

FM 3-90 Tactics



MAY 2023

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TACTICS

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Preface

FM 3-90 describes combat-tested tactics and techniques for offensive, defensive, and enabling operations. For each type of operation FM 3-90 discusses the organization of forces; minimum essential control measures; and general planning, preparation, and execution considerations.

To understand the doctrine contained in FM 3-90, readers must first understand the doctrinal topics described in ADP 3-90 since FM 3-90 expands and builds on the topics established in ADP 3-90. FM 3-90's foundational chapters are chapters 1, 2, 3, and 8. Readers must comprehend the material within these chapters to gain a full understanding of the remaining chapters within FM 3-90. Readers must also be familiar with ADP 5-0 and FM 5-0 as it applies the intellectual framework that leaders use to plan, prepare, execute, and assess military operations.

FM 3-90 is applicable to all members of the profession of arms. The principal audience are practitioners of military tactics, students of the various professional development courses, and doctrine writers at the U.S. Army's Centers of Excellence. Trainers and educators throughout the Army will also use this publication.

The considerations for offensive, defensive, and enabling operations in this publication apply to all echelons, even though numerous figures in this publication use divisions and brigade combat teams to illustrate points in the text. Echelon-specific field manuals and Army techniques publications address the specifics of how each tactical echelon uses these tactical concepts.

Commanders, staffs, and subordinates ensure their decisions and actions comply with applicable United States, international, and in some cases, host-nation laws and regulations. Commanders at all levels ensure their Soldiers operate in accordance with the law of armed conflict and applicable rules of engagement. (See FM 6-27/MCTP 11-10C for more information on the law of war.)

FM 3-90 uses joint terms where applicable. Selected joint and Army terms and definitions are in both the glossary and the text. Terms for which FM 3-90 is the proponent publication (the authority) are marked with an asterisk (*) in the glossary. When first defined in the text, terms for which FM 3-90 is the proponent publication are boldfaced and italicized, and definitions are boldfaced. When first defining other proponent definitions in the text, the term is italicized, and the number of the proponent publication follows the definition. Following uses of the term are not italicized. The introduction for FM 3-90 indicates heavily revised content within each chapter and appendix.

FM 3-90 applies to the Active Army, the Army National Guard/Army National Guard of the United States, and the U.S. Army Reserve unless otherwise stated.

The United States Army Combined Arms Center is the proponent for this publication. The preparing agency is the Combined Arms Doctrine Directorate, United States Army Combined Arms Center. Send written comments and recommendations on a DA Form 2028 (*Recommended Changes to Publications and Blank Forms*) to Commander, U.S. Army Combined Arms Center and Fort Leavenworth, ATZL-MCD (FM 3-90), 300 McPherson Avenue, Fort Leavenworth, KS 66027-2337; by e-mail to usarmy.leavenworth.mccoc.mbx.cadd-org-mailbox@army.mil; or submit an electronic DA Form 2028.

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Introduction

Tactics are the employment, ordered arrangement, and directed actions of forces in relation to each other. Leaders select tactics that accomplish their assigned mission. Successful tactics require generating and applying combat power. This publication introduces the basic concepts and control measures associated with the science of tactics and provides a common baseline for Soldiers and leaders to execute offensive, defensive, and enabling operations. Soldiers and leaders who know these basic tactics are better prepared to adapt them quickly based on the mission variables of mission, enemy, terrain and weather, troops and support available—time available, civil considerations, and informational considerations [METT-TC(I)].

Tactics require judgement in application. The tactics discussed in this publication focus on the Army's strategic role of prevailing during large-scale combat operations. Their application must be tempered by the obligation to protect the civilian population. The ability to seize and secure terrain, with its population and productive capacity, distinguishes land forces conducting offensive, defensive, or enabling operations. FM 3-90 provides a common framework for leaders from squad through corps echelon to conduct tactical operations in which leaders seek to find the enemy, fix the enemy, finish the enemy, and follow-through to achieve their objectives. This manual is not prescriptive, but it is authoritative.

FM 3-90 (*Tactics*) merges the 2013 versions of FM 3-90-1 (*Offense and Defense Volume 1*) and FM 3-90-2 (*Reconnaissance, Security, and Tactical Enabling Tasks Volume 2*) into a single comprehensive volume on offensive, defensive, and enabling operations. A highlight of changes includes:

- Created and became the proponent for the "tactical framework" - which is find, fix, finish, and follow through. This framework is how all offensive and defensive operations are described.
- Changed actions on contact from a 5-step process to a new 4-step process – “react”, “develop the situation”, “choose an action”, and “execute and report”.
- Removed defeat as a tactical mission task.
- Removed ambush as a tactical mission task, which was a mistake in the 2019 version of ADP 3-90.
- Changed the form of maneuver of “frontal assault” back to “frontal attack.”
- Added mobility, countermobility, link-up, and tactical deception as types of enabling operations.
- Made feint and demonstration as variations of tactical deception, instead of variations of an attack.
- Described what are forms of contact and added influence as a form of contact.
- Removed forms of defense and made them variations of an area defense.
- Changed the variations of troop movement from administrative movement, approach march, and tactical road march to tactical and nontactical movements.
- Removed encirclement as an enabling operation. It is still a desired outcome, and there is special planning required to create, maintain, reduce, and when encircled, break out of an encirclement, so that information was moved to an appendix.
- Removed the tactical mission tasks categories of "actions by friendly forces" and "effects on enemy forces."
- Modified, removed, or added over 140 definitions to make it easier to read and understand.
- Added graphics for all offensive and defensive operations.
- Made numerous other changes to enhance readability and understanding.

FM 3-90 is divided into four parts, consisting of twenty chapters and three appendices. Part One (chapters 1-2) focuses on the overall concept of tactics and maneuver. Part Two (chapters 3-7) focuses on offensive operations. Part Three (chapters 8-11) focuses on defensive operations. Part Four (chapters 12-20) focuses on enabling operations. Appendix A describes tactical control measures. Appendix B describes tactical mission tasks. Appendix C describes encirclements.

Chapter 1 (Army Tactics) introduces the role of Army tactics and discusses how the tactical taxonomy nests within multidomain operations. It also discusses the types and general planning considerations for offensive, defensive, and enabling operations. **The major updates to this chapter include introducing the tactical framework, updating taxonomy, a revision and expansion on the forms of contact, revision of assigned areas, and revision of actions on contact.**

Chapter 2 (Movement and Forms of Maneuver) introduces and describes movement formations, movement techniques, and the five forms of maneuver. **The major updates in this chapter include revising the forms of maneuver definitions and identifying the forms of maneuver as applicable to offensive and defensive operations.**

Chapter 3 (The Offense) introduces and describes the fundamentals of offensive operations, common offensive planning considerations, and transitions from offensive operations to defensive or stability operations. **There are no major updates to this chapter.**

Chapter 4 (Movement to Contact) introduces and describes general considerations, organization of forces, common control measures, conduct of the two variations of a movement to contact, and transitions. **The major update in this chapter is the expansion of the cordon and search section.**

Chapter 5 (Attack) introduces and describes general considerations, organization of forces, common control measures, and conduct of the four variations of an attack. **The major update in this chapter is moving demonstration and feint from the variations of an attack to chapter 19 (Tactical Deception).**

Chapter 6 (Exploitation) introduces general considerations, organization of forces, common control measures, and the conduct of an exploitation. **The major update in this chapter removes local and major exploitations.**

Chapter 7 (Pursuit) introduces and describes general considerations, organization of forces for the two variations of a pursuit, common control measures, and the conduct of a pursuit. **There are no major updates in this chapter.**

Chapter 8 (The Defense) introduces and describes the fundamentals of the defense, common defensive planning considerations, common defensive control measures, and transitions. **The major update in this chapter is the removal of the forms of the defense.**

Chapter 9 (Area Defense) introduces and describes the general considerations, organization of forces, common control measures, and the conduct of the three variations of an area defense. **The major update in this chapter is changing defense of a linear obstacle, perimeter defense, and reverse slope defense from forms of the defense to variations of an area defense.**

Chapter 10 (Mobile Defense) introduces and describes the general considerations, organization of forces, common control measures, and the conduct of a mobile defense. **No major updates in this chapter.**

Chapter 11 (Retrograde) introduces and describes the general considerations and conduct of the three variations of a retrograde. **The major update in this chapter is changing the retrograde tasks to variations of the retrograde.**

Chapter 12 (Reconnaissance) introduces and describes the general reconnaissance considerations, fundamentals, methods, and forms of reconnaissance. **The major updates in this chapter are updating the commander's reconnaissance guidance, tasks within the forms of reconnaissance, and reconnaissance fundamentals.**

Chapter 13 (Security Operations) introduces and describes the general security considerations and conduct of the types of security operations. **The major updates in this chapter are added commander's security guidance, updated tasks within types of security operations, and updated security fundamentals.**

Chapter 14 (Troop Movement) introduces and describes troop movement general considerations, types and methods of troop movement, and conduct of troop movements. **The major updates in the chapter are modifying the troop movement definitions and taxonomy.**

Chapter 15 (Relief in Place) introduces and describes the general considerations, organization of forces, control measures, and the conduct of relief in place. **There are no major updates in this chapter.**

Chapter 16 (Passage of Lines) introduces and describes the general considerations, organization of forces, control measures, and the conduct of the variations of a passage of lines **No major updates in this chapter.**

Chapter 17 (Countermobility) introduces and describes the general considerations for countermobility, terrain reinforcement, obstacle intent, obstacle employment principles, and obstacle emplacement. **This is a new chapter and makes countermobility an enabling operation.**

Chapter 18 (Mobility) introduces and describes the general considerations of and the types of mobility tasks. **This is a new chapter and makes mobility an enabling operation.**

Chapter 19 (Tactical Deception) introduces and describes tactical deception principles, types, means, and variations. **This is a new chapter and makes tactical deception an enabling operation and moves feint and demonstration from an offensive operation to a variation of tactical deception.**

Chapter 20 (Linkup) introduces and describes the general considerations and conduct of link up operations. **This is a new chapter and makes linkup an enabling operation.**

Appendix A (Tactical Control Measures) introduces and describes the general considerations for common control measures. **The major updates to this appendix include organizing control measures by movement and maneuver control measures, fire support coordination measures, and airspace coordinating measures.**

Appendix B (Tactical Mission Tasks) introduces, describes, and provides graphical depictions of the tactical mission tasks. **The major updates in this appendix are removing ambush and defeat as tactical mission tasks, alphabetizing the tactical missions, and removing actions by friendly forces and effects on enemy forces.**

Appendix C (Encirclements) introduces and describes encirclements and describes types of encirclement. **The major update to this appendix is modifying the executing an encirclement discussion to include two methods.**

This publication is the proponent for select terms. See introductory table-1 for removed terms. See introductory table-2 for terms with modified definitions. See introductory table-3 on page xviii for terms with a new proponent. See introductory table-4 on page xix for new terms.

Introductory table-1. Removed terms

Term	Remarks
administrative movement	No longer used as a defined Army term.
air movements	No longer used as an Army term. Adopts joint term.
contiguous area of operations	No longer used as a defined Army term.
covering force	No longer used as a defined Army term.
covering force area	No longer used as a defined Army term.
decisive engagement	No longer used as a defined Army term.
defeat (tactical mission task)	No longer used as a defined Army term.
encirclement operations	No longer used as a defined Army term.
fire strike	No longer used as a defined Army term.
flank attack	No longer used as a defined Army term.
noncontiguous area of operations	No longer used as a defined Army term.

Introductory table-2. Modified terms and definitions

Term	Remarks
actions on contact	FM 3-90 modifies definition and becomes proponent.
alternate position	FM 3-90 modifies definition and becomes proponent
ambush	FM 3-90 modifies definition.
approach march	FM 3-90 modifies definition and becomes proponent.

Introductory table-2. Modified terms and definitions (continued)

area reconnaissance	FM 3-90 modifies definition and becomes proponent.
area security	FM 3-90 modifies definition and becomes proponent.
attack	FM 3-90 modifies definition and becomes proponent.
attack by fire	FM 3-90 modifies definition.
block (tactical mission task)	FM 3-90 modifies definition.
bounding overwatch	FM 3-90 modifies definition.
box formation	FM 3-90 modifies definition.
breach	FM 3-90 modifies definition.
breakthrough	FM 3-90 modifies definition.
bypass	FM 3-90 modifies definition.
canalize	FM 3-90 modifies definition.
clear	FM 3-90 modifies definition.
column formation	FM 3-90 modifies definition.
contain	FM 3-90 modifies definition.
consolidate	FM 3-90 modifies term from consolidation to consolidate and updates the definition.
control	FM 3-90 modifies definition.
cordon and search	FM 3-90 modifies definition.
counterattack	FM 3-90 modifies definition and becomes proponent.
counterreconnaissance	FM 3-90 modifies definition.
decisively engaged	FM 3-90 modifies term from decisive engagement to decisively engaged and becomes proponent.
delay line	FM 3-90 modifies definition.
denial operations	FM 3-90 modifies definition.
destroy	FM 3-90 modifies definition.
detachment left in contact	FM 3-90 modifies definition.
direct pressure force	FM 3-90 modifies definition.
disengage	FM 3-90 modifies definition.
dismounted movement	FM 3-90 modifies term from dismounted march to dismounted movement
disrupt (tactical mission task)	FM 3-90 modifies definition.
double envelopment	FM 3-90 modifies definition.
echelon formation	FM 3-90 modifies definition.
encirclement	FM 3-90 modifies term from encirclement operations to encirclement and becomes proponent.
encircling force	FM 3-90 modifies definition.
engagement area	FM 3-90 modifies definition and becomes proponent.
engagement priority	FM 3-90 modifies definition.
envelopment	FM 3-90 modifies definition.
exfiltrate	FM 3-90 modifies definition.
exploitation	FM 3-90 modifies definition and becomes proponent.
fire superiority	FM 3-90 modifies definition.
fix (tactical mission task)	FM 3-90 modifies definition.
follow and assume	FM 3-90 modifies definition.

Introductory table-2. Modified terms and definitions (continued)

Term	Remarks
follow and support	FM 3-90 modifies definition.
forward boundary	FM 3-90 modifies definition.
gap	FM 3-90 modifies definition and becomes proponent.
infiltration	FM 3-90 modifies definition.
interdict	FM 3-90 modifies definition.
isolate (tactical mission task)	FM 3-90 modifies definition.
kill zone	FM 3-90 modifies definition.
lateral boundary	FM 3-90 modifies definition.
line formation	FM 3-90 modifies definition.
linkup	FM 3-90 modifies definition and becomes proponent.
linkup point	FM 3-90 modifies definition.
main battle area	FM 3-90 modifies definition and becomes proponent.
march column	FM 3-90 modifies definition.
march serial	FM 3-90 modifies definition.
march unit	FM 3-90 modifies definition.
meeting engagement	FM 3-90 modifies definition and becomes proponent.
mixing	FM 3-90 modifies definition.
mounted movement	FM 3-90 modifies term from mounted march to mounted movement
movement to contact	FM 3-90 modifies definition and becomes proponent.
neutralize	FM 3-90 modifies definition.
observation post	FM 3-90 modifies definition.
obstacle control measures	FM 3-90 modifies definition.
obstacle group	FM 3-90 modifies term by making term singular
occupy	FM 3-90 modifies definition.
passage lane	FM 3-90 modifies definition.
passage point	FM 3-90 modifies definition.
penetration	FM 3-90 modifies definition.
position area for artillery	FM 3-90 modifies definition.
primary position	FM 3-90 modifies definition and becomes proponent.
pursuit	FM 3-90 modifies definition and becomes proponent.
quartering party	FM 3-90 modifies definition.
rear boundary	FM 3-90 modifies definition.
reconnaissance by fire	FM 3-90 modifies definition.
reconnaissance in force	FM 3-90 modifies definition and becomes proponent.
reconnaissance objective	FM 3-90 modifies definition and becomes proponent.
reconnaissance-pull	FM 3-90 modifies definition.
reconnaissance-push	FM 3-90 modifies definition.
reduce (tactical mission task)	FM 3-90 modifies definition.
redundancy	FM 3-90 modifies definition.
release point	FM 3-90 modifies definition.

Introductory table-2. Modified terms and definitions (continued)

Term	Remarks
follow and support	FM 3-90 modifies definition.
forward boundary	FM 3-90 modifies definition.
retain	FM 3-90 modifies definition.
retrograde movement	FM 3-90 modifies definition.
route	FM 3-90 modifies definition.
route reconnaissance	FM 3-90 modifies definition and becomes proponent.
search and attack	FM 3-90 modifies definition.
sector of fire	FM 3-90 modifies definition.
secure	FM 3-90 modifies definition.
seize	FM 3-90 modifies definition.
single envelopment	FM 3-90 modifies definition.
spoiling attack	FM 3-90 modifies definition.
start point	FM 3-90 modifies definition.
stay-behind operation	FM 3-90 modifies definition.
supplementary position	FM 3-90 modifies definition and becomes proponent.
support by fire	FM 3-90 modifies definition.
suppress	FM 3-90 modifies definition.
tactical deception	FM 3-90 modifies definition and becomes proponent.
tactical mission task	FM 3-90 modifies definition.
tactical road march	FM 3-90 modifies definition and becomes proponent.
terrain management	FM 3-90 modifies definition and becomes proponent.
trail party	FM 3-90 modifies definition.
traveling overwatch	FM 3-90 modifies definition.
trigger line	FM 3-90 modifies definition and becomes proponent.
troop movement	FM 3-90 modifies definition and becomes proponent.
turn (tactical mission task)	FM 3-90 modifies definition.
turning movement	FM 3-90 modifies definition.
zone reconnaissance	FM 3-90 modifies definition and becomes proponent.

Introductory table-3. Modified proponent

Term	Remarks
bypass criteria	FM 3-90 becomes proponent.
checkpoint	FM 3-90 becomes proponent.
final protective line	FM 3-90 becomes proponent.
rally point	FM 3-90 becomes proponent.
subsequent position	FM 3-90 becomes proponent.
traveling	FM 3-90 becomes proponent.
trigger line	FM 3-90 becomes proponent.

Introductory table-4. New terms

Term	Remarks
assault	Adds new Army term.
battle handover	Adds new term.
consolidate	Adds new term.
coordination point	Adds new term
demonstration	Adds new Army term.
diamond formation	Adds new term.
disengagement criteria	Adds new term.
enabling operation	Adds new term.
feint	Adds new Army term.
forced march	Adds new term.
forward line of own troops	Adds new term.
light line	Adds new term.
nontactical movement	Adds new term.
quick reaction force	Adds new term.
raid	Adds new Army term.
security objective	Adds new term.
tactical movement	Adds new term.
vee formation	Adds new term.
vertical envelopment	Adds new term.
wedge formation	Adds new term.

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PART ONE

Tactics Overview

Part One introduces tactics and forms of maneuver. Chapter 1 describes the role of tactics, operational and mission variables, and the general considerations for tactics. Chapter 2 covers the movement formations, techniques, and the forms of maneuver.

Chapter 1

Army Tactics

This chapter introduces the role of Army tactics and discusses how the tactics taxonomy nests within multidomain operations. This chapter discusses the operational environment, the role of tactics, and general tactical considerations by warfighting function that apply to offensive, defensive, and enabling operations.

INTRODUCTION TO TACTICS

1-1. *Tactics* are the employment, ordered arrangement and directed actions of forces in relation to each other (ADP 3-90). Units employ tactics during the conduct of operations. An *operation* is a sequence of tactical actions with a common purpose or unifying theme (JP 1, Vol 1). Tacticians use the art and science of tactics to maneuver and position formations. *Maneuver* is movement in conjunction with fires (ADP 3-90). The purpose of maneuver is to gain and exploit positions of relative advantage to accomplish the mission. (See ADP 3-90 for more information on the art and science of tactics.)

1-2. Successful tactical operations are the result of integrating and synchronizing the warfighting functions in time, space, and purpose. The starting point for planning, preparing, and executing tactical operations is understanding the operational environment.

THE OPERATIONAL ENVIRONMENT

1-3. Army forces conduct offensive, defensive, and enabling operations within operational environments spanning the globe. An *operational environment* is the aggregate of the conditions, circumstances, and influences that affect the employment of capabilities and bear on the decisions of the commander (JP 3-0). For Army forces, an operational environment consists of five domains (land, air, maritime, space, and cyberspace) understood through three dimensions (physical, human, and information).

1-4. The purpose of understanding an operational environment is to aid in accounting for the totality of factors and conditions that impact the conduct of operations. This understanding enables leaders to better identify problems; anticipate potential outcomes; and understand the results of various friendly, enemy, adversary, and neutral actions and the effects these actions have on achieving the military end state. A description of an operational environment includes all the factors that the commander and staff need to capture and understand to inform the conduct of operations. (See FM 3-0 for more information on operational environments.)

OPERATIONAL VARIABLES

1-5. Army planners use the operational variables to describe an operational environment. *Operational variables* are a comprehensive set of information categories used to describe an operational environment (ADP 1-01). They are the aspects of an operational environment that affect operations, and they differ from one assigned area to another. The eight operational variables are: political, military, economic, social, information, infrastructure, physical environment, and time (also known as PMESII-PT).

1-6. When commanders and staff analyze their specific operational environment, they also discern what parts or aspects of each domain and the relevant information aspects and considerations to their operation. They continue to refine and update their analysis even after receiving a mission and throughout the course of the ensuing operation. (See FM 5-0 for more information on the operational variables.)

MISSION VARIABLES

1-7. The *mission variables* are categories of specific information needed to conduct operations (ADP 1-01). The purpose of mission variables is to provide a set of informational categories focused on what leaders need to know to achieve situational understanding once assigned a mission. This ensures Army leaders understand the context in which they perform their missions and if necessary, take actions to modify their chosen tactic. The seven mission variables are mission, enemy, terrain and weather, troops and support available—time available, civil considerations, and informational considerations [METT-TC(I)].

1-8. METT-TC (I) represents the mission variables leaders use to analyze and understand a situation in relationship to the unit's mission. The first six variables are not new. However, the pervasiveness of information and its applicability in different military contexts requires leaders to continuously assess its various aspects during operations. Due to this, "I" has been added to the METT-TC mnemonic. Information considerations are expressed as a parenthetical variable because it is not an independent consideration, but an important component of each variable of METT-TC that leaders must understand when developing understanding of a situation. (See FM 5-0 for additional information on the mission variables.)

ROLE OF TACTICS

1-9. Tactical actions always link to operational or strategic objectives; they are never employed in isolation. Tactics serve a distinct purpose and are nested within a larger military campaign. Military operations are inherently joint and frequently multinational in nature. Understanding how tactics fit into the larger picture is the starting point to planning, preparing, executing, and assessing successful tactical operations.

JOINT OPERATIONS

1-10. The joint force conducts joint operations through unified action. *Unified action* is the synchronization, coordination, and/or integration of the activities of governmental and nongovernmental entities with military operations to achieve unity of effort (JP 1, Vol 1). The Army accomplishes its mission by supporting the joint force and unified action partners in four strategic roles:

- Shape operational environments.
- Counter aggression on land during crisis.
- Prevail in large-scale ground combat.
- Consolidate gains.

1-11. These strategic roles are not tasks assigned to subordinate units. The U.S. Army's primary mission supports the joint force by organizing, training, and equipping its forces to conduct prompt and sustained land combat to defeat enemy ground forces and seize, occupy, and defend land areas.

MULTIDOMAIN OPERATIONS

1-12. The Army's contribution to joint operations is multidomain operations. *Multidomain operations* are the combined arms employment of joint and Army capabilities to create and exploit relative advantages that achieve objectives, defeat enemy forces, and consolidate gains on behalf of joint force commanders (FM 3-0). Multidomain operations are how Army forces operate as part of the joint force against threats able to

contest the joint force in all domains. Army forces simultaneously support and are supported by the joint force across all domains. This interdependent relationship between the Army and the rest of the joint force allows joint force commanders to impose multiple dilemmas on the enemy. This interdependence is also why all Army operations are multidomain operations.

1-13. At the tactical level of warfare, Army formations provide unique capabilities to the joint force. These capabilities include but are not limited to ground maneuver forces able to seize and hold terrain, surface based indirect fires, air and missile defense, and sustainment. Army tactical formations also use joint force capabilities including fixed- and rotary-wing aviation, unmanned aircraft systems (UAS), satellite communications, and the global positioning system during offensive, defensive, and stability operations.

1-14. All Army operations are multidomain operations. This is because every operation requires integrating capabilities from all domains to succeed. For example, at the lower tactical levels companies and platoons employ capabilities from other domains such as aviation (including UAS), joint fires, satellite communications, and the global positioning system. As part of the joint force, Army forces execute multidomain operations throughout the competition, crisis, and conflict contexts. Army tactical formations typically conduct operations dominated by one context at a time. (See FM 3-0 for more information on Army operations during competition and crisis).

1-15. During combat operations tactical-level Army forces execute offensive, defensive, and stability operations supported by enabling operations to achieve tactical objectives that support operational and strategic objectives. While a division possesses the capability and capacity to conduct simultaneous offensive, defensive, and stability operations, brigade combat teams (BCTs) and below are typically only capable of executing a single type of operation at a given time.

1-16. FM 3-90 focuses on the tactics associated with large-scale combat operations at the tactical level with particular emphasis on offensive, defensive, and enabling operations. (See ADP 3-07 for more information on stability operations and ADP 3-28 for more information on defense support to civil authorities).

OFFENSIVE, DEFENSIVE, STABILITY, AND ENABLING OPERATIONS

1-17. An *offensive operation* is an operation to defeat or destroy enemy forces and gain control of terrain, resources, and population centers (ADP 3-0). A *defensive operation* is an operation to defeat an enemy attack, gain time, economize forces, and develop conditions favorable for offensive or stability operations (ADP 3-0). A *stability operation* is an operation conducted outside the United States in coordination with other instruments of national power to establish or maintain a secure environment and provide essential governmental services, emergency infrastructure reconstruction, and humanitarian relief (ADP 3-0). Every type of operation has a mission that consists of a task and purpose.

1-18. An *enabling operation* is an operation that sets the friendly conditions required for mission accomplishment. By themselves, enabling operations do not directly accomplish the commander's end state and are not decisive on their own, but are required to conduct successful offensive, defensive, and stability operations. Enabling operations can also be described or listed as key tasks during the execution of a mission.

1-19. Offensive, defensive, and enabling operations arrange friendly forces by purpose. Purpose describes friendly force goals with respect to the enemy force's ability to achieve its objectives. *Objective* is a location used to orient operations, phase operations, facilitate changes of direction, and provide for unity of effort (ADP 3-90). Based on the purpose assigned, the commander selects a type of offensive or defensive operation and any enabling operations required. The types of operations have subsets called variations. The variations share similar ways of organizing forces as the parent operation, with differing conditions and outcomes. The taxonomy provides, if needed, additional categories of methods and forms. Figure 1-1 illustrates the Army's tactical taxonomy.

Types of Operations				
Offensive Operations		Defensive Operations		
Movement to Contact	Exploitation	Area Defense	Retrograde	
<ul style="list-style-type: none"> • Search and Attack • Cordon and Search 	Pursuit <ul style="list-style-type: none"> • Frontal • Combination 	<ul style="list-style-type: none"> • Defense of a Linear Obstacle • Reverse Slope Defense • Perimeter Defense 	<ul style="list-style-type: none"> • Delay • Withdraw • Retirement 	
Attack		Mobile Defense		
<ul style="list-style-type: none"> • Ambush • Counterattack • Raid • Spoiling Attack 				
Enabling Operations				
Reconnaissance	Security	Troop Movement	Relief in Place	Tactical Deception
<ul style="list-style-type: none"> • Route • Area • Zone • Reconnaissance in Force • Special 	<ul style="list-style-type: none"> • Screen • Guard • Cover • Area 	<ul style="list-style-type: none"> • Non-Tactical • Tactical 	Mobility	<ul style="list-style-type: none"> • Feint • Demonstration
		Passage of Lines	Countermobility	
		<ul style="list-style-type: none"> • Forward • Rearward 	Linkup	
Tactical Mission Tasks				
<ul style="list-style-type: none"> • Attack by Fire • Block • Breach • Bypass • Canalize • Clear 	<ul style="list-style-type: none"> • Contain • Control • Counterreconnaissance • Destroy • Disengagement • Disrupt 	<ul style="list-style-type: none"> • Exfiltrate • Fix • Follow and Assume • Follow and Support • Interdict • Isolate 	<ul style="list-style-type: none"> • Neutralize • Occupy • Reduce • Retain • Secure • Seize 	<ul style="list-style-type: none"> • Support by Fire • Suppress • Turn
Forms of Maneuver				
• Envelopment	• Frontal Attack	• Infiltration	• Penetration	• Turning Movement

Figure 1-1. Army tactical taxonomy

Offensive Operations

1-20. Chapter 3 discusses general considerations for offensive operations. The four types of offensive operations are—

- Movement to contact. (See Chapter 4).
- Attack. (See Chapter 5).
- Exploitation. (See Chapter 6).
- Pursuit. (See Chapter 7).

Defensive Operations

1-21. Chapter 8 discusses general considerations for defensive operations. The three types of defensive operations are—

- Area defense. (See Chapter 9).
- Mobile defense. (See Chapter 10).
- Retrograde. (See Chapter 11).

Enabling Operations

1-22. Chapters 12-20 discuss enabling operations. The nine types of enabling operations are—

- Reconnaissance. (See Chapter 12).
- Security operations. (See Chapter 13).

- Troop movement. (See Chapter 14).
- Relief in place. (See Chapter 15).
- Passage of lines. (See Chapter 16).
- Countermobility. (See Chapter 17).
- Mobility. (See Chapter 18).
- Tactical deception. (See Chapter 19).
- Linkup. (See Chapter 20).

GENERAL CONSIDERATIONS FOR TACTICS

1-23. The tasks assigned to subordinates are as much an aspect of tactics as employment and arrangement. Commanders and units use tactics as the basis for their concept of operations, which is derived from understanding the mission variables and operational environment. The three subcomponents of tactics are—

- **Employment:** the synchronization of warfighting functions. The characteristics of the offense and the defense assist in framing the synchronization of warfighting functions.
- **Arrangement:** formations in relation to friendly forces, enemy forces, and the terrain. The type of operations and forms of maneuver provide a baseline for these arrangements.
- **Directed actions:** the task and purpose directed by a commander to achieve objectives. The tactical mission tasks generally are used to direct the actions of subordinate forces.

1-24. A *warfighting function* is a group of tasks and systems united by a common purpose that commanders use to accomplish missions and training objectives (ADP 3-0). Synchronizing the six warfighting functions through prior planning and preparation increases a unit's effectiveness when executing operations. The six warfighting functions are—

- Command and control.
- Movement and maneuver.
- Intelligence.
- Fires.
- Sustainment.
- Protection.

See ADP 3-0 for detailed discussion on warfighting functions.

1-25. Each warfighting function contributes to generating and applying combat power during operations. *Combat power* is the total means of destructive and/or disruptive force that a military unit/formation can apply against the opponent at a given time (JP 3-0). Synchronizing operations produces complementary and reinforcing effects that result in a powerful blow that overwhelms enemy forces and creates friendly momentum. Army forces deliver that blow through a combination of five dynamics. The dynamics of combat power are—

- Leadership.
- Firepower.
- Information.
- Mobility.
- Survivability.

See FM 3-0 for more information on each dynamic of combat power.

1-26. Tactics don't happen in isolation, and they are influenced by a large variety of considerations. The remainder of this chapter discusses general tactical considerations broken down by warfighting function and are applicable to all types of operations. These considerations are in addition to those offensive and defensive specific considerations discussed separately in Chapter 3 and Chapter 8.

COMMAND AND CONTROL WARFIGHTING FUNCTION

1-27. The *command and control warfighting function* is the related tasks and a system that enable commanders to synchronize and converge all elements of power (ADP 3-0). The primary purpose of the

command and control warfighting function is to assist commanders in integrating the other warfighting functions effectively at each echelon and to apply combat power to achieve objectives and accomplish missions. The command and control warfighting function consists of the command and control warfighting function tasks and the command and control system. (See ADP 3-0 for a detailed description of the command and control warfighting function.)

1-28. Commanders, assisted by their staffs, integrate numerous processes and activities within the headquarters and across the force as they exercise command and control. The commander's mission and intent determine the scheme of maneuver and the allocation of available resources. Commanders issue intent linking the purpose of an operation with the conditions that define the desired end state.

1-29. Units must prepare to execute operations with degraded or minimal communications. Throughout the operations process, units may operate within range of enemy jamming capabilities. Situations will likely arise requiring units to reduce their electromagnetic signature. These situations may require units to employ emission control procedures to reduce the effectiveness of enemy targeting efforts. Operations during these periods require clearly understood and rehearsed standard operating procedures at all echelons. Successful operations during these periods requires that units have clearly developed emission control plans and exercise electromagnetic protection tasks focused on transmitting only mission essential information. (See FM 3-12 for more information on emission control procedures.)

Hasty and Deliberate Operations

1-30. Most military operations lie somewhere along a continuum between a hasty operation and a deliberate operation. A *hasty operation* is an operation in which a commander directs immediately available forces, using fragmentary orders, to perform tasks with minimal preparation, trading planning and preparation time for speed of execution (ADP 3-90). A *deliberate operation* is an operation in which the tactical situation allows the development and coordination of detailed plans, including multiple branches and sequels (ADP 3-90).

1-31. Generally, hasty operations take advantage of fleeting tactical opportunities that provide their formations a position of advantage over the enemy. In doing so commanders accept the risk of reduced planning, preparation, and coordination. Some situations may require commanders to take more time to plan and prepare their formations to ensure detailed integration and synchronization of the combined arms team. Any type of operation can be characterized as hasty or deliberate. (See ADP 3-90 for more information on hasty and deliberate operations.)

Tactical Framework

1-32. The tactical framework provides leaders with a framework to help visualize operations and to organize their force. The framework is applicable to all types of offensive and defensive operations. Figure 1-2 is a graphical depiction of the tactical framework. Inherent to the tactical framework is the concept of combined arms. *Combined arms* is the synchronized and simultaneous application of arms to achieve an effect greater than if each element was used separately or sequentially (ADP 3-0). FM 3-90 uses it to expand the discussion for each type of offensive and defensive operation. The tactical framework consists of—

- Find the enemy. Intel drives fires and maneuver.
- Fix the enemy. Prevent repositioning or reinforcement making them easier to destroy.
- Finish the enemy. Mass available combat power to accomplish the mission.
- Follow through. Defeat in detail, consolidate, reorganize, and transition.

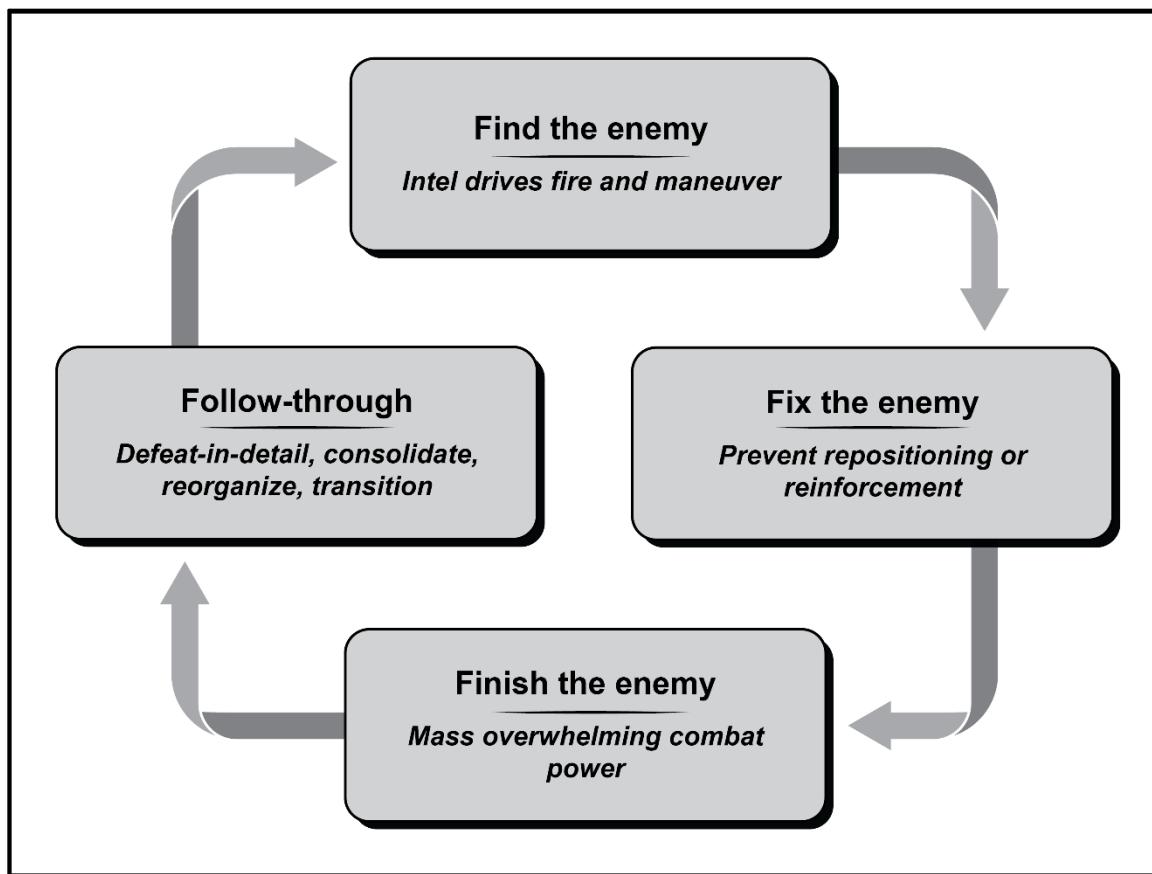


Figure 1-2. Tactical framework

Find the Enemy

1-33. Units find the enemy through aggressive information collection activities that provide commanders with timely, detailed, and accurate intelligence. Once a unit gains contact with the enemy they fight to maintain contact unless directed otherwise by their higher headquarters. Information collection activities contribute to improving situational understanding regarding the enemy and terrain. Units use as many capabilities as possible when performing information collection. Finding every enemy formation is likely impractical within the time and assets available. Therefore, information collection focuses on reducing those uncertainties within the assigned area that directly impact mission accomplishment.

1-34. Units use human and technical means to confirm suspected locations of enemy formations and capabilities. When successful, information collection enables commanders to use combined arms actions to fix and destroy enemy formations and shape the battlefield. If information collection efforts are unsuccessful, friendly forces conduct a movement to contact to find the enemy. Once the location of the enemy is known, friendly forces conduct actions on contact and maintain contact with the enemy.

Fix the Enemy

1-35. Fixing the enemy limits their maneuver options and prevents them from repositioning, reinforcing, or reorganizing. Fixing the enemy requires using combined arms and allows friendly forces to mass combat power against a relatively static enemy. Units seek to fix enemy forces with the minimum amount of combat power since fixing an enemy is typically a supporting effort.

1-36. Units at all echelons use all capabilities at their disposal to gain and maintain contact with the enemy and use combined arms to fix the enemy. Units can also isolate the enemy by severing lines of communications to fix enemy forces and prevent reinforcement. Nearly every type of offensive or defensive

operation incorporates some form of fixing an enemy force. For example, in an area defense friendly forces seek to fix enemy forces within engagement areas tied into obstacles to destroy them. In the attack, friendly forces fix an enemy while another force finishes the enemy by massing overwhelming combat power.

Finish the Enemy

1-37. While the enemy is fixed, friendly forces maintain momentum and mass overwhelming combat power to assault an objective to destroy enemy forces. An **assault is a short and violent well-ordered attack against a local objective**. Assaults occur at all tactical echelons. They can range from a squad assaulting a single gun emplacement to a brigade assaulting an enemy strong point. An assault ends when enemy forces are destroyed or have capitulated to friendly forces. Finishing the enemy requires aggressive application of combat power and small unit battle drills supported by all the forms of contact. The main effort of an operation finishes the enemy.

Follow Through

1-38. Once an enemy is finished, actions by friendly forces are not complete. Small remaining elements of the enemy may require friendly forces to destroy them in detail. If all enemy forces are not neutralized, friendly forces maintain constant pressure to keep them off balance while capitalizing on successful tactical actions.

1-39. Follow through includes more than destroying remaining enemy forces. It also includes consolidating and reorganizing activities and executing transitions. These actions aid in posturing friendly forces for future operations.

1-40. Besides just consolidating and reorganizing friendly forces also execute a wide variety of activities such as casualty evacuation, detainee operations, and sustainment operations. To maintain momentum and tempo units account for these activities within their concept of operations. However, extensive consolidation or reorganization activities may result in a unit's culmination and require a transition.

1-41. Transitions occur for a variety of reasons and are not just the result of a unit culminating or a temporary setback. They are a deliberate part of progress towards mission accomplishment, such as changing the phase of an operation or shifting from offensive operations to stability operations. Transitions can be difficult, particularly if they are unanticipated. During planning units identify potential transition points to reduce the increased friction inherent in transitions and maintain an accurate common operational picture to assess the progress of operations.

1-42. Offensive or defensive operations will likely continue unless all enemy forces are destroyed or capitulate. If this is the case, execution of follow through resets the cycle and units begin to find the enemy again. If finishing the enemy results in their total destruction or defeat and the cessation of offensive or defensive operations, friendly forces will likely transition to stability operations.

Battle Drill

1-43. In addition to accomplishing the mission, every plan contains options for exploiting success or any advantages that may arise. Units exploit success by aggressively executing their plans, promoting subordinate leader initiative, and rapidly executing battle drills.

1-44. A *battle drill* is rehearsed and well understood actions made in response to common battlefield occurrences (ADP 3-90). Battle drills are the actions of individual Soldiers and small units, typically when they meet the enemy. They require minimal leader orders to accomplish and are initiated on a cue, such as an enemy action or a leader's order, and are a trained response to that cue. Battle drills are designed to be quickly executed without the application of a deliberate decision-making process. Examples include "react to indirect fire" or "vehicle recovery." Although battle drills are commonly initiated when enemy contact is made during close combat, they can also occur within command posts when a specific type of information is received and action needs to be taken to support those units in contact. Leaders develop or use battle drills specific to their capabilities and operations to assist subordinates in execution of common instances during all operations.

Battle Handover

1-45. A **battle handover** is a coordinated mission between two units that transfers responsibility for fighting an enemy force from one unit to the other. It sustains continuity of the combined arms fight and protects the combat power of both forces involved. Battle handover is usually associated with conducting a passage of lines, a relief in place, and a breakout of an encircled force. Battle handover occurs along a general trace line designated as the battle handover line (BHL), generally a phase line forward of the stationary force. (See appendix A for more information on a battle handover line.)

Control Measures

1-46. Coordinating and synchronizing actions requires using control measures. A **control measure** is a means of regulating forces or warfighting functions (ADP 6-0). Control measures help commanders' direct actions by establishing responsibilities and limits that prevent subordinate unit actions from impeding one another and prevent fratricide. They also foster coordination and cooperation between forces without unnecessarily restricting freedom of action. Control measures may be detailed (such as an operation order) or simple (such as a checkpoint). Control measures are prescriptive and provide control without requiring detailed explanation. Good control measures foster freedom of action, decision making, initiative, reporting, and prevent fratricide.

1-47. Control measures can be permissive or restrictive. Permissive control measures facilitate action while restrictive control measures limit action. Control measures may be graphical (such as phase lines) or procedural (such as target engagement priorities). Commanders should establish only the minimum control measures necessary to provide essential coordination and deconfliction between units. Restrictive control measures only remain in place as long as required for mission accomplishment.

1-48. Determining what control measures are necessary to adequately command and control operations without overburdening subordinates is a key consideration for every unit. This is particularly important for company and below formations who may not possess the same digital systems or capabilities as their higher headquarters.

Graphic Control Measures

1-49. A **graphic control measure** is a symbol used on maps and displays to regulate forces and warfighting functions (ADP 6-0). Commander's establish graphic control measures to regulate maneuver, movement, airspace, fires, and other aspects of operations. In general, all graphic control measures should relate to easily identifiable natural or man-made terrain. Regardless of their specific function, each control measure should have a specific purpose: mass the effects of combat power, synchronize subordinate forces' operations, minimize the possibility of fratricide, or comply with the law of armed conflict.

1-50. At battalion and higher echelons, graphic control measures are initially identified during course of action development and refined throughout the operations process. However, a course of action sketch rarely provides the necessary detail to adequately command and control operations during execution. As plans and orders are refined subordinate echelons will typically add control measures to those from their higher headquarters. For example, a battalion may be tasked to seize an objective during an attack from their BCT headquarters. While the objective is assigned by the BCT, the battalion determines what control measures are necessary within that objective to adequately command and control their forces. When units develop control measures, they share those control measures with their subordinate units, higher headquarters, and adjacent units.

Digital and Analog Control Measures

1-51. Digital systems provide leaders numerous benefits to aid in developing, implementing, and modifying control measures. Many of these systems possess the capability to display active and inactive graphic control measure overlays as well as provide notifications for control measure violations even if that control measure is not actively displayed. An advantage of these digital systems is the ability to rapidly share information, such as adjustments to control measures, as well as the ability to maintain a clearer common operational picture within command posts. The disadvantage to these digital systems is that many are not resident at the

lowest tactical echelons, and they create an electromagnetic signature which can either be jammed or used for targeting purposes.

1-52. Analog control measures are hand-drawn on maps or overlays and are used by every echelon. Generally, battalion and above echelons use paper maps with overlays as a backup to many of their digital systems. Company and below echelons are more likely to use paper maps with overlays containing analog control measures as their primary means of command and control. These overlays consist of graphical control measures that allow the organization to maintain a common operational picture and continue operations within a degraded communications environment.

Note. FM 3-90 contains numerous figures containing graphic control measures when describing offensive, defensive, and enabling operations. For clarity, these figures contain only the major applicable graphic control measures. Appendix A contains additional information on each of the control measures discussed in FM 3-90. For a complete listing of all control measures see FM 1-02.2.

Terrain Management

1-53. Units manage terrain to coordinate and synchronize their operations with friendly forces. **Terrain management is the process of allocating terrain by specifying locations for units and activities to deconflict activities that might interfere with each other.** For example, an artillery unit is assigned a position area for artillery (PAA) to provide indirect fires. The PAA frames for the artillery unit the area for executing their fire missions and lets other units know that they need to coordinate with the PAA owner if they need to move through that area. Examples of terrain management include but are not limited to—

- Assigned areas including area of operations, zone, and sector.
- PAA.
- Assembly area.
- Battle position.
- Route.
- Lane.
- Axis of advance.

1-54. Assigning areas to subordinates is a key operational framework and terrain management consideration for headquarters at every echelon. When appropriate units may further subdivide their assigned area into assigned areas for their subordinate formations. A higher headquarters remains responsible for any area not assigned to a subordinate unit. A unit moving through or delivering effects into another units assigned area must coordinate with the assigned unit.

1-55. The types of assigned areas include area of operations, zone, and sector. While there are numerous other control measures that enable terrain management only area of operations, zone, and sector are part of the assigned area model. Each assigned area has unique characteristics and employment considerations outlined below.

Area of Operations

1-56. An *area of operations* is an operational area defined by a commander for land and maritime forces that should be large enough to accomplish their missions and protect their forces (JP 3-0). Units can use an area of operations (AO) during offensive, defensive, and stability operations. An AO is defined by boundaries that fully enclose the area. An AO is useful when a higher headquarters requires a greater degree of control. Units assigned an AO must be capable of performing specific responsibilities. These responsibilities include—

- Terrain management.
- Information collection, integration, and synchronization.
- Civil affairs operations.
- Movement control.

- Clearance of fires.
- Security.
- Personnel recovery.
- Airspace management.
- Minimum-essential stability operations tasks, which are—
 - Establish civil security.
 - Provide immediate needs (access to food, water, shelter, and medical treatment).

1-57. Commanders can add, remove, or adjust a subordinate units' AO responsibilities based on the situation and mission variables. However, when assigning an AO, a higher echelon headquarters must inform the subordinate unit of any changes to the responsibilities listed above.

Zone and Sector

1-58. A *zone* is an operational area assigned to a unit in the offense that only has rear and lateral boundaries (FM 3-0). The non-bounded side of a zone is open towards enemy forces. A higher echelon headquarters uses fire support coordination and maneuver control measures such as a limit of advance and a coordinated fire line to synchronize its deep operations with those of a subordinate unit. Zones allow higher headquarters to adjust deep operations without having to change unit boundaries. This gives greater flexibility to the higher headquarters for controlling deep operations, allowing subordinate units to focus on close and rear operations. A zone is best for front-line units executing high-tempo offensive operations characterized by direct fire contact with the enemy and a fluid forward line of troops (FLOT). Units treat everything behind the forward line of troops as an AO with the associated nine responsibilities. Zone can be further subdivided as needed. (See appendix A for more information on zones.)

1-59. A *sector* is an operational area assigned to a unit in the defense that has rear and lateral boundaries with interlocking fires (FM 3-0). The non-bounded side is open towards the enemy. A higher echelon headquarters uses fire support coordination and maneuver control measures such as battle positions and trigger lines to synchronize subordinate units. Higher headquarters are responsible for synchronizing operations forward of the main battle and security areas or coordinated fire line. Units use sectors to synchronize and coordinate engagement areas and allow for mutually supporting fields of fire, which do not require coordination between adjacent units. Units treat everything behind the forward line of troops as an AO with the associated nine responsibilities. Sectors can be further subdivided as needed. (See appendix A for more information on sectors.)

Forms of Contact

1-60. Contact is an interaction between two forces. There are three possible types of interactions:

- Both forces are in contact with each other.
- A friendly force is in contact with an enemy force, while the enemy force is out of contact with the friendly force.
- A friendly force is out of contact with an enemy force; however, the enemy force is in contact with the friendly force.

1-61. The forms of contact describe the method of interaction that positively identifies the location or activity of a force. The forms of contact also—

- Quickly describe to others what is happening.
- Describe the method of engagement.
- Provide an understanding of a force's capabilities and ranges.
- If a force is in contact, can trigger additional actions, typically in the form of battle drills.

1-62. An exception to these forms of contact are interactions with friendly or neutral entities such as civilians, nongovernmental organizations, or friendly and neutral military forces. This interaction triggers a decision from friendly leaders and are usually categorized as a non-hostile form of contact.

1-63. Whenever a force gains contact with another force, the gaining force can impede the freedom of action of that other force while enhancing their own freedom of action. For example, after gaining visual contact on

an enemy, friendly forces are able to maneuver—out of enemy contact—to a position to best destroy the enemy force. Ideally, when friendly forces engage enemy forces, they use as many different forms of contact as possible to create a dilemma for the enemy and allow the friendly force to accomplish its mission.

1-64. Leaders always account for how to defend or mitigate against the enemy using these forms of contact. They also make plans on how to use these forms of contact against the enemy. Not every unit or echelon will have all of these capabilities, but they will use as many as they have.

1-65. The nine forms of contact are—

- **Direct.** Interactions from ground-based, line of sight weapons systems (including small arms, tank main guns, and anti-tank missiles).
- **Indirect.** Interactions from non-line of sight weapons systems (including cannon artillery, mortars, and rockets).
- **Non-hostile.** Neutral interactions that may degrade military operations (including civilians on the battlefield, nongovernmental organizations, or neutral forces).
- **Obstacle.** Interactions from natural and manmade obstacles (including rivers and minefields).
- **Chemical, biological, radiological, and nuclear (CBRN).** Interactions from friendly, enemy, and civilian CBRN effects (including chemical attacks, nuclear attacks, industrial accidents, and toxic or hazardous).
- **Aerial.** Interactions from air-based combat platforms (including attack helicopters, armed UAS, and fixed-wing aircraft).
- **Visual.** Interaction from acquisition via the human eye, optical, or electro-optical systems (including ground reconnaissance, telescopic, thermal, and infrared sights on weapons and sensor platforms such as UAS and satellites).
- **Electromagnetic.** Interactions via systems used to acquire, degrade, or destroy using select portions of the electromagnetic spectrum (including radar systems, jamming, cyberspace, and electromagnetic pulse).
- **Influence.** Interactions through the information dimension intended to shape the perceptions, behaviors, and decision making of people relative to a policy or military objective (including through social media, telecommunications, human interaction, and other forms of communication and contact).

1-66. Visual contact allows a force to gain understanding of another other force with or without the other force's knowledge. With direct, indirect, and aerial forms of contact, visual contact is assumed. For CBRN, obstacle, non-hostile, electromagnetic, and influence contact, visual contact is not assumed and must be confirmed to clearly describe what is happening. For example, an animal could trigger an electronic ground sensor and a unit must confirm with visual contact whether the ground sensor was activated by enemy forces or by an animal.

1-67. When friendly forces are directed to “gain and maintain contact,” units decide which form or forms of contact is best to use for the situation. Ultimately, they are required to understand where the enemy force is and what it is trying to do all while minimizing the forms of contact the enemy has on friendly forces.

1-68. Friendly forces should expect that the enemy always has them under some form of visual, electromagnetic, and influence contact. The proliferation of communication capabilities results in an increasing ability of friendly, neutral, and adversarial actors to influence one another. The increasing use of social media on the battlefield by various actors will drive perceptions of all actors. This should not cause inaction by leaders, but rather encourage disciplined actions that will help to mitigate enemy contact. Activities to mitigate this include, but are not limited to, masking, deception, electromagnetic spectrum discipline, and camouflage.

Actions on Contact

1-69. ***Actions on contact is a process to help leaders understand what is happening and to take action.*** Actions on contact is not intended to generate a rigid, lockstep response to the enemy. Rather, the goal is to provide an orderly framework that enables leaders to apply sound decision making and timely actions to complete the operation.

1-70. Actions on contact are applicable to all types of operations. Figure 1-3 is a graphical depiction of actions on contact. They are just as applicable to a squad coming into direct fire contact with an enemy during a movement to contact, an armor company observing enemy in the defense, a signal element ambushed by the enemy, or a division in the attack. This framework is a way for leaders to quickly determine if things are going according to plan and what actions they need to take to either stay on plan or adjust to the new situation. Actions on contact are—

- React.
- Develop the situation.
- Choose an action.
- Execute and report.

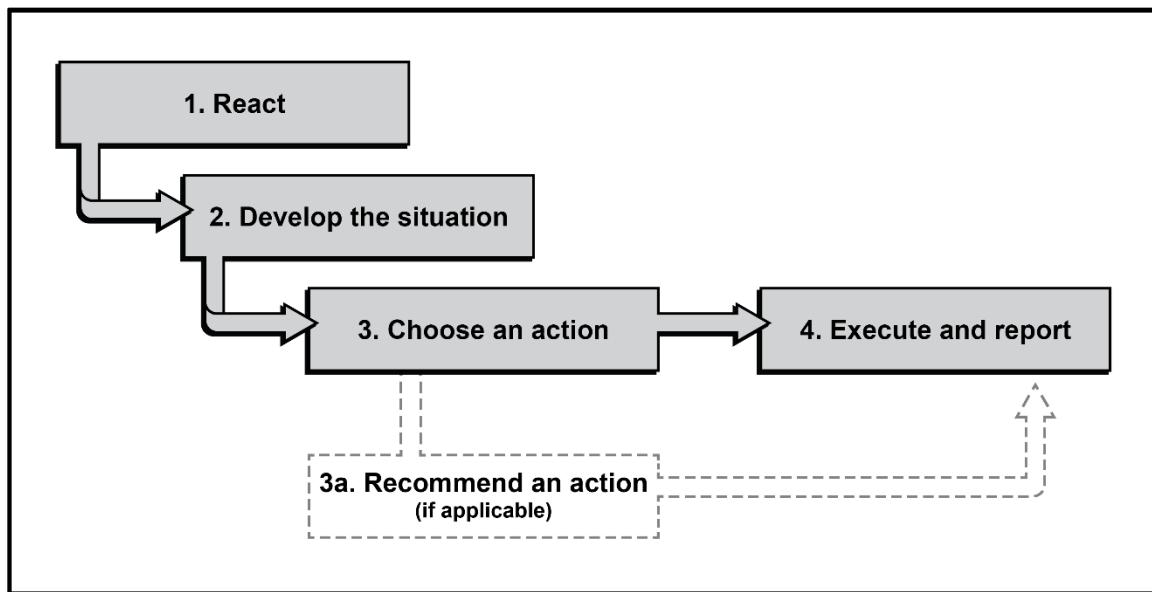


Figure 1-3. Actions on contact

1-71. No matter what a friendly force is or doing, once they make contact with the enemy, they conduct actions on contact. The unit carries out these actions on contact regardless of whether the enemy has detected its presence. Actions on contact are not to be confused with the battle drill of “react to contact” which is a trained response, requires minimal orders to accomplish, and is initiated by an enemy action. Actions on contact can also start with a unit reacting to contact, which simultaneously starts the actions on contact process for different echelons.

1-72. Typically, a unit’s standard operating procedure dictates specific actions, to include battle drills and reports, depending on the type of contact. Additionally, the mission variables, commander’s intent and guidance, and scheme of maneuver guide the actions individual units take when they make contact with enemy forces.

1-73. Leaders understand that at different echelons, actions on contact requires different amount of time to conduct with the biggest discriminator being the time it takes to develop the situation. For companies and below, units can quickly develop the situation and choose an action to execute. For battalions and higher, to synchronize their echelon properly to a new action, it may need to execute the rapid decision-making and synchronization process (known as RDSP) or a hasty military decisionmaking process (MDMP) session. Leaders balance the need to conduct their actions on contact with the need to maintain momentum.

React

1-74. If the enemy initiates the contact, the element in contact conducts the react to contact battle drill. Any unengaged portion monitors the situation and prepares to either support the portion of the unit in contact or continue the mission. Simultaneously, the unit in contact reports the contact to their higher headquarters

which helps them to develop the situation. This also alerts the higher echelon and allows the initiation of necessary actions.

1-75. If friendly forces make contact first without the enemy being aware, they pause and determine if they have been detected, if not they move to a location where they won't be observed and continue the actions on contact process. One of the tenets of multidomain operations is to make contact with the smallest element possible. This element is the one that reacts to contact, while the rest of the force begins conducting actions on contact at different tempos.

Develop the Situation

1-76. The unit in contact develops the situation to define the threat being faced. This helps to develop the situation across the front of the unit and ultimately provides more maneuver space to execute further actions. As the situation develops and the enemy force's dispositions, strength, and intentions become clearer, the unit in contact submits additional reports. Typical things to consider include, but is not limited to—

- Size, activity, location, composition, and orientation of the enemy force.
- Impact of obstacles and terrain.
- Enemy capabilities.
- Probable enemy intentions.
- Method of gaining positional advantage over the enemy.
- Friendly situation (location, strength, and capabilities).
- Possible friendly actions to achieve the specified end state.

1-77. For lower echelons such as companies and below, it will not take long to develop the situation based on their small frontage. Meanwhile for a brigade or division, based on their frontage, it will take longer to develop the situation and determine if the enemy is acting according to the plan before the commander can make an informed decision.

Choose an Action

1-78. After the unit makes contact, its leader gathers information to make an assessment based on their understanding of the enemy and friendly forces' composition and disposition and chooses an action consistent with the higher echelon commander's intent and within the unit's capabilities. These actions typically are—

- Attack.
- Bypass.
- Defend.
- Delay.
- Withdrawal.

1-79. For obstacles covered by fire, the unit can either seek a bypass or conduct breaching operations as part of a hasty attack. For obstacles not covered by fire, the unit can either seek a bypass or create the required number of lanes to support its maneuver or the maneuver of a supported unit.

1-80. Circumstances may dictate that the action requires a higher commander's approval. Reasons for needing a higher commander's approval could include—

- Action requires additional resources.
- Action is not within the commander's intent.
- Action sets conditions for the higher echelon to continue.
- Action changes their higher echelon's scheme of maneuver.

1-81. The leader of the unit in contact must report to the next higher echelon commander for action approval if the circumstances in paragraph 1-80 apply. Higher approval is required since the unit in contact's actions could change the entire friendly force's scheme of maneuver. The higher echelon carefully avoids focusing on initial security engagements to the detriment of operations directed against the enemy main body.

1-82. If the action is within the commander's intent and doesn't meet any of the criteria in paragraph 1-80 the unit in contact executes the chosen action with no additional approval needed. To avoid delay, unit

standard operating procedures (SOPs) and commander guidance may provide automatic approval of certain actions. The next higher echelon commander always has the option of disapproving the unit in contact's action based on its impact to the overall mission.

Execute and Report

1-83. With the action selected and, if needed, approved by their higher echelon, the unit in contact takes the appropriate actions. The unit initiates direct and indirect fires to gain the initiative if it is appropriate to engage enemy forces. If the action is to attack, the unit in contact immediately attacks if it has sufficient, immediately available combat power to overwhelm the enemy force. If the action is to defend or withdraw the unit in contact does so while maintaining contact and continuing to gain as much information as possible about the enemy forces disposition and positions. If the action is to bypass the enemy, the unit in contact maintains contact and continues their mission. Unless specifically told by their higher headquarters to break contact, the unit in contact will maintain contact no matter which action is chosen. Regardless of the chosen action, reporting to the next higher echelon is required to ensure the unit is staying within the commander's intent.

Tactical Mission Tasks

1-84. A *task* is a clearly defined action or activity specifically assigned to an individual or organization, or derived during mission analysis, that must be done as it is imposed by an appropriate authority (JP 1, Vol 1). **A tactical mission task is the specific activity a unit performs while executing a tactical operation or form of maneuver.** Tactical mission tasks are used as components of a mission statement or given as tasks to subordinate units. While all tactical mission tasks are defined, most have a symbol. Appendix B lists tactical mission tasks, their definitions, and shows their associated symbol.

1-85. Tactical mission tasks are essential in the development of a mission statement. A *mission statement* is a short sentence or paragraph that describes the organization's essential task(s), purpose, and action containing the elements of who, what, when, where, and why (JP 5-0). The "what" is either a task or a type of operation or both and is expressed in terms of action verbs. For example, a higher headquarters can assign a subordinate unit to conduct an area defense and block the enemy to prevent the enemy from crossing a phase line. The purpose or the why of the mission statement is interconnected to the tactical task. The "why" provides the reason the unit is to execute the task and the method the unit contributes to the higher echelon's headquarters. The purpose is critical in the formation of the mission statement. (See ATP 5-0.2-2 for an example list of purposes.)

Multinational Operations Considerations

1-86. Army forces can expect to operate with multinational partners. *Multinational operations* is a collective term to describe military actions conducted by forces of two or more nations, usually undertaken within the structure of a coalition or alliance (JP 3-16). Multinational operations present opportunities including—

- Providing international legitimacy that helps isolate adversary or enemy forces.
- Partners may have different authorities allowing them to employ capabilities in multiple domains.
- Providing additional combat forces who may possess capabilities the joint force may lack.

1-87. Multinational operational operations also include numerous challenges including—

- Language issues.
- National caveats on the use of forces, rules of engagement, authorities, and approval to share information and intelligence.
- Interoperability concerns.

1-88. *Interoperability* is the ability to act together coherently, effectively, and efficiently to achieve tactical, operational, and strategic objectives (JP 3-0). The Army's approach to interoperability encompasses all components and operational domains. This approach facilitates the ability of Army forces to operate with other unified action partners, including multinational partners. To increase multinational interoperability the Army participates in numerous bilateral and multilateral activities. Some of these activities result in standardization agreements or doctrine. These products serve as a baseline for cooperation among multinational partners. For tactical Army forces, these products can be transparent. For example, Army forces

operating as part of the multinational North Atlantic Treaty Organization use the same military operational symbols as their multinational partners. These agreements streamline sharing and communicating graphic operational information such as overlays among members.

1-89. Situations may arise where Army forces execute operations with multinational partners without an existing standardization agreement. This is most likely to occur during ad-hoc multinational operations. During these situations units must rely on liaison officers, clear and uncomplicated orders, and sharing sound tactical advice with their partners. Whenever possible, units take advantage of opportunities to train with multinational forces to increase their skills in executing multinational operations. (See FM 3-16 for more information on multinational operations.)

MOVEMENT AND MANEUVER WARFIGHTING FUNCTION

1-90. The *movement and maneuver warfighting function* is the related tasks and systems that move and employ forces to achieve a position of relative advantage over the enemy and other threats (ADP 3-0). Direct fire and close combat are inherent in maneuver. The movement and maneuver warfighting function includes tasks associated with force projection. Movement is necessary to disperse and displace the force as a whole or in part when maneuvering. Maneuver directly gains or exploits positions of relative advantage to accomplish the mission.

1-91. The movement and maneuver warfighting function includes these tasks:

- Move.
- Maneuver.
- Employ direct fires.
- Occupy an area.
- Conduct mobility and countermobility.
- Conduct reconnaissance and surveillance.
- Employ battlefield obscuration.

Local Security

1-92. *Local security* is the low-level security activities conducted near a unit to prevent surprise by the enemy (ADP 3-90). It includes any local measure taken by all friendly units against enemy actions to prevent a unit from being surprised and is an important part of maintaining the initiative. It involves avoiding enemy detection or deceiving enemy forces about friendly positions and intentions. It also includes finding any enemy forces in the immediate vicinity and knowing as much as possible about the enemy force's positions and intentions. Local security prevents a unit from being surprised, and it is an important part of maintaining the initiative. All units perform local security when conducting operations.

1-93. Units use both active and passive measures to provide local security. Active measures include using observation posts and patrols, establishing specific levels of alert in the unit, and establishing SOPs detailing alert procedures. Passive local security measures include using camouflage, movement control, noise and light discipline, electromagnetic protection, and proper communications procedures. They also include employing available sensors, night vision devices, and daylight sights to maintain surveillance over the immediate area.

Reserve

1-94. A *reserve* is that portion of a body of troops that is withheld from action at the beginning of an engagement to be available for a decisive movement (ADP 3-90). Commanders employ their reserves to exploit success or prevent failure. A reserve provides the unit flexibility by responding to unexpected situations and enables friendly forces to exploit or regain the initiative quickly because it is an uncommitted force. Once committed, a reserve's actions normally become or reinforce the echelon's main effort. Often a commander's most difficult and important decision concerns the time, place, and circumstances for committing the reserve. Commanders do not employ their reserve as a follow and support force or a follow and assume force. Other considerations for commanders are not placing artillery and other fire support

systems and reconnaissance assets in reserve. Such systems committed to echelon support operations are not in reserve.

1-95. Units also plan how to reconstitute their reserves after commitment of their original reserves. A higher unit can designate a subordinate unit's reserves as its new echelon reserve or assign another subordinate unit to assume the mission of the reserve. Units have more flexibility and can take greater risk in employing their reserves if their higher echelon headquarters has not committed its reserve. Units never develop a course of action (COA) that assumes the use of a higher echelons reserve.

1-96. Commander's generally place their reserve where they can easily reinforce the main effort and whenever possible, beyond the enemy force's direct fire range. Commanders decide whether to orient their reserves on their most likely mission or their most important mission when deciding where to place their reserves. They generally position their reserves to the rear of their units, in a location that provides maximum protection from enemy observation and fire. Units consider several factors when determining the exact location for their reserves. These factors include:

- Orientating on their most likely mission or their most important mission.
- Response time to various planning priorities.
- Access to main supply routes (MSRs).
- Locations of probable enemy penetrations.
- Terrain.
- Availability of cover and concealment.

Initially units may position their reserves in forward locations to deceive enemy forces and obscure subordinate unit boundaries. Obscuring subordinate unit boundaries is especially important for dissimilar units such as armored and dismounted infantry.

1-97. Units can task-organize their reserves into small elements and position them where they can react quickly to local combat developments in restrictive terrain that lacks movement routes. This dispersion provides increased protection, but it reduces the ability of a reserve to mass fires. Units look for the availability of covered lateral and forward high-speed deployment routes for their reserves. These reserves require movement priority along those routes when they are committed. Units ensure the maintenance of communications between these dispersed elements. This may require establishing retransmission nodes for combat net radios. Units maintain centrally located reserves positioned somewhat farther from the FLOT in open terrain. An enemy forces' potential to employ weapons of mass destruction and conduct air interdiction are other factors commanders consider when deciding where to position their reserves.

1-98. Units position their reserves beyond the enemy force's direct fire range whenever possible. This is easier to achieve at higher echelons than at lower echelons. Each reserve element takes defensive measures to prevent its acquisition and attack by enemy indirect fire systems. These measures include camouflage, local security, and control of electronic emissions.

1-99. A reserve must be able to move quickly to different locations in response to different contingencies. For example, a quick reaction force is a type of reserve used during stability operations. **A quick reaction force is a commander designated force to respond to threat attacks or emergencies.** For armored and Stryker reserves, an important consideration is cross-country mobility or road networks. For dismounted infantry forces, the key considerations are the existing road networks, the availability of ground and air transportation, or the availability of pickup and landing zones for use by supporting assets that enable the reserve to conduct air assault operations. This is easier to achieve at higher echelons than at lower echelons. Each reserve element takes defensive measures to prevent its acquisition and attack by enemy indirect fire systems. These measures include camouflage, local security, and control of electromagnetic emissions.

1-100. When issuing orders, commanders assign the reserve the task of "reserve" and assign it priorities for planning, which is unlike other subordinate elements that are assigned a tactical mission task and purpose. Commanders assign no more than three planning priorities based on the probability they could happen and time to prepare. Commitment of the reserve is listed on the commander's decision support matrix and decision support table.

Daylight Operations

1-101. Daylight operations allow friendly forces to use their equipment while facilitating control of their maneuver. They are psychologically and physically the least stressful on the units. Also, the unit can control movement more easily when all subordinates can see one another. Two major disadvantages to daylight operations are enemy forces can use their weapon systems more effectively to oppose friendly forces and friendly forces neutralize any technical overmatch they have for operations during limited visibility.

Limited-Visibility Operations

1-102. There are two general limited-visibility conditions: those in which technology, such as thermal sights, can overcome or partially overcome, and those that such technology cannot overcome. The first category includes darkness. The second category includes dense battlefield dust, smoke, heavy rain, snow, fog, or any other conditions that artificial illumination, image intensification, radar, or other sensors cannot partially overcome.

1-103. The mission variables normally require an operation conducted during limited visibility to be more deliberate than in daylight operations. The exception is when an attack occurs as part of the follow up to a daylight attack or as part of an exploitation or pursuit. Units planning night attacks consider how limited visibility complicates controlling units, Soldiers, and fires. Limited visibility also complicates identifying and engaging targets; navigating and moving without detection; locating, treating, and evacuating casualties; and locating, bypassing, or breaching obstacles.

1-104. Trained forces equipped for limited-visibility operations have significant advantages over enemy forces that are unprepared for limited-visibility operations. Examples of limited-visibility operations are nighttime, weather (blizzards, sandstorms, and heavy rain), and thick vegetation. When enemy forces have increased their limited-visibility capabilities, friendly forces must emphasize noise and light discipline during limited-visibility operations. For example, Soldiers who leave their laser sights on increase the likelihood of revealing their position and losing the element of surprise. Table 1-1 on page 1-19 outlines the advantages and disadvantages of conducting limited-visibility attacks.

1-105. The organization of forces for a limited-visibility operation is the same during daylight operations. However, changing an existing task organization under limited-visibility conditions typically requires more time and effort than it does during daylight operations.

1-106. Non-illuminated attacks offer the best chance of gaining surprise. However, units plan for illumination for every limited-visibility operation, so that it is readily available if required. Units can choose to conduct a non-illuminated operation until subordinate forces make contact with enemy forces. At that point, they can direct the illumination of the objective. Enemy units can also choose to employ illumination to increase the effectiveness of their efforts. All leaders within an attacking unit must understand the time, conditions, and employment authority for illumination.

1-107. Units plan for limited-visibility operations as they do for daylight operations while emphasizing—

- Keeping the plan simple.
- Taking additional time for reconnaissance.
- Taking advantage of easily identifiable terrain features, such as roads and railroad tracks, when establishing control measures.
- Using intermediate objectives as necessary to control and maintain the correct movement direction during the attack.
- Concealing preparations.
- Scheduling initial rehearsals during daylight, with the final rehearsal at night.
- Positioning security elements.

Table 1-1. Considerations for limited-visibility operations

Advantages of limited-visibility operations	Disadvantages of limited-visibility operations
<ul style="list-style-type: none"> • Defenses are more susceptible to infiltration. • Darkness can conceal the movement and position of large forces in both offense and defense. Physical and psychological factors favor attacking forces, as shock, disorientation, and isolation are easier to achieve. • Air assets can operate more easily in contested airspace because air defenders with only optical sights have greater difficulty acquiring targets at night. • The element of surprise may increase because forces are more susceptible to military deception techniques, such as decoy fighting positions, decoy equipment, dummy lights, noise, obscuration, and fires. Applies to both offense and defense. • Reserves cannot employ as quickly at night as forces can during daylight conditions. True for both offense and defense. Defense likely benefits from interior lines when employing the reserve. 	<ul style="list-style-type: none"> • Control of maneuver forces in the absence of technical means is more difficult. • Stationary defending forces can react more easily than attacking forces. • Extreme weather may degrade or prevent aviation support, including unmanned aircraft systems. • Attacking forces have increased difficulty determining the limits of obstacle systems. • Restrictive terrain is more difficult to traverse. • Light, obscuration, noise, and fires can deceive attacking and defending forces. • Attacking forces lose momentum because of the need to conduct attacks at a reduced tempo to maintain the coherence of the unit. • Land navigation is more difficult at night; units may get separated, lose cohesion, and support elements can move to the wrong positions. • Defending forces can reposition or emplace obstacles during limited visibility to help avoid detection by friendly information collection assets. • Attacking units are easier to ambush at night. • Adjusting indirect fire is difficult, even with night-vision devices or illumination. • Units require significantly larger quantities of signal ammunition such as tracers, flares, and illumination rounds. • Units have more difficulty locating and evacuating casualties. • The risk of fratricide increases. • Effective range of direct fire weapon systems decreases due to visibility, degraded target detection and identification.

1-108. Units establish control measures to facilitate visualizing, describing, and directing subordinate and supporting forces during limited-visibility operations. Units also take advantage of the technical capabilities of advanced equipment as they become available.

1-109. Absent positive information to the contrary, units must assume that enemy forces possess the same limited-visibility observation capabilities as friendly forces when conducting a limited-visibility operations. Using terrain to mask movement and deployment remains critical because limited visibility may create a false sense of protection from enemy observation. During movement, leaders reduce the distances between vehicles or individual Soldiers as necessary to allow one system or Soldier to observe the other. This decreases the time necessary to react to enemy contact.

Movement

1-110. In the context of Army tactics, *movement* is the positioning of combat power to establish the conditions for maneuver (ADP 3-90). The distinction between movement and maneuver is whether or not friendly forces are moving in conjunction with friendly direct or established indirect fire support. A friendly force chooses a movement technique based on the threat prior to enemy contact. To direct movement, Army forces use the movement techniques, movement formations, and battle drills to mitigate the risk of making

contact with the enemy before maneuvering. (See Chapter 2 for more information on movement techniques and formations.)

Employment of Direct Fires

1-111. A **field of fire** is the area that a weapon or group of weapons may cover effectively from a given position. In selecting a position, a unit must balance how the field of fire will best gain an advantage while simultaneously providing cover and mitigating the effect of the enemy's weapons systems.

1-112. Fire control measures are the means by which leaders control direct fires. Application of these concepts, procedures, and techniques helps the unit acquire the enemy, focus fires on the enemy, distribute the results of the fires, and prevent fratricide. At the same time, no single measure suffices to control fires effectively. Common fire control measures are—

- Target reference point.
- Rules of engagement.
- Engagement area.
- Sector of fire.
- Weapons safety posture.
- Direction of fire.
- Weapons control status.
- Terrain-based quadrant.
- Engagement priorities.
- Friendly-based quadrant.
- Trigger.
- Maximum engagement line.
- Restrictive fire line (RFL).
- Final protective line (FPL).
- Engagement techniques.
- Fire patterns.
- Target array.

Principles for Direct Fire Planning and Control

1-113. Leaders apply eight fundamental principles during planning, preparing for, and executing direct fires. These principles are not to restrict the actions of subordinates but to facilitate their ability to acquire and to engage with direct fire against the threat. These principles are—

- Destroy the greatest threat first.
- Mass the effects of direct fire.
- Employ the best weapon for the specific target.
- Avoid target overkill.
- Minimize exposure.
- Plan and implement control measures.
- Plan for limited-visibility conditions.
- Plan for degraded capabilities.

Destroy the Greatest Threat First

1-114. The order in which the unit engages enemy forces directly relates to the danger they present and how the engagement will seize the initiative. Leaders should assess the greatest threat not only in terms of capability, but also how a given target nests within the enemy's capabilities and desired friendly end state. The enemy forces' threat depends on their weapons, range, and positioning in relation to and comparison to the friendly force. In general, a friendly force, when presented with multiple targets, should initially concentrate fires to destroy the greatest threat, and then distribute fires over the remainder of the enemy force.

At the tactical unit level, the greatest threat may be an enemy command and control system, which directs the fires and maneuver of the enemy force.

Mass the Effects of Direct Fire

1-115. Leader's mass direct fires to achieve decisive results. Massing direct fires entails focusing available direct fires at critical points and distributing the effects. Random application of direct fires is unlikely to have a desired effect on the enemy.

Employ the Best Weapon for the Specific Target

1-116. Using the appropriate weapon for the target increases the probability of rapid enemy destruction or suppression while preserving resources. Key factors on determining the employment of weapon and ammunition type are target type, range, exposure, weapons and ammunition availability, and desired targets effects. Units array forces based on the mission variables.

Avoid Target Overkill

1-117. Target overkill—the overuse of weapon systems to achieve an effect—wastes ammunition and ties up weapons that are better employed acquiring and engaging other threats. Having every weapon engage a different threat, however, must be tempered by the requirement to destroy the greatest threats first. Commanders use only the amount of fire required to achieve the necessary effects. There may be reasons to demonstrate target overkill as a method directed against enemy morale in specific conditions related to commander's intent.

Minimize Exposure

1-118. The unit increases its survivability by exposing Soldiers to the minimal extent necessary to engage the enemy effectively. Natural or manmade defilades provide the best cover from lethal direct fire munitions. Friendly units minimize exposure by constantly seeking effective available cover, attempting to engage the enemy from the flank, remaining dispersed, firing from multiple positions, and limiting engagement times.

Plan and Implement Control Measures

1-119. The unit has numerous tools to assist in the planning and implementation of controlling direct fires. These tools include graphic control measures for friendly forces, engagement criteria, identification training for combat vehicles and aircraft, unit weapons safety posture, weapons control status, recognition markings, and a situational understanding to include range cards, area sketches, and rehearsals. Knowledge and employment of applicable control measures are the primary means of preventing fratricide and noncombatant casualties.

Plan for Limited-Visibility Conditions

1-120. Units operating during hours of limited visibility can engage enemy forces at nearly the same range as during daylight hours with limited-visibility fire control equipment. Units should inspect and bring their limited-visibility equipment prior to conducting operations. This prevents Soldiers from becoming unprepared to the changes in the weather and from daylight to nighttime.

1-121. Obscurants such as dense fog, heavy smoke, and blowing sand can reduce the capabilities of thermal and infrared equipment. Although decreased acquisition capabilities have minimal effect on area fire, point target engagements can occur at decreased ranges. The unit develops contingency plans for such extreme limited-visibility conditions, such as establishing listening posts, trigger lines, and target reference points capable of visual contact with thermals.

Plan for Degraded Capabilities

1-122. The unit initially develops a plan based on the unit's maximum effective capabilities. It then makes alternate plans for implementation in the event of casualties, weapon damage, or failure. While units cannot anticipate or plan for every situation, they plan for the most probable occurrences. Building redundancy into

the plan, such as having two systems observe the same area, is an invaluable asset when the situation (and the number of available systems) permits. Designating alternate sectors of fire provides adjacent elements a means of shifting fires if the enemy knocks one of them out of action.

Consolidate

1-123. **Consolidate is to organize and strengthen a captured position to use it against the enemy.** Units continuously assess their combat power and determine if they are achieving their objectives. At times, they may need to consolidate or reconstitute their forces. Units consolidate to ensure the friendly force maintains its capability and does not lose what it has gained or become disadvantaged. There is a difference between the actions taken to consolidate and to reconstitute.

1-124. Units consolidate on seized positions by repelling enemy forces only if it is tactically necessary or advantageous. Normally, units exploit their successes. However, they may have to take tactical pauses while performing their actions to consolidate, given the existing mission variables. Consolidate may vary from a rapid repositioning of forces and security elements to a reorganization of the friendly force and detailed improvement of the position for defense. Consolidate includes—

- Conducting reconnaissance.
- Establishing security.
- Eliminating enemy pockets of resistance.
- Positioning forces to enable them to defend against possible enemy counterattacks.
- Adjusting direct and indirect fire planning.
- Preparing their units for potential follow-on missions.

Chapter 5 discusses consolidate in detail as part of the offense.

Reconstitution

1-125. *Reconstitution* is an operation that commanders plan and implement to restore units to a desired level of combat effectiveness commensurate with mission requirements and available resources (ATP 3-94.4). Reconstitution consists of two major elements: reorganization and regeneration. Reconstitution operations are essential to rebuilding the combat power of a degraded unit. This encompasses more than just accumulating personnel and weapons systems and then projecting them forward. Because of the likely heavy casualties during combat operations, surviving leaders and undamaged equipment are likely to assume new roles in a reconstituted unit.

Reorganization

1-126. *Reorganization* is all measures taken by the commander to maintain unit combat effectiveness or return it to a specified level of combat capability (ATP 3-94.4). Reorganization is the action of expedient cross leveling of internal resources in a degraded unit in place to restore or increase combat effectiveness. Reorganization is an option when the operating tempo is such that the risk for removing a unit from the operation risks the mission. There are two types of reorganization operations, immediate and deliberate. Units base the type of reorganization operation executed on mission variables. These actions include—

- Cross-leveling equipment and personnel.
- Matching operational weapon systems with crews.
- Forming composite units by joining two or more attrited units to form a single mission-capable unit.
- Changing task organization in preparation for the next operation.

1-127. Immediate reorganization is the quick and usually temporary restoration of degraded units to minimum levels of effectiveness. Normally, a unit implements immediate reorganization in its current combat position or as close to that site as possible to meet near-term needs. To accomplish this, units use information in orders, unit SOPs (such as battle rosters, redistribution criteria, and contingency manning standards), and immediately available assets.

1-128. Units conduct deliberate reorganization when they have more time and resources available. It usually occurs farther to the rear than immediate reorganization. Procedures are similar to those for immediate reorganization, but some replacement personnel and equipment may be available, and the unit has additional time to conduct resupply and maintenance activities.

1-129. Reorganization aims to improve a unit's capability until more extensive efforts can occur if resources, the tactical situation, and time permit. Since reorganization involves activities internal to a unit, it is the most expedient means of maintaining combat power after contact with the enemy.

Regeneration

1-130. *Regeneration* is the rebuilding of a unit through large-scale replacement of personnel, equipment, and supplies, including the reestablishment of essential command and control and the conduct of mission-essential training for the unit (ATP 3-94.4). Regeneration is the deliberate restoration of a unit's combat power; it is considerably more resource intensive than reorganization. Regeneration is time intensive and requires days to weeks to execute. Because of the intensive nature of regeneration, it occurs at a designated regeneration site after the unit disengages from operations. Commanders normally situate the regeneration site in a relatively secure location. Tactical units only execute and do not plan the regeneration process.

INTELLIGENCE WARFIGHTING FUNCTION

1-131. The *intelligence warfighting function* is the related tasks and systems that facilitate understanding the enemy, terrain, weather, civil considerations, and other significant aspects of the operational environment (ADP 3-0). The intelligence warfighting function fuses the information collected through with primary tactical tasks of reconnaissance, surveillance, security operations, and intelligence operations.

1-132. Intelligence is a product, a process, and a function that enables the Army to conduct operations by supporting the commander and command and control (which is accomplished by supporting the rest of the staff). Commanders and staffs rely on many different types of intelligence products. The intelligence process is continuous and directly supports the operations process by developing information requirements, collecting on those requirements, processing data into information, analyzing information and intelligence from all sources, producing intelligence, and when necessary, developing the situation through operations.

1-133. Intelligence supports decision makers and staffs by providing situational understanding of the threat, terrain and weather, civil considerations, and other aspects of the operational environment. Intelligence supports the commander and staff with analysis and production of effective timely, relevant, accurate, and predictive assessments and products tailored to the commander's and staff's specific needs.

1-134. The intelligence warfighting function supports the commander through a broad range of tasks. These tasks are interrelated, require the participation of the commander and staff, and are often conducted simultaneously. The intelligence warfighting function tasks facilitate the commander's visualization and understanding of the threat and other relevant aspects of the operational environment. The intelligence warfighting function includes the following tasks:

- Provide intelligence support to force generation—the task of generating intelligence knowledge concerning an operational environment, facilitating future intelligence operations, and tailoring the force.
- Provide support to situational understanding—the task of providing information and intelligence to commanders to assist them in achieving a clear understanding of the force's current state with relation to the threat and other relevant aspects of the operational environment.
- Conduct information collection—the task that synchronizes and integrates the planning and employment of sensors and assets as well as the processing, exploitation, and dissemination systems in direct support of current and future operations.
- Provide intelligence support to targeting and information operations—the task of providing the commander information and intelligence support for targeting to achieve lethal and nonlethal effects.

Table 1-2 on page 1-24 illustrates how the intelligence warfighting function tasks support the commander. See ADP 2-0 and FM 2-0 for more discussions on intelligence tasks.

Table 1-2. Intelligence warfighting function tasks that support the commander

Intelligence tasks	Commander's focus	Commander's decisions
Provide intelligence support to force generation: •Provide intelligence readiness. •Establish an intelligence architecture. •Provide intelligence overwatch. •Generate intelligence knowledge. •Tailor the intelligence force.	Orient on contingencies.	•Should the unit's level of readiness be increased? •Should the operation plan be implemented?
Provide support to situational understanding: •Perform IPB. •Perform situation development. •Provide tactical intelligence overwatch. •Conduct police intelligence operations. •Provide intelligence support to civil affairs operations.	•Plan an operation. •Prepare. •Execute. •Assess. •Secure the force. •Determine 2nd and 3rd order effects on operations and the populace.	•Which COA will be implemented? •Which enemy actions are expected? •What mitigation strategies should be developed and implemented to reduce the potential impact of operations on the population?
Conduct information collection: •Collection management. •Direct information collection. •Execute collection. •Conduct intelligence-related missions and operations.	•Plan information collection for an operation, including PED requirements. •Prepare. •Execute. •Assess.	Which DPs, HPTs, and HVTs are linked to the threat's actions? •Are the assets available and in position to collect on the DPs, HPTs, and HVTs? •Have the assets been repositioned for branches or sequels?
Provide intelligence support to targeting and information operations: •Provide intelligence support to targeting. •Provide intelligence support to information operations. •Provide intelligence support to combat assessment.	•Create lethal or nonlethal effects against targets. •Destroy, suppress, disrupt, or neutralize targets. •Reposition intelligence or attack assets.	•Are the unit's lethal and nonlethal actions and maneuver effective? •Which targets should be re-engaged? •Are the unit's information operations effective?
COA course of action DP decision point HPT high-payoff target	HVT IPB PED	high-value target intelligence preparation of the battlefield processing, exploitation, and dissemination

FIRE WARFIGHTING FUNCTION

1-135. The *fires warfighting function* is the related tasks and systems that create and converge effects in all domains against the adversary or enemy to enable operations across the range of military operations (ADP 3-0). Units must execute and integrate fires, in combination with the other elements of combat power, to create and converge effects and achieve the desired end state.

1-136. The fires warfighting function tasks are—

- Execute fires across the five domains and in the information environment, employing—
 - Surface-to-surface fires.
 - Air-to-surface fires.
 - Surface-to-air fires.
 - Cyberspace operations and electromagnetic warfare.
 - Space operations.

- Multinational fires.
- Special operations.
- Information operations.
- Integrate Army, multinational, and joint fires through—
 - Targeting.
 - Operations process.
 - Fire support planning.
 - Airspace planning and management.
 - Electromagnetic spectrum management.
 - Multinational integration.
 - Rehearsals.

For additional information on fires tasks see ADP 3-19, FM 3-09, and FM 3-01.

1-137. The military decision-making process (MDMP) synchronizes the unit's scheme of maneuver with the provision of fire support. The plan must identify critical times and places where units need the maximum effects from their fire support assets. That planning must consider existing limitations on employing fires, such as rules of engagement, presence of friendly forces within the assigned area, desired conditions of subsequent phases, and requirements for collateral damage assessments. Each commander's guidance gives specified attack criteria for supporting fires assets, thus focusing the staff and unit planning and execution efforts on those critical times and events. Specified attack criteria are a compilation of commander's guidance, desired effects, and high-payoff targets and attack priorities. The time available to plan operations constrains a commander's ability to synchronize fire support operations that employ well-matched effects of all available assets against high-payoff targets.

1-138. The integration of indirect fire support is fundamental to the success of a unit's scheme of maneuver. Indirect fire planning reconciles top-down planning and bottom-up refinement. Indirect fire supports the unit's maneuver by planning preparation fires, which includes the different types of effects: harassing, interdiction, suppressive, destruction, and deception fires. These fires can be time or event driven. (See FM 3-09 for definition of desired effects.)

Fire Support Planning and Coordination

1-139. The unit's ability to orchestrate and employ all available fire support resources as a system and to integrate and synchronize fire support with the concept of operations results from an established process known as fire support planning and coordination. *Fire support planning* is the continuous process of analyzing, allocating, integrating, synchronizing, and scheduling fires to describe how the effects of fires facilitate maneuver force actions (FM 3-09). Successful fire support planning is the result of the fire support coordinator's aggressive contribution to the maneuver commander's planning and decision-making process. *Fire support coordination* is the planning and executing of fire so targets are adequately covered by a suitable weapon or group of weapons (JP 3-09). Formal coordination binds fire support resources together to create a unity of effort so that the multiple effects of each fire support asset across all domains are rapidly and continuously integrated and synchronized with the scheme of maneuver.

1-140. Fire supporters utilize the principles of fire support planning and coordination when advising the unit on the execution of fire support. These principles are extensions of the functions of fire support. The fire support planning and coordination principles are—

- Plan early and continuously.
- Ensure the continuous flow of targeting information.
- Consider the use of all lethal and nonlethal attack capabilities.
- Furnish the type of support requested.
- Use the most effective fire support attack/delivery system.
- Avoid unnecessary duplication.
- Consider airspace coordination.
- Provide adequate support.

- Provide for rapid and continuous coordination.
- Provide for flexibility.
- Use fire support coordination measures.

1-141. During execution, fire supporters use the principles of fire support execution to anticipate the dynamics of combat operations, maintain situational awareness of the operational environment, and leverage interoperable fire support command and control systems and attack and delivery capabilities. The fire support execution principles include—

- Adequate fire support for the committed units.
- Weight to the main effort.
- Immediately available fire support for the commander to influence the operation.
- Facilitate future operations.
- Maximize feasible centralized control.
- Never place artillery in reserve.

1-142. Units emphasize accomplishing simple and rapidly integrated fire support plans using quick-fire planning techniques and SOPs to focus fires on seizing the initiative. They integrate their fire assets as far forward as possible in their movement formations to facilitate the early emplacement of those assets. One example of this integration is the use of an unmanned aircraft system forward site team from a combat aviation brigade temporarily attached to a field artillery brigade to identify targets for destruction.

1-143. Artillery, mortars, and some electromagnetic attack capabilities must occupy positions that are well forward and still within supporting range of the flanks of maneuver forces to provide responsive indirect and nonlethal fires. Units consider the effect that movement by echelon or battery has on the amount of fire support available. They should support the unit's main effort with priority of fires.

1-144. Responsiveness can be achieved by the following:

- Training, especially digital sustainment training.
- Streamlining the call for fire by using digital systems.
- Planning fire support requirements in advance.
- Establishing a permissive battlefield design, to include airspace.
- Establishing permissive fire support coordination measures.
- Conducting rehearsals.
- Employing time on target.
- Continually training observers in all aspects of fire support.
- Limiting radio transmissions on fire networks to time-sensitive, mission-essential traffic only.

1-145. The linking of Army forward observers, joint fires observers, and target acquisition assets to quick fire or exclusive networks also provides responsive fires. Responsive fire networks allow the lead observers to communicate directly with specific field artillery and mortar units. These kinds of communications arrangements enhance responsiveness through streamlined net structures and focused priorities. Communications planning should also include the need for communications networks for the clearing of targets for rotary- and fixed-wing attacks.

1-146. Army units focus on integrating and synchronizing lethal and nonlethal activities. To preserve warfighting capabilities, and reduce the capabilities of potential adversaries, units utilize combinations of cyberspace, space operations, information operations, and electromagnetic warfare capabilities to seize, retain, and exploit the initiative. At the BCT level and above, units utilize cyberspace electromagnetic activities sections to assist in requesting cyberspace and electromagnetic warfare capabilities. These include offensive and defensive cyberspace, and Department of Defense information network operations, electromagnetic attack, electromagnetic protection, and electromagnetic warfare support. (For more information on cyberspace and electromagnetic warfare, see FM 3-12).

Airspace Control and Airspace Management

1-147. The joint force commander designates an airspace control authority to develop, coordinate, and publish airspace control procedures for operating the airspace control system in the joint operations area. The airspace control authority establishes an airspace control plan that provides specific planning guidance and procedures for the airspace control system for the joint operations area. The airspace control order is an order implementing the airspace control plan that provides the details of the approved requests for airspace coordinating measures (JP 3-52).

1-148. *Airspace control* is the exercise of delegated authority over designated airspace and users through control procedures and coordination measures to maximize operational effectiveness (JP 3-52). Airspace control is not synonymous with airspace management. Airspace control is reliant on airspace management capabilities provided by airspace control elements including military, U.S. civil, and host-nation air traffic control. *Airspace management* is the planning, coordination, integration, and regulation of airspace by airspace control elements in support of airspace control (JP 3-52). Controlling and managing airspace is a requirement to effectively integrate capabilities from multiple domains during military operations.

1-149. Any formation that employs aviation platforms (including UAS), surface-to-surface fires, or surface-to-air fires is an airspace user. Therefore, leaders at all echelons must understand the techniques and procedures used to integrate airspace capabilities into ground schemes of maneuver. At the tactical level, while numerous echelons can perform airspace management tasks, the division is the lowest echelon capable of performing airspace control. At battalion level and above, the U.S. Air Force provides tactical air control parties to assist in airspace management and provide terminal attack control of close air support missions.

1-150. Army units develop unit airspace plans, which consist of airspace coordinating measures (ACMs) that are integrated to support operations. BCT and above headquarters submit their unit airspace plans to their higher headquarters for inclusion into that echelon's unit airspace plan. Ultimately, the consolidated unit airspace plan reaches the battlefield coordination detachment and these ACMs, which are the Army's requirements for airspace, are then combined with the other components of the joint force airspace requirements and integrated into the airspace control order produced by the Joint Force Air Component Command.

1-151. ACMs are employed to facilitate the efficient use of airspace to accomplish missions and simultaneously provide safeguards for friendly forces. Airspace elements establish ACMs to accomplish one or more functions:

- Establish coordinated airspace for specific airspace users.
- Restrict the actions of some airspace users.
- Create airspace in which units can use weapons with minimum risk to other friendly forces.
- Control actions of specific airspace users.
- Require airspace users to accomplish specific actions.

See JP 3-52, FM 3-52, ATP 3-52.1/MCRP 3-20F.4 (MCWP 3-25.13)/NTTP 3-56.4/AFTTP 3-2.78, and ATP 3-91.1/AFTTP 3-2.86 for more information on airspace control and airspace management processes, procedures, and control measures.

SUSTAINMENT WARFIGHTING FUNCTION

1-152. The *sustainment warfighting function* is the related tasks and systems that provide support and services to ensure freedom of action, extended operational reach, and prolong endurance (ADP 3-0). Sustainment determines the depth and duration of Army operations. Successful sustainment enables freedom of action by increasing the number of options available to the commander. Sustainment is essential for retaining and exploiting the initiative. The sustainment warfighting function consists of four elements:

- Logistics.
- Health service support.
- Financial management.
- Personnel services.

FM 3-90 focuses on logistics, and medical considerations as they apply to tactical operations. For additional information on the sustainment warfighting function see ADP 4-0.

Logistics

1-153. During planning, units assess their basic load to determine its adequacy to support an operation. A *basic load* is the quantity of supplies required to be on hand within, and moved by a unit formation, expressed according to the wartime organization of the unit or formation and maintained at the prescribed levels (JP 4-09). Units further configure their basic load into combat loads for specific missions. *Combat loads* are the minimum mission-essential equipment and supplies as determined by the commander responsible for carrying out the mission, required for Soldiers to fight and survive immediate combat operations (FM 4-40). Combat loads are not standardized nor are quantities established since all are mission dependent.

1-154. Units can use logistics packages and throughput distribution of combat configured loads to resupply maneuver units maintaining momentum and tempo. A **logistics package is a grouping of multiple classes of supply and supply vehicles under the control of a single convoy commander**. Throughput distribution is a method of distribution which bypasses one or more intermediate supply echelons in the supply system to avoid multiple handling. A combat configured load consists of packages of water, Class I, Class III (B), Class IV, Class V, Class VIII, and Class IX constructed to support the type and mission of a maneuver unit. The supporting unit calculates and recommends the composition of combat configured loads based upon the controlled supply rate, forecasting, and historical data. Units determine the amount of cross loading required for supplies to prevent all of one type of supply from loss by the destruction of a single vehicle or aircraft. Units must also anticipate and plan for dynamic changes to task organization to ensure the appropriate ammunition types, repair parts, and petroleum, oil, and lubrications products are packaged and distributed accordingly.

1-155. Logistics units and materiel remain close to the maneuver force to ensure short turnaround time for supplies and services. This includes uploading as much critical materiel (such as ammunition and petroleum, oils, and lubricants) as possible and coordinating to preclude multiple units near each other. Units take into account the risk of enemy detection of logistics preparations for an attack.

1-156. The availability of adequate supplies and transportation to sustain an operation from start to finish is critical to mission success. Sustainment planners must account for logistics requirements during mission analysis to ensure the selected course of action and any potential branch plan is supportable. Based on the type of mission and expected consumption factors, they anticipate requirements and arrange for resupply via multiple means according to the concept of support. Additionally, logistics planners ensure their counterparts at the next higher echelon are fully aware of the sustainment requirements and priorities to aid in adding flexibility to the system (for example, potential need to throughput a class of supply for an urgent requirement, such as ammunition or bulk fuel). Supply lines of communications are strained, and requirements for repair and replacement of weapon systems increase. Requirements for petroleum, oils, and lubricants increase because of the distance combat vehicles are likely to travel. Sustainment units in direct support of maneuver units must be as agile and mobile as the forces they support. One way to provide continuous support is to task-organize sustainment elements with their supported maneuver formations.

1-157. Field maintenance assets move as far forward as possible and as the tactical situation allows to repair and return inoperable and damaged equipment to an operational status. Crews continue to perform their preventive maintenance checks and services in accordance with the operational climate and terrain. Battle damage assessment and repair is critical to sustaining offensive actions. *Battle damage assessment* is the estimate of damage composed of physical and functional damage assessment, as well as target system assessment, resulting from the application of fires (JP 3-0). Crews as well as maintenance and recovery teams conduct battle damage assessment and repair of disabled equipment by expeditiously fixing, bypassing, or using field expedient components. Battle damage assessment and repair restores the minimum-essential combat capabilities necessary to support a specific combat mission or to enable the equipment to self-recover.

1-158. Establishing aerial resupply and forward logistics bases may be necessary to sustain operations such as exploitation and pursuit conducted at great distances from a unit's sustaining base. The unit or support activity at an airlift's point of origin is responsible for obtaining the required packing, shipping, and sling-load equipment. It prepares the load for aerial transport, prepares the pickup zone, and conducts air-loading operations. The unit located at the airlift destination is responsible for preparing the landing zone to

accommodate aerial resupply, preparing to receive the load such as the right material handling equipment, and returning non-expendable equipment such as cargo pallets, sling-load equipment, or containers.

Health Service Support

1-159. *Health service support* encompasses all support and services performed, provided, and arranged by Army Medicine to promote, improve, conserve, or restore the behavioral and physical well-being of personnel by providing direct patient care that includes medical treatment (organic and area support), hospitalization, medical evacuation to include medical regulating, and medical logistics to include blood management (FM 4-02). Health service support also includes the treatment of CBRN patients and as directed, provides support to other Services, agencies, and organizations. (See FM 4-02 for additional information for health service support).

Medical Treatment (Organic and Area Support)

1-160. The medical treatment function encompasses Roles 1 and 2 medical treatment support. These roles of care are provided by organic assets (medical platoons in battalions and treatment teams assigned to sustainment units) or on an area support basis from supporting medical companies or detachments. Within the BCTs and echelons above brigade Army Health System units, this support is provided by the medical company (brigade support) and the medical company (area support). The area support mission encompasses routine sick call and support provided by all ten medical functions. (See FM 4-02 for additional information on medical treatment).

Hospitalization

1-161. Theater hospitalization provides essential care within the theater evacuation policy to either return a patient to duty or stabilize a patient for evacuation to a definitive care facility outside the AO. A hospital is a medical treatment facility capable of providing inpatient care. The Role 3 hospital centers execute the theater hospitalization mission. The Role 3 medical treatment facilities are appropriately staffed and equipped to provide diagnostic and therapeutic services, as well as the necessary supporting services required to perform its assigned mission and functions. (See ATP 4-02.10 for additional information on hospitalization).

Medical Evacuation

1-162. *Medical evacuation* is the timely and effective movement of the wounded, injured, or ill to and between medical treatment facilities on dedicated and properly marked medical platforms with enroute care provided by medical personnel (ATP 4-02.2). Medical evacuation (MEDEVAC) refers to both ground and air evacuation of casualties and joint or partnered air evacuation elements. Air MEDEVAC employs air assets from the air ambulance companies assigned to the combat aviation brigade to evacuate casualties. Leaders must consider the basic tenets that influence the employment of MEDEVAC assets. These factors include the—

- Patient's medical condition.
- Forces employment.
- Enemy's anticipated course of action and air defense capabilities.
- Anticipated patient load.
- Expected areas of patient density.
- Availability of MEDEVAC resources to include ground and air crews.
- Availability, location, and type of supporting medical treatment facilities.
- Adherence to the protections afforded to medical personnel, patients, medical units, and medical transports under the provisions of the Geneva Conventions.
- Unit airspace plan.
- Obstacle plans.
- Fire support plan (to ensure MEDEVAC assets are not dispatched onto routes and at the times affected by the fire support mission).
- Road network or dedicated MEDEVAC routes (contaminated and clean).

- Weather conditions.

Medical Logistics

1-163. FM 3-90 does not discuss medical logistics. (See FM 4-02 and ATP 4-02.1 for more information on medical logistics.)

Additional Medical Considerations

1-164. Tactical combat casualty care and casualty evacuation are not medical support functions. However, these are vital concepts for leaders to understand and implement during tactical operations.

Tactical Combat Casualty Care

1-165. Tactical combat casualty care is divided into the three phases: care under fire, tactical field care, and tactical evacuation care. Tactical combat casualty care occurs during a combat mission and is the military counterpart to prehospital emergency medical treatment. Tactical combat casualty care in the military is most commonly provided by enlisted personnel and includes self-aid and buddy aid (first aid), combat lifesaver (enhanced first aid), Army combat medics and critical care flight paramedics, corpsmen from the Navy and Marine Corps and the U.S. Coast Guard, and both medics and pararescuemen in the U.S. Air Force.

1-166. In the care under fire phase, combat medical personnel and their units are under effective hostile fire and are very limited in the care they can provide. During this phase, only those lifesaving interventions that must be performed immediately are undertaken. Soldiers mainly focus on stabilizing the casualties to transport them to the next higher medical facility.

1-167. During the tactical field care phase, medical personnel and their patients are no longer under effective hostile fire and medical personnel can provide more extensive patient care. In this phase, interventions directed at other life-threatening conditions, as well as resuscitation and other measures to increase the comfort of the patient may be performed. During tactical field care, personnel must be prepared to transition back to care under fire, or to prepare the casualty for tactical evacuation, as the tactical situation changes.

1-168. In the tactical evacuation care phase, casualties are transported from the battlefield to medical treatment facilities. Evacuation can be by either MEDEVAC or casualty evacuation. (See FM 4-02 for more information on tactical combat casualty care).

Casualty Evacuation

1-169. If MEDEVAC platforms are available, casualties should be evacuated on these platforms to ensure that they receive proper enroute medical care. However, if dedicated medical evacuation assets are unavailable, units use non-dedicated vehicles to transport causalities. *Casualty evacuation* is the movement of casualties aboard nonmedical vehicles or aircraft without enroute medical care (FM 4-02). Casualty evacuation (CASEVAC) involves the unregulated movement of casualties using tactical or logistic aircraft and vehicles. These vehicles or aircraft are not staffed with medical personnel for enroute care (unless augmentation is planned for in the operation plan). These vehicles and aircraft do not have organic medical equipment. If the combat medic is not available to provide care enroute, the combat lifesaver may accompany the casualties to monitor their conditions.

1-170. Combat operations place a significant burden on medical resources due to the magnitude and lethality of the forces involved. Medical units must anticipate large numbers of casualties in a short period due to the capabilities of modern conventional weapons and the possible employment of weapons of mass destruction. These mass casualty situations can rapidly exceed the capabilities of medical assets. *Mass casualty* refers to any number of human casualties produced across a period of time that exceeds available medical support capabilities (JP 4-02). Careful planning and coordination are necessary to minimize the extent to which medical capabilities are overwhelmed. CASEVAC must occur concurrently with operations. Units that cease aggressive maneuver to evacuate casualties while in enemy contact are likely to both suffer additional casualties while stationary and fail their mission. Effective management of mass casualty situations

depends on established and rehearsed unit-level mass casualty plans. There are a number of other variables which can ensure the success of a unit's mass casualty response. These include, but are not limited to—

- Coordination of additional medical support and augmentation of medical evacuation support, forward resuscitative and surgical detachments, combat support and field hospitals, casualty collection points, ambulance exchange points, and established Class VIII resupply.
- Rapid clearance of casualties from the battlefield (independent of MEDEVAC).
- Providing effective tactical combat casualty care for the injured.
- Continuous flow of casualties to the medical treatment facilities at the next higher role of care.
- Use of alternative assets when the number of casualties overwhelms the capacity of available medical evacuation systems.

PROTECTION WARFIGHTING FUNCTION

1-171. The *protection warfighting function* is the related tasks, systems, and methods that prevent or mitigate detection, threat effects, and hazards to preserve combat power and enable freedom of action (FM 3-0). Protection encompasses everything that makes the Army forces hard to detect and hard to destroy. Protection requires units to understand and visualize threats and hazards in an operational environment. This understanding allows units to prioritize their requirements and commit capabilities and resources according to those priorities. The protection warfighting function is the responsibility of all unit types and echelons in order to maintain the force's integrity and combat power.

1-172. The protection warfighting function includes these tasks:

- Conduct survivability operations.
- Coordinate air and missile defense support.
- Conduct populace and resources control.
- Conduct electromagnetic protection.
- Perform cyberspace security and defense.
- Provide force health protection.
- Conduct CBRN operations.
- Provide explosive ordnance disposal support.
- Conduct personnel recovery.
- Conduct detention operations.
- Conduct risk management.
- Implement physical security procedures.
- Apply antiterrorism measures.
- Conduct police operations.
- Conduct area security.
- Implement operations security.

Survivability Operations

1-173. *Survivability* is a quality or capability of military forces which permits them to avoid or withstand hostile actions or environmental conditions while retaining the ability to fulfill their primary mission (ATP 3-37.34/MCTP 3-34C). *Survivability operations* are those protection activities that alter the physical environment by providing or improving cover, camouflage, and concealment (ATP 3-37.34/MCTP 3-34C). Units exploit existing terrain features to enhance their survivability by altering the physical environment to provide or improve their cover and concealment. Likewise, units can use natural or manmade materials as camouflage to confuse, mislead, or evade the enemy to enhance their survivability.

1-174. All units conduct survivability operations within the limits of their capabilities. These include camouflaging their positions and constructing individual or crew served fighting positions. Engineers and CBRN units possess additional capabilities to assist survivability operations. These include hardening structures and positions and the reconnaissance, surveillance, and decontamination of CBRN hazards.

1-175. Survivability operations enhance the ability to avoid or withstand hostile actions by altering the physical environment. They accomplish this through four tasks:

- Constructing fighting positions.
- Constructing protective positions.
- Hardening facilities.
- Employing camouflage and concealment.

The first three tasks focus on providing cover, while the fourth task focuses on providing protection from observation and surveillance. These four tasks often have the added benefit of providing some degree of shelter or protection from the elements. All four tasks are often addressed in combination. For example, constructing fighting positions and protective positions usually also requires employing camouflage and concealment. Employing camouflage and concealment often accompanies activities to harden facilities.

Air and Missile Defense

1-176. Army air defense artillery forces provide low-to-high altitude air and missile defense (AMD), and contribute to situational understanding, airspace management, freedom of movement, freedom from aerial attack, and early warning. These capabilities deter or defeat enemy aerial threats, protect the friendly force and high-value assets, and enable the friendly force's freedom to operate. Enemy air threats include but are not limited to rockets, missiles, unmanned aircraft, and manned rotary- and fixed-wing aircraft. *Counterair* is a mission at the theater level that integrates offensive and defensive operations to attain and maintain a desired degree of control of the air and protection by neutralizing or destroying enemy aircraft and missiles, both before and after launch (JP 3-01). Counterair, from the active air defense perspective is a joint responsibility and will vary based on assets available and priorities. The area air defense commander through the area air defense plan executes this mission for a theater and provides the required integration and close coordination between Army air defense artillery forces and other counterair forces. Short-range air defense (known as SHORAD) assets may be attached or in direct support of corps and divisions.

1-177. Units employ both active and passive methods of air defense to include air defense artillery systems, direct fire weapons systems, and air guards. Active AMD are direct defensive actions taken to destroy, nullify, or reduce the effectiveness of hostile air and missile threats against friendly forces and assets. It includes the use of aircraft, air defense weapons, electromagnetic warfare, and other available weapons. Active missile defense requires early detection of missiles in flight to permit cueing, acquisition, tracking, classification, identification, and destruction as soon as possible after launch. Passive AMD are all measures, other than active air defenses, taken to minimize the effects of hostile air and missile threats against friendly forces and assets. All units conduct passive actions to reduce the effectiveness of the enemy air threat. These measures include camouflage, concealment, military deception, dispersion, reconstitution, redundancy, detection and warning systems, and the use of protective construction. Passive actions are a unit's first line of defense and improve survivability by reducing the likelihood of being detected and targeted from the air and by mitigating the potential effects of air surveillance and attack. Passive missile defense measures include detecting air and missile launches, predicting impact points, providing threat identification, and disseminating early warning. It includes measures initiated to reduce vulnerability and to minimize the effect of damage caused by missile attack.

1-178. Generally, the joint force uses both offensive and defensive counterair operations to dominate enemy airspace and prevent the launch of threats. Offensive counterair operations include the suppression of enemy air defenses. Defensive counterair operations defeat enemy air and missile threats attempting to penetrate or attack through friendly airspace. Units integrate joint forces to exploit the mutually beneficial effects of offensive and defensive actions to destroy, neutralize, or minimize air and missile threats.

1-179. Units coordinate and clear air and missile defense fires on the ground and through the airspace to enable rapid and timely engagement of threats while preventing fratricide. However, the ground force executing the defense ensures that as much as possible of their defended asset list is in range of these air and missile defense systems. Units take both active and passive air defense measures to protect themselves from aerial attack.

1-180. A ground force's organic weapons are its primary defense against short-range air threats. Units weigh the air threat with their ability to mitigate the threat when considering options for operations. Units

position available organic or supporting radars in locations to best support the operation. The selection of those positions reflects a risk assessment designed to preclude their early loss to enemy action. Units establish air defense priorities based on the concept of operations, scheme of maneuver, air situation, and the air defense priorities. Friendly air defense communicates weapon status to friendly assets, balances protection of ground units, and prevents fratricide of friendly air assets.

Populace and Resources Control

1-181. Units include populace and resources control measures in their planning and execution of all operations. Ensuring proper implementation of populace and resources controls can keep civilians from potentially getting harmed by or disrupting military operations, increase OPSEC by limiting their access to sensitive areas, and disrupt illegal activities that can affect military logistics. During the conduct of large-scale combat operations, an indigenous civil government will probably not be able to define, enact, and enforce populace and resources control measures. (See FM 3-57, ATP 3-39.30, and ATP 3-57.10 for additional information on the conduct of populace and resource control.)

Electromagnetic Protection

1-182. Many Army capabilities—including communications, cyberspace operations, information collection, space capabilities, target detection, and precision guided munitions—depend on assured access to the electromagnetic spectrum. The tasks to protect Army access to the electromagnetic spectrum are—

- Conduct electromagnetic protection actions.
- Conduct electromagnetic spectrum operations.
- Conduct defensive electromagnetic attack.

For more information on electromagnetic protection, see JP 3-85.

Conduct Electromagnetic Protection Actions

1-183. *Electromagnetic protection* is a division of electromagnetic warfare involving actions taken to protect personnel, facilities, and equipment from any effects of friendly or enemy use of the electromagnetic spectrum that degrade, neutralize, or destroy friendly combat capability (JP 3-85). This includes actions taken to ensure friendly use of the electromagnetic spectrum, such as frequency agility in a radio or variable pulse repetition frequency in radar. Electromagnetic protection protects U.S. and allied systems from the effects of friendly and enemy electromagnetic attack and electromagnetic interference.

1-184. Electromagnetic protection actions include—

- Electromagnetic compatibility.
- Electromagnetic hardening.
- Electronic masking.
- Emission control.
- Wartime reserve modes.

Conduct Electromagnetic Spectrum Operations

1-185. *Electromagnetic spectrum operations* is coordinated military actions to exploit, attack, protect, and manage the electromagnetic environment (JP 3-85). Electromagnetic spectrum operations enable electromagnetic systems to perform their functions in the intended environment without causing or suffering unacceptable interference.

Conduct Defensive Electromagnetic Attack

1-186. Defensive electromagnetic attack primarily protects friendly personnel and equipment or platforms against lethal attacks by denying enemy use of the electromagnetic spectrum to guide or trigger weapons. Defensive electromagnetic attack uses the electromagnetic spectrum to protect personnel, facilities, capabilities, and equipment. Examples of self-protection and other protection measures include the use of expendables (flares and active decoys), jammers, towed decoys, directed-energy infrared countermeasures, and counter radio-controlled improvised explosive device systems.

Perform Cyberspace Security and Cyberspace Defense

1-187. The Army secures and defends the network through a defense-in-depth approach, incorporating layered security and defenses. The tasks to secure and defend cyberspace are—

- Perform cybersecurity activities.
- Conduct defensive cyberspace operations-internal defensive measures.

1-188. *Cyberspace security* are actions taken within protected cyberspace to prevent unauthorized access to, an exploitation of, or damage to computers and networks, including platform information technology (JP 3-12). Cyberspace security is not specific to an enemy or adversary. Cyberspace security actions protect the networks and systems through all phases of network planning and implementation. Cyberspace security activities include vulnerability assessment and analysis, vulnerability management, incident handling, continuous monitoring, and detection and restoration capabilities to shield and preserve information and information systems.

1-189. *Cyberspace defense* are actions taken within protected cyberspace to defeat specific threats that have breached or are threatening to breach cyberspace security measures (JP 3-12). The purpose of cyberspace defense includes actions to protect, detect, characterize, counter, and mitigate threats. Such defensive actions are usually created by the joint force command or Service that owns or operates the network, except in cases where these defensive actions would affect the operations of networks outside the responsibility of the respective joint force command or Service.

Force Health Protection

1-190. *Force health protection* are measures that promote, improve, or conserve the behavioral and physical well-being of Soldiers comprised of preventive and treatment aspects of medical functions that include combat and operational stress control, dental services, veterinary services, operational public health, and laboratory services. Enabling a healthy and fit force, prevent injury and illness, and protect the force from health hazards (FM 4-02). (See FM 4-02 for additional information on force health protection).

Chemical, Biological, Radiological, and Nuclear

1-191. CBRN support to operations include the simultaneous application of the assess, protect, and mitigate functions guided by hazard awareness and understanding. CBRN units enable movement and maneuver of supported units in accordance with the concept of operations and scheme of maneuver.

1-192. CBRN staff assess potential CBRN threats and hazards and recommend mitigation measures to protect the force while minimizing degradation of units, personnel, equipment, and facilities from effects that would hinder operations. CBRN staffs advise units on risks and friendly vulnerabilities through their understanding of the operational environment and the enemy's capabilities. Measures to protect against and mitigate CBRN effects include proper protective equipment, exposure guidance, and alarm conditions.

1-193. CBRN operations include active measures to gain information on CBRN threats, enabling units to mitigate these threats and limit vulnerabilities while continuing operations. CBRN defense measures include individual, crew, and collective tasks. Units conduct CBRN reconnaissance and surveillance operations as complementary operations to facilitate maneuver by understanding the CBRN hazards. The time, techniques, and CBRN assets required to achieve reconnaissance objectives are determined by the intelligence requirements and mission variables. CBRN protection and mitigation measures increase the ability of the force to operate under CBRN conditions but may decrease operational tempo and increase sustainment requirements. (See FM 3-11 for more information on CBRN operations).

Personnel Recovery

1-194. Soldiers have an increased likelihood of becoming isolated during offensive operations. Units must train both the individual and staff on how to react when an isolating event occurs. *Army personnel recovery* is the military efforts taken to prepare for and execute the recovery and reintegration of isolated personnel (FM 3-50). Training includes the personnel recovery tasks of report, locate, support, recover, and reintegrate as well as the Code of Conduct and individual isolation tasks (survive, resist, escape, evade).

Detention Operations

1-195. Detention involves the detainment of a population or group that poses some level of threat to military operations. Unit staffs consider detention operations when developing plans. Detainee planning enables providing necessary resources to construct and operate detention facilities for the projected number of detainees. Units monitor the actual number of detainees closely to avoid devoting too many or too few resources to detention operations. It is essential to address all aspects of detainee operations while planning for the supported offensive operation. To ensure that units are prepared to incorporate detainee operations during planning, units establish mechanisms that ensure effective consideration of potential detainee operations and their supporting activities.

1-196. Detainee operations begin at the point of capture—the point at which a Soldier has the custody of, and is responsible for safeguarding, a detainee. Soldiers must be prepared to process and safeguard detainees. Actions at the point of capture—the point at which a Soldier has the custody of, and is responsible for safeguarding, a detainee—can directly affect mission success and could have a lasting impact on U.S. tactical, operational, and strategic military objectives. All Soldiers must be prepared to process and safeguard detainees. Upon capture, Soldiers must use the five Ss and T technique (short for search, silence, segregate, safeguard, speed, and tag) to process detainees. This technique provides a structure with which to guide Soldiers in conducting detainee operations until custody of the detainee transfers to another authority or location. (See FM 3-63 for additional details on detainee operations).

1-197. During the conduct of operations, Soldiers may capture enemy prisoners of war (EPWs). At the point of capture, the detainees and EPWs share the same five Ss and T technique. However, the legal framework is different. The local nation has the legal authority for procedures for civilian detentions. However, Soldiers must handle EPWs in accordance with international law and treat them humanely; Soldiers must not abuse EPWs physically or mentally. EPWs must be allowed to keep their personal protective equipment. The unit is responsible for their care. If a unit cannot evacuate EPWs in a reasonable time, they must give EPWs food, water, and first aid. Soldiers should not give EPWs comfort items such as cigarettes or candy.

Risk Management

1-198. Leaders must assume risk in knowing that subordinate leaders will not only accept, but also take risks to achieve mission success. Leaders identify and refine controls through continual dialogue with subordinate leaders to ensure their understanding of the commander's intent. Time is a key factor in assessing and understanding risks that could impact successful operations. Reduced time impacts the tempo of operations as well as compresses planning timelines and asset requests. Such impacts can have significant downward implications to units on the ground. A compressed timeline can add additional risk to operations with the following:

- Lack of implementing and resourcing potential deception activities.
- Rushed planning methodologies leading to incomplete plans.
- Confusing or unclear operation orders that lead to multiple fragmentary orders or verbal orders that can be misunderstood.
- An inability to request or use information collection assets resulting in ambiguity before operations.
- Lack of necessary rehearsals depending on the complexity and number of forces involved.
- An inability to provide necessary information for protection-related mitigation efforts in a CBRN environment such as mission-oriented protective posture, known as MOPP, or operational exposure guidance, known as OEG.
- Link-up procedures between organic and external forces.
- Lack of competing courses of action (COAs) resulting in an unnecessary limiting of options.

1-199. When planning operations, leaders need to thoroughly understand the potential enemy formations they may encounter. This is achieved through a solid understanding of intelligence preparation of the battlefield and the threat template and situational template to ensure that friendly forces have the appropriate force ratio to execute both offensive and defensive operations. If the force ratio is not a preferred one, the unit assumes risk to the force and accomplishing directed mission objectives. This is also important for when units have to assume risk when planning branches, sequels, and follow-on operations.

1-200. Maintaining an awareness of the common operational picture (COP) as an operation progresses is another key risk reduction technique. To aid leaders and Soldiers in this process, units develop and employ effective techniques and standard operating procedures, including—

- Monitoring the next higher echelon's radio network.
- Having communication between units.
- Providing COP updates.
- Including accurate position reporting.
- Training and using liaison officers.
- Overseeing local security.

For more information on risk management see ATP 5-19.

Antiterrorism

1-201. *Antiterrorism* consists of defensive measures used to reduce the vulnerability of individuals and property to terrorist acts, including limited response and containment by local military and civilian forces (JP 3-26). Antiterrorism is always a consideration for all forces. (See ATP 3-37.2 for additional information on antiterrorism operations).

Police Operations

1-202. Police operations encompass two tasks—law enforcement and policing. These two tasks are complementary and interdependent but are conducted with a different intent. Law enforcement is conducted for the purpose of enforcing laws, investigating crimes, and apprehending (when warranted) persons for adjudication within the appropriate judicial system. *Policing* is the application of control measures within an area of operation to maintain law and order, safety, and other matters affecting the general welfare of the population (FM 3-39). Policing focuses on maintaining order and establishing security—not the enforcement of laws on the population or to compelling compliance at the risk of legal penalties. The relative emphasis given to policing and law enforcement tasks is based on the operational and mission variables, including the presence of the applicable rule of law. An operational environment characterized by general war will require police operations heavily weighted toward policing tasks, with minimal emphasis on law enforcement. Operational environments characterized by relative stability and governance under the rule of law will require much more law enforcement activity and less focus on policing tasks. (See ATP 3-39.10 for additional information on police operations).

Area Security

1-203. ***Area security is a type of security operation conducted to protect friendly forces, lines of communications, and activities within a specific area.*** Area security operations occur regardless of which operation is currently dominant. Area security is conducted through the following five variations—

- Site security. A unit conducting site security may protect locations such as base/base camps, tactical assembly areas, critical assets, port areas and piers.
- Line of communication and route security
- Convoy security.
- Response force operations. Types of response forces include a mobile security force, such as a military police unit, and a tactical combat force, such as a combined arms battalion.
- Area damage control.

1-204. Operations in noncontiguous assigned areas require units to emphasize area security. During offensive and retrograde operations, the speed at which the main body moves provides some measure of security. Rapidly moving units in open terrain will deploy a forward security force to provide advance warning of enemy forces. Technical assets can be used when no security force is assigned. In restrictive terrain, security forces focus on key terrain such as potential choke points.

1-205. Commanders execute echelon support area and base security as part of an echelon's sustaining operations responsibilities. Area security is normally an economy of force measure ensuring the continued conduct of sustaining operations to support the echelon's main and supporting efforts. All area security

operations take advantage of the local security measures performed by all units regardless of their location in the assigned area. (See ADP 3-37 for more information on the variations of area security.)

1-206. A unit develops specific rules of engagement when conducting area security, particularly when civilians are present. However, commanders remain responsible for protecting the force, and they consider this responsibility when establishing rules of engagement. They explain restrictions on conducting operations to ensure everyone understands those restrictions. Soldiers must understand that their actions may have far-reaching positive or negative effects. Commanders iterate that media and adversaries can quickly exploit their Soldiers' actions, especially the way they treat civilians.

1-207. Sometimes area security forces must retain readiness over long periods without contact with enemy forces. This occurs most often when the enemy special purpose forces or insurgents are overmatched. Forces conducting area security should not develop a sense of complacency, even if the enemy force appears to have ceased operations in the secured area. Additionally, friendly forces should be mindful of mines and booby traps in these situations. Successful units assume that the enemy force regularly observes friendly operations to identify routines, weak points, and lax security for the opportunity to strike with minimum risk. This requires leaders to maintain vigilance and discipline in their Soldiers to preclude that opportunity from developing.

Operations Security

1-208. *Operations security* is a capability that identifies and controls critical information, indicators of friendly force actions attendant to military operations, and incorporates countermeasures to reduce the risk of an adversary exploiting vulnerabilities (JP 3-13.3). Operations security (OPSEC) is applied throughout all operations to protect any information or activities of friendly elements. The practice of OPSEC denies the enemy of information that it may use to disrupt or defeat actions by friendly forces.

1-209. OPSEC is not only concerned with protecting planning and preparation activities, but also encompasses applying effective field craft, camouflage, concealment, and masking. These techniques deny and disrupt the enemy's ability to gain information through reconnaissance and surveillance. It includes explaining to Soldiers methods the enemy uses to find and target their cell phones, gather geo-location tags from personal photos, and collect information from posts to social media. Other examples include how all lead-up activities—to include pre-combat checks and pre-combat inspections, vehicle loading, and modifications—can indicate future movements or operations and can provide enemy forces with an initial understanding of friendly force activities.

1-210. A unit's OPSEC program and any deception or survivability efforts should conceal the location of the friendly objective, the main effort, the disposition of forces, and the timing of the offense from enemy forces or mislead them regarding this information. These measures prevent enemy forces from launching effective spoiling attacks.

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Chapter 2

Movement and Forms of Maneuver

This chapter discusses movement formations, movement techniques, and the five forms of maneuver.

MOVEMENT FORMATIONS

2-1. A *movement formation* is an ordered arrangement of forces for a specific purpose and describes the general configuration of a unit on the ground (ADP 3-90). Movement formations allow a unit to move on the battlefield based on the terrain and enemy threat. Terrain characteristics and visibility determine the actual arrangement and location of the unit's personnel and vehicles within a given formation. There are seven different movement formations:

- Column.
- Line.
- Wedge.
- Echelon (left or right).
- Vee.
- Diamond.
- Box.

2-2. Each movement formation has its advantages and disadvantages. A unit may employ a series of movement formations during a movement or maneuver based on changing terrain or threat. Commanders consider the advantages and disadvantages that each formation has in the areas of command and control, firepower orientation, ability to mass fires, and flexibility. The use of standard formations allows units to transition from one formation to another, giving additional flexibility when adjusting to changes in the mission variables. Movement formations describe how combat or security elements maneuver in relation to each other and the main body. By designating the movement formation planned for use, units—

- Establish the geographic relationship between units.
- Indicate probable reactions once an enemy force makes contact with the formation.
- Indicate the level of security desired.
- Establish the preponderant orientation of subordinate weapon systems.
- Posture friendly forces for the attack.

COLUMN FORMATION

2-3. The *column formation* is a movement formation with elements arranged one behind another. A unit moves in column formation when the unit does not anticipate early contact, the objective is distant, and speed and control are critical. Figure 2-1 on page 2-2 depicts a column formation. The location of direct fire systems within the column reflects the column's length and the range fans of those systems. Normally, the lead element uses a traveling overwatch technique while the following units are in traveling formation. A column formation—

- Provides the best formation to move large forces quickly, especially with limited routes and limited visibility.
- Makes enemy contact with a small part of the total force while facilitating control and allowing the unit to quickly mass forces.
- Provides a base for easy transition to other formations.
- Works in restricted terrain.

2-4. There are also disadvantages to using a column formation. These include—

- Units can only immediately apply the majority of the column's firepower on the column's flanks.
- The length of the column affects movement and terrain management.
- Possibly inadvertently bypassing enemy units or positions and exposing the unit's flanks.
- Running head-on into an enemy deployed perpendicular to the column's direction of movement.

Restricted terrain may limit the ability of friendly forces to maneuver if contact is made to the front of the formation.

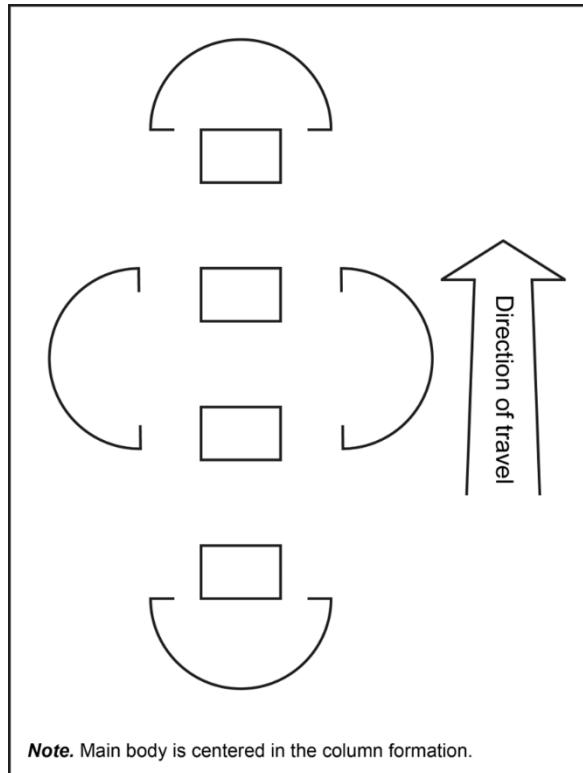


Figure 2-1. Column formation

LINE FORMATION

2-5. A **line formation** is a movement formation in which elements move abreast of each other. A unit typically employs this formation when assaulting an objective because it concentrates firepower to the front in the direction of movement. Figure 2-2 depicts a line formation. A line formation also—

- Facilitates speed and shock in closing with an enemy force.
- Allows the coverage of wide frontages.
- Facilitates the occupation of attack by fire or support by fire positions.

2-6. There are also disadvantages of a line formation:

- Provides less flexibility of maneuver than other formations since it does not distribute units in depth.
- Linear deployment allows a unit deployed on line to bring only limited firepower to bear on either flank.
- Provides limited or no reserve.
- Limits overwatch forces.
- Limits control of a unit using a line formation in restricted terrain or under conditions of limited visibility.

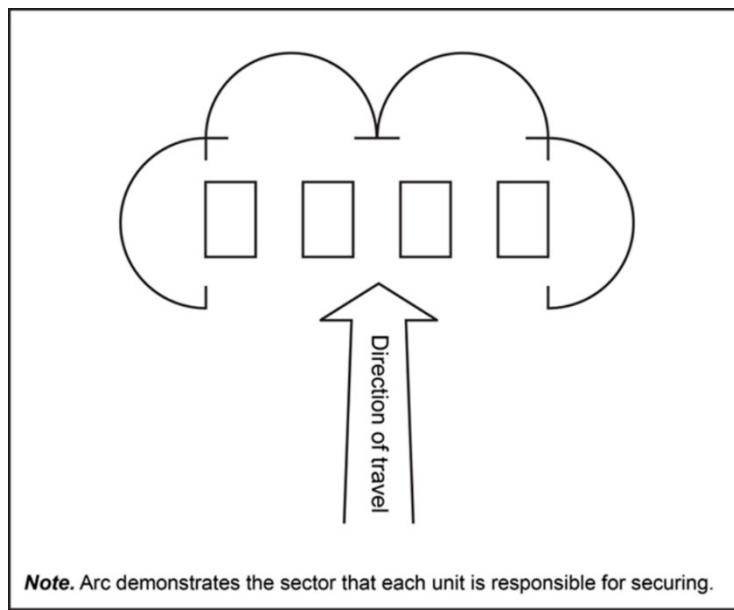


Figure 2-2. Line formation

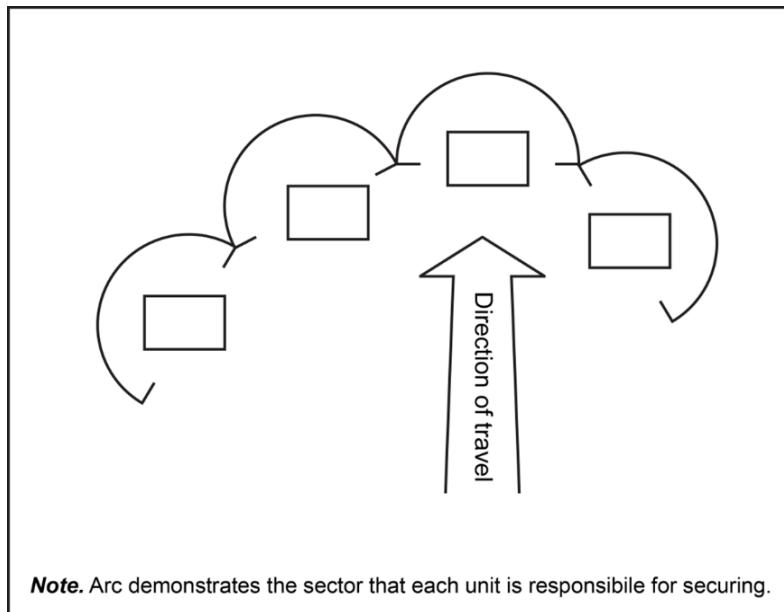
WEDGE FORMATION

2-7. The *wedge formation* is a movement formation with one lead element and the trail elements are paired off abreast of each other on the flanks. Units use this formation to attack an enemy appearing to the front and flanks. Figure 2-3 on page 2-4 depicts a wedge formation. Any unit can conduct a wedge formation; if there are an even number of maneuver elements, one side will be longer than the other. Leaders designate which side they want longer by directing a “heavy side.” For example, if a leader said they wanted the unit in a “wedge formation—heavy left,” then the left side of the unit would have more elements than the right side of the element. A unit uses the wedge when contact with an enemy force is possible or expected, but the enemy force’s location and dispositions are vague. It is the preferred formation for a movement to contact in an organization with three subordinate maneuver units because it initiates contact with one unit while retaining two other subordinate uncommitted units positioned to maneuver and further develop the situation. Within the wedge, subordinate units employ the formation best suited to the terrain, visibility, and likelihood of contact. Employing a wedge formation—

- Provides maximum firepower forward and allows units to use a large portion of their firepower on the flanks.
- Allows rapid crossing of open terrain when enemy contact is not expected.
- Facilitates control.
- Allows for rapid changes in the direction of movement.
- Facilitates the rapid change to other movement formations.

2-8. The primary disadvantages to the wedge formation are that it—

- Requires sufficient maneuver space or multiple routes for dispersion laterally and in depth.
- Lacks ease of control in restricted terrain or poor visibility.

**Figure 2-3. Wedge formation****ECHELON FORMATION**

2-9. An *echelon formation* is a movement formation with elements arranged on an angle to the left or to the right of the direction of attack (*echelon left*, *echelon right*). This formation provides focused firepower forward and to the flank of the direction of the echelon. It facilitates control in open areas. It provides minimal security to the opposite flank in the direction of the echeloning. A unit with knowledge of potential enemy locations can use an echelon formation to deploy subordinate ground elements diagonally left or right or as a way to work within a higher echelon movement formation. Figure 2-4 depicts an echelon left formation and figure 2-5 depicts an echelon right formation. Units operating on the flank of a larger formation commonly use this formation. An echelon formation—

- Facilitates control in open terrain.
- Allows the concentration of the unit's firepower forward and to the flank in the direction of the echelon.
- Allows forces not in contact to maneuver against known enemy forces because all elements will not simultaneously make contact.

2-10. The primary disadvantages of this formation are—

- Difficult to maintain control over the unit in restricted terrain.
- Lacks security or firepower on the opposite side of the echelon.

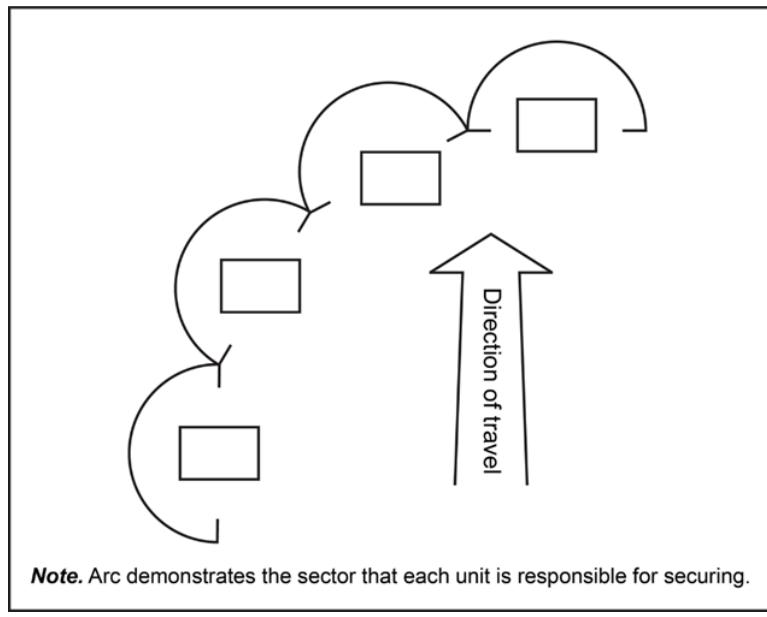


Figure 2-4. Echelon left formation

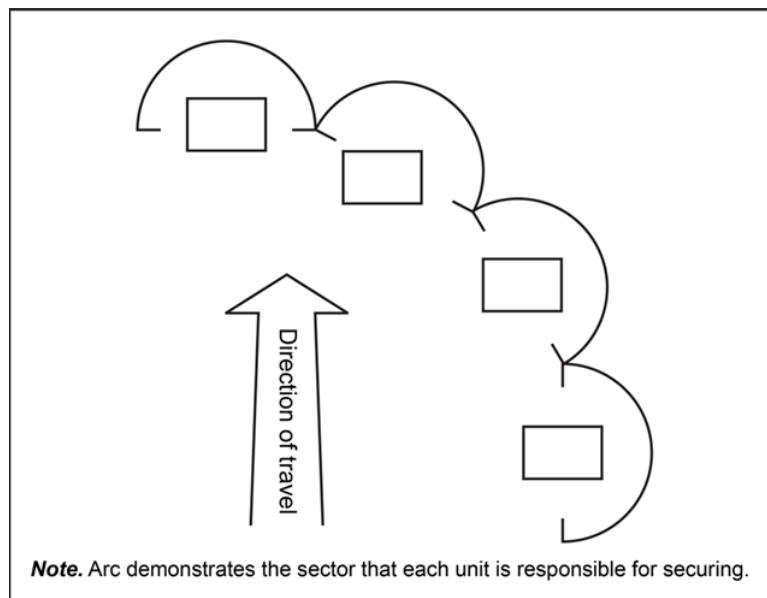


Figure 2-5. Echelon right formation

VEE FORMATION

2-11. A **vee formation** is a movement formation with two elements abreast and one or more elements trailing. If there are more elements after the trail element in the vee formation, the trail elements can be in front or behind the main body. This arrangement is suited for an advance against a known threat to the front. Figure 2-6 depicts a vee formation. Units use this formation when they know the enemy force's location and disposition and expect enemy contact. It—

- Provides maximum firepower forward and good firepower to the flanks, but the firepower on the flanks is less than that provided by the wedge.
- Facilitates a continued maneuver after making contact and a rapid transition to the assault.
- Allows a unit to change quickly to a line, wedge, or column formation.

2-12. The primary disadvantages to this formation include:

- Reorientation in the direction of movement, such as a 90-degree turn, are more difficult than using the wedge.
- Control is difficult in restricted terrain and under limited-visibility conditions.
- Lead element masks fires of the trail element.
- Requires sufficient maneuver space for dispersion laterally and in depth.

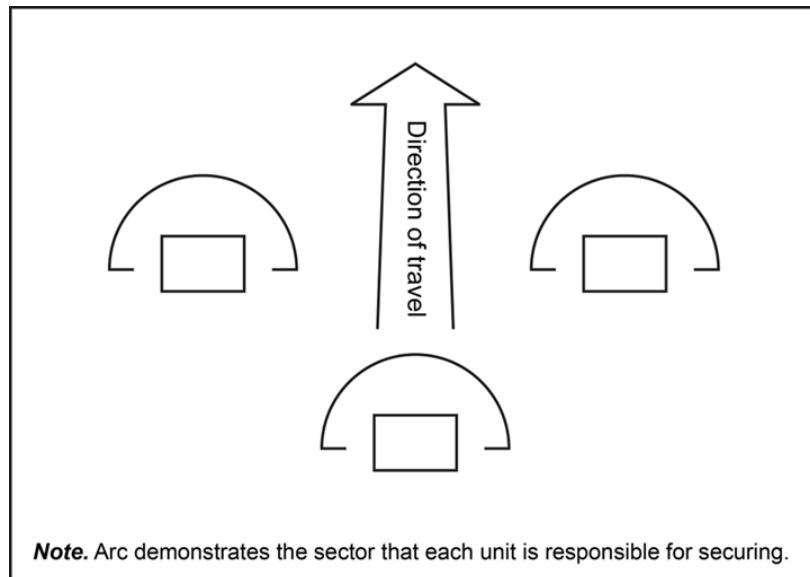


Figure 2-6. Vee formation

DIAMOND FORMATION

2-13. A ***diamond formation*** is a movement formation with one element leading, one element positioned on each flank, and the remaining elements to the rear. The non-security units of the diamond usually move in a column formation inside of the diamond. It is most effective during approach marches, exploitations, or pursuits when the unit has only general knowledge about the enemy. Figure 2-7 depicts a diamond formation. Advantages of employing a diamond formation include—

- Allowing units to maneuver to either flank immediately, regardless of which subordinate element makes enemy contact.
- Facilitates making enemy contact with the smallest possible force yet provides all around security.
- Provides firepower to the front and flanks.
- Changes easily and quickly to another formation.
- Facilitates speed of movement while remaining easy to control.
- Provides an uncommitted force for use as a reserve.

2-14. The primary disadvantages of this formation are that it—

- Requires sufficient maneuver space or multiple routes for dispersion laterally and in depth.
- Requires four subordinate maneuver elements.

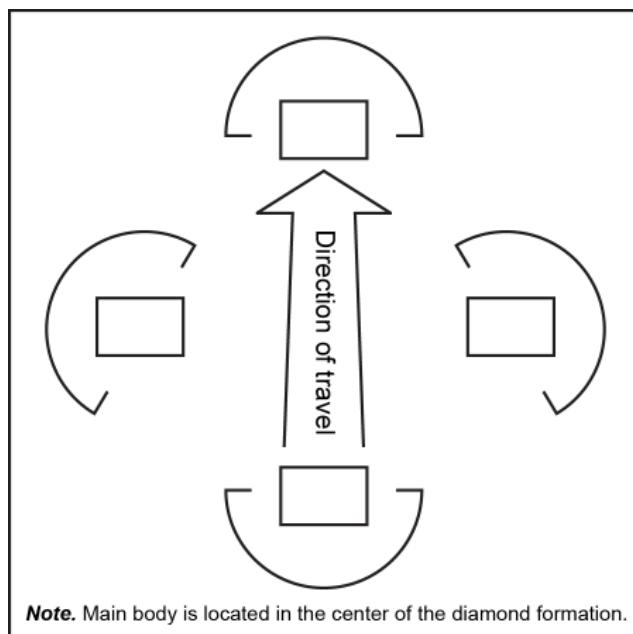


Figure 2-7. Diamond formation

BOX FORMATION

2-15. The **box formation** is a movement formation with elements arranged in a box or square, or two elements up and two elements back. This formation is only used when the unit has four security or combat elements. It is a flexible formation providing equal firepower in all directions. This formation can cause up to 50 percent of the force becoming decisively engaged simultaneously, thereby limiting the combat power available to maneuver against an enemy force. The box formation arranges the unit with two forward and two trail maneuver elements. Figure 2-8 on page 2-8 depicts a box formation. Units with only three subordinate maneuver elements cannot adopt the box formation unless reinforced with an additional maneuver element. The subordinate elements of the box usually move in a column formation within the box formation. Units often use this formation when executing an approach march, exploitation, or pursuit when they have only general knowledge about the enemy. Employing a box formation—

- Allows a unit to change quickly and easily to any other formation.
- Facilitates rapid movement yet still provides all around security.
- Provides firepower to the front and flanks.
- Maintains control more easily than a line formation.

2-16. Using the box formation also has disadvantages. These include—

- The requirement for sufficient maneuver space or multiple routes for dispersion.
- At battalion and company echelons, the possibility exists of enemy units massing on one element at a time as the presence of other friendly forces can mask other element's direct fires.

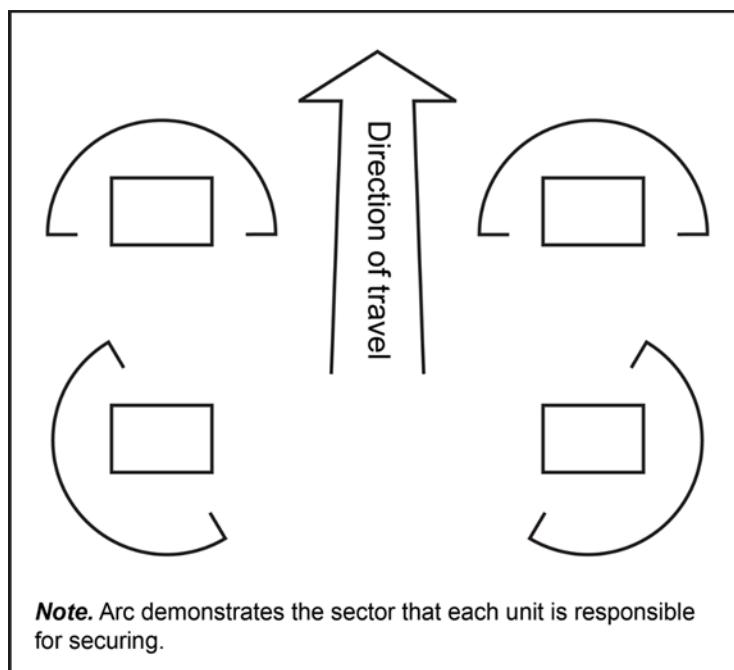


Figure 2-8. Box formation

MOVEMENT TECHNIQUES

2-17. Units use the movement formations in conjunction with three movement techniques: traveling, traveling overwatch, and bounding overwatch. Movement techniques limit the unit's exposure to enemy fire and position the unit to react to enemy contact. Units select the appropriate movement technique based on the chance of enemy contact. Figure 2-9 illustrates when a unit is most likely to use each technique. While moving, individual Soldiers and vehicles use the terrain to protect themselves when enemy contact is possible or expected. They use natural cover and concealment to avoid enemy fires. Soldiers and vehicle crews—

- Take active countermeasures, such as using obscuration and direct and indirect fire, to suppress or obscure suspected enemy positions.
- Cross open areas quickly and avoid large open areas, especially areas surrounded by high ground or terrain that can cover and conceal enemy forces.
- Avoid possible kill zones because it is easier to cross difficult terrain than to fight enemy forces on unfavorable terms.
- Do not silhouette themselves against the skyline.
- Do not move directly forward from a concealed firing position.

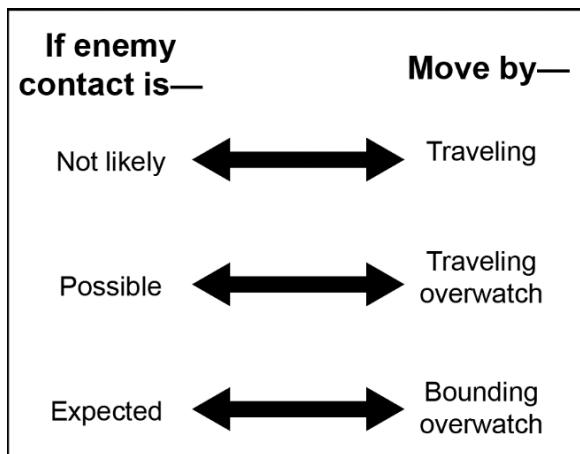


Figure 2-9. Movement techniques usages in relation to enemy contact

TRAVELING

2-18. ***Traveling*** is a movement technique used when speed is necessary and contact with enemy forces is not likely. All elements of the unit move simultaneously. Commanders or small-unit leaders are located where they can best control the situation. Trailing elements may move in parallel columns to shorten the column and reaction time. Figure 2-10 depicts the traveling movement technique.

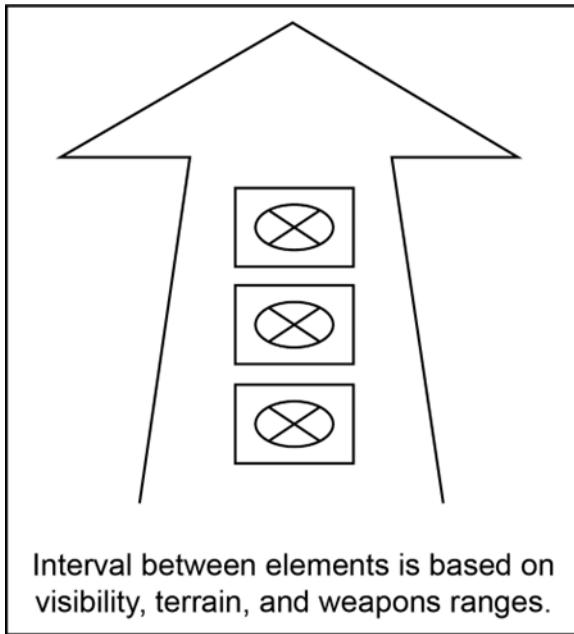


Figure 2-10. Traveling movement technique

TRAVELING OVERWATCH

2-19. ***Traveling overwatch*** is a movement technique used when contact with enemy forces is possible. A short distance, which varies with the terrain, separates the lead element and trailing element. The trailing element moves at variable speeds and may pause for short periods to overwatch the lead element. It controls its movement based on the terrain and the lead element. The rear element overwatches at such a distance that if enemy forces engage the lead element, it will not prevent the rear element from firing or moving to support the lead element. Figure 2-11 depicts this technique and shows how the overwatch can simultaneously occur at multiple echelons.

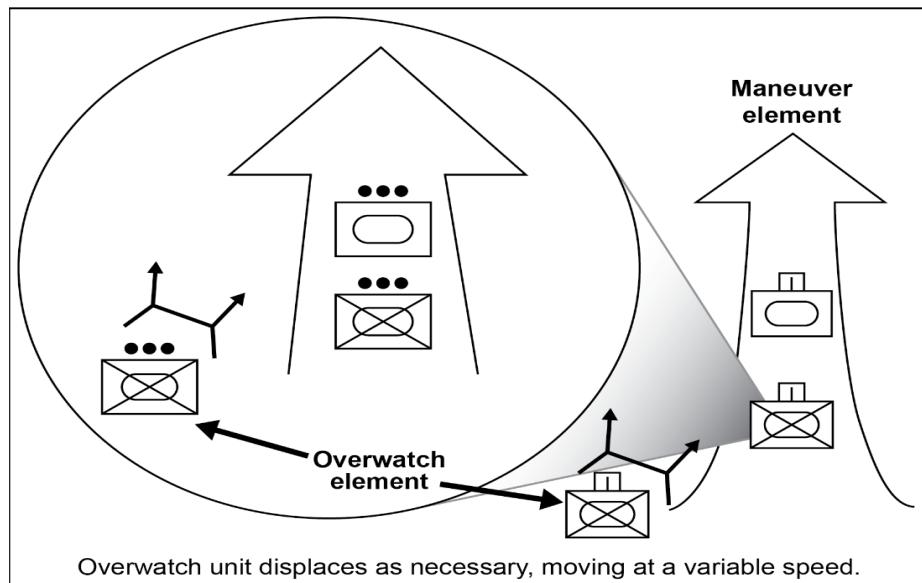


Figure 2-11. Traveling overwatch movement technique

BOUNDING OVERWATCH

2-20. **Bounding overwatch** is a movement technique used when contact with enemy forces is expected. The unit moves by bounds. One element always halts in position to overwatch another element while it moves. The overwatching element positions to support the moving unit by fire or maneuver. Units use the bounding overwatch movement technique when expecting to make contact with enemy forces. There are two variations of this technique: alternating bounds and successive bounds.

2-21. In both cases, the overwatching elements cover the bounding elements from covered or concealed positions with good observation and fields of fire against possible enemy positions. The support by fire positions also offer protection for stationary weapons platforms. They can immediately support the bounding elements with fires or maneuver against the enemy if the bounding elements make contact. Unless they make contact en-route, the bounding elements move via covered and concealed routes into the next set of support by fire positions. Leaders base the length of a bound on the terrain and the range of overwatching weapons. They can use the uncommitted part of their forces whenever needed as part of an immediate and controlled reaction to any threat to the bounding force.

2-22. If the unit uses alternate bounds, the bounding element moves forward, halts, and occupies a support by fire position. The stationary element always covers the bounding element's movement, halt, and occupation of the bounding element's support by fire position. The bounding element advances past the stationary element, takes an overwatch position, and becomes the new forward element. The former stationary element now becomes the bounding element, advances past the stationary element, and occupies a new support by fire position. This method is usually more rapid than successive bounds. Figure 2-12 on page 2-12 illustrates a bounding overwatch using alternate bounds.

2-23. As depicted in figure 2-13 on page 2-12, if the unit uses successive bounds, the lead element, covered by the trail element, advances and occupies a support by fire position. The rear element advances to a support by fire position abreast of the lead element and halts. The lead element moves to the next position and the move continues. Only one element moves at a time, and the rear element avoids advancing beyond the lead element.

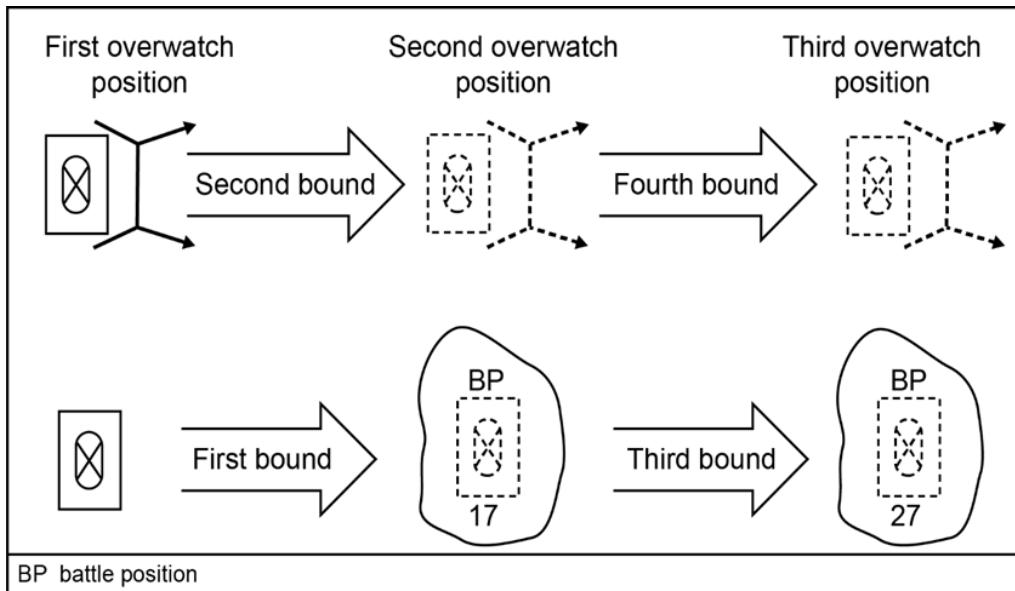


Figure 2-12. Bounding overwatch movement technique (alternating bounds)

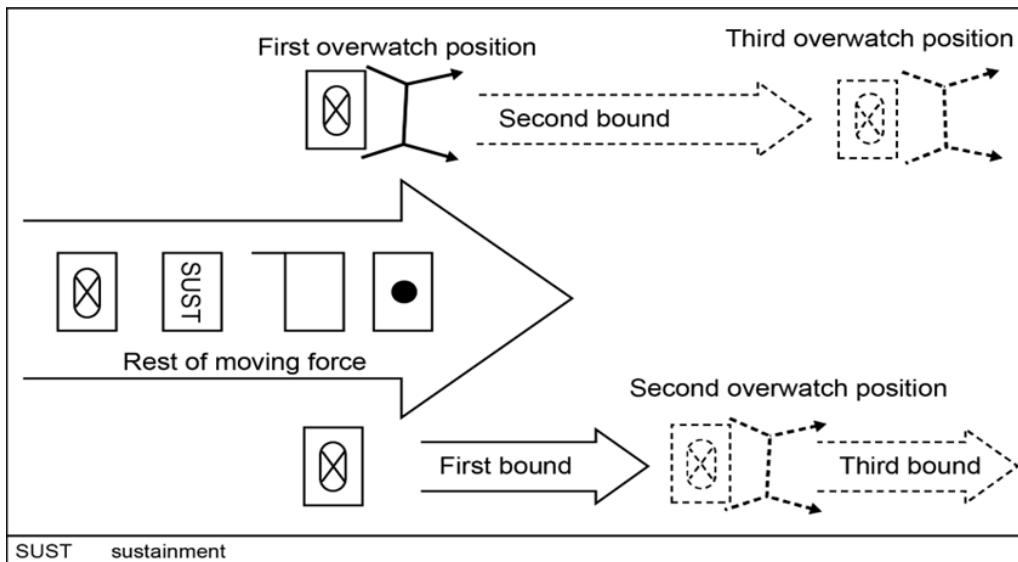
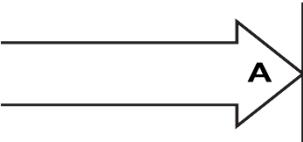
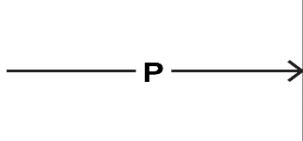
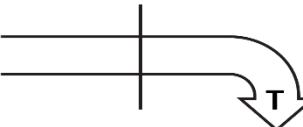


Figure 2-13. Bounding overwatch movement technique (successive bounds)

FIVE FORMS OF MANEUVER

2-24. *Forms of maneuver* are distinct tactical combinations of fire and movement with a unique set of doctrinal characteristics that differ primarily in the relationship between the maneuvering force and the enemy (ADP 3-90). A form is a broad way of describing a scheme of maneuver. Units generally use the types of offensive and defensive operations to explain the overarching operation whereas the forms of maneuver are the basis for courses of action. Table 2-1 lists and illustrates the symbols for the five forms of maneuver.

Table 2-1. Forms of maneuver and planning symbols

<i>Form of maneuver</i>	<i>Planning symbol</i>
Frontal attack	
Penetration	
Envelopment	
Turning movement	
Infiltration	

2-25. Combined arms organizations accomplish their mission by synchronizing the warfighting functions to execute these forms of maneuver. Combined arms is the synchronized and simultaneous application of arms to achieve an effect greater than if each element was used separately or sequentially. Understanding the characteristics of an assigned area and the enemy's dispositions helps units determine the best form of maneuver.

2-26. A single operation may contain multiple forms of maneuver, such as a frontal attack to clear a security area followed by a penetration to create a gap in enemy defenses. A form of maneuver can also be used in the defense. For example, in a mobile defense the striking force conducts an envelopment to destroy the enemy. Typically, a higher headquarters does not dictate what form of maneuver a subordinate should use, but if the situation warrants, a higher echelon may constrain a subordinate force to a specific form of maneuver. The successful execution of any forms of maneuver requires trained forces capable of shifting their formations quickly in response to a changing enemy situation.

FRONTAL ATTACK

2-27. A **frontal attack** is a form of maneuver in which an attacking force seeks to destroy a weaker enemy force or fix a larger enemy force in place over a broad front. As depicted in figure 2-14 on page 2-14 an attacking force uses a frontal attack to overrun a weak enemy force. They normally employ a frontal attack to—

- Clear enemy security forces.
- Overwhelm a shattered enemy force during an exploitation or pursuit.
- Fix enemy forces in place as part of another operation.
- Conduct a reconnaissance in force.

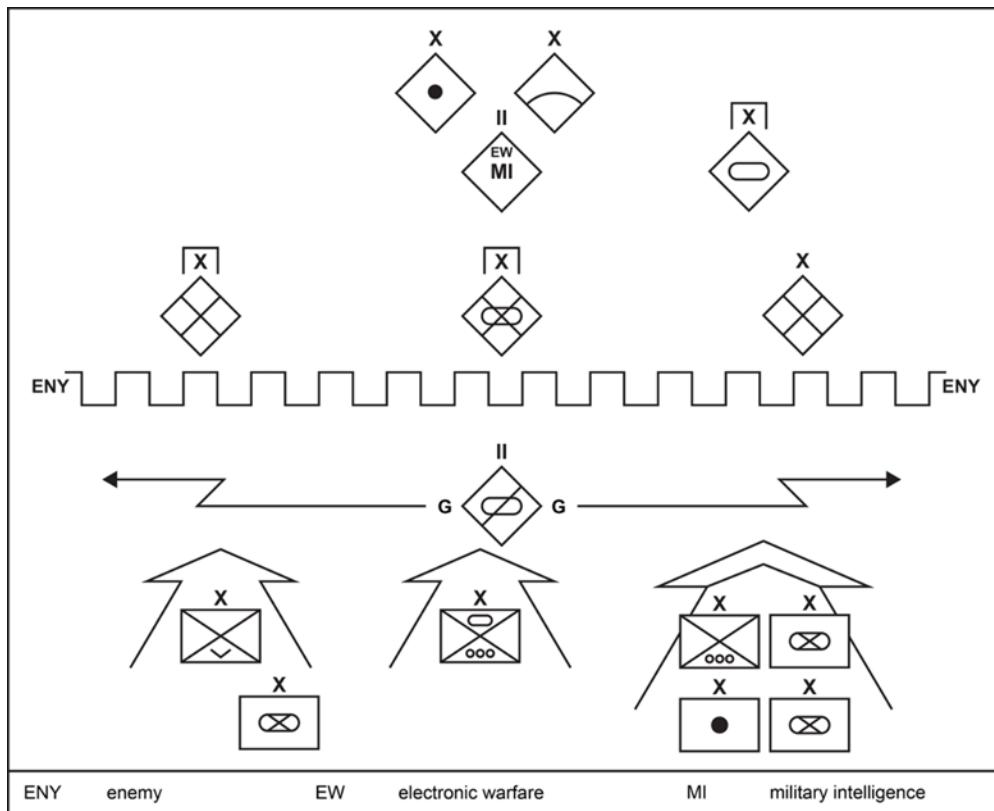


Figure 2-14. Frontal attack

2-28. A frontal attack is necessary when assailable flanks do not exist. Frontal attack maintain continuous pressure along the entire front until a breach occurs or the attacking forces succeed in pushing the enemy forces back. Consequently, units rarely conduct frontal attack when they lack overwhelming combat power unless fixing the enemy is vital to a larger operation's success.

Organization of Forces

2-29. There is no unique organization of forces associated with a frontal attack. Units executing a frontal attack organize into a security force, a main body, and a reserve. The mission variables dictate the specific task organization of a unit.

Control Measures

2-30. Units conducting a frontal attack may not require any additional control measures beyond those established to control the overall mission. This includes at a minimum an assigned area and an objective. Units can also use any other control measure necessary to control the frontal attack, including—

- Attack positions.
- Lines of departure.
- Phase lines.
- Assault positions.

- Limits of advance.
- Directions of attack or axes of advance for every maneuver unit.

Planning a Frontal Attack

2-31. It is seldom possible for a unit to exert sufficient pressure to overwhelm an enemy force using a frontal attack, since it strikes the enemy force along a significant portion of the enemy's front. There are many considerations for a force to execute a frontal attack. These considerations can include—

- A friendly force tasked to fix the enemy force in place.
- Terrain that dictates the unit cannot execute another form of maneuver.
- Friendly forces have overwhelming combat power to quickly finish the enemy in position.

2-32. A unit's planning efforts should reflect these considerations. When considering employing a frontal attack as a shaping operation, units also consider other means for fixing the enemy force in position, such as feints or demonstrations, and employing indirect fires to mitigate risk.

Executing a Frontal Attack

2-33. Units conducting frontal attack advance on a broad front, normally with their subordinate ground maneuver elements abreast (except for the reserve). The security force clears enemy reconnaissance, surveillance, and target acquisition assets while the main body advances. An attacking force seeks to fix enemy forces and gain positional advantage to destroy them using maneuver.

2-34. If an attacking unit discovers a gap in the enemy force's defenses, friendly units seek to exploit that weakness and disrupt the integrity of the enemy force's defense. Units assess the situation to ensure that enemy forces are not luring them into an engagement area. Units synchronize the exploitation to prevent counterattacking enemy forces from isolating and destroying successful subordinate elements of the attacking friendly force.

2-35. When units conducting a frontal attack can no longer advance, they transition to a defensive posture. Once set in the defense, they continue to perform reconnaissance of enemy positions to locate gaps or assailable flanks and may assist the forward passage of lines of follow-on forces.

PENETRATION

2-36. A **penetration** is a form of maneuver in which a force attacks on a narrow front. Destroying the continuity of a defense enables the enemy force's subsequent isolation and defeat in detail. The penetration extends from the enemy force's disruption zone through the battle zone into the enemy support zone. Units employ a penetration when—

- Weak spots are identified in enemy defenses through reconnaissance, surveillance, and security operations.
- Conditions do not permit an envelopment, such as the enemy having no assailable flank.

Organization of Forces

2-37. Penetrating a defensive position requires overwhelming combat power at the point of penetration and combat superiority to continue the momentum of the attack. Units allocate combat power and designate control measures to fix enemy reserves and long-range weapons in their current locations and to isolate enemy forces within the area selected for penetration. Penetrations organize into a breach force, support force, assault force, and a reserve. These elements exist for each location the force is required to penetrate. Units should not withhold combat power from the initial penetration to conduct additional penetrations unless there is sufficient combat power to ensure the success of the initial penetration.

Breach Force

2-38. The breach force is responsible for executing the initial penetration of the enemy's defense. The breach force. The breach force is typically the main effort until the breach is complete. Depending on the situation the breach force may also be responsible for widening the gaps of the initial penetration.

Support Force

2-39. The support force is responsible for fixing defending enemy forces along a broad front to allow the breach and assault forces to penetrate along a narrow front. The support force is a supporting effort to the breach and assault forces.

Assault Force

2-40. The assault force is responsible for seizing the penetration objectives on the far side of the penetration. It is typically the main effort. Depending on the situation the assault force may have a follow-and-support mission to the breach force.

Reserve

2-41. The use of the reserve avoids diverting the assault element from attacking the final objective of the penetration. Units assign subordinate units the tactical mission tasks of follow-and-support or follow-and-assume to ensure rapid exploitation of initial success.

See paragraphs 2-51 through 2-57 for how these forces execute a penetration.

Control Measures

2-42. A unit conducting a penetration normally has a narrower assigned area than a unit conducting a frontal attack. The minimum control measures for a penetration are—

- An assigned area to every maneuver unit.
- Axis of advance or a direction of attack.
- A line of departure (LD) or line of contact (LC).
- The time of the attack or time of assault.
- Phase lines.
- An objective.
- Limits of advance (LOAs) to control and synchronize attacks. (Units can use BHLs instead of LOAs if they know where they will likely commit their follow and assume forces.)
- Checkpoints.
- Graphic control measures associated with breaching operations, such as points of breach and lanes.
- Probable lines of deployment.
- Support by fire positions and attack by fire positions.
- Fire support coordination measures.

2-43. The lateral boundaries of a unit or units assigned the main effort are narrow to help maintain the mass necessary at the area of penetration. Units locate LOAs far enough beyond the enemy's main defensive positions to complete their breach of those positions. They adjust existing boundaries to accommodate the new situation if operations result in opportunities to exploit success and pursue retreating enemy forces or expand the penetration.

Planning a Penetration

2-44. The success of a penetration depends primarily on a coordinated and synchronized plan executed at a high tempo against comparatively weak enemy defenses. The terrain behind an area selected to penetrate must allow follow-on forces to proceed from the breach to a deeper objective.

2-45. The depth of an enemy position and the relative strength of attacking echelons determine the width of a penetration. The availability of artillery, air support, and other combat enablers for an attacking force helps units determine relative combat power. A wider gap allows friendly forces to pass through more quickly and in large-sized formations, making it more difficult for enemy forces to close the gap. The deeper a penetration, the easier it is to expose an enemy force's flanks by the breach, and the less likely it is that an enemy force will be in a position to restore its front by falling back.

2-46. Plans for penetrating a defensive position include isolating, suppressing, and destroying by fire enemy forces in an area selected for the penetration. These plans should also address how to isolate the area of penetration from support or reinforcement by enemy forces located outside the area. A critical part of a plan is positioning friendly assets so that units can mass the effects of their combat power to accomplish these results without giving away the location of the penetration.

2-47. The majority of units and assets are in positions where the effects of their combat power apply to the area selected for penetration. Plans for the penetration normally have three phases:

- Breaching the enemy force's main defensive positions.
- Widening the gap created to secure the penetration's flanks.
- Seizing an objective and subsequently exploiting the success of the penetration.

2-48. Planning the sequence of these phases depends on the situation. In some situations, if there are weaknesses or gaps in an enemy force's front, it is possible for armored forces to breach the enemy force's defenses and proceed straight to an objective. Simultaneously, infantry units could conduct local envelopment and exploitation operations.

2-49. Supporting efforts for outside the area of penetration are normally to isolate enemy forces on the flanks of the penetration. Synchronizing the effects of rotary- and fixed-wing aircraft, artillery fires, and obscuration to delay or disrupt repositioning forces are examples of supporting efforts. Units usually attempt to penetrate the enemy's defensive positions along a boundary between two enemy units because defenses tend to be less effective along a boundary.

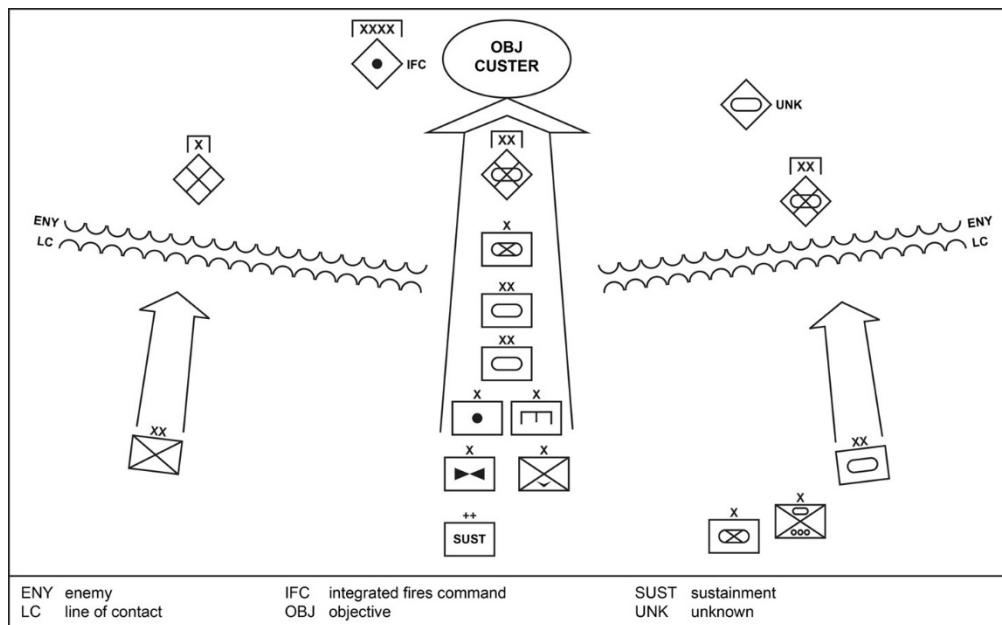
2-50. Units plan penetrating through the enemy force's defensive positions in enough depth so enemy forces cannot reestablish a viable defense in rearward positions. Units do not divert the strength of attacking forces to widening the gap to secure the flanks of the penetration until the forces achieve sufficient depth. However, plans should address contingencies, such as enemy counterattacks against the penetration's flanks, if the unit culminates at any point during the operation or actions to take if the penetration is unsuccessful. Plans provide for uninterrupted support to attacking elements as they close with the enemy and accomplish their mission.

Executing a Penetration

2-51. After the initial breach of the enemy force's defense, the situation determines the sequence of the remaining two phases. If enemy forces are in a weak position, it may be possible for the lead attacking force to seize the penetration's final objective while simultaneously widening the initial breach. (See discussion beginning in paragraph 18-9 for more information on breaching.)

Breaching the Enemy's Main Defensive Positions

2-52. The support force fixes the enemy along a broad front to allow the breach and assault forces to penetrate on a relatively narrow front. The support force can accomplish this by adjusting its lateral boundaries to the point or points of penetration or by extending its boundaries to fix the enemy on a broader front. This allows the force conducting the penetration to focus overwhelming combat power at that location. The support force locates where it can suppress the enemy for the breaching and the assaulting forces. The breach force establishes a lane or lanes to facilitate the assault force operation. The breach force can also be assigned near objectives to prepare the passing of the assault force. Figure 2-15 on page 2-18 depicts a penetration with two support forces fixing enemy forces on a broad front and the breach and assault forces executing the penetration.



2-53. Supporting efforts focus on the remainder of the enemy forces in their current positions and isolate the objective from enemy forces. These operations prevent enemy forces from disengaging to reinforce enemy units opposing the main effort. Units track the battle's progress to ensure that subordinate forces penetrate entirely through the enemy force's main defensive positions and not just the enemy force's disruption zone.

2-54. Enemy forces normally try to slow down or stop a breach to gain time to react to the changing situation. The attacking unit must rapidly exploit and reinforce success. The attacker masses resources and additional units as necessary to ensure completing the penetration through the enemy force's defensive positions.

Widening the Gap to Secure the Penetration's Flanks

2-55. Once the attacking force penetrates the main defenses, it begins to widen the penetration of the enemy force's defensive positions by conducting a series of shallow envelopments or attacks by fire. The task of widening the gap of the penetration is normally assigned to a follow-and-support force. Commanders also have the option of committing their reserve to accomplish that task. If the reserve is committed, the commander must designate another reserve, or the unit will not have the forces available to commit a reserve to another operation. Units plan to meet enemy counterattacks by shifting fires or committing reserves or follow and assume forces. They can use obstacles on the flanks of the penetration as a combat multiplier to assist in defeating any local enemy counterattacks and to maintain the force's tempo.

Seizing an Objective and Subsequent Exploitation

2-56. The assault force attacks objectives to destroy the continuity of the enemy's defensive position. Frequently, that objective is so far from the area of penetration that the unit or units initially conducting the penetration cannot seize it without pausing. In that event, units plan to commit the reserve or attack with the assault force through the breaching force early. Exploitation beyond the objective tends to be executed by divisions and corps. The exact force mix depends on the mission variables, while the armored, Stryker, and aviation forces are generally suited for subsequent exploitation.

2-57. Divisions and corps may initiate an attack by simultaneously launching two or more convergent penetrations against weak locations on the enemy front. Often this method of attack helps isolate an extremely strong enemy defense. Units assign supporting efforts to contain any enemy positions that may influence the penetration.

ENVELOPMENT

2-58. ***Envelopment*** is a form of maneuver in which an attacking force avoids an enemy's principal defense by attacking along an assailable flank. An envelopment avoids the enemy force's strength—the enemy's front—where the effects of enemy fires and obstacles are generally the greatest and attacks the enemy to the flank or rear. Envelopments force the enemy to fight in two or more directions simultaneously to meet the converging efforts of an attack. Envelopments focus either on seizing terrain, destroying enemy forces, or interdicting enemy withdrawal routes. Units prefer to conduct an envelopment instead of a penetration or a frontal attack because generally the flanks of the defending forces are weaker and provide the attacking forces the most opportunities to destroy the enemy force. The main effort focuses on attacking an assailable flank. If no assailable flank is available, the attacking force creates one through the conduct of a penetration. The three variations of the envelopment are—

- Single envelopment.
- Double envelopment.
- Vertical envelopment.

2-59. A ***single envelopment*** is a variation of envelopment where a force attacks along one flank of an enemy force. A single envelopment is generally easier to control and does not require a significant number of forces. See figure 2-16 on page 2-20 for an illustration of a single envelopment.

2-60. A ***double envelopment*** is a variation of envelopment where forces simultaneously attack along both flanks of an enemy force. A force seeking to execute a double envelopment must also have a substantial mobility advantage over defending forces. A unit performs a double envelopment by conducting a frontal attack to fix enemy forces in place while enveloping both of the enemy force's flanks. A double envelopment generally requires more forces than a single envelopment and are more difficult to control.

2-61. A ***vertical envelopment*** is a variation of envelopment where air-dropped or airlanded troops attack an enemy forces' rear, flank, or both. A force seeking to execute a vertical envelopment requires the necessary vertical lift capability and indirect fire assets to suppress enemy air defense capability. Because of the forces required, normally only divisions and larger organizations can conduct double and vertical envelopments, since these organizations have the resources and the capability to control these envelopments. A vertical envelopment, by either airborne assault or air assault, allows the commander to—

- Overcome distances quickly, overfly barriers, and bypass enemy defenses.
- Extend the area over which the commander can exert influence.
- Leaves the enemy defenses more vulnerable to attack from the main body.
- Disperse reserve forces widely for survivability reasons while maintaining their capability for effective and rapid response.
- Exploit combat power by increasing tactical mobility.
- Seize key terrain to deny the enemy's use.

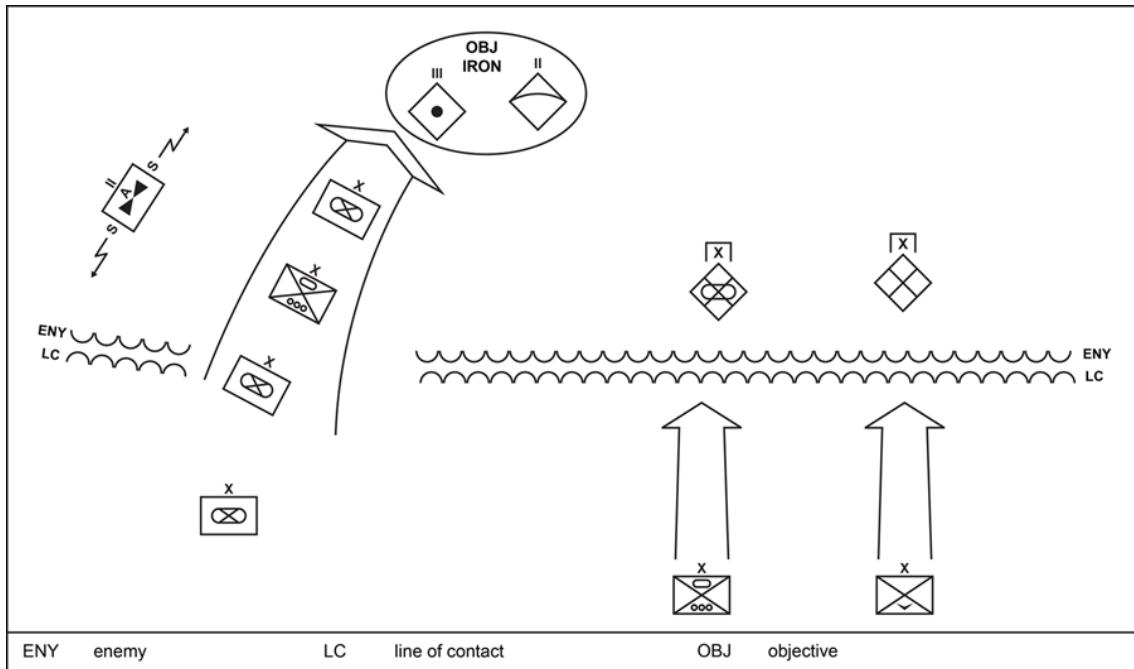


Figure 2-16. Single envelopment

Organization of Forces

2-62. During a single or double envelopment units organize their forces to perform two primary tasks: fixing the enemy force and executing the envelopment. Units conducting an envelopment task organize forces into a fixing force, enveloping force, security force, and a reserve. The only organizational difference between a single envelopment and double envelopment is that a double envelopment consists of two enveloping forces. The fixing force normally conducts a frontal attack to fix enemy forces in their current positions to prevent their escape and reduce their capability to react against the enveloping force. The fixing force should use the minimal amount of combat power to fix the enemy while ensuring the majority of combat power is in the enveloping force. During a double envelopment, commanders typically designate the most likely to succeed of the two envelopment operations as the main effort for resources. The enveloping force maneuvers behind the enemy's battle zone to defeat enemy forces in their positions, but from an unexpected direction. The security force prevents the enemy from discovering friendly dispositions, capabilities, and intentions, or hindering the envelopment.

2-63. Units executing a vertical envelopment organize friendly forces into an air assault task force or an airborne task force. The air assault task force is a temporary group of integrated forces tailored to a specific mission under the command of a single headquarters. The air assault task force consists of an air assault force and the ground assault force. The ground assault force is task-organized with enough combat power to seize or fix the objective or enemy force. The airborne task force is organized by an assault echelon, follow-on echelon, and rear echelon. The assault echelon is task-organized with enough combat power to seize or fix the objective or enemy force. (See FM 3-99 for more information on airborne and air assault operations.)

Control Measures

2-64. At a minimum, commanders assign an area for each unit participating in an envelopment. They also designate phase lines, support by fire and attack by fire positions, contact points, and appropriate fire coordination measures, such as a RFL or boundary between converging forces, and any other control measures necessary to control the envelopment. Figure 2-17 is an example of control measures used when conducting an envelopment.

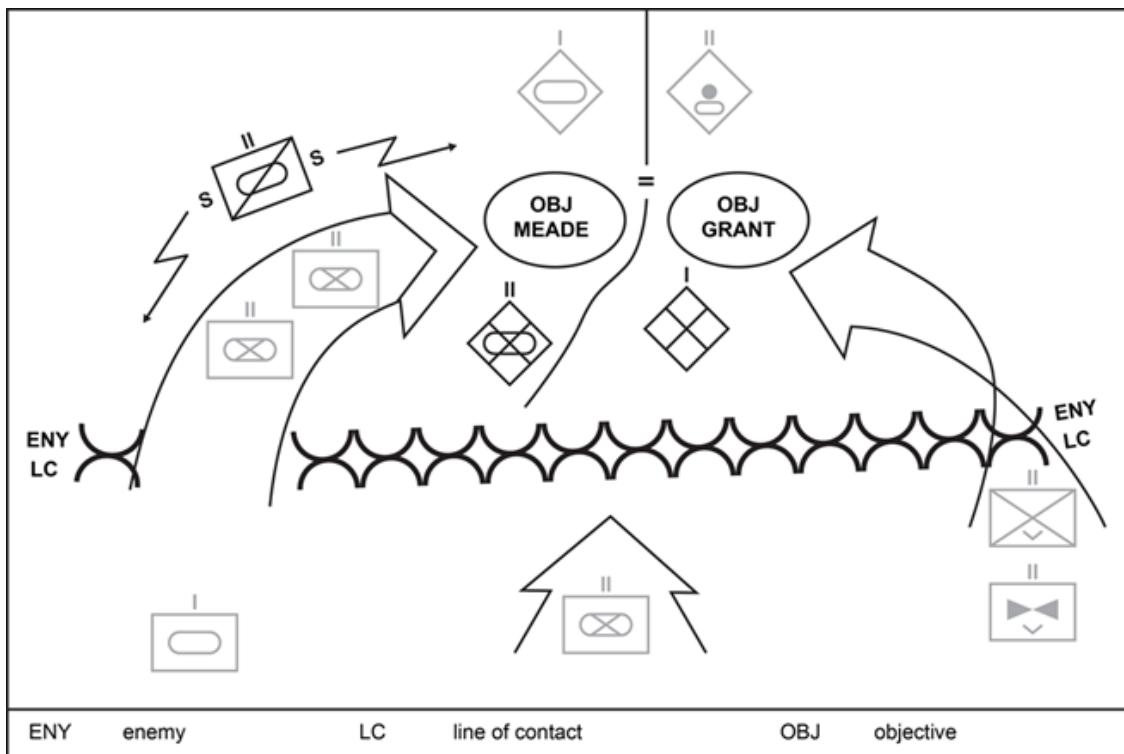


Figure 2-17. Envelopment control measures.

Planning an Envelopment

2-65. Successful envelopment planning requires knowing and understanding enemy forces and their capabilities. Units seek to maneuver the enveloping force around or over the enemy force's main defenses to secure objectives on the enemy force's flank or rear. From those objectives, the enveloping force can use its positional advantage to employ superior combat power against a defending enemy force oriented in the wrong direction. A unit uses information collection assets to determine the disposition and capabilities of enemy forces to detect and react to their operations.

2-66. Units plan for the force conducting the envelopment to remain within supporting distance of the fixing force. *Supporting distance* is the distance between two units that can be traveled in time for one to come to the aid of the other and prevent its defeat by an enemy or ensure it regains control of a civil situation (ADP 3-0). Sustaining the enveloping force requires deliberate planning because only intermittent ground lines of communications (LOCs) between the echelon support area and the enveloping force may exist.

2-67. Units develop branch and sequel plans to the envelopment operation to exploit the envelopment's success. These plans consider the transition to a pursuit in order to complete the destruction of the enemy force or to halt and pass forward the reserve or follow and support forces.

Executing an Envelopment

2-68. A successful envelopment depends largely on the degree of surprise units achieve against enemy forces or the use of overwhelming combat power. The envelopment's probability of success also increases when an enveloping force has superior mobility and intelligence, possesses air superiority, and has supporting efforts that fix the bulk of the enemy's forces in their current positions.

2-69. Normally, units orient the majority of their combat power toward where they expect to engage enemy forces, while assuming risk by placing less combat power on their own flanks. The attacking unit creates an assailable enemy flank using whatever means necessary. The enveloping force then moves rapidly to exploit

the situation before enemy forces strengthen an assailable flank by preparing positions in depth or by engaging their reserve. Rapid movement around the enemy force's flank is essential to prevent enemy forces from occupying previously prepared positions. Higher headquarters' supporting efforts attempt to prevent the enemy from reconstituting reserves from other portions of the enemy front.

2-70. After the initial envelopment of one flank, which places enemy forces at a disadvantage, units have many options. They may choose to exploit success by generating additional combat power along the same axis. Units can destroy or defeat the enveloped enemy force in place, or transition to another type of operation, such as an exploitation, pursuit, or encirclement.

TURNING MOVEMENT

2-71. A *turning movement* is a form of maneuver in which the attacking force seeks to avoid the enemy's principal defensive positions by attacking to the rear of their current positions forcing them to move or divert forces to meet the threat. A turning movement differs from an envelopment because the force conducting a turning movement seeks to make enemy forces displace from their current locations, whereas an enveloping force seeks to engage enemy forces in their current locations from an unexpected direction. It can also be conducted using waterborne or amphibious means. Figure 2-18 graphically depicts a turning movement. Units frequently transition this form of offensive maneuver from the attack into an exploitation or pursuit. The turning force must also be capable of operating outside supporting distances for a set time. Only divisions and above can execute a turning movement. This is due to these echelons possessing the organic resources to organize a turning force that can operate outside the supporting distance of the main body and force enemy units out of their current positions. execute a turning movement.

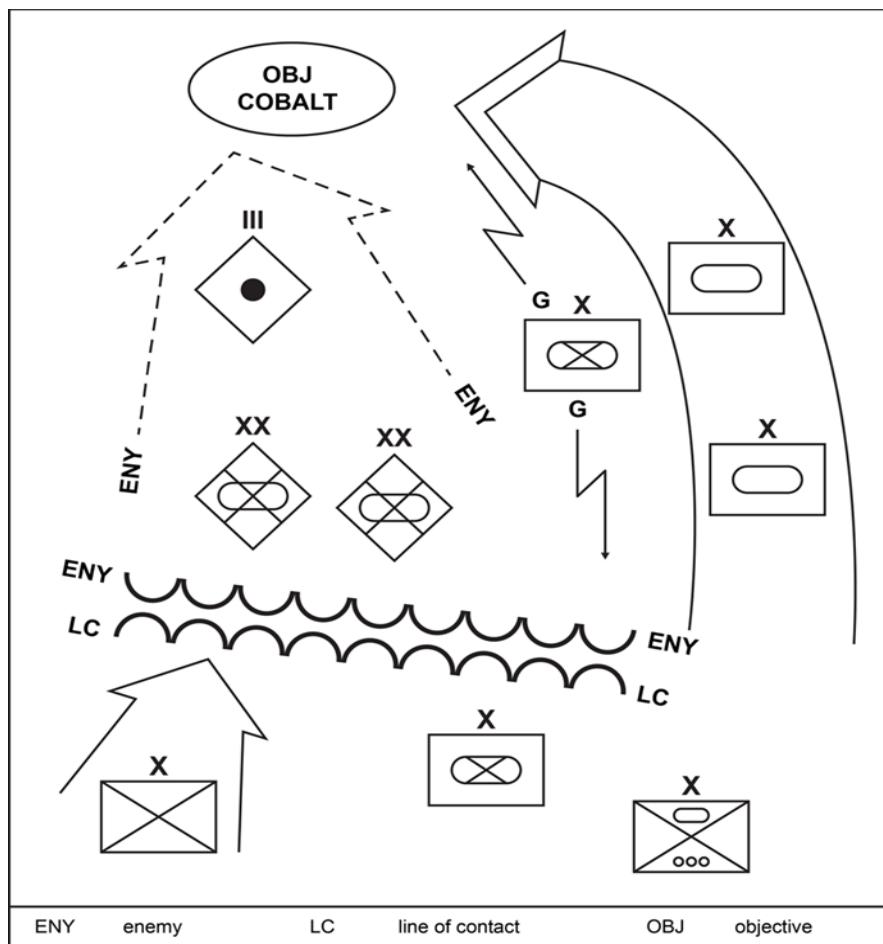


Figure 2-18. Turning movement

Organization of Forces

2-72. The task organization for a turning movement are the following:

- Security force.
- Diversion force.
- Turning force.
- Reserve.

2-73. The security force performs security and reconnaissance tasks as part of its enabling operations. A diversion force is task-organized to ensure the success of the turning force. The diversion force conducts operations, such as attacks designed to divert the enemy force's attention away from the turning force. The force conducting the turning movement is the turning force. The turning force conducts the echelon's main effort and is resourced appropriately. The reserve is positioned to support the turning force. However, the reserve can support the security or diversion force if required.

Control Measures

2-74. Units designate control measures as necessary to synchronize subordinate force's operations. These control measures include—

- Phase lines.
- Contact points.
- Objectives.
- Limits of advance.
- Appropriate fire control measures.

Planning a Turning Movement

2-75. Selecting the right terrain-oriented objective of a turning movement is of major importance to the success of the operation. This causes the enemy forces to relocate from their current position to meet the friendly force in a position away from their previous occupied position or risk catastrophic defeat. The unit's scheme of maneuver in a turning movement may vary depending on the specific situation and mission variables. In addition to common offensive planning considerations, units conducting a turning movement pay special attention to planning branches and sequels to the turning movement, including—

- Transitioning to an exploitation or pursuit.
- Transitioning to a defense.
- Linking up the turning force and diversion force.
- Retrograding the turning force.

2-76. After developing the tactical plan, units plan how the turning force maneuvers to its objective. They develop the turning force's movement, loading, and staging plans if they require outside transportation assets. Units plan to occupy key terrain that threatens the enemy force's survival or remain mobile and seek ways to exploit the turning force's success.

2-77. If there is an early linkup with the main body during a turning movement, the turning force normally plans to defend the terrain required to protect itself. Once reinforcement or linkup with the main body occurs, units plan how to use the turning force to continue the attack or relieve the main body so it can prepare for subsequent missions.

2-78. The distances between forces and the existence of intermittent LOCs magnify the problems inherent in providing sustainment to a maneuver force during a turning movement. Therefore, when planning a turning movement, units describe the sustainment conditions required or acceptable for the operation.

2-79. Units consider the provision of all supplies and equipment required for mission accomplishment as an integral part of tactical planning. They plan and organize unit sustainment operations to support a rapid tempo of highly mobile and widely dispersed operations. Turning movements tend to have greater supporting distances and responsibilities. Sustainment planners recognize this and adjust their plans using available

resources. Subordinate units carry only those supplies required to meet their immediate needs into the operation.

Executing a Turning Movement

2-80. Successful turning movements threaten the enemy force into a dilemma. First, enemy forces must move from their original positions to meet the threat presented by the turning force. Often enemy forces must commit available reserves against this new threat, which exposes their reserves to friendly fires. After the turning movement, enemy forces must engage the friendly force on ground that they have not chosen or prepared. The other option for enemy forces is to continue to hold the terrain they occupy at the risk of becoming enveloped and potentially encircled by friendly forces. Whenever possible, units conducting a turning movement try to reach the terrain-oriented objective that compels enemy forces to reposition prior to encountering them. Friendly forces finding their way into the enemy force's rear area to rapidly exploit the situation seek to achieve their objectives before the enemy can react. Rapid movement is essential to prevent enemy forces from occupying previously prepared positions in the enemy force's rear.

2-81. The maneuver of the turning force is what causes enemy forces to leave their positions. A turning force normally conducts most of its operations outside the supporting range of the diversion force and possibly outside its supporting distance. The turning force must contain sufficient maneuver, functional, and multifunctional capabilities to operate independently for a specified period. Units organize the reserve to exploit success by using either the turning force or the diversion force.

INFILTRATION

2-82. An **infiltration** is a form of maneuver in which an attacking force conducts undetected movement through or into an area occupied by enemy forces. Infiltration is also a march technique used well before encountering enemy forces to avoid enemy information collection assets. Infiltration occurs by land, water, air, or a combination of means. Moving and assembling forces covertly through enemy positions takes a lot of time. A successful infiltration requires the infiltrating force to avoid detection and engagement by enemy forces. Since this requirement limits the size and strength of the infiltrating force, and infiltrated forces alone can rarely defeat an enemy force, units use infiltration in conjunction with and in support of other forms of offensive maneuver. Figure 2-19 depicts an infiltration.

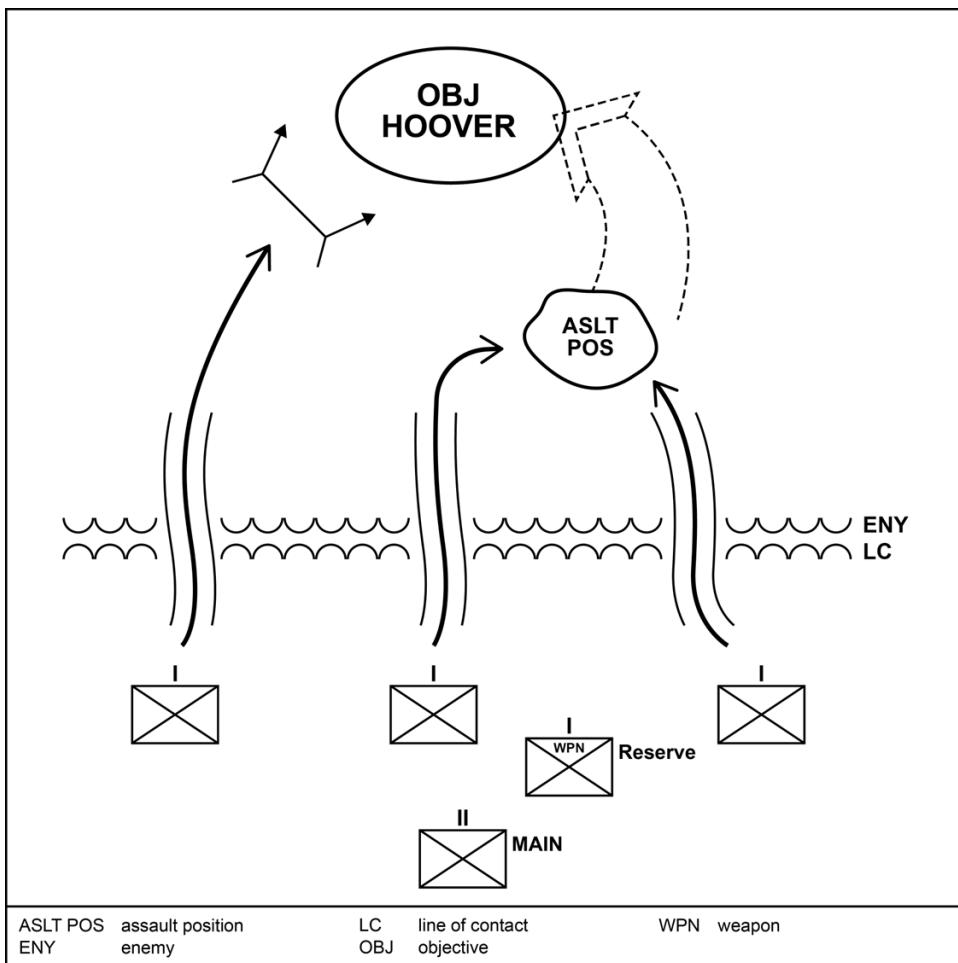


Figure 2-19. Infiltration

2-83. Units conduct infiltration to move all or a portion of a unit through gaps in the enemy force's defenses to—

- Reconnoiter known or templated enemy positions and conduct surveillance of named areas of interest and targeted areas of interest.
- Attack enemy-held positions from an unexpected direction.
- Occupy a support by fire position to support the main effort.
- Secure key terrain.
- Conduct ambushes and raids to destroy vital facilities and disrupt the enemy force's defensive structure by attacking enemy reserves, fire support and air defense systems, communications nodes, and sustainment elements.
- Conduct a covert breach of an obstacle or obstacle complex.

2-84. Special operations forces and dismounted infantry units up to brigade size are best suited to conduct an infiltration. In some circumstances, armored- and Stryker-equipped forces operating in small units can conduct an infiltration when the terrain can mask their force's movement signature. The proliferation of technology leads to increased situational understanding for both friendly and enemy forces as well as an increased chance of detecting units conducting an infiltration. Understanding the capabilities of these technologies informs the decision as to whether an infiltration is feasible.

Organization of Forces

2-85. Infiltrating units generally organize into a security force and a main body. Normally, to be successful, an infiltrating force must avoid detection until it reaches its objective rally point. The infiltrating unit organizes the main body into one or more infiltrating elements. These elements are the largest size element possible that meet requirements for stealth and ease of movement. This organization increases control and the speed of the infiltration while providing responsive combat power. Units determine the exact size and number of infiltrating elements based on the situation.

2-86. Units consider the following factors when determining how to organize available forces. Smaller infiltrating elements are not as easy to detect as larger elements and can get through smaller defensive gaps. Even the detection of one or two small elements by enemy forces may not prevent an infiltrating unit from accomplishing its mission. Larger infiltrating elements are easier to detect, and their discovery is more apt to endanger the success of the mission but if compromised are better equipped to react. A unit with many smaller infiltrating elements requires more time to complete the infiltration and needs more linkup points than a similar sized unit with only a few and larger infiltrating elements. Many smaller infiltrating elements are also harder to control than fewer, larger elements.

2-87. If resources allow, units designate security forces that move ahead of, to the flanks of, and to the rear of each infiltrating element's main body. These security forces may be assigned either screen or guard missions. They determine the sizes and orientation of security elements based on the situation. Each infiltrating element is responsible for its own reconnaissance effort.

2-88. Sustainment of an infiltrating force normally depends on the force's basic load of supplies and those medical and maintenance assets accompanying the infiltrating force. After completing the mission, units reopen LOCs to conduct normal sustainment operations.

Control Measures

2-89. Control measures for an infiltration include, at a minimum—

- One or more infiltration lanes.
- A LD or point of departure (PD).
- Movement routes with associated start points (SPs) and release points (RPs), or a direction or axis of attack.
- Linkup or rally points, including objective rally points.
- Assault positions.
- One or more objectives.
- A limit of advance.
- Phase lines.
- Checkpoints.
- Attack position.

If it is not necessary for the entire infiltrating unit to reassemble to accomplish its mission, the objective may be broken into smaller objectives. Each infiltrating element would then move directly to its objective to conduct its mission.

Planning an Infiltration

2-90. The activities and functions associated with the process of planning an infiltration are the same as with any other offensive operation. That planning takes advantage of that unit's ability to surprise enemy forces. The planning process synchronizes the warfighting functions that support the infiltrating unit, especially precise information collection. Without precise, detailed intelligence, infiltration maneuvers become high-risk probing operations that can be costly and time consuming. Careful planning, full information collection integration, detailed analysis, and OPSEC enable an infiltrating force to avoid an enemy force. This minimizes direct contact and maximizes surprise.

2-91. Sustaining infiltrations requires detailed planning with regard to medical evacuation, maintenance support, and resupply classes of supply for the infiltrating unit. Unlike the other forms of maneuver,

infiltration purposely maneuvers units out of sustainment range for longer periods to surprise the enemy. The prolonged time away from medical evacuation, maintenance, and resupply of classes of supply increases the risk to the infiltrating unit, which requires detailed planning to mitigate. After identifying gaps or weaknesses in the enemy force's defensive positions, units assign infiltration lanes, contact points, and objectives to subordinate units. These objectives afford the infiltrating force positions of advantage over enemy forces (the objectives are not required to be to the rear of the enemy force). Each subordinate unit picks one or more routes within the assigned lane and establishes additional contact points, rally points, assault points, and other control measures as required.

2-92. Units require routes within an infiltration lane to be far enough apart to prevent an infiltrating element on one route from seeing other infiltrating elements, but close enough so that an infiltrating element could switch quickly to another route if the situation requires it. They may use single or multiple infiltration lanes depending on the infiltrating force's size, the amount of detailed information on enemy dispositions, terrain, time allowed, and number of lanes available. Units require each route to provide infiltrating elements cover and concealment while avoiding known enemy and civilian locations and movement routes as much as possible. If possible, the subordinate unit selects the exact routes during the preparation phase after reconnoitering each infiltration lane. That subordinate decides whether the unit infiltrates as a whole or as smaller elements, depending on the enemy force's density and strength.

2-93. A single infiltration lane—

- Facilitates navigation, control, and reassembly.
- Requires the existence or creation of only one gap in the enemy force's position.
- Reduces the area for which detailed intelligence is required.

2-94. Multiple infiltration lanes—

- Require the existence or creation of more gaps in the enemy force's security area.
- Reduce the possibility of compromising the entire force.
- Increase difficulty with maintaining control.

2-95. The sizes and numbers of infiltrating elements are major considerations for units when deciding whether to use a single lane or multiple infiltration lanes. If the infiltration takes place using multiple elements, contingency plans must address the following situations:

- A lead element, possibly the security force, makes contact, but the trail elements have not started infiltrating.
- A lead element infiltrates successfully but compromises one or more trailing elements.
- A linkup point is compromised.
- An element is isolated by the enemy.

2-96. The infiltration plan also addresses the following considerations:

- Availability of supporting fires throughout the operation.
- Linkup or extraction of the infiltrating unit after mission completion.
- Sustainment of the infiltrating force during the operation, including casualty evacuation.
- Tactical deception operations.
- Linkup of various infiltrating elements.
- Command and control of forces.
- Positioning of combat vehicles to support the infiltrating elements.
- Use of limited visibility and rough terrain to mask movement and reduce possible detection.
- Infiltration of the largest elements possible to maintain speed and control.
- Rehearsals.
- Abort criteria.
- Critical friendly zones.

2-97. Planned recognition signals and linkup procedures for the infiltration should be simple and quick. If there have not been any firing or other noises, users of signals should consider the probability of detection. However, if there have already been assaults, artillery, and small arms fire, stealth is less of a concern. A lack

of time and the short distance involved in many infiltration operations may make conducting formal linkup procedures unnecessary.

Preparing an Infiltration

2-98. Once the objective, infiltration lanes, and linkup or rally points are selected, commanders' direct information collection operations to update and confirm intelligence requirements. Friendly information collection operations identify enemy sensors and surveillance systems. Units then revise the plan to reflect current conditions in the assigned area.

Executing an Infiltration

2-99. Moving undetected during an infiltration requires a considerable amount of time. The infiltrating unit moves from its assembly area or current position through the start point and then continues moving along the infiltration route to a release point. If small elements are conducting the infiltration, the unit uses a series of linkup points to reassemble into a coherent unit.

2-100. If the complete unit is conducting the infiltration, the forward security force begins its movement first and the main body follows. The distance between the forward security force and the main body depends on the mission variables. The security force must be far enough ahead of the main body so that it can either deploy or move to another route if the forward security force discovers enemy forces. The forward security force in an infiltration needs enough time to move in a stealthy and secure manner. Enemy units should not be able to move undetected between the forward security force and the main body.

2-101. As the infiltrating unit moves, the security force reports the cover and concealment of each route, enemy activity, location of danger areas and linkup points, enemy activity on the objective, and other combat information. The unit attempts to avoid enemy and civilian contact; however, contact does not always mean the mission is compromised. The infiltrating unit engages targets first with indirect fires to avoid revealing its presence and exact location.

2-102. If necessary, the forward security force conducts actions on contact while the main body moves to another route, reconstitutes a forward security force, and continues the mission. If the main body makes contact unexpectedly, it either bypasses the encountered enemy force or attacks the enemy force if the enemy has little combat power or cannot be bypassed. During an infiltration, the forward security force ignores ineffective enemy fire and continues to move.

2-103. The infiltrating unit's elements move to an assembly area or an objective rally point to consolidate and reorganize their combat power, refine the plan, and conduct any last-minute coordination before continuing the mission. The unit then conducts those tasks needed to accomplish its mission, which could be an attack, raid, ambush, seizing key terrain, or information collection.

2-104. Units may need to abort an infiltration operation if the mission variables change during the infiltration, creating a condition where units can no longer accomplish the infiltration. Examples of changes that might trigger such an action include—

- Significant portions of the infiltrating force's combat power are lost through navigation errors, enemy action, accidents, or maintenance failures.
- Movement or significant reinforcement of a force-oriented objective.
- Detection of the infiltration by enemy forces.
- Changes in the tactical situation that make the mission no longer appropriate.

Units develop criteria for aborting the infiltration as part of the planning process. They transmit the decision to abort the infiltration to all appropriate headquarters for action and information.

PART TWO

Offensive Operations

Commanders use offensive operations to defeat and destroy enemy forces as well as to seize terrain, resources, and population centers. Part Two consists of five chapters that describe the fundamentals of the offense and the four types of offensive operations—movement to contact, attack, exploitation, and pursuit.

Chapter 3

The Offense

Offensive actions are combat operations conducted to defeat and destroy forces and seize terrain, resources, and population centers. They impose the commander's will on the enemy. The basics discussed in this chapter apply to the conduct of all types of offensive operations.

PURPOSES OF THE OFFENSE

3-1. The offense is the decisive form of war. The offense is the ultimate means commanders have of imposing their will on enemy forces. The main purposes of the offense are to defeat enemy forces, destroy enemy forces, and gain control of terrain, resources, and population centers. Additionally, units conduct the offense to—

- Secure decisive terrain.
- Deprive the enemy of resources.
- Gain information.
- Fix an enemy force in position.
- Disrupt an enemy force's attack.
- Set the conditions for successful future operations.

CHARACTERISTICS OF THE OFFENSE

3-2. Successful offenses share these characteristics:

- Audacity.
- Concentration.
- Surprise.
- Tempo.

See ADP 3-90 for more information on the purposes and characteristics of the offense.

TYPES OF OFFENSIVE OPERATIONS

3-3. The types of offensive operations describe the general sequence of the offense and recommended formations. The purpose of the operation discriminates one from another. The four types of offensive operations are—

- Movement to contact.
- Attack.
- Exploitation.
- Pursuit.

Table 3-1 contains the planning symbols associated with movement to contact, exploitation, and pursuit.

Table 3-1. Types of the offensive operations and planning symbols

Type	Planning Symbol
Movement to contact	
Exploitation	
Pursuit	

Note. Attack does not have a planning symbol. Unless a commander deems it is necessary to constrain their subordinates the default type of offensive operation is an attack and graphic control measures such as an axis of advance or direction of attack can be used to convey the commander's intent. Additionally, exploitations and pursuits are generally a branch or sequel to a successful attack.

Movement to Contact

3-4. **Movement to contact is a type of offensive operation designed to establish or regain contact to develop the situation.** It creates favorable conditions for subsequent tactical actions. Units conduct a movement to contact when the enemy situation is vague or not specific enough to conduct an attack. Forces conducting a movement to contact seek to make contact using the smallest friendly force feasible. If friendly forces make contact with an enemy, they have five options: attack, defend, bypass, delay, or withdraw. There are two variations of movement to contact:

- Search and attack.
- Cordon and search.

See Chapter 4 for more information on movement to contact.

Attack

3-5. An **attack** is a type of offensive operation that defeats enemy forces, seizes terrain or secures terrain. Attacks incorporate coordinated maneuver. An attack differs from a movement to contact since knowledge of the enemy's disposition enables units to synchronize and employ combat power more effectively. There are four variations of an attack:

- Ambush.
- Counterattack.
- Raid.
- Spoiling attacks.

See Chapter 5 for more information on attack.

Exploitation

3-6. An **exploitation** is a type of offensive operation following a successful attack to disorganize the enemy in depth. Exploitations seek to disintegrate enemy forces to the extent that they have no alternative but surrender or retreat. Exploitations take advantage of tactical opportunities. Division and higher echelon headquarters normally plan exploitations as branches or sequels to current operations. See chapter 6 for more information on exploitation.

Pursuit

3-7. A **pursuit** is a type of offensive operation to catch or cut off a disorganized hostile force attempting to escape, with the aim of destroying it. Pursuits entail rapid movement and decentralized control. Pursuits require the pursuing force to retain more mobility than the enemy force. Any offensive operation can transition into a pursuit if enemy resistance breaks down and enemy forces flee. Pursuits generally follow successful exploitations with the purpose of completing the destruction of enemy forces before they can reorganize. There are two variations of pursuits:

- Frontal.
- Combination.

See Chapter 7 for more information on pursuit.

COMMON OFFENSIVE PLANNING CONSIDERATIONS

3-8. The widespread application of highly accurate and lethal weapons, the high degree of tactical mobility, ever-present sensors, and a complex operational environment all characterize contemporary combined arms warfare. Units have a higher probability of tactical success when they can first visualize the battlefield, understand the implications of existing friendly and enemy dispositions, and take effective action to impose their will on the situation. The planning considerations for the offense also apply to the defense with situationally appropriate modifications.

3-9. Only a determined offense, conducted at a high tempo and to great depth, attains the enemy force's destruction. The attacker's principal advantage is that it possesses the initiative. Maintaining the initiative allows units to engage the enemy at the time, and in a manner of their choosing. Attacking units have the time and opportunity to develop a plan and to concentrate the effects of subordinate forces and combat enablers to create conditions for success. Units strike the enemy in unexpected ways at unexpected times and places. They focus on attacking the right combination of targets, not necessarily the biggest or the closest. These attacks are rapidly and violently executed, unpredictable, and seek to disorient enemy forces.

3-10. Attacking units maintain tempo by rapidly following up on attacks throughout the depth of the battlefield to keep enemy forces off-balance and deny them the ability to recover. Friendly forces develop flexible plans that allow them to take advantage of opportunities to maintain the initiative and dictate the tempo of operations against the enemy. Due to the intensity and high pace of offensive operations, units take proactive measures to prevent early culmination prior to accomplishing their assigned mission. The tempo of friendly operations must be fast enough to prevent effective counteraction and attacking units change their means and methods before enemy forces can adapt to them.

3-11. Table 3-2 illustrates some of the common control measures used during offensive operations. Additionally, paragraphs A-6 through A-61 define and discuss common offensive control measures used to synchronize the effects of combat power. Units use the minimum control measures required to complete their missions while providing subordinates the flexibility needed to respond to changes in the situation while preventing fratricide.

Table 3-2. Common offensive control measures

<i>Common offensive control measures</i>		
Assault positions	Checkpoints	Probable line of contact
Assault time	Direction of attack	Probable line of deployment
Assembly areas	Final coordination line	Objectives
Attack by fire positions	Limit of advance	Objective rally point
Attack position	Line of departure	Support by fire position
Axis of advance	Phase lines	Time of attack
Battle handover line	Point of departure	Zone

3-12. Line of sight overlays help protect the force by identifying intervisibility lines, where units cannot make visual and direct fire contact. An enemy force will have difficulty engaging friendly forces with direct fire weapons without line of sight. Situation templates also help protect the force. If units know how fast an enemy force can respond to their actions, they can sequence operations so they occur at times and places where an enemy force cannot respond effectively. Units calculate enemy response times by determining enemy artillery range fans, movement times between enemy reserve assembly area locations and advancing friendly forces, and other related intelligence items.

COMMAND AND CONTROL WARFIGHTING FUNCTION

3-13. Synchronizing the six warfighting functions through planning and preparation increases a unit's effectiveness when executing operations. However, the fluid nature of combat requires leaders to orchestrate the actions of subordinates during the execution phase. Leaders determine where they can best affect the flow of operations and influence critical events by redirecting the effects of committed forces, changing priorities of support, or employing echelon reserves. This redirection normally means that units are well forward in the echelon's formation, usually with the force designated to conduct the main effort or at a location where a key decision or task must be accomplished to enable the success of the main effort. Examples of key tasks or decisions can include the execution of a forward passage of lines or a wet-gap crossing. Once the unit conducting the main effort makes contact with the enemy, friendly forces quickly move to where they best can assess the situation and direct the continuation of offensive operations.

3-14. At battalion and above, units anticipate requirements to shift the main effort during an offense to press the battle and keep enemy forces off balance. They develop decision points to support these changes using both human and technical means to validate decision points.

3-15. In addition to assigning objectives and identifying decision points, leaders at all echelons consider how to exploit advantages that arise during operations and the seizure of intermediate and final objectives. Leaders exploit success by aggressively executing the plan, taking advantage of subordinate initiative, and employing trained units capable of rapidly executing standard drills. The echelon reserve also provides a flexible capability to exploit unforeseen advantages.

3-16. Units maintain communications and comprehensive throughput of information among all units throughout the offense. They plan how to position and reposition command and control systems to help control operations. Units plan how to expand the communications coverage to accommodate increased distances and enemy efforts to deny friendly communications systems as the unit advances. Units provide for redundant communication means.

3-17. A unit maintains its common operating picture throughout an operation. For a common operating picture to aid a unit in maintaining situational awareness, the unit requires timely and frequent updates of relevant information. All echelons report information on the disposition and activities of friendly and enemy forces.

3-18. A well-trained unit with rehearsed standard operating procedures, augmented with digital systems, enjoys reduced engagement times and an enhanced planning process. This enhances its ability to control the tempo of the battle and stay ahead of the enemy's decision cycle. Greatly improved knowledge of enemy and friendly situations facilitates the employment of fires and maneuver at extended ranges. Such knowledge also enhances friendly forces' freedom to move to those battlefield locations that best enable their ability to influence the battle or engagement at the critical time and place.

MOVEMENT AND MANEUVER WARFIGHTING FUNCTION

3-19. Attacking units maneuver to avoid enemy strengths and to seek positions of relative advantage that they can exploit to accomplish their mission. They seek to overwhelm enemy forces with one or more unexpected attacks before enemy forces have time to react in an organized fashion. Echelon security forces prevent an enemy force from discovering friendly dispositions, capabilities, and intentions, or from interfering with the preparations for the attack. Finally, units maneuver to close with and destroy enemy forces by close combat and shock effect. *Close combat* is warfare carried out on land in a direct-fire fight, supported by direct and indirect fires and other assets (ADP 3-0). Close combat encompasses all actions that place friendly forces in immediate contact with enemy forces where units use direct fire and movement in combination to defeat or destroy enemy forces or to seize and retain ground.

3-20. The forward movement of subordinate units is critical to the unit maintaining the initiative necessary for successful offensive actions. By maintaining a high tempo, units deny enemy forces a chance to plan, prepare, and execute an effective response to friendly offensive actions. This is a key way to ensure the survivability of the force. Techniques for maintaining a high offensive tempo include using multiple routes, dispersion, highly mobile forces, piecemeal destruction of isolated enemy forces, scheduled rotation and relief of forces before they culminate, and the wise use of terrain. The exact techniques employed in a specific situation must address the mission variables.

3-21. Units can overwhelm an enemy force by seizing and retaining key and decisive terrain early. *Key terrain* is an identifiable characteristic whose seizure or retention affords a marked advantage to either combatant (ADP 3-90). When present, *decisive terrain* is key terrain whose seizure and retention is mandatory for successful mission accomplishment (ADP 3-90). If decisive terrain is present, commanders designate it to communicate its importance to their concept of operations. A friendly force must control decisive terrain to accomplish its mission. (See ADP 3-90 and ATP 2-01.3 for more information on key terrain.)

INTELLIGENCE WARFIGHTING FUNCTION

3-22. Units use available information collection assets to study the terrain and confirm or deny the enemy force's strengths, dispositions, and likely intentions, especially where and in what strength the enemy force defends. Indications of the location and composition of obstacles and the positioning of engineer assets may be key in determining where and when an enemy force defends. These assets also gather information concerning the civilian population within an assigned area to confirm or deny their numbers, locations, and likely intentions, especially with regard to staying in shelters or fleeing from combat operations.

3-23. By studying the terrain, units try to determine the principal mounted and dismounted avenues of approach to their objectives. They also try to determine the most advantageous areas for the enemy's main defense, routes that enemy forces may use to conduct counterattacks, and other factors, such as observation and fields of fire, avenues of approach, key terrain, obstacles, and cover and concealment (known as OAKOC). Attacking units continuously conduct information collection (reconnaissance, surveillance, intelligence operations, and security operations) during their offensive actions because it is unlikely that they have complete knowledge of the enemy force's intentions and actions.

3-24. Commander's critical information requirements in the offense commonly include three to five focuses such as—

- Locations, composition, equipment, strengths, and weaknesses of the enemy force, to include high-value targets and enemy reconnaissance and surveillance capabilities.
- Location of unmanned aircraft system ground control stations and launch and recovery sites.
- Probable locations of enemy reconnaissance objectives.

- Locations of possible enemy assembly areas.
- Locations of enemy indirect fire weapons systems and units.
- Locations of gaps, assailable flanks, and other enemy weaknesses.
- Locations of areas for friendly and enemy air assault and parachute assault operations.
- Locations of enemy air defense gun and missile units and air defense radars.
- Locations of enemy electromagnetic warfare units.
- Effects of weather and terrain on current and projected operations.
- Information related to areas, structures, capabilities, organizations, people, and events (known as ASCOPE) about civilians located within the unit's assigned area.
- Likely withdrawal routes for enemy forces.
- Anticipated timetable schedules for the enemy force's most likely course of action and other probable courses of action.
- Locations of enemy command and control and intelligence nodes, reconnaissance and surveillance systems, and the frequencies used by the information systems linking these systems.
- Locations of enemy sustainment assets.
- Location of reserves, reserves movement routes, indications of enemy main effort, and indicators driving friendly force commander's decisions.

3-25. If friendly information collection assets cannot answer the commander's information requirements, units can commit additional internal resources, decide to execute the offense with the current information, or request additional information collection support from information to higher echelon and adjacent units.

3-26. The intelligence preparation of the battlefield process assists the units in the offense with—

- Identification of key terrain features, and manmade and natural obstacles.
- Trafficability and cross-country mobility analysis.
- Line of sight overlays.
- Situation templates.

FIRE WARFIGHTING FUNCTION

3-27. The coordinated use of indirect fires and joint fires enable units to gain and maintain fire superiority throughout all offensive actions. Units use various methods and assets to achieve the desired effects on targeted enemy forces and thereby enable friendly maneuver. This includes Army indirect systems and joint fires.

Army Fire Support

3-28. Indirect fire assets provide units with options for gaining and maintaining fire superiority. ***Fire superiority are the dominating fires of one force over another force that permits that force to maneuver at a given time and place without prohibitive interference by the other.*** They use long-range artillery systems (both cannon and rocket) along with rotary- and fixed-wing aircraft to engage enemy forces throughout the depth of the enemy's positions.

3-29. Fire support planning is the continuing process of analyzing, allocating, and scheduling fires. It determines how fires are used, what types of targets to attack, what collection assets units use to acquire and track those targets, what assets they use to attack targets, and what assets verify effects on these targets. This planning does not stop at the objective or the limit of advance. Units give attention to flanks and potential enemy hide positions. Coordination among echelon fire cells and the proper use of fire support coordination measures are critical to prevent fratricide. Units plan to employ available fires to delay or neutralize repositioning enemy forces to include enemy reserves. They also use fires to suppress, neutralize, or destroy those enemy forces and systems that can most affect their units' closure on their objectives. Units establish triggers for the initiation, shifting, and lifting of fires based on the mission variables.

3-30. The fire support coordinator (known as FSCOORD), or chief of fires depending on the echelon, integrates fires into the unit's scheme of maneuver. Fire support coordinators plan the appropriate fire support for their unit. These fires can be time or event driven. The fire support coordinator plans fires on known and

likely enemy positions, which may include templated enemy positions. Successful massing of indirect fires and fixed-wing attacks requires a fire cell that can proficiently track friendly indirect fire asset positions and movements and that knows the various systems effective fire ranges. It also requires a tactical air control party proficient in the timely execution of close air support.

3-31. Units must weigh the probable effects of preparation fires against achieving a greater degree of surprise against enemy forces. Friendly fires always run the risk of receiving counter fires. Units balance this risk with the requirements of the mission to determine whether to employ preparation fires. They may decide to employ terminally guided munitions to destroy select high-payoff targets or use these munitions in mass against part of the enemy defense to facilitate a breach and negate the requirement for long-duration preparation fires by using area fire munitions.

3-32. Units may choose to make an initial assault without using preparation fires to achieve tactical surprise. However, they always plan fires to support their units' operations so that they are available if needed. Preparation fires are normally high-volume fires delivered over a short period to maximize surprise and shock effect. These preparation fires also include the conduct of electromagnetic warfare and cyber operations. Preparation fires can continue while ground maneuver elements are moving. This consideration applies to the conduct of all offensive operations.

3-33. Artillery and mortars must occupy positions that are well forward and still within supporting range of the flanks of maneuver forces to provide responsive indirect fires. Units consider the effect that movement by echelon or battery has on the amount of fire support available. They should support the unit's main effort with priority of fires. If the operation contains phases, the main effort generally has priority of fires. Units place coordinated fire lines (CFLs) as close as possible to friendly maneuver forces and plan on-order CFLs on phase lines so that those CFLs can quickly shift as their forces advance. This allows the rapid engagement of targets beyond the CFL by the maximum number of available systems. Units establish critical friendly zones to protect critical actions, such as support-by-fire positions and breaching efforts.

3-34. Linking Army forward observers, joint fires observers, and target acquisition assets to quick fire or exclusive networks also provides responsive fires. Responsive fire networks allow the lead observers to communicate directly with specific field artillery or mortar fire units. These kinds of communication arrangements enhance responsiveness through streamlined network structures and focused priorities. Communications planning should also include the need for communications networks for the clearing of targets for rotary- and fixed-wing attacks.

3-35. Units employ information capabilities to support the offense. As friendly forces move through the enemy force's disruption zone and close into the enemy's main battle zone, electromagnetic warfare jamming resources concentrate on neutralizing enemy fire control, target acquisition, unmanned systems control nodes, and information collection systems. They use military deception to prevent the enemy force from determining the location and objective of the friendly main effort. In addition, intelligence sensors continue to provide combat information and guidance to both friendly jammers and lethal indirect fire weapon systems, so attacking units can destroy enemy command and control nodes, reconnaissance and surveillance assets, artillery, and other high-payoff targets. Units synchronize the timing and conduct of these offensive actions, so they achieve maximum effectiveness.

Joint Fires

3-36. Joint fires assist ground forces in shaping operations. *Joint fires* are fires delivered during the employment of forces from two or more components in coordinated action to produce desired effects in support of a common objective (JP 3-0). The principles in the application of joint fires are generally the same between offensive, defensive, and enabling operations. Joint surface-to-surface fires include—

- Army indirect fire, cyber, and electromagnetic warfare assets tasked with supporting Air Force, Navy, or Marine Corps operations.
- Navy missile and naval gun fire, cyber, and electromagnetic warfare assets supporting Army units.
- Marine Corps indirect fire assets supporting Army units.

Joint air-to-surface fires include—

- Army rotary-wing or UAS supporting Air Force, Navy or Marine Corps operations.
- Navy and Air Force fixed-wing, and electromagnetic warfare assets.
- Marine Corps fixed- or rotary-wing or UAS supporting Army units.

See JP 3-09, ADP 3-19, FM 3-09, and ATP 3-09.32/MCRP 3-31.6/NTTP 3-09.2/AFTTP 3-2.6 for information on joint fires.

SUSTAINMENT WARFIGHTING FUNCTION

3-37. Offensive operations will require more reinforcements, fuel, medical, equipment, and materiel compared to defensive and enabling operations. Also, offensive operations increase the likelihood of generating mass casualties and replacing personnel and equipment. Offensive operations require greater precision in sustainment and will be executed at a higher operating tempo than other types of operations. This requires a flexible and adaptable sustainment structure to meet the demands of offensive operations. In the offense, the sustainment focus is on logistics and health service support. Proper echeloning of logistics and medical assets are key to maintaining tempo and minimizing risk in offensive operations.

Logistics

3-38. Logistic units and material remain close to the maneuver force to ensure short turnaround time for supplies and services. This includes uploading as much critical materiel, such as ammunition and petroleum, oils, and lubricants, as possible and coordinating to preclude attempted occupation of a logistics release point by more than one unit at a time. This allows units to reduce risk by lowering their physical and electronic signature during resupply operations. Units make decisions regarding the risk of enemy detection of logistics preparations for an attack.

3-39. Responsive sustainment of the offense begins during mission analysis and continues throughout the operation based on the expertise of the planners and the preparation and agility of the sustainment units during execution as the potential for supplies to not be available increases as the operation progresses. Logisticians must assist with the development of feasible courses of action during planning and anticipate changes of requirements during execution. They must consider alternative routes and different means to accomplish the timely delivery of the required support and they must provide their leaders with options to overcome whatever obstacles appear. The laws of physics constrain the art of the possible, but ingenuity and innovation can deliver solutions to problems that appear insurmountable.

3-40. The variety and complexity of offensive actions requires that units establish flexible and tailorble transportation systems. There may be a wide dispersion of forces and lengthening of lines of communication. Required capabilities include movement control, terminal operations, and mode operations.

3-41. Units need to closely monitor emerging resupply and rearm requirements in conjunction with ongoing operations. The prioritization of the requirements must be thought out and appropriate for the units with follow-on missions, rather than units that are most depleted in conjunction with the potential shift in mission priorities as the operation progresses.

Health Service Support

3-42. The burden on medical resources increases due to the intensity of offensive actions and the increased distances over which support is required as a force advances. The unit re-allocates medical resources as the tactical situation changes. Medical units can anticipate large numbers of casualties in a short period due to destructive capabilities of modern conventional weapons and the employment of weapons of mass destruction. These mass casualty situations can exceed the capabilities of organic and direct support medical assets to treat the numbers of casualties sustained. To prevent this from occurring, planners anticipate this possibility and coordinate with area support medical units to help absorb a rise in battlefield injuries. Careful planning and coordination avoid compromising the standard of medical care for injured Soldiers. Effective management of mass casualty situations depends on established and rehearsed mass casualty plans and

detailed medical planning. Units consider several other variables that ensure the success of mass casualty response plans. These include, but are not limited to—

- The coordination and synchronization of additional medical support or augmentation, such as medical evacuation support, forward resuscitative surgical intervention provided by forward resuscitative and surgical detachments, combat support and field hospitals, casualty collection points, ambulance exchange points, and established Class VIII resupply.
- Quick location and evacuation of injured personnel from the battlefield.
- Providing effective tactical combat casualty care and emergency medical treatment for injured personnel.
- Continuous flow of casualties to medical treatment facilities at the next higher role of care.
- Use of casualty evacuation assets when the number of casualties overwhelms the capacity of the medical evacuation system.
- Accurate triage and rapid medical evacuation of injured personnel to medical treatment facilities at the next higher role of care.
- Planning of MEDEVAC routes (ground and air) along with contingencies during times of hazardous trafficability.
- MEDAVAC capacity is rarely sufficient, and units must designate casualty evacuation capability within their formations.

PROTECTION WARFIGHTING FUNCTION

3-43. Protection prevents or mitigates detection, threat effects, and hazards to preserve combat power and enable freedom of action. To help preserve the force, units ensure they address all protection tasks during the unit's planning, preparation, and execution, while also constantly assessing the effectiveness of those protection tasks. In the offense, protection is applied carefully and selectively to ensure that it does not hinder a unit's freedom of action. This is accomplished through protection integration and synchronization where and when significant threats and hazards are projected in the offensive plan. The fluidity and rapid tempo of the offense poses challenges when protecting friendly assets to deny enemy forces the ability to interfere with friendly force operations.

3-44. Protection is a key consideration at every echelon and all military activities have some inherent or organic protection capability (such as survivability, antiterrorism measures, local security). Higher echelons employ protection systems to enable lower echelon maneuver and deny enemy forces the ability to interfere with subordinate forces' ongoing operations. Lower echelons use reconnaissance and security forces to protect forward maneuver forces and exposed flanks. At the lowest tactical levels, units use deception, cover, concealment, and dispersion to counter threat capabilities and preserve critical capabilities, assets, and activities. (See ADP 3-37 for information on protection tasks).

Air and Missile Defense

3-45. A ground force's primary air defense systems are its organic weapons to defend against short-range air threats, supported by joint fighter aircraft conducting offensive and defensive counterair operations. The joint force may not have air superiority or even air parity. Units weigh the air threat with their ability to mitigate the threat when considering options for offensive operations. During offensive actions, units direct the positioning of available organic or supporting radars in those locations where they can best initially support the unit's attack. The selection of those positions reflects a risk assessment designed to preclude their early loss to enemy action. The air defense airspace management (known as ADAM) cell in the echelon staff communicates with the appropriate air and missile defense (AMD) command post. That AMD command post provides additional information to the supported unit to expand the fidelity of the air picture, including information on engaged air threats by the joint force air component unit, Army Patriot air defense systems, and short-range air defense. The attacking unit concentrates on conducting passive protection measures during its offensive actions. If attacked by enemy aerial systems in assembly areas, attack positions, or while moving, the unit disperses and conducts small-arms air defense. Units at each echelon establish air defense priorities based on the concept of operations, scheme of maneuver, air situation, and air defense priorities established by higher headquarters. If units have Army air defense systems supporting their attack, they generally weight that coverage toward their main efforts and establish protective corridors over terrain

traversed by subordinate units conducting that operation. Command of all air defense assets requires complete and timely communications to ensure proper weapon status for the protection of friendly air support assets.

3-46. Protection measures are an essential part of air and missile defense planning at all levels. All units conduct passive actions in conjunction with their missions. Passive actions reduce the effectiveness of the enemy air threat.

3-47. Tactical air defense support focuses on—

- Enemy UAS.
- Enemy rotary-wing aircraft.
- Enemy fixed-wing aircraft.

Survivability

3-48. All units have an inherent responsibility to improve their positions and take proactive measures to protect their forces, whether they are in an assembly area or maneuvering. Survivability operations consist of three areas designed to focus efforts on mitigating friendly losses to hostile actions or environments: providing or improving cover, concealment, and camouflage. Units normally consider the impact of constructing protective emplacements for artillery and sustainment concentrations as part of the planning process. Units do not employ protective positions in the offense as extensively as they do in the defense. Such terrain modifications may require significant amounts of time, making them impractical for protecting assets that must frequently move to keep pace with operations. However, units may require the hardening of key command and control facilities, especially those with detectable electronic signatures. Maneuver units construct hasty fighting positions as soon as possible when they halt or pause during the conduct of offensive operations. Forces conducting offensive actions continue to use camouflage, cover, concealment, survivability moves, maximum existing terrain, obscuration, and deception.

Explosive Ordnance Disposal

3-49. Explosive ordnance disposal units assess and render safe hazards to protect the force. These elements can dispose of all explosive hazards to include foreign or U.S. ammunition, unexploded ordnance, mines, and CBRN munitions. Engineers identify, breach, and clear minefields. Explosive ordnance disposal forces render safe explosive hazards that restrict unit freedom of movement or deny access to or threaten critical assets or operations. (See ATP 4-32 for more information on explosive ordinance disposal operations.)

Coordinate Air and Missile Defense

3-50. Air and missile defense assets during an offensive operation can provide vital protection from air threats and contribute to the freedom of maneuver by friendly forces. Units coordinate and synchronize air and missile defense assets for coverage over maneuver forces and their critical assets, to include denying surveillance by threat aerial platforms. Air and missile defense assets also protect forward-based infrastructure—such as lines of communications and command nodes—from aerial attack, determine and predict reporting ballistic missile launch points and impact points, and provide early warning and surveillance.

3-51. Unit protection cell planners coordinate with the unit air and defense airspace management cell for AMD to protect the unit's prioritized protection list, ensuring the protection of critical assets and forces from enemy air attack, missile attack, and surveillance.

3-52. AMD assets integrate protective systems by using the six employment guidelines—mutual support, overlapping fires, balanced fires, weighted coverage, early engagement, and defense in depth—and additional considerations necessary to mass and mix AMD capabilities. These employment guidelines enable air defense artillery forces to successfully accomplish combat missions and support overall force objectives.

Risk Management

3-53. The likelihood of fratricide increases during offensive operations compared to defensive operations. During offensive operations, friendly forces maneuver towards enemy forces, while another friendly force

gains fire superiority. The convergence of friendly forces at the decisive point is the riskiest part of any offensive operation.

3-54. During offensive operations, various briefs and rehearsals are the primary tools for reducing risk identified during planning and preparation. The types of risks identified assist in determining the type of rehearsal conducted. Rehearsals should extend to all levels of command and involve all key players.

3-55. Risk management considerations during offensive operations include—

- Confirmation briefs to ensure leaders understand their assigned mission and key tasks.
- Backbriefs to ensure subordinates' course of actions meets their higher echelons commander's intent.
- Rehearsals to ensure shared understanding between units and refine applicable control measures to synchronize operations.

3-56. The following factors may reveal risks during rehearsals:

- Types of rehearsals such as combined arms or fires rehearsals.
- Training and proficiency levels of units and individuals.
- The habitual relationships between units conducting the offensive operation.
- The physical readiness of the troops conducting the offensive operation.

Area Security

3-57. Area security operations typically support offensive operations by ensuring the continual conduct of sustainment operations that generate and maintain combat power to maintain tempo and extend operational reach. Additionally, area security operations allow units to provide protection to critical assets without a significant diversion of combat power. During the offense, various military organizations may be involved in conducting area security operations in an economy-of-force role to protect lines of communications, convoys, or critical fixed sites and radars. Bases and base camps employ local security measures (including explosive ordnance disposal, assessments and recommendations, random antiterrorism measures, and increased force protection conditions) but may be vulnerable to enemy or adversary remnant forces requiring a response that is beyond base camp capabilities. In support areas, units conduct area damage control to prevent and respond to the negative effects of enemy or adversary action that can diminish combat power.

TRANSITIONS

3-58. Units transition from offensive operations only when they result in complete victory and the end of hostilities, reach a culminating point, or receive a change in mission from a higher unit. Generally, units in the offense transition to the defense or stability. All offensive actions that do not achieve complete victory reach a culminating point for a variety of reasons, such as when—

- Initiative shifts from the attacking force to the enemy.
- Friendly forces encounter heavily defended areas that they cannot bypass.
- Fuel, ammunition, and other supplies fail to keep up with expenditures.
- Soldiers become physically exhausted.
- Casualties and equipment losses become too much for an organization to handle.
- Repairs and replacements do not keep pace with damage and losses.
- Reserves or follow-on forces are not available to continue the advance.
- Enemy reinforcements attack, or the defender counterattacks with fresh troops.

Several of these causes may combine to halt an offense. In some cases, the unit can regain its momentum, but this only happens after difficult fighting or an operational pause.

3-59. Transitions do not just occur between offense, defense, and stability operations. During offensive operations it may be necessary, or planned, for units to execute a short halt to operations without necessarily executing a transition. An example would be a unit executing a short halt in an assault position prior to maneuvering during an attack. The halt, or tactical pause, should be as brief as possible to ensure the unit does not lose momentum.

3-60. Units anticipate the reasons listed in paragraph 3-58, plan a pause to replenish combat power, and phase their operations accordingly before subordinate forces reach their culminating points. Simultaneously, units attempt to prevent enemy forces from knowing when friendly forces become overextended.

TRANSITION TO DEFENSIVE OPERATIONS

3-61. Once offensive actions begin, the attacking unit tries to sense when subordinates reach, or are about to reach, their culminating points. Before they reach them, units transition to a focus on defensive operations. They have more freedom to choose where and when to halt an attack if they sense that subordinate forces are approaching culmination. Units plan future activities to aid the defense, minimize vulnerability to attack, and facilitate renewal of the offense as the force transitions to branches or sequels of ongoing operations. For example, to prevent overburdening the extended LOCs that units should manage when and how they begin to transition to prevent a LOC bottleneck.

3-62. Units anticipate the ending of unit offensive actions by preparing branches and sequels and transmitting them to subordinates via orders. These orders include the time or circumstances under which the current offense transitions to a defensive operation, the missions and locations of subordinate units, and control measures. As units transition from an offensive focus to a defensive focus, they—

- Maintain contact and surveillance of enemy forces by combining reconnaissance units and surveillance assets to develop the information required to plan future actions.
- Establish a security area and local security measures.
- Position artillery assets to ensure the support of security forces.
- Position forces for probable future employment.
- Maintain or regain contact with adjacent friendly units in a contiguous assigned area and ensure that units remain capable of mutual support in a noncontiguous assigned area.
- Transition engineer effort by shifting emphasis from mobility to countermobility and survivability.
- Consolidate and reorganize.
- Explain the rationale for transitioning from the offense to their Soldiers.
- Emplace protective obstacles.
- Resupply with fuel and ammunition.
- Occupy defensible terrain.

3-63. Units reorganize and resupply during transitions. This requires a transition in the sustainment effort with a shift in emphasis from ensuring the force's ability to move forward to ensuring the force's ability to defend on its chosen location (by increasing forward stocks of construction, barrier, and obstacle material and ammunition). A transition is often a time when units can perform equipment maintenance. Additional assets may also be available for casualty evacuation and medical treatment because of a reduced tempo of operations.

3-64. Units should not wait too long to transition from the offense to the defense as subordinate forces approach their culminating points. Without prior planning, transitioning to defensive actions after reaching a culminating point is extremely difficult. There are several reasons for this:

- Defensive preparations are hasty, and forces are not adequately disposed for the defense.
- Defensive reorganization requires more time than an enemy force may allow.
- Usually attacking forces approaching culmination find themselves dispersed across the width and depth of their assigned areas with reduced combat power.
- The shift to the defense requires a psychological adjustment. Soldiers who have become accustomed to advancing must now halt and operate defensively on new and often unfavorable terms.

3-65. Units can use two techniques when transitioning to a defensive operation. The first technique is for the leading elements to commit forces and push forward to claim enough ground to establish a security area anchored on defensible terrain. A *security area* is that area occupied by a unit's security elements and includes the areas of influence of those security elements (ADP 3-90). The main force moves forward or rearward as necessary to occupy key terrain and institutes a hasty defense that progresses into a deliberate defense as time

and resources allow. The second technique is to establish a security area generally along the unit's final positions, moving the main body rearward to defensible terrain. The security force thins out and the remaining force deploys to organize the defense. In both methods, the unit keeps the security area with the appropriate depth to enable dispersion and minimize early threat acquisition of friendly positions.

3-66. In the first technique, the security area often lacks depth because the force lacks sufficient combat power to seize required terrain. In the second technique, enemy forces may accurately template the forward trace of friendly units and engage with artillery and other fire support systems. These actions often result in the loss of additional friendly Soldiers and equipment and expend more resources.

3-67. If units determine the necessity of terminating an offense and conducting a retrograde, typically subordinate units initially conduct an area defense from their current locations. This lasts until their units can synchronize their activities to conduct retrograde operations. The amount of effort expended in establishing an area defense depends on the mission variables.

TRANSITION TO STABILITY

3-68. The end of focused offensive operations may not be the decisive act. The successful performance of stability tasks may be the main effort in a major operation or campaign. Units and staffs plan the transition to focus on the conduct of stability tasks from the conduct of offensive operations. To assist in this transition to stability-focused operations, units continuously consolidate gains. Units consider activities necessary to consolidate gains while seeking to achieve their end state. It is the final exploitation of tactical success.

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Chapter 4

Movement to Contact

This chapter discusses movement to contact beginning with its general considerations. It then discusses organization, control measures, and conducting a movement to contact. It then discusses two variations of a movement to contact: search and attack and cordon and search. Lastly, it talks about transitioning from a movement to contact to another type of offensive or defensive operation.

GENERAL CONSIDERATIONS FOR A MOVEMENT TO CONTACT

4-1. A movement to contact is a type of offensive operation designed to establish or regain contact to develop the situation. Units perform a movement to contact when the tactical situation is unclear, or the enemy force succeeds in breaking contact with friendly forces. A properly executed movement to contact develops the situation and maintains the unit's freedom of action after establishing contact with the enemy. This is essential in maintaining the initiative and achieving a position of advantage. Movement to contact allows units to create conditions for subsequent operations. Once contact is made with an enemy force, the friendly force quickly transitions either to an attack, a hasty defense, or bypasses enroute to their objective.

4-2. An enemy force's use of terrain, operations security, and military deception operations can degrade the friendly forces situational understanding and require small tactical units to conduct movements to contact. A movement to contact employs purposeful and aggressive movement, decentralized control, and the hasty deployment of combined arms formations from the march. The fundamentals of a movement to contact are—

- Focus all efforts on finding enemy forces.
- The initial contact force should be small, mobile, self-contained, and avoid becoming decisively engaged by the enemy's main body.
- Task-organize the force and use movement formations and battle drills to deploy and attack rapidly in any direction.
- Keep subordinate forces within supporting distances to facilitate gaining and maintaining contact.
- Upon gaining contact, maintain that contact regardless of the course of action (COA) adopted.
- Close air support, air interdiction, and counterair operations are essential to the success of large-scale movements to contact. Local air superiority or, at a minimum, air parity is vital to the operation's success.

4-3. A movement to contact increases the odds of a unit executing a meeting engagement. A ***meeting engagement*** is a combat action that occurs when a moving force engages an enemy at an unexpected time and place. The enemy force encountered may be either stationary or moving. A meeting engagement does not require both forces to be surprised. The force making unexpected contact is the one conducting a meeting engagement. Such encounters often occur in small-unit operations when reconnaissance has been ineffective. The force that reacts first to the unexpected contact generally gains an advantage over its enemy.

4-4. A meeting engagement may also occur when opponents are aware of each other, and both decide to attack to obtain a tactical advantage. Additionally, a meeting engagement may occur when one force attempts to deploy into a hasty defense while the other force attacks before its opponent can organize an effective defense. No matter how the force makes contact, seizing the initiative is the overriding imperative. Prompt execution of battle drills at platoon level and below, and standard actions on contact for larger units, can give that initiative to the friendly force.

ORGANIZATION OF FORCES FOR A MOVEMENT TO CONTACT

4-5. At a minimum, a movement to contact is organized with forward security forces—either a covering force or an advance guard—and a main body. The reserve, fires, engineer, and sustainment assets are included in the main body. Based on the mission variables, commanders may increase their unit's security by resourcing an offensive covering force and an advance guard for each column, as well as flank and rear security. Figure 4-1 depicts a generic organization of forces for a movement to contact.

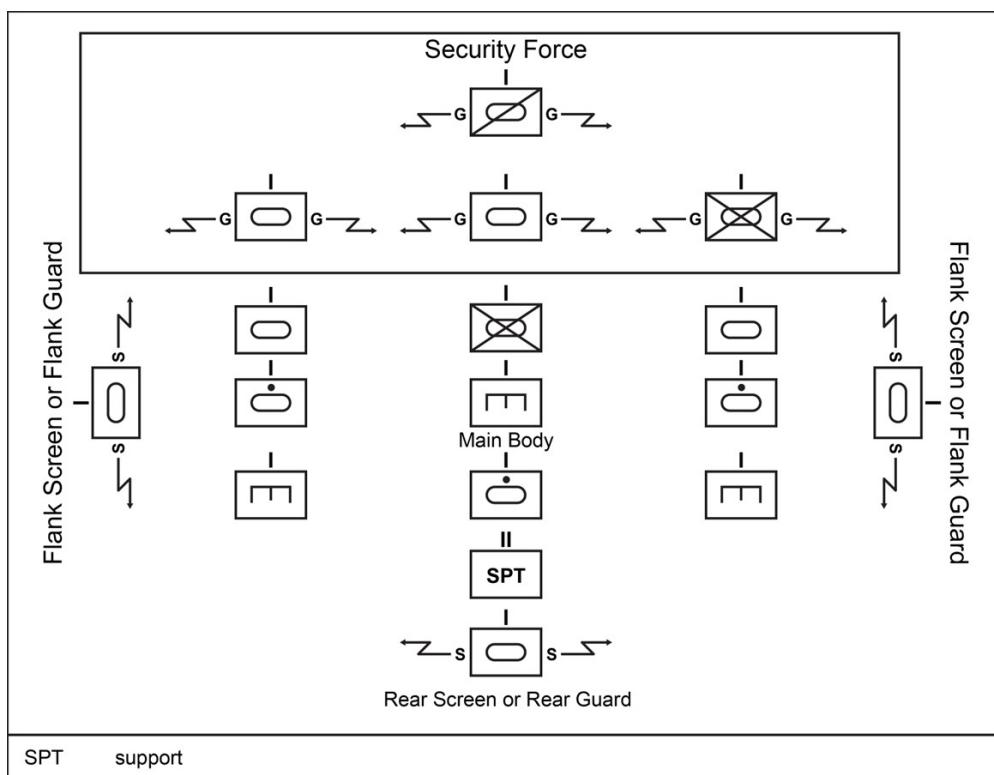


Figure 4-1. Organization of forces for a movement to contact

4-6. Initiating a movement to contact requires units to be out of contact with the enemy main body. However, units may have enough information to target enemy reconnaissance assets, uncommitted forces, reserves, or sustaining operations activities. Commanders normally designate forces, such as long-range artillery systems and fixed-wing aircraft to engage known enemy elements within their assigned area. The forward security element is critical to the protection of the main body and enables units to make contact on their terms.

FORWARD SECURITY FORCES

4-7. Units conducting a movement to contact can organize their security force as an advance guard force, a covering force, or both. This provides the main body with early warning, protects the movement of the main body, and develops the situation before committing the main body. A guard force is a force that contains sufficient combat power to defeat, cause the withdrawal of, or fix the lead elements of an enemy ground force before it can engage the main body with direct fire. A covering force is a self-contained force capable of operating independently of the main body, unlike a guard force to conduct the cover task. This covering force accomplishes the same effect as a guard and reports directly to the establishing commander.

4-8. Each element of the force synchronizes its actions with adjacent and supporting units, maintaining contact and coordination as prescribed in orders and unit SOPs. The lead elements of the main body maintain contact with the security force. The rear and flank security elements maintain contact with and orient on the main body's movement. These security forces prevent unnecessary delay in the movement and premature

deployment of the main body as long as possible. Commanders may instruct the advance guard to eliminate small pockets of resistance bypassed by the covering force (if both are used). The conduct of the security forces in the movement to contact are the same as those for security operations. (See Chapter 13 for additional information on security operations.)

MAIN BODY

4-9. A main body consists of forces not assigned to security duties. It normally includes the maneuver forces conducting the main effort once contact is made with the enemy as well as fires, engineer, and sustainment assets to support the operation. The combat elements of the main body prepare to respond to enemy contact that the unit's security forces make. If the situation allows, commanders can assign a follow and support mission to a subordinate maneuver unit. This allows that subordinate unit to relieve security forces and perform tasks such as containing bypassed enemy forces, handling dislocated civilians, and clearing routes. Security forces can then continue their primary mission.

4-10. Units frequently find that their main supply routes (MSRs) become extended as operations proceed. Aerial resupply may be necessary to support large-scale movement to contacts or to maintain the momentum of the main body. Combat trains containing fuel, ammunition, medical assets, and maintenance assets move with their supported battalion or company team. Fuel and ammunition stocks remain loaded on tactical vehicles in the combat trains so they can quickly move when necessary. Battalion field trains move with a higher support echelon, such as the brigade support battalion, in the main body of each BCT. Aviation units use forward arming and refuel points (known as FARP_s) to reduce aircraft turnaround time.

RESERVE

4-11. Commanders designate a portion of the main body for use as the reserve. The mission variables determine the size of the reserve, and the more unknown the enemy situation, the larger the size of the reserve. On contact with enemy forces, a reserve provides flexibility to react to unforeseen circumstances and allows a unit to resume its movement. See paragraphs 1-94 through 1-100 for more information on the reserve.

COMMON CONTROL MEASURES FOR A MOVEMENT TO CONTACT

4-12. Units use the minimal number and type of control measures possible in a movement to contact because of the uncertain enemy situation. These measures include designation of an assigned area with left, right, front, and rear boundaries, or a separate assigned area bounded by a continuous boundary in noncontiguous operations. Commanders further divide their assigned area into subordinate unit assigned areas to facilitate subordinate unit actions.

4-13. A movement to contact usually starts from a LD at the time specified in the operation order. Commanders control a movement to contact by using phase lines, contact points, and checkpoints as required. They also control the depth of the movement to contact by using a LOA or a forward boundary. Figure 4-2 on page 4-4 depicts example common movement to contact control measures and also depicts a limit of advance and not a forward boundary. Commanders can designate one or more objectives to limit the extent of a movement to contact and orient the force. However, these are often terrain oriented and used only to guide movement. Although a movement to contact may result in taking a terrain objective, the primary focus should be on gaining contact with enemy forces and developing the situation. If a unit has enough information to locate significant enemy forces, then it should plan an attack.

4-14. Commanders use boundaries to separate the various organizational elements and clearly establish responsibilities between different organizations. They synchronize the movement to contact with control measures, battle drills, and formation discipline.

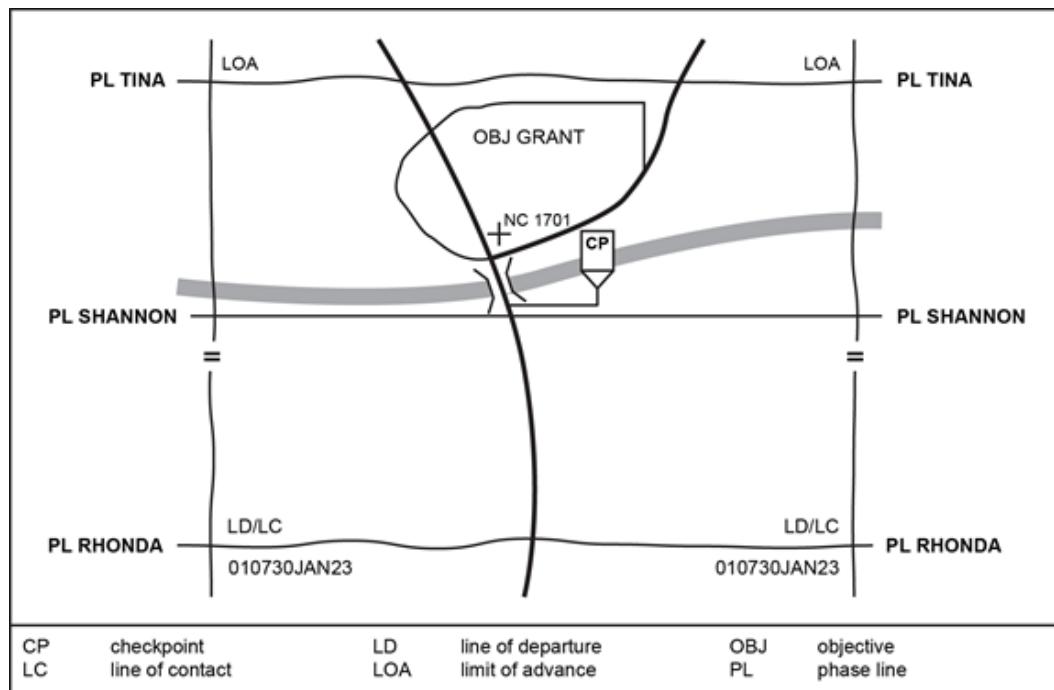


Figure 4-2. Example movement to contact control measures

4-15. Commanders designate a series of phase lines that can successively become the new rear boundary of the forward security elements as that force advances. Each security area rear boundary becomes the forward boundary of the main body and shifts as the security force moves forward. The rear boundary of the main body designates the limit of responsibility of the rear security element. This line also shifts as the main body moves forward. Units may use an axis of advance to control movement. However, there is the risk that their forces may not detect and may inadvertently bypass enemy forces outside the axis.

PLANNING A MOVEMENT TO CONTACT

4-16. Planning for a movement to contact requires units to balance competing requirements in the allocation of combat power. The first requirement is to determine an enemy force's location and intent. The second requirement is to execute security operations to protect the main body. The main body focuses its planning and preparation on the conduct of hasty attacks, bypassing forces, and hasty defenses. The plan must address actions anticipated by the unit based on available information and anticipated times and locations of meeting engagements. Commanders also task their forward security forces with conducting route reconnaissance of routes the main body traverses.

4-17. Units seek to gain contact by using the smallest elements possible. These elements are normally ground or aerial units performing reconnaissance but may include UAS or other collection assets. Units may task-organize their reconnaissance assets with additional combat power to allow them to develop the situation. The movement formation of the main body should also make initial contact with the smallest force possible. It should provide for efficient movement of the force and adequate reserves. Commanders choose to have all, or part of the main body conduct an approach march as part of the movement to contact to provide efficiency and freedom of action to the main body. (See Chapter 14 for additional information on troop movement.)

4-18. The frontage assigned to a unit in a movement to contact must allow it to apply sufficient combat power to maintain the momentum of the operation. Reducing the frontage normally gives a unit more combat power to develop the situation upon contact while maintaining the required momentum. The forward security force should have uncommitted forces available to develop the situation without requiring the deployment of the main body. The benefits of a wider frontage include increasing the likelihood of making contact with the enemy and reducing the potential of inadvertently bypassing enemy formations.

4-19. Units primarily rely on fires assets to weight the lead element's combat power, but they also provide the lead element with the additional combat enablers needed to accomplish the mission. Indirect fires system support maneuver forces to get within direct fire range and engage enemy forces.

4-20. The reconnaissance effort may proceed faster in a movement to contact than in a zone reconnaissance because the emphasis is on making contact with enemy forces. However, commanders must recognize that there is an increased risk in bypassing enemy units when increasing the speed of the reconnaissance effort.

4-21. Based on mission variables, commanders clearly state bypass criteria. For example, an armored or Stryker BCT commander in an open desert environment could state that the bypass criteria is an enemy-mounted force smaller than a platoon. The BCT clears all enemy forces larger than a mounted platoon from that brigade's axis of advance. Any force that bypassed an enemy unit must maintain contact with it until handing it off to another friendly element, usually a force assigned a follow and support mission. See paragraph 12-27 for a discussion on bypass criteria.

4-22. The intelligence officer, assisted by engineer and air defense staff representatives, carefully analyzes the terrain, including air avenues of approach. At a minimum, the intelligence staff identifies the enemy force's most dangerous and most likely COA in the mission analysis portion during the MDMP. Because of the force's vulnerability, the intelligence officer must not underestimate enemy forces during a movement to contact. A thorough intelligence preparation of the battlefield (IPB) process—a modified combined obstacle overlay that includes intervisibility overlays, threat courses of action, and event templates—enhances the force's security by indicating danger areas where the force is most likely to make contact with enemy forces. It also helps to determine movement times between phase lines and other locations. Potential danger areas are likely enemy defensive locations, engagement areas, observation posts, and obstacles. The fires system targets these areas. They become on-order priority targets placed into effect or cancelled as the lead element can confirm or deny enemy force presence. The information collection annex of the movement to contact order must address coverage of these danger areas. If reconnaissance forces cannot clear these areas, more deliberate movement techniques are required. These areas and resource shortages should be identified during the MDMP process. Resources should be reallocated, or maneuver adjusted based on the results of COA analysis.

4-23. Commanders develop decision points to support changes in the force's movement technique or movement formation. Using human and technical means to validate decision points, commanders determine the acceptable degree of risk based on the mission. The commander's confidence in the products of the IPB process and the acceptable risk determine the unit's movement formation and scheme of maneuver. In a high-risk environment, it is usually better to increase the distance between forward elements and the main body than to slow the speed of advance.

4-24. Higher headquarters execute supporting operations in support of their subordinates as part of a movement to contact. This occurs when the information regarding the enemy reserves and follow-on forces is available, but information regarding enemy forces in proximity to the friendly force is not available. As in any other type of operation, units plan to focus operations on finding enemy forces and then delaying, disrupting, or destroying each enemy force before it arrives in direct fire range. This allows maneuver forces to prepare to engage enemy units on their arrival.

4-25. Commanders can opt not to designate a main effort until forces make contact with enemy forces, unless there is a specific reason to designate one. They retain resources under direct control to reinforce the main effort. Commanders may designate the main effort during the initial stages of a movement to contact because of the presence of a key piece of terrain or an avenue of approach.

PREPARING A MOVEMENT TO CONTACT

4-26. The preparations for conducting a movement to contact are the same as those for an attack. (See paragraphs 5-32 through 5-46 for additional information on preparation for attacks.) The only difference is the focus on battle drills since the location and disposition of the enemy is unknown.

EXECUTING A MOVEMENT TO CONTACT

4-27. The commander of the forward security force chooses a movement formation (based on the mission variables) and makes contact with the smallest possible force while providing flexibility for maneuver. Whatever formation the unit chooses, it must be able to deploy appropriately once it determines an enemy force's location. The unit ensures that the route or axis of advance traveled by the main body is free of enemy forces. The main body may move continuously (using traveling and traveling overwatch) or by bounds (using bounding overwatch). It moves by bounds when contact with an enemy force is expected and the terrain is favorable. The overall commander may position some indirect fire assets, such as a mortar platoon or artillery battery and forward observers, with the forward security force. These forward observers can help overwatch the forward security force movement while indirect fires focus on suppressing enemy weapons, obscuring enemy observation posts, and screening friendly movement.

4-28. Behind the forward security force, the main body advances over multiple parallel routes with numerous lateral branches to remain flexible and reduce the time needed to initiate maneuver. (While it is preferred for a battalion to use multiple routes, battalions and smaller units can move on a singular route.) In a movement to contact, the main body's march disposition must allow maximum flexibility for maneuvering during movement and when establishing contact with an enemy force.

4-29. The main body keeps enough distance between itself and its forward security force to maintain flexibility for maneuver. This distance varies with the echelon of command, the terrain, and the availability of information about enemy forces. The main body may execute a tactical movement for all or part of the movement to contact to use the available road network efficiently or reduce the time needed to move from one location to another. Command posts and supply trains seek routes that allow them to remain responsive throughout an assigned area and occupy hasty positions as necessary.

4-30. Fire support systems should focus on suppression missions to disrupt enemy forward security elements as they make contact and focus on obscuration of enemy forces missions or screen exposed friendly forces when conducting a movement to contact. They schedule synchronized movements of fire support systems with the movement of the rest of the force. Fire support systems that cannot match the cross-country mobility of ground maneuver units may cause them to slow their rate of advance. If these units do not slow down, they run the risk of outrunning their fire support. Units synchronize the employment of close air support to prevent enemy forces from regaining balance while ground fire support assets are repositioning. The main body updates the high-payoff target list during a movement to contact operation as necessary.

4-31. Similar considerations apply to air and missile defense when enemy forces possess these capabilities. A unit conducting a movement to contact remains aware of the air and missile defense umbrella provided by radars, air defense systems, and the joint combat air patrol.

4-32. The unit's tempo, momentum, tactical dispersal, and attention to electromagnetic emission control complicate an enemy force's ability to detect and target the main body prior to making contact. Once a friendly force makes contact and masses against detected enemy forces, it becomes vulnerable to strikes by enemy conventional weapons and weapons of mass destruction. A friendly force must mass effects rapidly in a meeting engagement and disperse again as soon as it overcomes resistance to avoid enemy counteractions.

4-33. Movement should be as rapid as the terrain, the mobility of the force, and the enemy situation permits. Open terrain provides maneuver space on either side of the line of march and facilitates high-speed movement. It also allows for greater dispersal and usually permits more separation between forward security elements and the main body than restricted terrain allows. Units should never commit their main bodies to canalizing terrain before forward security elements have ensured the main bodies can maintain freedom of movement within that terrain. Enemy forces may have established fire support control measures that allow enemy forces to employ non-observed harassing and interdiction fires on friendly forces traversing these choke points. Units may shorten the distance between elements to decrease reaction time or deploy their force to prepare for contact as the enemy situation develops.

4-34. At battalion and company echelons, a force moves along covered or concealed positions along routes using terrain to minimize its vulnerability to enemy weapons. Further, an overwatching force should cover

the moving force. Regardless of the specific movement technique employed, subordinate elements need to provide mutual support and be knowledgeable of each other's sectors of fire.

4-35. The moving force must attempt to cross any obstacles it encounters without loss of momentum by conducting hasty (in stride) breaches. Units use forward security forces in an attempt to seize intact bridges whenever possible. Lead security elements bypass or breach obstacles as quickly as possible to maintain the momentum of the movement. If lead security elements cannot overcome obstacles, commanders direct subsequent elements of the main body to breach the obstacle site. Following forces can also reduce obstacles and improve routes that hinder the unit's sustainment flow.

Find the Enemy

4-36. Units gain and maintain enemy contact to further shape operations for a movement to contact. All information collection assets focus on determining an enemy force's disposition and providing units with current intelligence and relevant combat information; this ensures that they can commit friendly forces under optimal conditions. Units use all available sources of combat information to find an enemy force's location and disposition. Corps and divisions leverage collection assets from organic, attached, and direct support units; special operations forces; and joint and multinational assets to gain contact with enemy forces. BCTs and their subordinate battalions use their organic reconnaissance assets to gain contact. This contact may be in any of eight forms (see paragraphs 1-60 through 1-68 for a discussion on the nine forms of contact). Units use information collection systems to cue aerial and ground reconnaissance by their attached BCTs and combat aviation brigades.

4-37. The enemy situation becomes clearer as the unit's forward security elements conduct actions on contact to develop the situation in accordance with their commander's intent and plan. By determining the strength, location, and disposition of enemy forces, these security elements allow units to focus the effects of the main body's combat power against the enemy main body. The overall force must remain flexible to exploit both intelligence and combat information. The security force should not allow an enemy force to break contact unless it receives an order from the friendly force commander. When a strong covering force has not preceded the advance guard, the advance guard should seize terrain that offers essential observation.

4-38. The unit's security force often gains a tactical advantage over an enemy force by using tempo and initiative to conduct actions on contact, allowing it to gain and maintain contact without becoming decisively engaged. ***Decisively engaged is when a fully committed force or unit cannot maneuver or extricate itself.*** Once the lead elements of a force conducting a movement to contact encounter an enemy force, they conduct actions on contact. The unit treats obstacles like any other form of enemy contact, since it assumes that the enemy force has covered these obstacles by fire. The unit carries out actions on contact regardless of whether the enemy force has detected its presence. How quickly the unit develops the situation is directly related to its security. This tempo is directly related to the unit's previous training to execute SOPs and drills.

Fix the Enemy

4-39. On contact, the main body brings overwhelming fires on enemy forces to prevent the enemy forces from conducting either a spoiling attack, organizing a coherent defense, or withdrawing. With the enemy fixed, the security force maneuvers quickly to find gaps in the enemy force's defenses. Units use information collection assets to gain as much information as possible about the enemy force's dispositions, strengths, capabilities, and intentions. As more intelligence becomes available, the main body attacks to destroy the enemy. The higher headquarters of the unit conducting the movement to contact conducts countermobility operations to prevent enemy reserves from moving to counter the unit's actions.

4-40. The security force does not allow enemy security and main body forces to maneuver against the friendly main body. The security force's organization, size, and combat power are major factors that determine the size of the enemy force it can defeat or fix in place without deploying the main body.

4-41. Units use aerial maneuver and fire support assets to fix enemy forces in their current positions by directly attacking enemy maneuver elements and command and control systems and emplacing situational obstacles. The typical priorities are to attack—

- Enemy forces in contact.
- Enemy command and control (C2) and fire direction control facilities.

- Enemy fire support assets.
- Moving enemy forces not yet in contact, such as follow-on forces and reserves.

4-42. Attack priorities vary with mission variables. Attack rotary- and fixed-wing aircraft can engage enemy forces throughout the depth of an assigned area (if the suppression of enemy air defenses can reduce the risk to aircraft to an acceptable degree).

4-43. The techniques units employ to fix enemy forces when both forces are moving differ from those employed when enemy forces are stationary during a meeting engagement. In both situations, when the security force cannot overrun enemy forces by conducting a hasty frontal attack, units deploy a portion of their main body. When this occurs, the unit transitions to an attack and is no longer conducting a movement to contact.

Finish the Enemy

4-44. If possible, friendly security forces overwhelm enemy security forces by executing a frontal attack to make contact with the enemy main body. If this is not possible, friendly security forces fix enemy security forces and the main body conducts a penetration or envelopment of the enemy security forces. This makes the main body the main effort of the movement to contact and is a key reason why units ensure that their main bodies avoid enemy engagement until a time and place of their choosing. They maneuver their main bodies at a tempo the enemy force cannot match. They do this to overwhelm the enemy before it can react effectively or reinforce. Units attempt to defeat the enemy security force in detail while still maintaining the momentum of the advance, until the unit makes contact with the enemy main body.

4-45. If the main body initiates a frontal attack, it deploys rapidly to the vicinity of the line of contact. Commanders of maneuvering units coordinate forward passage through friendly forces in contact as required. The intent is to deliver the assault before the enemy force can deploy or reinforce its engaged forces. Commanders may order an attack from a march column. They can also wait to attack until they can deploy forward the bulk of their main body. They avoid piecemeal commitment, except when rapid action is essential, their units have combat superiority and can maintain that superiority throughout their attacks, or when the terrain forces that COA.

4-46. Units attempting an envelopment focus on attacking the enemy force's flanks and rear before the enemy force can prepare to counter these actions. They use security forces to fix enemy forces while their main bodies maneuver to look for an assailable flank. Alternatively, they use their main body to fix the enemy force while their reserve finds an assailable flank.

4-47. If the enemy force is not rapidly defeated, commanders have three options: bypass, transition to a deliberate attack, or conduct a defense. In all cases, they make every effort to retain the initiative by conducting violent and resolute attacks and preventing enemy forces from countering them. Simultaneously, units maintain momentum by synchronizing the actions of friendly maneuver, functional and multifunctional support, and sustainment elements.

Follow Through

4-48. After a successful attack, friendly forces either continue movement to their final objective or they conduct a hasty defense to consolidate and reorganize before continuing. If the location of the enemy main body is still unclear and friendly forces have not reached their limit of advance, the unit resumes their movement to contact.

VARIATIONS FOR A MOVEMENT TO CONTACT

4-49. Movement to contact has two variations: search and attack and cordon and search. Paragraphs 4-50 through 4-82 further discuss these variations.

SEARCH AND ATTACK

4-50. ***Search and attack*** is a variation of a movement to contact where a friendly force conducts coordinated attacks to defeat a distributed enemy force. Units employ this variation of a movement to

contact when enemy forces are operating as small, dispersed elements, and the units cannot target them by any methods other than a physical search. Units may also use a search and attack when the task is to deny enemy forces the ability to move within a given area. Primarily, dismounted infantry forces conduct a search and attack. Armored, mechanized, and Stryker-equipped forces often support dismounted infantry performing this task. A search and attack often occurs during the conduct of irregular warfare. However, it may also be necessary when conducting noncontiguous operations during combat operations and consolidating gains.

4-51. All echelons can conduct search and attack operations. However, a division rarely conducts search and attack operations simultaneously throughout its assigned area. BCTs, maneuver battalions, and companies normally conduct search and attack operations. BCTs assist their subordinate maneuver battalions conducting a search and attack by ensuring the availability of indirect fires and other support.

Organization of Forces for a Search and Attack

4-52. Commander's task-organize into reconnaissance, fixing, and finishing forces, each with a specific task and purpose. Alternatively, all units can be involved in the reconnaissance effort with individual subordinate elements performing the fixing and finishing functions based on the situation.

4-53. Commanders base the size of their reconnaissance forces on available information about the size of enemy forces in their assigned areas, and the size of these assigned areas in terms of the geography and the size of the civilian population. The more uncertainty that exists within a situation, the larger the reconnaissance force. A reconnaissance force typically consists of scout, infantry, aviation, and electromagnetic warfare assets. A fixing force must have enough combat power to isolate enemy forces once the reconnaissance force finds them. The finishing force is normally the main body of that echelon. It must have enough combat power to defeat the enemy forces expected within its assigned area. Commanders can direct subordinate units to retain their own finishing force, or they can retain direct control of the finishing force. Units may also rotate subordinate elements through the reconnaissance, fixing, and finishing roles. However, rotating roles may require a change in task organization and additional time for training and rehearsal.

Control Measures for a Search and Attack

4-54. Units establish control measures that allow decentralized action and small-unit initiative to the greatest extent possible. Figure 4-3 on page 4-10 depicts the minimum control measures for a search and attack which include an assigned area, target reference points (TRPs), objectives, checkpoints, and contact points. The use of target reference points facilitates responsive fire support upon making contact with enemy forces. They use objectives and checkpoints to guide the movement of subordinate elements. They use other control measures, such as phase lines and named areas of interest (NAIs), as necessary. (Appendix A discusses these common control measures.)

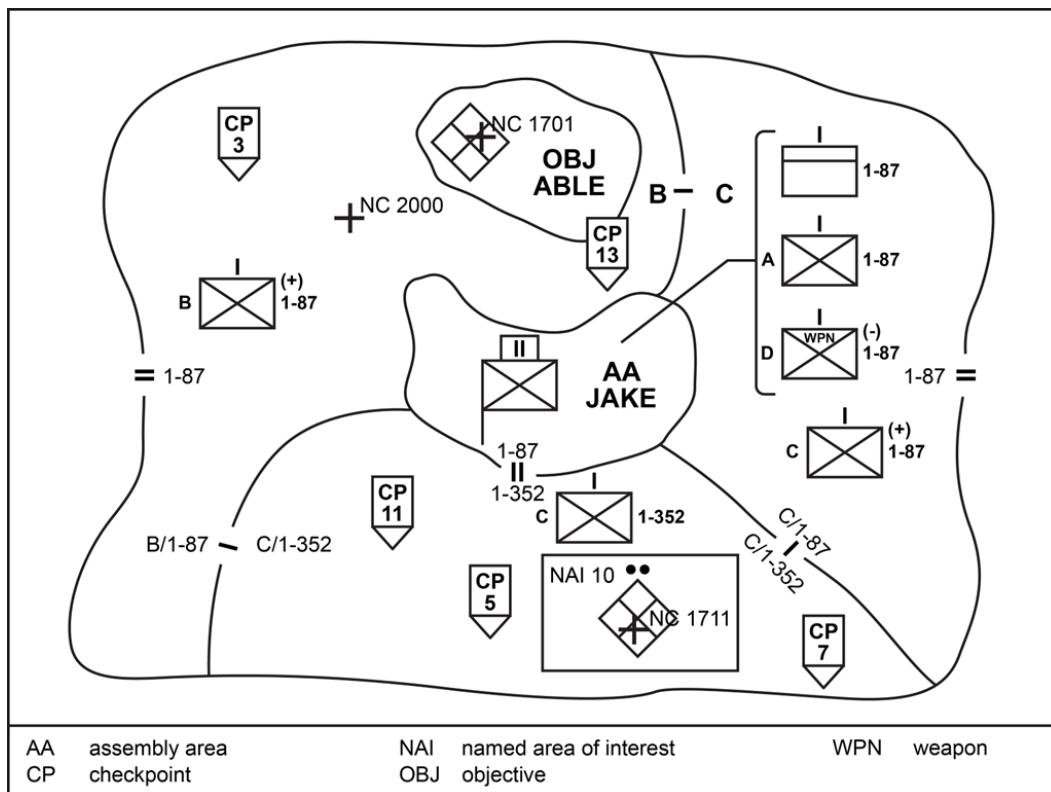


Figure 4-3. Search and attack control measures

Planning a Search and Attack

4-55. Units conduct a search and attack for one or more of the following purposes:

- Destroy enemy forces: render enemy forces in an assigned area combat ineffective.
- Deny the area: prevent enemy forces from operating unhindered in a given area, for example, in any area that the enemy is using for a base camp or for logistics support.
- Protect the force: prevent enemy forces from massing to disrupt or destroy friendly military or civilian operations, equipment, property, and facilities.
- Collect information: gain information about enemy forces and the terrain to confirm the enemy COA predicted by the IPB process.

The products of the IPB process are critical to conducting a search and attack. They focus the force's reconnaissance efforts on likely enemy locations.

4-56. The search and attack plan places the finishing force, as the main effort, where it can best maneuver to destroy enemy forces or essential facilities once located by reconnaissance assets. Typically, the finishing force occupies a central location in an assigned area. However, the terrain may allow units to position their finishing forces outside search and attack areas. Commanders weight their main effort by using priority of fires and assigning priorities of support to available combat enablers, such as engineer elements and helicopter lift support. Units establish control measures as necessary to consolidate and reorganize and concentrate the combat power of the force before the attack. Once a reconnaissance force locates an enemy force, fixing and finishing forces can destroy it. Units also develop contingency plans in the event of the compromise of their reconnaissance force.

4-57. Fire support plans must provide flexible and rapidly delivered fires to achieve their commander's desired effects throughout an assigned area. Units position fire support assets so they can support subordinate elements throughout their assigned areas. They must establish procedures for rapidly clearing fires. To clear

fires rapidly, command posts and small-unit commanders track and report the locations of all subordinate elements. Because of the uncertain enemy situation, units assign clear fire support relationships.

Executing a Search and Attack

4-58. Each subordinate element operating in its own assigned area searches for and attacks enemy forces within its capability. Units may enter an assigned area by infiltrating as an entire unit and then splitting out or by infiltrating as smaller units via ground, air, or water. Units should use previously established control measures and communications means between any closing elements to prevent fratricide and friendly fire incidents. The reconnaissance force conducts an area reconnaissance to reconnoiter identified named areas of interests.

4-59. Once the reconnaissance force finds enemy forces, the fixing force develops the situation and executes one of two options based on the commander's guidance and the mission variables. The first option is to block identified routes that the detected enemy forces can use to escape or employ reinforcements. The fixing force maintains contact with enemy forces and positions to isolate and fix enemy forces before the finishing force attacks. The second option is to conduct an attack to fix enemy forces in their current positions until the finishing force arrives. The fixing force attacks if it meets the commander's intent and if it can generate sufficient combat power against detected enemy forces. Units may need to position the fixing force before the reconnaissance force enters an assigned area, depending on the enemy force's mobility and the probability of the compromise of the reconnaissance force.

4-60. BCTs (and possibly battalions) may establish fire support bases to provide fire support coverage throughout an assigned area during search and attack operations in complex terrain. These positions should be mutually supporting and prepared for all around defense. Fire support bases are also located in positions that facilitate aerial resupply. The development of these positions depends on the mission variables because their establishment requires diverting combat power to protect assets in these fire support bases.

4-61. If conditions are not right to use the finishing force or main body to attack detected enemy forces, the reconnaissance or the fixing force can continue to conduct reconnaissance and surveillance activities to develop the situation further. Whenever this occurs, the force maintaining surveillance must be careful to avoid detection and possible enemy ambushes.

4-62. The finishing force or main body may move behind the reconnaissance and fixing forces, or it may locate at a pickup zone and conduct air assault movement into a landing zone near enemy forces, once enemy forces are located. The finishing force or main body must be responsive enough to engage enemy forces before they can break contact with the reconnaissance force or the fixing force. The echelon intelligence officer provides the commander with an estimate of the time it takes enemy forces to displace from their locations. The commander provides additional mobility assets, so the finishing force or main body can respond within that timeframe.

4-63. Units use their finishing force or main body to destroy detected and fixed enemy forces during a search and attack by conducting hasty or deliberate attacks. One unit maneuvers to block enemy escape routes while another unit conducts the attack, or units employ indirect fire or close air support to destroy enemy forces. Units may have the finishing force or main body establish area ambushes and use the reconnaissance and fixing forces to drive enemy forces into the ambushes.

CORDON AND SEARCH

4-64. The second variation to conduct a movement to contact is cordon and search. **Cordon and search is a variation of movement to contact where a friendly force isolates and searches a target area.** Typically, units execute cordon and searches to capture or destroy possible enemy forces and contraband. Cordon and search operations take place throughout the range of military operations. Generally, cordon and search are conducted during stability operations or situations where the likelihood of large-scale organized violence is unlikely. Units conducting a cordon and search organize their subordinate units into four elements—command, security, search or assault, and support. The security element must be large enough to establish both an inner and an outer cordon around the target area of the search. In that regard, cordon and search operations are similar to encirclements. Maneuver battalions and lower echelons normally conduct cordons and searches.

4-65. Cordon and search operations occur in five phases: reconnaissance, movement to the objective, cordon establishment, search, and retrograde. These phases are descriptive of a cordon and search and are not prescriptive.

4-66. The reconnaissance phase is initiated upon receipt of mission and continues throughout the planning process. Planners conduct intelligence preparation of the battlefield, develop a scheme of maneuver, and refine the plan. The friendly force performs the necessary reconnaissance to gain information and complete the plan. A complete order is issued, allowing time for leaders to develop subordinate plans and conduct rehearsals. The planning phase ends when rehearsals, pre-combat checks, and inspections are complete, and the unit crosses the LD.

4-67. Movement to the objective area occurs as a single unit or in separate serials sequenced along differing routes. Leaders consider terrain and threat assessments to determine appropriate movement formations and techniques. The movement phase ends when the security element reaches its release point and begins establishing the cordon.

4-68. Establishing a cordon entails emplacing an outer and inner cordon, simultaneously or sequentially. The cordon is considered established when the objective area is isolated, and it continues until the force commences retrograde. Leaders consider allocating priority of intelligence, reconnaissance, surveillance, fires, and nonlethal assets to the cordon element once the cordon is established.

4-69. Clearing the objective area and searching target areas occur once the objective area is isolated. Forces may undertake additional activity after the objective is clear, including tactical questioning, site exploitation, providing medical attention to local nationals, communicating with local leaders, and conducting other influence activities. The amount of time spent at an objective area depends on factors including the size of the objective, the number of adversaries to vet, the amount of material of likely intelligence-value present, the presence of explosive hazards, and the size and augmentation of the search element.

4-70. The enemy may force cordon and search operations, or a unit may execute them voluntarily. A retrograde is a transitional operation; it is not conducted in isolation. Stay-behind reconnaissance forces may be employed to observe activity for a period after the cordon and search force departs the objective area. Retrograde is not complete until all personnel, including stay-behind forces, arrive in the designated assembly area. Retrograde is the most vulnerable phase of cordon and search operations, possibly rife with personnel accountability issues and interdiction by enemy forces along anticipated retrograde routes. Leaders strongly consider using intelligence, surveillance, and reconnaissance and joint fires assets to support the retrograde. (See Chapter 11 for additional information on retrograde operations.)

Principles for a Cordon and Search

4-71. The principles of cordon and search are comprehensive and fundamental rules to guide battalions. The principles are not a checklist. While the commander considers these principles, they do not apply in the same way to every situation. Instead, the principles summarize characteristics of successful cordon and search operations. For the unit, the value in these principles lies in analyzing a pending operation while synchronizing efforts and determining if or when to deviate from the principles based on the current situation. The nine principles of cordon and search are—

- Speed.
- Surprise.
- Isolation.
- Proper target identification.
- Timeliness.
- Accountability.
- Minimization of collateral damage.
- Detailed search.
- Legitimacy.

Methods of Cordon and Search

4-72. Units have two methods for conducting a cordon and search: cordon and knock and cordon and enter. The primary difference in methods is the level of force required to gain access to the target. In a cordon and knock, the search element requests or demands access to the target. In a cordon and enter, the search element accesses the target by force. Regardless of the method, search elements must be prepared to escalate force appropriately to gain access to the target. Leaders consider the terminal effects of fires and ensure friendly location awareness to prevent fratricide and limit collateral damage to the greatest extent possible.

Control Measures for Cordon and Search

4-73. Control measures useful for conducting cordon and search include—

- Assembly area.
- Line of departure.
- Checkpoints.
- Contact points.
- Objectives.
- Rally points.
- Phase lines.
- Routes.
- Restricted fire line.

Planning a Cordon and Search

4-74. During planning (includes preparation) and reconnaissance, mission analysis is conducted through either the MDMP or troop leading procedures process, focusing on the task and purpose, intelligence preparation of the battlefield (identification of target and target areas), and tentative scheme of maneuver. Detailed direct fire plans serve as risk mitigation measures to prevent fratricide between clearing elements and the cordon. Support forces external to the battalion are task-organized and warning orders are issued. As planning serves to focus the information collection effort by identifying what to look for and where to look for it, reconnaissance helps to refine the planning process by answering through collection, information requirements, and priority intelligence requirements. Although the plan is continually updated with reconnaissance and surveillance throughout the operation, this phase ends with the unit issuing the completed order, conducting final rehearsals and inspections, and crossing the LD.

Preparing a Cordon and Search

4-75. The level of rehearsal and extent of participation depend upon the time available and the physical location of participants. Rehearsals may be full or reduced force. Multiple rehearsal types and techniques may be used in preparation for a mission. For example, confirmation briefs and backbriefs may be required following the issuance of an operation order, and a map rehearsal may be conducted via remote communications equipment or in person once subordinate elements have completed their plans.

4-76. Rehearsals should address non-mission-specific tasks and mission-specific execution details and be more than a mere discussion of what is supposed to happen. Effective rehearsals test subordinate understanding of key activities, including the spatial relationships and timing of key actions; contingencies; communication; and purpose, priorities, allocation, and resourcing of support. Leaders normally issue rehearsal guidance via published warning orders.

4-77. Non-mission-specific task rehearsals might include—

- Battle drills and other standard operating procedures, such as assaulting a building or reacting to enemy contact.
- Breaching obstacles and doorways.
- Search techniques (such as individual, vehicle, and room).
- Detainee and captured materiel handling and processing.
- Tactical callout.

4-78. Mission-specific execution activity rehearsals might include—

- Emplacing inner and outer cordons.
- Target area clearance.
- Retrograde from the objective area.

Executing a Cordon and Search

4-79. The execution of the cordon may be executed sequentially or simultaneously using single or multidirectional ingress routes. The methods may be used alone or combined. For example, the outer cordon position may be occupied sequentially via a single ingress route followed by a sequential occupation of the inner cordon positions via a single ingress route. Figure 4-4 depicts the symbol for a cordon and search.

4-80. The search element prepares to move to the target area during cordon emplacement. The search and assault element movement to the target area may be simultaneous, nearly simultaneous, or sequential in relation to the cordon emplacement.

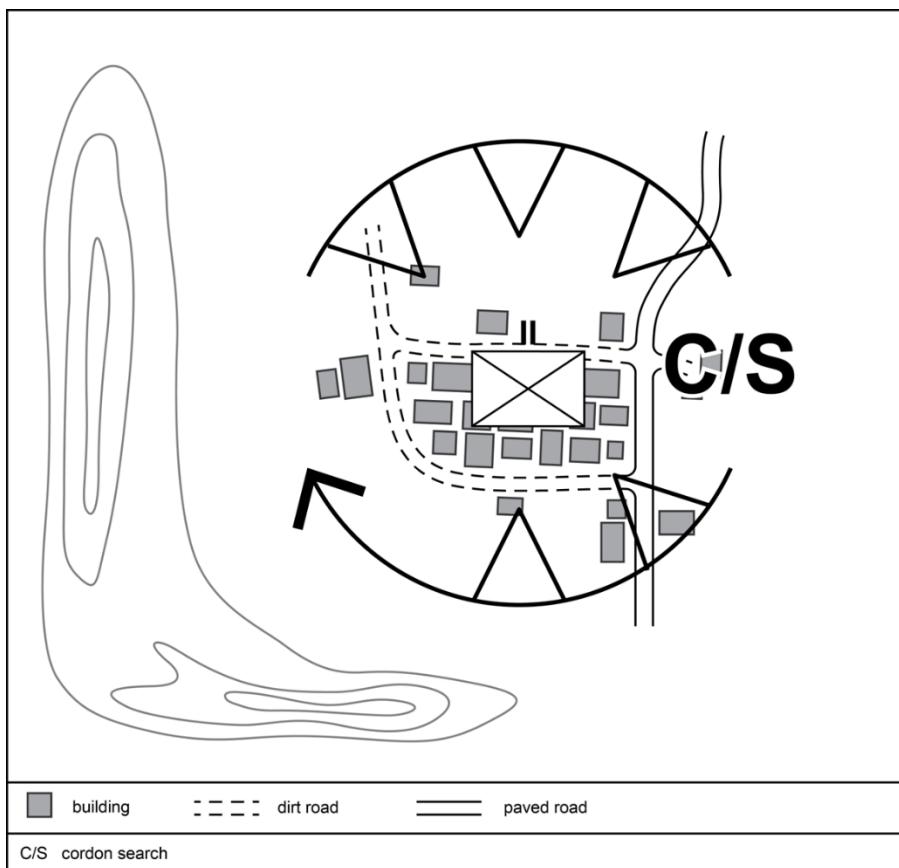


Figure 4-4. Cordon and search symbol

4-81. When combined, the outer cordon positions may be occupied simultaneously from multidirectional ingress routes, followed by a sequential occupation of the inner cordon positions via a single ingress route. Figure 4-5 depicts inner and outer cordons for a battalion level cordon and search.

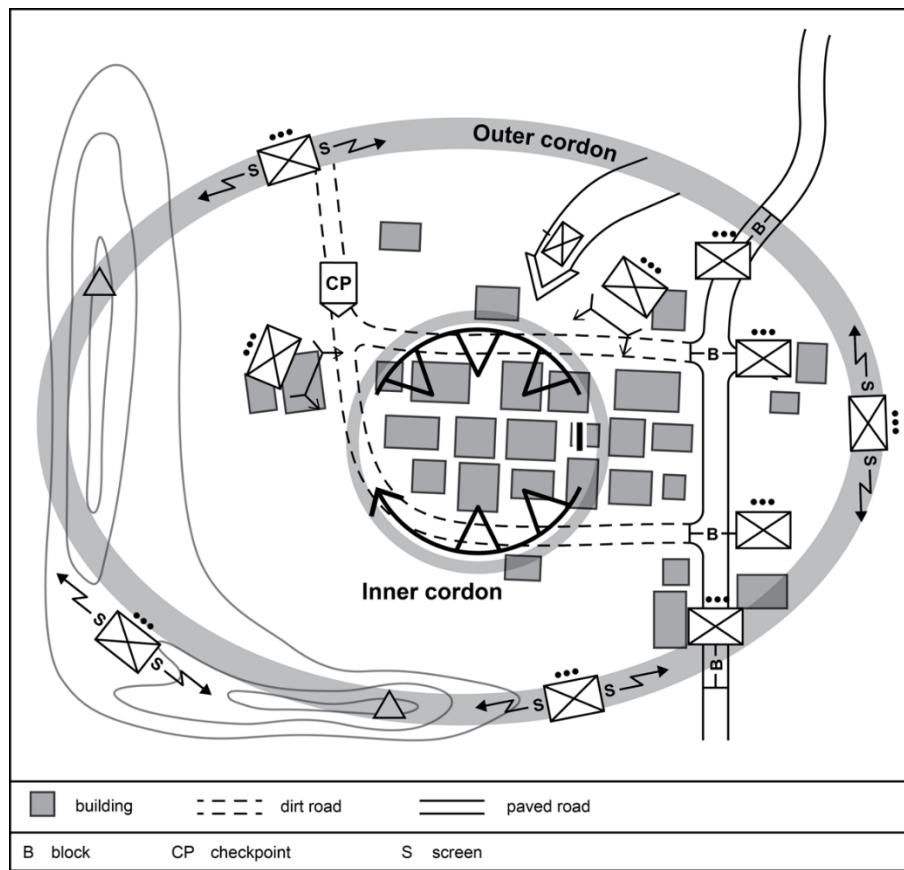


Figure 4-5. Example inner and outer cordons

4-82. Considerations for each cordon and search technique follow:

- In a sequential occupation, the security element successively occupies inner and outer cordon positions. This occupation allows for ease of control and simplicity of maneuver but accepts the risk that an alert adversary may have an opportunity to react or escape the target area.
- In a simultaneous occupation, the security element occupies cordon positions simultaneously (or near simultaneously). This occupation achieves tactical surprise in the objective and target areas and reduces the opportunity for an adversary to react or escape the target area.
- Using a single ingress route, the cordon and search force moves to the objective area in a column along a single route or from a single landing zone until elements reach designated release points. Using a single ingress route maximizes control but increases the time required to isolate the objective area and offers an adversary the opportunity to more easily delay joint force access to the objective area.
- Using multidirectional ingress routes, the cordon and search force moves to the objective area from multiple directions using multiple routes or landing zones. Using multidirectional ingress routes enables simultaneous occupation of outer cordon positions and rapid isolation of the objective area. However, this technique requires detailed time and distance analysis to synchronize cordon and search force arrival in the objective area; increases C2 complexity; and dilutes concentration of combat power during movement to the objective area.

TRANSITIONS

4-83. If the enemy force is not rapidly defeated, commanders have three options: bypass, transition to a deliberate attack, or conduct a defense. In all cases, commanders make every effort to retain the initiative by conducting violent and resolute attacks and preventing enemy forces from countering them. Simultaneously,

units maintain momentum by synchronizing the actions of friendly maneuver, functional and multifunctional support, and sustainment elements.

TRANSITION TO AN ATTACK

4-84. The decision to conduct a hasty or deliberate operation is based on the commander's current knowledge of the enemy situation and assessment of whether the assets available (to include time) and the means to coordinate and synchronize those assets are adequate to accomplish the mission. If assets and means are lacking, the unit takes additional time to plan and prepare for the operation or bring additional forces to bear on the problem. The commander makes that choice in an environment of uncertainty, which always entails some risk. Ongoing improvements in command and control systems continue to assist in the development of a common operational picture of friendly and enemy forces while facilitating decision making and communicating decisions to friendly forces.

TRANSITION TO A DEFENSE

4-85. Some transitions require friendly forces to transition into a defense. If the movement to contact does not defeat the enemy force or the friendly force has lost, then friendly forces get a different momentum. This changed momentum may dictate the transition into the defense. Friendly forces may lose their momentum and transition from a movement to contact to a defense for several reasons:

- The size, location, and composition of the enemy is significantly different than what was templated, and the friendly force risks destruction if they continue the movement to contact.
- If directed by their higher headquarters during planning. For example, if the unit was directed to conduct a movement to contact to a specified phase line and arrive without meeting the enemy then a hasty defense is needed to hold the terrain gained until directed to move on.
- Friendly forces outrun their logistics and risk culmination.
- Friendly combat losses prevent the unit from continuing to advance.
- The loss of external assets within range to support the continued advance of friendly forces.

4-86. If friendly forces lose momentum, the commander decides when to transition to a defense. The commander must utilize all information available; especially combat power against combat ratios to make this decision. See Part Three for execution of the defense.

Chapter 5

Attack

This chapter addresses those considerations unique to an attack. The general offensive considerations discussed in chapter 3 continue to apply. This chapter addresses the general considerations, organization of forces, common control measures, planning, preparation, execution considerations, and the four variations of an attack.

GENERAL CONSIDERATIONS FOR THE ATTACK

5-1. An attack is a type of offensive operation that defeats enemy forces, seizes terrain, or secures terrain. An attack masses the effects of overwhelming combat power against selected portions of an enemy force with a tempo and intensity that the enemy force cannot match. Attacking units seek positions of advantage and deliberately synchronize their combined arms teams.

ORGANIZATION OF FORCES FOR AN ATTACK

5-2. Commander's task-organize their forces to give each unit enough combat power to accomplish its mission once the commander determines their schemes of maneuver. Units normally organize their forces into a security force, a main body, and a reserve, all supported by sustainment organizations. The best place and time for an attacking force to task-organize is when it is in an assembly area. This allows units to complete any changes in task organization in time to conduct rehearsals with their attached and supporting elements.

FORWARD SECURITY FORCE

5-3. While planning and preparing for operations, units have a security force to their front. Upon initiating movement toward their objective, they place a reconnaissance and security force to their front to identify enemy locations, dispositions, and strengths. These forces also confirm trafficability of axes of advance and cross-mobility corridors. They also destroy (within capabilities) as much of the enemy in the disruption zone as possible, enabling the main body to focus on the enemy in the battle zone. Units only resource dedicated flank or rear security forces during an attack if the attack uncovers one or more flank or the rear of the attacking force as they advance. Commanders designate flank or rear security forces and assign them a guard or screen mission, depending on the mission variables. Attacking forces should maintain a forward security element. The size of the forward security element is based upon if the friendly force has gained and maintained visual contact of the enemy.

MAIN BODY

5-4. Units organize their main bodies into combined arms formations to conduct their main and supporting efforts. They aim their main effort towards decisive points. Decisive points can consist of the immediate destruction of selected enemy forces, the enemy force's capability to resist, seizure of terrain objectives, or the defeat of the enemy force's plan. Units' schemes of maneuver identify the focus of their main effort. All their forces' available resources operate in concert to ensure the success of the main effort. The subordinate unit or units designated to conduct the main effort can change during the course of the attacks. Units designate assault, breach, and support forces if they expect to conduct breaching operations during their attack.

5-5. Units retain flexibility by arranging their forces in depth, retaining strong reserves, and maintaining centralized control of long-range fire support systems. Units focus their available resources to support their main efforts achievement of its objective. Units cannot allow enemy actions, minor changes in the situation, or the lack of success by other supporting efforts to divert combat power from the main effort.

5-6. Commanders may need to designate one or more of their units to conduct supporting efforts to create windows of opportunity for executing their main effort. They use the minimal combat power necessary to accomplish their missions, since overwhelming combat power cannot be employed everywhere. Units conducting supporting efforts usually have a wider assigned area than those conducting the main effort. Commanders can assign the tasks of follow and assume or follow and support to subordinate units.

RESERVE

5-7. The strength and composition of the reserve vary with the mission variables, the form of maneuver, and the risk accepted. In an attack, the combat power allocated to the reserve depends primarily on the level of uncertainty about enemy forces, especially the strength of any expected enemy counterattacks. For example, in a hasty attack a reserve can contain up to one third of a force's combat power. Alternatively, units size their reserve to defeat their enemy's projected available counterattack forces in deliberate attacks. They should not constitute their reserves by weakening their main effort. A reserve requires mobility equal to or greater than the most dangerous enemy ground threat, and it should be able to counter that threat. See paragraphs 1-94 through 1-100 more information on a reserve.

COMMON CONTROL MEASURES ASSOCIATED WITH AN ATTACK

5-8. A higher echelon commander assigns the area to units conducting offensive actions within which they operate. Within these assigned areas, units at a minimum designate these control measures:

- A phase line as the LD, which may also be the line of contact (LC).
- The time to initiate the operation.
- The objective.

If necessary, a commander can assign an area (zone or area of operations) or use axis of advance, direction of attack, routes, or additional phase lines to further control maneuver forces. Figure 5-1 depicts common control measures associated with an attack.

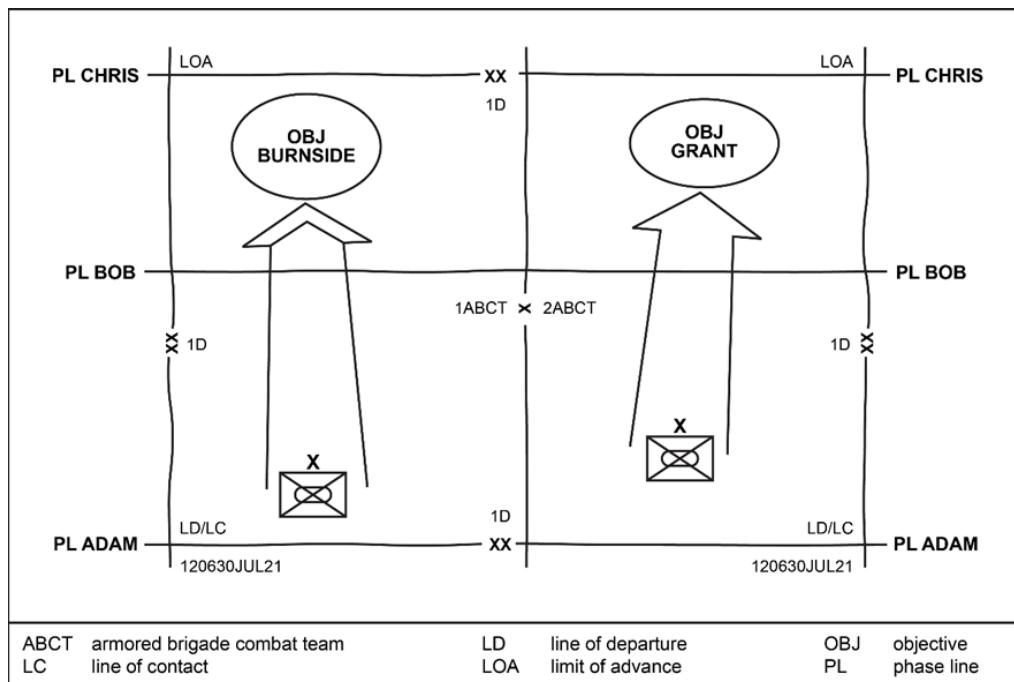


Figure 5-1. Example of attack control measures

5-9. Units can use any other control measures necessary to control an attack. Short of the LD, units may designate assembly areas and attack positions where they prepare for offensive actions or wait for established required conditions to initiate the attack. Beyond the LD, units may designate checkpoints, PLs, probable

lines of deployment (PLDs), assault positions, direct fire control measures, and indirect fire support coordination measures (FSCMs). Between the PLD and the objective, units can use a final coordination line (FCL), assault positions, support by fire and attack by fire positions, and a time of assault to further control the final stage of their attacks. Beyond the objective, commanders can impose a LOA if they do not want their units to conduct exploitation or a pursuit or template where they want their forces to position after the completion of the attack such as a battle position or blocking position.

5-10. Units increase control over the movement of all attacking elements in attacks during limited visibility conditions. Typically, they impose additional control measures beyond those used in daylight attacks. These additional measures may include using a PD and a direction of attack.

PLANNING FOR AN ATTACK

5-11. In an attack, units seek to keep enemy forces off balance while continually reducing the enemy force's options. Friendly forces seek to place enemy forces into a position where they can easily be defeated or destroyed. Friendly forces focus effects on enemy forces that seek to prevent the unit from accomplishing its mission and seizing its objective. Planning helps commanders synchronize the effects of combat power through the MDMP and troop leading procedures.

5-12. Units focus the effects of friendly systems to achieve fire superiority and allow their maneuver forces to breach enemy defensive networks. A friendly force must gain and maintain fire superiority at critical points during an attack. The unit uses long-range artillery systems (cannon and rockets) and air support (rotary- and fixed-wing) to engage the enemy throughout the depth of the enemy's defensive positions. The warfighting functions provide a model of how units organize and employ the force to ensure all capabilities of the force are synchronized in time and maneuver space during an attack.

COMMAND AND CONTROL

5-13. Commanders assign subordinate units their missions and use control measures necessary to synchronize and maintain control over the operation. Units plan to control the attack by determining the methods through command posts and signal assets and use graphic control measures (such as probable line of contact and enemy trigger lines) to manage the attack. They also control the attack by stating the desired effect of fires on the enemy weapons system such as suppression or destruction using previously developed enemy situational and weapons templates. Units match friendly weapon systems against selected enemy systems to determine the PLD as they array subordinate elements to shape the battlefield. They determine how long it takes subordinates to move from the LD to the PLD and any required support by fire positions once they determine their respective PLDs. They establish when and where their forces must maneuver into enemy direct fire range.

5-14. In addition to accomplishing the mission, every attack plan contains provisions for exploiting success or any advantages that may arise during the operation. Units exploit success by aggressively executing their plans, promoting subordinate leader initiative, and rapidly executing battle drills.

5-15. Information systems offer ways that units can gain and maintain enemy contact. Units enhance shared situational understanding by developing SOPs that govern the COP. Information systems improve the rapid, clear communication of orders and commander's intent, thereby reducing the confusion and friction of battle. This is especially true when the lowest tactical echelons can rapidly update the data on the information systems providing that common operational picture. The disposition and activities of friendly and enemy forces and third-party agencies are important elements of information. Service and joint intelligence systems feeding those information systems enable commanders and echelon staffs to detect and track enemy forces without having subordinate forces make physical contact with enemy forces. The ability to see and understand the situation before enemy forces do allows friendly forces to act first and maneuver out of direct contact with enemy forces at a high tempo. These abilities allow units to position their subordinate forces where those forces can overwhelm selected elements of the enemy force. This disrupts and destroys the enemy's combined arms team. Such attacks—delivered simultaneously with precision by air, land, maritime, space, and cyberspace systems throughout the width, height, and depth of the battlefield—can stun enemy forces and rapidly lead to their defeat.

MOVEMENT AND MANEUVER

5-16. Units seek to surprise enemy forces through movement and maneuver by choosing an unexpected direction, time, type, or strength for the attack. Surprise delays enemy reactions, overloads and confuses enemy command and control systems, induces psychological shock in enemy forces, and reduces the coherence of the enemy defense. Units can achieve tactical surprise by attacking in bad weather and over seemingly impassable terrain, conducting feints and demonstrations, and maintaining a high tempo, thereby destroying enemy forces. All of which is enhanced by the effective employment of OPSEC. For example, a unit in extremely hilly or mountainous terrain may consider transporting dismounted infantry forces to the heights and have them maneuver down the terrain. Units may plan different attack times for their main and supporting efforts to mislead enemy forces and allow the shifting of supporting fires to successive attacking echelons. However, simultaneous attacks provide a means to maximize the effects of mass in the initial assault. Simultaneous attacks also prevent enemy forces from concentrating defensive fires against successive attacks.

5-17. Commanders and their subordinate leaders focus on the routes and formations their units use to traverse the terrain from the LD or PD to the objective during the planning process. Some locations may require attacking units to change formation, direction of movement, or movement technique when they reach those locations. Units designate contact points at critical locations to ensure coordination between adjacent units.

5-18. Units attack targets throughout the depth of the enemy's defense to keep the enemy force off balance and limit enemy freedom of action. However, for the main effort, units concentrate the effects of overwhelming combat power to shatter the cohesion of the enemy force's defense. Units accomplish this by applying combat power against enemy forces at a level of violence and in a manner that enemy forces cannot match. For example, a battalion commander can mass an Army combined arms battalion's firepower and rapid advancement against an enemy rifle company's hastily prepared defensive position.

INTELLIGENCE

5-19. Commanders require information on an enemy force's organization, equipment, and tactics to determine the appropriate employment of unit and system capabilities and tactics. They need to understand an enemy force's strengths and weaknesses. Units develop threat courses of action and enemy situational templates based on analysis of all available combat information and intelligence. These products address both conventional and unconventional threats and are useful in determining the feasibility of available COAs. Ideally, this knowledge is available early in the planning phase.

5-20. Units conduct information collection activities before they attack. Information requirements can include—

- The location and depth of enemy reserves.
- The location and extent of obstacles, potential breach sites, enemy engagement areas, and contaminated areas.
- The location of areas where attacking units can become disoriented, such as rough or restrictive terrain.
- The most favorable routes of approach to the attack objective.
- Areas that attack forces can use for flanking fire and maneuver, such as support by fire and attack by fire positions.
- Suitability of planned friendly assault, artillery, and sustainment positions.
- Enemy deception operations.
- Current and future weather impacts to operations.
- Anything that requires a commander's decision.

Commanders and leaders at all echelons personally participate in this process.

5-21. Units take every opportunity to gain and refine combat information regarding enemy forces. They employ information collection assets to gather combat information and process it into intelligence. Information gathered during the planning phase is especially useful in determining the viability of each COA developed. Generally, units cannot conduct deliberate attacks if they do not know the location of most of the

defending enemy force's units and systems. If that is the case, units must conduct a movement to contact or spend more time collecting information.

5-22. Units collect information through reconnaissance; this information is analyzed and combined with other available information to become intelligence. Units employ reconnaissance over a broad area that allows their reconnaissance elements to identify enemy weaknesses to exploit and identify enemy strengths to avoid. Units exploit the situation by choosing COAs that allow their main effort to attack enemy weaknesses and penetrate identified gaps in an enemy force's defense. Commanders can then commit their forces to widen the gap and envelop enemy forces. Their reconnaissance elements continue to move, seeking paths of least resistance and pulling their main bodies deep into the enemy force's rear.

5-23. Once friendly reconnaissance elements gain contact with enemy forces, they develop the situation. If the objective is an enemy force, the reconnaissance element orients on it to maintain contact and determine as much as possible about its dispositions.

5-24. Units ensure reconnaissance and surveillance of enemy defensive positions and terrain critical to their schemes of maneuver continue throughout their attacks. Reconnaissance and surveillance assets can detect attempts by enemy forces to modify their defenses. In turn, this allows units to adjust their schemes of maneuver as the enemy situation becomes clearer. They can use human and technological means, acting separately or in combination, to provide the required degree of reconnaissance and surveillance.

FIREs

5-25. The planning process synchronizes the unit's maneuver with the provision of fire support. It must identify critical times and places where units need the maximum effects from their fire support assets. This planning considers existing limitations on employing fires, such as weapon ranges, presence of friendly forces within the assigned area, desired conditions of subsequent phases, rules of engagement and positive identification requirements, and requirements for collateral damage assessments. Units combine movement with fires to mass effects, achieve surprise, destroy enemy forces, and obtain decisive results. Each commander's guidance identifies fire support tasks that supporting fires organizations must accomplish to support the scheme of maneuver. Throughout planning, units develop various targeting products to support fire support execution. These include a high-payoff target list, target selection standards, and an attack guidance matrix. The purpose of these products is to ensure the efficient and effective application of fire support that supports the scheme of maneuver. (See FM 3-09 for more information on fire support task development and targeting products.)

5-26. Units emphasize accomplishing simple and rapidly integrated fire support plans using quick fire planning techniques and SOPs. They integrate their fire assets as far forward as possible in unit movement formations to facilitate the early emplacement of those assets. Friendly forces concentrate fires on forward enemy elements to enable maneuver efforts to close with enemy positions. Fires can isolate forward enemy elements by using long-range fires, air support, and electromagnetic warfare.

5-27. Fire support facilitates the attacking units' maneuver by destroying or neutralizing strong enemy forces and positions. Fire support systems take full advantage of available preparation time to achieve these demanding effects criteria. Fire plans feature the following characteristics:

- Target locations confirmed or denied by information collection efforts.
- Designation of target sensor to shooter communication links.
- Possible use of preparation and deception fires to shape an enemy force's defense.
- Air support to destroy high-payoff targets.
- Proactive suppression of enemy air defense efforts.
- Preparation fires that shift just as the maneuver force arrives on the objective.
- A suppression and obscuration fire plan to support operations.
- Pre-positioned ammunition backed by prepackaged munitions stocks capable of rapid delivery.
- Integration of nonlethal effects, such as electromagnetic attack and military information support operations, into the attack guidance matrix.
- Integration of primary and backup observers to engage high-payoff targets.

- FSCMs—accounting for danger close and other technical constraints—allow maneuver forces to get as close as possible to the objective before lifting fires.
- Signals for lifting and shifting fires on the objective.
- Do not dilute fire support capabilities to the extent they are unable to concentrate in support of the main effort.
- Plan for echeloning of fires.
- Maximize use of organic fires.

SUSTAINMENT

5-28. Units prioritize their sustainment operations to support their attacking forces. They prioritize sustainment support by designating who has priority for resupply combined with task-organizing capabilities (for example, shifting fuel tankers and operators from one unit to another). Prioritization weights the main effort by ensuring the right forces have the required supplies and equipment to accomplish the most important tasks.

5-29. Lines of communication typically increase during attacks. Therefore, units consider forward positioning sustainment assets to increase their operational reach and flexibility. Units also consider the availability and feasibility of using aerial assets to augment ground-based sustainment operations. This includes the ability to execute aerial resupply and aerial medical evacuation. Units must not assume the friendly forces possess air supremacy or air superiority which may preclude the use of aerial assets to execute sustainment operations.

5-30. Units must balance positioning supporting sustainment assets forward to support the attacking force with maintaining force protection. Forward positioning sustainment assets can create a risk. If the enemy is able to target and destroy these assets, then they may force the culmination of friendly operations prior to their success. Commanders need to balance account for this risk when considering the placement of sustainment assets during an attack. From these forward locations, units can sustain attacking forces and when applicable, shift priority of support to the units conducting the main effort. As attacking forces advance, their supporting sustainment units and capabilities displace forward as required to shorten supply lines, using displacement techniques designed to ensure uninterrupted support to maneuver units.

PROTECTION

5-31. Prioritization of protection tasks is vital to supporting an attack, however the prioritization will vary by echelon based on the resources and capabilities available. The mission variables guide the priorities of protection tasks and resources. Protection tasks that support the attack include but are not limited to: OPSEC, detention operations, CBRN operations, survivability operations, area security, and air and missile defense.

PREPARING FOR AN ATTACK

5-32. Even in fluid situations, attacks are best organized and coordinated in assembly areas. Units may opt not to use assembly areas if they determine that rapid action is essential to retain tactical advantages. Detailed advance planning—combined with digital communications, SOPs, and battle drills—may reduce negative impacts of such a decision.

5-33. Attacking units move into their assembly areas during the preparation phase unless they are already located in their assembly area. They move with as much secrecy as possible, normally at night and along routes that prevent or degrade an enemy force's capabilities to observe or detect their movement. They avoid congesting their assembly areas and occupy those areas for the minimum possible time. Units are responsible for their own protection activities, such as local ground security, while in their assembly areas.

5-34. Attacking units continue priorities of work to the extent the situation and mission allow before moving to attack positions. Preparations include but are not necessarily limited to—

- Protecting the force.
- Task-organizing.
- Performing reconnaissance.

- Refining the plan.
- Briefing the troops.
- Pre-combat checks.
- Pre-combat inspections.
- Moving logistics and medical support forward.
- Conducting rehearsals.
- Promoting adequate rest for both leaders and Soldiers.
- Positioning the force for subsequent action.

5-35. Leaders at all levels conduct a reconnaissance of the actual terrain when this does not compromise OPSEC or result in excessive risk. In some areas, geospatial intelligence databases can enable leaders to conduct a virtual reconnaissance when a physical reconnaissance is not practical. Leaders should also reconnoiter the terrain at night when preparing for a limited-visibility attack.

5-36. A thorough reconnaissance of the objective, its foreground, and other enemy positions is a critical part of attack preparation. Units exploit all available information collection assets to provide commanders necessary information. This includes requesting joint surveillance feeds of enemy movements from higher echelons or imagery of enemy obstacles.

5-37. Reconnaissance forces infiltrate through the enemy disruption zone to conduct a zone or area reconnaissance. They can employ precision munitions and conventional indirect fires to destroy detected enemy outposts while remaining undetected. They locate and attempt to infiltrate the enemy's main defensive positions to confirm enemy unit dispositions. When properly task-organized, units may also give forces conducting reconnaissance the mission to conduct covert breaches in the enemy force's obstacle complexes to facilitate rapid movement of their parent units' decisive or shaping operations.

5-38. Units exercise and refine their schemes of maneuver and fires during rehearsals. These rehearsals are an important part of ensuring their plans' coordination and synchronization. Commanders review the anticipated battle sequence with subordinate leaders to ensure all units understand the plan, the relationship between fire and movement, and the synchronization of critical events as part of their rehearsal process. Sample critical events to focus on at rehearsals include—

- Execution triggers.
- Moving from assembly areas to individual unit LDs.
- Maneuvering from the LD to the PLD.
- Occupying support by fire positions.
- Conducting a breach or gap crossing (as appropriate).
- Assaulting the objective.
- Consolidating on the objective.
- Exploiting success or pursuing a withdrawing enemy.
- Actions of echelon reserves.

Units must also conduct separate, stand-alone warfighting function rehearsals such as sustainment, fires, and C2 as necessary. The rehearsals should account any adverse conditions that are possible which would provide time to identify and prepare them to cope with problems. These rehearsals include battle drills, such as breaching minefields at lower tactical echelons.

5-39. From their assembly areas, attacking units move to their attack positions. (See figure 5-2 on page 5-8.) Units move from assembly areas to the attack positions in the same way as for any other tactical movement. The number of columns each unit employs in its movement depends on the availability of suitable routes and the friendly and enemy situation. The tactical situation and the order in which commanders want subordinate units to arrive at their attack positions governs the march formation. The LD facilitates the simultaneous initiation of the attack at the prescribed time by all attacking units.

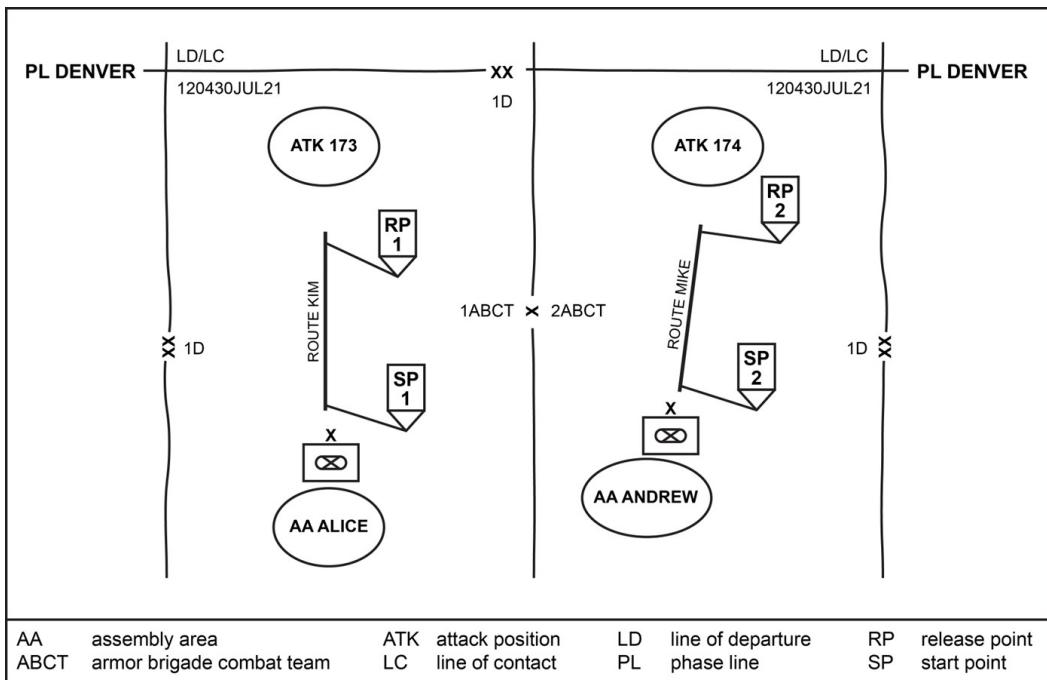


Figure 5-2. Example control measures for movement from assembly area to attack position

5-40. Dismounted infantry units move by tactical vehicles to the maximum extent possible prior to the arrival of identified dismount points to avoid prematurely exhausting their Soldiers. However, dismounted infantry forces should not travel too far forward in tactical vehicles. Enemy forces can detect the noise and other battlefield signatures associated with using tactical vehicles at a greater distance than they can detect dismounted infantry Soldiers. An enemy force will probably respond to friendly tactical vehicles with direct and indirect fire systems. Units weigh the need for security against the time required to conduct a foot march and its resulting effects on their Soldiers' physical stamina.

5-41. Units move rapidly through their attack positions and across LDs controlled by friendly forces. Units use their designated attack positions only as needed. For example, it is a place they refuel before crossing the LD to ensure sufficient fuel to reach the objective. Units use attack positions when friendly conditions have not yet been set. Units should minimize the time they remain stationary in their attack positions. Generally, units should initiate actions to protect themselves and increase their survivability every 10 to 15 minutes. This includes such things as deploying local security, deploying camouflage nets, and starting the construction of fighting and survivability positions. Units can use quartering parties to assist in occupying their attack positions.

5-42. Commanders may designate points of departure for their attacking units instead of an LD for units attacking on foot using infiltration and stealth. Armored and Stryker units normally use gaps or lanes through friendly positions to allow them to deploy into movement formations before they cross the LD.

5-43. Preliminary operations for an attack may include using preparation fire and the relief of units in contact by executing a relief in place or a forward passage of lines. The relief of units may be desirable to continue the momentum of the attack with fresh troops, change the direction of the attack, exploit a weakness in the enemy position with reserves, or initiate an offensive on a stabilized front.

5-44. Tactical commanders use artillery, mortar, fixed and rotary wing aircraft, electromagnetic warfare, and military information support operations to conduct preparation fire. They develop their preparation fire from the top down, with bottom-up refinement. Those subordinate units most affected by the effects of these preparation fires must strongly emphasize the bottom-up refinement process. Preparation fire can—

- Destroy enemy forces.
- Suppress, neutralize, or disrupt high-value or high-payoff targets.

- Gain fire superiority.
- Suppress enemy forces in their defensive positions.
- Facilitate the attacking force's maneuver.
- Deceive enemy forces.
- Isolate enemy forces.

5-45. These preparation fires may initially destroy or disrupt only the enemy's reconnaissance and security forces and their positions if attacking forces are in contact with the enemy's disruption zone. In either case, counterfires conducted as part of preparation fire can degrade the enemy's fire support systems and assist in achieving fire superiority.

5-46. Commanders ensure that attacking maneuver forces have the functional and multifunctional support and sustainment assets necessary to conduct the operation and maintain the momentum of their attacks as part of the preparation process. That support and sustainment effort must anticipate future maneuvers to ensure the uninterrupted advance of maneuver forces.

EXECUTING AN ATTACK

5-47. An attack consists of a series of advances and assaults by attacking units until they accomplish their mission. Commanders at all echelons use their initiative to shift their main effort among units as necessary to take advantage of opportunities and momentum to ensure the enemy force's rapid destruction. Attacking units move as quickly as possible, following reconnaissance elements through gaps in the enemy force's defenses. Units shift their efforts to reinforce success and carry the battle deep into the enemy force's rear. Commanders do not delay their attacks to preserve the alignment of subordinate units or adhere too closely to their preconceived plans.

5-48. Units strive to retain their freedom of action while protecting their forces. They continually seek opportunities to defeat, destroy, or reduce the enemy force's combat power or shatter the enemy force's cohesion and capability to fight even if those opportunities deviate from their previous detailed plans for defeating the enemy force. Units avoid strict adherence to plans no longer appropriate to battlefield conditions.

5-49. Commanders avoid becoming so committed to their initial plan that they neglect opportunities. They remain mentally prepared to abandon failed attacks and exploit unanticipated successes or enemy errors by designating other units to conduct their main effort in response to changing situations. Commanders follow the tactical framework when attacking.

FIND THE ENEMY

5-50. Gaining and maintaining contact with an enemy force, who is determined to break contact, is vital to the success of offensive actions. A defending enemy force generally establishes a disruption zone around those forces occupying the main line of defense to make early contact with attacking forces to determine their capabilities, intent, COA, and to disrupt their approach. An enemy unit uses that disruption zone to defeat friendly reconnaissance forces and hide enemy dispositions, capabilities, and intent. An enemy commander's goal is to compel the attacking force to conduct a movement to contact against defending enemy forces that know the exact location of the attacking force.

5-51. Units employ their combat power to overwhelm enemy forces based on their situational understanding. However, echelons below division do not normally have the detection, tracking, and weapon systems necessary to conduct supporting efforts directed against enemy forces not currently committed to close combat. The way a unit gains and maintains contact depends on whether the unit is in contact with the enemy's disruption zone or the enemy's battle zone. It also depends on the echelon of the unit in the nested layers of reconnaissance and security. For example, the intent of a corps' reconnaissance effort is to determine the dispositions, composition, direction of movement, and rate of movement of a defending enemy's significant forces. A reinforced armored BCT, task-organized as a covering force or advance guard, can fight through most disruption zones, develop the situation, confirm information provided by technical means, and force enemy forces to reveal additional information prior to divisions executing close operations. This additional information often includes locating the enemy's tactical and possibly operational reserves. At a

lower echelon, a maneuver battalion constituting the advance guard of the main body of a BCT can use its scout platoon to conduct a zone reconnaissance that focuses on acquiring enemy positions and obstacles.

5-52. The ability of units to anticipate an enemy force's actions by gaining and maintaining contact with all significant parts of their opposing enemy forces—to include tracking enemy reserves, fire support, and follow-on forces—increases the security of attacking forces. Units seek to detect enemy attempts to shift major elements of defending enemy forces or launch a counterattack. They can prevent enemy reconnaissance assets from detecting major friendly force attacking movements by sending out a force to conduct zone reconnaissance with an on-order security mission. The risks to an enemy force increase when friendly forces impede or deny success to enemy collection assets. These factors result in providing attacking units with additional time to take advantage of changing situations. Moving within an enemy force's decision cycle allows friendly units to take advantage of successes by transitioning to the tasks of exploitation and pursuit and to complete the enemy's destruction.

FIX THE ENEMY

5-53. The purpose of fixing enemy forces is to prevent the enemy from repositioning within their battle zone. Every friendly move causes the enemy force to react. An enemy commander opposes friendly units attempting to fix enemy's forces. Friendly units do everything possible to limit the options available to enemy forces. Fixing an enemy into a given position or COA and controlling the enemy force's movements limit enemy options and reduce the amount of battlefield uncertainty and associated risk.

5-54. Units seek to fix enemy forces with the minimum amount of combat power. Commanders normally allocate the bulk of their friendly combat power to forces conducting their main effort. Thus, fixing operations are supporting efforts. Therefore, units carefully consider which enemy elements to fix and target only those that can significantly affect the outcome of their operations. The longer the requirement to fix these forces, the more resources units need to accomplish the mission. Generally, the support force engages enemy forces so they cannot respond to the friendly main effort. This may require units to slow the rate of movement of selected enemy units to prevent them from influencing the outcome of the operation.

5-55. Reducing uncertainty allows friendly forces to maneuver to mass the effects of overwhelming combat power against a portion of an enemy force. It gives units more time to modify their attack plan as necessary and synchronize their employment of friendly forces. It allows units to mass forces in one place by using economy of force measures in other areas. Units may also try to fix selected enemy units, such as the enemy reserve or follow-on force, to prevent them from repositioning or maneuvering against friendly forces conducting the main effort.

5-56. Severing enemy lines of communications and main supply routes over prolonged periods by using interdiction measures is another way to fix enemy forces. These measures can range from air interdiction that destroys bridges and rail switching yards to ambushes of enemy resupply convoys conducted by infiltrating combat patrols.

5-57. Another method of fixing enemy forces is to tie obstacles into the existing terrain to further canalize and slow the movement of enemy reserves. At lower tactical echelons, scatterable minefields can isolate objectives from possible enemy reinforcement or counterattacks and block or disrupt enemy actions to the flanks. Units can use tactical deception operations and activities, such as demonstrations and false preparation fires, to fix enemy forces. Using extensive obscuration and vehicle mockups in a tactical deception effort can also assist in fixing targeted enemy forces.

5-58. Another method of isolating the objective is to use lethal and nonlethal effects. Lethal effects may range from sniper fire to a joint fire plan designed to destroy a selected portion of an enemy force. Nonlethal effects, such as electromagnetic warfare, can prevent enemy forces from receiving orders or vital intelligence and information or disrupt enemy fire control systems.

FINISH THE ENEMY

5-59. With the enemy force found and fixed, commanders maneuver subordinate forces to accomplish the mission. Units seek to avoid an enemy's defensive strength by attacking through a point of relative weakness, such as a flank or rear.

5-60. The key to success is to strike hard and fast, overwhelm a portion of the enemy force, and then quickly transition to the next objective or phase. This maintains the momentum of the attack without reducing the pressure on enemy forces. Additionally, units make every effort to locate and track enemy reserves and follow-on forces to prevent friendly forces from unexpected attack by significant enemy forces. It also allows units time to delay, disrupt, or destroy these enemy forces before they can interfere with their attacks.

5-61. The rest of this section shows an example of how a friendly force would finish the enemy. It includes actions to disrupt the enemy; movement from the line of departure; actions at the probable line of deployment, assault position, final coordination line; and actions on the objective—both mounted and dismounted.

Disrupting the Enemy

5-62. As part of finishing the enemy, friendly units disrupt the enemy force to increase the likelihood of success during the attack. Disrupting one or more parts of the enemy combined arms team creates multiple dilemmas for the enemy, weakens the entire enemy force, and allows friendly units to attack selected portions of the remaining enemy force. This disruption effort usually occurs at echelons above brigade because lower echelons lack the necessary reconnaissance, target acquisition, intelligence analysis, cyber and electromagnetic warfare, and target attack assets to engage enemy forces not committed to close combat. Their assessment and decisions regarding what to disrupt, when to disrupt, and for what purpose are critical. Creating multiple dilemmas synchronized to deliver effects at the most opportune time overwhelms the enemy's ability to command and control their forces and respond effectively.

5-63. For example, the goal of disrupting an enemy fire support system is to allow friendly forces to maneuver and mass the effects of their weapon systems against the enemy without the enemy's indirect fire weapons being able to engage friendly forces. Attacking forces can accomplish this by attacking enemy forward observers, fire direction centers, command posts, artillery and rocket systems, or ammunition storage areas. Each set of targets requires a different amount of resources. The probability of success, the effectiveness of the attack, and the time necessary to achieve the desired target effects varies with each set of targets. Timing is also important. If units execute their associated supporting efforts too early, an enemy force may have time to recover and respond before friendly forces conducting their main effort can complete their maneuver.

5-64. Units seek to use the element of surprise to conduct operations that strike at enemy forces upon making any type of contact with enemy forces. This surprise denies enemy forces the opportunity to focus and synchronize combat power against attacking friendly forces. It prevents enemy forces from massing defending enemy forces or fires at critical times and locations. Surprise can produce confusion, fear, and piecemeal resistance. These operations disrupt both the enemy's combined arms team and the enemy commander's ability to plan operations and control enemy forces. These operations, once initiated, continue throughout their attacks. Units use any existing advantages over enemy forces in these areas to aid their disruption process through lethal and nonlethal effects.

Movement from the Line of Departure

5-65. Units transition from movement to maneuver once they cross their LDs. If circumstances dictate crossing the LD not in their proper movement formation they establish a probable line of deployment to indicate where they will transition to their appropriate movement formation. They move aggressively and as quickly as the terrain and enemy situation allows. They move forward using appropriate movement techniques assisted by the fires of supporting units. Fire and movement are closely integrated and coordinated. Effective suppressive fires facilitate friendly movement, and friendly movement facilitates effective fires. Attacking units use avenues of approach that avoid strong enemy defensive positions, take advantage of all available cover and concealment, and maneuver forces to positions of advantage against the defending enemy forces. Units use obscurants to conceal their movement where cover and concealment are not available. Any delays in establishing obscuration and suppressive fires before crossing their LDs may require attacking units to occupy their assault positions.

5-66. Artillery and other ground-based fires assets move as necessary to ensure that attacking units remain within supporting range. Units analyze the time it takes maneuver units to move from their LDs to their PLDs and the distances involved. This analysis provides the data that units use to ensure supporting systems can

provide the necessary fire support before their supported maneuver units move inside the effective range of enemy direct fire weapon systems. Units use fires delivered from fixed- and rotary-wing systems and the autonomous operation capabilities of artillery systems to help counter enemy artillery range advantages.

5-67. Units deploy to maintain maximum firepower against known enemy positions when they expect to make contact at or shortly beyond their LDs. Commanders select the formation that best balances firepower, tempo, security, and control for the specific situation. They have the option of deploying a security force in front of their attacking units. Units may also employ flank or rear security forces if required by the enemy situation. They may not want to change formations during the attack because of potential loss of momentum resulting from such changes. Attacking forces transition to the bounding overwatch movement technique when they expect enemy contact. See paragraphs 2-20 through 2-23 for more information on the bounding overwatch movement technique.

5-68. Between the LD and the PLD, attackers seize intermediate objectives only to eliminate enemy positions or apply additional suppressive fires. Artillery, rocket, electromagnetic warfare, and aerial assets engage targets of opportunity and enemy security forces. They direct subordinate forces to occupy predesignated support by fire positions as their units approach suspected enemy positions or danger areas. Lethal fires, suppression, and obscuration enable attacking forces to occupy these support by fire positions. Units use direct fires from these positions to suppress enemy forces while the rest of their formation continues to advance toward their objectives.

5-69. Units engage known enemy forces with the maximum combat power to overwhelm them as quickly as possible. Attacking units that encounter a small enemy unit on the way to their objectives either quickly overrun or bypass that small enemy unit if it meets the bypass criteria.

Actions at the Probable Line of Deployment, Assault Position, or Final Coordination Line

5-70. Attacking units maintain their pace of advance as they approach their PLDs. Commanders divide their attacking units into one or more assault and support forces either before or on reaching the PLD. Infantry Soldiers dismount from their combat vehicles at their PLD, if necessary. All forces supporting the assault force are in their support by fire positions before the assault force crosses the PLD. Units synchronize the occupation of support by fire positions with the maneuver of their supported attacking units to limit the vulnerability of the forces occupying these positions. They use unit tactical SOPs, battle drills, prearranged signals, EAs, and target reference points (TRPs) to control the direct fires from these supporting positions. Units normally employ RFLs between converging forces.

5-71. Figure 5-3 shows that the PLD can be co-located or near the assault position. Units ensure that the final preparations of their breach forces in assault positions do not delay maneuver to breach points as soon as conditions are set. Whenever possible, assault forces rapidly pass through their assault positions. They may have to halt in their assault positions while supporting and suppressive fires lift and shift. In this case, if the defending enemy force anticipates the assault, assault forces deploy into covered positions, and obscure their positions with smoke. Support forces continue their suppressive fires on the objective for as long as assault forces remain in their assault positions.

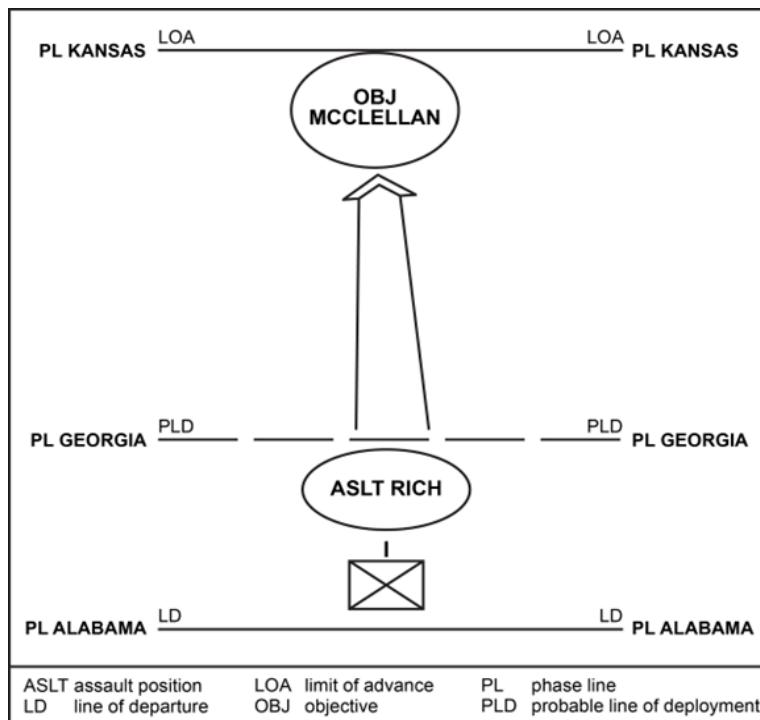


Figure 5-3. Example of a probable line of deployment and assault position

5-72. Once support forces create the conditions, breach forces reduce, proof, and mark the required number of lanes through the enemy force's tactical obstacles to support the maneuver of assault forces. Commanders clearly identify conditions that allow their breach forces to proceed to avoid confusion. From their probable lines of deployment, assault forces maneuver against or around enemy forces to take advantage of support forces' efforts to suppress targeted enemy positions. Support forces employ direct and indirect fires against selected enemy positions to destroy, suppress, obscure, or neutralize enemy weapons and cover the assault forces' maneuver. Assault forces closely follow these supporting fires to accomplish their mission.

Actions on the Objective

5-73. Units employ overwhelming and simultaneous fire, movement, and violence during their final assaults to finish the enemy. These violent assaults destroy, defeat, or drive enemy forces from their objective areas. Small units conduct the final assault while operating under the control of the appropriate echelon command post. Armored forces have the option of conducting this final assault in either a mounted or dismounted configuration. Stryker forces typically conduct the assault with their dismounted forces with support from their vehicles.

5-74. The key to forward movement when assault forces are under enemy direct fire is to return effective fire. Destructive or suppressive fires are most effective when fired by stationary support forces. These fires prevent enemy forces from firing effectively at moving assault forces. Support forces place a heavy volume of fires on enemy forces to destroy, neutralize, or suppress them once they are in position and assault forces are prepared to move. The ability of support forces to move to advantageous terrain is critical to ensuring success. They reduce their rate of fire to sustainable levels to conserve ammunition as assault forces close on their objectives once they suppress the enemy's positions. This ensures that they have enough ammunition to support the assault. Support forces increase their rate of fire to ensure continued suppression when assault forces near their objectives. This allows assault forces to assault enemy positions before the enemy can react. Commanders provide specific signals for support forces to ceasefire, shift their fire to another target area, or walk their fire across the objective in front of the assault force. Alternatively, these later actions may occur when the assault begins.

5-75. Units use screening smoke to conceal units and individual positions, or obscuration to blind enemy forces. Screening smoke is particularly effective during movement to, and assault on, the objective. Care must be taken to avoid screening smoke obscuring friendly units. Units place obscuration in front of enemy positions, on the far side of obstacles, and in areas that restrict maneuver. They may use obscuration over their support areas to limit enemy observation. The neutralization of enemy thermal viewers requires the use of multispectral obscuration.

5-76. Units employ all fire support means to destroy or suppress enemy forces and sustain the momentum of their attacks. They improve the likelihood of success by carefully synchronizing the effects of indirect fire systems or available air assets. Units plan fires in series or groups to support maneuver against enemy forces on or near their geographical objectives. Assault elements move rapidly across their objectives as their units shift artillery fires and obscurants from the objective to other targets. Support elements maintain suppressive fires to isolate objectives and prevent enemy forces from reinforcing or counterattacking. These support elements also destroy escaping enemy forces and systems. Units employ information capabilities, such as cyberspace operations and electromagnetic warfare, to attack enemy command and control information systems as part of this effort.

5-77. Units limit position changes of fire support systems because position changes reduce the volume of available fires. Units balance the need to maintain that amount of artillery support against enemy counterfire capabilities with their need to provide continued coverage as attacking units continue to move forward. Supporting indirect fire assets move into their new positions one subordinate unit at a time, by echelon, to maintain support throughout the attack. Units can use any available air assets to provide supporting fires, in addition to organic mortar systems, while field artillery batteries displace.

5-78. Small enemy units moving toward the penetrated area can disrupt the synchronization of the final assault. As friendly units and weapon systems crews engage enemy targets, they tend to focus on their immediate opponents rather than the overall situation. Loss of situational understanding combined with the defending enemy forces' more detailed knowledge of the terrain allows small enemy forces to inflict a great deal of damage on friendly attacking forces. Attacking unit leaders need to understand the flow of combat and retain the capability to engage these enemy forces before they can alter the outcome of their assaults. Commanders can commit their reserves to maintain the momentum of their attacks and keep pressure on enemy forces. This also hinders enemy attempts to stabilize the situation.

5-79. Units isolate and destroy portions of the enemy defense in sequence when attacking well-prepared, integrated enemy defenses. See figures 5-4 and 5-5 to see this process illustrated. Friendly forces isolate, suppress, obscure, and bypass selected enemy positions. For example, obscuration delivered by field artillery and mortars in front of the objective—between the force and the enemy—screens friendly breach and assault force movement and obscures enemy weapon systems. Units place fires on and beyond the flanks of an objective to isolate an enemy position. These fires include obscuration; high-explosive, improved conventional munitions (if available); and precision-guided munitions delivered by a mix of field artillery, fixed-wing aviation assets, and attack helicopters. In addition, units may employ short duration scatterable mines in conjunction with terminally guided munitions to help isolate and impair an enemy force's ability to counterattack. (Their use must not impede the conduct of exploitation and pursuit operations.) Units can employ jammers to cut information system links between enemy maneuver forces and their supporting artillery.

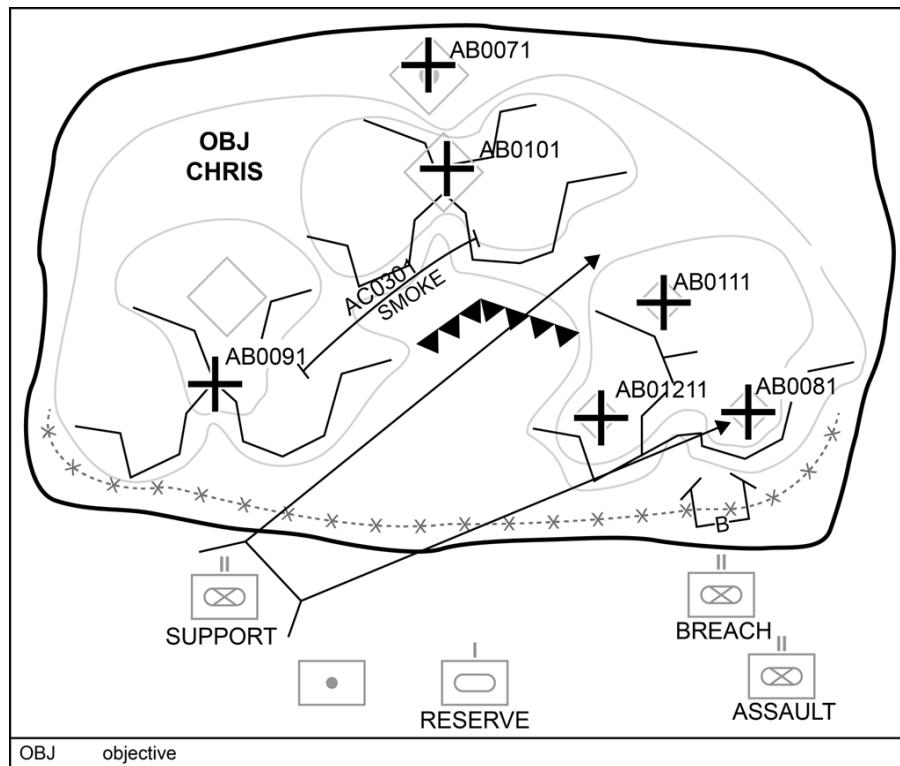


Figure 5-4. Attack of an objective, breach

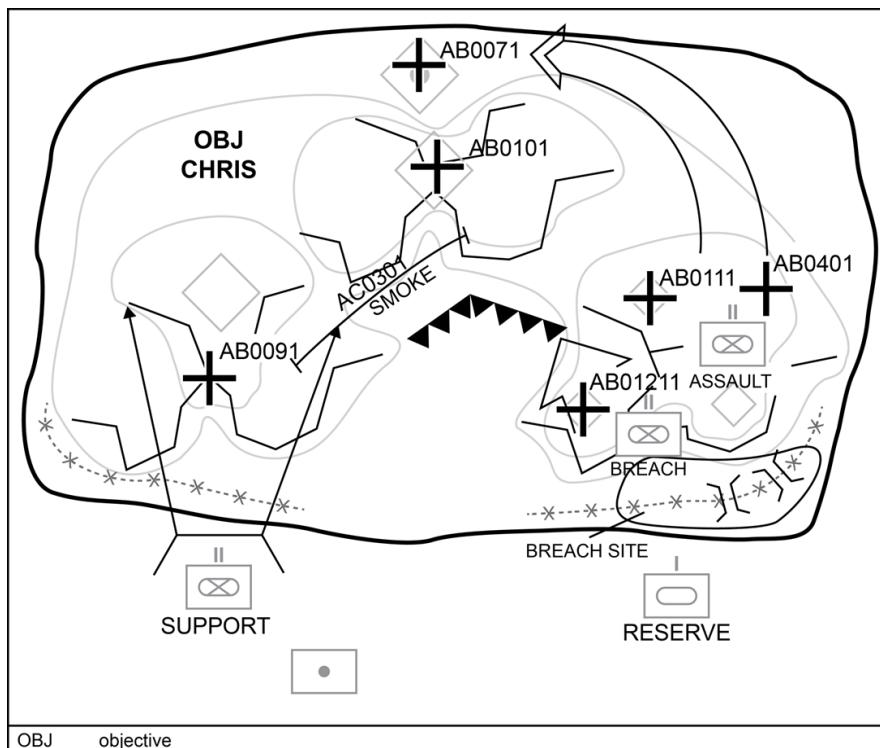


Figure 5-5. Attack of an objective, assault

5-80. Units mass overwhelming combat power in sequence against isolated centers of resistance. Assault element commanders can task-organize their elements to assault one portion of an objective at a time. The enemy force may attempt to reinforce its defending forces or counterattack during the friendly force's attack. Once the attacking force reaches the far side of the objective, selected elements clear remaining pockets of resistance while the bulk of the assault force prepares for a possible enemy counterattack. After assault forces reach their objectives, support forces leave their support by fire positions and rejoin assault forces or move to blocking positions to counter possible enemy counterattacks.

Mounted Assault

5-81. Units consider the terrain, obstacles, and the strength of enemy anti-armor defenses when determining whether to conduct a mounted or dismounted attack. Mounted assaults accelerate the operation's execution by allowing the greatest speed and shock action and providing the best protection against small arms and indirect fires while conserving the strength of the infantry Soldiers conducting the assault.

5-82. Armored units can conduct a mounted assault when facing weak, hastily prepared, disorganized resistance, or when attacking with overwhelming combat power. They concentrate all supporting fires to destroy and neutralize enemy forces and fix local reserves when conducting a mounted assault. Tanks, infantry fighting vehicles, and amphibious assault carriers use cannons and machineguns to engage targets for as long as possible. Other weapons increase their rate of fire as commanders lift or shift fires from one type of weapon to another. The assault force advances close to its objective under the cover of these supporting fires.

5-83. Assault forces attack using shock action and firepower to overrun enemy positions as soon as their commanders shift supporting fires beyond their objectives. Mechanized infantry elements move as close as possible to their objectives while remaining mounted in their combat vehicles. Commanders give the order for infantry elements to dismount from their carriers when the danger to the mounted infantry elements exceeds the protection offered by their combat vehicles.

5-84. Units may employ this technique with armored forces rapidly clearing an objective against an enemy force that lacks a robust anti-armor capability. First, the assaulting forces overrun their objectives. Then, the accompanying mechanized infantry Soldiers dismount from their combat vehicles on the far side of their objectives and sweep their objectives from the far side back to the near side to clear any remaining pockets of enemy resistance. The ability of armored forces to closely follow friendly mortar and artillery fires as they shift across their objectives is a major advantage. Units secure their objectives immediately after they shift their supporting fires to deny enemy forces time to move from protective to firing positions.

Dismounted Assault

5-85. Light infantry and Stryker units assault an objective utilizing dismounted infantry. Typically, Stryker units use their vehicle platforms in support of the dismounted assault.

5-86. Units usually conduct dismounted assaults when—

- The terrain favors dismounted operations.
- Enemy forces have a strong anti-armor capability.
- Tanks and armored combat vehicles are not available to lead the assault even though the mission variables favor their employment.
- Enemy obstacles prevent maneuver across the objective.
- Friendly forces require stealth to close on the objective.
- Mounted assaults stall on or short of the objective.
- Enemy forces are in prepared positions.

Commanders determine if, when, and where any Stryker infantry forces dismount from their combat vehicles based on analysis of the mission variables and the degree of risk involved.

5-87. Commanders of attacking forces advance beyond the geographical boundaries of enemy defensive positions whenever possible before stopping to consolidate and reorganize. This is because enemy forces with considerable indirect fire capabilities are likely to have developed preplanned targets on those positions for rapid engagement in case of their loss and to support enemy counterattacks.

FOLLOW THROUGH

5-88. Once the objective is seized and friendly forces establish security, subordinate units clear their objective of enemy forces, consolidate and reorganize, and prepare for enemy counterattacks. Units position their armored and antitank systems in overwatch to cover likely enemy mounted avenues of approach. Mechanized infantry forces normally dismount and orient along likely dismounted and mounted avenues of approach. Mortars, command posts, and sustainment assets move forward to consolidate. Units also dispatch patrols to ensure contact with any adjacent friendly forces. Otherwise, a gap would occur, which an enemy force could exploit during a counterattack. Units are responsible for establishing contact with units to their left and right as defined by the direction to enemy forces.

5-89. When the situation allows, units work to gain or maintain contact with those enemy forces that have abandoned their recent positions or objectives immediately after the friendly assaults conclude. Units send patrols in any direction required to maintain or regain contact with enemy forces in their assigned areas. Higher echelon commanders reposition their information collection assets and adjust their missions as necessary to maintain contact. With an understanding of the friendly and enemy situation, commanders have a decision to make. They can exploit success and continue their attacks or terminate their attack. After seizing an objective, the most likely on-order mission is to continue the attack.

Continuing the Attack

5-90. Units seek to achieve a breakthrough that can turn into an exploitation or a pursuit by continuing their attacks. A **breakthrough** is a rupturing of the enemy's forward defense that occurs as a result of an attack. At BCT echelon and below, units maintain contact and attempt to exploit their success. Normally, a division, corps, or higher echelon commander, makes the decision regarding whether to initiate an exploitation or pursuit or to terminate offensive actions.

5-91. Units plan logical sequels to their attacks as part of their follow through. Attacking forces plan for exploitation. Exploiting forces plan for the pursuit of a defeated enemy force. Units seek to employ their subordinate forces during an exploitation without overextending their sustainment capabilities. Commanders plan to have fresh units pass around or through forward units to sustain their attacks' momentum. They may assign these fresh units with the task of follow and support or follow and assume in an effort to maintain tempo. Commanders of any unit conducting the offense envision how, under what conditions, where, and when their unit transitions to the defense, based on possible enemy countermoves and other events.

5-92. Fire support assets move quickly to take advantage of the natural reduction in support requirements that occur when their supported unit takes enemy positions. Field artillery units reposition to where they can support renewed attacks when ammunition supplies and enemy actions permit. Attacks by manned and unmanned aircraft systems can provide support while these artillery systems reposition. Road conditions, such as destroyed bridges or large numbers of dislocated civilians, and unit cross-country mobility capabilities affect the exact time of repositioning.

5-93. Units attempt to exploit the deterioration of enemy positions by attacking before enemy forces can reconstitute an effective defense. Units employ precision-guided munitions in combination with the maneuver of armor or Stryker formations, Army aviation, and air support to achieve decisive results.

5-94. Ordinarily, defending enemy forces attempt to hold their positions until nightfall to be able to complete their withdrawal under the cover of darkness. Attacking units maintain pressure, continuing their attacks at night. Friendly units maintain enemy contact through these attacks. This keeps enemy forces off balance and makes their withdrawal from action extremely difficult. If enemy forces are too strong to overrun, friendly units concentrate their efforts on enveloping or encircling retrograding enemy forces when enemy forces try to conduct a delay. Attacks aggressively pushed through the hostile front may isolate major elements and force enemy forces to evacuate their entire defensive position before they can construct viable fallback positions.

5-95. Successful attacking units penetrate deeply into hostile positions to attack enemy reserves, artillery, command and control nodes, and lines of communications. Either assault or support units attack the enemy force's newly exposed flanks to widen gaps in the enemy's defensive position. Units send forces that have a high degree of tactical mobility through those gaps to exploit the penetration, attack the enemy force from

the rear, and prevent the enemy's escape. Force multipliers—such as fixed-wing aviation assets—concentrate on supporting ground forces exploiting the penetration.

5-96. Attacking units may have to bypass enemy units to maintain their tempo when they transition to an exploitation or pursuit. Units bypass enemy forces according to previously established bypass criteria. At a minimum, bypassed enemy forces remain under observation or fixed in place by other units until passed off to follow-on units.

5-97. Units intensify their information collection efforts to obtain the situational understanding necessary to decide on a COA if enemy forces succeed in withdrawing major forces from action. Aggressive units may prevent enemy forces from reconstituting an effective defense in a rearward position. They may have to delay the renewal of their attacks until those information collection efforts are successful so they can formulate tactically sound plans if the enemy succeeds in occupying new defensive positions.

Terminating the Attack

5-98. If all objectives have been accomplished, or the unit has culminated, the unit terminates the attack and establishes a defense until relieved.

5-99. Units preplan the location and future missions of each element. Artillery and other fire support systems mass fires on enemy assembly areas and enemy troops forming for counterattacks. Commanders may alert their reserves to protect the flanks of attacking units, hold ground seized by them, or counter enemy counterattacks. They may use antitank minefields or other obstacles to cover likely enemy avenues of approach. Units improve these obstacles and defensive positions when they have time and resources.

5-100. Units designate target reference points, final protective fires (PPFs), engagement areas, and other direct and indirect fire control measures. Once in position, subordinate elements modify preplanned measures and improve defensive capabilities as required. Echelon scout or cavalry units deploy beyond these local security patrols to conduct their reconnaissance or security missions.

VARIATIONS OF ATTACKS

5-101. Units use variations of the attack to organize forces against specific enemy dispositions. Attack variations include—

- Ambush.
- Counterattack.
- Raid.
- Spoiling attack.

The commander's intent and mission variables determine the specific variation. As subordinate attack variations, they share many of the planning, preparation, and execution considerations of the attack. Paragraphs 5-102 through 5-150 discuss the unique considerations of each variation of the attack: ambush, counterattack, raid, and spoiling attack.

AMBUSH

5-102. An **ambush** is a variation of attack from concealed positions against a moving or temporarily halted enemy. An ambush stops, denies, or destroys enemy forces by maximizing the element of surprise. Ambushes can employ direct fire systems as well as other destructive means, such as command-detonated mines, indirect fires, and supporting nonlethal effects. They may include an assault to close with and destroy enemy forces. In an ambush, the ambush force does not normally seize and hold ground objectives.

5-103. The two methods of an ambush are the point ambush and the area ambush. In a point ambush, a unit deploys to attack a single kill zone. In an area ambush, a unit deploys into two or more related point ambushes. A unit smaller than a platoon does not conduct an area ambush. The **kill zone** is the location where fires are concentrated in an ambush. Typically, kill zones use heavy direct fire for a short duration. Whereas engagement areas tend to use indirect and direct fires for longer duration over a larger area.

5-104. A specific type of a point ambush is an anti-armor ambush. The anti-armor ambush is significantly different from a typical point ambush in that it typically involves only crew-served weapons and anti-armor systems and can be conducted at longer ranges.

5-105. Ambushes are hasty or deliberate, but they take place along a continuum. A hasty ambush is an immediate reaction to an unexpected opportunity conducted using SOPs and battle drills. Units plan deliberate ambushes as specific actions against specific targets. Detailed information about a target, such as size, organization, weapons, equipment carried, route, direction of movement, and times the target reaches or passes certain points on its route may be available. All forces may conduct an ambush. There are no ambush specific control measures. Ambushes are further categorized as near or far ambushes based on the proximity of the friendly force to the enemy force.

5-106. The normal goal of an ambush is the death or capture of all enemy personnel located within the kill zone. Another goal could be to destroy certain designated vehicles. Ideally, the ambush force destroys the ambushed enemy so quickly that enemy personnel within the kill zone cannot report the engagement.

Organization of Forces for an Ambush

5-107. Units typically organize an ambush into three elements: assault, support, and security. The assault element fires into the kill zone. Its goal is to destroy the enemy force. When used, the assault force attacks into and clears the kill zone. Commanders may assign additional tasks—including searching for items of intelligence value, capturing prisoners, and completing the destruction of enemy equipment to preclude its immediate reuse—to their assault force. The support element supports the assault element by firing into and around the kill zone, and it provides the ambush's primary killing power. The support element attempts to destroy most of the enemy's combat power before the assault element moves into the objective or kill zone. The security element isolates the kill zone, provides early warning of the arrival of any enemy relief force, and provides security for the assault and support elements. It secures the objective rally point and blocks enemy avenues of approach into and out of the ambush site, which prevents enemy forces from entering or leaving.

Planning an Ambush

5-108. During terrain analysis, leaders identify at least four different locations: the ambush site, the kill zone, security positions, and rally points. As far as possible, units avoid ideal ambush sites because alert enemies avoid them if possible. Since enemies increase their vigilance and security when they must enter them, surprise is difficult to achieve. Instead, units should choose unlikely sites when possible. Other planning considerations for an ambush include—

- A no-later-than time to establish the ambush.
- A tentative ambush formation or, for an area ambush, element locations.
- Insertion and exit routes.
- A forward passage of lines and movement to the ambush site in tactical formation.
- Actions if enemy forces detect the ambush before its initiation.
- A scheme of maneuver that maximizes engagement of the enemy force's flank or rear, provides early warning of target approach, includes assault element actions in the kill zone, and details how the ambush element displaces from the ambush site.
- Actions on the objective.
- Obstacles to augment the effects of the friendly fire.
- A fire support plan that integrates the direct fire and obstacle plans, which results in the enemy force's isolation, inflicts maximum damage, and supports ambush forces in their rally points.
- The criteria for initiating the ambush. For example, units only engage enemy formations of the same or smaller size and withhold fire until the target moves into the kill zone.
- Any required changes to the ambushing unit's fire distribution SOP.
- Rear security measures.
- Selecting appropriate standoff ranges for anti-armor weapons and maintaining clear line of sight.

5-109. Point ambush techniques include employing a linear or L-shaped formation. The names of these formations describe deployment of the support element around the kill zone. The ambush formation is important because it determines whether a point ambush can deliver the heavy volume of fire necessary to isolate, fix, and destroy the enemy. Units determine the formation used based on the advantages and disadvantages of each formation in relation to the mission variables.

5-110. In a linear ambush, the assault and support elements generally deploy parallel to the target's route of movement—the long axis of the kill zone—that subjects the target to flanking fire in the line formation. (Figure 5-6 depicts a sketch of a linear ambush.) The security element positions itself where it can best provide security to the assault and support elements. The size of the area covered by the support element's weapons limits the size of the target trapped in the kill zone. Natural, manmade, and military obstacles—reinforced with tactical obstacles integrated with direct and indirect fires—trap the target in the kill zone. A disadvantage of the line formation is that the target may disperse so that it is larger than the kill zone.

5-111. The linear ambush formation is effective in close terrain, which restricts the target's movement, and in open terrain where existing or reinforcing obstacles block one flank. Units may place similar obstacles between their assault and support elements and their kill zones to protect their ambush forces from the target's counter ambush drills. When ambush forces deploy in a line formation, they leave access lanes through these protective obstacles so that they can assault the target. An advantage of the line formation is that it is relatively easy to control under all conditions of visibility.

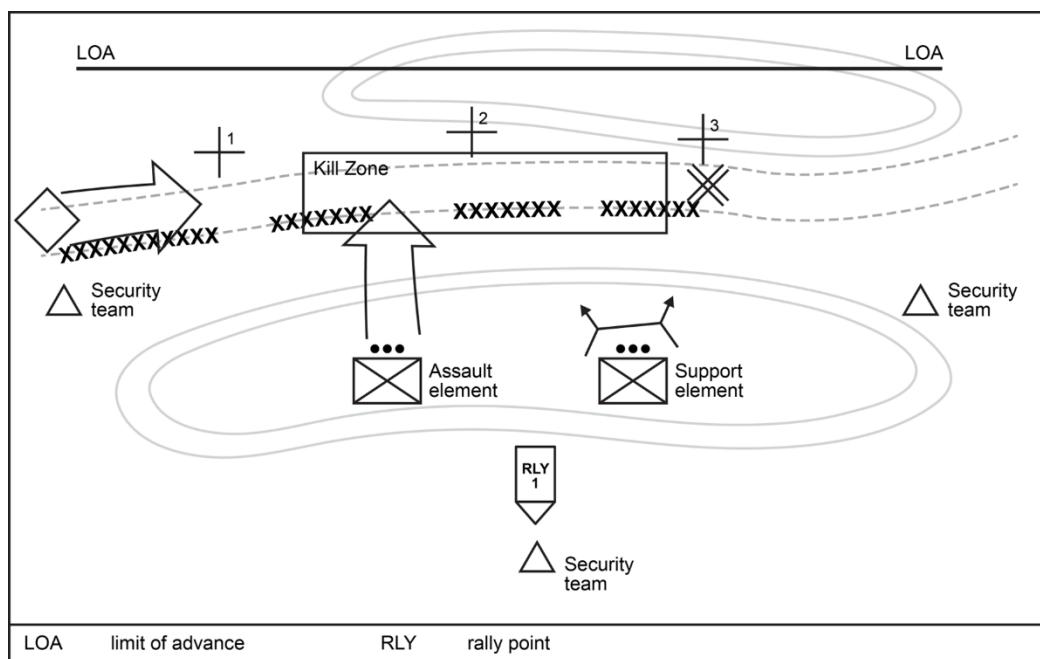


Figure 5-6. Example of a linear ambush

5-112. The L-shaped formation is a variation of the line formation as shown in figure 5-7. The long leg of the "L" (the assault element) is parallel to the kill zone and provides flanking fire. An advantage of the "L" formation is that the short leg (the support element) is at the end of the kill zone and at a right angle to it and blocks the enemy's forward movement. It also provides enfilading fire that interlocks with fire from the other leg. Units can employ an L-shaped formation on a straight stretch of trail, road, stream, or at a sharp bend.

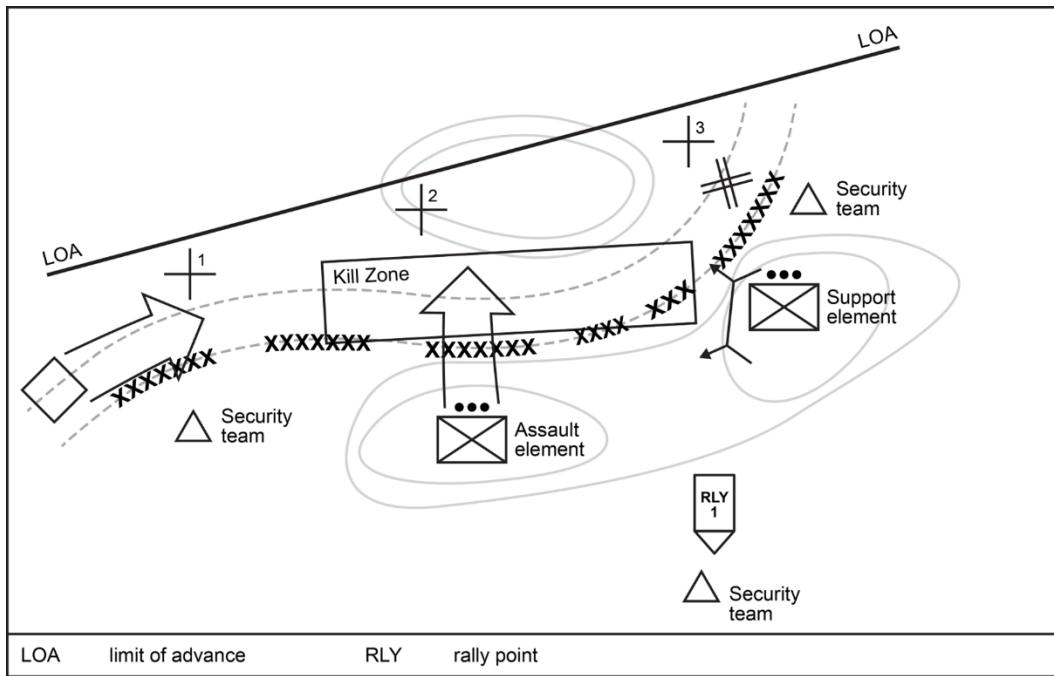


Figure 5-7. Example of an L-shaped ambush

5-113. An area ambush is most effective when enemy movement is largely restricted to trails or roads. Figure 5-8 on page 5-22 is a sketch of an area ambush. The area should offer several suitable point ambush sites. Units select a central ambush site around which to organize outlying ambuses. They determine the enemy force's possible avenues of approach and escape routes once they select the central ambush site. Commanders assign outlying point ambush sites to subordinates to cover these avenues. Friendly ambushing forces report all enemy traffic going toward or away from the central ambush site to their higher headquarters after those forces occupy those outlying sites. These outlying ambuses allow enemy elements to pass through their kill zones until their commanders initiate their central ambush. Once the central ambush begins, these outlying ambuses prevent enemy troops from escaping or entering the area.

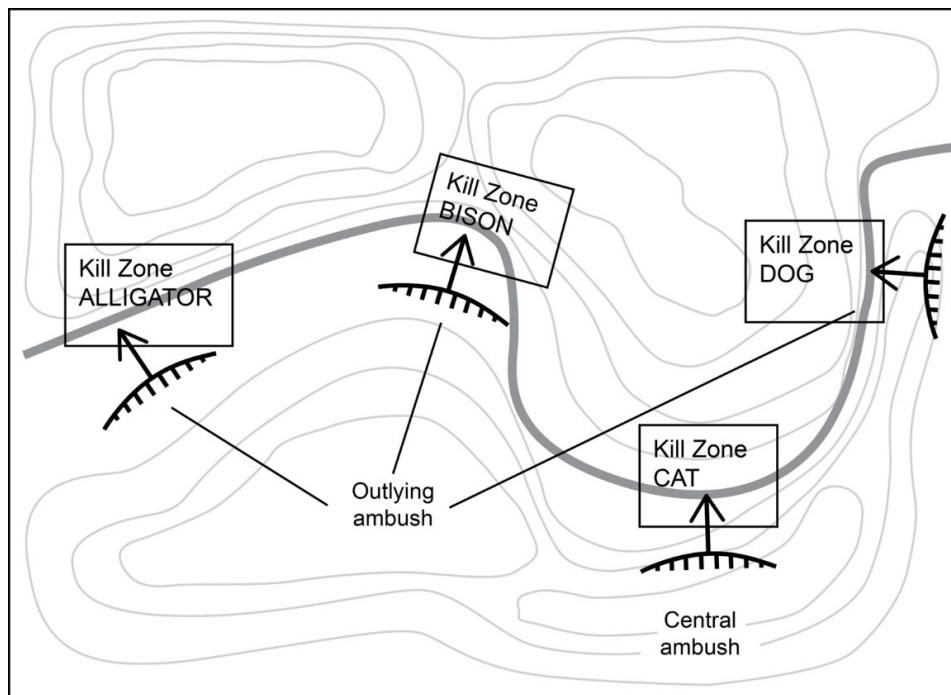


Figure 5-8. Area ambush

5-114. Leaders of forces performing an ambush specify the signals required to control the ambush. They make frequent changes to the meaning of audible and visual signals to avoid setting patterns that enemy forces can recognize. Otherwise, enemy forces might recognize a signal and react in time to avoid the ambush's full effects. For example, if ambushing forces always employ a white star cluster to signal withdrawal in a night ambush, an alert enemy force might fire one and cause a friendly ambushing force to withdraw prematurely. The subordinate elements of the ambush unit must receive communications—in the form of signals—that relay this information:

- Target approaching, normally given by a member of the security team to warn the ambush commander and the ambush elements of the target's progress.
- Initiate the ambush, given by the ambushing element's commander. (This signal should be the use of the most casualty-producing and reliable weapon or explosive, such as a main gun round from a tank or infantry carrier, the detonation of mines or explosives, or other direct fire crew-served weapons.)
- Lift or shift fire, given when initiating the assault on the target; all fires must stop or shift at once so that the assault element can attack before the target can react.
- Assault, given when the assault force is to move into the kill zone and complete its activities.
- Cease fire, given to cease all fires.
- Withdraw from the kill zone or ambush site, given when the ambush is completed or an enemy relief force is approaching.

5-115. Leaders use various signals to communicate this information, such as radio transmissions, voice commands, vehicle horns, whistles, or pyrotechnics. All signals must have at least one backup. For example, if the signal to shift fire fails, the assault element should not attack the target unless it receives the backup signal. Signals sent out before initiation of the ambush should not expose the ambush to enemy detection. Units review SOP signals to see if they need to be revised or augmented to meet specific situational requirements.

Preparation for an Ambush

5-116. The keys to a successful ambush are surprise, coordinated fires, and control. Surprise allows the ambush force to seize control of the situation. If total surprise is not possible, it must be so nearly complete that the target does not expect the ambush until it is too late to react effectively. Thorough planning, preparation, and execution help achieve surprise.

5-117. Leaders conduct their leader's reconnaissance with key personnel to confirm or modify the plan. This reconnaissance should be covert to remain undetected and preclude alerting enemy forces. If necessary, commanders modify their ambush plans and immediately disseminate those changes to subordinate leaders and other affected organizations. Leaders maintain close control during movement to, occupation of, and withdrawal from ambush sites. Control is most critical when ambush units are approaching their targets. Leaders enforce camouflage, noise, and light discipline. All ambush force elements reconnoiter their routes of withdrawal to selected rally points. When possible, all Soldiers within the ambush force reconnoiter the routes they use.

5-118. The ambush unit's security element remains at full alert and uses all available observation devices to detect the enemy's approach to the ambush site. Small-unit leaders within each ambush element rotate each Soldier's duties as necessary to maintain alertness.

5-119. Leaders position and coordinate all weapons, including mines and demolitions, to obtain the maximum effectiveness against targets in their kill zones. All fires, including those of supporting artillery and mortars, are coordinated. Each support element isolates its kill zone, prevents the target's escape or reinforcement, and delivers a large volume of highly concentrated surprise fire into that kill zone. This fire must inflict maximum damage so assault elements can quickly assault and destroy their targets.

Execution of an Ambush

5-120. Fire discipline is a key part of any ambush. Soldiers withhold fire until the ambush leader gives the signal to initiate the ambush. The initiation signal should be from the most deadly and reliable weapon in the ambush. Once initiated, the support and assault elements deliver accurate fires at the maximum rate possible. Failure to deliver accurate and rapid fires delays the assault, giving the target time to react and increasing the possibility of fratricide. Accurate fires help achieve surprise and destroy targeted elements. When it is necessary to assault the target, the lifting or shifting of fires must be precise. The assault element does not conduct its assault until achieving elimination of enemy fires or resistance.

5-121. The ambush force may have to withdraw by bounds if the ambush fails and the enemy force pursues. It should use obscuration to help conceal its withdrawal. Activating limited duration minefields along withdrawal routes after the passage of the withdrawing ambush force can help stop or delay enemy pursuit. Commanders position their support elements to assist the withdrawal of their assault elements.

5-122. Ambush forces withdraw to their rally points, reorganize, and start their return march on their commanders' orders. Assault forces halt and disseminate any combat information obtained to all ambush elements at previously established locations. Ambushing forces do not need to halt if their assault force's information systems are able to disseminate this combat information.

5-123. Once ambush forces return, commanders or their representatives debrief them to help identify enemy patterns of response, activities, and procedures, both inside and outside the ambush area. Unit assistant chiefs of staff and intelligence personnel report this information to all appropriate organizations through intelligence channels. Units adjust tactics, techniques, and procedures to account for new enemy information. (See ATP 3-21.8 for additional information on the conduct of small unit ambushes.)

COUNTERATTACK

5-124. A **counterattack** is a variation of attack by a defending force against an attacking enemy force. Units should not counterattack unless there is a reasonable chance of success. Units executing a counterattack can use all or part of the defending force, to include their reserve, against an attacking enemy. The specific purpose for a counterattack is to deny to the enemy the attainment of the enemy's purpose and regain the initiative from the enemy through offensive action. Counterattacking forces maneuver to isolate and destroy designated enemy forces. Counterattacking forces can attack by fire into an engagement area to defeat or

destroy an enemy force, restore the original position, or block an enemy penetration. In sustained defensive actions, units counterattack toward limited objectives, such as regaining lost battle positions (BPs). Once launched, counterattacks become their echelon's main effort. (Figure 5-9 illustrates projected major counterattacks.)

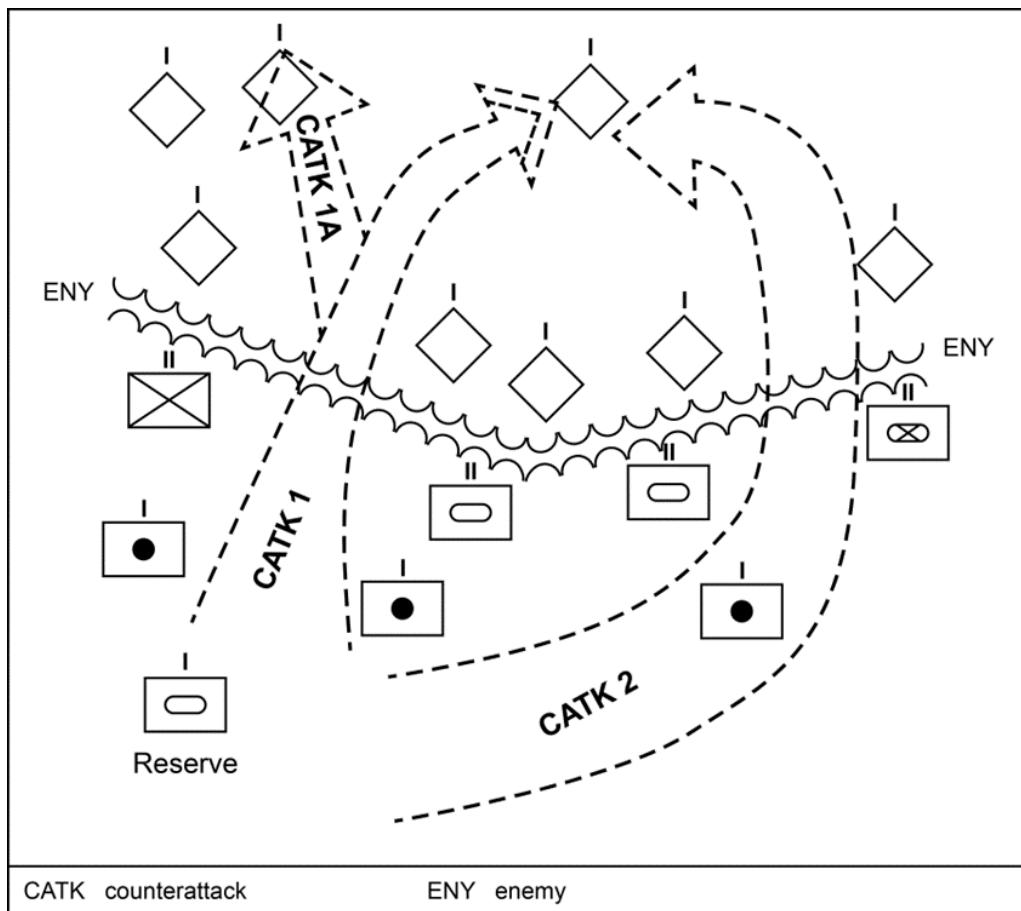


Figure 5-9. Example of counterattacks

5-125. It is difficult for enemy forces to fight a defensive battle in response to friendly counterattacks after they reach their culminating point because—

- Defensive preparations are hasty.
- Enemy forces are not adequately organized for defense.
- Reorganizing for a defense requires more time than the friendly commander allows.
- Enemy forces have reduced combat power, and they are dispersed across the battlefield.
- Enemy forces are physically fatigued.

5-126. Units plan and conduct counterattacks to attack enemy forces when and where enemy forces are most vulnerable. This is often when an enemy force is attempting to overcome friendly defensive positions. Normally, enemy forces attempt to retain a reserve or striking force to reinforce these vulnerabilities, once opposing units commit their counterattack forces. Commanders assign terrain objectives to counterattacking forces even when their counterattacks are force oriented to control the maneuver of their counterattacking forces. Units normally assign attack by fire positions when counterattacking using primarily direct and indirect fires.

5-127. The two methods of counterattacks are major and local. Local counterattacks are attacks to retake positions lost to enemy action or to exploit targets of opportunity. A major counterattack seizes the initiative from an enemy force through offensive action after an enemy force launches an attack. Units also conduct

major counterattacks to defeat or block an enemy penetration that endangers the integrity of their entire defense, or to attrit an enemy force by the defeat or destruction of isolated portions of it. In both cases, waiting for an enemy force to act first may reveal the enemy's main effort and create an assailable flank to exploit.

Organization of Forces for a Counterattack

5-128. Units conducting a local counterattack often consist of defending forces that survive after completing their withdrawal from lost positions and the unit's reserve. Units performing a local counterattack are unlikely to change the internal task organization of these immediately available forces because this most likely will delay initiation of these local counterattacks. Units may be able to designate elements to conduct reconnaissance.

5-129. Units conducting a major counterattack typically organize their combined arms assets into forces for security, reconnaissance, main body, and reserve. They use defending forces already in contact with enemy forces to fix or contain those same enemy forces. Commanders may use a force committed to the counterattack, their reserve, another echelon's reserve, or commanders may designate any other force to be their counterattack force. Units complete changes in task organization in time to allow subordinate forces to conduct rehearsals with their attached or supporting elements as time allows.

5-130. A counterattack force is a committed force if its commander's defensive scheme hinges on a counterattack to destroy, dislocate, disintegrate, or isolate the attacking enemy force. The reserve becomes a committed force when ordered to conduct planned counterattacks. Units conducting mobile defenses allocate field artillery, engineers, and other combat enablers to their striking forces because their defensive schemes hinge on counterattacks by their striking forces. In this case, commanders designate other forces as their reserves.

Planning a Counterattack

5-131. Units plan their counterattacks against enemy forces when those enemy forces are vulnerable. Their defenses create gaps between attacking enemy units, exposing the flanks and rear of elements of attacking enemy forces as they advance. The seizure of defended positions typically leaves attacking enemy forces temporarily disorganized, depleted, and ill prepared to meet sudden counterattacks. Units must assess their situations rapidly since opportunities for effective local counterattacks are usually brief and must execute their counterattacks swiftly. They assign objectives or attack by fire positions to counterattacking forces, depending on if they intend their counterattacking forces to close with and assault enemy forces. Local counterattacks may or may not be the result of previous deliberate planning.

5-132. Units normally develop their major counterattack plans as branches or sequels to their main defensive plans. A major counterattack may achieve surprise when it strikes enemy forces from an unanticipated direction. For that reason, units involve forces allocated to the performance of a major counterattack, such as the strike force in a mobile defense, in developing those plans as well as any plans to exploit potential success.

5-133. Units generally have two options when executing a counterattack. The first, and generally preferred, technique is to attack using forces not previously committed to the defense. This is because defending units may still be decisively engaged. Attacking forces may come from the reserve or consist of reinforcements. Since these forces were not recently or actively involved in combat, they are more likely to—

- Be at authorized strength levels.
- Enjoy a higher combat system operationally ready rate.
- Have leaders and Soldiers who are more likely to be rested and thus capable of prolonged, continuous operations.
- Have a complete basic load of supplies.
- Have the time and energy to plan and prepare for offensive action.
- Be able to maneuver out of physical contact with enemy forces.

5-134. Potential drawbacks to using forces not previously committed to the defense:

- Forces are required to conduct a forward passage of lines.
- Enemy information collection assets are likely to detect the arrival of significant reinforcements.

- Defending in noncontiguous assigned areas has different requirements. To mass overwhelming combat power in the main effort might require friendly forces to adopt economy of force measures in some assigned areas while temporarily abandoning others in order to concentrate sufficient combat power.

5-135. The second technique when transitioning to the offense is to use the currently defending forces to attack. This technique generally has these advantages:

- Speed of execution:
 - Units do not have to move from an assembly area or potentially other assigned areas.
 - Units do not have to conduct a forward passage of line.
 - Units already have a common operational picture that includes knowledge of the enemy force's patterns of operation.
- Increased likelihood of catching enemy forces by surprise. Units move less and so avoid potentially alerting enemy forces to potential offensive operations.

5-136. Potential disadvantages of this technique are that the attacking force generally lacks stamina and sustainment, specifically ammunition. The attacking force must be quickly replaced if friendly offensive actions are not to culminate quickly.

Preparing a Counterattack

5-137. The keys to preparing a successful counterattack are surprise, control, and coordinated fires. Surprise allows a counterattacking force to seize control of a situation. If total surprise is not possible, it must be so nearly complete that the targeted enemy force does not expect the attack until it is too late to react effectively. Thorough planning and preparation help achieve surprise. Units adjust the positioning of their information collection assets and the missions given those assets to determine the location and targets for their counterattacks.

5-138. Control of a counterattack begins with a unit's plan. Commanders conduct their leader's reconnaissance with key personnel to confirm or modify their counterattack plans. They modify their plans and disseminate those changes to subordinate leaders and other affected organizations as necessary. If possible, each counterattack force element reconnoiters its planned axis of advance and the routes it takes. Units maintain close control during movement to and occupation of hide positions and the information collection process. This control is necessary so enemy forces do not detect the presence of counterattacking forces before they can initiate their counterattacks. Leaders enforce camouflage, noise, and light discipline.

5-139. Units coordinate their fire support by adjusting the planned positions of weapon systems to obtain maximum effectiveness against targets in the planned objectives, and they request support from assets not typically available to their echelon. Units coordinate all fires, including those of supporting artillery and mortars. They use these fires to isolate a targeted enemy force in planned locations or engagement areas while preventing its escape or reinforcement. These fires inflict maximum damage quickly before enemy forces can respond to the counterattack.

Executing a Counterattack

5-140. Units conduct counterattacks in the same way they conduct any other attack. Subordinates initiate local counterattacks with available forces when those actions fit within their higher echelon commander's intent. A local counterattack should be swift and violent. Units exploit enemy disorganization, such as the confusion that temporarily exists in an attacking force after it seizes a defended position. A rapidly mounted local counterattack may yield better results than a more deliberate counterattack executed by a higher echelon because of the speed at which forces can launch them.

5-141. Units may conduct local counterattacks to retain or seize positions on the flanks of a strong enemy penetration. This prevents enemy forces from widening the penetration while forces from other defending units engage the penetrating enemy forces. Holding these flanks can also prevent the sacrifice of positional depth because the limited gap in the defensive position prevents an attacking enemy force from fully exploiting its success.

RAID

5-142. A **raid** is a variation of attack to temporarily seize an objective with a planned withdrawal. The purposes of the raid are to: secure information, capture personnel or equipment, destroy a capability, rescue and recover individuals and equipment, or confuse an adversary. Raids are usually small, involving battalion-sized or smaller forces. Figure 5-10 illustrates the five phases of a raid. In the first phase, the raiding force inserts or infiltrates into the objective area. In phase two, the raiding force isolates the objective area from outside support or reinforcement, including enemy air assets. In phase three, the unit overcomes any enemy forces at or near the objective in a violently executed surprise attack using all available firepower for shock effect. In phase four, the force seizes the objective and accomplishes its assigned task quickly before any surviving enemy forces in the objective area can recover or receive outside reinforcements. Lastly, in phase five the raiding force withdraws from the objective area and is extracted, usually using a different route than that used for movement to the objective.

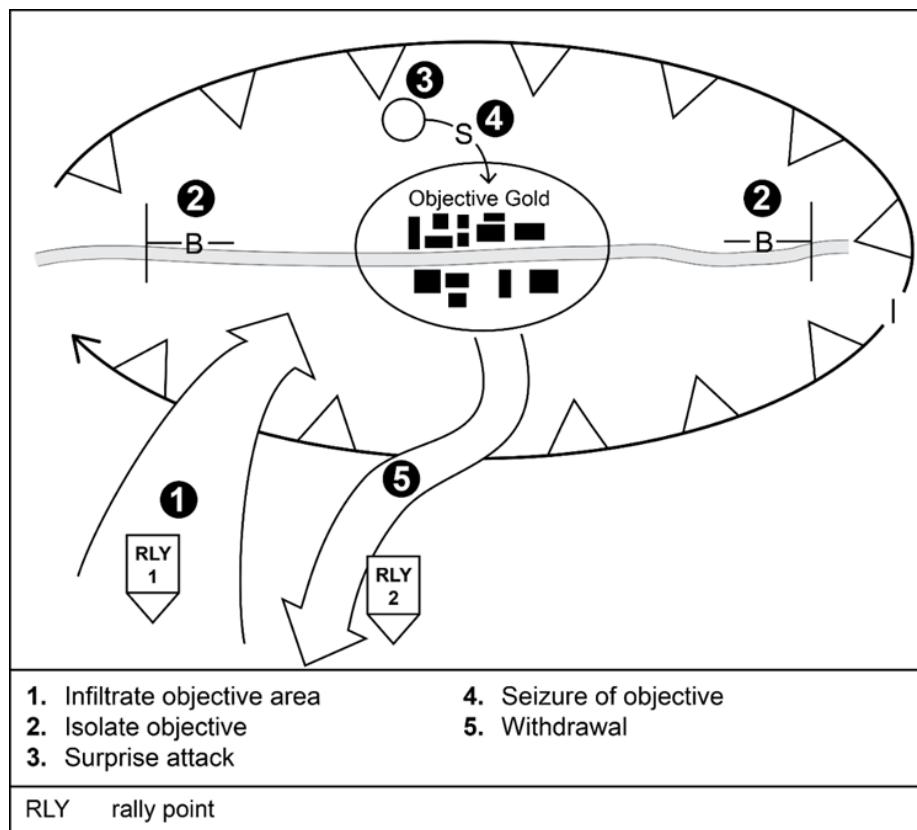


Figure 5-10. Five phases of a raid

5-143. A simplified raid chain of command is an essential organizational requirement. A raid usually requires a force carefully tailored to neutralize specific enemy forces operating near an objective and to perform whatever additional functions are required to accomplish the objectives of the raid. These additional functions can consist of the demolition of bridges over major water obstacles or the recovery of an attack helicopter pilot shot down forward of the forward line of own troops (FLOT). Units incorporate any necessary support specialists during the initial planning stage of the operation.

5-144. When commanders and staffs plan raids, they require precise, time-sensitive intelligence. The planning process determines how control, sustainment, and target acquisition occur during a raid. Planners also develop techniques and procedures for conducting operations across the FLOT given specific mission variables expected to exist during the conduct of the raid. Commanders and staffs develop as many alternative COAs as time and the situation permit. They carefully weigh each alternative. Commanders and staffs

determine the risks associated with conducting the mission and possible repercussions in addition to those planning considerations associated with other offensive operations.

5-145. At a minimum, all elements involved in a raid must rehearse their individual missions and tasks. If time permits all elements involved in a raid rehearse the entire mission together to ensure synchronization and understanding. The key elements in determining the level of detail and the opportunities for rehearsal before mission execution are time, OPSEC, and deception requirements.

5-146. Raids conducted by ground maneuver forces within the depths of the enemy's support zones tend to be audacious, rapid, and of short duration. Logistics support is minimal; units carry as much ammunition and petroleum, oils, and lubricants as possible, taking advantage of any captured enemy supplies. Once the raiding force crosses its LD, only limited, emergency aerial resupply of critical supplies and medical evacuation are feasible because of the absence of a secure LOC. Units must thoroughly plan for aerial resupply of a raiding force since it entails greater risk than normal operations.

SPOILING ATTACK

5-147. A **spoiling attack** is a variation of an attack employed against an enemy preparing for an attack. The objective of a spoiling attack is to disrupt the enemy force's offensive capabilities and timelines while destroying targeted enemy personnel and equipment. A spoiling attack is not to seize terrain or other physical objectives. Units perform spoiling attacks whenever possible during their performance of defensive tasks. Spoiling attacks strike enemy forces while they are halted in assembly areas or attack positions, often when they are preparing for their own offensive operations. A spoiling attack usually involves armored, attack helicopter, or fire support elements attacking enemy assembly positions in front of the main battle area. Figure 5-11 depicts a spoiling attack.

5-148. Units conduct spoiling attacks to—

- Disrupt the enemy force's offensive preparations.
- Destroy key assets that the enemy force requires to attack, such as fire support systems, fuel and ammunition stocks, and bridging equipment.
- Gain additional time for defending forces to prepare their positions.
- Reduce the enemy force's current advantage in the correlation of forces.

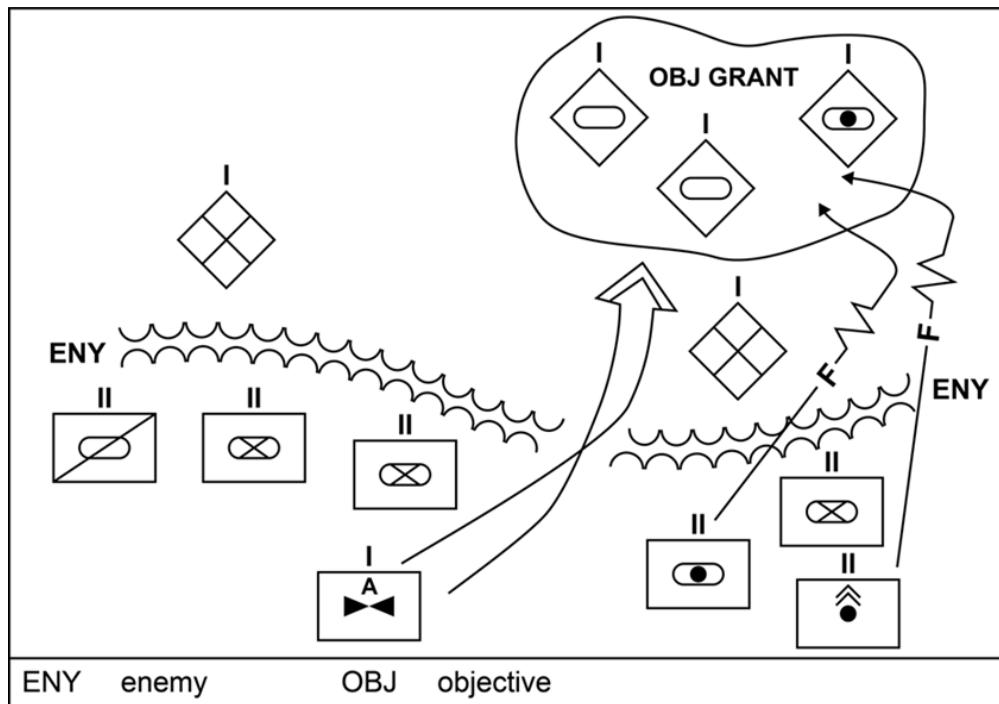


Figure 5-11. Spoiling attack

5-149. Units can employ their reserves in spoiling attacks to throw the enemy's offensive preparations off their timetable. In this case, commanders assume the risk of not having a reserve or designate other forces as their echelon reserve. The following considerations affect a spoiling attack:

- Commanders may want to limit the size of the forces used in executing their spoiling attacks.
- Units do not conduct spoiling attacks if the loss or destruction of the friendly attacking force would jeopardize the defending force's ability to accomplish the defensive mission.
- The mobility of the force available for the spoiling attack should be equal to or greater than that of the targeted enemy force.
- Operations by artillery, aviation, or electromagnetic systems to prevent enemy elements not in contact from interfering with the spoiling attack are necessary to ensure the success of the operation.

5-150. There are two conditions that must be met to conduct a successful spoiling attack:

- The spoiling attack's objective must be obtainable before the enemy force can respond to the attack in a synchronized and coordinated manner.
- Commanders must prevent the overextension of forces conducting their spoiling attacks.

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Chapter 6

Exploitation

An exploitation takes full advantage of offensive success. Commanders at all echelons exploit successful offensive actions. Exploiting success at every opportunity denies an enemy force time to reconstitute an effective defense by shifting forces or by regaining the initiative through a counterattack. This chapter discusses the general considerations, organization of forces, control measures, planning and preparation considerations, and execution considerations for an exploitation. All units, regardless of their size, conduct exploitations.

GENERAL CONSIDERATIONS FOR AN EXPLOITATION

6-1. An exploitation is a type of offensive operation following a successful attack to disorganize the enemy in depth. Exploitation reinforces disorganization and confusion in the enemy's command and control (C2) systems. The enemy force's tactical defeat reduces its ability to react and adds confusion in the enemy's C2 structure. Units conduct exploitations to take advantage of this reduction in enemy capabilities to make permanent what would be only a temporary tactical effect.

6-2. A unit conducts an exploitation when it capitalizes on tactical opportunities created while accomplishing successful offensive operations. A unit exploits to maintain or increase their successes by preventing enemy forces from reconstituting an effective defense or to recover from the initial attack. Whenever possible, the lead attacking unit transitions directly to the exploitation after accomplishing its mission. If this is not feasible, units pass additional forces into the lead. They act quickly to capitalize on these successes. Although exploitations may appear insignificant, their cumulative effects can be decisive. Subordinate commanders, working within their higher echelon commander's intent, use their initiative to launch exploitations. Units inform their higher headquarters when initiating exploitations. This prevents disruption of the higher echelon's battle and allows the higher echelon headquarters to assess the possibility of the enemy forces fleeing. This would lead to the initiation of pursuit operations.

ORGANIZATION OF FORCES FOR AN EXPLOITATION

6-3. The forces conducting an attack are also the forces that initially exploit that attack's success—reconnaissance and security, main body, and reserve. Typically, commanders do not assign a subordinate unit the mission of exploitation before starting a movement to contact or attack. Units reorganize internally to reflect the specific mission variables when an opportunity to exploit success occurs. Units request any required additional resources to support the exploitation from the appropriate headquarters. Additional resources may include assets that allow the exploiting force to identify and attack targets in depth. Resources may also include assets that have the capability to conceal or mislead the enemy of the actions of the exploiting force. Each exploitation force should be large enough to defend itself from enemy forces it expects to encounter. It should also be a reasonably self-sufficient combined arms force capable of operations beyond the supporting range of the main body.

6-4. Commanders should not expect those units that create the conditions for an exploitation to continue the exploitation in depth. If they plan to exploit with specific subordinate units, they specify the degree of damage or risk to those units that they are willing to accept during the operation. If the initial attacking units incur significant losses of combat power, commanders relieve them as soon as possible. Units continue the exploitation with a previously uncommitted force once the initial exploiting force's combat power weakens because of fatigue, disorganization, attrition, or need to resupply. They also commit fresh forces when the

initial exploiting force needs to hold ground or resupply. The relieving force requires a high degree of tactical mobility so it can continue the exploitation.

6-5. An exploitation may be more effective if units commit additional forces and assign them the task of follow and support or follow and assume. They assign follow and support missions to units designated to assist exploiting forces by relieving them of tasks that would slow their advances. The lead unit and any follow and assume or follow and support units exchange liaison teams to facilitate the transfer of responsibilities. Units designated to follow and assume conduct a forward passage of lines and replace the initial exploiting forces before they approach their culminating point. Normally, the next higher echelon commander retains control of the forces performing the task of follow and support or follow and assume. When possible, units assigned these tasks should possess mobility equal to that of the exploiting unit or receive additional engineer and transportation assets to provide the necessary mobility. Once organized, they are committed forces and receive artillery, air defense, engineer, and other functional and multifunctional support and sustainment forces based on the mission variables. In an exploitation operation projected to achieve significant depth, commanders may attach elements of a follow and support unit to the exploiting force to ensure unity of command and effort. Units retain only those reserves necessary to ensure flexibility of operation, continued momentum in the advance, and likely enemy responses to the exploitation.

6-6. Since the force conducting an exploitation operation typically covers a wider front than an attacking force, fire support assets may find their supported elements operating outside normal supporting ranges. Fire support assets must displace forward to ensure continued fire support on and beyond enemy formations, but this may impede the support to an exploiting force's flank elements. Commanders typically establish a command or support relationship between the exploiting force's subordinate elements and fire support units (and other combat enablers) to provide the required support. Alternatively, they may move additional reinforcing fire support elements forward to ensure fires coverage.

6-7. The joint air and missile defense coverage for the initial attack is likely to remain effective throughout an exploitation. However, this air and missile defense coverage may become less effective when tactical commanders accept risk and require these air and missile defense assets to cover more area as their forces advance. Commanders consider the risks with moving out of air and missile defense coverage. Units request adjustments in that coverage to conform to the unit's tactical maneuvers.

6-8. An exploitation mission demands a force with a significant mobility advantage over enemy forces. This mobility advantage may favor forces with tracked or wheeled armored combat vehicles. Attack helicopters and air assault assets may constitute a portion of an exploiting force's combat power. Dismounted infantry conducting a vertical envelopment are extremely useful in seizing key terrain such as defiles and crossing obstacles. They can also disrupt enemy transportation nodes along the exploiting force's route of advance into and through the enemy force's rear. Units integrate combat engineers into the exploiting force to breach obstacles, keep ground forces maneuvering, and provide countermobility protection to the flanks. They also use engineers to maintain the force's supply routes.

Reconnaissance and Security Forces

6-9. When units initiate an exploitation operation, the exact enemy situation may not be clear. They order one or more subordinates to conduct reconnaissance to gain and maintain enemy contact. Those forces conducting reconnaissance also provide a degree of security. Supporting collection assets, other information collection assets, and intelligence produced by adjacent, higher, and lower echelons complement their reconnaissance efforts. These assets assist units in maintaining a situational understanding of the strength, dispositions, capabilities, and intentions of all significant enemy elements within their areas of interest. Commanders normally emphasize reconnaissance more than security operations when conducting exploitation. Nevertheless, since forces exploiting success tend to move independently, the overall commander addresses the total force's security requirements.

6-10. Units assign the appropriate security missions to appropriate subordinates in the same way they do for a movement to contact (discussed in Chapter 4). Exploiting commanders typically organize the forward most security element into a covering force to protect their main body's movement and develop the situation before they commit their main body. These security elements respond directly to the overall commander.

6-11. If they are unable to resource a covering force for independent operations, exploiting units may use an advance guard in place of a covering force. This is typical for a BCT conducting exploitation on its own. In some cases when the higher echelon (corps or division) creates a covering force, a BCT subordinate to that corps or division may still push out its own advance guard behind the covering force. This normally occurs when subordinate exploiting units advance in multiple parallel columns.

Main Body

6-12. The actions of the unit's main body during the exploitation are the same as the actions during a movement to contact. See discussion beginning in paragraph 4-9 for more information on the actions for the main body during a movement to contact.

Reserve

6-13. The actions of the unit's reserve during the exploitation are the same as the actions during a movement to contact. See discussion in paragraph 4-11 for more information on the actions for the reserve during a movement to contact.

COMMON CONTROL MEASURES FOR AN EXPLOITATION

6-14. Exploitation uses fewer control measures than many other operations because of the uncertain enemy situation and the need to provide subordinate commanders with the maximum flexibility to accomplish the mission. Figure 6-1 on page 6-4 depicts example control measures for an exploitation. Commanders can use a limit of advance instead of objectives. Planners develop control measures as part of the planning process. They issue these control measures as part of the attack order to facilitate the transition to exploitation.

6-15. A unit conducting exploitation normally operates in the same assigned area its higher commander assigned it for the attack. The exploiting unit assigns subordinate units their own assigned areas. Units may change boundaries between subordinate forces often to take advantage of opportunities. Since an exploiting unit deploys reconnaissance and security forces, units adjust boundaries as the exploiting force advances. They designate obstacle-restricted areas to prevent friendly obstacles from hindering the movement of the exploiting force. To enhance security, commanders designate obstacle zones or belts (depending on the echelon) on the flanks of the exploiting force's mobility corridors. Units use phase lines and subsequent objectives to control the conduct of the exploitation. They use objectives to orient the movement of exploiting forces. Although exploitation may result in seizing terrain as an objective, it focuses primarily on completing the destruction of the enemy force. Commanders establish a limit of advance if they anticipate culmination or some other restriction influencing their operations, such as extending operations beyond supporting ranges and being unable to mitigate this risk.

6-16. Units normally employ permissive FSCMs during exploitation. A coordinated fire line (CFL) ensures rapid response. Movement of the CFL is particularly important to provide adequate support as the force continues to advance. Even if commanders do not anticipate culminating, the establishment of a forward control measure is important to facilitate operations by a higher echelon headquarters beyond that control measure. Units can use additional control measures, such as target reference points and checkpoints, as required.

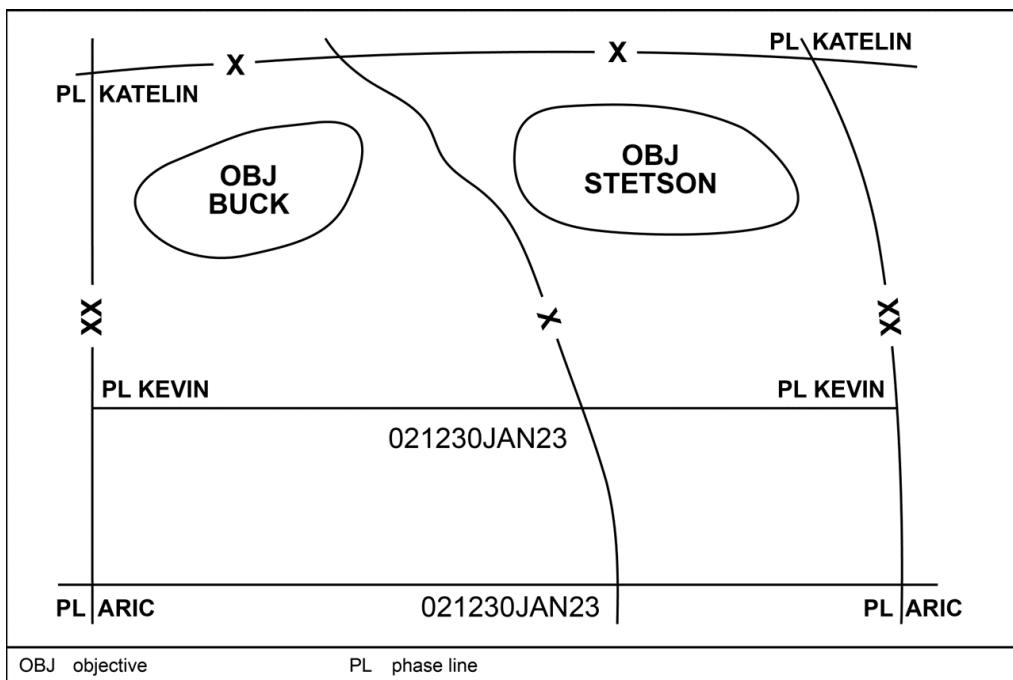


Figure 6-1. Example exploitation control measures

PLANNING AN EXPLOITATION

6-17. The commander's ability to deny enemy forces flexibility by anticipating enemy counteractions is critical to a successful exploitation. Commanders arrange operations to deny enemy forces the ability to respond to attacks by disrupting the enemy's decision cycles.

6-18. Exploitation planning begins during the preparation phase of all offensive actions. To avoid losing critical time during the transition from a movement to contact or an attack to an exploitation, commanders tentatively identify forces, objectives, and assigned areas for subordinate units before the mission begins. The defeat of enemy forces and the seizure of objectives deny the enemy forces routes of escape, resulting in the encirclement of selected enemy forces and the destruction of enemy C2 nodes and sustainment facilities. BCT and higher echelon commanders initiate an exploitation as a branch or a sequel to their existing operations once they recognize that the opportunity to conduct an exploitation exists. Higher echelon commanders may direct that lower tactical commanders immediately exploit the successes of their units.

6-19. Commanders plan for decentralized execution during the conduct of an exploitation. The commander's intent prepares subordinates to exercise initiative throughout the operation. Commanders state the purpose of the exploitation, which may be to force the retrograde of enemy forces from an area, encircle enemy forces so they cannot withdraw, expand a lane or gap, attack along a flank, or destroy enemy artillery and other fire support systems. The intent must describe the desired end state. That intent also determines the force's main and supporting efforts.

6-20. A clear commander's intent provides subordinates with guidance on integrating their operations into the overall operations of the higher echelon headquarters. Subordinates seize all opportunities to damage enemy forces or accelerate the tempo of friendly operations. Commanders place few restrictions on subordinates. These restrictions may include clear instructions regarding the seizure of key terrain and the bypass criteria for enemy forces. Reliable, secure communications among the exploiting force, the follow and support force, and the commander facilitates coordination that maximizes the impact of the exploitation. However, all subordinate commands use the higher commander's intent to continue to the desired end state, even if they lose communications.

6-21. During exploitation planning and execution, commanders balance the force conducting the exploitation's need for speed and momentum against its need for security as it begins to move beyond

supporting range of the rest of the force. Generally, commanders prevent a force conducting an exploitation to move outside of supporting distance of the main body. Determining the supporting distance requires some knowledge of the enemy force's remaining capabilities. Generally, units approach exploitation planning with a sense of guarded optimism. It is an excellent opportunity to shatter enemy cohesion and exploit a position of relative advantage over enemy forces. However, units cannot allow enemy forces to draw their exploiting force into a salient where it is subject to defeat in detail by an enemy counterattack.

6-22. An exploitation may take the form of a movement to contact with a series of hasty attacks. Commanders usually issue a series of fragmentary orders that designate—

- Movement formation.
- The unit positions.
- Required modifications to task organization.
- Bypass criteria.
- Revised or new control measures that assist with the maneuver.

6-23. Forces conducting exploitation normally maneuver on a wide front and on at least two axes. The forces on each axis are capable of independent action, depending on the mobility of the force, the road network, and other aspects of the terrain. In some cases, rather than assigning subordinates their own assigned areas, commanders may designate a movement formation for the entire unit to concentrate all combat power against a specific enemy element. (See Chapter 2 for more information on movement formations.)

6-24. The fire support plan includes allocating support for meeting engagements or hasty attacks that occur during the exploitation. The fire support coordinator plans targets beyond the projected locations of the exploiting maneuver forces to shield those forces from enemy counterattacks. The fire support coordinator then addresses how to provide fire support to the force in its movement to the LOA and targets locations beyond the LOA to disrupt enemy LOCs.

6-25. Units plan for fires displacement as an integral part of an exploitation. Indirect fire assets must displace at a faster pace than during normal offensive actions while maintaining the capability to provide accurate and lethal fires. Units plan on subordinate forces using less ammunition during an exploitation than in an attack because retrograding enemy forces are normally not in prepared positions. Units also consider requesting close air support in an exploitation, especially to support those forces moving beyond the supporting range of the main body. There may be an increase in risk if enemy forces retreat into an integrated air defense network. Army aviation and joint aircraft can help identify and track high-payoff targets forward of the exploiting force.

6-26. Commanders anticipate the exploitation and ensure that the sustainment plan supports the force all the way to the LOA. Planning for sustainment in the exploitation includes designating—

- Future MSRs.
- Logistics release points.
- Maintenance collection points.
- Casualty collection points.
- Medical treatment facilities.
- Ambulance exchange points.
- Prisoner of war collection points.

6-27. Functional and multifunctional sustainment arrangements must remain flexible during exploitation operations. Units can attach functional and multifunctional sustainment units to exploiting maneuver forces. This changes the normal support relationship between the two forces to a command relationship for the duration of the operation. Alternatively, supporting sustainment assets can follow an exploiting force in an echeloned manner along MSRs. Transportation and supplies to sustain the force become more complicated as an exploitation progresses. Sustainment units must accompany the force with enough fuel, spare parts, ammunition, and so on, to prevent culmination. Supply lines become a challenge during the exploitation as routes degrade and the conduct of route and convoy security can occur.

6-28. In sustaining an exploitation, planners primarily focus on petroleum, oil, and lubricants consumption and vehicle maintenance. A significant factor is that an exploiting force tends to travel on a broad front,

which may necessitate designating one or more MSRs to handle the dispersion. Sustainment operators remain prepared to move their sustainment assets forward and move them more often than in an attack.

6-29. Selecting a flexible MSR is critical because sustainment units must respond to changes in the direction of the exploitation. Engineers have responsibility for MSR maintenance. During planning, commanders address the control of sustainment unit positioning and convoys. The tactical commander calls supporting as well as organic sustainment units forward and redirects them as needed. Units may have to plan for guides to assist the movement of these sustainment assets around bypassed enemy positions and obstacles. Commanders may assign elements from the reserve to conduct support area security to help protect sustainment and other supporting elements or to secure their MSRs. They plan for controlling dislocated civilians on the battlefield so that their presence does not interfere with follow-on maneuver and support assets.

6-30. Units plan situational obstacles for each phase of the operation. For example, commanders direct the emplacement of scatterable minefields to deny enemy counterattacking forces specific avenues of approach.

PREPARING AN EXPLOITATION

6-31. The preparations for the conduct of an exploitation are the same as those for an attack. See paragraphs 5-32 through 5-46 for additional information on preparing for an attack.

EXECUTING AN EXPLOITATION

6-32. An exploitation may be initiated through orders or when reaching prescribed objectives or phase lines. Units weigh the risk when conducting exploitations for limited visibility, fatigue, inclement weather, fratricide, and the exhaustion from extended operations. An exploitation typically requires reconnaissance, firepower, and maneuver of previously uncommitted units. Units support exploiting forces with tactical air support, attack aviation, artillery fires, and other fires assets. Units participating in an exploitation apply the doctrine, tactics, techniques, and procedures appropriate for a unit of their size conducting a movement to contact and an attack.

6-33. To maintain sufficient forces to conduct exploitation, commanders ensure that subordinates focus on the commander's intent. Subordinate commands should not dissipate their combat power by seeking minor tactical successes or becoming fixed by engaging enemy forces smaller than those in the bypass criteria. They strive to reach their assigned objective with the maximum possible strength as rapidly as possible.

6-34. A transition from attack to exploitation may be hard to distinguish. An abrupt transition may occur when a force uses large numbers of precision munitions, achieves surprise, or overwhelms a much weaker enemy force. Normally, commanders order an exploitation after their force seizes or secures its objective. With adequate support, they can launch an exploitation with the initial assault or at any time after that, depending on the effects of the fires and their guidance.

6-35. Since an exploitation takes advantage of previous success, forces previously allocated to attack enemy forces normally continue their ongoing activities. These activities include—

- Attrition or defeat of enemy reserves before their commitment.
- Destruction of enemy countermobility assets before their employment on a friendly axis of advance for the exploiting force.
- Disruption of enemy units attempting to reestablish a coherent defense.
- Disruption of enemy sustaining operations.

An exploitation assumes units have timely, relevant, and accurate intelligence to target these enemy actions.

6-36. Commanders can also initiate an exploitation when they realize that an enemy force is having difficulty maintaining its position or cohesion. Updated intelligence is crucial to commanders, since it is difficult to predict the exact conditions required to transition from an attack to exploitation. Therefore, commanders and subordinates watch the enemy force's defenses for indications of disintegration that may signal the opportunity to transition to exploitation. Indicators may include—

- The threat or use of weapons of mass destruction by enemy forces.
- A flood of civilians on the attack axis.
- An increase in enemy reconnaissance.
- An increase in rearward movement, especially by fire support elements and reserves.
- Enemy preparation to demolish or destroy facilities, installations, equipment, and supply stockpiles.
- Various units intermix their vehicles and personnel in movement formations or march columns.
- Significant increases in the number of prisoners captured.
- A decrease in the intensity of enemy fire.
- Fires increasing in one or more portions of the line of contact that do not reflect the developing situation and occur at a time when the amount of defensive fires appears to be decreasing.
- A considerable decrease in an enemy force's resistance.
- Disorganized enemy defenses.
- A significant increase in abandoned enemy war materiel.
- Reports confirming the capture or absence of enemy leaders.
- Friendly forces overrunning enemy artillery, C2 facilities, and supply points.
- Enemy units disintegrating and friendly companies and battalions defeating enemy battalion and brigade-sized units, respectively.

6-37. Commanders have two general methods to exploit battlefield success. The first method is to exploit with the forces that achieved the initial battlefield success. In this method, commanders expect those forces to exploit their own success. This is extremely common at low tactical echelons, such as at battalion echelons and below, at all points along the range of operations. Commanders select this method when an attacking unit has accomplished its mission with minimum loss, and it is the force most readily available to continue the advance. It may become necessary to reorganize and resupply these forces while they are still moving to maintain the momentum of the exploitation.

6-38. The second method is to exploit with forces other than the unit that achieved the initial battlefield success. This other force may be the echelon reserve or specifically designated follow and assume forces. In this method, this other force is committed by passing around, over, or through the forces that achieved the initial success. This method is generally indicated when the attacking echelon still has essential tasks to accomplish, is still actively engaged with enemy forces, or requires reorganization before it can continue the advance. This commonly occurs in exploitations by brigades and larger units.

FIND THE ENEMY

6-39. When an offensive mission is accomplished, units at all echelons deploy their reconnaissance and security forces to discover whether the opportunity exists to initiate exploitation. This effort must start almost immediately after an attacking unit seizes its objective. These reconnaissance and security forces must gain and maintain enemy contact while remaining within the supporting range of their parent organization. Gaining and maintaining contact with enemy forces is critical since enemy forces may be trying to break contact or reorganize.

6-40. The commander's intent determines how much contact is required to maintain pressure on an enemy force, increase their disorganization, or seize key or decisive terrain. Units employ their reconnaissance assets to observe enemy force movements and search for weakly defended enemy positions. If those assets are not available, other maneuver units perform those reconnaissance tasks. While maintaining observation of enemy forces, the reconnaissance force tries to locate enemy reserves, uncommitted forces, and blocking positions. This effort helps the exploiting force avoid ambushes as the enemy force seeks to recover the initiative by counterattacking.

6-41. Units use aerial reconnaissance to augment ground reconnaissance. They employ aerial sensors, such as manned and unmanned aircraft systems, in advance of ground maneuver reconnaissance. This allows aerial observation of named and targeted areas of interest that facilitate their maneuver and cue the attack of targets. Armed manned and unmanned aircraft can locate enemy positions and engage enemy forces to disrupt their movement and preparations. Aerial assets maintain constant contact and pressure on the enemy.

6-42. A commander's decision to exploit stems from the assumption that enemy forces have already been somewhat disrupted. Units use all available resources to maintain pressure and overwhelm enemy forces. Units combine the effects of operations against enemy reserves and uncommitted forces with the rapid maneuver of ground forces to maintain this disruption. When permissible, attack aviation elements can maneuver in front of or over exploiting ground maneuver forces to destroy targets. Units seek to integrate fixed-wing aircraft into the fires plan for attacking these targets. The exploiting force advances to keep the enemy force off balance and degrade enemy intelligence, surveillance, and reconnaissance capabilities. The exploiting force's fire support system must deliver massed fires quickly to respond to any contingencies that arise during the exploitation.

FIX THE ENEMY

6-43. As part of its shaping operations, an exploiting force has three goals in fixing an enemy force. First, fix enemy units in positions out of supporting distance of each other. This allows the exploiting force to defeat enemy forces in detail. Second, units attack out of contact enemy forces before they can affect the exploitation. By attacking these enemy forces, units seek to fix them in their current positions or force them to move to locations where they can be contained until the exploiting force, or a follow and support force can engage and defeat them. Third, it achieves a specific targeting effect—such as causing 15 percent casualties—that disrupts the enemy commander's plan.

FINISH THE ENEMY

6-44. The exploiting force maneuvers to maintain pressure on the enemy and to prevent their reorganization or escape. Units take advantage of any available vertical envelopment capabilities to accomplish these missions. The exploiting force clears only enough of its assigned area to permit its advance. It cuts through enemy logistics units and LOCs to seize objectives vital to the enemy force's defense. It attacks from the march to overrun weak enemy formations. Exploiting forces can, based on the bypass criteria, contain and bypass those enemy pockets of resistance too small to jeopardize the mission. Commanders report enemy forces to adjacent units, following units, and higher echelon headquarters.

6-45. If an enemy unit is too strong for the leading elements of the exploiting force to overrun and destroy, succeeding elements of the force conduct a hasty attack based on the combat information provided by its leading elements. In almost all cases, units use forms of maneuver other than the frontal attack, to produce faster and better results with fewer casualties. While the exploiting force is seeking one or more assailable flanks, available fire support systems continue to engage enemy forces to divert attention from the attempted envelopment and destroy as much enemy combat power as possible.

6-46. An exploiting force may face prepared belts of defensive positions in depth when it is exploiting the initial success of the attack. Therefore, the exploiting force must move to attack and destroy enemy defending forces before they can occupy subsequent or supplemental positions. The faster the exploiting force moves, the less likely it is that succeeding defensive lines will be fully prepared and the less effort it will take to penetrate each successive defensive position. The exploiting force attacks and maneuvers as many times as necessary until it breaks completely through the enemy force's defenses.

6-47. A commander's primary concern when initiating an exploitation resulting from a successful attack is rapidly shifting the force into the appropriate task organization to take advantage of a window of opportunity. Commanders control their formation as it moves and prevent its overextension. They anticipate the enemy force's reactions to friendly actions. The real danger to the exploiting force is not the immediate enemy force, but the enemy forces not yet engaged. Overextension is a risk inherent in exploitation. While commanders avoid overextension, they must also guard against being overcautious.

FOLLOW THROUGH

6-48. Once the exploitation begins, friendly forces quickly move to attack enemy forces. The exploitation continues so enemy forces cannot escape. The exploiting force retains terrain only as necessary to accomplish its mission. Commanders are careful not to dissipate combat power to achieve minor tactical successes or to reduce small enemy forces. They shift operations to reconnaissance and surveillance, countermobility, and protection tasks because of the possibility of an enemy counterattack once their exploiting forces reach their respective objectives.

6-49. During an exploitation, units often surround or bypass enemy forces. Surrender appeals and ultimatums are particularly effective when directed against surrounded, isolated, or bypassed enemy units. While the exploiting force conducts its operations, the follow and support force, if available—

- Widens or secures the flanks.
- Destroys bypassed enemy units.
- Relieves supported units that have halted to contain enemy forces.
- Blocks the movement of enemy reinforcements.
- Opens and secures LOCs.
- Guards prisoners, key areas, seized enemy bases and installations, and routes.
- Controls dislocated civilians.
- Secures key terrain.
- Secures potential threats (abandoned enemy equipment, weapons, ordnance, explosives, and toxic information materials including chemical, biological, radiological, and nuclear).

6-50. At some point, units conducting exploitation either reach their culminating point or transition to a pursuit. Culmination can occur for various reasons, such as friendly losses or the enemy's commitment of a reserve. Units transition to another type of operation once they make an assessment that their force is approaching culmination. For example, a pursuit enables units to complete the enemy force's destruction.

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Chapter 7

Pursuit

This chapter discusses pursuit and its general considerations. It then discusses organization of forces, control measures, planning, and the execution of a pursuit.

GENERAL CONSIDERATIONS FOR A PURSUIT

7-1. A pursuit is a type of offensive operation to catch or cut off a disorganized hostile force attempting to escape, with the aim of destroying it. Pursuit operations begin when an enemy force loses internal cohesion and is unable to mount an organized defense. A pursuit leaves enemy forces trapped, unprepared, unable to defend, and faced with the options of surrender or destruction. Pursuits include the rapid shifting of units, continuous day and night movements, hasty attacks, containment of bypassed enemy forces, large numbers of prisoners, and a willingness to forgo some synchronization to maintain pressure on a fleeing enemy. Pursuits require swift maneuver and attacks by friendly forces to strike the enemy force's most vulnerable areas. A successful pursuit requires flexible forces, initiative by commanders at all echelons, and a high tempo during execution.

7-2. A pursuit focuses on the complete destruction of fleeing enemy force. Attriting hostile forces on their LOCs does not effectively ensure the destruction of an enemy force. Units in a pursuit try to combine direct pressure against fleeing forces with an enveloping or encircling maneuver to prevent the enemy force from fleeing. This fixes the enemy force in positions where the enemy force can be defeated in detail. If it becomes apparent that enemy resistance has broken down entirely, and the enemy is fleeing the battlefield, any offensive operation can transition to a pursuit.

7-3. Conducting a pursuit requires a deliberate decision by a commander, as friendly forces face increased risk of becoming isolated and encircled by the enemy. Typically, corps and division commanders order subordinate units to conduct a pursuit. Once the pursuit begins, the subordinate unit maintains contact with the enemy forces and pursues fleeing enemy forces without further orders. The unit maintains the pursuit as long as the enemy force appears disorganized. The attacker risks becoming disorganized if they move too quickly. To sustain the pursuit, units must be prepared for increased physical and mental effort.

7-4. Units must be aware of any approaching culmination points. Enemy forces are usually displacing back to their supply bases, and potentially their own forces, while friendly forces become less effective as they expend resources faster than they can replace them. Reasons to stop a pursuit may include—

- The presence of reorganized enemy forces.
- Increased enemy resistance.
- Fatigue.
- A lack of supplies.
- Inability to secure flanks.
- A diversion of friendly units to security missions.
- The need to contain bypassed enemy units.
- Inability to maintain adequate contact with adjacent friendly units.

The unit staff should develop a decision support template that depicts decision points, timelines associated with the movement of forces and the flow of the operation, and other relevant information before the unit reaches an unidentified culmination point.

ORGANIZATION OF FORCES FOR A PURSUIT

7-5. Normally, commanders do not organize specifically for pursuit operations ahead of time, although unit staffs may plan for a pursuit as a branch or sequel to the current order. Therefore, units must be flexible to react when the situation presents itself. A unit's maneuver and sustainment forces continue their ongoing activities, while the commander readjusts priorities to better support the pursuit and ensures subordinate units are as self-sufficient as resources permit. Units request and acquire additional support from higher echelon headquarters based on the mission variables. For most pursuits, commanders assign subordinate forces security, direct pressure, encircling, follow and support, and reserve missions. **The *direct pressure force* is a force employed in a pursuit that orients on the enemy main body to prevent enemy disengagement or defensive reconstitution.** **The *encircling force* is the force that maneuvers to the rear or flank of the enemy to prevent the enemy's escape.** The enemy can be destroyed between the direct pressure force and encircling force. The encircling force advances or flies along routes parallel to the enemy's line of retreat. If the encircling force cannot outdistance the enemy to cut the enemy off, the encircling force may also attack the flank of a retreating enemy. Given sufficient resources, units can assign more than one force the encirclement mission. The subordinate unit assigned the follow and support mission polices the battlefield to prevent the dissipation of the combat power of the unit assigned the direct pressure mission. The discussion beginning in paragraph B-42 addresses the duties of a follow and support force. Reserves allow commanders to take advantage of unforeseen opportunities or respond to enemy counterattacks.

7-6. There are two variations of a pursuit; each involves assigning a subordinate the mission of maintaining direct pressure on the rearward moving enemy force. The first is a frontal pursuit that employs only direct pressure. The second is a combination that uses one subordinate element to maintain direct pressure and one or more other subordinate forces to encircling the retrograding enemy force. The combination pursuit is generally more effective. Either the subordinate applying direct pressure or the subordinate conducting the encirclement can be conducting the main effort in a combination pursuit.

7-7. The force providing direct pressure must be strong enough to defeat enemy rear guard actions and maintain pressure on the enemy's main body. It forces the enemy force to deploy frequently in an attempt to delay the advance of the force applying direct pressure and restricts the enemy force's ability to break contact. The force applying direct pressure must be as mobile as the enemy force. Armored and Stryker units are ideally suited to this role in open terrain, but commanders can employ dismounted infantry forces if the enemy force is also dismounted and the terrain prevents the use of more mobile forces.

7-8. The encircling force's mobility must be equal—preferably superior—to the withdrawing enemy force. If there is no inherent mobility differential, units must create one. This differential can also result from the force applying direct pressure to force the enemy force to deploy. Units can also enhance and sometimes create this mobility advantage by conducting countermobility operations against the enemy force, specifically targeting locations—including choke points or bridges—that hinder the fleeing enemy force's withdrawal. Armored, air assault, and airborne forces are well suited for this encircling mission. Attack aviation elements are also effective when used as part of this encircling force.

7-9. The encircling force must be strong enough to defend itself from the enemy force's main body and slow or fix the enemy force until the friendly force applying direct pressure can combine with the encircling force to destroy the enemy force. It must be capable of mounting a hasty defense without placing itself at risk of defeat. The force conducting the encirclement must be self-contained, since it normally operates out of supporting range of friendly indirect fire systems. Therefore, it frequently has additional supporting artillery.

7-10. The primary mission of this encircling force is to prevent the enemy force's escape, but commanders can assign other missions to their forces conducting the encirclement. These other missions can include—

- Detecting or identifying weapons of mass destruction and marking the site for sensitive site exploitation.
- Linking up with airborne or air assault forces in their airheads.
- Reporting terrain conditions and other combat information beyond what is normally addressed in the unit standard operating procedures.

7-11. Direct pressure and encircling forces require engineer support to create lanes through obstacles, which enables them to move rapidly and continuously. Units should place combat engineers well forward in unit

movement formations to breach any unpassable obstacles quickly. Engineers accompanying the encircling force must also be prepared to conduct survivability tasks.

FRONTAL PURSUIT

7-12. In a frontal pursuit, units employ a single force to maintain direct pressure on the fleeing enemy along the same routes used by that enemy. Commanders choose this option in two situations. The first is when they cannot create a subordinate force with a sufficient mobility advantage to get behind a retrograding enemy force. The second is when they cannot provide enough resources to the force conducting the encirclement to allow that force to survive and sustain itself until achieving linkup with the direct pressure force. Either situation can occur because of restrictive terrain or because an enemy force withdraws in a disciplined, cohesive formation and still has significant combat power. Figure 7-1 depicts a frontal pursuit.

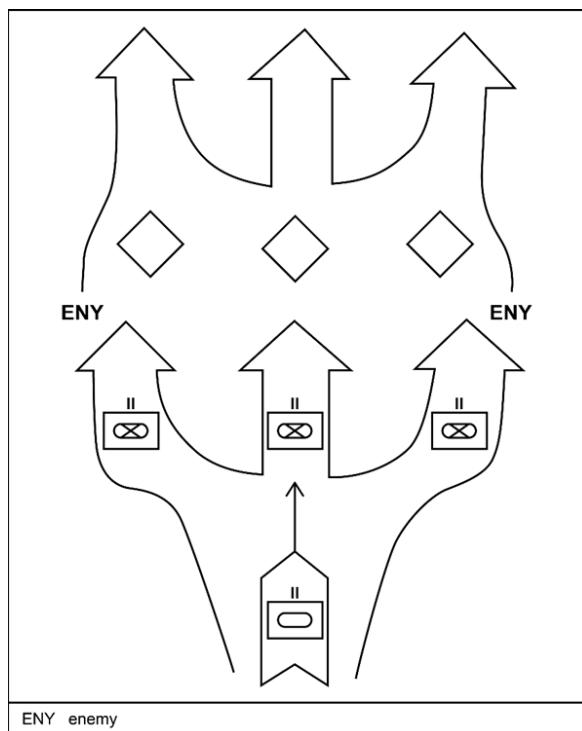


Figure 7-1. Frontal pursuit

COMBINATION PURSUIT

7-13. In the combination pursuit a direct pressure force and an encircling force work together to destroy the enemy. The direct pressure force normally conducts a series of attacks to slow the enemy force's retirement by forcing the enemy force to stand and defend. In the combination pursuit, the force providing direct pressure initiates a frontal pursuit immediately on discovering the enemy force fleeing from the battlefield. This slows the tempo of the enemy force's withdrawal (or fixes the enemy force in its current position if possible) and may destroy the enemy's rear security force. By maintaining constant pressure, the force providing direct pressure helps to maintain conditions necessary for the success of the force conducting the envelopment operation. This latter force advances or flies along routes parallel to the fleeing enemy force. If the encircling force cannot outdistance the enemy force to cut the enemy force off, the encircling force may also attack the flank of a fleeing enemy force. The force conducting the encircling operation conducts an envelopment or a turning movement to position itself where it can block the enemy force's escape and trap the enemy force between the direct pressure force and the encircling force. Figure 7-2 on page 7-4 depicts a combination pursuit.

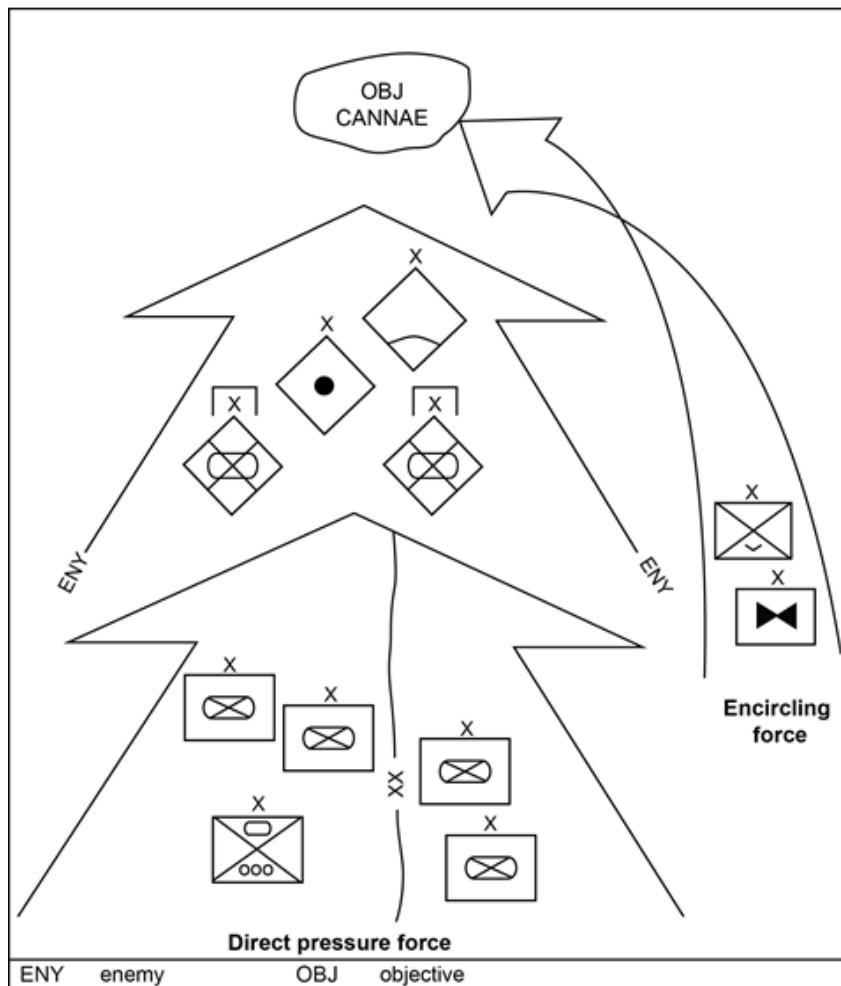


Figure 7-2. Combination pursuit

CONTROL MEASURES FOR A PURSUIT

7-14. Pursuit control measures should be flexible and allow adjustments to reflect changing conditions. Units use control measures in the pursuit to—

- Retain tactical options to converge on the most important axis or to redirect the pursuit effort on a new axis.
- Provide subordinate units as much freedom of action as possible, consistent with security and maintenance of command integrity.
- Provide units the flexibility to engage enemy reserves or counterattack forces.
- Prevent fratricide.

7-15. Commanders employ centralized planning and decentralized execution during a pursuit. They balance the need to prevent fratricide and friendly fire incidents with the need to allow subordinates to take advantage of fleeting opportunities in a pursuit with rapidly moving forces and an evolving situation. Commanders designate assigned areas for each maneuver unit involved in the pursuit. During a pursuit, they establish few control measures for the direct pressure force other than phase lines, checkpoints, and some fire control measures such as a restrictive fire line. Units use phase lines to designate a forward and rearward boundary for the direct pressure force. The forward boundary relieves the direct pressure force of any responsibility beyond the forward boundary. It also gives the higher echelon headquarters flexibility to coordinate with the

encircling force and address enemy elements located beyond that forward boundary. The rear boundary becomes the boundary between the direct pressure force and the follow and support force.

7-16. If the encircling force is a ground element, the control measures are almost identical to those used during an envelopment, as shown in figure 7-3. Units designate routes, axis of advance, or assigned areas adjacent to that of direct pressure forces to allow the encircling force to move parallel to retrograding enemy forces and eventually move ahead of those enemy forces. Commanders can designate terrain objectives as guides for encircling forces. However, commanders may change these objectives rapidly and frequently, based on the progress of encircling forces and enemy actions. These objectives should be terrain features that provide encircling forces defensible terrain that enemy forces cannot easily bypass. Units often select choke points, such as defiles and bridges, as objectives for the encircling force.

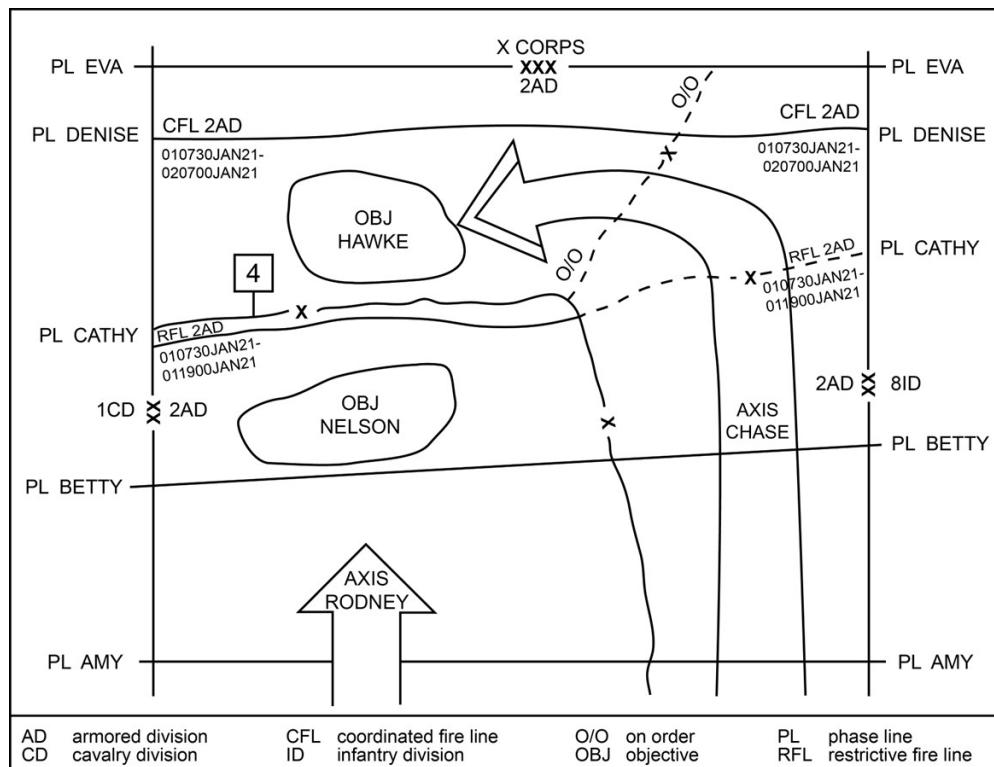


Figure 7-3. Example pursuit control measures

7-17. Units establish boundaries or RFLs between the forces conducting the encircling and direct pressure forces before those encircling forces reach their objectives. Other FSCMs should relieve encircling forces of unnecessary fire support coordination responsibilities. The overall commander directs security operations beyond those encircling forces, allowing them to engage retrograding enemy forces without devoting resources to flank and rear security. The overall commander establishes additional control measures to control the convergence of both elements of the friendly force, such as RFLs, phase lines, and contact points.

PLANNING A PURSUIT

7-18. Units anticipate an enemy fleeing from the battlefield as either a branch or a sequel to the plan. The plan identifies possible forces for security, direct pressure, encircling, follow and support, and reserve as well as issue an on-order or be-prepared mission to these forces. They should employ the maximum number of available maneuver forces in the pursuit. Units base the details of their plans on the enemy force's anticipated actions, the formation of attacking troops, and the amount of planning time available. Commanders and staffs also consider—

- Possible routes the enemy force might use to flee from the battlefield.
- Availability of information collection assets to detect enemy forces and acquire targets in depth.
- Scheme of movement and maneuver.
- Availability and condition of pursuit routes.
- Availability of forces to keep the pressure on the enemy force until its destruction is complete.
- Critical terrain features.
- Use of reconnaissance and security forces.
- Allocation of munitions and aviation support.
- Availability of functional and multifunctional support and sustainment resources.

7-19. Pursuit planning addresses the possibility of defending temporarily during operational pauses while preparing to continue the pursuit or to consolidate gains. However, using an operational pause generally results in the abandonment of the pursuit because the enemy force is able to use that time to organize a coherent defense. The pursuit plan results in forces prepared to conduct wide-ranging operations using all available maneuver assets throughout the assigned area to complete the destruction of the enemy force.

7-20. Units must address how to detect the enemy force from fleeing the battlefield. Otherwise, the enemy force may succeed in reorganizing and establish a hasty defense. Units look for indicators of an enemy fleeing, such as when the enemy force—

- Lacks the capability to maintain its current position or cohesion.
- Conducts limited local counterattacks.
- Intensifies reconnaissance and intelligence efforts.
- Increases the amount of rearward movements and changes the type of elements conducting them, especially by fire support and reserves.
- Prepares facilities, installations, equipment, and supply stockpiles for demolition and destruction.
- Decreases fire in intensity and effectiveness through the assigned area.
- Increases fires in one or more individual portions of the front that do not relate to the developing situation, or when the amount of defensive fires seems to be decreasing.

7-21. The presence or absence of any of these signs may not necessarily indicate the start of a retrograde operation. The enemy force could be attempting to draw friendly forces into an ambush or setting up a counterattack as part of its defense. When commanders initiate a pursuit, they often create the encircling force from uncommitted or reserve elements. Normally, these forces do not have allocated fire support assets. Units plan how to redistribute fire support assets to support the encircling forces. Attack helicopters and fixed-wing aircraft are well suited to support the encircling force.

7-22. Engineer mobility and countermobility assets sustain the rate of advance and hinder the enemy force's withdrawal. Engineers prepare the route of advance and support the lateral dispersion of units transitioning to the pursuit and the movement of the reserve. During the pursuit, units plan for engineers to provide assault bridging and emergency road repairs to sustain the tempo of the pursuit. Units also plan to use engineer assets to block any bypassed enemy force's withdrawal routes by using antitank and command-operated mines, demolitions, and obstacles.

7-23. Sustainment units plan for increased demand for fuel and maintenance as the tempo of operations increases. In the pursuit, priority for sustainment normally goes to units having the greatest success. Sustainment planners need to anticipate success, since the depth of the pursuit depends on the capability of sustainment assets to support the operation. Units should plan to sustain as far forward as possible during the pursuit, including attaching bulk sustainment assets further down than normally considered. The sustainment

elements supporting the pursuing force should be as mobile as possible. Sustainment planners support the pursuing force by coordinating items such as providing casualty evacuation over unsecured routes. Units may need aerial resupply or well secured convoys to support this force. Security for sustainment convoys and lines of communications are major planning considerations. Units use all available sustainment assets to provide essential support to the forces pursuing enemy forces.

PREPARING A PURSUIT

7-24. The considerations for preparing a pursuit are the same as an attack which is outlined in Chapter 5. See paragraphs 5-32 through 5-46 for additional information on preparing for a pursuit.

EXECUTING A PURSUIT

7-25. The purpose of a pursuit is to destroy the enemy forces while the enemy force is disorganized and fleeing from the battlefield. This generally occurs by trapping enemy forces between direct pressure forces and encircling forces or a major geographic barrier—such as an unfordable river—followed by the enemy force’s destruction. Timeliness in deciding to initiate a pursuit is critical to its success. If the enemy force begins to take flight undetected, it avoids the disruption that would come from the constant pressure resultant of a pursuit. Units should anticipate that enemy forces will flee at times of limited visibility.

7-26. Units often conduct pursuits as a series of encirclements in which they intercept, isolate, and capture or destroy successive portions of a fleeing enemy force. Direct pressure forces conduct a series of hasty attacks to destroy any enemy forces executing security missions, maintain constant pressure on the enemy main body, and slow the rate at which enemy forces can flee. These forces fix, disrupt, and destroy enemy elements, provided such actions do not interfere with their primary mission of maintaining constant pressure on the enemy’s main body. To maintain tempo, the direct pressure force can pass off large enemy forces to follow and support units, if the bypassed enemy forces do not pose a significant risk to the direct pressure force on the fleeing enemy.

FIND THE ENEMY

7-27. The echelon that discovers the enemy fleeing first acts to maintain contact with the enemy force across a wide area without waiting for orders from higher echelon headquarters. This ensures that the enemy force does not consolidate and reorganize into a unit capable of mounting an organized defense. These forces in contact constitute the core of the direct pressure force. As the situation permits, they re-form into a movement column with reconnaissance and security elements in the lead and, if necessary, to the flank.

7-28. During a pursuit, the intelligence effort is intensive. Information collection assets concentrate on all routes that enemy forces could use when conducting a retrograde operation. These assets report on the disposition of fleeing enemy forces and on the movement of the enemy reserves as the pursuit develops. The tactical situation during a pursuit may become obscure because of its depth. Much of the information needed during a pursuit concerns areas and activities beyond the fleeing enemy force. Therefore, the information provided by higher echelon information collection assets can give a commander an understanding of what is beyond the enemy force. However, commanders need to confirm this information with reconnaissance enablers. They can determine—

- The rearward movement of enemy sustainment forces.
- The composition of retrograding forces and their direction of movement.
- The composition and direction of movement of enemy reserves.
- The nature of obstacles and intermediate defensive positions.

Information about uncommitted enemy reserves and prepared positions is vital when a pursuit force may be approaching a culminating point; it may be the basis for terminating the pursuit.

FIX THE ENEMY

7-29. Keeping enemy forces from reconstituting and reorganizing an effective defense is critical to success. Constant pressure by direct pressure forces and echelon fire support systems disrupts and weakens enemy

forces during a pursuit. Units use fires to keep pressure on enemy forces. They do not allow enemy commanders to adjust their forces freely to counter friendly force actions. Indirect and joint fires harass and disrupt the enemy force's attempts to move engaged forces to the rear or bring previously uncommitted forces into action. In a pursuit, main efforts may include the ground maneuver of the direct pressure or the encircling force. Fire support targets in a pursuit include fires on enemy columns and troop or vehicle concentrations. Units may use fire support assets to repulse enemy counterattacks, destroy or delay enemy reserves, and destroy enemy fire support systems. They use all nonlethal and lethal effects at their disposal against the enemy force's C2 system as an integral part of fixing the enemy while they concentrate on destroying or degrading the enemy force's capability to reconstitute and synchronize an effective defense.

7-30. Units fix fleeing enemy forces by pressuring enemy forces with maneuver or with nonlethal and lethal fires. Disruption of enemy C2 systems by direct pressure forces significantly degrades enemy force capabilities to counter friendly efforts. This makes the goal of fixing an enemy force much easier to accomplish.

7-31. An enemy force attempts to use its reserves to reestablish the organization of its forces or facilitate the fleeing of enemy forces. Fixing enemy reserves is essential to the pursuit's success and is normally the focus of echelon shaping operations. The direct pressure force fixes enemy reserves in place or slows them down so that they remain outside supporting distance until the destruction of the withdrawing enemy force.

FINISH THE ENEMY

7-32. The overall commander of the pursuit normally combines the actions of a subordinate conducting a frontal pursuit to provide direct pressure on the fleeing enemy force with the actions of a second subordinate attempting to encircle that same fleeing enemy. The force providing direct pressure advances in a column formation as quickly as possible. After a successful penetration of a defending enemy force, existing gaps among the different elements of the force and the direct pressure force often increase. To prevent the vulnerability of open flanks, the overall commander can deploy uncommitted elements with a reserve mission where they can respond to flank dangers. The overall commander does not expect a uniform rate of advance on all axes. Some columns may move rapidly while others may engage in penetrating the enemy force's rear guard defensive positions or opposing enemy counterattacks.

7-33. The actions of the force applying direct pressure should facilitate the commitment of another force moving parallel to the rearward moving enemy force in an attempt to encircle that enemy force. The depth of the pursuit depends on the size of the forces involved. The commander directing the initiation of a pursuit informs the higher echelon commander of this intention. This allows the higher echelon headquarters to avoid desynchronizing other operations and ensures the necessary resources are devoted to the unit conducting the pursuit.

7-34. The force providing direct pressure normally tasks its forward subordinate element to provide an advance guard to prevent enemy forces from ambushing its main body and to overrun or bypass small enemy forces. This advance guard moves on multiple routes. If it encounters enemy units beyond its capacity to defeat, it conducts actions on contact to develop the situation. The commander of the direct pressure force uses combat information from actions on contact to guide the main body to a position of advantage where it can seriously degrade or destroy the retrograding enemy force. The actions of the force providing direct pressure may or may not be in conjunction with the actions of any encircling force.

7-35. The overall pursuit commander does everything possible to place a friendly force behind a retrograding enemy force to trap the bulk of the enemy force between the encircling force and the force providing direct pressure. The force providing direct pressure maintains enough pressure on the retrograding enemy force so that the encircling force can envelop it. To envelop the enemy force, the direct pressure force must be strong enough to overcome any enemy rear guard before the enemy's main body can complete its retrograde and reestablish a coherent defense. Once in position, the encircling force defends or attacks as necessary, responding to the enemy force's actions and those of the force providing direct pressure, to complete the enemy force's isolation.

7-36. If the enemy force succeeds in reorganizing and forming a perimeter, the pursuing unit should encircle the enemy force. (See Appendix C for more information on encirclements.)

FOLLOW THROUGH

7-37. Once a commander initiates a pursuit, it continues until a higher echelon commander terminates the pursuit or their intent and end state are achieved. This typically occurs when one of the following conditions are met:

- The pursuing force destroys or captures the enemy force and resistance ceases.
- The pursuing force fixes the enemy force for follow-on forces.
- That commander makes an assessment that the pursuing force is close to a culminating point.
- The higher echelon cannot support a pursuing force.

7-38. Units often transition from a pursuit into other types of offensive and defensive actions. If the enemy force attempts to reorganize, forces conducting a pursuit execute hasty attacks. They conduct an exploitation to capitalize on the success of these attacks and then move back into pursuit. Forces conducting a pursuit may also transition into a defense if the pursuing force reaches a culminating point. This usually occurs when the enemy force introduces strong reinforcements to prepare for a counteroffensive. The higher echelon commander may transition to stability operations and begin consolidating gains if the pursuit successfully destroys the enemy force.

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PART THREE

Defensive Operations

Commanders use defensive operations to destroy enemy forces; to retain terrain, resources, and population centers; and to regain the initiative. Part Three consists of four chapters that describe the fundamentals of the defense and the three types of defensive operations—area defense, mobile defense, and retrograde.

Chapter 8

The Defense

Defensive actions are operations that create conditions for the offense that allow Army forces to regain the initiative. This chapter covers the purpose, characteristics, types, common control measures, common planning considerations, and transitions for the defense.

PURPOSE OF THE DEFENSE

8-1. While the offense is more decisive, the defense is usually stronger. However, the conduct of the defense alone normally cannot determine the outcome of battles. The purpose of the defense is to create conditions for the offense that allow Army forces to regain the initiative. Other reasons for conducting the defense include—

- Countering enemy action.
- Retaining decisive terrain or denying a vital area to an enemy.
- Attriting or fixing an enemy as a prelude to the offense.
- Increasing an enemy's vulnerability by forcing an enemy commander to concentrate subordinate forces.

8-2. A defensive operation is an operation to defeat an enemy attack, gain time, economize forces, and develop conditions favorable for offensive or stability operations. The inherent strengths of the defense are the defender's ability to occupy positions before an attack and use the available time to improve those defenses. A defending force stops improving its defensive preparations only when it retrogrades or begins to engage enemy forces. A defending force continuously takes opportunities afforded by lulls in action to improve its positions and repair combat damage during execution of the defense.

8-3. A defending force does not wait passively to be attacked. A defending force aggressively seeks ways of attriting and weakening enemy forces before close combat begins. A defending force maneuvers to place enemy forces in a position of disadvantage and attacks those enemy forces at every opportunity. The static and mobile elements of a defense combine to deprive enemy forces of the initiative. A defending force contains enemy forces while seeking every opportunity to transition to the offense.

8-4. Units can visualize their defensive assigned area using a main battle area (MBA), a security area, forward edge of the battle area (FEBA), the FLOT, and rear area. The **main battle area is the area where the commander intends to deploy the bulk of their unit to defeat an attacking enemy**. The security area

is that area occupied by a unit's security elements and includes the areas of influence of those security elements. The *forward edge of the battle area* is the foremost limits of a series of areas in which ground combat units are deployed to coordinate fire support, the positioning of forces, or the maneuver of units, excluding areas in which covering or screening forces are operating (JP 3-09.3). The forward line of own troops is a line that indicates the most forward positions of friendly forces in any kind of military operation at a specific time.

Note. Throughout chapters 8 through 11, this publication will use the terms MBA, security area, forward edge of battle area, and FLOT as a visualization method of describing the assigned area for defending units.

8-5. Units generally place their reserve where they can easily reinforce the main effort. However, the reserve may reinforce other priorities in the defense. Units use a reserve to—

- Seize the initiative.
- Destroy enemy forces.
- Reinforce forces.
- Block enemy avenues of approach.
- Counterattack.

CHARACTERISTICS OF THE DEFENSE

8-6. Successful defenses share these characteristics:

- Disruption.
- Flexibility.
- Maneuver.
- Mass and concentration.
- Depth.
- Preparation.
- Security.

See ADP 3-90 for more information on the characteristics of the defense.

TYPES OF DEFENSIVE OPERATIONS

8-7. There are three types of defensive operations:

- Area defense.
- Mobile defense.
- Retrograde.

These three types of operations have significantly different concepts and present different problems. Units consider each independently when planning and executing the defense. Although the names of these types convey the overall aim of a selected operation, each type usually contains elements of the other and combines static and mobile elements. Table 8-1 depicts the symbols for an area defense and mobile defense. Table 8-2 depicts the symbols for retrograde operations.

Table 8-1. Defensive operations symbols

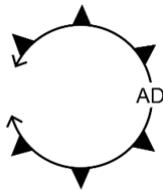
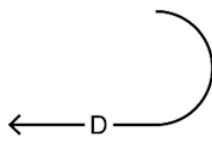
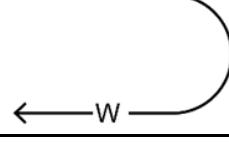
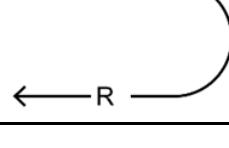
Type of Defense	Symbol
Area defense	
Mobile defense	

Table 8-2. Retrograde task symbols

Retrograde Task	Symbol
Delay	
Withdraw	
Retirement	

AREA DEFENSE

8-8. An *area defense* is a type of defensive operation that concentrates on denying enemy forces access to designated terrain for a specific time rather than destroying the enemy outright (ADP 3-90). The purpose of an area defense is to retain the terrain where the bulk of the defending force positions itself in mutually supporting prepared positions. Units maintain their positions and control the terrain between these positions. The main effort focuses fires into engagement areas, possibly supplemented by a counterattack. Units at all echelons can conduct an area defense. They may use an area defense to transition to offensive operations, retrograde, or stability operations. The variations of an area defense are defense of linear obstacle, perimeter defense, and reverse slope defense. (See Chapter 9 for more information on area defense.)

MOBILE DEFENSE

8-9. A *mobile defense* is a type of defensive operation that concentrates on the destruction or defeat of the enemy through a decisive attack by a striking force (ADP 3-90). The mobile defense focuses on defeating or destroying enemy forces by allowing them to advance to a point where they are exposed to a decisive counterattack. A mobile defense includes a fixing force and a striking force:

- A *fixing force* is a force designated to supplement the striking force by preventing the enemy from moving from a specific area for a specific time (ADP 3-90). Units use the fixing force to hold

attacking enemy forces in position, to turn attacking enemy forces into ambush areas, and to retain areas from which to launch the striking force.

- The *striking force* is a dedicated counterattack force in a mobile defense constituted with the bulk of available combat power (ADP 3-90).

8-10. A mobile defense requires assigned areas of considerable depth. Units shape the battlefield causing an enemy force to overextend its LOCs, expose its flanks, and dissipate its combat power. Likewise, they must be able to move their forces into a position where they can defeat the attacking force. Divisions and larger formations normally execute mobile defenses. In limited circumstances a BCT can execute a mobile defense unilaterally. (See Chapter 10 for more information on mobile defense.)

RETROGRADE

8-11. A *retrograde* is a type of defensive operation involving organized movement away from the enemy (ADP 3-90). An enemy force may compel these operations, or units may execute them voluntarily. In either case, the higher echelon headquarters executing the retrograde must approve the operation before its initiation. The retrograde is not conducted in isolation; it is a transitional operation. It is part of a larger maneuver scheme designed to preserve combat power in order to regain the initiative in future operations. The three variations of the retrograde are delay, withdraw, and retirement. (See Chapter 11 for more information on retrograde.)

COMMON DEFENSIVE CONTROL MEASURES

8-12. Paragraphs A-63 through A-88 define common control measures specific to defensive operations. Units use the minimum control measures required to complete their missions while providing subordinates the flexibility needed to respond to changes in the situation.

8-13. Units control the defense by using control measures that provide the flexibility needed to respond to changes in the situation and allow them to concentrate combat power at the decisive point. Common defensive control measures are:

- Engagement area (EA).
- Battle position (BP).
- Battle handover line (BHL).
- Named area of interest (NAI).
- Target areas of interest (TAI).
- Fire support coordination measures (FSCMs).
- Disengagement line.
- Phase lines.

COMMON DEFENSIVE PLANNING CONSIDERATIONS

8-14. A defense is more effective when there is adequate time to thoroughly plan and prepare defensive positions. Lack of preparation time may cause units to maintain a larger reserve force or accept greater risks than usual. All units must be capable of mounting a defense with minimal preparation, but a strong defense takes time to organize and prepare. Time is always a critical factor so units must establish clear priorities of work to provide focus for critical capabilities such as countermobility assets. If an enemy attack does not take place at the predicted time, units use the additional time to continue improving their position. Units increase the effectiveness of the security area, establish additional fighting positions (alternate, supplementary, and subsequent), refine the defensive plan (to include branches and sequels), conduct defensive rehearsals, and maintain vehicles and personnel.

8-15. To gain time to organize a defense, units may order the security force to conduct a delay while the main body disengages and moves to more advantageous positions. The security force must know how long it needs to delay enemy forces for the main body so that it can task-organize and prepare its defense. Security forces are also given additional tasks to disrupt the enemy's attack and attrit key enemy formations or

capabilities. These additional tasks help to set the conditions for a successful defense in the main battle area by separating enemy forces from each other and denying them the ability to mass at their decisive points.

8-16. At the attack's onset, defending units yield the initiative to enemy forces. However, they exploit the advantages of prepared, mutually supporting positions organized for all around defense and knowledge of the terrain to slow the enemy's momentum. Defending units hinder enemy offensive preparations by using lethal and nonlethal means to reduce the coherence of the enemy force's attack and begin to wrest the initiative from the enemy force. The defending force draws the enemy into engagement areas where defending forces can initiate combat on their own terms. The defending force surprises the enemy with concentrated and integrated fires that violently erupt on exposed enemy formations from concealed and protected positions. Defending units then counterattack enemy forces with repeated unexpected attacks and they exploit small tactical successes and opportunities to stop the attacker's momentum.

8-17. The defending force does not have to kill every enemy soldier, squad, or combat system to be successful. It only has to destroy the enemy's ability to synchronize a combined arms team or the enemy soldiers' will to fight. Those events signal a transition period that affords the defending commander the opportunity to seize the initiative and return to the offense.

8-18. Units consider the implications of combat on the civilian population. Civilians often affect friendly combat operations. Units conduct operations in accordance with U.S. and international law. This may mean that civilians place demands on logistics systems or place themselves in combat areas, influencing fire coordination measures and synchronization of warfighting functions.

8-19. The common defensive planning considerations addressed in paragraphs 8-20 through 8-133 apply to all defensive operations. In the defense, synchronizing the elements of combat power allows units to desynchronize and destroy the enemy. Defensive synchronization normally results from detailed planning and preparation among the various units participating in an operation. While these activities may be separated in time and maneuver space, they are synchronized so the enemy feels their combined consequences at decisive times and places. All defenses are a mix of static and dynamic actions. As an operation evolves, units shift main and supporting efforts to press the engagement and keep the enemy off balance. Synchronized prior planning and preparation bolsters the unit's combat power and increases the effectiveness of the defense.

COMMAND AND CONTROL

8-20. A defense generally imposes few restrictions on the defending unit. It allows freedom of maneuver within assigned boundaries but requires units to prevent enemy penetration of the rear boundary. This mission allows units to distribute forces to suit the terrain and plan an engagement that integrates direct and indirect fires. Commanders ensure that subordinate unit defensive plans are compatible and that control measures, such as contact points and phase lines, are sufficient for coordination when assigning areas. The defensive plan addresses what happens when the defense transitions.

8-21. Defensive operations are often difficult to conduct because the enemy force possesses the initiative and usually has superior combat power. Defending units may have to frequently shift supporting efforts to contain the enemy's attack until the defending force can seize the initiative. This may require units to adjust subordinate units' assigned areas, repeatedly commit and reconstitute the reserve, and modify the original plan.

8-22. Units begin defensive preparations immediately upon moving into position. A technique that units use is reporting set and established to indicate their level of preparation. "Set" occurs when defending units are in position and prepared to conduct a hasty defense. "Established" occurs when defending units are prepared to conduct a deliberate defense according to the base plan.

8-23. Defending units may change task organization to respond to the existing or projected situation, such as forming a detachment to be left in contact before conducting a withdrawal. Whenever possible, task organization changes take place between units that have previously trained or operated together to take advantage of established interpersonal relationships. Task-organized units place special attention on ensuring that each element directs its efforts toward accomplishing the overall unit's mission. This requires commanders to ensure the synchronizing of objectives, control measures, movement routes, and defensive

positions as well as ensuring their subordinates understand their specifically assigned tasks. It also requires using a SOP common to each element of the task-organized unit. Failure to synchronize task-organized elements has often resulted in mission failure during operations.

8-24. To break through the MBA, the enemy often attacks along boundaries of defending units when they can be identified. Therefore, units at every echelon ensure that the plan for their part of the defense is properly coordinated, not only within their units, but also with adjacent and supporting units. Commanders coordinate by personally visiting subordinate commanders on the ground when possible or by establishing contact points. Staffs rapidly disseminate coordination decisions to all concerned. Leaders consider these planning aspects in the coordination process:

- The higher commander's intent and concept of operations.
- The tactics applied by adjacent and supporting units.
- Control measures that enhance coordination between units.
- Planning for mutual support.
- Information collection and target acquisition.
- Location and composition of security forces.
- Obstacles and demolitions.
- Fires, including employing antitank systems, illumination, and obscuration.
- Air defense coverage areas.
- Employing the reserve in conjunction with fire support systems.
- Communications.

8-25. Because command posts tend to be stationary in the defense, units place them in hardened areas or protective terrain and reduce their electronic signature. Command posts must remain capable of rapidly relocating to respond to battlefield developments.

8-26. Defending units typically yield terrain along with the civilian inhabitants—which makes dealing with those civilians more difficult in the defense than in the offense. However, defending units need to prevent the uncoordinated movement of dislocated civilians within their assigned area. Such uncoordinated movements hamper the execution of friendly defenses by hindering the repositioning of defending forces, the sustainment of defending forces, and the evacuation of casualties. It is also important that the defending units meet their legal obligations to the civilian inhabitants within their assigned areas.

8-27. Conditions that require conducting denial and stay-behind operations can arise during defensive operations. These two operations have their own unique planning and execution considerations.

Denial Operations

8-28. Sometimes, enemy units capture a friendly force's equipment and supplies. This situation often occurs during the conduct of defensive and retrograde operations. To prevent this, defending commanders conduct denial operations. **Denial operations are actions to hinder or deny the enemy the use of terrain, supplies, or facilities.** They may include destroying, removing, and contaminating those supplies and facilities or erecting obstacles. The principles of denial are—

- Commanders order the destruction of military equipment and supplies only when friendly forces cannot prevent them from falling into enemy hands.
- Commanders deny enemy forces the use of military equipment and supplies by means of its destruction, removal, or contamination.
- Steps taken to deny stocks do not preclude their later use by friendly forces, if possible.
- Deliberately destroying medical equipment and supplies and making food and water unfit for consumption is unlawful under the terms of the Geneva Conventions.

8-29. In denial operations, the definition of a unit's military equipment and supplies could expand to include military installations and any civilian equipment and supplies used by the friendly force. Only immediate military necessity permits the destruction of civilian property under the law of war. Determining whether there is sufficient necessity to justify destruction is a complex decision that requires consideration of moral,

political, and legal considerations. Additionally, civil instability increased by the destruction of civilian property, material, and equipment could have adverse effects on the outcomes of future operations.

8-30. Commanders who order denial operations consider the potential value of the military equipment and supplies to an enemy force when determining the priorities and the extent of the operation. Examples of high priorities for denial include—

- Classified equipment, material, and documents.
- Petroleum, oils, and lubricants (known as POL).
- Sophisticated weapon systems or electronic equipment.
- Heavy weapons and associated ammunition.
- Communications equipment.
- Ferrying and bridging equipment.
- Air, sea, and land transport systems.
- Any other military supplies, equipment, or facilities are a lesser priority in denial operations.

8-31. Denial also prevents an enemy from repairing a system by cannibalizing several systems. Commanders issue detailed instructions to deny military equipment and supplies to prevent an enemy force from using them. The unit must destroy the same parts in each type of system.

8-32. Denial differs from countermobility operations because commanders design denial operations to deprive the enemy force of some, or all, of the short-term benefits of capturing an area. The impact of denial operations on civilian inhabitants and the environment of the area act as a moral and a legal constraint on their use by U.S. forces. Commanders involve their legal advisor and civil affairs operations staff in planning denial operations.

8-33. Commanders ensure that executing the denial plan does not adversely affect the unit's future operations. This includes carefully considering the force's demolition policy in relation to the purpose of the rearward movement and the contemplated subsequent actions of the force. Widespread demolitions during a retrograde may greatly hinder a friendly force moving back into the area more than enemy forces during a friendly retrograde. For example, destroying the transportation infrastructure increases friendly force logistics difficulties once friendly forces recapture an area. Removing or destroying militarily significant supplies and equipment, such as fuel, obstacle materials, and rail cars, from an area requires friendly forces to bring similar assets with them when they reoccupy an area.

8-34. Commanders can expand a denial operation to prevent enemy forces from exploiting resources, such as—

- Fuel, minerals, and the civilian population.
- Facilities, such as river locks, railroad switching yards, road interchanges, bridges, and industrial plants.
- Routes of communication, such as telephone exchanges, radio stations, and television stations.

8-35. The defending force can assist civil authorities in evacuating civilians. The defending force either removes the resources, supplies, and facilities from areas abandoned to enemy forces or destroys them in place. Denial operations may be either total or limited.

8-36. Total denial operations can produce long-term political, economic, military, and environmental effects. Total denial operations have operational level, and possibly strategic level, impact. Total denial operations consume large quantities of transportation and engineer resources and require considerable time to plan and execute.

8-37. Limited or partial denial operations are particularly suitable if a defending force expects to regain control of the area within a short time. The removal or destruction of only a few key components can reduce a facility to limited utility, yet it allows for the facility's quick restoration of all functions upon its return to friendly control. American forces only destroy discrete targets of significant military value. Limited denial operations normally do not affect the advance of properly supported enemy formations possessing cross-country mobility. However, they can seriously impede an enemy force's road bound and rail bound logistics support if commanders properly plan and execute them.

Stay-Behind Operations

8-38. A **stay-behind operation** is an operation in which a unit remains in position to conduct a specified mission while the remainder of the force withdraws or retires from an area. The force for this operation consists of enough combat, functional and multifunctional support, and sustainment elements to protect and sustain its fighting capability for the duration of the mission. A stay-behind force may also result from enemy actions that bypass friendly forces.

8-39. The primary purpose of the stay-behind force is to deceive an enemy force into believing the parent unit is still in position while most of the unit withdraws and disrupts enemy forces. A stay-behind force is a high-risk mission because of the potential for its encirclement and destruction by enemy forces. Resupply and casualty evacuation are also extremely difficult. Commanders consider assigning these missions only after a thorough analysis of the mission variables. A stay-behind force attacks enemy combat forces and command nodes, functional and multifunctional support, and sustainment elements from unexpected directions. These attacks may cause enemy follow-on forces to be more cautious and to slow down to clear possible attack and ambush sites. Commanders may require the stay-behind force to conduct a breakout from encirclement and linkup operations after it completes its mission.

8-40. A dismounted, stay-behind infantry force surprises an enemy force by conducting a series of raids and ambushes. Commanders can insert this infantry force via infiltration, air assault, or airborne operations; it can also be a bypassed force. Attacks in the enemy support area by friendly armored forces can cover a larger area than attacks by dismounted infantry forces.

8-41. Stay-behind operations eventually require the stay-behind force to reenter friendly lines or link up with other elements, often in more than one location. Commanders carefully coordinate this reentry to prevent friendly fire incidents. Commanders select the best return routes available for the stay-behind force, and they guard gaps or lanes through obstacles along these routes.

8-42. Commanders conduct stay-behind operations only when confident that the stay-behind force will rejoin the main body, extract itself in alternative ways, or the main body will fight its way forward to link up with the stay-behind force. It is critical that the commander and staff develop detailed isolated Soldier guidance when planning the stay-behind operation. (See FM 3-50 for more information on isolated Soldier guidance.)

8-43. A **detachment left in contact** is an element left in contact as part of the previously designated security force while the main body conducts its withdrawal. It simulates—as nearly as possible—the continued presence of the main body until it is too late for an enemy force to react by conducting activities such as electronic transmissions or attacks. The detachment left in contact (DLIC) requires specific instructions about what to do when the enemy force attacks and when and under what circumstances to delay or withdraw. If the detachment left in contact must disengage from the enemy force, it uses the same techniques as in the delay. If required, commanders provide these detachments additional recovery, evacuation, and transportation assets to use after disengagement to speed their rearward movement.

8-44. While both a detachment left in contact and a stay-behind force delay and disrupt the enemy, the biggest difference is the level of stealth. A stay-behind force delays the enemy through small scale engagements such as raids and ambushes. A stay-behind force only masses its combat power when combat power ratios and the tactical situation are in its favor. A detachment left in contact engages the enemy and tries to represent itself as a larger force, so its presence must be known as it fights in a very conventional manner. Both forces seek to link-up with friendly forces when they accomplish their commander's intent.

8-45. Two methods exist to resource the detachment left in contact. The first method is for each major subordinate element of the withdrawing force to leave a sub element in place. For example, in a BCT withdrawal, each maneuver battalion leaves a task-organized company team in contact. Typically, these teams fall under a senior DLIC commander designated by the brigade commander. The second method is one major subordinate command of the withdrawing force can stay behind as the DLIC. Figure 8-1 depicts a BCT with three maneuver battalions leaving one task-organized battalion as the detachment left in contact. That battalion expands its security responsibilities to cover the width of the BCTs' assigned area.

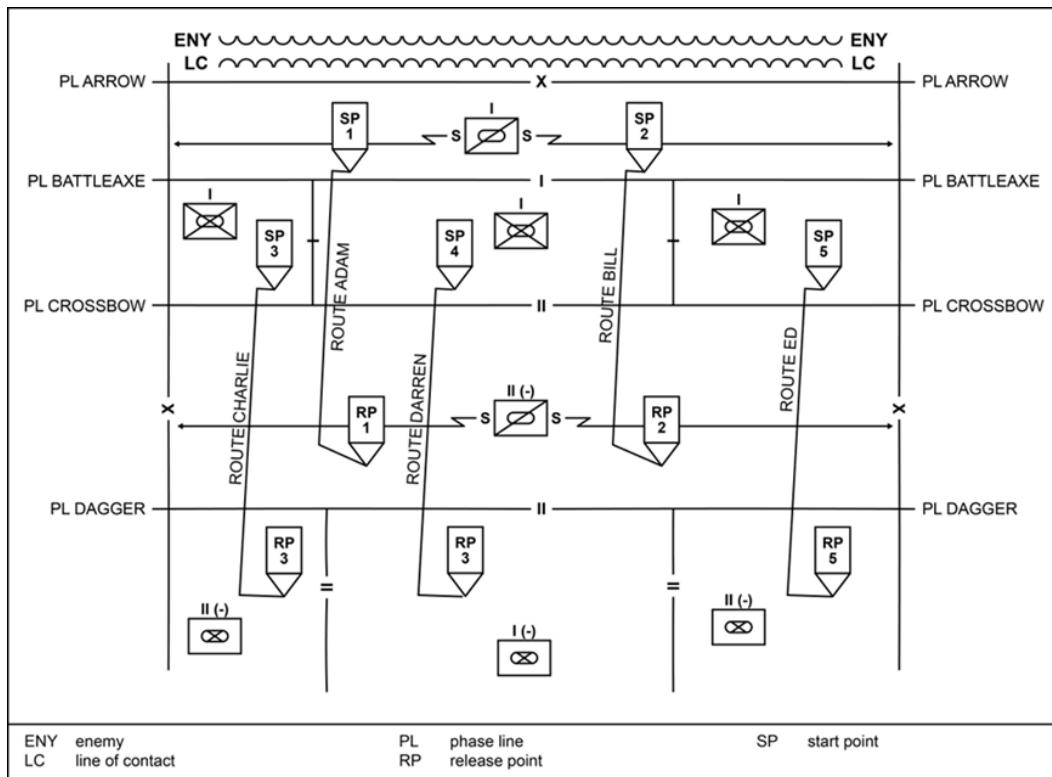


Figure 8-1. Example detachment left in contact

8-46. When a DLIC is used, commanders create an additional security force behind the existing main defensive positions to assist the withdrawal process. They can create an additional force from the withdrawing unit or from an assisting unit. The DLIC can conduct a delay for this additional security force and then join it, or the DLIC can conduct a battle handover and then conduct a rearward passage of lines. In either case, the additional security force becomes the rear guard.

Civil Considerations

8-47. Units' defensive concepts of operations address how the preparation and conduct of the defense will influence the civilian population in their assigned areas. This includes the conduct of noncombatant evacuation operations for U.S. civilians and other authorized groups. Commanders have legal obligations to civilian populations in their assigned areas. Ideally, the local nation government will have the capability to conduct the six primary stability tasks. Defending units conduct only those minimum-essential stability tasks required by the mission variables and expend only the minimum-essential resources to meet their legal and ethical responsibilities to civilians during the execution of a defense.

MOVEMENT AND MANEUVER

8-48. Defending units intend to defeat an enemy force's attack by overwhelming it with direct and indirect fires before it conducts its final assault on friendly defensive positions. As an enemy force's attack fails, it attempts to withdraw or transition to a defense in the face of friendly counterattacks. If enemy forces succeed in overrunning a key defensive position, the defending force counterattacks to overwhelm enemy forces before they can either organize a defense or exploit their initial success.

Exploit the Advantages of Terrain

8-49. Units exploit the advantages of occupying the terrain where the battle will occur. The defending force engages the attacker from locations that give the defending force an advantage. These locations include

defiles, rivers, thick woods, swamps, cliffs, canals, built-up areas, and reverse slopes. Effective defensive positions in the MBA use natural and man-made obstacles. Units may choose to shape the battlefield by defending in one area to deny terrain to enemy forces while delaying in another area to deceive the enemy into believing that the attacking enemy force has achieved success.

8-50. Defending units use key terrain to impede an enemy force's movement and place overwatching elements in positions to provide early warning and engage enemy forces with indirect fires. These positions can be located forward of the topographical crest and on the flanks of positions in a valley or depression. Defending units select terrain that allows the massing of friendly fires and forces the enemy to commit its forces piecemeal into friendly engagement areas. This exposes portions of the enemy force to destruction without giving up the advantages of fighting from protected positions. Examples of key terrain include terrain that permits the defending force to cover a major obstacle system by fire and important road junctions or choke points that affect troop movements.

8-51. Units determine the probable combat power ratios the defenders will face and establish positions accordingly. Once defending units arrive at acceptable force ratios—or the degree of risk is clear—they allocate available forces and begin planning engagement areas. They determine where to engage enemy forces on each enemy avenue of approach. Defending units array forces on those avenues of approach and establish engagement areas using obstacles and fires to canalize enemy forces into them. They take actions to increase the kill probabilities of various weapons systems at different ranges. This includes establishing range markers for direct fire weapons, confirming the zero on weapons, and clearing obstacles that might impede wire-guided munitions.

8-52. The seven steps of engagement area development include the following:

- Identify likely enemy avenues of approach.
- Identify most likely enemy course of action.
- Determine where to kill the enemy.
- Position subordinate forces and weapons systems.
- Plan and integrate obstacles.
- Plan and integrate fires.
- Rehearse the execution of operations within the engagement area.

For more information on engagement area development see ATP 3-21.10.

8-53. Generally, defending forces have the advantage of preparing the terrain by reinforcing natural obstacles, fortifying positions, and rehearsing operations. First, they prepare the ground to force the piecemeal commitment of the enemy and its subsequent defeat in detail. Second, they identify good locations for engagement areas along the enemy's expected avenue of approach, such as in open areas dominated by terrain that offers adequate cover and concealment for the defending forces. Defending forces use natural and reinforcing obstacles to compel the enemy into these prepared engagement areas. Units employ and continuously strengthen obstacles and fortifications to improve the natural defensive strength of a position, which has a direct bearing on the distribution of forces, frontages, and depth of the defense. Lastly, defending forces rehearse defensive operations.

8-54. Examples of terrain features that favor the defense include—

- A series of parallel ridges across the line of hostile advance.
- Unfordable streams, swamps, lakes, and other obstacles on the front and flanks.
- High ground with good observation and long-range fields of fire.
- Concealed movement routes immediately behind defensive positions.
- A limited road network in front of the line of contact to confine enemy forces to predictable avenues of approach.
- A good road network behind the line of contact that allows a defending unit to reposition forces as the battle progresses.

8-55. The opposite of terrain conditions listed in paragraph 8-54 degrades a force's ability to conduct defensive operations. For example, terrain with a limited road network that canalizes the defending force allows enemy forces to predict its movement and take steps to interdict that movement.

8-56. Units conduct survivability moves among their primary, alternate, supplementary, and subsequent positions based on the mission variables. A *survivability move* is a move that involves rapidly displacing a unit, command post, or facility in response to direct and indirect fires, the approach of a threat or as a proactive measure based on intelligence, meteorological data, and risk assessment of enemy capabilities and intentions (ADP 3-90).

Maintain Security

8-57. Units use security operations to prevent enemy forces from determining friendly locations, strengths, weaknesses, and to preserve combat power. They also try to delay and disrupt an attacking force by making it deploy prematurely. Defending units can mitigate an attacker's inherent advantage of initiative regarding the time, place, plan, direction, strength, and composition of the attack by disrupting enemy formations and countering reconnaissance efforts, causing them to blindly attack into prepared defenses. Defending units counter enemy reconnaissance through both active and passive measures. They must not permit enemy information collection assets to determine the precise location and strength of defensive positions, obstacles, engagement areas, and reserves. First, the defending force conducts reconnaissance to gain and maintain contact with the enemy. Second, each echelon normally establishes a security area forward of its MBA. The security area is separated from the MBA by the FEBA. It extends as far to the front and flanks as necessary for the security force to deploy. Forces in the security area furnish information on enemy forces and delay, deceive, and disrupt enemy forces and conduct counterreconnaissance. All units conduct local security operations within their assigned areas to prevent enemy forces from disrupting operations, to include echelon support areas. Units implement OPSEC and other protection measures to deny enemy forces information about friendly dispositions.

Disrupt the Enemy Attack at Every Opportunity

8-58. The defending force conducts operations throughout the depth of the enemy's formation to destroy key enemy units and assets, particularly their artillery and reserves, or disrupt their timely introduction into battle at the point of engagement. This allows the defending force to regain the initiative. The defending force conducts spoiling attacks to disrupt the enemy force's concentrations and attack preparations. The defending force counterattacks enemy successes rapidly with a friendly reserve, the forces at hand, or a striking force before enemy forces can exploit success. Units use direct fires to mass combat power. Units designate direct fire control measures to focus, shift, or distribute direct fires on enemy formations or within engagement areas.

Mass the Effects of Combat Power

8-59. A defending force must mass its combat power to overwhelm enemy forces and regain the initiative. When required, units use economy of force measures in areas that do not involve the main effort to mass forces for use at the decisive point. In an area defense, defending units use engagement areas to concentrate combat power from mutually supporting positions. In a mobile defense, units use the striking force to generate combat power at decisive points. Another way forces can apply the effects of mass is by committing the reserve.

8-60. Typically, defending units engage advancing enemy forces using two primary methods—echelonment of fires and simultaneous fires. In echelonment of fires, units engage an advancing enemy force at the maximum effective range of available weapon systems. They then employ an increasing volume of fire by engaging with shorter range systems as the attacking enemy force continues to close on their positions while continuing to engage the attacker with longer range systems. This allows for defending units to attrit and defeat enemy forces as far forward of friendly defensive positions as is possible. It also allows the defender to engage the enemy for longer periods which normally allows for more kills forward of the defender's positions. Defending units normally employ this method of engagement against enemy formations of similar or larger size than defending forces. The major disadvantage of this method is that once defenders employ indirect fire systems, it allows enemy forces to locate the firing positions of those systems. This allows enemy forces to engage the defending forces with fires. Also at lower tactical levels, it may make flank shots against enemy armored systems more difficult to obtain at longer ranges. (See ATP 3-09.42 for more information on echelonment of fires.)

8-61. Another method of engaging an advancing enemy force uses the simultaneous employment of all weapon systems. This method can draw more enemy forces into an engagement area before firing, preventing forces further back from bypassing and resulting in a greater shock effect and more kills on first engagement. However, the engagement occurs at a much closer range, and the mass and momentum of attacking enemy forces may still carry them into friendly positions. This method is ideal for use in situations where parts of the attacking enemy force are isolated from the direct fire support of the rest of the enemy force. This might occur when employing a reverse slope defense or defending from an attacking enemy element that is considerably smaller or possesses significantly less lethal capabilities than the defending force. In this case, the defending unit entices the majority of the attacking enemy force to enter friendly engagement areas.

Armored and Stryker Forces

8-62. When most of a defending force consists of units equipped with armored combat vehicles, units conduct a defense designed to take advantage of the tactical mobility and protection offered by them. Combat vehicles provide defending forces with the capability to maneuver and delay the advance of an enemy force and then immediately change from a delay to a mobile defense or counterattack. Forces equipped with armored combat vehicles are well suited for use as security and MBA forces. Armored and Stryker forces are better suited for operations within a CBRN environment than dismounted infantry forces are because of their organic collective protection systems.

Dismounted Infantry Forces

8-63. When facing enemy dismounted forces, units deploy and use defending dismounted infantry forces in the same way as they use defending armored and Stryker forces against enemy armored and motorized forces. Dismounted infantry forces facing an armored enemy force are primarily used in static roles within the MBA or in security roles in the echelon support area. They are also most effective when fighting from prepared defenses or in restricted terrain, such as swamps, woods, hilly and mountainous areas, and urban areas. Dismounted infantry forces can take advantage of their stealth and ability to move through restrictive terrain to place weapon systems in unexpected locations undetected. However, they are far more vulnerable than armored forces to direct and indirect fires, especially when away from prepared defenses and overhead cover.

8-64. Units use airborne and air assault units in the same manner as other dismounted forces once they deploy into their drop zones or landing zones. However, there may be problems in extracting a committed airborne or air assault force, particularly if it is in direct contact with the enemy. Use of an airborne force in a reserve role requires its proximity to readily available certified airdrop crews and aircraft and is therefore generally unsuited as a reserve. Because of its inherent mobility and potential reaction speed, an air assault force is often well suited for a reserve role during the conduct of the defense, but also faces restrictions based on weather. Their role as a dismounted reserve might include the following tasks:

- Rapid reinforcement of a threatened position.
- Establishment of a blocking position, possibly in conjunction with existing defensive positions.
- Echelon support area security operations, such as containment of an enemy airborne or air assault.
- Reinforcement of encircled friendly forces.
- Flank protection.

Aviation Forces

8-65. Aviation forces—rotary, fixed wing, and unmanned aircraft systems—are particularly valuable in the defense because of their speed, mobility, and versatility. Their tasks can include—

- Reconnaissance and security operations.
- Disrupting, destroying, and delaying enemy forces in the deep and close areas.
- Counterattacks and spoiling attacks.
- Controlling the ground for limited periods where a unit does not wish to commit ground forces irrevocably (for example, forward of an executed obstacle).
- Closing gaps in a defense plan before the arrival of ground maneuver forces.
- Defeating enemy penetrations.

- Facilitating the disengagement of ground forces.
- Counteracting enemy activities in the echelon support area, in particular enemy airborne or air assault forces.
- Resupplying defending forces with Class IV barrier material or facilitating casualty evacuation.
- Assisting in the countermobility effort.

These tasks may require additional ground forces to achieve the desired effect.

Ensure Mutual Support

8-66. Mutual support exists when positions and units reinforce each other with direct and indirect fires, thus preventing the enemy from attacking one position without one or more adjacent positions subjecting it to fires. Mutual support increases the strength of all defensive positions, prevents defeat in detail, and helps prevent infiltration between positions. Tactical positions achieve maximum degree of mutual support when they are located to observe or monitor the ground between their positions or conduct patrols to prevent any enemy infiltration. During periods of limited visibility, units position small tactical units closer together to retain the advantages of mutual support. Unit leaders coordinate the nature and extent of their mutual support.

Countermobility

8-67. In the defense, units normally prioritize engineer efforts on countermobility and survivability over mobility. This means that defending units typically require large quantities of Class IV and Class V material and specialized equipment to construct obstacles and fighting and survivability positions. Units ensure that they synchronize these efforts with their sustainment plans.

8-68. Units plan to canalize enemy forces into a salient. In this case, they take advantage of the enemy force's forward orientation by fixing the enemy force and then delivering a blow to the enemy force's flank or rear. As an enemy's attacking force culminates and assumes a defensive posture, friendly defending units rapidly coordinate and concentrate all fires against unprepared and unsupported segments of the attacking enemy force. Friendly forces may deliver these fires simultaneously or sequentially.

8-69. When planning obstacles, units consider not only current operations but also future operations. They design obstacles for current operations, so they do not hinder future operations. Units can designate certain obstacles to shape the battlefield as high priority reserved obstacles. Units assign responsibility for preparation of reserved obstacles to a subordinate unit but retain authority for ordering their completion. One example of a reserved obstacle is a destruction of a highway bridge over a major river. Such obstacles receive the highest priority in preparation and, if ordered, execution by the designated subordinate unit.

8-70. Units integrate reinforcing obstacles with existing obstacles to improve the natural restrictive nature of the terrain to halt or slow enemy movement, canalize enemy movement into engagement areas, and protect friendly positions and maneuver. They must integrate their obstacles with fires to be effective. This requires the ability to deliver effective fires well beyond the obstacle's location. When possible, units conceal obstacles from hostile observation. They coordinate obstacle plans with adjacent units and conform to the obstacle zone or belts of higher echelons.

8-71. Effective obstacles block, turn, fix, disrupt, or force the enemy to attempt to breach them. A defending unit tries to predict enemy points of breach based on terrain and probable enemy objectives. A defending force develops means to counter enemy breach attempts, such as pre-coordinated fires. The attacker will try to conceal the time and location of the breach. The defending unit's plan addresses how to counter such a breach, to include reestablishing the obstacle by using scatterable mines and other techniques.

8-72. Improvement to the defense is continuous. Given time and resources, a defending force constructs additional obstacle systems in depth, paying special attention to its assailable flanks and rear. The rear is especially vulnerable if noncontiguous assigned areas or nontraditional threats exist. Obstacle systems can provide additional protection from enemy attacks by forcing an enemy to spend time and resources to breach or bypass them. This gives the defending force more time to engage enemy forces attempting to execute breach or bypass operations.

8-73. Units designate the subordinate unit responsible for establishing and securing each obstacle. They may retain execution authority for some obstacles or restrict the use of some types of obstacles to allow other

battlefield activities to occur. Units allow subordinate units some flexibility in selecting the exact positioning of obstacles. However, all units must know which gaps or lanes—through obstacles and crossing sites—to keep open for movements, as well as the firing and self-destruct times of scatterable mines to prevent delays in movement. Units follow specific and clear orders for executing reserve obstacles and closing lanes. As each lane closes, the closing unit reports the lane's closure to the higher echelon, subordinate, and adjacent headquarters to preclude displacing units from moving into unmarked or abandoned obstacles.

8-74. Primarily company-sized and smaller units construct protective obstacles. Leaders within these small units ensure that observation and fires cover all obstacles to hinder breaching. Deliberate protective obstacles are common around fixed sites. Protective obstacles are a key component of survivability operations. They are tied in with final protective fires and provide friendly forces with close-in protection. Units at all echelons track defensive preparations, such as establishing Class IV and Class V supply points and start or completion times of obstacle belts and groups. Commanders use artillery, air, or ground systems to reseed minefields that an enemy has breached. (See Chapter 17 for further information on combined arms countermobility operations.)

Mobility

8-75. During the defense, mobility tasks include maintaining routes, coordinating gaps in existing obstacles, and supporting counterattacks. Engineers also open helicopter landing zones and tactical landing strips for fixed-wing aircraft. Maintaining and improving routes and creating bypass or alternate routes at critical points are major engineering tasks because movement routes are subject to fires from enemy artillery and air support systems. These enemy fires may necessitate deploying engineer equipment forward, such as assault bridging and bulldozers. Units can also evacuate or restrict movement of dislocated civilians to routes not required by friendly forces to avoid detracting from the mobility of the defending force. A unit's coordination with available civil affairs forces, intergovernmental and nongovernmental entities, and potentially local nation government officials can also assist units in preserving their combat power.

8-76. Typically, a unit's priority of mobility support is to routes used by counterattacking forces, then to routes used by main body forces displacing to subsequent positions. Mobility support mainly involves reducing obstacles and improving or constructing combat roads and trails to allow tactical support vehicles to accompany moving combat vehicles. Units coordinate carefully to ensure units leave lanes or gaps in obstacles for repositioning main body units and committing the counterattack force. CBRN reconnaissance systems also contribute to the force's mobility in a contaminated environment.

Obscuration

8-77. Units use obscuration to disrupt the enemy's assault or movement formations and to deny the enemy's use of target acquisition optics, visual navigation aids, air avenues of approach, landing zones, and drop zones. Obscuration creates gaps in enemy formations, separates or isolates attacking units, and disrupts enemy planned movements. Bispectral obscuration can blind attackers who lack thermal viewers or other enhanced optical systems. It prevents overwatching enemy elements from observing and engaging the defender, while defending forces with advanced optical systems can acquire and engage the enemy within the smoke. The commander can use smoke to facilitate friendly target acquisition by highlighting enemy systems against a light background while degrading the enemy's optics. Smoke used to mask obstacles located in low-level flight corridors and on landing and drop zones can prevent an enemy from using these drop zones or greatly increase the enemy's risk.

8-78. Units use smoke-generation capabilities to mark targets and screen or obscure friendly positions. They must carefully employ obscurants with regard to enemy systems and friendly capabilities. Improper use can create an advantage for the enemy. The effectiveness of smoke depends on weather conditions and the quantity of smoke employed. Units coordinate the use of smoke generators, artillery or mortar smoke, and smoke pot employment. These smoke-producing systems are most effective when used together to achieve synergistic effects. Using smoke can also enhance military deception operations and cover friendly movements. (See ATP 3-11.50 for more information on planning, preparing, and executing battlefield obscuration.)

Limited-Visibility Adjustments

8-79. The ability of attacking forces to create conditions of limited visibility—including thermal neutralizing smoke—and the smoke and dust associated with a battle also means that defending units must be able to rapidly modify their defense to one that is effective during limited visibility. Defending units should plan for limited visibility rather than full visibility during defensive planning. In this case, defending units may need to move closer to the avenues of approach they are guarding. Sensors may still have some value in these conditions.

8-80. Units can expect attacking enemy forces to create or take advantage of limited-visibility conditions. Defending units expect attacking forces to take advantage of limited-visibility conditions to—

- Conduct reconnaissance operations to locate the defending force's weapons, defensive obstacles, and positions.
- Breach or reduce defensive obstacles.
- Move elements through gaps in the defending forces coverage caused by reduced weapon ranges.

8-81. A valid defensive plan includes these items to help overcome potential limited-visibility problems:

- Long-range detection equipment, such as radar, sensors, and thermal imaging devices, focused on well-defined avenues of approach. Employing multiple means in the same area of interest improves the likelihood of detection.
- Deployed weapons systems and some units along avenues of approach that follow terrain features potentially used by an enemy force for orientation in darkness, such as wood lines and water courses.
- Increased numbers of infantry, scouts, observation posts, combat patrols, and anti-armor teams deployed forward on secondary avenues of approach and between subordinate unit defensive positions to detect and slow enemy movement, especially enemy infiltration attempts, and protect obstacles against enemy breaching attempts.
- Emplaced point obstacles and early warning devices along likely night approaches to slow advancing enemy forces or to alert defenders to enemy presence.
- Planned and rehearsed weapons systems and unit displacements and the massing of fires on projected enemy approaches. (Defending units moving over previously reconnoitered routes should be able to move faster than an enemy force moving through unfamiliar terrain.)
- Planned illumination on or behind likely engagement areas to silhouette enemy forces while leaving defenders in shadows and darkness.
- Adjustments to the organization of the defense for limited visibility that commence before dark and are completely reversed to their daylight configuration before dawn.

INTELLIGENCE

8-82. During the planning process, units use intelligence to identify probable enemy objectives and avenues of approach. From those probable objectives and avenues of approach, they develop NAIs and TAIs. Units study patterns of enemy operations and an enemy force's vulnerability to counterattack, interdiction, electromagnetic warfare, air attacks, and canalization by obstacles. Units also examine an enemy force's capability to conduct air attacks, insert forces behind friendly units, and employ CBRN weapons. Units also determine how soon a follow-on enemy force can join an engagement when they are defending against an enemy attacking in echelons.

8-83. Commanders direct their information collection assets to determine the locations, strengths, and probable intentions of attacking enemy forces before and throughout their defense. They prioritize early identification of the enemy's main effort within their assigned areas. Commanders may need to complement information collection operations with combat actions that test enemy intentions. Fighting for information can have two benefits: it can make enemy forces reveal their intentions and their preparations.

8-84. Units use available information collection assets—such as geospatial intelligence, ground surveillance, and reconnaissance—to study the terrain. By studying the terrain, they try to determine the principal enemy and friendly mounted, dismounted, and air avenues of approach. Units determine the most advantageous area for the enemy force's main attack, as well as other mission variables. Just as in the offense, the echelon

intelligence and operations officers, in coordination with the rest of the staff, develop a synchronized and integrated information collection plan that satisfies the unit's maneuver, targeting, and information requirements.

8-85. A unit's ability to see enemy forces is critical to the conduct of the defense. Defensive plans must address the sustainment, replacement, and reconstitution of information collection assets throughout the preparation and execution of the defense. In the defense, the performance of information collection tasks overlaps unit planning and preparing phases. Leaders performing these tasks often deploy within their assigned areas before their units fully develop their plans. These leaders need to respond to changes in orientation and mission. Commanders ensure that their staffs fully plan, prepare, and assess the execution of their information collection synchronization plans to ensure that all their commander's critical information requirements are answered to inform their overall plans.

FIREs

8-86. In the defense, units use fires to neutralize, suppress, or destroy enemy forces; to delay or disrupt an enemy force's ability to execute a given COA; and to enhance the effects of massed direct fires. Thus, fire support systems support both the commander's main and supporting efforts.

8-87. A defending force is more effective if it can locate and attack enemy forces while they are stationary and concentrated in assembly areas or advancing along LOCs, as opposed to when attacking enemy forces deploy in combat formations within the MBA. To accomplish this, a defending force must employ available indirect and joint fires throughout its assigned area and closely link them to target acquisition means, such as information collection assets.

8-88. As defensive plans develop, units visualize how to synchronize, coordinate, and distribute the effects of indirect and direct fire at the decisive time and place. They place permissive FSCMs as close as possible to friendly positions to enable the rapid engagement of attacking enemy forces by indirect and joint fires. Units coordinate the massing of fires effects on enemy targets, concentrated at obstacles and other choke points, before enemy forces can disperse. Proper distribution of fires ensures the massing of overwhelming combat power at these points and ensures the destruction or neutralization of high-payoff targets without wasting assets through repetitive engagements by multiple friendly systems.

8-89. Effects from multiple domains have the greatest impact on an enemy when units synchronize them with direct fires, obstacles, and counterattack plans. Units integrate the fire support and obstacle plans from the beginning of planning for a defense. Indirect fires complement the effects of obstacles and can disrupt enemy attempts to breach or bypass these obstacles. All elements in the fire support chain must understand the commander's intent, the scheme of maneuver, and the obstacle plan.

8-90. Various fire support considerations exist for each phase of the defense. As part of shaping operations or supporting efforts during defense preparations, units try to disrupt an enemy force's attack preparations by—

- Employing indirect fires on choke points and likely enemy force assembly areas.
- Employing air support on known, suspected, and likely enemy force locations.
- Attriting enemy resources by continuously engaging high-payoff targets.
- Conducting electromagnetic warfare to degrade the enemy force's ability to command and control forces.
- Employing counterfires to engage and destroy enemy artillery and mortar systems attempting to deliver suppressive fires.
- Providing fires in support of the unit's security operations, such as a unit conducting the tactical mission task of counterreconnaissance.

8-91. Units may want to wait to execute a counterfire mission until an engagement begins in the MBA. However, when defending forces enjoy qualitative advantages in fire support, the advantages gained from a counterfire battle usually outweigh the risks to the defending force. The defender's ability to mass fires quickly and then rapidly reposition forces is a major factor in disrupting enemy forces and establishing the conditions for successful defensive operations.

8-92. Units employ fires to support the security force, using precision and other munitions to destroy enemy reconnaissance elements and other high-payoff targets. This also helps to deceive enemy forces about the location of the MBA. Units support their security forces by planning the delivery of fires at appropriate times and places throughout their assigned areas to slow and canalize an enemy force as it approaches the security area. This allows defending security forces to engage enemy forces on favorable terms. To prevent fratricide and friendly fire incidents, units place no-fire areas over security force elements. Finally, defending units use fires to support the withdrawal of the security force once the security force's shaping operation is complete and the defending unit is prepared to conduct MBA operations.

8-93. Air support can play an important part in attriting or destroying enemy forces. Often, only aircraft are available to oppose an enemy penetration until ground forces can redeploy. Units use air interdiction and close air support to disrupt an enemy advance. Close air support can operate with Army helicopters and artillery assets. Additionally, units can incorporate artillery fires with electromagnetic warfare and joint systems to suppress enemy air defenses while aircraft engage targets. Air interdiction can delay, destroy, or neutralize enemy follow-on forces, thereby providing the unit with additional time to prepare defensive positions.

8-94. Once the engagement moves into the MBA, fire support assets continue to target enemy combat units to force them to deploy. At the same time, these assets inflict casualties, disrupt the cohesion of the enemy's attack, and impede the enemy's ability to mass combat power. Fire support assets continue to attack an enemy follow-on force before it can be committed to the MBA. Fire support assets attack enemy command and control facilities and logistics sites in depth to isolate the attacking enemy force. Units take advantage of the range and flexibility of fire support weapons to mass fires at critical points, such as obstacles and engagement areas, to slow and canalize the enemy force to provide better targets for direct fire systems. Fire support systems cover barriers, gaps, and open areas within the MBA. Units assign tasks to these fire support systems, including closing obstacle gaps or reseeding previously breached obstacles in accordance with the rules of engagement. Other tasks include—

- Massing fires to suppress enemy direct and indirect fire systems to facilitate defensive maneuver, especially counterattack and disengagement.
- Neutralizing or isolating enemy forces that have penetrated the defensive area and impeding the movement of enemy reserves.
- Attacking enemy artillery and forward air defense elements.
- Using jamming to degrade or disrupt the enemy force's ability to transmit data and information.
- Reallocating fire support assets, after identifying the enemy's main effort, to reinforce fires in the most vulnerable areas.
- Disrupting the enemy combined arms team through such action as separating attacking enemy combat vehicles from enemy dismounted infantry.

8-95. In response to shallow enemy penetrations, artillery units normally reposition their systems laterally, away from the points of enemy penetration. This allows the defender's artillery systems to provide fire support throughout the area of penetration.

SUSTAINMENT

8-96. Units address several unique sustainment considerations in the defensive plan. Priorities for replenishment are normally ammunition and materials to construct caching ammunition and limited amounts of petroleum products. Units place these materials in centrally located positions within obstacles and defensive positions. There is normally a reduced need for bulk fuel in the defense compared to the offense. There may be an increased demand for decontaminants and CBRN collective and personal protective equipment. Units consider stockpiling for the MBA. If necessary, units plan to destroy those stocks as part of a delay. The supply of obstacle materials in a defense can be a significant problem that requires detailed coordination and long lead times. Units are careful to not overlook the transportation assets and personnel required in obtaining, moving, and uncrating barrier material and associated obstacle-creating munitions, such as demolition charges and mines.

8-97. Commanders ensure that echelon sustainment officers and sustainment unit commanders supporting the defending force understand the commander's tactical intent. Sustainment officers can then establish

support priorities in accordance with the commander's intent and plan sustainment operations to ensure the supportability of the operation. Units also address sustainment during branches and sequels to the defense plan, such as a counterattack into the flank of an adjacent unit.

8-98. Maneuver units resupply regularly and maintain supply stocks in case an enemy breakthrough disrupts the replenishment flow. At the battalion and BCT levels, units ensure combat configured loads are delivered to maneuver units regularly. Combat configured loads are packages of potable and non-potable water; CBRN defense supplies; barrier materials; ammunition; petroleum, oils, and lubricants; medical supplies; and repair parts tailored to a specific-sized unit. This eliminates the need to request supplies and reduces the chance that a lapse in communications interrupts the supply flow and jeopardizes the integrity of the defense. Units resupply the supported maneuver unit using this push system until it requests otherwise. Units can use utility and cargo helicopters to deliver supplies directly from the echelon support area to the defending unit. Units use information systems to tailor these combat-configured push packages to the demands of the supported maneuver units.

8-99. If defending units do not expect enemy forces to conduct a limited-visibility attack, the defending force can conduct resupply during periods of limited visibility. This reduces the chance for enemy interference with the resupply process, but it also lengthens the amount of time it takes to complete the process. If defending units expect the enemy to conduct a limited-visibility attack, they conduct resupply during daylight. When enemy forces possess significant air, satellite, or unmanned aircraft capabilities, friendly forces may be required to infiltrate resupply vehicles to reduce the chance of enemy detection.

8-100. Terrain management is a critical consideration in the echelon support area. Units position each sustainment unit where it can best fulfill its support tasks while using minimal resources to maintain security in conjunction with other units located in the echelon support area. In contiguous operations, units position echelon sustainment facilities farther away from the forward edge of the battle area in a defense than in an offense to avoid interfering with the movement of units between BPs or the forward movement of counterattack forces. These facilities are located far enough behind friendly lines that likely enemy advances do not compel the relocation of critical sustainment capabilities at inopportune times. However, those sustainment capabilities supporting the unit must be close enough to provide responsive support. In noncontiguous operations, units position sustainment facilities in areas within the perimeters of ground maneuver units to provide security and avoid interrupting their sustainment functions. Units distribute similar functional sustainment units throughout the defensive area in both environments. This distribution allows them to designate one sustainment unit to pick up the workload of a displacing second sustainment until the second sustainment unit is once again operational.

8-101. Defending units provide maintenance support as far forward as possible at maintenance collection points to reduce the need to evacuate equipment. The purpose of the maintenance effort is to fix as far forward as possible those systems that can return to maneuver units in combat-ready condition. Units ensure that multifunctional forward logistics elements contain the maximum variety of maintenance personnel with appropriate equipment, such as repair sets, kits, and outfits, to repair weapon systems quickly.

8-102. Medical support associated with the defense anticipates significant casualties just as in the offense. Units plan to augment available ambulances if a mass casualty situation develops. Units should always plan for mass casualties and have an evacuation plan, including ambulance exchange points and air evacuation, which accounts for the use of both standard and nonstandard air and ground platforms.

8-103. The conduct of troop movements and resupply convoys is critical to a successful defense. Units balance terrain management, movement planning, and traffic circulation control priorities. They plan multiple routes throughout the assigned areas and closely control their use. They may allocate mobility resources to maintain main supply routes to support units and supplies moving forward and to evacuate personnel and equipment to the rear. Military police ease these movements, prevent congestion, and respond to maneuver plan changes. Units plan for dislocated civilians and the effect that they have on friendly military operations. Civil affairs staff assist units in planning populace and resources control measures. Local nation and international organizations minimize the impact of disaster or conflict on dislocated civilians. Units coordinate air and ground movements supporting their scheme of maneuver with any other affected Services. They also coordinate such movements with any affected organic and external Army aviation, fire support, air defense, and ground maneuver units.

8-104. During the preparatory phase of the defense, sustainment operators normally pre-position supply stocks, particularly ammunition and barrier materials, in the BPs of defending forces. They also establish maintenance and casualty collection points. Sustainment operators address these and other sustainment preparations in the planning process to avoid compromising the operation. Units can include sustainment preparations in their military deception plans.

PROTECTION

8-105. Unit survivability is critical to defensive success. Protection preserves subordinate unit capabilities so that units can use those capabilities to apply maximum combat power at the desired times and places. Criticality, vulnerability, and recoverability are some of the most significant considerations for units in determining protection priorities. They use available decision support tools and analyses to assess the unit's critical assets and key vulnerabilities. Units plan and prepare for enemy attacks by predicting where the next attack will occur and applying measures to mitigate the attack. These enemy attacks may be from conventional, irregular, or terrorist forces and drive changes in local unit protection or individual protective measures. Incident management plans and environmental considerations integrate the protection tasks and their associated systems. The protection tasks discussed in paragraphs 8-106 through 8-133 have additional defense-specific planning considerations not addressed in Chapter 1. (See ADP 3-37 for more information on protection tasks.)

Survivability

8-106. Since an attacking enemy force usually has the initiative in terms of where and when it will attack, a defending unit takes many actions to protect the force from losses due to enemy actions. The survivability effort for the defense enables units to concentrate firepower from fixed positions. To avoid detection through the forms of contact and destruction by enemy forces, units move frequently and establish survivability positions quickly. To provide flexibility, units may need primary, alternate, supplementary, and sequential positions. This is particularly true of units defending key or decisive terrain. Units enhance their survivability by using concealment, military deception, dispersion, masking, and field fortifications. Units avoid predictable defensive preparations because enemy forces tend to attack lightly defended areas.

8-107. When preparing area and mobile defenses, engineers supporting the defensive effort help maneuver and supporting units prepare fighting and survivability positions. Units locate these positions throughout the defending unit's assigned areas from the security area, through the MBA, to the echelon support area. BCTs pass survivability requirements beyond the capabilities of their brigade engineer battalions to the current operations integrating cell in their higher echelon headquarters. That headquarters then tasks a maneuver enhancement brigade or functional engineer brigade to provide the required support based on the mission variables. These engineers also prepare any strongpoints required by the concept of operations.

8-108. Survivability tasks include preparing and constructing trenches; command post shelters; and artillery firing, radar, and combat vehicle fighting positions. Units provide guidance on the level of protection—such as hull defilade or overhead cover, system priorities, and early use of specialized engineer systems that can construct survivability positions. Their priority in engineer survivability planning during defensive operations is determining the most appropriate locations and standards for the construction of survivability positions. This includes such things as determining overhead cover standards, such as capable of resisting penetration by 82mm mortar or 152mm howitzer shells.

8-109. Units protect supplies against blast, shrapnel, incendiaries, and CBRN contamination. They can protect supplies loaded on tactical vehicles against almost anything but a direct hit by constructing berms large enough to accommodate vehicles and deep enough to keep supplies below ground level. These berms may not provide the desired degree of protection against an enemy force using indirect fire or cluster munitions. The echelon engineer officer can advise sustainment operators about storage area sites that reduce the requirements for engineer survivability support without reducing the degree of protection provided.

8-110. The defending unit's subordinate maneuver elements occupy their assigned areas as soon as possible. This allows those units to have as much time as possible to prepare their defensive positions and enhance the defensive characteristics of the terrain within those assigned areas. This includes the construction of fighting and survivability positions.

8-111. Units employ three principles to enhance the concealment of their defensive positions from ground and aerial observation—siting, discipline, and construction:

- Siting means selecting the most advantageous position in which to hide a person, an object, or an activity. This is often the shadows provided by wood lines and buildings.
- Strict concealment discipline by units and individual Soldiers is required for success in any concealment effort. Units avoid activities that change the appearance of an area or reveal the presence of military equipment. Laxness and carelessness reveal positions. Tracks, spoil, and debris are the most common signs of military activity that indicate concealed objects. Units ensure that new tracks follow existing paths, roads, fences, or natural lines in the terrain pattern. Units do not end exposed routes at a position but extend them to another logical termination. Units brush out, camouflage, or cover their tracks, if practical. Units cover or place spoil and debris on positions and equipment to blend with the surroundings. Units add artificial camouflage when the terrain and natural vegetation are inadequate for concealment.
- Construction involves adding natural materials to blend with the surrounding terrain.

8-112. Leaders ensure Soldiers understand the importance, principles, and techniques of camouflage. All personnel must ensure the effectiveness of all camouflage measures and maintain strict camouflage discipline. In addition to hiding equipment, units can avoid detection by using techniques such as placing mud on glassy surfaces and unfilled sandbags over windshields.

8-113. Major defensive positions, sustainment sites, command posts, and other facilities may require special camouflage. Camouflage measures that provide this protection include constructing dummy positions and decoys. Units carefully plan the use of such measures within the framework of real positions and ongoing and future operations. Five fundamental methods work to camouflage and conceal individual weapons, units, installations, and activities—hiding, blending, disguising, disrupting, and decoying:

- Hiding is the complete concealment of an object by some form of physical screen. For example, sod placed over mines hides the mines; the overhead canopy of trees hides the objects beneath from aerial observation; tunnels hide objects located within them; a building's roof and walls, camouflage net, or tarpaulin hides objects beneath them; and a defilade position hides objects from ground observation. In some cases, the screen may be invisible. In other instances, the screen may be visible, but it hides the activity behind it.
- Blending is arranging or applying camouflage materials on, over, and around an object so that it appears to be part of the background. Examples include applying face paint to the exposed areas of skin, and adding burlap, paint, and live vegetation to helmets and clothing to closely resemble or blend into the background. Units can apply the same technique for equipment or structures.
- Disguising is the intentional misleading of the enemy about the friendly force's identity, strength, and intention, and may draw enemy fire from real assets. Therefore, the simulation of objects, pieces of equipment, or activities may have military significance. Inflatable tanks, tents, and buildings can look like the real thing to an aerial observer.
- Disrupting is the technique that alters or eliminates regular patterns and target characteristics. Disrupting techniques include pattern painting, deploying camouflage nets over selected portions of a target, and using shape disrupters (such as camouflage sails) to eliminate regular target patterns.
- Decoying is the technique that deploys a false or simulated target within a target scene or in a position where the enemy might conclude that it has found the correct target. Decoys generally draw fire away from real targets. Depending on their fidelity and deployment, decoys greatly enhance survivability.

8-114. Units employ damage limiting measures as part of unit survivability measures. These measures attempt to limit damage if enemy forces detect the position. Damage limiting measures make enemy forces destroy friendly equipment one piece at a time and use multiple attacks. Enemy forces should never be able to put a unit out of action with just a single attack. One type of damage limiting measure is units disperse to limit the damage done by an enemy attack. Dispersed troops and vehicles make attacking forces concentrate on single, small targets in which system or target location inaccuracies may cause enemy weapons systems to miss intended targets. An enemy force may employ any cluster munitions to counter friendly dispersion efforts. The wider the dispersion of unit personnel and equipment, the greater the potential for limiting

damage. This can also make it harder to mass effects. Units position forces and installations to avoid congestion, but do not disperse them to the extent that there is a risk of defeat in detail by an enemy force employing conventional munitions or weapons of mass destruction.

8-115. Units also use cover to limit the amount of damage and casualties that they can receive because of an enemy attack. Folds in the earth, natural depressions, trees, buildings, and walls offer cover; individuals and units seek them out and use them habitually. If units deploy in flat terrain lacking cover, digging in or sandbagging can offer some protection. The unit employs obscuration if it is moving and cannot use natural cover or cannot build fortifications. Obscurants (including smoke) make target acquisition much more difficult for attacking forces. The defending unit must do everything it can to avoid an attack in the first place as part of its survivability measures, but if it is attacked, it uses cover and dispersion to limit the amount of damage.

8-116. In addition to cover and concealment units employ tactical deception to increase their survivability. This can include use of decoys, frequent repositioning of units, and construction of false battle positions. (See Chapter 19 for more information on tactical deception.)

Air and Missile Defense

8-117. Army AMD units will not normally be positioned to provide AMD support to security forces in the defending unit's security area. Short-range air defense units may be assigned or attached to defending units to support maneuver forces and protect critical static assets. They may be able to range portions of the MBA to provide some general support. Generally, defending ground forces depend on offensive and defensive counterair warfare operations conducted by fixed-wing aircraft and short- and long-range surface-to-air missiles for defense against enemy aircraft and missiles. Defending ground units employ small arms air defense against enemy aircraft attacking their positions and enemy UASs.

8-118. Air and missile defense supports the conduct of the defense by engaging targets throughout the assigned area with air and missile defense fires and defensive counterair operations. In the defense, general fire support considerations for supporting the concept of operations include—

- Planning for target acquisition and sensors to provide coverage of NAIs, TAIs, and critical assets.
- Providing fires in support of defensive counterair operations to prevent enemy aerial attacks.
- Providing integrated air and missile defense fires in synchronization with maneuver and electromagnetic warfare countermeasures in the conduct of decisive and shaping operations.
- Providing fires to support counterattacks.
- Providing fires in support of main and supporting efforts.

See JP 3-01 for additional information on joint counterair operations.

Force Health Protection

8-119. Defensive operations can result in prolonged occupation of static positions and corresponding exposure of personnel and equipment to weather and other environmental effects or health threats that can quickly degrade readiness. Proper planning and employment of force health protection asset to mitigate potential health threats is critical to conducting defensive operations. Units enforce environmental disciplines, such as hydration, field hygiene and sanitation, protective clothing, and maintenance. Defensive operations also may entail sustained enemy bombardments resulting in dramatic effects on the mental and behavioral health of unit personnel. Soldiers can become combat ineffective from heavy indirect fire, even if exposure is for short durations. Units deliberately emplace systems for combat and operational stress identification and treatment to reduce the return to duty time of affected personnel.

Chemical, Biological, Radiological, and Nuclear

8-120. Defending units in static positions are vulnerable to CBRN threats and hazards. Units specify the degree of acceptable risk and establish priorities for their CBRN assets. They must balance the dispersion of forces and installations to increase CBRN survivability with the ability to mass overwhelming combat power to defeat enemy forces.

8-121. Units develop, train, and rehearse a CBRN protection plan to protect personnel and equipment from CBRN hazards. Units conduct mission-oriented protective posture level analysis results to determine initial individual protective equipment levels, decontaminants, water, and other CBRN equipment requirements. Higher echelon headquarters often establish the mission-oriented protective posture level. Force health personnel maintain situational awareness and surveillance of personnel strength information for indications of force contamination, epidemics, or other anomalies apparent in force health data. Units ensure that they can conduct CBRN defense measures including surveillance, protection and decontamination of military personnel and equipment. Commanders are responsible for CBRN passive defense training to prepare the unit to operate in a CBRN environment.

8-122. CBRN personnel contribute to the overall protection of units located in defensive positions. Units employ CBRN reconnaissance and surveillance elements along movement routes and at potential choke points. CBRN vulnerability assessments provide a list of recommended preventive measures for units to consider before and after they move into their defensive positions. These assessments provide a list of preventive measures that can range from mission-oriented protective posture levels, CBRN agent characteristics on persistency and volatility, to establishing or activating collective protection systems and establishing personnel and equipment decontamination sites. Proper use of CBRN assets enables units to reduce casualties and complete the mission. (See FM 3-11 for more information on CBRN operations.)

Operations Security

8-123. As part of the defense, the echelon's OPSEC program and any military deception or survivability efforts should conceal the locations of defensive positions, engineer support, the disposition of forces, and the timing of any offensive operations from the enemy or mislead the enemy regarding this information. These measures prevent the enemy from launching effective spoiling attacks. (For more information on military deception see FM 3-13.4. For more information on operations security see ATP 3-13.3.)

Explosive Ordnance Disposal

8-124. Explosive ordnance disposal elements provide the capability to detect, identify, evaluate, render safe, exploit, and dispose of explosive hazards to ensure friendly forces maintain their freedom of movement. These elements can also render safe and dispose of explosive hazards that deny access to or threaten supplies, facilities, and other critical assets. These hazards can include conventional unexploded ordnance, high-yield explosives and associated materials, improvised explosive devices, and weapons of mass destruction. Explosive ordnance disposal may dispose of hazardous foreign or U.S. ammunition; unexploded ordnance; and individual, booby-trapped, and chemical mines. Breaching and clearance of minefields is primarily an engineer responsibility (See ATP 4-32 for more information on explosive ordnance disposal operations).

Detention Operations

8-125. During the defense, units must plan for capturing numerous detainees, most of whom are categorized as enemy prisoners of war. The classification of these detainees varies according to operational environments. Defending units may capture individual detainees or entire enemy units separated and disorganized from combat. Unit staffs consider detention operations when developing defensive plans. Planners account for all aspects of detainee operations while planning for the supported operation. To ensure that units are prepared to incorporate detainee operations during planning, units establish mechanisms that ensure effective consideration of potential detainee operations and their supporting activities. Units monitor the actual number of detainees closely to avoid devoting too many or too few resources to detainee operations.

8-126. All Soldiers participating in military operations must be prepared to process and safeguard detainees. Actions at the point of capture—the point at which a Soldier has the custody of, and is responsible for safeguarding, a detainee—can directly affect mission success and could have a lasting impact on U.S. tactical, operational, and theater strategic military objectives. Military police are trained in detainee operations and support the force by relieving units of detainees to reduce the impact on combat forces. (See FM 3-63 for more information on detainee operations.)

Area Security

8-127. The enemy will employ a mix of long-range fires, aircraft, cannons, missiles, and rockets, as well as ground maneuver and special purpose forces, to attack defending forces, command and control nodes, lines of communication (LOCs), sustainment sites, and civilian population centers to disrupt a unit's defense. Units pay attention to area and local security throughout the conduct of the defense. This is especially true when the defending unit conducts noncontiguous operations. Units protect their forces and critical assets through a variety of measures. Forces conducting area security in the defense can deter, detect, or defeat terrorist elements in addition to providing protection from more conventional threats.

8-128. The success of unit defensive actions may depend on protecting the echelon support area from enemy attacks. Units address any early detection and immediate destruction of enemy forces attempting to operate in the echelon support area or interdict LOCs between support areas and maneuver forces. Enemy attacks in the echelon support area can range in size from individual saboteurs to enemy airborne or air assault insertions targeted against key facilities and capabilities. These enemy activities, especially at smaller unit levels, may even precede the onset of hostilities and may be almost indistinguishable from terrorist acts.

8-129. Units clearly define responsibilities for the security of units in the echelon support area. The unit designated as responsible for a given echelon support area (for example, the maneuver enhancement brigade for the division support area) is responsible for defensive planning and risk mitigation in that area. That unit can designate the commanders of tenant units (except medical corps officers) as base and base cluster commanders. Those base and base cluster units are responsible for the local security of their respective bases and base clusters. The unit responsible for the echelon support area can also designate protection standards and defensive readiness conditions for tenant units and units transiting through the area. Higher protection standards can affect the ability of those supporting sustainment units to perform their primary mission—support the operations of maneuver and other forces. Units coordinate to mitigate effects of security operations on the primary functions of the echelon support area.

8-130. The echelon's OPSEC program and any deception or survivability efforts should conceal the location of the friendly objective, the main effort, the disposition of forces, and the timing of the defense from enemy forces or mislead enemy forces regarding this information. These measures prevent enemy forces from launching effective spoiling attacks.

8-131. Planners determine how military police elements supporting the defending unit enhance unit protection capabilities by conducting area security (including reconnaissance, surveillance, base security, protective services, secure routes and convoys, and physical security measures) inside and outside the echelon support area. Military police also perform response force operations to defeat Level II threats against bases and base clusters located in that support area. Military police maintain contact with Level III threats in the echelon support area until a tactical combat force can respond.

Risk Management

8-132. The likelihood of fratricide decreases during defensive operations compared to offensive operations. During defensive operations, friendly forces are typically stationary and the enemy is maneuvering towards them. However, instances for fratricide are typically higher during transitions, such as going on the offense or retrograding.

8-133. During the preparation phase of defensive actions, planning and rehearsals are the primary tools for identifying and reducing risk. The types of risks identified determine the type of rehearsal conducted. Rehearsals should extend to all levels of command and involve all key players. Considerations for their use include—

- Confirmation briefs to ensure leaders understand what they have been told to do.
- Backbriefs to ensure subordinates' course of actions meets their higher echelon commander's intent.
- Rehearsals to ensure all Soldiers understand how their organization synchronizes with the rest of the friendly forces in offensive operations.

TRANSITIONS

8-134. If a defense is successful, units anticipate and transition to either offensive operations or stability operations. If an area or a mobile defense is unsuccessful, forces transition into a retrograde. Transition from one type of operation to another requires accurate situational assessment capabilities as well as mental and physical agility of all those involved.

8-135. Units deliberately plan for branch or sequel operations, which assist the transition process and allow them to create conditions necessary for a successful transition. Such planning addresses the need to control the tempo of operations, maintain contact with both enemy and friendly forces, and keep the enemy force off balance. Transition planning establishes the procedures and priorities by which a unit prepares for the next mission. Based on the mission variables, it establishes the required organization of forces and control measures necessary for success. Probable transitions should be identified by units with a staff and reflect on the commanders' decision support products.

8-136. Prior contingency planning decreases the time needed to adjust the tempo of combat operations when a unit transitions from a focus on the defense to other operations. It does this by allowing subordinate units to simultaneously plan and prepare for subsequent operations. Preparations typically include resupplying unit basic loads and repositioning or reallocating supporting systems.

8-137. A unit's contingency planning also reduces the amount of time and confusion when it is unsuccessful in its defensive efforts and must transition to retrograde operations. Units designate subordinate units to conduct delaying operations and to evacuate casualties and inoperative equipment. They use retrograde operations to preserve the force as a combat-capable formation until they can establish those conditions necessary for a successful defense.

TRANSITION TO OFFENSIVE OPERATIONS

8-138. A defending unit transitions to the offense by anticipating when and where an enemy force will reach its culminating point or require an operational pause before it can continue. At those moments, the defending force has odds that are more favorable. Combat power ratios favor a defending force. The enemy force will do everything it can to keep friendly forces from knowing it is approaching that culmination point and thus is overextended. Indicators that the enemy force is becoming overextended include when—

- Enemy forces begin to transition to the defense; this defense may be by forces in or out of contact with friendly forces.
- Enemy forces suffer heavy losses.
- Enemy forces start to deploy before encountering friendly forces.
- Enemy forces are defeated in most engagements.
- Enemy forces are committed piecemeal in continued enemy attacks.
- Enemy reserves are identified among the attacking forces.
- Examination of captured or killed enemy soldiers and captured or destroyed enemy equipment and supplies shows that the enemy force is unable to sustain itself.
- Enemy operations show a noticeable reduction in tempo.
- Local counterattacks meet with unexpected success.

8-139. In a mobile defense, transitioning to the offense generally follows the striking force's counterattack. In an area defense, units designate a portion of their force to conduct the attack. This force usually includes the echelon's available reserves.

8-140. As units transition their forces from the defense to the offense, they—

- Establish a LD. This may require the conduct of local, small-scale attacks to seize terrain necessary for the conduct of offensive operations or to destroy enemy forces that could threaten the larger offensive action.
- Maintain contact with enemy forces, using combinations of available information collection assets to develop the information required to plan future operations and avoid falling for enemy military deception operations.

- Maintain or regain contact with adjacent units in a contiguous assigned area and ensure that subordinate units remain capable of mutual support in a noncontiguous assigned area.
- Maneuver capabilities based on probable future employment. For example, fire support assets tend to move forward so that their range encompasses additional enemy forces and terrain.
- Transition the focus of engineer efforts from countermobility and survivability to mobility.
- Submit a prioritized protection list to influence the positioning of these air and missile defense assets.

8-141. Units reorganize and resupply concurrently with other transition activities. This requires sustainment to transition from a chosen location to an emphasis on ensuring the force's ability to advance and maneuver. For example, in the defense, the sustainment effort may focus on Class IV and Class V items and evacuation of combat-damaged systems. In the offense, the sustainment effort may focus on providing Class III and forward repair of maintenance and combat losses. A transition is often a time to perform deferred equipment maintenance. Additional assets may also be available on a temporary basis for casualty evacuation and medical treatment because of a reduction in the tempo of operations.

8-142. Units should not wait too long to transition from the defense to the offense as the enemy force approaches its culminating point. At that point, enemy forces are dispersed, extended in depth, and weakened. At that time, any enemy defensive preparations will be hasty, and they will not have their forces adequately positioned for the defense. Units want the enemy force in this posture when they transition to the offense. They do not want to give the enemy force time to prepare for the defense. Additionally, the psychological shock on enemy soldiers will be greater if they suddenly find themselves desperately defending on new and often unfavorable terms while friendly Soldiers will enjoy a psychological boost by going on the offense.

8-143. If units in contact transitions to the attack, they must retain sufficient forces in contact to fix enemy forces. Units concentrate their attacks by reinforcing select subordinate units so they can execute the attack, and if necessary, maintain the existing defense. They can also adjust the defensive boundaries of subordinate units so entire units can withdraw and concentrate for the attack. For more information on transitioning to the offense, see counterattacks in Chapter 5.

8-144. If a defensive operation leads to a stalemate with both forces left in contact, defending units seek to retain the initiative and create conditions for future operations. Commanders prepare their defending units to move rapidly to subsequent defensive positions during battle lulls because of the risks associated with defending twice from the same positions. This is because the enemy force now knows the location of friendly defensive positions and can target them with supporting fires unless those defending forces can displace. Defending units stay in place and continue to fight unless they can suppress enemy forces or take other actions to break contact with enemy forces if there are no battle lulls. This is because of the risk when units try to displace from prepared positions while still under enemy pressure.

TRANSITION TO THE RETROGRADE

8-145. Defending units unable to maintain the integrity of their defense must transition to a retrograde operation or risk destruction. A retrograde involves either a delay, withdrawal, or retirement operation. These operations may occur simultaneously or sequentially. As in other operations, the commander's intent and concept of operations drive planning for retrograde operations. Each variation of the retrograde operation has its unique planning considerations, but considerations common to all retrograde operations are risk, the synchronization of forces, and rear operations. Chapter 11 addresses planning, preparing, and executing considerations for retrograde operations. However, many key considerations receive special emphasis during the transition from the defense to the retrograde.

8-146. The transition to retrograde operations must be accompanied by efforts designed to—

- Reduce the enemy force's strength and combat power.
- Provide friendly reinforcements.
- Concentrate forces elsewhere for the attack.
- Prepare stronger defenses elsewhere in the assigned area.
- Lure or force part or all of the enemy force into areas where it can be counterattacked.

8-147. The complexity and fluidity of retrograde operations and the absolute need to synchronize the entire operation dictates the need for detailed, centralized planning and decentralized execution. Planning for retrograde operations begins with the preparation of plans for the follow-on mission. The concept of operations and commander's intent drive those plans.

8-148. The nature of retrograde operations involves an inherent risk of degrading the defending force's morale. Commanders remain well forward and visible. They ensure that subordinate leaders and Soldiers understand the purpose and intent of the operation as well as their role in accomplishing the mission. Thorough planning, effective control, and aggressive leadership minimize risk during a retrograde and enhance the probability of success.

8-149. Intelligence requirements dramatically increase as friendly forces begin their movement to other locations and the combat capabilities of units in contact are reduced. Units develop a synchronized and integrated information collection plan to identify and locate enemy attempts to pursue, outflank, and isolate the defending force as it transitions to the retrograde. As units transition to the retrograde, they make every effort to conserve combat power. Units consider the need to—

- Balance the risk of conserving combat power while remaining disposed to the intent of the defensive mission.
- Disengage and withdraw units lacking tactical mobility and nonessential elements before the retrograde of the main body.
- Use mobile forces to cover the retrograde of less mobile forces.
- Use the minimum-essential combat power necessary to provide security for the retrograde of the main body.

TRANSITION TO STABILITY

8-150. Units may transition to stability operations if the defense retained decisive terrain, denied vital areas to enemy forces, and successfully defended against attacking enemy forces removing the need for an offensive operation. As in other operations, the commander's intent and concept of operations drive the planning for stability tasks. Generally, units focus on meeting immediate essential service and civil security needs for civilians in the assigned area while coordinating with any existing local nation government and nongovernmental organizations before addressing the other primary stability tasks. Support requirements may change dramatically. Units will probably need to change their rules of engagement and ensure that those changes are quickly distributed to all levels.

8-151. When a unit transitions from a defense to stability, the unit will generally execute a sequel to its previous defensive order. Units reorganize to introduce those capabilities required by changes in the mission variables. If commanders and staffs are unfamiliar with the civil considerations of their assigned area, they should refer to assigned or attached civil affairs units operating in their area or their higher headquarters if they have no command or support relationship with a civil affairs unit. The command and control and protection functions remain relevant to prevent Soldiers from relaxing discipline and safety standards as the stress of active defensive actions disappears.

Chapter 9

Area Defense

This chapter addresses general considerations, organization of forces, and control measures typical to an area defense. It then discusses how to plan, prepare, and execute an area defense. Lastly, this chapter discusses the variations of the area defense.

GENERAL CONSIDERATIONS FOR AN AREA DEFENSE

9-1. An area defense capitalizes on the strength inherent in a closely integrated defensive operation. An area defense enables forces to consolidate, reorganize, and transition to another tactical operation, such as the offense. Commanders may assign their subordinate units the task of conducting an area defense. Subordinate echelons defend within their assigned areas as part of their higher echelon's operations.

9-2. Units conduct an area defense when—

- Directed to defend or retain specified terrain.
- They cannot resource a striking force.
- Their available forces possess less mobility than enemy forces.
- The terrain affords natural lines of resistance and limits the enemy force to a few well-defined avenues of approach, thereby restricting the enemy force's maneuver.
- They have enough time to organize their defensive positions.
- Terrain constraints and lack of friendly air superiority limit the striking force's options in a mobile defense to a few probable employment options.
- Conditions require the preservation of forces when transitioning from a focus on the performance of offensive operations to stability tasks.

9-3. Units conducting an area defense combine static and mobile tasks to accomplish their missions. Static actions usually consist of fires from prepared positions. Mobile actions include using the fires provided by units in prepared positions as a base for counterattacks and repositioning units between defensive positions. Units can use their reserves and uncommitted forces to conduct counterattacks and spoiling attacks to desynchronize enemy forces or prevent them from massing.

ORGANIZATION OF FORCES FOR AN AREA DEFENSE

9-4. An area defense is organized with a security force, main body, and a reserve. Since an area defense focuses on retaining key terrain, most of the unit's combat power in the main battle area is positioned to support the defense of that terrain, while security forces provide early warning. See paragraphs 9-24 through 9-37 for more information on position selection in the defense.

SECURITY FORCE

9-5. Units balance their need for strong security forces to shape their operation and their main body's main effort. They usually allocate security forces to provide early warning and protect those main body forces, systems, and locations necessary to conduct their main effort from unexpected enemy contact. The location of these security forces is usually in front of the main defensive positions where forces are contiguous with one another. These security forces locate on avenues of approach between their respective protected forces and known or suspected enemy force locations on noncontiguous battlefields.

9-6. Maneuver battalion and BCT security forces normally conduct forward screen or guard operations. Division and corps commanders may employ a forward covering force. Division commanders may have their forward security forces conduct a guard if their parent corps employs a forward covering force.

9-7. Commanders designate flank security forces to cover gaps on the unit's flanks. This occurs when gaps between units develop during the conduct of defensive operations. A flank screen or guard is critical if an enemy avenue of approach into the defended area from the flanks could be uncovered during the defense.

MAIN BODY

9-8. Units build their main effort around identified key terrain. A unit's main effort in an area defense focuses on retaining that key terrain by using fires from mutually supporting, prepared positions supplemented by one or more counterattacks and repositioning forces. A unit's main effort normally involves close combat since an area defense emphasizes terrain retention.

9-9. Units normally position their echelon's main body—the bulk of combat power—in their MBA where they want to conduct their main effort. They organize their main body to fix and finish attacking enemy forces. Most of the units in a main body deploy into prepared defensive positions within their MBA. However, some mobile elements may hide and are ready to deploy where and when needed.

RESERVE

9-10. Units' defensive plans should be able to succeed without use of their reserves. However, their reserves' most likely task is to conduct counterattacks based on previously prepared plans. Lower echelon commanders use their reserves primarily to conduct local counterattacks to restore the integrity of their defense or to exploit opportunities. Senior commanders use their reserves to seize the initiative from enemy forces when opportunities to do so present themselves. For example, a corps commander may choose to employ their reserve against enemy fire support assets and follow-on forces to limit the enemy commander's ability to mass combat power on the corps main effort.

9-11. Commanders can assign their reserve a wide variety of tasks to accomplish, and their reserves need to be flexible enough to perform other tasks. Commanders may find it necessary to commit their reserves to restore the integrity of their defenses by blocking enemy penetrations or reinforcing fires into engagement areas. Secondary tasks for a reserve may also include—

- Reinforcing the defense of committed forces.
- Blocking or containing enemy forces that penetrate friendly defensive positions.
- Relieving depleted units and providing for continuous operations.
- Reacting to threats directed against friendly sustainment efforts.
- Extending the flanks of defending units to prevent their envelopment.
- Covering retrograde movements.

9-12. Defending units usually have difficulties establishing and resourcing their reserves because they are normally facing enemy forces with superior combat power. Nevertheless, commanders at each echelon down to the battalion retain reserves as a means of ensuring mission accomplishment and for exploiting opportunities through offensive action.

9-13. Units may not be able to resource separate reserves in some situations. Therefore, they may constitute all or a portion of their reserves from their security forces (after those forces conduct a rearward passage of lines through MBA units). If units employ a security force as the reserve for an area defense, they withdraw the force so it has sufficient time to occupy the reserve positions, perform the necessary degree of reconstitution, and prepare plans for reserve roles. However, this is not the preferred option. Before battle handover, the senior commander must state the acceptable risk to security forces or the disengagement criteria in quantifiable terms, such as friendly strength levels, time, or event. In this case, after completing the rearward passage, security forces move to assembly areas to prepare for their subsequent operations. These areas should be free from enemy interference and clear of MBA units, LOCs, and MSRs.

CONTROL MEASURES FOR AN AREA DEFENSE

9-14. Units organize their area defense by designating engagement areas. Using the seven steps of EA development, defending units determine where to place BPs and how best to assign areas to subordinate units. Units create security areas in front of their MBAs. Security areas should be deep enough to make enemy forces displace as much of their supporting forces as possible, such as cannon artillery, sensors, and air defense artillery gun systems, before attacking. Units also designate echelon support areas.

9-15. Area defense maneuver graphic control measures may include—

- Engagement areas.
- Boundaries.
- FEBA.
- Battle handover lines.
- Strong points.
- TRPs.
- NAIs.
- TAIs.
- Decision points.
- Passage points.
- Various other fire control and countermobility control measures.

9-16. Figure 9-1 depicts example area defense control measures. Appendix A defines these defensive control measures.

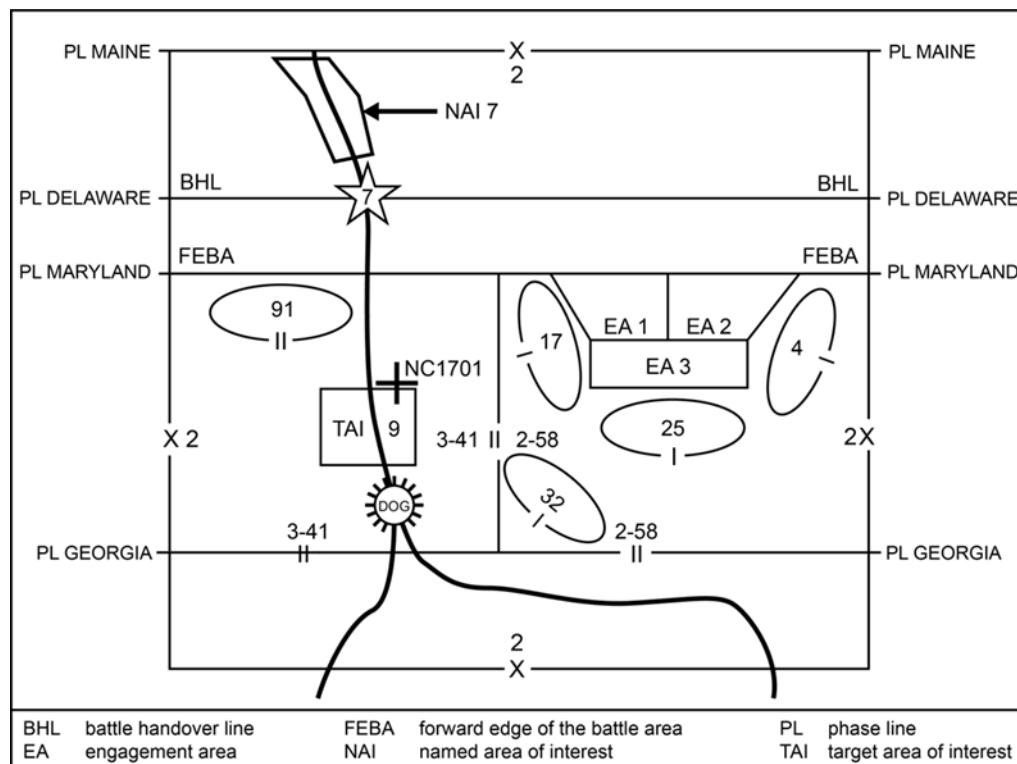


Figure 9-1. Example area defense control measures

9-17. Commanders give their subordinate commanders specific guidance on the initial positioning of forces. Commanders ensure the synchronization of subordinate units' defensive plans, and that control measures, such as contact points and phase lines, enable subordinate commanders and prevent fratricide. If subordinate unit commanders prepare their defensive plans in isolation, assailable flanks between subordinate units could

easily develop. Commanders are responsible for fires and movement planning between the positions of their subordinate units.

PLANNING AN AREA DEFENSE

9-18. The key to a successful area defense is the integration and synchronization of all available assets. The general defensive planning considerations addressed in Chapter 8 apply to the area defense. They assign missions, allocate forces, and apportion functional and multifunctional support and sustainment resources. Commanders decide where to concentrate their efforts and where to take risks. They can rapidly redirect attack aviation and field artillery systems initially allocated to supporting efforts to support their main effort at the appropriate time.

9-19. Units organize their forces differently for contiguous and noncontiguous assigned areas. Figure 9-2 graphically depicts the organization of forces for an area defense in contiguous assigned areas while figure 9-3 graphically depicts the organization of forces for an area defense in noncontiguous assigned areas. Figure 9-2 does not designate the exact security missions performed by security forces because those vary from screen to cover based on the mission variables.

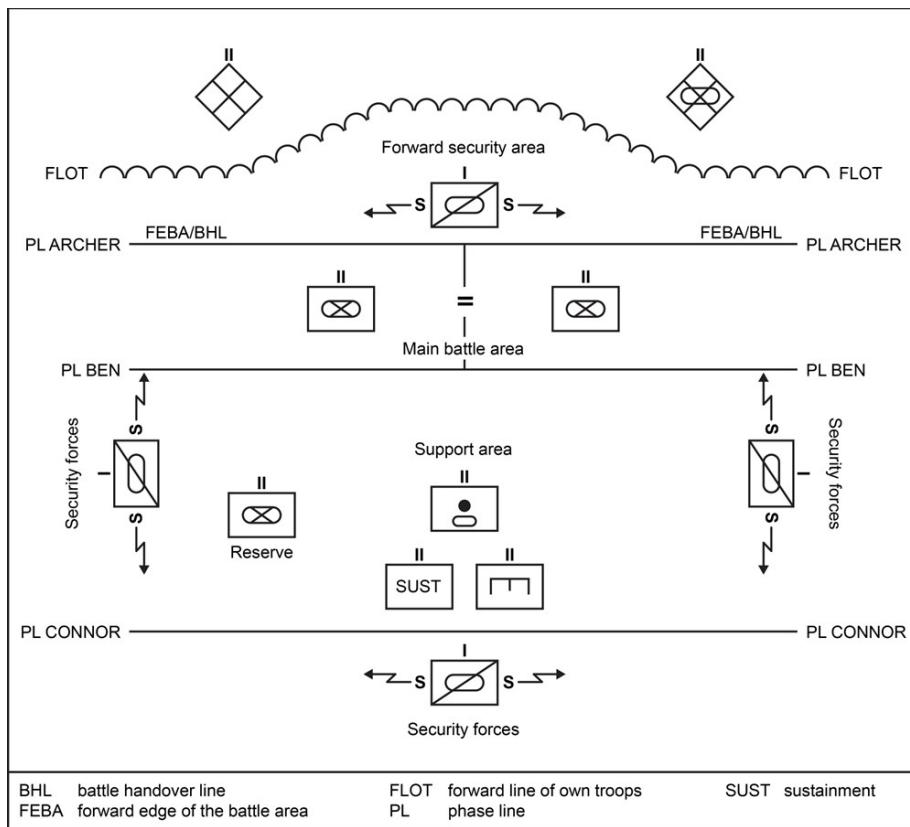


Figure 9-2. Organization of forces for an area defense, contiguous assigned areas

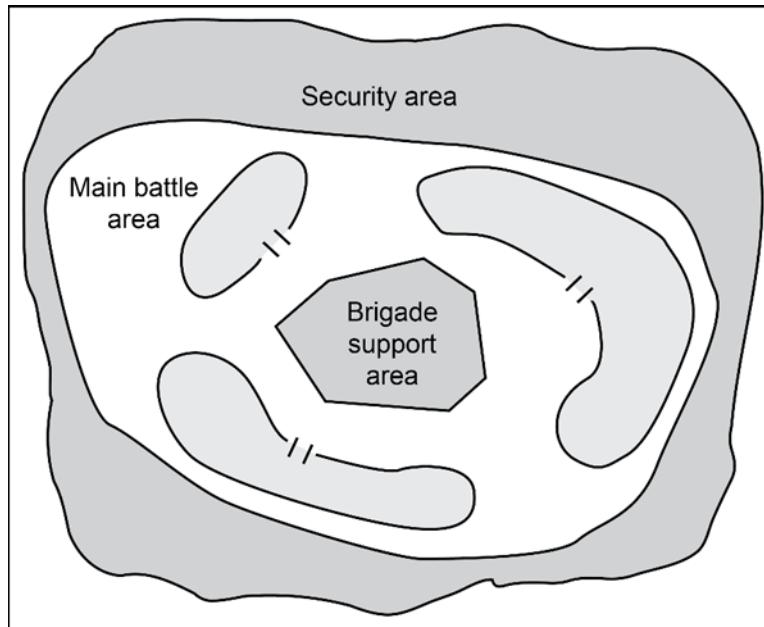


Figure 9-3. Organization of forces for an area defense, noncontiguous assigned areas

9-20. Commanders describe their concept of operations in sufficient detail so that their staffs and subordinate commanders understand precisely how commanders intend to fight their battles. Commanders ensure the coordination of maneuver and supporting actions among subordinates.

9-21. Commanders' keys to successful area defense include—

- Concentrating effects.
- Depth of the defensive area.
- Security.
- Taking full advantage of the terrain.
- Flexibility of defensive actions.
- Timely resumption of offensive actions.

9-22. Units organize their defensive efforts based on their analysis of the mission variables and their higher echelon commander's concept. They decide where to concentrate their efforts and how to economize forces. Initial friendly actions force enemy units to enter established engagement areas. Friendly forces regain the initiative from enemy forces when they successfully perform their area defense. They take advantage of available offensive opportunities that do not risk the integrity of their defenses.

9-23. Sustainment units in an area defense require a careful balance among establishing forward supply stocks of petroleum, oils, and lubricants; barrier material; and ammunition in adequate amounts to support defending units. These units avoid having so many supplies located in forward locations that units cannot rapidly move them to counter or avoid enemy advances. Commanders can lawfully obtain from local civilian infrastructure any suitable petroleum, oils, and lubricants, barrier material, construction equipment, and laborers which will reduce the defending unit's transportation requirements. Proper forecasting of supply and support requirements is important to the success of the area defense. Likewise, units forward deploy maintenance and medical support with their associated repair parts and medical supplies. Those systems and Soldiers or equipment that cannot return quickly to the battle are rapidly evacuated from forward defensive positions to avoid unduly burdening medical and maintenance elements.

POSITION SELECTION

9-24. Successful units carefully design their defense plan to ensure they can halt enemy attacks and develop opportunities to seize the initiative and resume offensive operations. The cohesion of defending forces

significantly affects the overall effectiveness of the area defense. Units prepare to adjust their defensive dispositions to meet changes in the enemy's dispositions to maintain that cohesion.

9-25. The area defense requires units in defensive positions to accomplish their mission independently or in combination by defeating enemy forces by fire, absorbing the strength of the attack within their positions, or destroying enemy forces with local counterattacks. Units combine the advantages of fighting from prepared positions, obstacles, planned fires, and local counterattacks to isolate and overwhelm selected enemy formations. They rapidly shift the purpose and location of their main effort throughout their assigned areas as conditions change. Commanders may have to reposition defending units within their defensive positions or reposition between terrain features to mass the effects of overwhelming fires against attacking enemy units. The defensive plans designate axes of advance and routes for the commitment or movement of their reserves, or the forward or rearward passage of one unit through another. Those plans identify air axes for aerial maneuver by attack aviation elements, air assault units, or fixed-wing aircraft. Their operations processes identify decision points associated with the initiation of these counterattacks, the repositioning of forces, and other actions.

9-26. The capability to reposition relies on defending forces having tactical mobility. Defending forces stay in their prepared positions and accept the possibility of becoming decisively engaged if they lack this mobility advantage.

9-27. Commanders assigning defensive missions define their defended areas. They have to accept gaps and conduct noncontiguous operations when defending on broad fronts with minimal forces. This results in a noncontiguous FLOT. Defending shallow assigned areas requires units to operate well forward with a corresponding reduction in their flexibility.

9-28. The ideal area defense is one where effective mutual support exists throughout the width and depth of the defender's tactical positions. Units organize and occupy defensive positions based on their natural defensive strength. Defending units maintain tactical integrity within their defensive areas. Units conducting an area defense normally address flank security requirements by assigning those responsibilities to subordinate elements or organizing a separate security force to perform that task.

9-29. Units typically have two methods for the placement of their positions when conducting an area defense: defense in depth and forward defense. A higher echelon commander may dictate the method to their subordinates or subordinates may retain the flexibility to choose the method of an area defense. These two methods are not exclusionary. Part of a defending unit can conduct a forward defense while the other part conducts a defense in depth.

Defense in Depth

9-30. Units normally prefer to perform a defense in depth. Forces defending in depth absorb the momentum of enemy attacks by making enemy forces attack repeatedly through a series of mutually supporting positions. Building these positions requires significant time and engineer support to increase the survivability and countermobility of those positions. Depth gives fire support assets time to deliver effects on multiple locations against selected elements of the attacking enemy force. Depth provides more reaction time for defending forces to respond by repositioning or counterattacking. Units continuously employ their information collection assets to gather additional information about the attacking enemy's intentions and capabilities between the time combat starts and the time the enemy commits to a COA. Depth reduces the risk of enemy forces rapidly penetrating the MBA along unexpected directions.

9-31. Units also employ a defense in depth when enemy forces can employ large quantities of indirect fires. Units disperse their forces throughout their assigned area when conducting a defense in depth. They take area damage control measures to reduce the effects of these munitions and weapons on defending friendly forces, and they deny enemy forces lucrative targets. The degree of dispersal adopted by defending forces is a function of the enemy and friendly forces' capabilities as well as the terrain to rapidly concentrate combat power at decisive points.

9-32. Commanders can position their defending units in successive layers of BPs along likely enemy avenues of approach when conducting a defense in depth. (Figure 9-4 is a sketch illustrating this concept. It depicts a

division conducting a defense in depth with subordinate BCTs deployed in noncontiguous assigned areas with enemy avenues of approach shown.) Commanders usually decide to conduct a defense in depth when—

- Their defensive missions are not restrictive and allow them to operate throughout the depths of their assigned areas.
- The terrain within their assigned areas does not favor a forward defense, and there is better defensible terrain deeper within their assigned areas.
- There is significant depth available, allowing the trading of space for time.
- The cover and concealment on or near the FEBA is limited.

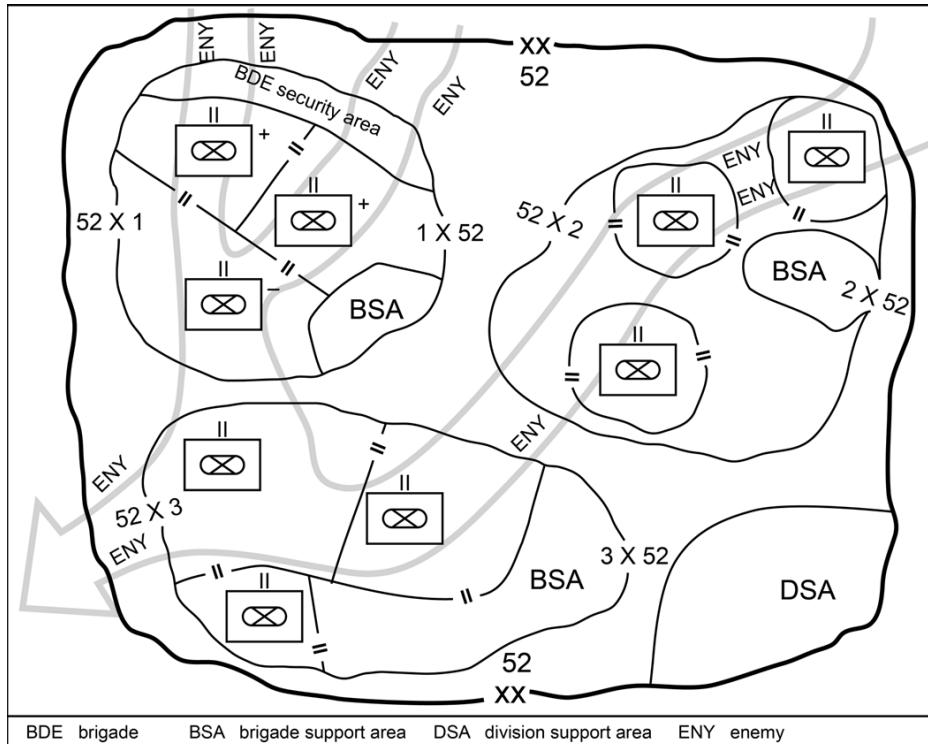


Figure 9-4. Example defense in depth

9-33. Large units, such as divisions or corps, employing a defense in depth can conduct an area defense on a wider frontage than they can if they adopt a forward defense. This is because a forward defense has no time or maneuver space to reposition forces. A defense in depth allows units to use security forces in the forward part of their MBA to identify the enemy force's main effort and control the depth of the enemy force's penetration into their MBA. By their defensive actions, these forces provide units with time to react to enemy actions and allow defending units to take offensive steps to eliminate enemy options, such as conducting counterattacks into the flanks of advancing enemy forces.

Forward Defense

9-34. When units defend forward within their assigned areas, they organize their forces so they can commit most of their available combat power early in their defensive efforts. To accomplish this, units may deploy their forces forward in their respective assigned areas or plan counterattacks well forward in the MBA or even beyond the MBA. Units can conduct their main effort from forward defensive positions near the FEBA in a forward defense. Figure 9-5 on page 9-8 is a sketch illustrating this concept. Units concentrate significant portions of their available combat power toward engagement areas located along their FEBA. The intent is to prevent significant enemy penetrations into their defensive areas. Units conduct forward defense operations to retain these positions along their FEBA and counterattack any enemy penetrations. However, the defending force's lack of depth may allow enemy forces to exploit success if they penetrate the friendly force's main defensive positions.

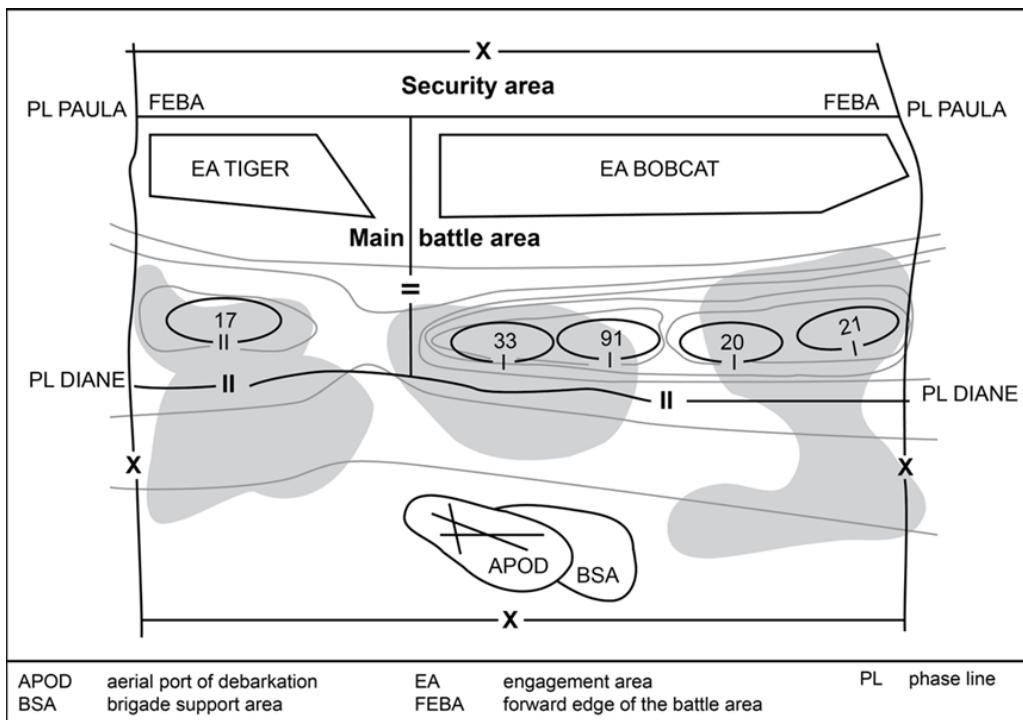


Figure 9-5. Example forward defense

9-35. Commanders may choose to conduct a forward defense when—

- The best defensive positions, natural obstacles, and natural engagement areas are located along the FEBA.
- Cover and concealment in the rear portion of their assigned areas are limited.
- The higher commander directs them to retain forward terrain.
- The terrain in the assigned area does not support a mobile defense.
- The enemy has superior mobility.

Positioning the Reserve

9-36. Defending units have the ability to seize the initiative by counterattacking over familiar ground to destroy halted or disorganized enemy forces. Their reserve is a key component of these counterattacks. Defending units protect their counterattacking forces by employing overwatching fires from friendly positions. Commanders direct counterattacks against an enemy force's exposed rear or flanks whenever possible.

9-37. Units expend significant effort during the planning process to ensure the effective use of their reserves. They may locate their reserves within their assigned areas where those reserves can employ existing road networks. Those road networks allow the rapid displacement of these reserves throughout their assigned areas in response to different opportunities or contingencies. Commanders have more flexibility and can take greater risk in employing their reserves if their higher echelon headquarters has not committed its reserve. See Chapter 1 for more information on general considerations for positioning the reserve.

SPOILING ATTACKS AND COUNTERATTACKS

9-38. Units do not wait for the enemy to initiate an attack when developing their defensive plans. They seek opportunities to conduct spoiling attacks and counterattacks against enemy forces. Units execute spoiling attacks and local counterattacks to disrupt the enemy's attack preparations and buy time and maneuver space

for defensive preparations. In an area defense, units plan major counterattacks as a branch or sequel to the main defensive operation.

9-39. A spoiling attack preempts or disrupts an enemy force's ability to launch an attack, while a counterattack prevents an enemy force from exploiting successes. The forces conducting either variation of attack need to be capable to develop the situation, defend themselves, and force the enemy to react. This allows friendly forces to place the enemy's attack plan at risk. See Chapter 5 for more information on spoiling attacks and counterattacks.

PREPARATION CONSIDERATIONS FOR AN AREA DEFENSE

9-40. When planning for an area defense, units focus their collection activities on confirming templated enemy courses of action, identifying favorable terrain for the defense, and answering the commander's critical information requirements. Information obtained from those activities may or may not cause units to refine their plans. Defensive preparations allow time for any necessary additional coordination and synchronization among different headquarters. They also allow for the conduct of those supporting efforts that fall within their defensive capabilities and OPSEC guidelines. Defending units may have to commit substantial forces to security operations or conduct spoiling attacks if they know that enemy forces will attack before they finish their defensive preparations.

9-41. Units normally establish an area defense after they complete the deployment process of force projection, complete their offensive actions, or are in assembly areas. Commanders issue warning orders stating the mission and identifying any special considerations. While subordinate units complete their current missions, unit staffs perform detailed planning. Staffs coordinate for the pre-positioning of ammunition and barrier material in secure areas near the unit's projected defensive positions before starting the operation.

9-42. Upon receiving initial mission orders, defending units establish a local security posture and occupy hide positions in sector before beginning defensive preparations. Security forces immediately assume their security mission and prepare positions simultaneously. Commanders conduct reconnaissance of their defensive areas and establish forward security areas before their units occupy their defensive positions. Units may pre-position supplies, such as ammunition and barrier materiel, once they can secure those positions and supplies. The mission variables are the deciding consideration in establishing priorities. Those priorities can include—

- Establishing local security and deploying security forces.
- Emplacing communications assets to support the unit's primary, alternate, contingency, and emergency communications for each primary, supplemental, and alternative positions.
- Establishing contact points with any adjacent units so that their commanders can coordinate and synchronize their defensive efforts.
- Identifying engagement areas where commanders seek to engage and destroy enemy forces.
- Emplacing obstacles and surveying indirect fire targets to support these obstacles.
- Positioning key weapon systems to engage into engagement areas and cover obstacles.
- Planning fire control measures, such as TRPs, trigger lines, and FPFs to support these engagement areas.
- Positioning the reserve.
- Designating and appropriately clearing fields of fire.
- Preparing primary fighting positions based on the anticipated fighting conditions, such as the time of day and weather conditions.
- Providing concealment and camouflage for fighting and survivability positions as they are constructed.
- Positioning observers who can see both targets and trigger lines.
- Positioning any available critical friendly zones over friendly positions by establishing sensor coverage and direct communications links between sensors and shooters.
- Installing limited-visibility aids, such as thermal hot spots and chemical lights on TRPs.
- Updating range cards and sector sketches as required.
- Preparing alternate fighting positions.

- Designating and preparing supplementary positions.
- Designating hide positions and rehearsing movements to and from all fighting positions. (Units may place their vehicles in hide positions at any time while preparing the defensive position.)
- Improving trafficability of projected counterattack routes.
- Pre-stocking ammunition in positions where it can survive anticipated enemy preparation fires.
- Positioning barrier material for constructing fighting positions and obstacles.
- Rehearsing movements under daylight and limited-visibility conditions.
- Establishing sleep and rest plans.
- Continuing to improve the defense.

9-43. Survivability positions enhance the strength of a defensive position by providing Soldiers and weapons systems with specified degrees of cover from enemy fires. Units initiate construction of survivability positions based on their priorities of work, and they continue to build and improve them until the last possible moment. The degree of overhead, frontal, and side protection provided varies with the location of the sheltered troops and enemy capabilities. Defending units improve communications routes throughout their defensive positions to ease movement of supplies and forces as time and resources allow. Communications routes are particularly important for reserves. Units establish tactical communications with their various subordinate elements and offsite antennas to reduce their electromagnetic signature.

9-44. Defending units rehearse how they move to and from primary, alternate, supplementary, and sequential positions. These rehearsals establish the time necessary to conduct these movements under different environmental conditions. Units modify their existing defensive plans based on the results of these rehearsals and changes in the mission variables. They check that the routes taken during these rehearsals do not show obvious signs of heavy use. These steps can include the conduct of only dismounted rehearsals, only moving one vehicle per platoon, and taking steps to eliminate signs of movement such as sweeping snow back over the tracks made during the rehearsal.

9-45. Commanders ensure close coordination among their subordinates. One way to do this during the preparation phase is for them to take their subordinate commanders to vantage points in the MBA if such sites are available. They can conduct rehearsals and finalize coordination from those positions. This technique also helps commanders transmit their intent and share their situational understanding.

9-46. The location, composition, and movement of echelon reserves are typically essential elements of friendly information. Other typical essential elements of friendly information in the defense include location of main obstacle belts, location of critical countermobility assets, indirect fire assets, and supply points. Enemy reconnaissance focuses on finding these reserves and reporting when and where they commit.

9-47. Units integrate sustainment into their maneuver rehearsals to verify that routes for support do not cross or conflict with routes used by their reserves or other maneuver elements. They balance the use of ammunition and other supply caches against their ability to secure those caches. Units also ensure the availability of alternate lines of communications and MSRs to support their contingency plans and changes in tactical situations.

9-48. Units ensure the integration of available combat enablers into their plans. During this phase, commanders verify that their subordinate commanders and other leaders have a shared understanding of their plans and can execute them with minimal guidance. One technique that commanders use to ensure subordinate understanding is the receipt of backbriefs from their subordinates after they issue their orders.

EXECUTION CONSIDERATIONS FOR AN AREA DEFENSE

9-49. In an area defense, units use various techniques and procedures to accomplish their missions. Defending forces repeatedly seek to force the enemy to maneuver into engagement areas where they can target them. Defending forces operate mainly from prepared, protected positions to concentrate combat power against attempted enemy breakthroughs and flanking movements. Units use their mobile forces to cover gaps between their defensive positions, reinforce those positions as necessary, and counterattack to seal penetrations or block enemy attempts at flanking movements. Figure 9-6 illustrates control measures that units can use when mixing static and mobile elements in an area defense.

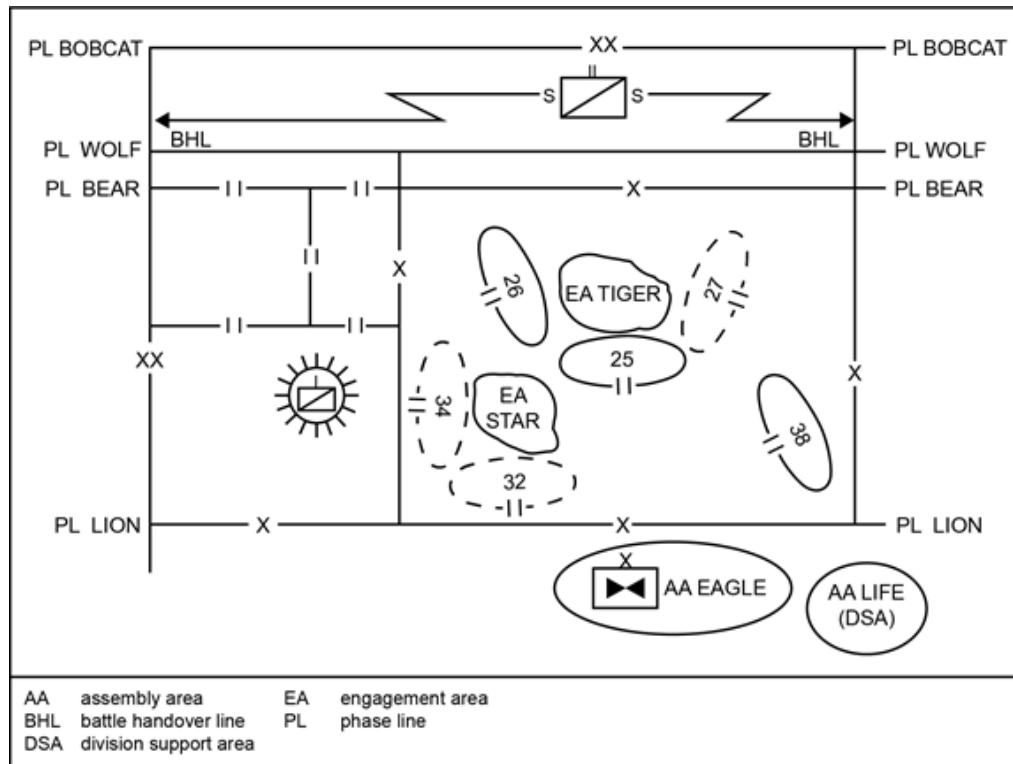


Figure 9-6. Example area defense

9-50. The mission variables—most importantly time—determine how closely units can synchronize their supporting efforts with their main efforts. Units conduct supporting efforts designed to regain the initiative by limiting an attacking enemy force's options and disrupting an enemy force's plan. Supporting efforts prevent enemy forces from massing and creating windows of opportunity for the conduct of the main effort. This allows defending forces to defeat attacking enemy forces in detail. Units also employ supporting efforts to disrupt enemy operations by attacking enemy command posts at critical stages in a battle or by striking and eliminating key enemy elements and capabilities. This could be river crossing equipment and supplies in regions that contain numerous unfordable rivers. Reconnaissance and security operations are normally components of the echelon's shaping operations and supporting efforts.

9-51. Gaining and maintaining enemy contact in the face of an enemy force's determined efforts to destroy friendly information collection assets is vital to the success of defensive actions. As an enemy force's attack begins, defending units strive to identify the locations and capabilities of committed enemy units, to determine the enemy's intent and direction of attack, and to gain time to react. Initially, defending units accomplish these goals in their security areas. The sources of this type of intelligence include reconnaissance and security forces, intelligence units, special operations forces, and aviation elements. Battalions and companies are increasingly able to access combat information provided by technical means belonging to higher echelons, such as UAS and signals intelligence, to provide the required reaction time. Units ensure the distribution of a COP throughout their forces during the battle as a basis for subordinate commanders' actions. Units use the information available, in conjunction with military judgment, to determine the point at which enemy forces commit to a given COA.

9-52. Units' security forces seek to disrupt enemy reconnaissance forces and mask dispositions, capabilities, and intent of their defending forces. This occurs simultaneously with friendly information collection assets helping to determine an enemy forces' chosen COA. Ideally, security area engagements cause enemy forces to conduct a movement to contact against friendly prepared defenses.

9-53. Security forces use every opportunity to gain information, delay, and disrupt the enemy. Their commanders prepare to pass through or around MBA forces as quickly as possible by using multiple passage

points, gaps, or lanes along the FEBA as the security forces displaces. This usually occurs in one location at a time until all security forces complete their retrograde. However, the security force may pass in sequence based on enemy pressure. Transfer of responsibility occurs forward of the FEBA at the BHL. Security forces make any required last-minute coordination with MBA forces at contact points to ensure their rapid passage through the MBA. Figure 9-7 illustrates the use of a BHL and other control measures associated with the rearward movement of forward security forces.

VARIATIONS OF THE AREA DEFENSE

9-54. The variations of the area defense have unique conditions and their own planning considerations. The three variations of area defense are:

- Defense of a linear obstacle.
- Perimeter defense.
- Reverse slope defense.

9-55. When determining their variation of the area defense, units decide the location of defensible terrain within their assigned areas based on terrain characteristics and their estimate of the enemy force's chosen COA. Those terrain characteristics include terrain relief patterns, avenues of approach into and within the assigned areas, the location of any key or decisive terrain, and existing obstacles and choke points, including rivers and fording sites. The other mission variables also influence this decision.

DEFENSE OF A LINEAR OBSTACLE

9-56. Units may conduct a variation of an area defense along or behind a linear obstacle (see figure 9-7). Linear obstacles, such as mountain ranges or rivers generally favor a forward defense. The planning, preparation, and execution of a defense of a linear obstacle is not different than any other area defense. The main difference is that the defense focuses on the linear natural or man-made obstacle as opposed to a separate key terrain feature, such as an urban area or hill.

9-57. A defending force seeks to defeat any enemy forces attempting to seize a bridgehead across a linear obstacle. Local defending units immediately counterattack any enemy bridgeheads to destroy enemy forces located within the bridgehead, while higher echelons attempt to isolate enemy bridgehead sites. If an enemy force seizes a bridgehead and strikes out rapidly, it could quickly penetrate the defending force. An enemy penetration requires units to conduct either a counterattack, delay, or a withdrawal.

9-58. It is extremely difficult to deploy in strength along the entire length of a linear obstacle. Defending units must conduct economy of force measures in some areas. In an area defense, units' use of a defense in depth accepts the possibility that enemy forces may conduct a crossing at a given point. The depth of the defense should prevent an enemy force from rapidly exploiting its success. It also diffuses the enemy force's combat power by causing enemy forces to contain bypassed friendly defensive positions in addition to continuing to attack friendly positions in greater depth. Once the enemy force secures several bridgeheads, the defending force moves to contain them. Defending commanders may choose not to counterattack until they can mass overwhelming combat power. They will probably choose to eliminate the bridgeheads sequentially in this case. However, defenders risk allowing enemy forces to establish and fortify bridgeheads and crossing sites to the extent that a counterattack force is unable to eliminate them.

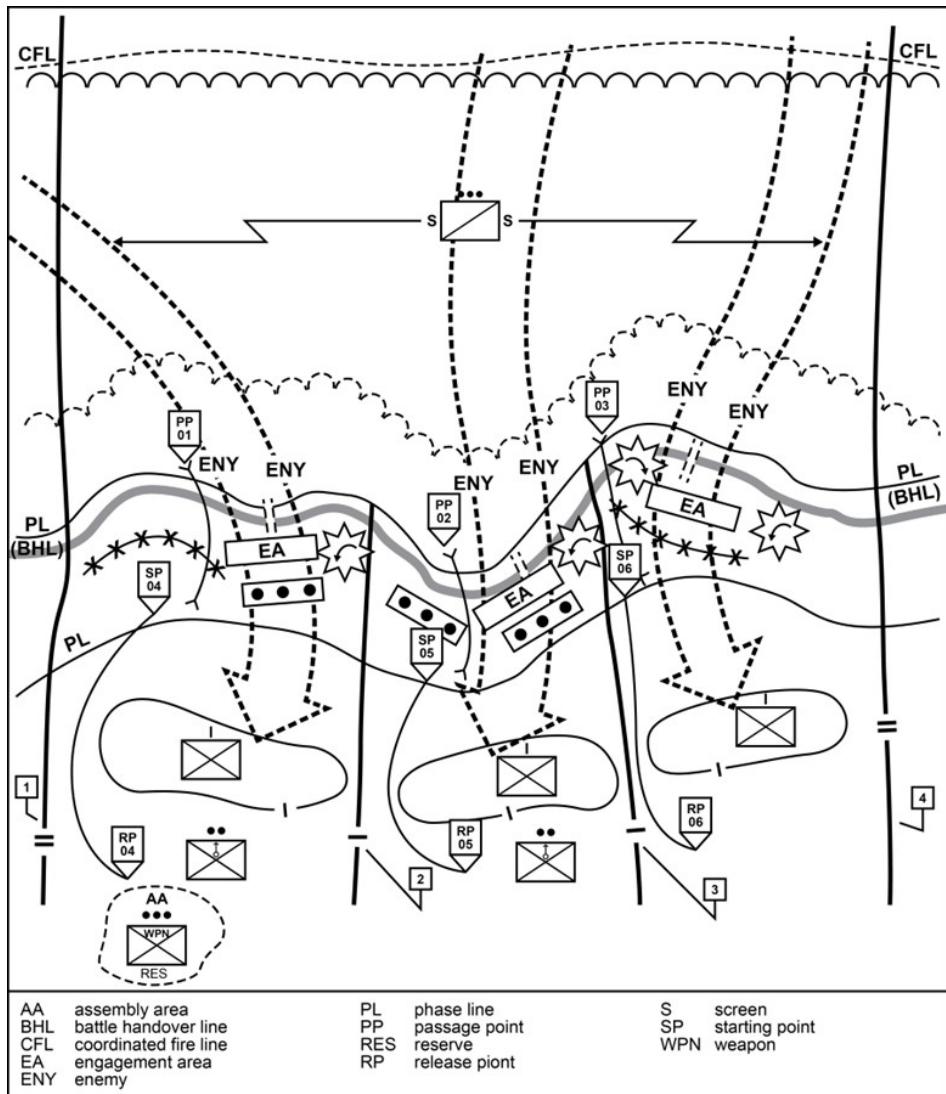


Figure 9-7. Example of a defense of a linear obstacle

PERIMETER DEFENSE

9-59. Units may employ the perimeter defense as a variation when conducting an area defense when the unit is required to orient on all directions. They also use it in other circumstances, such as when 360-degree security is required when taking a temporary halt during a troop movement.

9-60. The prerequisites for a successful perimeter defense are aggressive patrolling and security operations outside the perimeter. A unit within the perimeter can perform these activities, or another force, such as the territorial defense forces of a local nation in which hostilities occur, can perform them. A unit can organize a perimeter defense to accomplish a specific mission, such as protecting a firebase or providing immediate self-protection, such as during resupply operations when all around security is required. Commanders establish a perimeter when a unit must hold key terrain, such as a strong point, or when it must defend itself in noncontiguous areas where a unit cannot tie its defense in with adjacent units. This occurs when a unit is operating behind enemy lines or when it is securing an isolated objective, such as a bridge, mountain pass, or airfield. Bypassed or isolated friendly forces also need to form a perimeter to allow them to defend in place. Forces located within the confines of a base or base cluster in their echelon support also need to establish a perimeter defense. Figure 9-8 on page 9-14 depicts an example of a perimeter defense.

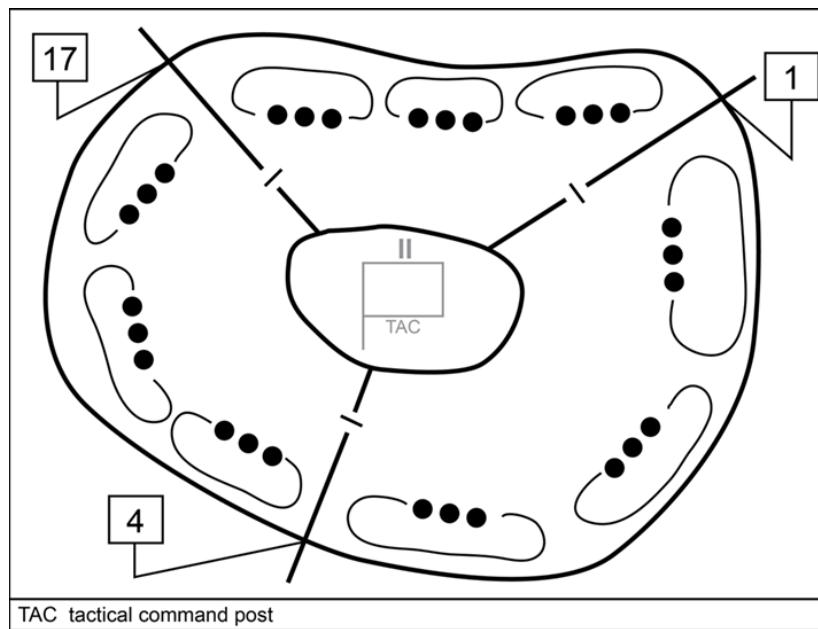


Figure 9-8. Example of a perimeter defense

9-61. A major characteristic of a perimeter defense is a secure inner area with most of the combat power located on the perimeter. Another characteristic is the ease of access for resupply operations. Units coordinate direct and indirect fire plans to prevent accidentally engaging neighboring friendly units and noncombatants. Normally, the reserve centrally locates to react to a penetration of the perimeter at any point.

9-62. Perimeters vary in shape depending on the terrain and situation. Units may reinforce those most vulnerable parts of their perimeter with additional resources once they determine the most probable direction of enemy attack. The perimeter shape conforms to the terrain features that best use friendly observation and fields of fire. Units can increase the effectiveness of a perimeter by tying it into a natural obstacle, such as a river, which allows a defending unit to concentrate its combat power in more threatened areas.

Organization of Forces

9-63. A perimeter defense has no special organization of forces. They organize in the traditional reconnaissance and security force, main body, and reserve. Units may employ all defending forces forward along a perimeter or establish a defense in depth within a perimeter. They employ patrols, raids, ambushes, air attacks, and supporting fires to harass and destroy enemy forces before they make contact with the perimeter, thus providing defense in depth with both techniques.

9-64. In a forward defense, commanders place all subordinate units in positions along the perimeter. Figure 9-9 illustrates how a battalion commander could divide the perimeter into subordinate unit assigned areas with boundaries and contact points. This method reduces the possibility of fratricide and friendly fire incidents within the perimeter and maximizes combat power on the perimeter.

9-65. Constructing an outer and inner perimeter creating defensive depth is a technique of a defense in depth. Figure 9-9 illustrates this technique using an infantry BCT occupying an assembly area while waiting for its engineer battalion and third infantry battalion to arrive in the joint operations area. The infantry BCT commander directs the two subordinate infantry battalion commanders to place two of their companies along the outer perimeter reinforced with detachments from their weapons companies and one company in reserve. This configuration gives depth to each battalion's positions and facilitates control. The figure does not depict the cavalry squadron since it occupies positions outside the perimeter in this example. Alternatively, figure 9-10 illustrates how this infantry BCT commander could elect to assign the outer perimeter to the two infantry battalions and have the cavalry squadron resource an inner perimeter, retaining a larger, more tactically mobile central reserve.

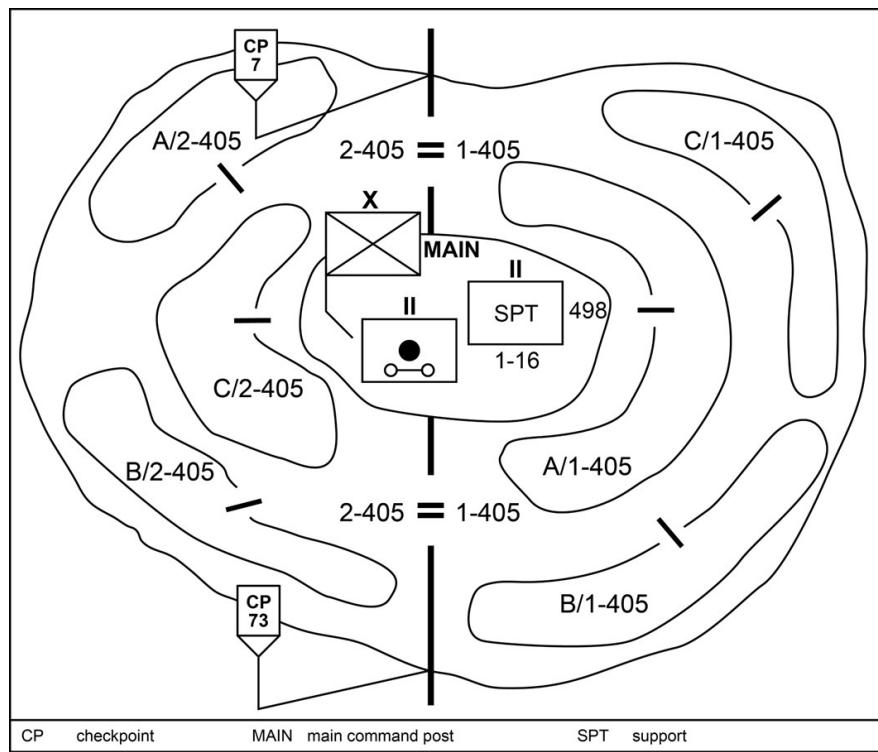


Figure 9-9. Example of a perimeter defense in depth

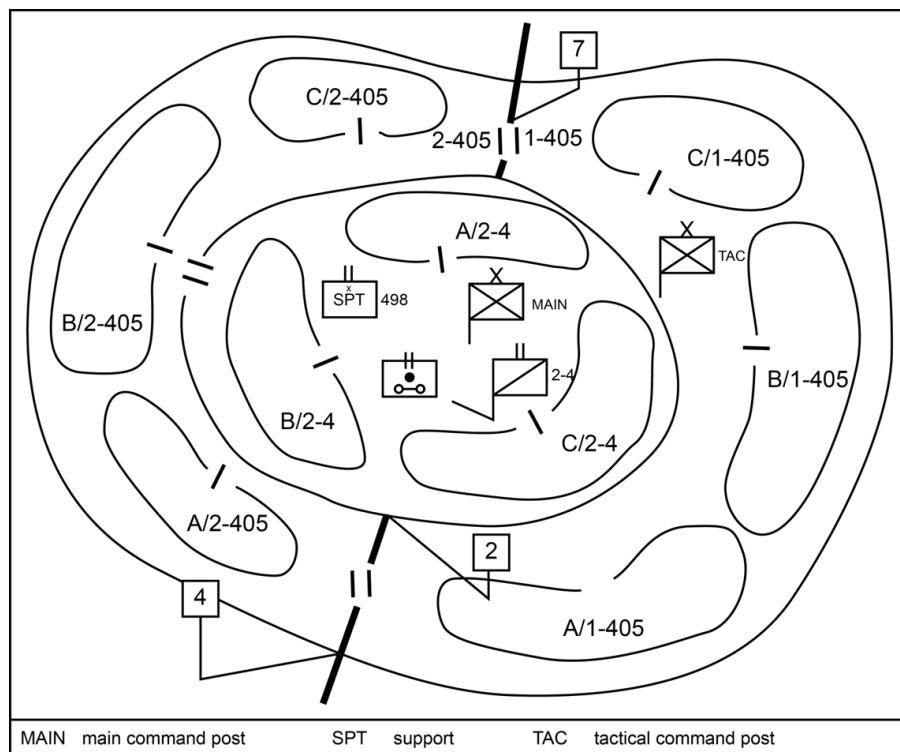


Figure 9-10. Battalion perimeter, squadron reserve

9-66. Commanders position forces within a perimeter to decrease the possibility of an enemy force simultaneously suppressing the inner and outer perimeter forces with the same fires. Friendly forces within the perimeter provide mutual support. In open terrain, they cover gaps on the outer perimeter between units with fires. They do not allow gaps between defensive fighting positions when the unit is in restrictive terrain with restricted fields of fire and observation. This may mean that a unit defends along a narrower frontage than on more open terrain. Commanders may also have to employ all subordinate units on the line formed by the perimeter. Units ensure that outer perimeter positions have rearward protection from inner perimeter weapons if an inner perimeter is established.

9-67. Units can assign combat vehicles supporting defense firing positions on the perimeter to cover the most likely mounted avenues of approach. Based on their mobility, combat vehicles can also form the unit's reserve. Vehicle commanders select and prepare alternate and supplemental firing positions and routes to and from them. If a perimeter has several mounted avenues of approach leading to it, units may elect to hold combat vehicles in hide positions until an enemy force approaches. Units prepare routes, firing positions, and range cards for all positions. Small-unit leaders must ensure that vehicles do not destroy communications wires when vehicles move from one position to another.

9-68. The need to hold or protect terrain features—such as bridges, airfields, or landing zones—from enemy observation and fires may restrict the positioning of units within a perimeter. These factors, as well as the inability to achieve depth, make a perimeter defense vulnerable to penetration by heavy enemy forces. Units reduce these vulnerabilities by—

- Developing information collection plans that provide early warning.
- Positioning anti-armor systems on restrictive terrain to concentrate fires on armor approaches.
- Providing as much depth as the diameter of the perimeter to allow the proper placement of security elements and the reserve and the designation of secondary sectors of fire for anti-armor weapons.
- Constructing obstacles to fix or block enemy forces, so friendly units can effectively engage them.
- Using obscurants and military deception.

9-69. If isolation from other friendly units drives commanders to form a perimeter, such as when conducting echelon support area security or when encircled, functional and multifunctional support and sustainment elements from other units may seek to take advantage of that perimeter's protection. The base commander gives these elements defensive missions based on their capabilities within the base formed by the perimeter. Units coordinate and integrate any fire support provided from outside the perimeter into the overall defensive plan. This extra fire support conserves the ammunition of units within the perimeter.

9-70. Units normally employ reconnaissance assets, such as a scout platoon, outside the perimeter to provide early warning. They augment perimeter security with squad sized or smaller observation posts forward of the perimeter provided and controlled by units positioned along that perimeter. These security elements position to observe avenues of approach. Patrols examine areas not under observation by stationary elements. Any security forces operating outside the perimeter coordinate their passage of lines into and out of the perimeter with the appropriate perimeter units.

9-71. The reserve may be a designated unit or a provisional force organized from available personnel and equipment. The reserve forms a second line of defense behind the perimeter forces. Ideally, the reserve is mobile enough to react to enemy action along any part of the perimeter. Units position the reserve to block the most dangerous avenue of approach and assigns on-order positions on other critical avenues. They may task combat vehicles initially occupying firing positions on the perimeter with the mission of reinforcing the reserve.

Control Measures

9-72. Commanders, in a perimeter defense, use control measures to designate the trace of the perimeter, BPs, contact points, and lateral and forward boundaries. They can use engagement areas (EAs), target reference points (TRPs), final protective fires (FPFs), and principal direction of fire as fire control measures. Units designate checkpoints, contact points, passage points, and passage routes for use by local reconnaissance, surveillance, and security elements operating outside the perimeter boundary. Figure 9-11 illustrates some of these control measures.

Planning a Perimeter Defense

9-73. Defending units position their forces and plan fire and movement so they can respond to the widest possible range of enemy actions. Defending commanders, assisted by their staffs, prepare plans, including counterattack plans. Units rehearse, evaluate, and revise their plans as needed. The availability of landing and drop zones protected from enemy observation and fire is a major consideration when selecting and organizing the perimeter defense. Units must emphasize supply economy and protect existing supply stocks since aerial resupply is vulnerable to weather and enemy fires. Commanders consider the fundamentals of an area defense in paragraphs 9-18 through 9-39 when planning a perimeter defense.

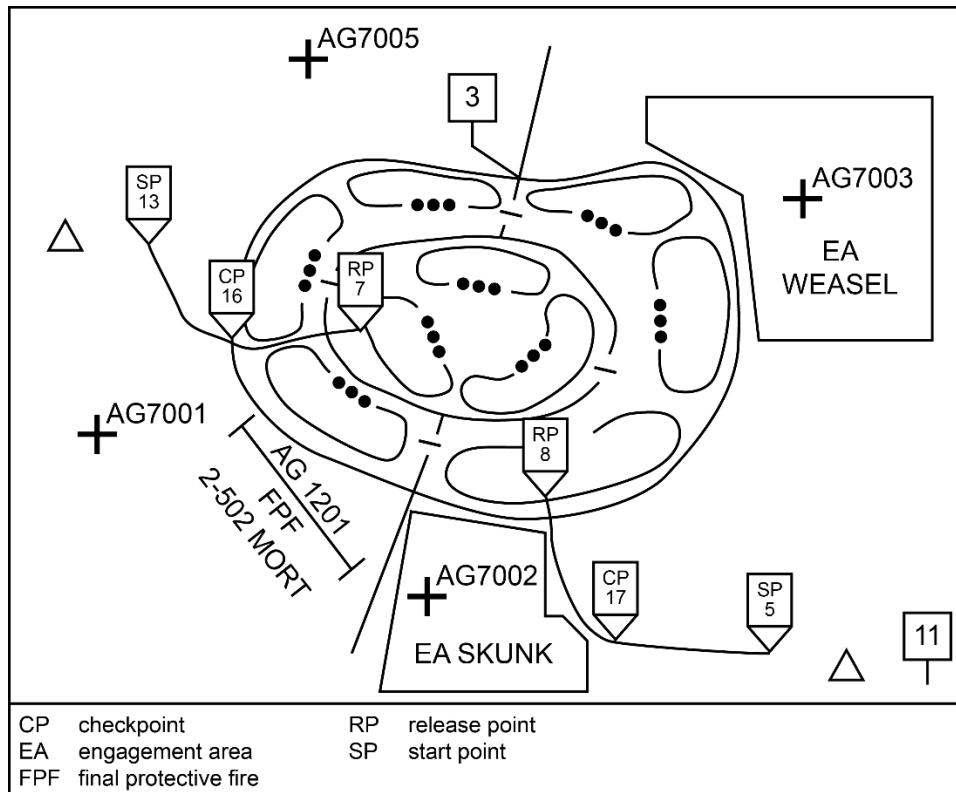


Figure 9-11. Example perimeter defense control measures

9-74. The mission variables considered when commanders and staffs developed their counterattack plans as branches or sequels to their defensive plans may not correspond exactly with the situation when the moment comes to execute those counterattacks. Units reassess and revise their counterattack plans based on their revised situational understanding as their defenses unfold. This revised understanding results from an updated common operational picture as new intelligence and combat information becomes available to answer these questions:

- Is a counterattack feasible or should commanders use the reserve to contain enemy successes?
- When and where should defending forces counterattack?
- What parts of the defending force should counterattack?
- What should defending forces block or contain in the case of successful enemy penetrations?
- Is there enough time to complete the counterattack before the arrival of enemy follow-on forces?
- Can commanders conduct their counterattack using only available fires or must ground maneuver forces be committed?

Use of Terrain

9-75. Proper evaluation and organization of an area's terrain are essential to maximize the effectiveness of a force conducting perimeter defense. Units consider—

- Natural defensive characteristics of the terrain.
- Using artificial obstacles to enhance the natural defensive characteristics of the terrain.
- Existing roads, railways, and waterways used for military LOCs and civilian commerce.
- Controlled land areas surrounding the perimeter to a range beyond that of enemy mortars and rockets.

Security

9-76. An effective security requires early warnings. Early warnings of pending enemy actions allow units the time to react to any threat. Combat outposts, patrols, sensors, target acquisition radars, and aerial surveillance provide early warning. Civil information, human intelligence, and observed changes in a populations pattern of life near the position are excellent indicators of pending enemy actions. Security measures vary with the enemy threat, forces available, and the other mission variables; however, all around security is essential.

Mutual Support

9-77. Units position defending forces to ensure mutual employment of defensive resources, such as crew-served weapons, observation, and maneuver elements. Mutual support between defensive elements requires careful planning, positioning, and coordination because of the circular aspects of the perimeter defense. They use surveillance, obstacles, prearranged indirect fires, and maneuver elements to exploit or reinforce fires to control any gaps in the perimeter. Defensive plans provide for using all available support, including indirect fire, attack helicopters, and fixed-wing aircraft.

All-Around Defense

9-78. In defensive planning, units prepare to defend against an enemy attack from any direction and designate the unit defending the most likely enemy avenue of approach the main effort. They employ flexible plans and position their reserve to react to any threat. They commit maneuver elements and supporting weapons to detect, engage, and destroy an attacking enemy force. Commanders assign defensive positions and sectors of fire to all personnel within the perimeter.

Defense in Depth

9-79. Alternate, subsequent, and supplementary positions, combat outposts, and mutually supporting strong points forward of the perimeter extend the depth of a defense. Units plan fires to the maximum range throughout a defensive area. They may place protective obstacles around critical locations within the perimeter during periods of reduced visibility to disrupt the enemy's plan and add depth to the defense.

Responsiveness

9-80. An attacking enemy force has the advantage of deciding when, where, and with what force to attack. Defending units prepare plans—including counterattack plans—and rehearse, assess, and revise them as necessary. The defensive plan contains procedures for timely responses by fire support teams and maneuver forces.

Maximum Use of Offensive Action

9-81. Since the objective of a perimeter defense is to maintain a secure position, units use offensive actions to engage enemy forces outside the perimeter. On initial occupation of a perimeter, friendly forces take offensive actions to destroy enemy forces in the immediate area. Once the perimeter area is clear, a relatively smaller force can defend the perimeter, thereby releasing other forces for other operations. Units employ patrols, raids, ambushes, aerial attacks, and supporting fires to harass and destroy enemy forces to prevent them from threatening the perimeter. They maintain constant communications and a COP with subordinates

within the perimeter. Commanders direct their subordinates to conduct appropriate actions to remove threats located within their assigned areas and sectors of fire.

Executing a Perimeter Defense

9-82. Attacks against a perimeter may range from long-range sniper, mortar, rocket fire, or attacks by suicide demolition squads to attacks by major enemy ground and air forces. Mortars, artillery, tanks, and anti-armor missile systems from within the perimeter engage enemy forces at long ranges. As an attack comes within small-arms range, other weapons on the perimeter engage enemy forces. If the assault continues, the defending force employs its FPFs. If enemy forces penetrate the perimeter, the reserve blocks the penetration or counterattacks to restore the perimeter. After committing the initial reserve, commanders reconstitute another reserve to meet other threats. This force normally comes from an unengaged unit on a different portion of the perimeter. If commanders use an unengaged force to constitute a new reserve, they must retain sufficient forces to defend the vacated sector, unless the situation forces commanders to assume that degree of risk.

9-83. Sustainment elements may provide support from within the perimeter or from outside locations, depending on the mission and the status of the unit providing the defensive perimeter, type of transport available, weather, and terrain. Commanders often sustain units in contested areas without secure ground LOCs by air.

Find the Enemy

9-84. This typically occurs once friendly security forces make initial enemy contact. The security force does not idly await the arrival of the enemy. They take an active role as part of the information collection activities to find the enemy and understand their location, disposition, strength, and course of action.

9-85. The security force also conducts counterreconnaissance against enemy reconnaissance and intelligence assets. Destroying these assets allows units to force enemy units to deploy into formations on the ground of those commanders' choosing, thus helping to disrupt and desynchronize the enemy force's plan. This also prevents the enemy from understanding the composition and disposition of the main effort of the defense and forces the enemy to attack into an unknown situation.

Fix the Enemy

9-86. Units do everything possible to limit an enemy force's options when conducting an area defense. They conduct supporting efforts to constrain the enemy into specific COAs, control enemy movements, or fix enemy forces in given locations. Units continue to find, delay, or attrit enemy forces for follow on and reserve to keep them from entering the MBA when executing these operations.

9-87. Units have several options to help fix attacking enemy forces. They can design supporting efforts—such as securing the flanks and point of a penetration—to fix enemy forces and allow friendly forces to execute decisive maneuver elsewhere. Combat outposts and strong points can also deny enemy force's movement to or through a location.

9-88. Units use obstacles to fix, turn, block, or disrupt to limit the enemy force's options. Properly executed obstacles result from top-down and bottom-up obstacle planning and emplacement. Blocking forces can also affect enemy movement. A blocking force may achieve its mission from a variety of positions depending on the mission variables.

Finish the Enemy

9-89. The main effort occurs in the MBA in an area defense. This is where the effects of supporting efforts, coupled with sustaining operations, combine with the main effort of the main body forces to defeat enemy forces. Commanders' goals are to prevent enemy forces from further advances by using a combination of fires from prepared positions, obstacles, and mobile reserves.

9-90. Generating massed effects is especially critical to units conducting the defense of large areas against enemy forces with significant advantages in combat power. An attacking enemy force has the ability to select the point and time of attack. Therefore, an attacking enemy force can mass forces at specific points, thus

dramatically influencing the ratio of forces at these points of attack. Defending units quickly determine their enemy force's intent and the effects of terrain. This allows defending units and their weapon systems to concentrate the effects of combat power against enemy forces at those points and restore a more favorable force ratio.

9-91. Units carefully plan and coordinate the withdrawal of their forward security forces through MBA forward positions. MBA forces assume responsibility for a battle at the BHL. Units may find it necessary to increase the intensity of the direct and indirect fire support they provide to these forward security forces. This support allows those security forces to break direct contact with an enemy force as they approach the BHL and FEBA and conduct a rearward passage of lines. Units may also employ obscuration to assist in the retrograde maneuver of their security forces. Units guard rearward passage lanes in obstacle complexes left for the withdrawal of their security forces and arrange for closing those lanes after the passage of those forces. MBA forces provide other support as required to assist the withdrawal of these security forces.

9-92. Attacking enemy forces try to find vulnerabilities and passage points after they reach the MBA, possibly by conducting a series of probing attacks. Defending units engage enemy lead forces as these attacks develop. Defending units select and reinforce terrain to canalize attacking enemy forces and limit the available maneuver space. This limited maneuver space tends to slow enemy advances and cause enemy formations to compress with resulting increased force densities. These conditions favor the employment of defensive fires and air support. Defending units employ simultaneous and sequential fires to impose the maximum possible enemy losses at this stage of a battle.

9-93. Subordinate elements maneuver using massed direct and indirect fire and movement to gain positional advantage over assaulting enemy forces. Commanders also direct engineer obstacle and sustainment efforts by assigning priorities. They reposition forces to meet enemy forces where they actually are rather than where they projected enemy forces would be. Commanders direct operations and support subordinate elements by providing the necessary functional and multifunctional support and sustainment assets. They control the commitment of their reserves. Units engage enemy follow-on forces with long-range rockets and air support at division echelons and above. Units can defeat an echeloned enemy's attack in detail, one echelon at a time, if they can delay the entry of enemy follow-on forces into the MBA. This is because disrupting the enemy force's timetable can lead to the creation of exploitable gaps between the enemy force's committed and subsequent echelons.

9-94. Gaps between defensive positions may be necessary within the MBA due to a lack of defending forces. Units do not leave gaps in or near points where they project enemy forces will commit their main effort. Units continue to observe these gaps and cover them with their available fires. Where possible, units block these gaps by emplacing obstacles or moving in friendly forces.

9-95. Commanders clearly define responsibilities for dealing with each enemy penetration. They take steps to block enemy MBA penetrations and destroy any penetrating enemy forces as soon as possible. This usually requires the employment of friendly reserves. Units may need to extend defensive actions within the depth of their assigned areas to counter enemy penetrations not stopped farther forward.

9-96. Units do not allow attacking enemy forces to consolidate on any newly won objectives, unless this fits in their operational concepts for the defense. Generally, units conduct local counterattacks with available local resources to prevent enemy forces from consolidating on those objectives. The smallest possible units conduct these local counterattacks. However, commanders remain aware of the need to avoid piecemeal commitment. Units do not abandon their positions unless this action aligns with their higher echelon commander's intent or that higher echelon commander grants them permission to do so. Defending forces contain enemy penetrations if they are unable to repulse enemy forces until they can act in concert with major counterattacking forces. Units orchestrate their counterattacks with the effects of all their elements of combat power, such as their supporting fire support systems.

9-97. Units employ all available resources necessary to ensure success when counterattacking. Their reserves' counterattack usually becomes their main effort on their commitment. One of commanders' most critical decisions is the commitment of their reserve. Therefore, commanders avoid premature or piecemeal commitment of reserves. Commanders may reinforce their reserves before commitment to give them greater capabilities to counter enemy action. Units do not counterattack as an automatic reaction to an enemy penetration. Nor do commanders commit reserves solely because enemy forces reach a certain phase line or

other location. Units may employ fire support assets and local counterattacks by forces already defending to destroy, disrupt, or attrit enemy penetrations, thus avoiding the need to commit reserves. Units launch their counterattacks when enemy forces present their flanks, overextend, or the enemy forces' momentum dissipates. Units can target counterattacks to isolate and destroy selected enemy forces within the MBA once they can identify the flanks of the enemy force's main effort.

9-98. Sometimes commanders may determine that their reserves are unable to conduct successful counterattacks. Units use their available resources to block, contain, or delay enemy forces in this situation. This gains time for the employment of higher echelon reserves. Commanders and staffs adjust their existing defensive plans to integrate these high-echelon reserves into their defensive and counterattack schemes. Units adjust boundaries and designate additional BPs for occupation. They plan the routes units will use and any necessary adjustments to existing command and support relationships. They can speed the process of positioning and moving these reserves by designating routes, allocating mobility assets, and providing traffic control personnel and guides at designated contact points to lead and brief them on the situation. Units employ maneuver battalion scouts, military police, and cavalry units to provide traffic control during the movement of these reserves because they have the combat power to protect themselves from those small enemy forces that units may encounter in this situation.

Follow Through

9-99. Defensive actions aim to retain terrain and create conditions for a counteroffensive that regains the initiative. The area defense does this by causing enemy forces to sustain unacceptable losses before reaching their objectives.

9-100. Upon defeating the enemy attack, commanders have a decision to make. They can consolidate, reorganize, and begin the counterattack. They can consolidate and reorganize and prepare to defend again. If they are unable to defeat the enemy attack, they need to transition to a retrograde. Any decision to withdraw must account for the current situation in adjacent defensive areas. Only the higher echelon commander who ordered the defense can designate a new FEBA or authorize a retrograde operation. No matter what option is chosen, units must continue to conduct MEDEVAC and CASEVAC, battle damage assessment and repair, detainee operations, and begin setting conditions for the branch or sequel to their defense.

REVERSE SLOPE DEFENSE

9-101. For a reverse slope defense, units organize their defense on the portion of a terrain feature or slope with a topographical crest that masks the main defensive positions from enemy observation and direct fire. All or part of the defending force may employ this technique. It is generally useful at lower tactical echelons, such as battalion and below.

9-102. Units base a successful reverse slope defense on denying enemy forces the topographical crest. Although a defender may not occupy a crest in strength, controlling the crest by fire is essential for success. Controlling the crest reduces the effects of indirect fire (mortar, artillery, and close air support) and draws the battle into small-arms range. Units use a reverse slope defense to provide a defending force an opportunity to gain surprise. Their goal is to make enemy forces commit forces against the forward slope of the defense, causing enemy forces to attack in an uncoordinated fashion across the exposed topographical crest. Firing from covered and concealed positions throughout the battle area, the defending force maintains a distinct advantage over the exposed enemy forces and canalizes them through unfamiliar terrain into engagement areas Figure 9-12 on page 9-22 shows the terminology associated with the reverse slope defense.

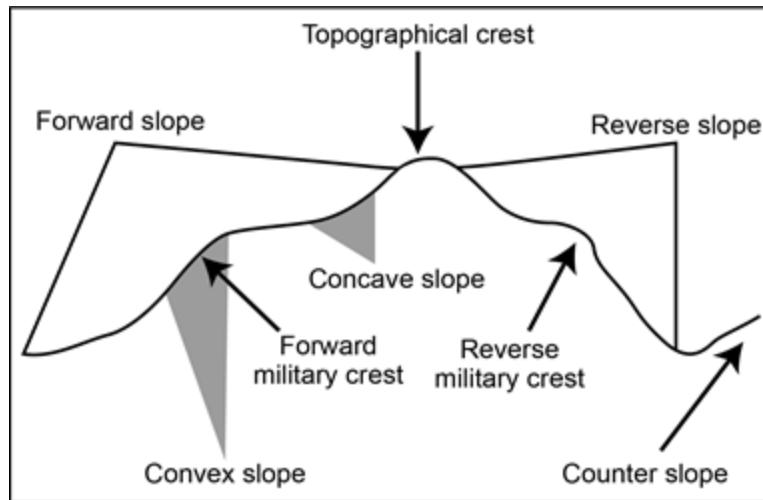


Figure 9-12. Slope terminology

9-103. Units choose to conduct a reverse slope defense when—

- The crest and forward slope are untenable because the enemy force enjoys a quantitative or qualitative advantage in firepower at that point.
- Enemy forces cannot depress enough to engage friendly forces.
- The crest and forward slope offer little or no cover and concealment.
- The forward slope has been lost to enemy action or not seized.
- Mutual support by flank units can adequately cover the forward slope.
- Variance in the friendly force's tactical pattern is advisable to deceive or surprise enemy forces.
- Forced to assume a hasty defense while in contact with or close to enemy forces.

9-104. A reverse slope defense may deceive enemy forces regarding the true location and organization of its main defensive positions. This defense protects the main defensive positions from preparation fires and causes enemy forces to deploy into assault formations prematurely. The forward crest of the main defensive positions limits the enemy force's observation. It reduces the effectiveness of enemy indirect fires and close air support rendering the enemy force's direct fire weapons ineffective. The defending force may surprise enemy forces as they crest the high ground, engaging them with massed fires. Units on the reverse slope have more freedom of movement until the crest is lost. The reverse slope defense also removes any direct fire stand-off advantage the enemy may have.

9-105. However, using a reverse slope defense has several disadvantages:

- The effective range of direct fire weapons may be limited.
- Once security elements withdraw, enemy forces can advance largely unimpeded until attacking elements crest the high ground in front of the main defensive positions.
- The enemy force has the advantage of attacking downhill.
- Maintaining observation of the enemy force is difficult.
- In some cases, units can cover obstacles only from positions on the forward slope.

Organizations of Forces

9-106. Commanders task-organize their forces to give each unit enough combat power to accomplish its mission once their schemes of maneuver are determined. A unit conducting a reverse slope defense normally task-organize their forces into a security force, a main body, and a reserve.

9-107. Units position the security force where they can observe the forward slope, the terrain forward of it, and other approaches to the defending position. Security elements destroy enemy reconnaissance assets, delay enemy forces, disorganize the enemy force's attack, and deceive enemy forces regarding the exact

location of the main defense. They position information collection assets and observation posts near or forward of the topographical crest to provide long-range observation of both the enemy force's flanks and front. An observation post may vary in size from a two-man team to a rifle squad or to a multiple combat vehicle section in each position. Units employ sufficient forces to provide observation and a usually a screen for the MBA. During periods of reduced visibility, units should increase the numbers and sizes of these detachments to provide security against infiltration or unexpected attack. Aggressive night combat patrols and ambushes are an essential part of the security process.

9-108. To achieve surprise and limit an enemy force's ability to maneuver, units organize the main body into defensive positions to mass fires on attacking enemy forces as they cross the topographic crest. In a reverse slope defense, the key position denies enemy penetration and supports forward elements by fire. The defending force maintains observation and fires over the entire forward slope as long as possible to destroy enemy forces, thus preventing enemy forces from massing for a final assault. From defensive positions on the reverse slope, the close-in battle builds in intensity. The defending force does not fire its direct fire weapons, which are located throughout the MBA (on adjacent slope positions, counterslope positions, or reverse slope positions) until suitable targets appear. At the same time, the defending force shifts the effects of its indirect fires to those areas forward of the crest and forward military slope.

9-109. When possible, other units on complementary terrain support units in reverse slope positions. This is especially desirable when those supporting units can observe and place fires on the crest and forward slope. In a defense on a counterslope (reverse forward slope), fires must cover the area immediately in front of the reverse slope positions to the topographical crest. Units organize defensive positions to permit fires on enemy approaches around and over the crest and on the forward slopes of adjacent terrain features, if applicable. The key factors that affect the organization of these areas are mutually supporting covered and concealed positions, numerous existing and reinforcing obstacles, the ability to bring devastating fires from all available weapons onto the crest, and a counterattack force. Depending on the terrain, the most desirable location for the reserve may be on the counterslope or the reverse military crest of the counterslope.

Control Measures

9-110. Defensive control measures introduced in previous chapters continue to apply. Units place engagement areas and obstacles on the reverse slope. The topographical crest normally marks the far edge of the engagement area. Defending forces must dominate the crest with fires to prevent enemy forces from successfully engaging the main body.

Executing a Reverse Slope Defense

9-111. When executing a reverse slope defense, units place special emphasis on—

- The proper organization of the forward slope to provide observation across the entire front and security to the main BPs.
- A fire support plan to prevent the enemy force's occupation and use of the topographical crest.
- A counterattack plan that specifies measures necessary to clear the crest or regain it from enemy control.
- Fire support to destroy, disrupt, and attrit enemy forces on the forward slope.

9-112. Units normally place FPFs along the topographical crest and employ them as enemy forces reach the first row of defiladed obstacles. Units use the reserve to counterattack and expel the enemy from the topographical crest if massed indirect fires do not defeat the attack.

9-113. A reverse slope defense pursues offensive opportunities through surprise and deceptive actions. It is uniquely suited to infantry forces in mountainous terrain. When conducting a reverse slope defense, surprise results from defending in a manner for which the enemy forces are not prepared. Once this defense successfully halts an enemy attack, it may have limited further value because the effect of surprise is difficult to attain.

9-114. The entire forward security force should not withdraw automatically as soon as the first enemy units reach the FEBA. Units can leave in place security elements located in areas where enemy forces have not advanced. These security forces adjust to the enemy force's advance and continue to conduct security

operations as far forward as possible. They continue to resist enemy supporting efforts, such as the enemy's reconnaissance effort, thereby upsetting the enemy's coordination and allowing MBA units to fight one engagement or battle at a time. Doing this increases the chances for success even if the enemy attack penetrates the MBA in one or more areas. In some cases, security forces can attack enemy elements from the rear, engage high-payoff targets, or operate between echelons to isolate leading enemy units.

9-115. Commanders may order security force information collection assets to displace to one or both sides of an enemy penetration and continue to maintain observation of enemy forces approaching the MBA. These information collection assets can facilitate friendly counterattacks by observing and providing access to the enemy force's flanks. Alternatively, units may plan to monitor those areas where enemy forces have not advanced into the MBA solely by technical means to prevent the isolation and possible encirclement of these assets.

9-116. Units coordinate battle handover between their security forces and MBA forces as quickly and efficiently as possible to minimize vulnerability to enemy fire. Security forces need to retain freedom of maneuver until the start of their passage of lines. Fire support assets help cover the withdrawal of these security forces. Support and sustainment elements of the security force leave the security area as early as possible to avoid hampering the movement of maneuver forces. Normally, the security force hands off the battle to the nearest MBA force.

9-117. Units consider their security force's next mission before initiating battle handover between their security and MBA force. Factors that may affect this decision are the status of their security forces, their subsequent mission preparation requirements, and the size and nature of the reserve required by the situation. Commanders may decide to employ their security forces immediately as their reserve, which would release their initial reserves for other tasks. Alternately, they may decide to use their security forces to conduct additional security operations on the flanks of MBA forces as a battle progresses. However, it may be some time before a given security force is ready for commitment. Therefore, units more often wait until their security forces reconstitute and they commit their initial reserves before designating their former security forces as their new reserves.

9-118. Units plan the location of their security forces assembly areas on the follow-on missions they assign to those security forces. They locate those assembly areas to rapidly support their ongoing operations yet keep withdrawn security units from interfering with ongoing decisive and shaping operations. After passage, their security forces normally move to these locations to prepare for subsequent operations. At a minimum, units rearm and refuel their security forces as soon as possible after their relief from the security mission. Additional sustainment concerns include casualty evacuation, maintenance requirements, and resupply of other classes of supply.

Chapter 10

Mobile Defense

This chapter first discusses mobile defense and its general considerations. It then discusses organization of forces and control measures. Lastly, this chapter discusses how to plan, prepare, and execute a mobile defense.

GENERAL CONSIDERATIONS FOR A MOBILE DEFENSE

10-1. A mobile defense focuses on defeating or destroying enemy forces by allowing them to advance to a point where the striking force can conduct a decisive counterattack. The area defense, on the other hand, focuses on retaining terrain by absorbing an attacking force into an interlocked series of positions where units destroy the attacking force largely by fires.

10-2. Units smaller than a division do not normally conduct a mobile defense because of their limited capabilities to conduct multiple engagements throughout the width and depth of an assigned area while simultaneously resourcing forces for striking, fixing, and reserve. Typically, the striking force in a mobile defense may consist of one-half to two-thirds of the defender's combat power. BCTs and smaller units generally conduct an area defense or a delay as part of the fixing force as units shape the enemy force's penetration, or they attack as part of the striking force. Alternatively, they can constitute a portion of the reserve.

10-3. The mission variables may dictate that a unit conducts a mobile defense when defending against an enemy force with greater combat power but less mobility. The following circumstances favor when to conduct a mobile defense:

- The defending force possesses equal or greater mobility than the enemy force.
- The frontage assigned exceeds the defending force's capability to establish an effective area or positional defense.
- The depth of the assigned area encourages attacking enemy forces to overextend and move into unfavorable positions where they are vulnerable to a counterattack.
- Time for preparing defensive positions is limited.
- Sufficient armored, Stryker, aviation, Army, and joint fires are available to allow rapid concentration of combat power.
- The assigned area lacks well-defined avenues of approach and consists largely of flat, open terrain.
- The mission does not require denying the enemy specific terrain.

10-4. Units conducting a mobile defense anticipate enemy penetrations into defended areas and use obstacles and defensive positions to shape and control penetrations. They also use counterattacks either to draw enemy forces into entering planned penetration areas or to deceive the enemy commander as to the nature of the defense. Risks associated with the conduct of a mobile defense include—

- The fixing force may be isolated and defeated in detail because of the need to resource the striking force to the detriment of the fixing force.
- Enemy operations may impair the ability of the striking force to react at critical points.
- The enemy force may not move into the area intended by the defending commander.
- The attacking enemy force may retain some momentum as it approaches desired engagement areas.

- The defending force may not gain a timely, accurate picture of the attacking enemy force's locations and dispositions required by the striking force to execute the main effort.
- The decentralized operations required in a mobile defense may increase potential for friendly fire incidents.

Command and control systems improve the ability of the friendly force to gain and maintain a COP, which reduces the risk associated with this type of defense. Figure 10-1 depicts a mobile defense.

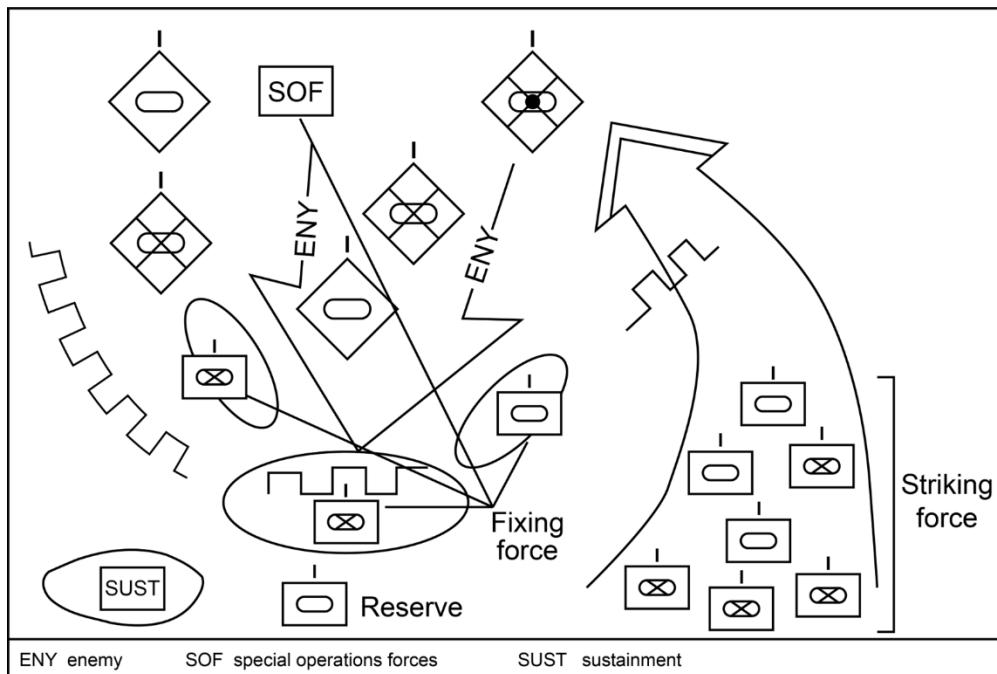


Figure 10-1. Mobile defense

10-5. Just as in an area defense, commanders of a mobile defense consider how their operations impact the civilian population within the assigned area. The impact of the population is of more concern during a mobile defense than it is during an area defense because the scope of maneuver and tempo of operations is much larger. Civilian attempts to avoid advancing enemy formations and locations where combat occurs will impede the ground maneuver of defending units unless commanders account for their presence and provide alternative routes for dislocated civilians. Units communicate these routes to the civilian population using various means to ensure they receive the information. Ideally, local nation civilian or military organizations provide civilian traffic regulations and immediate essential services along those civilian evacuation routes (along with the other five primary stability tasks). However, if the local nation cannot perform these tasks, the defending unit will have to perform them. Screening of civilians by units is necessary in this case to preclude enemy agents from using these routes to infiltrate friendly defensive positions. At all times, commanders must meet legal obligations to local civilian populations.

ORGANIZATION OF FORCES FOR A MOBILE DEFENSE

10-6. Units organize the main body into two principal groups: the fixing force and the striking force. In a mobile defense, reconnaissance and security, reserve, and sustaining forces accomplish the same tasks as in an area defense. Units adjust their task organization before committing subordinate units to combat. Figure 10-2 illustrates the organization of forces for a mobile defense.

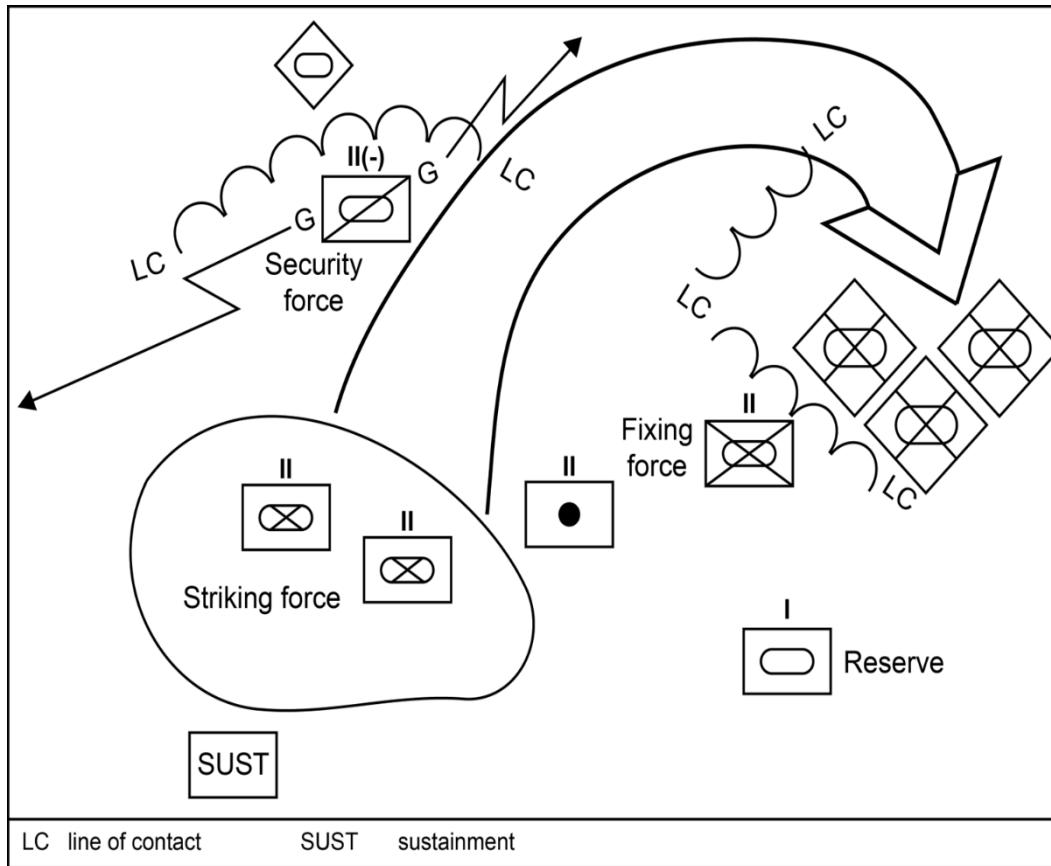


Figure 10-2. Organization of forces for a mobile defense

10-7. A fixing force is a force designated to supplement the striking force by preventing the enemy from moving from a specific area for a specific time. The fixing force is used to hold attacking enemy forces in position, by canalizing attacking enemy forces into engagement areas, and to retain areas from which to launch the striking force. A fixing force is organized with the minimum combat power needed to accomplish its mission. The fixing force turns, blocks, and delays an attacking enemy force. It tries to shape an enemy penetration or contain an enemy force's advance. Typically, it has most of the countermobility assets of the defending unit. The fixing force may conduct defensive actions over considerable depth within the MBA. However, it must be prepared to stop and hold terrain on short notice to assist the striking force on its commitment. The operations of the fixing force establish the conditions for a decisive attack by the striking force at a favorable location. The fixing force sets the condition for the striking force. The fixing force executes its portion of the defense by combining an area defense and a delaying action.

10-8. The striking force is a dedicated counterattack force in a mobile defense constituted with the bulk of available combat power. The commander's most critical decisions are when, where, and under what conditions they should commit the striking force. The striking force contains the maximum combat power available to commanders at the time of its counterattack. This is the main effort for the unit during the mobile defense. The striking force is a combined arms force that has greater combat power and mobility than the force it seeks to defeat or destroy. Units consider the effects of surprise when determining the relative combat power of their striking forces and their targeted enemy units. The striking force is normally task-organized with all support and sustainment assets before its commitment. Units should position mobility enhancing assets near the lead elements of their striking forces.

10-9. A striking force is the key to a successful mobile defense. All its contingencies relate to its attack. If the opportunity does not exist to commit the striking force, the defending unit repositions forces to establish the conditions for success. The striking force must have mobility equal to or greater than that of its targeted

enemy force. It can obtain this mobility through task organization, countermobility operations to slow and disrupt enemy movements, and mobility operations to facilitate the rapid shifting of friendly formations. The striking force requires access to multiple routes because an attacking enemy force normally denies the defending force freedom of action.

10-10. Resourcing a reserve in a mobile defense is difficult and requires commanders to analyze risk. The unit must balance the size of the reserve with taking forces away from either the fixing or strike force. Commanders generally plan priorities for the reserve to prevent the fixing force from failing or to exploit the success of the striking force.

CONTROL MEASURES FOR A MOBILE DEFENSE

10-11. Since the mobile defense is the combination of a unit conducting an area defense and a separate unit conducting a counterattack, it takes control measures from both. These control measures include designating assigned areas of the fixing and striking forces with their associated boundaries, BPs, and phase lines. Units designate a LD or a line of contact as part of the graphic control measures for the striking force. They may designate an axis of advance for the striking force. Units can designate attack by fire or support by fire positions. They use engagement areas, TRPs, TAIs, and FPFs as necessary. They designate NAIs to focus the efforts of reconnaissance and surveillance assets. This allows units to determine an enemy force's course of action. Units also designate checkpoints, contact points, passage points, passage routes, and passage lanes for use by reconnaissance and surveillance assets, security units, and the striking force. Figure 10-3 depicts example control measures for a mobile defense.

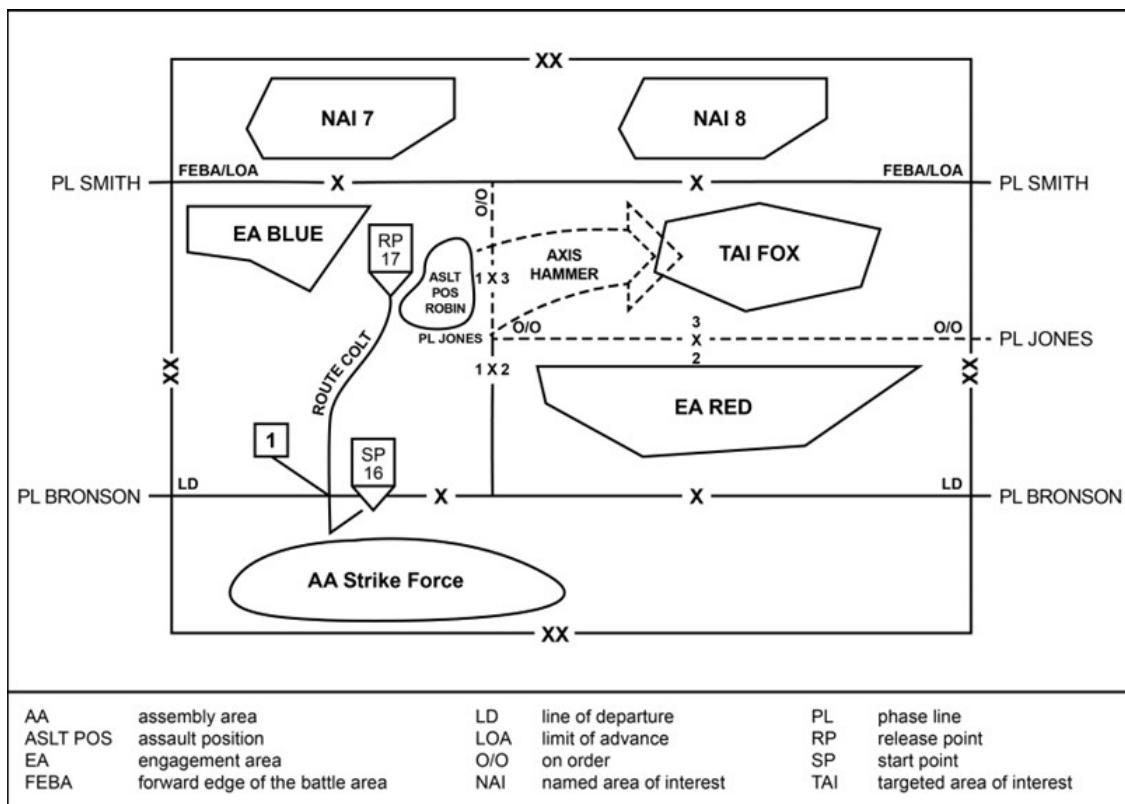


Figure 10-3. Example of mobile defense control measures

10-12. Commanders provide the striking force commander with control measures to focus the striking force at the decisive time and place and to deconflict fires with the fixing force. At a minimum, the striking force commander needs to know decision points that lead to the commitment of the striking force, the limit of advance, and boundaries of the striking force's assigned area. If the overall commander imposes either an axis of attack or a direction of attack as a control measure, that higher echelon commander restricts the

striking force commander's freedom of maneuver. However, such restrictions may be necessary to avoid contact with enemy forces that could distract the striking force from accomplishing its primary mission. Units may have to determine and transmit these control measures rapidly for subordinates to take advantage of an opportunity to commit the striking force in the counterattack. Units also develop graphics that help them recover the defense's integrity if the striking force is not successful in its attack. (Appendix A explains these control measures.)

PLANNING A MOBILE DEFENSE

10-13. The key to a successful mobile defense is the integration and synchronization of all available assets to maximize the combat power of the defending unit, particularly the striking force. Units integrate and synchronize their plans to deliver combined effects at decisive times and places.

10-14. In a mobile defense, units may take advantage of terrain or obscurants to hide a striking force until the enemy force's forward elements pass the striking force. Until committed, the striking force maintains a defense. This technique closely resembles the use of stay-behind forces. Similarly, commanders may order friendly units inadvertently bypassed by enemy forces not to break out immediately so that they may capitalize on their position to destroy enemy forces.

10-15. A mobile defense gives enemy forces an opportunity to conduct a limited penetration or advance along a limited frontage with a portion of their forces. Units conducting a mobile defense employ minimal forces as the fixing force. This generally allows enemy forces to penetrate or cross an obstacle in at least one location. Once this occurs, the fixing force isolates and fixes the enemy penetration. Once the penetration is fixed, defending units launch a counterattack by using the striking force to destroy the fixed enemy. Units may also choose this variation when an enemy force is likely to use weapons of mass destruction.

MOVEMENT AND MANEUVER

10-16. The ability to maintain the mobility advantage of a defending force is an important aspect of the mobile defense. This mobility advantage may result from or be enhanced by countermobility actions directed against an attacking enemy force. In the mobile defense plan, units ensure their reserves and striking force have freedom of maneuver. Simultaneously, the fixing forces restrict the enemy's mobility and momentum, while guiding or forcing the enemy into areas that favor the defense.

10-17. Most countermobility assets support the operations of the fixing force. Most mobility assets support the operations of the striking force. Situational obstacles provide a tremendous advantage to defending forces in a mobile defense. These obstacles are a combat multiplier because they enable economy of force measures. Units use situational obstacles to exploit enemy vulnerabilities, exploit success, separate enemy follow-on forces, and provide flank protection.

FIRE

10-18. The carefully planned indirect fires of all weapons is the basis for an effective mobile defense. The striking force conducts the main effort in a mobile defense. It requires continuous and concentrated fire support. Commanders weight their main effort, in part, by allocating field artillery and other weapon systems to it. They rapidly shift indirect fire support from the fixing force to the striking force. These fire support systems do not have to move with the striking force if it remains within supporting range.

10-19. Units plan to move their fire support assets to locations where they can support the fixing and strike force. Fire support assets, especially when employing precision munitions, can partially compensate for a lack of maneuver forces in the striking force. Units take precautions to prevent fratricide as the striking force approaches the fixing force's engagement areas by establishing RFLs while supporting air and artillery assets interdict enemy movements.

SUSTAINMENT

10-20. When planning to sustain the mobile defense, planners must look beyond the fixing force's supporting effort to support the striking force's counterattack. The greater the distance the striking force must cover when moving from its assembly area to its final objective, the greater the amount of supplies needed

to support that move. Once committed, units in the striking force require priority of fuel, ammunition, and maintenance support over comparable units in the fixing force. Units establish casualty treatment and evacuation procedures for both the fixing force and the striking force. The fixing force will likely suffer a higher percentage of casualties than the striking force as it absorbs the enemy force's attack. When the striking force must move a considerable distance from its assembly area, units should consider establishing a tactical assembly area near the fixing force prior to the assault on the enemy. Commanders weigh the benefits of establishing these bases against the cost in terms of combat power or effort diverted from the support mission to secure intermediate staging bases before establishing them. (See ATP 3-35 for additional information on intermediate staging bases.)

PREPARING A MOBILE DEFENSE

10-21. Preparations for a mobile defense include developing the fixing force's defensive positions and engagement areas. Units aggressively use information collection assets to track enemy forces as they approach. Engineers participate in conducting route and area reconnaissance to find and classify existing routes. They improve existing routes and open new routes for use during the battle by the striking force. They also conduct counter mobility and survivability operations for the fixing force.

10-22. The striking force assembles in one or more areas depending on the width of the assigned area, the terrain, enemy capabilities, and their commander's intent. Before the enemy attack begins, the striking force may deploy some or all of its elements forward in the MBA to—

- Deceive the enemy force regarding the purpose of the striking force.
- Occupy dummy BPs.
- Create a false impression of unit boundaries, which is important when operating with a mix of armored, Stryker, and light infantry forces or multinational forces.
- Conduct reconnaissance of routes between the striking force's assembly areas and potential objectives.

10-23. The enemy force attempts to discover the strength, composition, and location of units that constitute the fixing force and the striking force. Units use protective measures, such as security forces and OPSEC, to deny the enemy force information. Friendly units use those measures to degrade the collection capabilities of enemy reconnaissance and surveillance assets. Commanders routinely reposition units to mislead the enemy force and to protect the friendly force. In addition, units incorporate OPSEC, tactical deception, and other protective measures into plans and preparations. They attempt to portray an area defense to the enemy force while hiding the striking force.

EXECUTING A MOBILE DEFENSE

10-24. The first two steps of the tactical framework are normally done by the fixing force. The finish step is normally the mobile defense's main effort, while the follow through step is normally a branch or sequel operation done by both forces.

10-25. Units executing a mobile defense maintain the flexibility to yield terrain and shape the enemy penetration. They may even entice the enemy force by appearing to uncover an objective of strategic or operational value to the enemy force. The striking force maneuvers to conduct the main effort—the counterattack—once the results of the actions of the fixing force shape the situation to meet the commander's intent.

FIND THE ENEMY

10-26. Units conducting a mobile defense focus on discovering the enemy's strength and exact locations to facilitate the effectiveness of the striking force. The security force (guard or cover) or the fixing force confirms the enemy force's course of action and the main avenues of approach used by the enemy force. Commanders normally task other information collection assets to determine the location of enemy reserves and follow-on forces. Early detection of an enemy force's main effort provides units with reaction time to adjust their fixing force's positions and shape the enemy penetration, which, in turn, provides the time

necessary to commit the striking force. The striking force commander requires timely updates of the enemy situation to ensure that the striking force engages the enemy force at the right location and time.

10-27. While conducting delaying tasks, the security force determines what routes the enemy force is using, where the enemy force is strong or weak, and where gaps exist within enemy formations. This information aids units in seizing the initiative by identifying opportunities. Further, it helps direct the striking force along the path of least resistance, as it maneuvers to employ its combat power at the critical time and place.

FIX THE ENEMY

10-28. In a mobile defense, units conduct supporting efforts to disrupt the enemy force's commitment of reserves and follow-on echelons into the battle. These supporting efforts create the conditions for committing the striking force by isolating the object of the striking force and destroying the enemy force's key command and control nodes, logistics resupply units, and reserves. Whenever possible, units sequence these supporting efforts, including the use of electromagnetic warfare, so that their effects coincide with the commitment of the striking force. To generate a tempo that temporarily paralyzes enemy C2, units increase the intensity of these supporting efforts on the commitment of the striking force. Units continue to conduct supporting efforts once the striking force commits to prevent enemy forces outside the objective area from interfering with the decisive counterattack.

10-29. Fixing the enemy force establishes conditions necessary for the main effort by the striking force. Typically, commanders of the defending force allow the enemy force to penetrate the MBA before the striking force attacks as shown in figure 10-4 on page 10-8. The fixing force may employ a combination of area defense, delay, and strong point techniques to shape the enemy penetration. The intent of the fixing force is not necessarily to defeat the enemy force but to shape the penetration of the enemy force to facilitate a decisive counterattack by the striking force. Commanders ensure that the missions and task organization of subordinate units within the fixing force are consistent with the concept for preventing the enemy penetration. Defensive positions within the fixing force may not be contiguous since the fixing force contains only the minimum-essential combat power to accomplish its mission.

10-30. In a mobile defense, units retain ground only to facilitate the commitment of the striking force. Units can yield ground to make the enemy commander think that their attack is successful or to entice the enemy to move to a point where the striking force can attack. The fixing force's use of obstacles supports this shaping effort and helps it gain a mobility advantage over enemy forces.

10-31. During a mobile defense, commanders may need to commit the reserve to reinforce the fixing force and help shape the battlefield. They position their reserves so they can effectively react to the enemy force's most likely and most dangerous course of action. Without a reserve, commanders assume significant risk in attempting to shape enemy penetrations. Circumstances may also force them to employ elements of the striking force to assist the fixing force. If that occurs, units can use available long-range fire support assets and attack helicopters. These assets allow them to rapidly disengage and shift support during the striking force's commitment.

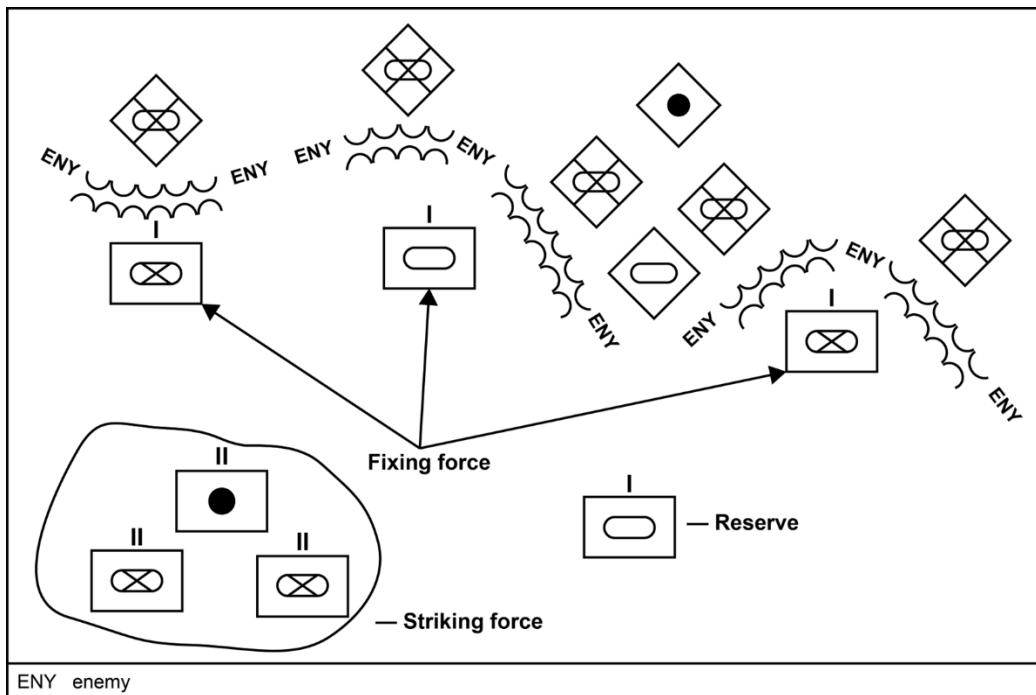


Figure 10-4. Mobile defense before commitment of striking force

FINISH THE ENEMY

10-32. Commanders' situational understanding is critical in establishing the conditions that initiate the striking force's movement and in determining the general area that serves as a focus for the counterattack. Situational understanding includes identifying those points in time and maneuver space where the counterattack proves decisive. The unit staff synchronizes the unit's activities in time and maneuver space to mass the effects of the striking force at the right time and place by establishing decision points.

10-33. The actions of the striking force are the echelon's main effort on its commitment. Information collection assets focus on tracking the enemy force's advance. The striking force commander continuously receives intelligence and information updates that allow that commander to adjust the counterattack to defeat the enemy. Once the enemy starts its attack, any forward-deployed elements of the striking force withdraw to assembly areas or attack positions and prepare for their commitment.

10-34. The defending commander launches the striking force in a counterattack when its offensive power is greater than the targeted attacking enemy force. Piecemeal commitment of the striking force in support of local objectives jeopardizes the success of the overall operation. The striking force must execute the counterattack rapidly and violently, employing all combat power necessary to ensure success. The striking force may be committed at a different time and area than anticipated. Thus, it must be able to respond to unexpected developments rapidly and decisively. Figure 10-5 depicts a mobile defense after commitment of a striking force.

10-35. Because the striking force normally attacks a moving enemy force, it generally assumes a formation with a covering force, an advance guard, a main body, and either a follow and support or a follow and assume force. The strike force commander designates flank responsibilities and may even allocate a force against a particularly vulnerable flank. The striking force takes advantage of obstacles, such as rivers or obstacle zones, to prevent the enemy from counterattacking the strike force. However, the striking force moves quickly and mitigates risk to its flanks, using speed and situational understanding to provide security.

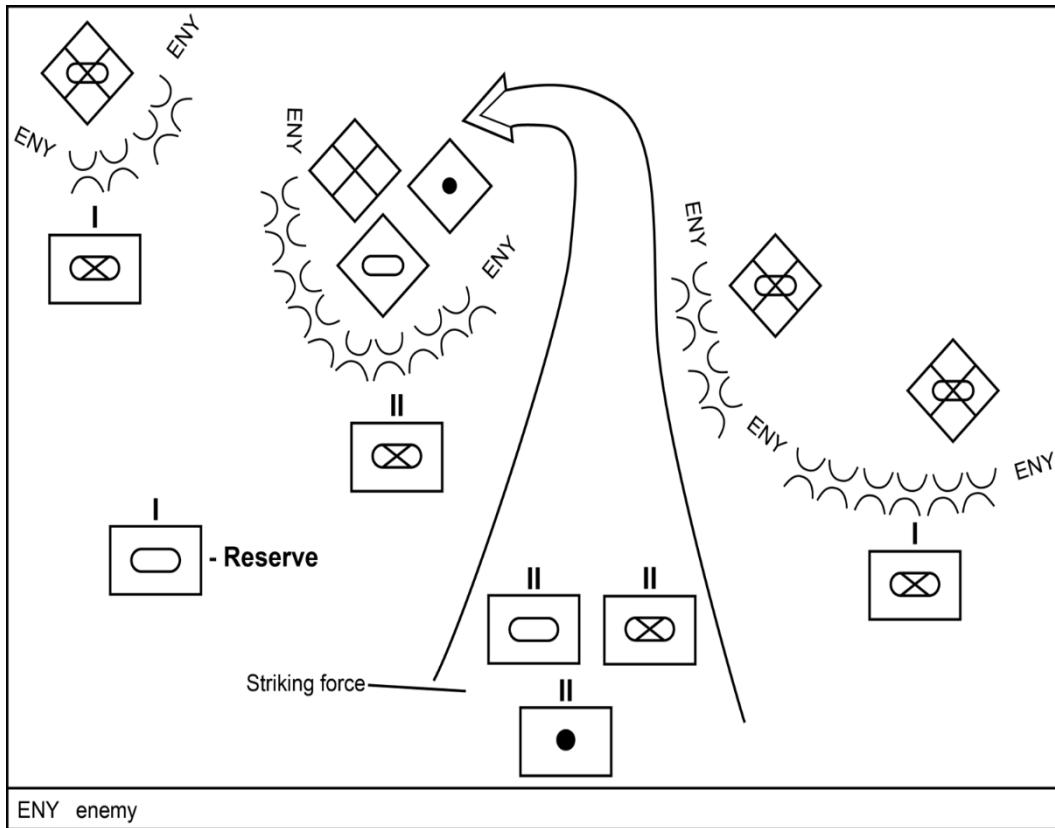


Figure 10-5. Mobile defense after commitment of striking force

10-36. The striking force attacks in a formation that provides maximum combat power forward to destroy the enemy force. The striking force takes advantage of its mobility and firepower to seize the initiative by overwhelming the enemy force with swift strikes that cripple the enemy force's C2 system, disrupt attacking enemy formations, and destroy enemy combat systems. Units ensure that fire support and fixing force efforts capture the enemy force's attention and posture the enemy force for attack by the striking force. During the counterattack, the striking force commander may have one element of the striking force occupy support by fire positions to suppress the enemy force, while another striking force element prepares to assault the objective. Armored, Stryker, and light infantry forces may make this assault.

10-37. Engineers should be well forward to enhance the mobility of the striking force. These lead engineers search for existing obstacles and clear routes within their capabilities. Follow-on engineers expand breaches, improve routes, and replace assault bridges with more permanent structures. Engineers with flank forces focus on countermobility to protect the striking force's flanks.

FOLLOW THROUGH

10-38. Units use defensive actions to create the opportunity to transition to the offense. In a mobile defense, that transitional opportunity generally results from the success of the striking force's attack. Units exploit success and attempt to establish conditions for a pursuit or an exploitation, based on the success of the striking force's attack. If the mobile defense is unsuccessful and the enemy force retains the initiative, units must either reestablish a defense or conduct retrograde operations.

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Chapter 11

Retrograde

This chapter discusses the retrograde and its general considerations. It then discusses the three variations of the retrograde: delay, withdrawal, and retirement.

GENERAL CONSIDERATIONS FOR THE RETROGRADE

11-1. A retrograde is organized movement away from the enemy. It may be forced by enemy actions, or it may be made voluntarily. In either case, the higher echelon commander of the force must approve the retrograde prior to execution. The three variations of the retrograde are delay, withdrawal, and retirement. Units may execute retrogrades to—

- Transition to other operations.
- Gain time without becoming decisively engaged.
- Resist, exhaust, and damage an enemy force in situations that do not favor a defense.
- Draw enemy forces into an unfavorable situation or extend the enemy's LOCs.
- Preserve the force or avoid combat under undesirable conditions, such as continuing an operation that no longer promises success.
- Reposition forces to conform to movements of other friendly troops.
- Position the force for use elsewhere in other missions.
- Simplify sustainment of the force by shortening LOCs.
- Position the force where it can safely conduct reconstitution.
- Adjust the defensive scheme to secure terrain more favorable to the defense.
- Deceive enemy forces.

11-2. Leaders ensure Soldiers remain disciplined and aggressive during retrograde operations to preserve unit morale. Additionally, units can counter any negative effects on morale by planning and efficiently executing the retrograde and ensuring Soldiers understand their task, purpose, and the duration of the operation. Retrogrades can negatively affect Soldiers' morale more than any other type of operation because they may view a retrograde as a defeat. After completing a retrograde operation, commanders may reconstitute their forces.

11-3. Military police conduct security and mobility support to preserve the retrograde force's freedom of movement. They augment supporting military forces by establishing traffic control posts and enable route and convoy security. Military police also provide support through the execution of detainee operations.

11-4. The extended frontages and ranges common to retrograde operations make the provision of fire support difficult and limit the ability to mass fires. Therefore, retrograde forces, especially delay forces, often have more fire support assets. Commanders' risk of losing supporting artillery systems and their ammunition stocks increases when conducting retrograde operations. Therefore, they balance their decision to commit fire support systems forward against anticipated requirements in subsequent battle stages. In particular, units take steps to protect their artillery systems against the direct fires of mobile enemy elements. Units can use available rotary- and fixed-wing aircraft to augment or replace artillery systems.

11-5. During a retrograde, sustainment units echelon their movements to maintain adequate support to the committed force. They maintain maximum dispersion consistent with control and local security. They aim to provide uninterrupted support and maximum protection during the time it takes to conduct the retrograde operation. By echeloning support, units reduce the time each sustainment unit spends moving, preventing it from performing its primary support tasks. High-priority assets may require added protection to prevent their loss or capture. To reduce congestion and interference with the operations of combat, functional and

multifunctional support units and supporting sustainment assets displace as early as possible, normally during periods of limited visibility. The early displacement of sustainment units can also prevent revealing friendly future operations to the enemy force.

11-6. **A retrograde movement is any movement to the rear or away from the enemy.** Such movements may be classified as a withdrawal, retirement, or delaying action. Retrograde operations generally require more Class III and possibly more Class V supplies than during the conduct of other defensive operations. These supplies must be available for emergency issue. These two factors combine to increase the demand for transportation assets and maneuver space on MSRs. This, in turn, increases the need for movement management and pre-positioned services and supplies. Sustainment units carry and cache necessary fuel and ammunition stocks as required by the specific situation.

11-7. The sustainment provided must be mobile to cope with demands of the tactical situation that typically occur during a retrograde operation. Units prevent unnecessary supplies from accumulating in areas projected for abandonment. Only essential medical and logistics support should be located in the area involved in the retrograde operation.

11-8. Commanders establish maintenance, recovery, evacuation priorities, and destruction criteria for inoperable equipment. Maintenance requirements generally overwhelm the organic capabilities of forward units during a retrograde operation. Higher headquarters place as much maintenance, recovery, and evacuation assets forward as possible to augment or relieve combat elements of the burden of repairing unserviceable equipment. Recovery and evacuation vehicles position themselves at critical locations to keep disabled vehicles from blocking movement routes. Forward units evacuate systems that they cannot repair within established timelines. They use all available means to accomplish this, including equipment transporters and armored vehicles with inoperative weapon systems. Units destroy inoperable equipment to prevent its capture when recovery and evacuation are impossible. When possible, units destroy the same vital components in each type of system to prevent the enemy from rapidly exploiting captured friendly systems through battlefield cannibalization.

11-9. Commanders assign transportation priorities for the movement of combat troops and their supplies, the movement of obstacle materials to impede enemy forces, and the evacuation of casualties and repairable equipment. Units keep MSRs open and decontaminated as necessary. They also increase the amount of transportation assets available to assist in the retrograde.

11-10. Generally, units use alternate supply routes rather than just a few main supply routes. Some routes remain open for traffic moving to the front while the bulk of functional and multifunctional support and sustainment units displace farther rearward. Commanders designate and reserve routes for civilian traffic including dislocating civilians. Commanders avoid designating routes that cross or otherwise interfere with the unit's MSRs as much as possible.

11-11. The senior military person present determines when to request medical evacuation and assigns precedence of evacuation. The advice of the senior medical person at the scene, the patient's condition, and the tactical situation all influence this decision. Assignment of medical evacuation precedence is necessary. The precedence provides the supporting medical unit and controlling headquarters with information used in determining priorities for committing their evacuation assets. For this reason, correct assignment of precedence cannot be overemphasized; overclassification remains a continuing challenge. Medical assets evacuate patients as quickly as possible, consistent with available resources and pending missions. Medical elements supporting the retrograding force provide rapid evacuation of casualties to medical facilities. Medical evacuation requirements are especially demanding in the large assigned areas common to the retrograde. Units may augment the ground ambulance capabilities of supporting forward medical units.

VARIATIONS OF RETROGRADE

11-12. Variations of retrograde have unique conditions and their own planning considerations. The three variations of retrograde are—

- Delay.
- Withdraw.
- Retirement.

DELAY

11-13. A *delay* is when a force under pressure trades space for time by slowing down the enemy's momentum and inflicting maximum damage on enemy forces without becoming decisively engaged (ADP 3-90). A delay is one of the most demanding of all ground combat operations. A delay wears down enemy forces so that friendly forces can regain the initiative through offensive action, buys time to establish an effective defense, or determines enemy intentions as part of a security operation. Normally in a delay, inflicting casualties on enemy forces is secondary to gaining time. For example, a flank security force conducts a delay operation to provide time for the protected force to establish a viable defense along its threatened flank. A force conducting a delay normally avoids a decisive engagement except when preventing enemy penetration of a phase line for a specific duration.

11-14. A delay operation can occur when units do not have enough forces to attack or defend. It may also occur, based on a unit's mission, in conjunction with a higher echelon commander's intent. Commanders may base their decision to conduct a delay not on the unit's combat power, but on other mission variables. For example, during security operations, units may conduct a delay as a supporting effort to draw enemy forces into an area where they are vulnerable to a friendly counterattack. Another example is a delay instituted as an economy of force effort to allow units to conduct offensive actions elsewhere.

11-15. The ability of a force to trade maneuver space for time requires depth within the delaying force's assigned area. The amount of depth required depends on several factors, including the—

- Amount of time to be gained.
- Relative combat power of friendly and enemy forces.
- Relative mobility of the forces.
- Nature of the terrain.
- Ability to shape the assigned area with obstacles and fires.
- Degree of acceptable risk.

Ordinarily, the greater the depth, the lower the risk involved to the delaying force and the greater the chance for success.

11-16. A delay succeeds by causing enemy forces to fight through a series of defensive positions. A delaying force must offer a continued threat of serious opposition, causing enemy forces to repeatedly deploy and maneuver. Delaying forces displace to subsequent positions before enemy forces are able to concentrate sufficient resources to decisively engage and defeat delaying forces in their current position. The length of time a force can remain in a position without facing the danger of decisive engagement is primarily a function of relative combat power and the mission variables, such as terrain and weather.

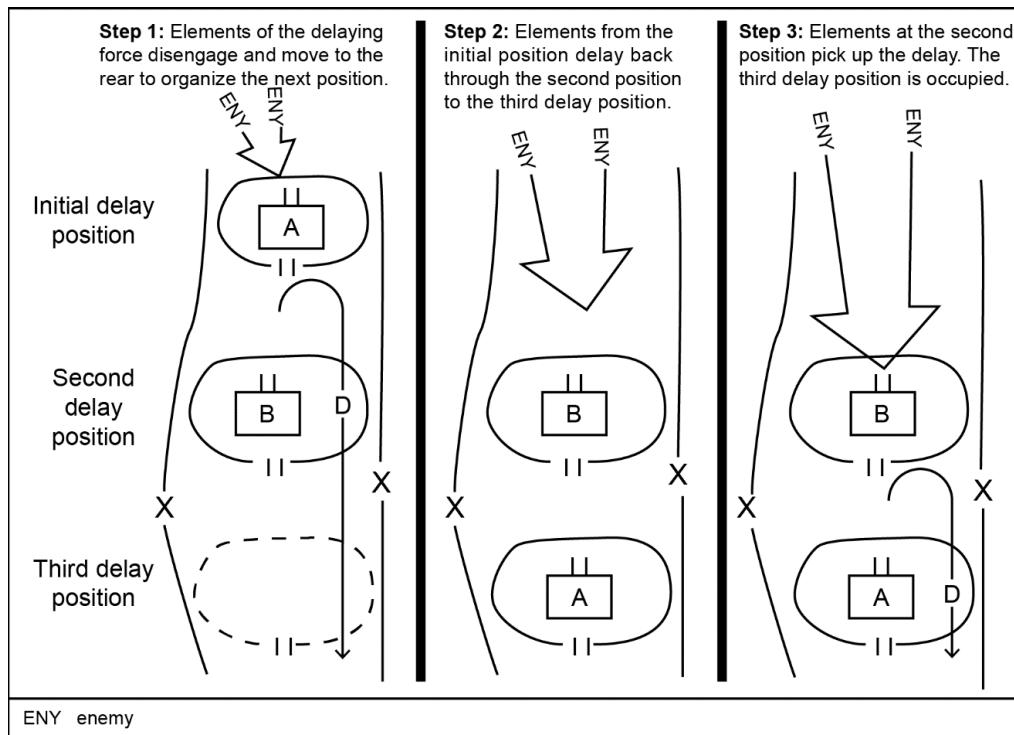
11-17. Commanders normally assign subordinate units contiguous assigned areas deeper than they are wide. They use obstacles, implement fires, and move throughout the depth of each assigned area. If units plan the delay to last a short time or the assigned area's depth is limited, the delaying unit may need to delay from a single set of positions. If units expect the delay to last for a longer period, or if sufficient depth is available, the delaying unit may delay using either an alternating or subsequent bounding technique to execute the delay.

11-18. In both techniques, delaying forces normally reconnoiter their next positions before occupying them and, if possible, post guides at their next position. Additionally, in executing both techniques, it is critical that the delaying force maintains contact with enemy forces between delay positions. Table 11-1 on page 11-4 summarizes the advantages and disadvantages of these two techniques.

Table 11-1. Considerations for delay techniques

Method of delay	Use when	Advantages	Disadvantages
Delay from alternating positions	Assigned area is narrow. Forces are adequate to be split between different positions.	Allows positioning in depth. Allows more time for equipment and Soldier maintenance. Increases flexibility.	Requires passage of lines. Engages only part of the force at one time.
Delay from subsequent positions	Assigned area is wide. Forces available do not allow themselves to be split.	Masses fires of all available combat elements.	Limited depth to the delay positions. Less available time to prepare each position. Less flexibility.

11-19. Units normally prefer to bound from alternating positions when adequate forces are available and the assigned area has sufficient depth. In a delay using alternating bounds, two or more units in a single assigned area occupy delaying positions in depth. As the first unit engages enemy forces, the second unit occupies the next position in depth and prepares to assume responsibility for the operation. The first force disengages and passes around or through the second force. It then moves to the next position and prepares to reengage enemy forces while the second force engages enemy forces. Units normally use alternate positions when their delaying forces operate on narrow fronts. A delay using alternating bounds is particularly useful on the most dangerous avenues of approach because it offers greater security than a delay using subsequent bounds. However, it requires more forces and continuous maneuver coordination. Additionally, delaying forces risk losing contact with enemy forces between their delay positions. Figure 11-1 depicts a delay from alternating positions.

**Figure 11-1. Delay from alternating positions**

11-20. Units delaying using subsequent positions when the assigned area is so wide that available forces cannot occupy more than a single tier of positions. In a delay using subsequent bounds, all delaying units are

committed to each of the series of BPs or across the assigned area on the same PL. Most of the delaying force is located well forward. The mission dictates the delay from one BP or PL to the next. Units stagger the movement of delaying elements so that elements are not moving at the same time. Figure 11-2 illustrates a delay from subsequent positions.

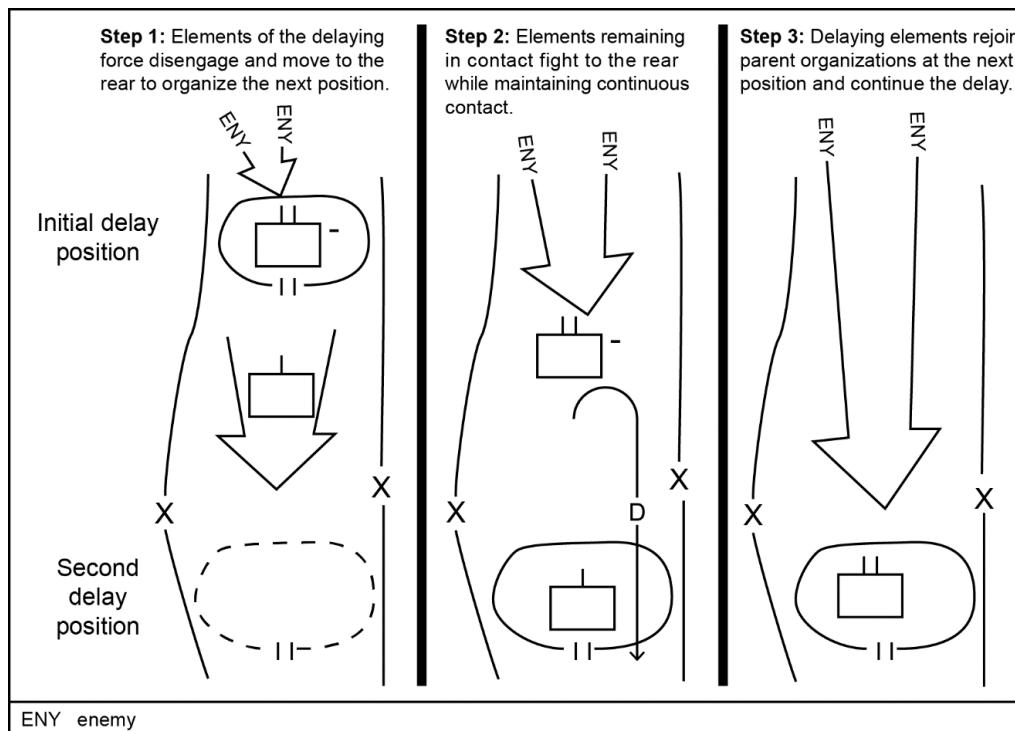


Figure 11-2. Delay from subsequent positions

Organization of Forces

11-21. Units normally organize the delaying force into a main body, a security force, and a reserve. The security force usually conducts a screen forward of the initial delay positions.

11-22. The main body, which contains the majority of the delaying force's combat power, uses alternating or subsequent bounds to conduct the delay. Commanders usually deploy their main bodies as complete units into forward positions when conducting a delay from subsequent positions. They divide the main body into two parts, roughly equal in combat power, to occupy each set of positions when conducting a delay using alternating bounds.

11-23. Commanders retain a reserve to contain enemy penetrations between positions, to reinforce fires into engagement areas, or to help a unit disengage from enemy forces. All these missions require a reserve with enough combat power and mobility to attack the enemy ensuring its reaction to the attack.

11-24. Functional and multifunctional support and sustainment assets are widely dispersed and often attached to the units they support because of the width of the assigned areas normally assigned in a delay. Engineer priorities are normally countermobility first, then mobility. However, restrictive terrain that impedes friendly movement may require units to reverse priorities. Close coordination is necessary so engineer obstacles are covered by fire and do not impede planned withdrawal routes of delaying forces or the commitment of a counterattacking reserve force. The delaying force should have a greater allocation of fire support systems, including Service and joint aviation, to enable the delay force to break contact if necessary.

11-25. The requirement to maintain continuous support during the delay requires sustainment organizations to echelon their assets throughout the area. This echeloning, coupled with the wide dispersion of combat forces inherent in a delay, complicates the execution of the delay.

Delay Control Measures

11-26. The delay consists of a series of independent small-unit actions that occur simultaneously across the front. Subordinate units need freedom of action. Figure 11-3 depicts common graphics used in a delay including assigned areas, PLs, BPs, contact points, checkpoints, engagement areas, trigger lines, points, TRPs, and disengagement lines. Commanders designate contact points in front of, between, and behind units to assist coordination, ensure continuity of the delay, and draw attention to enemy avenues of approach into unit flanks.

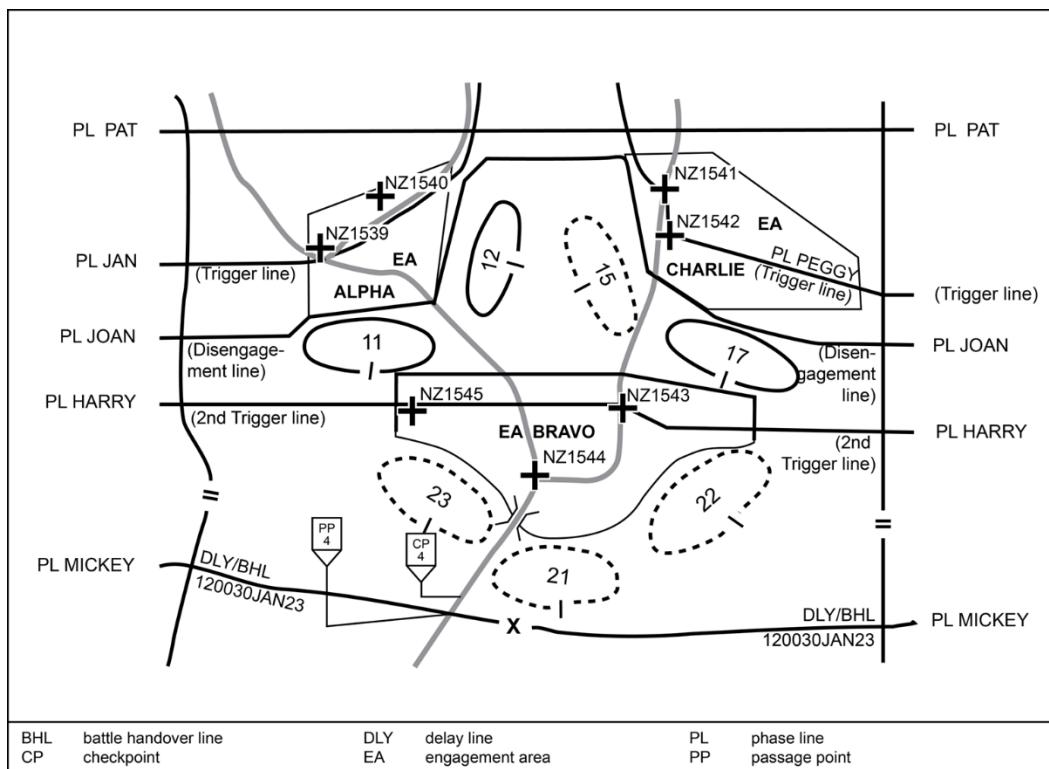


Figure 11-3. Example of common delay control measures

11-27. Commanders assign each likely enemy avenue of approach to only one subordinate unit when designating subordinate units' assigned areas. When commanders assign subordinates their assigned areas, terrain that controls fire and observation into those areas is included.

11-28. Units designate additional PLs beyond those established by the higher echelon as necessary to control the unit's movement during the delay. A **delay line** is a phase line over which an enemy is not allowed to cross before a specific date and time or enemy condition. The delay line is depicted as part of the graphic control measure. Designating delay lines is a command decision that imposes a high degree of risk on the delaying unit. The delaying unit does everything in its power—including becoming decisively engaged—to prevent enemy forces from crossing that line before the time indicated. A delay line may also be event driven. For example, commanders can order delaying units to prevent penetration of the delay line until supporting engineers complete construction of rearward obstacle belts.

Planning a Delay

11-29. Units must understand and exercise the basic defensive tactics outlined in Chapter 8 to conduct a successful delay. However, these defensive basics for a delay have unique considerations, and the significance of these considerations varies based on the mission variables. In a delay, units operate on extended frontages at great risk from advancing enemy forces. The tactical situation constantly changes and the opportunities for maneuver are few. Subordinate units must have the flexibility to take immediate actions

to retain the integrity of their forces. This helps retain their freedom of maneuver and inflict maximum destruction on enemy forces.

11-30. Commanders and their staffs identify ground and air avenues for enemy attacks and friendly counterattacks. When avenues of approach diverge or pass from one assigned area to another, adjacent units coordinate with each other. Using the results of IPB, units designate initial and subsequent delay positions on key terrain that covers likely enemy avenues of approach throughout the depth of the assigned area allocated to the delay mission.

11-31. Commanders of delaying forces must maintain a mobility advantage over their attackers. They maintain this advantage by fully using the mobility inherent in their available combat and tactical systems. Engineering and fire support enablers are critical to this effort. Units take additional steps to enhance friendly mobility and degrade enemy mobility, such as building combat trails between delaying positions and preparing bridges over major rivers for demolition. The delaying force should be capable of constructing large numbers of obstacles and delivering long-range fires. For example, while the enemy force travels in movement formations that allow it to press its attack, the delaying force aims to engage the enemy force as early and often as possible. This forces the enemy out of their preferred formations and into a series of time-consuming deployments into assault formations.

11-32. Air defense of a delaying force has three main considerations: the protection of the force while it is in position, the protection of any forces left in contact, and the protection of the force as it moves to the rear. Priority should be toward maintaining the mobility of the force. Air defense assets remain mobile yet able to engage aerial targets with little advance warning. These assets should work in teams and be able to move to the rear in alternating bounds. This ensures that dedicated air defense assets are in position and that they have the flexibility needed to keep pace with operations. Air defense firing points are not obvious positions that an enemy force would target as part of preparation or supporting fires. The brigade air defense and airspace management element provide early warning of enemy air attack over combat net radios using the command net at brigade echelons and below.

11-33. Flanks and gaps between units are always areas of concern. In a linear deployment, attacking enemy forces can bypass or outflank the delaying force if coordination between adjacent friendly units is weak or if one unit creates a gap by moving rearward too rapidly. Therefore, units designate BPs to guard approaches into the assigned area. Adjacent units of different commands exchange liaisons to ensure coordination.

11-34. Displacement criteria should specify at what point—either event or time driven—the delaying force should begin its displacement. Units calculate enemy closure rates for the terrain and compare them to friendly displacement rates between positions. Units can calculate movement times by comparing time and distance factors. Units determine required obstacle effects and emplacement locations by applying the enemy force's probable closure rates and formations to available mobility corridors. This also helps them determine if and where delay forces will be required to or likely to be decisively engaged to achieve their delay objective. Careful consideration of the mission variables, especially terrain analysis, is an inherent part of delay planning.

Characteristics of the Delay

11-35. Commanders must clearly describe three certain characteristics to their subordinate conducting a delay mission. First, they direct one of two methods: delay within the assigned area or delay forward of a specified line or terrain feature for a specified time. Commanders usually base that time on another unit completing its activities, such as establishing rearward defensive positions. A mission of delay in the assigned area implies that force integrity is a prime consideration. In this case, the delaying force delays enemy forces as long as possible while avoiding decisive engagement. Generally, this force displaces upon meeting predetermined criteria, such as when an enemy force reaches a disengagement line. The control measures are the same for both alternatives except that during a delay forward of a specified line for a specified time, commanders annotate the PL with the specified time. If commanders establish delay lines, mission accomplishment outweighs preservation of the force's integrity. It may require that delaying force hold a given position until ordered to displace. Figure 11-4 on page 11-8 depicts a delay forward of a specified line for a specified time.

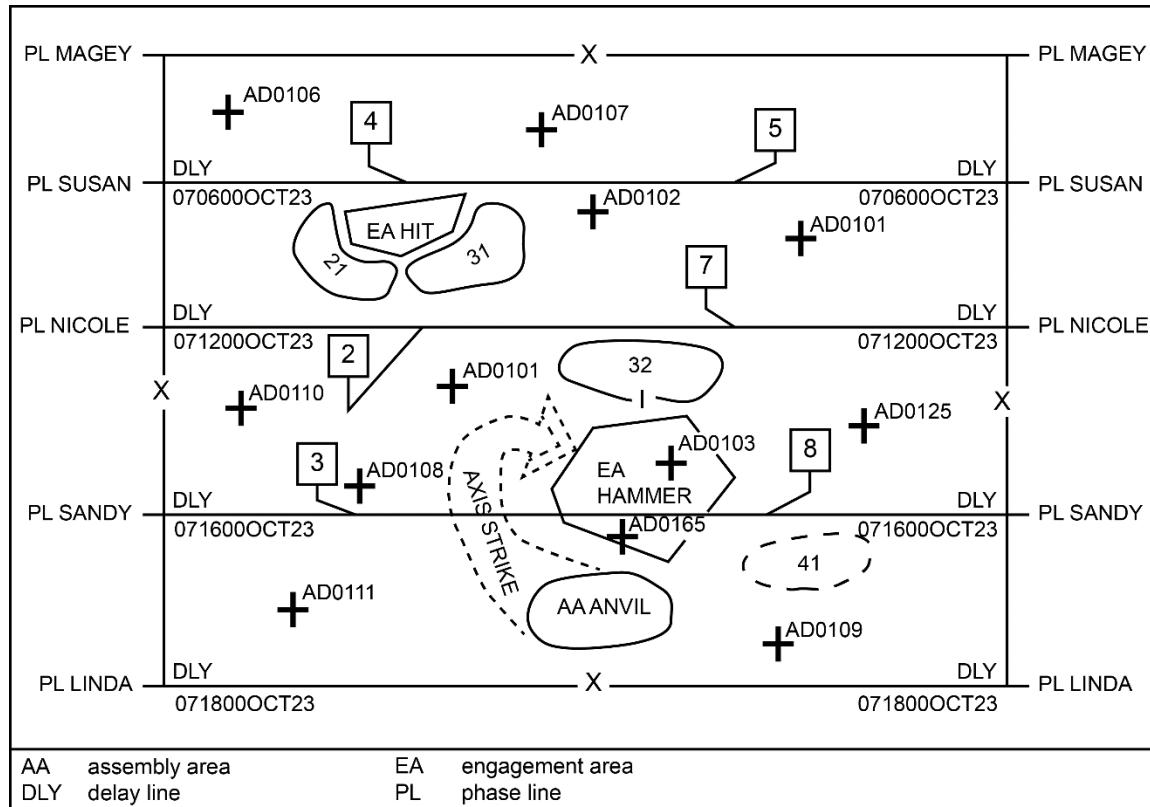


Figure 11-4. Example of a delay forward of a specified line for a specified time

11-36. The second characteristic is that the commander must specify the acceptable level of risk for the security force to take. Acceptable risk ranges from accepting decisive engagement in an attempt to hold terrain for a given time to maintaining the integrity of the delaying force. The depth of the assigned area available for the delay, the time needed by the higher echelon headquarters, and the delaying force's subsequent missions determine the amount of acceptable risk.

11-37. The third characteristic is that the commander must specify whether the delaying force may use the entire assigned area or must delay from specific BPs. A delay using the entire assigned area is preferable, but a delay from specific positions may be required to coordinate two or more units in the delay. To enhance command and control and to coordinate the battle across a broad front, commanders can assign specific BPs down to platoon level. Commanders may direct units to delay within their assigned area if that best supports the scheme of maneuver.

Command and Control in a Delay

11-38. Communications are essential to the success of this variation of a retrograde, and commanders build redundancy into the communications architecture. Digital and analog systems help ensure redundancy by providing a COP. This allows one command post to temporarily assume the duties of another command post if it is destroyed, displaced, or has suffered an enemy cyberspace or electromagnetic attack.

11-39. While planning a delay, the main command post is normally the first command post to displace, leaving the tactical command post to control the delay until the reestablishment of the main command post in a secure location. The main command post may displace by echelon, leaving a residual command and control capability in the original location.

Intelligence in a Delay

11-40. When conducting a delay operation, commanders may not get the most effective use of supporting intelligence assets. They echelon organic and supporting information collection systems rearward to maintain partial coverage of the assigned area during the delay. This increases the importance of effective collection management. However, commanders must rely on the dissemination of intelligence from higher echelons and combat information, such as that from manned and unmanned aircraft systems, to make up for the degradation in collection when systems displace.

Effects of Terrain in a Delay

11-41. Commanders take advantage of the terrain when planning how to position forces and conduct operations. They select terrain that favors friendly actions and hampers enemy actions. The terrain dictates where a delaying force can orient on a moving enemy force and ambush it. During a delay, restrictive terrain facilitates shorter displacements initiated at closer range to enemy forces. Commanders conducting operations in restrictive terrain select locations that restrict the enemy force's movement and prevent the enemy force from massing its combat power. On the other hand, flat or open terrain requires earlier displacements at greater distances to stay in front of the advancing enemy force. In open terrain, the most important consideration in selecting a position is a good, long-range field of fire.

11-42. In restricted terrain, positions tend to be closer together. In open terrain, delay positions are often far apart. In selecting positions, commanders consider natural and manmade obstacles, particularly when the enemy force has numerous armored combat systems.

11-43. Commanders identify routes that reinforcements, artillery units, command posts, and sustainment elements will use and keep under their control and free of obstacles. Alternate routes should be available so that a friendly force can bypass closed or contaminated choke points.

11-44. Disengaging from an enemy force while displacing from one position to the next has challenges. The unit's disengagement plans include—

- The maneuver concept of operations for tactical elements after disengagement, which includes the movement routes for each small unit.
- Fires to suppress enemy forces and cover the unit's movement.
- Electromagnetic warfare activities to disrupt enemy command and control at critical moments.
- Obscurants to conceal the unit's movement, conduct a military deception operation, or cover passage points.
- Contact points and passage points if moving through friendly lines.
- Disengagement start times.
- The earliest time for functional and multifunctional support and sustainment elements to move.
- Designated units responsible for closing lanes through obstacles and executing reserved obstacles.

Movement and Maneuver in a Delay

11-45. A delay is one of the most difficult tasks to execute. The primary reason is that the delaying force must engage attacking enemy forces to slow their movement, yet not become decisively engaged. In certain situations, commanders may direct a decisive engagement to prevent an enemy force from prematurely crossing a delay line or to risk a part of the force to avoid jeopardizing the entire delaying force. The delaying unit maintains continuous coordination with any flank units as it displaces rearward.

11-46. Armored and Stryker-equipped forces, supported by lethal and nonlethal capabilities, are highly suitable for delay operations in most terrain. Their organic firepower allows them to engage enemy forces effectively at long ranges, and their mobility allows them to move quickly between subsequent positions or to a flank. These same characteristics also allow these forces as a reserve to launch rapid counterattacks to extract delaying forces from untenable situations.

11-47. Dismounted infantry forces are especially suited to conduct delays in restricted and severely restricted terrain. They take advantage of such terrain, reinforced by the use of obstacles, to hinder the mobility of enemy combat systems and their supporting tactical vehicles. Dismounted infantry forces can

also participate in stay-behind operations. This type of terrain offers cover for the movement of friendly infantry forces and favors using ambushes against enemy forces. Because of the restrictions on organic motorized transportation assets and the limited protection available to infantry units, commanders specifically plan for their displacement.

11-48. Commanders may employ air assault forces in a manner similar to that of other dismounted infantry units in a delay. However, air assault forces possess additional useful capabilities in a delay operation. Because of their habitual relationship with helicopter units, they can rapidly deploy, redeploy, and disperse in open terrain if the weather is suitable and the necessary landing and pickup zones exist. The combination of dismounted infantry, attack and assault helicopters, and fire support systems found in air assault units allows delaying commanders to concentrate combat power rapidly at key locations to attrit enemy forces through repeated ambushes. The combined arms nature of air assault units also makes them extremely useful for conducting security and reserve operations over large geographical areas against mechanized and dismounted enemy forces. However, their extraction is a high-risk activity when pressured by an armored enemy force or in the presence of a significant air defense threat.

11-49. The mobility, lethality, and long range of rotary-wing and fixed-wing aviation make these assets invaluable to a force conducting a delay. Commanders can also use air assault forces to conduct counterattacks and spoiling attacks as part of a combined arms force. Other uses of rotary-wing assets in a delay include the rapid rearward movement of sustainment assets, the deployment of infantry, and the deployment of reconnaissance forces.

11-50. During a delay, countermobility is the most important engineer planning consideration. However, if the delaying force must cross one or more major obstacles, the major engineer planning consideration is mobility. Commanders set realistic and specific priorities for the engineer effort. They monitor its progress to prevent it from dissipating countermobility efforts throughout the area. Commanders employ engineers in depth. This is crucial when commanders conduct noncontiguous operations, or when enemy forces attack deep into the support area of a force conducting contiguous operations, or when enemy forces have the ability to employ weapons of mass destruction. The maneuver element provides security for the engineers so that they can concentrate their efforts on engineer tasks.

11-51. Because of the importance of mobility and countermobility tasks, a unit conducting a delay probably has few engineer assets to devote to survivability tasks. Units should maximize the use of obscurants to provide concealment for movement and assembly when weather conditions are favorable. Smoke curtains, blankets, and haze may protect withdrawing columns, critical points, and routes. Commanders take precautions to ensure that the smoke does not provide a screen for the enemy's advance. (See ATP 3-11.50 for more information on battlefield obscuration.)

Preparing for a Delay

11-52. The defensive preparations outlined in Chapter 8 apply when conducting a delay. Resources, including time available, determine the extent of preparations. Commanders' top priority is reconnaissance. Additionally, the preparation of subsequent positions receives a higher priority than it does in either a mobile or an area defense. It is not always possible to complete all preparations before starting delay operations. Consequently, delaying units continue to prepare and adapt plans as a situation develops.

11-53. In the delay, commanders use BPs in a manner similar to the mobile defense. However, commanders place more emphasis on width than depth. Within each BP, most of the available firepower is oriented toward the expected enemy avenue of approach. Commanders must provide adequate flank and rear security, since the delaying unit must furnish its own security. Each crew and squad learn the routes from its primary positions to alternate, supplementary, and sequential positions. Furthermore, commanders conduct reconnaissance of subsequent BPs and prepare routes for displacing. In preparing a BP, commanders conducting a delay place less emphasis on installing protective obstacles, establishing final protective lines, and stockpiling ammunition in either an area or a mobile defense. Leaders sometimes refer to BPs as delay positions during the conduct of a delay.

11-54. Commanders deploy their security force well forward of the initial delay positions to give early warning of any enemy forces approaching. When the security force detects and reports enemy forces approaching, commanders reconcile these reports against decision support matrixes and event templates to

support their decisions and identify enemy COAs. Based on an analysis of ongoing events and a prediction of how the battle will unfold, commanders can direct one subordinate element to maneuver in a manner designed to draw the advancing enemy force into a position of disadvantage.

Executing a Delay

11-55. The complexity of a delay requires the subordinate elements of a force to execute different, yet complementary, actions. In a delay, attacks, area defenses, mobile defenses, and other actions may occur in any sequence or simultaneously. For example, commanders may elect to assign one force the task of securing a key road intersection for a set amount of time, while another force can attack the enemy flank. Therefore, the enemy force must deploy into a hasty defense, which delays any further enemy attacks.

11-56. Intelligence preparation of the battlefield defines enemy COAs. Initially, intelligence assets attempt to determine if enemy forces recognize the delay. Subsequently, they focus on how enemy forces react to the delay. Information collection assets monitor enemy attempts to envelop the flanks or strike the rear of the rearward moving friendly force. They also focus on actions of any enemy airborne, air assault, and attack aviation units that may try to interdict the movement of the friendly force. Commanders conducting delays attempt to detect the enemy force's advance early to adjust the scheme of maneuver and concentrate sufficient combat power to delay the enemy force effectively.

11-57. The security force fixes, defeats, and destroys the enemy force's reconnaissance and security elements without risk of becoming decisively engaged. It directs fires at the approaching enemy force as far forward of the delay positions as possible. Engaging a moving enemy force at long ranges inflicts more casualties on an attacking enemy force before it can engage the delaying force; it also slows the enemy force's tempo of operations. The more a delaying force can eliminate an enemy force's reconnaissance assets, the more likely the enemy force will move with caution.

11-58. Once the security force makes contact with the enemy force, it maintains contact. As an enemy force approaches, it moves by bounds back to the flanks of the defending units, keeping the enemy force under constant observation. This prevents the enemy force from finding gaps between delaying units and attacking the exposed flanks of delaying units. The security force uses covered, concealed, and coordinated routes to avoid enemy and friendly fires.

11-59. Recovering security assets may be more difficult if the security force needs to pass through the range of the delaying force. Recovery should be to the flanks of delay positions and not through friendly engagement areas or TRPs unless a tactical situation makes such movement necessary. Security forces move so that they do not reveal the locations of other friendly elements.

11-60. The main body uses various techniques to execute the delay. These include ambushes, counterattacks, spoiling attacks, artillery raids, electromagnetic warfare, and close air support. Commanders of delaying forces preserve the force's freedom to maneuver by engaging enemy forces with sufficient force to stop their advance temporarily. The delaying forces use obstacles and defensive positions in depth to slow and canalize enemy forces and exploit the mobility of their combat systems to confuse and defeat them. Once a delay starts, units displace rapidly between positions. Whenever possible, commanders grasp any opportunity to seize the initiative, even if only temporarily. Delaying forces may conduct counterattacks from unexpected directions to confuse enemy commanders.

11-61. In a delay, commanders use lethal and nonlethal capabilities to delay enemy forces, inflict casualties, and assist the friendly force in gaining a mobility advantage over enemy forces. Lethal and nonlethal effects continue throughout the delay. These assets can disrupt the enemy's follow-on forces and restrict the immediate battle to the enemy's committed forces. Fixed- and rotary-wing assets can engage enemy forces before they come in range of other supporting lethal and nonlethal assets.

11-62. Effects generated by lethal and nonlethal assets support direct fire engagements to prevent an enemy force from conducting an attack on the delay position. Lethal and nonlethal assets separate enemy formations by attacking an enemy force when it concentrates near choke points and in engagement areas. Integrating fires and obstacles makes it difficult for an enemy force to maneuver through engagement areas. The delaying force disrupts an enemy's momentum by forcing deployment and by inflicting casualties. Lethal and nonlethal capabilities assist delaying forces by—

- Assisting in disengaging maneuver forces.
- Suppressing enemy forces.
- Degrading an enemy force's ability to move and communicate.
- Obscuring an enemy force's overwatching support by fire positions and degrading enemy intelligence and target acquisition systems.
- Reinforcing or closing breaches or lanes in obstacles.
- Executing FPFs.
- Screening friendly displacements and disengagements by using obscurants. (This also degrades an enemy force's terminal guidance of precision-guided munitions.)
- Destroying high-payoff targets.
- Supporting limited counterattacks.

11-63. As an advancing enemy force approaches the delay position, they cross one or more trigger lines and move into engagement areas within the range of the delaying force's anti-armor missiles, tank cannons, and small arms. Commanders hold their delaying force's direct fire until enemy forces are positioned where their fire plans and schemes of maneuver require their use. They control fires of the delaying forces in the same manner as in any defense. The more damage a delaying force can inflict on enemy forces, the longer it can stay in position.

11-64. As an enemy force attacks and maneuvers against a delaying force, delaying commanders continuously assess the situation to guide the displacements of the delay force to avoid becoming decisively engaged. Units use lethal and nonlethal capabilities from multiple domains to engage enemy forces while the delaying force disengages and withdraws from delay positions. Integrated fires and FPFs directed at and in front of enemy positions allow a delaying force to disengage.

11-65. Division and brigade commanders collaboratively plan and facilitate decentralized execution of a delay to battalion and lower echelons. Senior commanders rely on their subordinates to accomplish the mission and request help when needed. Commanders establish the acceptable risk and displacement criteria. Subordinates displace once they meet the previously established delay criteria. A displacement may be a preplanned event or time dependent. The senior commander monitors the delay and intervenes when the displacement of one unit threatens the survival of another.

11-66. The delaying force relies heavily on lethal and nonlethal effects to suppress and disrupt enemy forces, so the delaying force can disengage, move, and occupy new positions. If a subordinate element cannot maintain separation from enemy forces, commanders can shift additional combat enablers and other resources to that particular assigned area to counter the enemy forces' success. As one subordinate element displaces, delaying commanders order other subordinate elements to change their orientation to cover the move. Each displacing element travels along its designated route, using demolitions as required and requesting additional fire support if the enemy force continues to maintain contact.

11-67. Passing through obstacle lanes during displacement between positions poses significant risks to the delaying force. The unit passing through a linear obstacle may become more vulnerable to an enemy force's attack because of the danger of the delaying force bunching up on the far side of an obstacle. Obstacle lanes also increase the time required for a passing unit to transit through an area. Commanders prevent an enemy force from engaging passing units until they can redeploy into a tactical formation.

11-68. Reserves and air assets should not be committed early in the delay unless its integrity is threatened. Typically, commanders commit their reserves to help a unit disengage and regain its ability to maneuver or to prevent an enemy force from exploiting an advantage. Commanders' early commitment of their initial reserves reduces their ability to influence the battle unless they can reconstitute new reserves. Commanders that can extract, re-designate, or otherwise reconstitute their reserves can quickly commit their reserves several times through the delay.

11-69. In the delay, commanders balance the location of their force's sustainment elements with capability to provide adequate support and protection from enemy indirect fire. Artillery ammunition stocks must be capable of sustaining the quantity of fire support required in the delay. Maintenance operations in a delay focus on evacuating rather than returning disabled or damaged vehicles to combat. Units evacuate these

vehicles from the security area unless they can quickly repair them. Units destroy inoperative vehicles that they cannot evacuate to prevent their capture.

Terminating the Delay

11-70. A delay operation terminates when the delaying force conducts a rearward passage of lines through a defending force, the delaying force reaches defensible terrain and transitions to the defense, the advancing enemy force reaches a culminating point, or the delaying force transitions to the offense. If the advancing enemy force reaches a culmination point, the delaying force maintains contact in current positions, withdraws to perform another mission, or transitions to the offense. In all cases, the senior commander must plan for the expected outcome of the delay. If commanders expect a friendly counterattack, they plan for the forward passage of the counterattack force, conserve resources to ensure combat superiority, and handover appropriate assigned areas.

WITHDRAW

11-71. *A withdraw* is to disengage from an enemy force and move in a direction away from the enemy (ADP 3-90). Commanders may or may not conduct a withdrawal under enemy pressure. Subordinate units may withdraw without the entire force withdrawing. A unit conducts a withdrawal for the reasons listed at the beginning of this chapter. In addition, a withdrawal may precede a retirement operation.

11-72. Although commanders avoid withdrawing from action under enemy pressure, this is not always possible. They may conduct a withdrawal when the situation requires rapid action to save the command from disaster. This usually occurs after a tactical reverse or after a unit reaches its culminating point. When an aggressive enemy force becomes aware of a friendly force's withdrawal or its intention to withdraw, the attacking enemy commander attempts to exploit the withdrawal, using all available capabilities to turn the friendly force's withdrawal into a rout. The attacking enemy force may have ground and air superiority and continuously attempt to pursue, encircle, and destroy the withdrawing force. The attacking enemy commander may use a combination of direct pressure and enveloping forces and fires to isolate the withdrawing friendly force.

11-73. Withdrawals are inherently dangerous because they involve moving units to the rear and away from an enemy force. The heavier the fighting and the closer the contact with an enemy force, the more difficult the withdrawal. OPSEC is extremely important. A unit usually confines its rearward movement to times and conditions when an advancing enemy force cannot observe the movement, so that the enemy force cannot easily detect the operation. To retain the element of surprise and freedom of action, commanders consider the enemy's abilities to observe friendly movements. OPSEC is critical during the initial stages of a withdrawal, when most of the functional and multifunctional support and sustainment elements displace.

11-74. Units withdraw to assembly areas or new defensive positions. Alternatively, they can withdraw indirectly to either area through one or more intermediate positions. When preparing new positions, commanders balance the need for security with the need to establish the defense.

Organization of Forces for a Withdrawal

11-75. Commanders organize a withdrawing unit into a security force, a main body, and a reserve. They also organize a detachment left in contact and stay-behind forces if the scheme of maneuver requires them. Commanders avoid changing task organization unless subordinates have sufficient planning time. However, circumstances may dictate rapid task organization changes immediately before a withdrawal, such as when the unit must conduct an immediate withdrawal to prevent encirclement.

11-76. The security force maintains contact with the enemy force until ordered to disengage or until another force takes over. It simulates the continued presence of the main body, which requires additional allocation of combat multipliers beyond those normally allocated to a force of its size. The greater its mobility and range advantages over the enemy force, then the easier for the security force to cover the main body's withdrawal. Commanders organize most available combat power to their security forces as a rear guard or a rear covering force, since the most probable threat to a withdrawing force is a pursuing enemy. However, security forces must maintain all around security of the withdrawing force. When an enemy force can

infiltrate or insert forces ahead of the withdrawing force, commanders may establish an advance guard to clear the route or assigned areas. They designate a flank guard or screen, as the situation requires.

11-77. When a security zone exists between the two main opposing forces, the existing security force can transition on order to a rear guard or rear covering force. It then conducts delay operations until commanders order it to disengage and break contact with the enemy force. When the withdrawing force is in close contact with the enemy force, a security zone does not normally exist. Withdrawals under these conditions require that security forces adopt different techniques. For example, the detachment left in contact establishes a way to break contact sequentially with the enemy force.

11-78. The main body of the withdrawing force consists of all elements remaining after the senior commander resources a security force and reserve. Commanders in a withdrawal generally find it difficult to resource a reserve, but they make every attempt to do so. When the complete formation withdraws under pressure, the reserve may take limited offensive action, such as spoiling attacks, to disorganize, disrupt, and delay the enemy force. It can counter penetrations between positions, reinforce threatened areas, protect withdrawal routes, and free encircled or heavily engaged forces.

Withdrawal Control Measures

11-79. Withdrawing forces protect themselves while simultaneously moving combat power away from enemy forces. This requires careful coordination among all forces. Throughout an operation, commanders strictly control rearward movement and maintain the ability to concentrate combat power at key times and places. Figure 11-5 illustrates that commanders use the same control measures in the withdrawal that they employ in the delay or the defense. Withdrawal control measures also include the routes used by each unit in the withdrawal and their movement times.

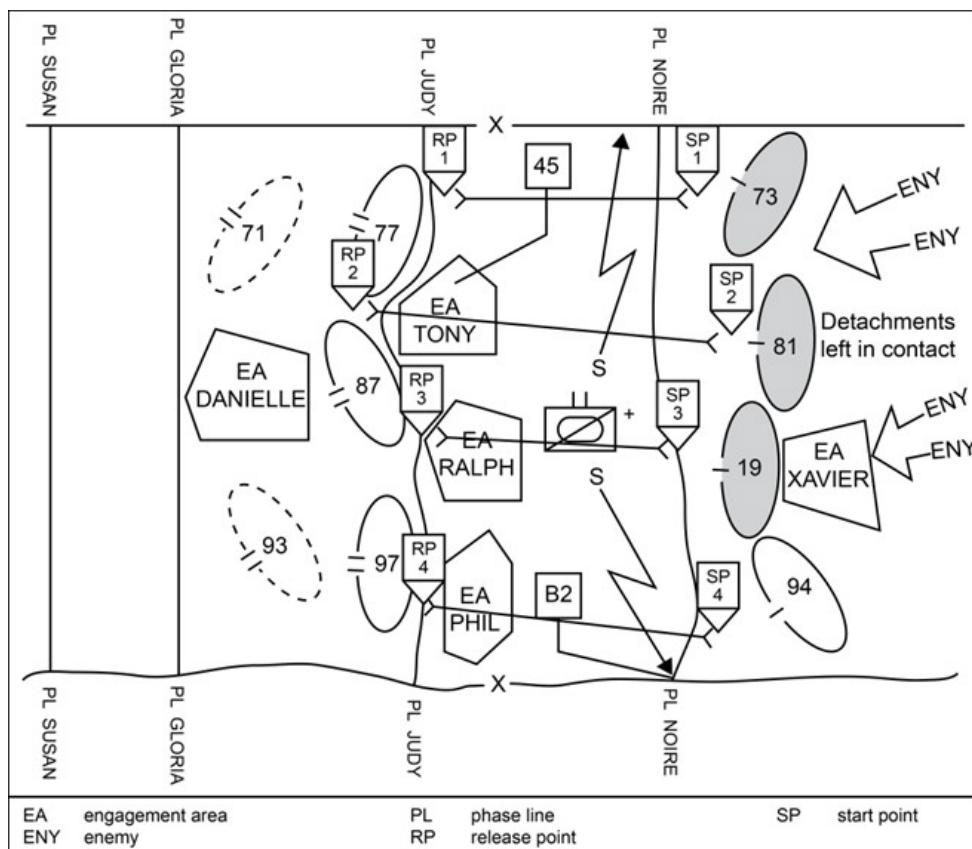


Figure 11-5. Example control measures for a withdrawal using a detachment left in contact

Planning a Withdrawal

11-80. Commanders plan and coordinate a withdrawal in the same manner as a delay, although some mission variables apply differently between a delay and a withdrawal. A withdrawal always begins under the threat of enemy interference. Because the force is most vulnerable if the enemy force attacks, commanders always plan for a withdrawal under pressure. They then develop contingencies for a withdrawal without pressure. In both cases, their main considerations are to—

- Plan a deliberate break from the enemy force.
- Displace the main body rapidly, free of enemy interference.
- Safeguard the withdrawal routes.
- Retain sufficient maneuver and functional and multifunctional support and sustainment capabilities throughout the operation to support forces in contact with the enemy force.

11-81. A withdrawal may be assisted or unassisted. It may or may not take place under enemy pressure. These two factors combined produce the four techniques shown in figure 11-6. The figure also depicts the tactical mission symbols for a withdrawal and a withdrawal under enemy pressure.

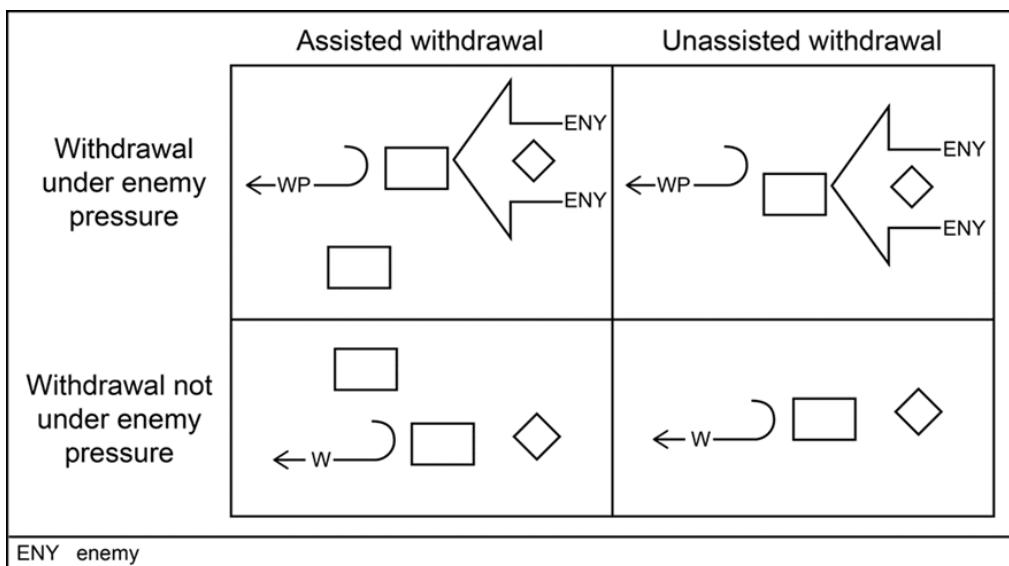


Figure 11-6. Withdrawal techniques

11-82. Commanders prefer to conduct a withdrawal while not under pressure and without assistance. An assisting unit requires commanders to add additional coordination and prompt unit actions. In a withdrawal under enemy pressure, all units withdraw simultaneously when available routes allow, using the tactics of a delay to fight their way to the rear. When the simultaneous withdrawal of all forces is not practical, commanders decide the order of withdrawal. Several factors influence their decision, including—

- Subsequent missions.
- Availability of transportation assets and routes.
- Disposition of friendly and enemy forces.
- Level and nature of enemy pressure.
- Degree of urgency associated with the withdrawal.

11-83. Commanders must make three interrelated key decisions: when to start the movement of selected functional and multifunctional support and sustainment elements, when to start displacing forward elements, and when to start the security force's disengagement operations. Commanders avoid premature actions that indicate a withdrawal to enemy forces. They anticipate enemy means of interference and plan for employing security forces, lethal and nonlethal capabilities, and air assets.

11-84. Commanders conducting a withdrawal without enemy pressure can plan when to begin the withdrawal. They have the option of taking risks to increase the displacement capabilities of the withdrawing force. For example, commanders may order their main bodies to conduct tactical road marches instead of moving in tactical formations. They can plan for stay-behind forces as part of their operations.

11-85. A withdrawing force can receive assistance from another force in the form of—

- Additional security for the area through which the withdrawing force will pass.
- Information concerning withdrawal routes.
- Forces to secure choke points or key terrain along withdrawal routes.
- Elements to assist in movement control, such as military police to conduct traffic control points.
- Required maneuver and functional and multifunctional support and sustainment, which can involve conducting a counterattack to assist the withdrawing unit in disengaging from enemy forces.

Preparing for a Withdrawal

11-86. Before withdrawing, the main body dispatches quartering parties to help it occupy the new position. In an unassisted withdrawal, the withdrawing unit establishes its own security force and reserve. It reconnoiters and secures the routes it uses for its rearward movement while sustaining itself during the withdrawal. The withdrawing unit must disengage from enemy forces.

11-87. Concealing supplies along movement routes can simplify support requirements and reduce the enemy force's ability to interfere with logistics operations. This allows sustainment units to withdraw earlier than they otherwise could. Commanders carefully consider whether to place supplies in caches. Once cached, supplies are difficult to recover if an operation does not go as planned. Other than medical items, a withdrawing unit evacuates or destroys all supplies that it cannot evacuate to prevent their capture. Commanders establish destruction criteria for each class of supply by both time and event.

Executing a Withdrawal

11-88. Typically, when under enemy pressure, the force facing the least amount of contact withdraws first. The more heavily engaged forces generally withdraw supported by indirect fires and a security force, if available. Withdrawing forces take advantage of obstacles to assist in breaking contact with the enemy force. They conduct night movements and use obscuration to screen friendly movement reducing the accuracy of enemy direct and indirect fires and enemy observations of friendly movements. The security force continues to use alternate and subsequent positions until the entire friendly force breaks contact with the enemy force.

11-89. The security force may remain in position as part of tactical deception. The main body moves rearward to intermediate or final positions as rapidly as possible. After the main body withdraws to a safe distance, the security force begins its rearward movement. Once the security force begins moving, it assumes the duties of a rear guard. Even if the enemy force does not pursue the withdrawing force, the security force continues to act as the rear guard unless commanders assign that mission to another element. However, if not pursued by the enemy force, the security force may remain in a march column.

11-90. The main body moves rapidly on multiple routes to reconnoitered positions. It may occupy a series of intermediate positions before completing the withdrawal. Usually functional and multifunctional support units and their convoy escorts, move first, and precede combat units in the withdrawal. Commanders ensure the disciplined use of routes during a withdrawal, despite confusion and enemy pressure.

11-91. When the main body withdraws, its reserve remains well forward to assist the security force and other units by employing supporting direct and indirect fires and counterattacks. The reserve can launch spoiling attacks to disorganize and delay the enemy force and extricate encircled or heavily engaged forces.

11-92. If the security force and the reserve cannot prevent the enemy force from closing on the main body, commanders commit some or all of the main body to prevent the enemy force from further interfering with the withdrawal. If the security force fails to slow the enemy force, the main body delays or defends. In this event, the withdrawal resumes at the earliest possible time. If the enemy force blocks movement to the rear, commanders can direct their units to alternate routes to bypass the enemy force. Alternatively, the withdrawing force can attack through the enemy force.

Terminating a Withdrawal

11-93. Once the withdrawing force successfully disengages from the enemy force, it has two options. It can rejoin the overall defense under conditions that are more favorable, or it can transition into a retirement and continue to move away from the enemy force and toward its next mission.

RETIREMENT

11-94. A *retirement* is when a force out of contact moves away from the enemy (ADP 3-90). A retiring unit organizes for combat, but it does not anticipate interference from enemy ground forces. Retirement operations are usually conducted to reposition forces for future operations or to accommodate the current concept of operations. Typically, another unit's security force covers the movement of one formation as the unit conducts a retirement. However, enemy mobile forces, unconventional forces, air strikes, air assault operations, or long-range fires may attempt to interdict the retiring unit. Commanders plan for enemy actions and organize their forces to fight in self-defense.

11-95. When a withdrawal from action precedes a retirement, the actual retirement begins after the unit breaks contact and organizes into its march formation organization. (While a force withdrawing without enemy pressure can also use march columns, the difference between the two situations is the probability of enemy interference.) Units conduct retirements as tactical road marches where security and speed are the most important considerations.

11-96. Each retiring unit generally moves toward an assembly area, which should support the preparations for the unit's next mission. Commanders consider unit capabilities to support defensive actions, if combat occurs during the retirement, when determining routes to assembly areas.

11-97. The initial action in a retirement is to move sustainment units and supplies to the rear. At the designated time, the retiring unit executes a withdrawal from action and forms into a march formation. The unit can first move into an assembly area, if this step is necessary, before moving into a march formation to reestablish command and control or resupply. Once it forms a march formation, the force is prepared to initiate the retirement. During the initial phase, the force retires in multiple small columns. As the distance from the enemy force increases, smaller columns can consolidate into larger ones for ease of movement control. The number of routes and the potential for enemy contact influence how and when this occurs.

Organization of Forces for a Retirement

11-98. Commanders normally designate security elements and a main body in a retirement. Figure 11-7 on page 11-18 illustrates this organization of forces. The formations employed during a retirement depend on the number of available routes and the potential for enemy interference. Commanders typically move major elements to the rear simultaneously. However, limited roles or a flank threat may require echeloning of the movement in terms of time and ground locations.

11-99. The terrain and the enemy threat dictate whether a retiring force establishes a single rear security force, which is usually a rear guard, or whether each column forms a separate rear security force. These security forces protect the rearward moving columns from surprise, harassment, and attack by any pursuing enemy force. Their size and composition depend on the strength and imminence of the enemy threat. These security elements generally remain in march columns unless potential exists for enemy interference. If an enemy force establishes contact, the rear security element conducts a delay.

11-100. The retiring march columns normally require an advance guard augmented by engineers focused on mobility. Commanders focus their engineers supporting their rear guards on countermobility. They assign flank security elements to prevent potential enemy interference with their retiring force's extended columns. Commanders may designate flank security responsibilities to subordinate march units.

11-101. The main body organizes in a manner opposite that of an approach march. The movement of functional and multifunctional support and sustainment units ideally precedes the movement of combat forces. When necessary, elements of the main body can reinforce the rear guard or any other security element. Because fire support elements and attack aviation elements of the main body can respond rapidly, they are usually the first elements tasked for this mission.

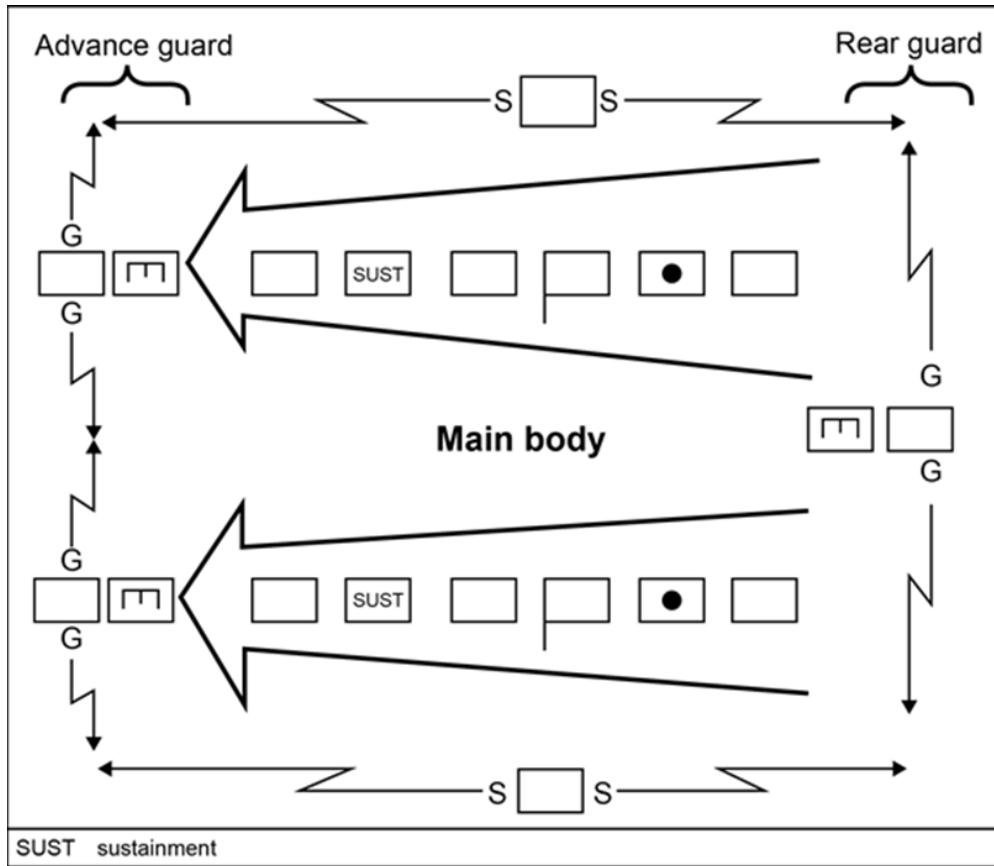


Figure 11-7. Example organization of forces for a retirement

Retirement Control Measures

11-102. The control measures used in a retirement are the same as those in a delay and a withdrawal. As in a withdrawal, thorough planning and strict adherence to routes and movement times facilitate an orderly retirement. Typically, commanders control movement using movement times, routes, and checkpoints.

PART FOUR

Enabling Operations

Enabling operations are operations that connect offensive, defensive, and stability operations together. On their own, they are not decisive, but they help set conditions for the execution of all operations. They are complex enough that they require a either a deliberate planning effort or a well developed and understood SOP to execute. Part Four consists of nine chapters that describe reconnaissance, security operations, troop movement, relief in place, passage of lines, countermobility, mobility, tactical deception, and link-up operations.

Chapter 12

Reconnaissance

This chapter addresses general reconnaissance considerations, reconnaissance fundamentals, reconnaissance management, forms of reconnaissance operations, reconnaissance methods, and recuperation and reconstitution of reconnaissance assets. (See FM 3-98 for more detail on reconnaissance operations.)

GENERAL RECONNAISSANCE CONSIDERATIONS

12-1. *Reconnaissance* is a mission undertaken to obtain information about the activities and resources of an enemy or adversary, or to secure data concerning the meteorological, hydrographic, geographic or other characteristics of a particular area, by visual observation or other detection methods (JP 2-0). Reconnaissance is one part of information collection; the other three parts that comprise information collection are security, intelligence operations, and surveillance. *Surveillance* is the systematic observation of aerospace, cyberspace, surface or subsurface areas, places, persons, or things by visual, aural, electronic, photographic, or other means (JP 3-0). Although there are similarities between reconnaissance and surveillance to facilitate information collection, reconnaissance collection uses multiple means, including surveillance, to find information by systematically checking multiple locations in a designated operational area. Instead of focusing on one specific piece of required information, reconnaissance can help provide units with a broader understanding of the impacts the terrain, weather, and enemy that ultimately assists the higher headquarters planning efforts. Whereas surveillance is more persistent and looming and tends to be more passive. Units perform reconnaissance tasks before, during, and after other operations to obtain information that commanders and their staffs use in the IPB process so they can formulate, confirm, or modify enemy courses of action and to drive planned or unplanned commander decisions within the friendly plan.

12-2. Reconnaissance identifies terrain characteristics, enemy and friendly obstacles to movement, and the disposition of enemy forces and the civilian population, so units can maneuver their forces freely and rapidly. Reconnaissance prior to unit movements and occupation of assembly areas is critical to protecting friendly forces and preserving combat power. Units also perform reconnaissance to keep their forces free from contact as long as possible so that they can concentrate on their main effort. Leaders at every echelon disseminate

information to emphasize the importance of reporting to their Soldiers and rapidly updating digital and analog systems to reflect friendly, enemy, and neutral activities.

RECONNAISSANCE FUNDAMENTALS

12-3. There are seven fundamentals of successful reconnaissance operations:

- Ensure continuous reconnaissance.
- Do not keep reconnaissance assets in reserve.
- Orient on the reconnaissance objective.
- Report all required information rapidly and accurately.
- Retain freedom of maneuver.
- Gain and maintain enemy contact.
- Develop the situation rapidly.

Ensure Continuous Reconnaissance

12-4. Effective reconnaissance is continuous. Units conduct reconnaissance before, during, and after all their operations. Reconnaissance gathers information that commanders use when deciding to execute current, branch, or sequel plans. The nature of priority intelligence requirements (PIRs) and information requirements change as operations transition. Units employ reconnaissance assets to report friendly unit locations, status, and sustainment requirements during chaotic situations. It is important that all Soldiers act as sensors and report their observations in a timely manner.

12-5. Before operations, reconnaissance fills gaps in information about enemy forces, the terrain, and civil considerations. During operations, reconnaissance assets provide units with updated information that verifies their enemy forces' composition, dispositions, and intentions. This allows those commanders to verify which potential COAs enemy forces are attempting to execute. It also allows commanders to determine if their plans are still valid based on ongoing events within their assigned areas. After operations, reconnaissance elements maintain contact with enemy forces to determine the enemy's next move. At a minimum, units ensure the continuous conduct of reconnaissance as part of all their security missions. This includes the performance of local security by forces not currently in contact.

12-6. Reconnaissance performed over extended distances and time requires units to pace or rotate their reconnaissance assets to maintain continuous coverage. Scouts require time for rest, resupply, training, and the performance of troop leading procedures. Technical reconnaissance assets require time for preventive maintenance checks and services. Commanders determine where, and when, they require maximum reconnaissance efforts and then manage their available reconnaissance assets to ensure their availability at critical times and places.

Do Not Keep Reconnaissance Assets in Reserve

12-7. Commanders never keep their reconnaissance assets in reserve. This does not mean that units commit all their assets all the time. When committed, reconnaissance assets use all their resources to accomplish the mission. They use their reconnaissance assets based on their capabilities and the mission variables to achieve the maximum coverage needed to answer their critical information requirements. At times, this requires them to task, re-assign, or minimize the reconnaissance assets to ensure their availability at critical times and places. They do not recover and sustain reconnaissance assets by placing them in the reserve. They consider all their reconnaissance assets as committed assets with specific missions at all times. They may keep units with multiple roles that can conduct reconnaissance, security, and other combat missions in an economy of force role as their reserve for future security or combat missions.

Orient on the Reconnaissance Objective

12-8. Commanders use their reconnaissance objectives to focus reconnaissance efforts. **Reconnaissance objective is the most important result desired from that specific reconnaissance effort.** The objective can be either threat or terrain based, depending on what type of operation a battalion or higher echelon is conducting. Every reconnaissance mission specifies a reconnaissance objective by priority, intent, and the

information to obtain. Commanders assign reconnaissance objectives based on PIRs resulting from the IPB process and the reconnaissance asset's capabilities and limitations. A reconnaissance objective can be information about a specific geographic location, such as the cross-country trafficability of a specific area, to confirm or deny a specific activity of a threat, or to specify the location of a threat such as a specific piece of equipment or an entire system. Furthermore, reconnaissance units use their reconnaissance objective to guide them in setting priorities when they lack time to complete all the tasks associated with performing a specific type of reconnaissance. Reconnaissance assets remain focused on achieving these objectives regardless of what they encounter during their missions. These assets implement reconnaissance objectives to focus their efforts when time, enemy action, or other factors prevent them from performing all the tasks normally associated with a particular form of reconnaissance.

Report All Required Information Rapidly and Accurately

12-9. Reconnaissance assets acquire and report accurate and timely combat information about their reconnaissance objectives. This information may quickly lose its value, which is why it is important that the latest time information of value is included with information requirements to aid in timely reporting and avoid wasting reconnaissance assets. Reconnaissance assets report exactly what they see and, if appropriate, what they do not see as this information is potentially tied to PIRs or information requirements. Seemingly unimportant information may be extremely important when combined with other information. Reports of no enemy activity are as important as reports of enemy activity. Unit information management plans ensure that unit reconnaissance assets have the proper communications equipment to support the echelon's integrated information collection plan.

Retain Freedom of Maneuver

12-10. Reconnaissance assets need to retain their battlefield mobility, refine tactical knowledge of terrain and the enemy, and maintain their initiative to complete their missions. Reconnaissance stops and battle begins when these assets become decisively engaged. Reconnaissance assets require clear engagement and disengagement criteria that support their commander's intent. They employ proper movement and reconnaissance techniques, use overwatching fires, and follow standard operating procedures. Reconnaissance assets adopt formations designed to gain contact with the smallest friendly element prior to approaching areas where enemy contact is expected. This provides friendly elements maximum maneuver space and prevents the entire reconnaissance element from becoming decisively engaged. Units use the IPB process to identify anticipated areas of likely contact. Use of indirect fires to provide suppression and obscuration as well as to destroy point targets is a method reconnaissance elements use to retain their freedom of maneuver. Reconnaissance units have a working relationship with Army aviation reconnaissance assets that can enable freedom of maneuver through early warning as well as destruction of direct threats to ground reconnaissance forces.

Gain and Maintain Enemy Contact

12-11. Reconnaissance assets gaining contact with enemy forces maintain contact unless their commander orders otherwise, or their survival is at risk. This does not mean individual scout and reconnaissance teams cannot break contact with enemy forces. Units conducting reconnaissance are responsible for maintaining contact once it occurs. Contact can range from visual to direct fire contact. After contact the unit decides which form or forms of contact is best for maintaining enemy contact so they can continue to provide required information. Survivability is a key consideration for the unit in determining which forms of contact to maintain. Leaders at all echelons must decide which forms of contact, through available assets, will enable the reconnaissance force to maintain contact and can switch between them as needed. Surveillance, combined with stealth, is often sufficient to maintain contact and is the preferred method. Units conducting reconnaissance avoid direct fire contact with enemy forces unless it is necessary to gain essential information.

Develop the Situation Rapidly

12-12. Reconnaissance assets develop the situation immediately upon contact with enemy forces or obstacles. Report enemy force composition, dispositions, activities, and movements and maneuver. If contact is made with an obstacle, then reconnaissance assets determine the type and extent of the obstacle and if the

obstacle is actively being overwatched and covered with either direct or indirect fires. Enemy obstacle locations and compositions can provide information concerning enemy force positions, weapon capabilities, and scheme of fires. Reconnaissance assets develop the situation using action on contact drills.

RECONNAISSANCE MANAGEMENT

12-13. No single reconnaissance asset can answer every information collection requirement, and there are rarely enough reconnaissance assets to cover every requirement. Staffs use a mix of reconnaissance management methods, such as cueing, mixing, redundancy, and task-organizing, to use their limited assets most effectively and collect the most critical information as quickly as possible.

12-14. **Cueing** is the integration of one or more types of reconnaissance or surveillance systems to provide information that directs follow-on collecting of more detailed information by another system. Cueing helps to focus limited reconnaissance and surveillance assets, especially limited ground assets, which can rarely examine every part of a large area closely. Electronic, thermal, visual, audio, and other technical assets with wide-area surveillance capabilities (often working from aerial platforms) can quickly determine areas of enemy concentration or areas without an enemy presence. These assets may cue ground and aerial reconnaissance assets to investigate specific areas to confirm and amplify information developed by technical assets. For example, Joint Surveillance Target Attack Radar System and Guardrail-equipped aircraft can cover large areas and cue ground reconnaissance or unmanned aircraft once they identify the presence of enemy forces. Units may dispatch ground reconnaissance or UAS to verify this information and track enemy assets for targeting purposes. Similarly, a ground reconnaissance asset can cue surveillance assets. Units use reconnaissance assets based on their capabilities and use the complementary capabilities of other assets to verify and expand information.

12-15. **Mixing** is using two or more different capabilities to collect against the same information requirement. Employing a mix of systems not only increases the probability of collection, but also provides information that is more complete. For example, a Joint Surveillance Target Attack Radar System aircraft may detect and locate a moving enemy tactical force, while the division or corps analysis and control element uses organic and supporting assets to determine its identity, organizational structure, and indications of its future plans. Employing a mix of systems is always desirable if the situation and available resources permit. Mixing systems can also help uncover enemy deception attempts by revealing discrepancies in reports from different collectors.

12-16. **Redundancy** is using two or more like capabilities to collect against the same information requirement. Commanders decide which NAIs justify having more than one asset covering them based on the priority of their information requirements. When more than one asset covers the same NAI, a backup is available in the event that one asset cannot reach the NAI in time, the first asset suffers mechanical failure, or the enemy force detects and engages the first asset. For example, two observation posts overwatching the same NAI from two different locations. Redundancy also improves the chances of successful information collection.

12-17. Commanders may task-organize their reconnaissance assets by placing additional assets under their subordinates' control to increase asset effectiveness and survivability. These assets may include additional signal retransmission elements, engineer reconnaissance elements, civil affairs teams, or additional security forces such as an infantry platoon.

COMMANDER'S RECONNAISSANCE GUIDANCE

12-18. The guidance the commander provides to the reconnaissance assets is key in collecting PIR to aid in the decision making of higher echelons. There are three sections to the commander's reconnaissance guidance: focus, tempo, and engagement and disengagement criteria. Tempo is a key element to the commander's reconnaissance guidance as it refers to the level of detail and level of aggressiveness required to accomplish the reconnaissance mission. (See FM 3-98 for more information on commander's reconnaissance guidance.)

Focus

12-19. The focus of the reconnaissance defines the reconnaissance unit's area of emphasis and is composed of four categories: threat, civil, terrain, and weather effects. A focus aids the reconnaissance effort by narrowing the scope of operations to obtain the information that is most important to developing the situation and aid in planning for future operations. Commanders and staffs further the reconnaissance efforts by focusing on specific reconnaissance objectives. The objective should directly support the end state stated within the commander's intent.

Tempo

12-20. The reconnaissance tempo is the level of detail and level of aggressiveness required to accomplish reconnaissance operations. The level of detail is conveyed using the terms "rapid" and "deliberate" to establish the necessary number of tasks required, based on the amount of time available, in a reconnaissance operation to sufficiently answer the supported commander's PIR. The level of aggressiveness addresses the necessity to avoid either detection or engagement and is conveyed through the terms "forceful" and "stealthy". Commanders analyze the mission variables of METT-TC(I) to assist them in determining the best reconnaissance tempo for a specific form of reconnaissance. Although the terms may not be mutually exclusive, the three major factors that drive the selection of the specific terms will be time, commander's intent, and the known enemy situation.

Level of Detail

12-21. Reconnaissance tempo has two levels of detail: rapid or deliberate. Commanders first identify the tasks associated with the assigned reconnaissance mission. Rapid or deliberate is used by the commander to focus on the appropriate level of detail necessary for the supported commander to make decisions.

12-22. In a rapid reconnaissance, commanders prescribe the minimum number of tasks necessary to accomplish the mission. By assigning a rapid reconnaissance, the commander is focusing on a reduced number of tasks and specificity of information associated with the assigned tasks. This is more easily accomplished with a greater understanding of the operational environment, or when only specific information is needed to facilitate the supported commander's decisions. The limitation of rapid reconnaissance is a higher risk to the force due to reduced specificity and less detailed information about the operational environment.

12-23. In a deliberate reconnaissance all tasks for that mission must be accomplished to ensure success and answer PIRs. This is inherently more time intensive due to the amount of required information to collect and tasks to complete and is necessary when the understanding of the operational environment is vague. Deliberate reconnaissance requires meticulous information collection, and is conducted when there is limited enemy presence, when more time is available, or the commander requires more detailed information about the operational environment. The limitation of a deliberate reconnaissance is that it may require augmentation to include more detailed information collection assets and may require more deliberate sustainment planning.

Level of Aggressiveness

12-24. Reconnaissance tempo has two levels of aggressiveness: forceful or stealthy. A forceful level of aggressiveness develops the situation by employing air and ground reconnaissance, technical means, and direct and indirect fire systems to rapidly develop the situation. Forceful reconnaissance is appropriate when favorable relative combat power analysis permits, when limited time necessitates, or when aggressive engagement is necessary to gain the required information. Units conducting forceful reconnaissance can move overtly as direct and indirect contact will not hinder or may enable the collection effort. A stealthy level of aggressiveness emphasizes avoiding detection and direct and indirect contact as it will hinder collection efforts and could limit freedom of maneuver. Stealthy reconnaissance typically takes more time than forceful reconnaissance and is appropriate when time is available and the unit is either unable to fight for information based on relative combat analysis, the commander wants forces to remain undetected, or when a higher headquarters is unwilling to accept a higher threshold of risk. Units also use UAS independently, or in conjunction with ground reconnaissance assets, to execute stealthy reconnaissance.

12-25. The levels of detail and aggressiveness combine to give the commander four combinations of tempo to choose from. The four combinations of reconnaissance tempo are—

- Rapid and forceful.
 - Limited information requirements.
 - Mission timeline emphasizes prompt collection.
 - Overt movement is acceptable.
 - Direct and indirect fires will not hinder or may enhance collection efforts.
- Rapid and stealthy.
 - Limited information requirements.
 - Mission timeline emphasizes prompt collection.
 - Covert movement is required.
 - Direct and indirect fire contact will hinder collection efforts and movement and maneuver.
- Deliberate and forceful.
 - Extensive information requirements.
 - Mission timeline allows comprehensive collection.
 - Overt movement is acceptable.
 - Direct and indirect fires will not hinder or may enhance collection efforts.
- Deliberate and stealthy.
 - Mission timeline allows detailed collection.
 - Extensive information requirements.
 - Covert movement is required.
 - Direct and indirect fire contact will hinder collection efforts and movement and maneuver.

12-26. It is less important that commanders use the specific terms (rapid or deliberate, forceful or stealthy) to communicate an organization's reconnaissance tempo. Instead, commanders should strive to provide guidance within each area of tempo to assist subordinate units in understanding how the reconnaissance effort is nested within the supported organization's operating tempo. Generally speaking, commanders should inform the reconnaissance force how much information pertaining to the enemy and terrain they need to gather, how quickly that information must be gathered, and how aggressively to pursue that information.

Engagement and Disengagement Criteria

12-27. ***Engagement criteria*** are protocols that specify those circumstances for initiating engagement with an enemy force. Commanders must clearly define the size or type of enemy force they want their subordinate elements to engage or avoid. The commander ensures that subordinate leaders understand this to avoid becoming decisively engaged which prevents the unit from continuing reconnaissance operations. Commanders use bypass criteria to direct bypassing or handing off certain sizes or types of units to maintain the tempo of the operation based upon subsequent planned operations and guidance from higher. ***Bypass criteria*** are measures established by higher echelon headquarters that specify the conditions and size under which enemy units and contact may be avoided. Reconnaissance assets direct and rehearse handover of enemy targets between friendly units as required when specified enemy formations are bypassed.

12-28. ***Disengagement criteria*** are protocols that specify those circumstances where a friendly force must break contact with direct fire and observed indirect fire to avoid becoming decisively engaged or to preserve friendly combat power. Just like engagement criteria, it is critical for the commander to clearly state when the subordinate elements must break contact with direct fire with enemy forces to prevent becoming decisively engaged and more importantly retain freedom of maneuver.

CHARACTERISTICS OF RECONNAISSANCE ASSETS

12-29. Every unit has a requirement to report information about the terrain, weather, civilian activities, and friendly and enemy dispositions. Troops in close combat and reconnaissance patrols of maneuver units at all echelons collect information on enemy units with which they are in contact. In echelon support areas, reserve

maneuver forces, functional and multifunctional support, sustainment elements, other government agencies, and multinational forces observe and report civilian and enemy activity and significant changes in terrain trafficability. Although all units conduct reconnaissance, those specifically trained in reconnaissance operations are cavalry, manned and unmanned aviation reconnaissance, scouts, and special forces. Some branches, such as engineers, civil affairs, and chemical, have specific ground reconnaissance tasks to perform that complement the force's overall reconnaissance effort. However, maneuver battalions, BCTs, divisions, and corps commanders primarily use their organic or attached ground and aerial reconnaissance assets, and their space operations, target acquisition, and intelligence elements to conduct reconnaissance operations.

12-30. Battalion and higher echelon commanders assign missions to their reconnaissance assets based on the organization, equipment, and training of those assets. They know the capabilities and limitations of their available reconnaissance assets. This ensures the appropriate employment of these assets based on their capabilities. They will also augment their reconnaissance assets with enablers if they recognize that the reconnaissance task requires additional augmentation to be successful. Table 12-1 shows the typical nesting of reconnaissance and surveillance assets available at different echelons.

Table 12-1. Typical reconnaissance and surveillance assets available

	<i>Platoon</i>	<i>CO/TM</i>	<i>BN/TF</i>	<i>BCT</i>	<i>Division</i>	<i>Corps</i>
Observation post	C/T	C/T	C/T	C/T	C/T	C/T
Reconnaissance patrol	C/T	C/T	C/T	C/T	C/T	C/T
Combat outpost	A	A	C/T	C/T	C/T	C/T
Scout platoon	A	A	C/T	C/T		
Cavalry troop		A	A	C/T	C/T	
Cavalry squadron		A	A	C/T	A	
Chemical reconnaissance		A	A	C/T	C/T	C/T
Artillery target acquisition systems			A	C/T	C/T	C/T
Air defense radar systems			A	A	C/T	C/T
Other military information collection assets			A	C/T	C/T	C/T
Air cavalry squadron				A	C/T	C/T
Unmanned aircraft systems	A	A	A	C/T	C/T	C/T
Cavalry regiment					A	C/T
Special forces and rangers					A	A
Technical surveillance platforms			A	A	C/T	C/T
A	Echelon can routinely expect the information from that source to be made available to it.					
C/T	Echelon controls or routinely tasks the asset.					
BCT	brigade combat team	BN/TF	battalion or task force	CO/TM	company or team	

12-31. Commanders primarily employ a combination of manned ground and air assets supported by technical systems to perform reconnaissance. These assets use the strengths of one system to overcome the weaknesses of another. They delineate reporting procedures for all units to disseminate information gathered during reconnaissance that facilitates mission accomplishment.

12-32. Commanders employ all available resources, not just reconnaissance units, to satisfy their existing information requirements. Joint forward observers and fire support teams report combat information. Forward deployed air defense units observe and report enemy aircraft and air corridors in use as well as supplement available air control radars. Specialized reconnaissance assets such as these will have unique requirements of time on objective, distance to objective, and movement. Planning and integration are required to ensure that requirements of the mission variables of the reconnaissance commander and the collection requirements are effectively balanced. Ground reconnaissance can involve assets not specifically tailored for the mission.

12-33. During the conduct of any form of reconnaissance, the commander may require information about a specific aspect of the area of operations. To obtain this information the commander may direct a specific focus task which typically requires the use of an organization uniquely trained and equipped for the mission. Focus tasks include CBRN, civil, electromagnetic, and engineer reconnaissance.

12-34. CBRN reconnaissance includes missions to obtain information on suspected or confirmed chemical, biological, radiological, or nuclear threats and hazards in an assigned area. CBRN reconnaissance identifies indicators of enemy CBRN production or employment, and indicators related to civilian or industrial facilities that could be weaponized or produce hazards when damaged or destroyed. (See ATP 3-11.37/MCRP 10-10E.7/NTTP 3-11.29/AFTTP 3-22.44 for more on CBRN reconnaissance.)

12-35. *Civil reconnaissance* is a targeted, planned, and coordinated observation and evaluation of specific civil aspects of the environment such as areas, structures, capabilities, organizations, people, or events (JP 3-57). Civil reconnaissance verifies or refutes civil information, supports operational environment assessments, and detects and monitors changes in the civil component. It is conducted over time through routine engagement and patterned civil observance using active and passive sensors, virtual sensors, and other means. (See FM 3-57 for more information on civil reconnaissance.)

12-36. *Electromagnetic reconnaissance* is the detection, location, identification, and evaluation of foreign electromagnetic radiations (JP 3-85). Electromagnetic reconnaissance supports information collection at brigade and higher echelons using assigned electromagnetic warfare personnel and capabilities. Information obtained through electromagnetic reconnaissance assists the commander with situational understanding and can support signals intelligence activities. Electromagnetic reconnaissance may result in electromagnetic protection modifications or lead to an electromagnetic attack against enemy capabilities. (See FM 3-12 for more information on electromagnetic reconnaissance.)

12-37. Engineer reconnaissance obtains information about the infrastructure, terrain, or threat. This may include data on obstacles, gap crossing sites, airfields, bridges, tunnels, roads, and trails. Engineer units do not have designated reconnaissance teams. Engineer reconnaissance is directed and task-organized based on mission requirements using assets that would otherwise support other engineer missions. (See ATP 3-34.81/MCWP 3-17.4 for more on engineer reconnaissance.)

12-38. Ground reconnaissance elements are generally limited in the depth to which they can conduct reconnaissance. However, they can operate in weather conditions that prohibit aerial reconnaissance operations. Reconnaissance conducted by manned and unmanned aircraft systems complement ground reconnaissance by increasing the speed and depth of reconnaissance over designated areas. Aerial reconnaissance assets can operate over terrain that hinders ground operations, such as swamps, extremely rugged terrain, or deep snow. Aviation assets can operate at a considerable depth, far in advance of dedicated ground reconnaissance elements focused on close operations. Thus, aviation assets provide units with additional time to react to enemy forces. Manned and unmanned aerial reconnaissance assets use their optics, video, thermal imaging, electronic sensors, and communications capabilities to detect and report enemy activities. All types of aviation units generate pilot reports when conducting their primary missions. These reports are often a source of valuable combat information.

12-39. While several technical systems can perform reconnaissance, most of these systems are surveillance platforms. Surveillance complements reconnaissance by cueing the commitment of reconnaissance assets against specific locations or specially targeted enemy units.

12-40. Military intelligence units conduct supporting intelligence operations. They provide electronic intercept, UAS sensor feeds, and human intelligence, counterintelligence, and downlinks from theater and national assets. Theater and national reconnaissance and surveillance systems broadcast information and intelligence to commanders and provide near real-time imagery as a part of an integrated intelligence effort. Artillery and air defense target acquisition radars complement military intelligence surveillance systems as a part of that effort. Examples of human intelligence collection include face-to-face interrogation of captured enemy Soldiers, screening of the civilian population, and debriefing of friendly Soldiers, such as scouts and special operations forces. (See JP 2-0 or FM 2-22.3 for more information about human intelligence collection.)

12-41. Division and corps headquarters have various ways to obtain information from space reconnaissance assets. Various sensors found on these assets use the breadth of the electromagnetic spectrum (EMS) to gather

data for situational awareness, planning, intelligence, and operations by ground forces. Space reconnaissance assets can continue reconnaissance regardless of the enemy capability to defend against air and ground reconnaissance assets. Space and terrestrial weather may have varying effects on the different space-based sensors and the portion of the EMS being used. Certain space-based reconnaissance assets can be limited in the amount of support provided due to the physical limitations of their orbit and revisit times.

FORMS OF RECONNAISSANCE

12-42. The five forms of reconnaissance operations are—

- Zone reconnaissance.
- Area reconnaissance.
- Route reconnaissance.
- Reconnaissance in force.
- Special reconnaissance.

12-43. Table 12-2 shows what types of Army reconnaissance units are typically assigned the forms of reconnaissance operations. Special operations forces conduct special reconnaissance.

Table 12-2. Dedicated reconnaissance units and forms of reconnaissance operations

	<i>Scout Platoon</i>	<i>Troop or company</i>	<i>Air cavalry</i>	<i>Cavalry squadron</i>	<i>Brigade combat team</i>	<i>Division</i>	<i>Special operation forces</i>
Zone	X	X	X	X	X		
Area	X	X	X	X	X		
Route	X	X	X				
Reconnaissance in force				X (if reinforced)	X	X	
Special							X

ZONE RECONNAISSANCE

12-44. *Zone reconnaissance* is a form of reconnaissance operation that involves a directed effort to obtain detailed information on all routes, obstacles, terrain, and enemy forces within a zone defined by boundaries. Commanders assign a zone reconnaissance mission when they need additional information on a zone before committing other forces. It is appropriate when the enemy situation is vague, existing knowledge of the terrain is limited, or combat operations have altered the terrain. A zone reconnaissance may include several route or area reconnaissance missions assigned to subordinate units.

12-45. Zone reconnaissance is normally a deliberate process and units need to allow adequate time to perform this task. It takes more time than any other reconnaissance operation. It normally involves extended distances and starts from a LD. It requires the employment of all ground elements executing the zone reconnaissance abreast of each other. Commanders may forgo detailed reconnaissance of these zones and focus assets on NAIs that reveal enemy dispositions and intentions when their reconnaissance objectives are enemy forces. Reconnaissance units do not disregard terrain when focusing on enemy forces. However, they minimize their terrain reconnaissance efforts to what influences the NAIs.

Tasks Associated with Zone Reconnaissance

12-46. Units performing zone reconnaissance accomplish the following tasks within capability (unless otherwise ordered):

- Find and report all enemy forces within the zone.
- Based on engagement criteria, clear all enemy forces in the designated assigned area of the unit conducting reconnaissance.
- Determine the trafficability of all terrain in the zone including built-up areas.
- Locate and determine the extent of all contaminated areas in the zone.

- Inspect and classify all bridges in the zone.
- Inspect and classify all overpasses, underpasses, and culverts.
- Locate fords, crossing sites, or obstacle bypasses in the zone.
- Locate and clear all mines, obstacles, and barriers in the zone.
- Report reconnaissance information.
- Reconnoiter all terrain in the zone.
- Locate bypass around built-up areas, obstacles, and contaminated areas.
- Reconnoiter specific terrain in the zone.
- Reconnoiter defiles along the route. Clear them of enemy and obstacles or locate a bypass.

Organization of Forces for a Zone Reconnaissance

12-47. Several subordinate units operate abreast within their assigned area when performing a zone reconnaissance. Commanders directing their forces to perform a zone reconnaissance designate a maneuver reserve when they expect to encounter significant enemy forces. That reserve should contain significant combat power. For example, armored company teams normally perform this task for a cavalry squadron in an armored BCT. Units conducting a zone reconnaissance ensure fires assets can adequately support throughout the execution of the operation.

Control Measures for a Zone Reconnaissance

12-48. Commanders control the performance of zone reconnaissance by assigning areas to units conducting the reconnaissance. They may designate their zone by designating lateral boundaries, lines of departure, and LOAs. Units conducting zone reconnaissance can further divide their zone with additional lateral boundaries to define subordinate unit's zones. Figure 12-1 is an example of a sketch showing how commanders control zone reconnaissance. The primary difference between an area reconnaissance and a zone reconnaissance is that a zone reconnaissance typically involves larger areas than those associated with the performance of area reconnaissance.

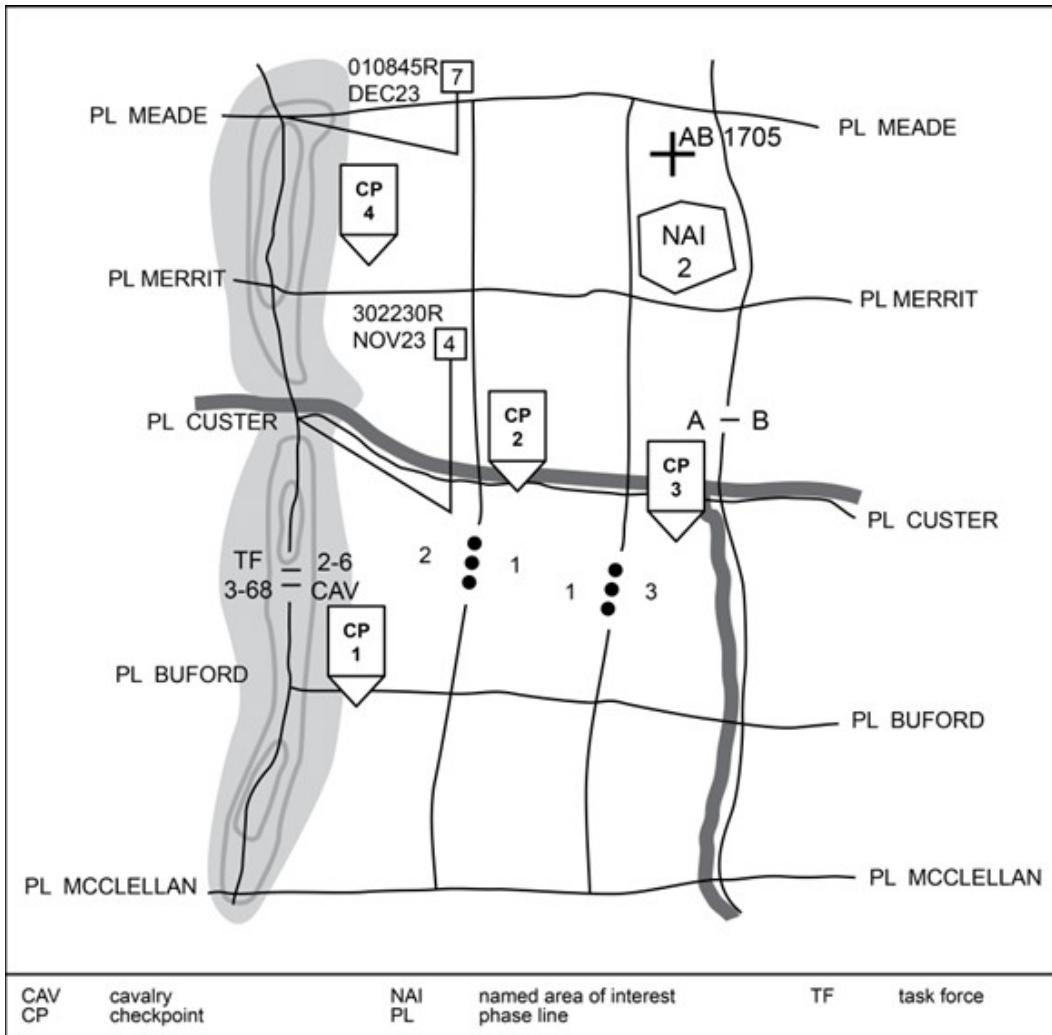


Figure 12-1. Example of zone reconnaissance control measures

AREA RECONNAISSANCE

12-49. *Area reconnaissance* is a form of reconnaissance operation that focuses on obtaining detailed information about the terrain or enemy activity within a prescribed area. This area may consist of a single location, such as a town, a ridgeline, a forest, an airhead, a bridge, an installation, or any other critical operational feature such as obstacles. Obstacles are considered as either natural or man-made and can include areas with CBRN contamination. Commanders assign an area reconnaissance when information on the enemy situation is limited or when focused reconnaissance yields specific information on the area in question. Area reconnaissance is normally smaller than zone reconnaissance and is not usually contiguous to other friendly areas targeted for reconnaissance.

12-50. Commanders may forgo detailed reconnaissance of their respective areas and focus their assets on NAIs that reveal enemy compositions, dispositions, and intentions when their reconnaissance objectives are oriented on enemy forces. Reconnaissance units cannot disregard terrain while focusing on enemy forces in this situation. However, they minimize their terrain reconnaissance efforts to those that may influence NAIs.

Tasks Associated with the Performance of an Area Reconnaissance

12-51. Units performing an area reconnaissance perform the following tasks within capability (unless otherwise ordered):

- Confirm or deny commander's PIRs.
- Reconnoiter specific terrain in the area.
- Find and report all enemy forces within the area.
- Determine the trafficability of all terrain in the area, to include built-up areas.
- Locate and determine the extent of all contamination in the area.
- Inspect and classify all overpasses, underpasses, defiles, and culverts.
- Locate fords or crossing sites near all bridges in the area.
- Inspect and classify all bridges in the area.
- Locate a bypass around built-up areas, obstacles, and contamination in area.
- Locate any bypasses for existing obstacles in the area.
- Locate and clear all mines, obstacles, and barriers in the area.
- Report reconnaissance information.

Organization of Forces for an Area Reconnaissance

12-52. Considerations for the organization of forces for an area reconnaissance are the same as organizing a zone reconnaissance. (See paragraph 12-47.) The overall commander of those units performing the area reconnaissance establishes a maneuver reserve if that individual expects units to encounter significant enemy forces. This reserve needs adequate combat power to reinforce decisively engaged reconnaissance forces. A tank-heavy company team normally performs this task for a cavalry squadron of an armored BCT. Commanders ordering the performance of an area reconnaissance provide their reconnaissance elements with adequate fire support assets that move with those elements if the areas they are reconnoitering are located beyond supporting range of their main bodies.

Control Measures for an Area Reconnaissance

12-53. Figure 12-2 is a sketch showing that commanders control an area reconnaissance using the same control measures as in a zone reconnaissance. The primary difference between an area and a zone reconnaissance is that a zone reconnaissance typically involves larger areas than those associated with the performance of area reconnaissance. Units conducting area reconnaissance can further divide their assigned area with additional lateral boundaries to define subordinate unit assigned areas. These subordinates' assigned areas are not necessarily the same size.

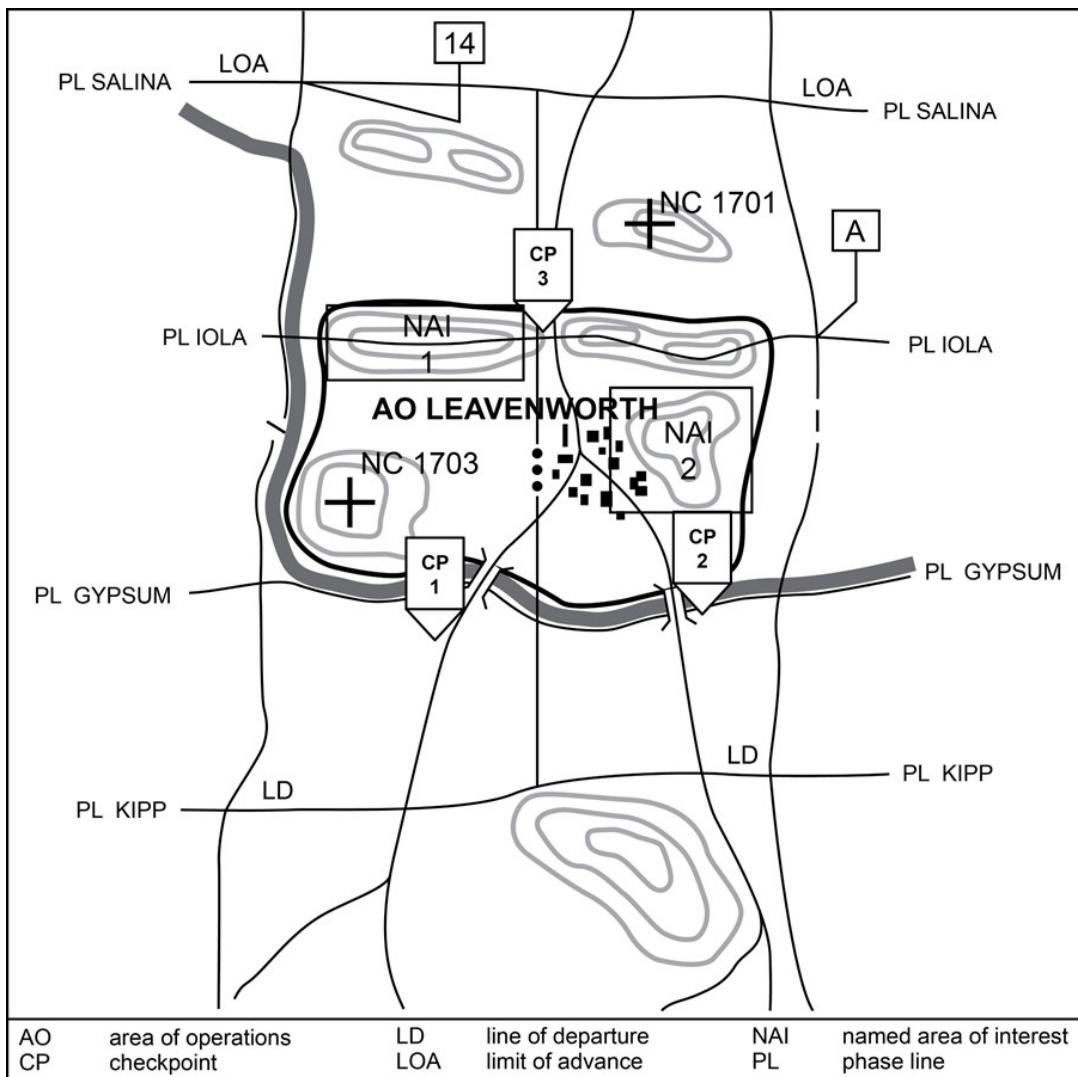


Figure 12-2. Example of area reconnaissance control measures

12-54. Units place additional control measures on recognizable terrain where possible. They locate contact points where they determine that it is necessary for adjacent units to make physical contact and the time the contact takes place. They use phase lines to coordinate the movement of elements operating abreast. Checkpoints indicate critical terrain features and help to control ground movement and coordinate air-ground integration. Commanders use FSCMs to control direct and indirect fires. They use additional control measures as necessary. In addition, commanders assigning the area reconnaissance mission specify the routes their reconnaissance units will use to enter their assigned areas. Units depart these assigned areas on different routes upon completion of their area reconnaissance tasks.

12-55. Units inform the commander assigning the mission if they lack the time or resources to complete all the tasks listed in paragraph 12-51. Their respective commanders then issue further guidance on which tasks each unit needs to complete or the respective priority of these tasks. Their different reconnaissance objectives may make it clear which tasks are more important. These units report and await further instruction if they determine that they cannot complete assigned tasks after initiating their reconnaissance efforts. This includes such things as clearing enemy forces from their assigned areas or supporting the maneuver of their respective main bodies by reducing obstacles to create lanes. (See FM 3-98 for additional information on the performance of area reconnaissance.)

ROUTE RECONNAISSANCE

12-56. *Route reconnaissance* is a form of reconnaissance operation to obtain detailed information of a specified route and all terrain from which the enemy could influence movement along that route. The route may be a road, highway, trail, mobility corridor, avenue of approach, or axis of advance. The reconnaissance effort provides new or updated information on route conditions, such as obstacles and bridge classifications, and enemy, adversary, and civilian activity along the route. Commanders normally assign this mission during a zone or area reconnaissance when they require more information on a specific route for friendly movement.

Tasks Associated with a Route Reconnaissance

12-57. Units conducting route reconnaissance perform specific tasks, unless ordered otherwise by their commanders. If they do not have the time or resources to complete all the tasks associated with the performance of a route reconnaissance, units inform their higher echelon commanders. Those higher echelon commanders then issue further guidance on which tasks these units must complete or the priority of each task. (This guidance is usually clear from their individual reconnaissance objectives.) If they determine that they cannot complete all assigned tasks after initiating their route reconnaissance, such as clearing enemy forces or reducing obstacles, units report and continue to execute the mission within capability while simultaneously waiting for further guidance from their higher headquarters. (See FM 3-98 and ATP 3-34.81/MCWP 3-17.4 for additional information concerning route reconnaissance.)

12-58. Route reconnaissance tasks (within capability) include—

- Find, report, and, based on engagement criteria, clear all enemy forces that can influence movement along the route.
- Reconnoiter and determine the trafficability of the route.
- Reconnoiter all terrain that the enemy can use to influence movement along the route, such as choke points, ambush sites, pickup zones, landing zones, and drop zones.
- Reconnoiter all built-up areas along route.
- Reconnoiter all lateral routes.
- Locate bypasses around built-up areas, obstacles, and contaminated areas.
- Inspect and classify all bridges within the area.
- Reconnoiter defiles along the route. Clear them of enemy and obstacles or locate a bypass.
- Inspect and classify all overpasses, underpasses, and culverts.
- Locate fords or crossing sites near all bridges on the route.
- Locate and clear all mines, obstacles, and barriers on the route.
- Submit route report.

Organization of Forces for a Route Reconnaissance

12-59. Commanders assign route reconnaissance as a separate mission or as a specified task for units conducting a zone or area reconnaissance. A platoon conducts a route reconnaissance over only one route at a time. For larger organizations, the number of platoons available directly influences the number of routes covered simultaneously. Integrating ground, air, and technical assets ensures a faster and more complete route reconnaissance.

12-60. A ground reconnaissance effort is essential if the mission is to conduct detailed reconnaissance of one or more routes or the mission requires clearing enemy forces from those routes and adjacent terrain. Commanders operate and equip forces conducting ground reconnaissance to enable them to respond to enemy forces they encounter. Ground reconnaissance forces require immediate access to responsive fire support and other combat enablers. This is especially true when units expect to make contact with significant enemy forces. If commanders require detailed information on specific routes, engineer assets can determine the classification of critical points along routes more quickly and accurately than scouts can. If commanders anticipate encountering significant obstacles, they include combat engineers as part of their ground reconnaissance forces. Commanders can also include CBRN, civil affairs, or EMS reconnaissance assets as required.

12-61. Commanders employ aerial reconnaissance when required by the mission variables. However, aerial reconnaissance can rarely clear enemy forces from locations where they can affect movement on these routes and aircraft cannot breach obstacles. When time is limited, aerial reconnaissance is essential to determine which areas are clear of enemy forces and obstacles. Aerial reconnaissance can also cue ground reconnaissance assets regarding where to focus their efforts.

Control Measures Associated with a Route Reconnaissance

12-62. Commanders create an assigned area for the unit conducting the reconnaissance. They place lateral boundaries on both sides of reconnoitered routes. These lateral boundaries are far enough out from these routes to allow reconnaissance of all terrain from which an enemy force could influence each reconnoitered route. They draw lines of departure with reference to battlefield locations where enemy contact is possible. Commanders generally place these lines of departure before and perpendicular to the reconnoitered routes. This allows adequate maneuver space for the unit conducting the reconnaissance to deploy into a movement formation. These lines of departure create the rear boundary of the assigned area occupied by the units conducting the route reconnaissance. Commanders place LOAs far enough beyond the RP for each examined route, including any terrain from which an enemy force could influence that route. Together a SP and an associated release point define a reconnoitered route. Commanders require detailed information on these routes and may add phase lines and checkpoints to coordinate reconnaissance, control movement, or designate critical points. They place additional control measures on terrain features identifiable from the ground and the air to coordinate indirect and direct fires and assist in air to ground coordination. Figure 12-3 depicts control measures associated with performing a route reconnaissance.

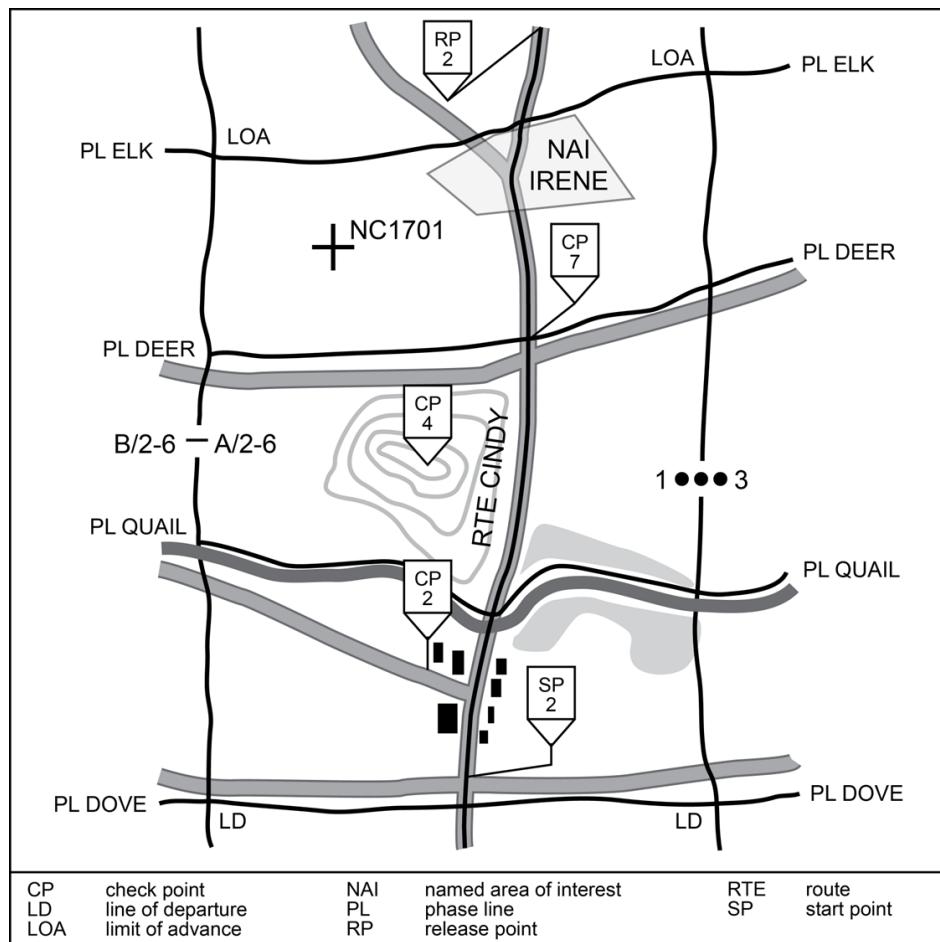


Figure 12-3. Example of route reconnaissance control measures

RECONNAISSANCE IN FORCE

12-63. A *reconnaissance in force* is a form of reconnaissance operation designed to discover or test the enemy's strength, dispositions, and reactions or to obtain other information. Battalion-sized task forces or larger organizations usually conduct a reconnaissance in force. Commanders assign this operation when an enemy force is operating within an area and they cannot obtain adequate intelligence about the enemy force by other means. Units may also conduct a reconnaissance in force in restrictive terrain where an enemy is likely to ambush smaller reconnaissance forces. Reconnaissance in force is forceful reconnaissance, conducted as an offensive operation with clearly stated reconnaissance objectives. The overall goal of a reconnaissance in force is to determine exploitable enemy weaknesses. It differs from other reconnaissance operations because commanders direct their performance to gain information solely about an enemy force. Commanders plan for both the reinforcement and the retrograde of their forces. They plan a reinforcement so they can exploit success and they plan a retrograde if they encounter superior enemy forces.

Tasks Associated with a Reconnaissance in Force

12-64. Units performing a reconnaissance in force carry out these tasks:

- Penetrate the enemy's disruption zone and determine its size and depth.
- Determine the location and disposition of enemy forces.
- Attack enemy positions and attempt to force the enemy to react by using local reserves or major counterattack forces, employing fires, adjusting positions, and employing specific weapon systems.
- Determine weaknesses in the enemy's disposition to exploit.
- Locate obstacles and create lanes as specified.
- Enter areas of operation in complex terrain not previously occupied by friendly forces such as urban environments.

As with other reconnaissance tasks, units performing reconnaissance in force report and continue to conduct their mission as they await further guidance from their higher headquarters if they cannot complete their assigned tasks.

Organization of Forces for a Reconnaissance in Force

12-65. While specifically trained and equipped units usually conduct the other reconnaissance tasks, any maneuver force can conduct a reconnaissance in force. Commanders directing the performance of a reconnaissance in force organize their forces in the same way as they organize offensive operations. They normally direct the performance of a reconnaissance in force as a movement to contact or a series of frontal attacks across broad frontages. The lack of enemy information dictates that these forces are large and strong enough to develop the situation. They need to be capable of protecting themselves long enough to receive support from other friendly assets. The less commanders know about their opposing enemy forces, the stronger they organize each friendly force.

Control Measures for a Reconnaissance in Force

12-66. The control measures associated with a reconnaissance in force are the same as for offensive operations. See paragraphs A-44 through A-61 for offensive operations control measures.

SPECIAL RECONNAISSANCE

12-67. *Special reconnaissance* is reconnaissance and surveillance actions conducted as a special operation in hostile, denied, or diplomatically and/or politically sensitive environments to collect or verify information of strategic or operational significance, employing military capabilities not normally found in conventional forces (JP 3-05). These actions provide an additional capability for commanders and supplement other conventional reconnaissance actions. Sometimes only visual observation or other collection methods in the target area can obtain the desired information, even with offensive cyber electromagnetic warfare techniques, long-range sensors, and overhead platforms. Special operations forces are equipped and possess capabilities

enabling them to conduct reconnaissance on denied and hostile areas normally inaccessible to other forces or assets. Special reconnaissance activities include—

- Environmental reconnaissance.
- Armed reconnaissance.
- Target and threat assessment.
- Post-strike reconnaissance.

See ATP 3-18.4 for additional information on special reconnaissance activities.

RECONNAISSANCE STAFF INTEGRATION

12-68. The performance of reconnaissance operations contributes significantly to each commander's battlefield visualization. Staffs develop Annex B (Intelligence) to the base plan or order to support their commander's decision-making process.

12-69. Commanders make judicious, yet aggressive, use of their available reconnaissance assets. Reconnaissance planning ensures that available reconnaissance assets produce the greatest results. Commanders set priorities for their reconnaissance assets as time and the assets themselves are limited. Generating many unfocused missions rapidly wears down these assets, making them less effective and potentially leaving enemy vulnerabilities undiscovered.

12-70. Commanders ensure the coordination and synchronization of all subordinate echelons for the reconnaissance effort. Since the need for information gained by reconnaissance is integral to all elements of operations and warfighting functions, reconnaissance operations demand an integrated approach to planning, preparation, and execution. The two habitual participants in the reconnaissance planning process are the operations and intelligence staff officers. Operations staff officers have primary staff responsibility for reconnaissance planning, allocating, and tasking resources. Normally, they are responsible for ground and aerial reconnaissance assets, which include manned aviation, small UAS, engineers, CBRN, and artillery. Intelligence staff officers have primary responsibility for ground surveillance systems, larger UAS, and special electronics mission aircraft. Civil affairs operations staff officers have primary responsibility for planning civil reconnaissance, civil engagement, and the analysis, evaluation, and integration of civil information into the common operational picture. Commanders ensure their staffs adopt an integrated combined arms approach to planning, preparing, executing, and assessing reconnaissance as an integral part of their information collection plans.

INFORMATION COLLECTION PLAN

12-71. Units coordinate their reconnaissance efforts with other higher echelon and lateral units to maximize information collection. Staffs, primarily intelligence staff officers, identify gaps in available intelligence, based on their initial IPB and their commanders' critical information requirements. The IPB process identifies factors that impact their information collection efforts, such as—

- Avenues of approach that support friendly movement and exploit enemy weaknesses.
- Key terrain, choke points, obstacles, and hazard areas.
- Enemy positions, especially exploitable flanks.
- Observation points.

12-72. The performance of reconnaissance tasks (part of their information collection efforts) and the IPB process are interactive and iterative, each feeding the other. (See FM 3-55 for more information on the information collection process and ATP 2-01.3 for more information on the IPB process.)

12-73. Intelligence and operations staff officers develop their initial synchronization plans to acquire information to help answer PIRs based on available information collection assets. These plans assign specific information collection tasks to specific units for action. They integrate information collection into the operation order and appropriate annexes.

12-74. Operations staff officers use these synchronization plans when they prepare Annex L (Information Collection) to the operation orders. This annex provides for the flexible execution of reconnaissance operations, including the provision for adequate synchronization of fire support, sustainment, and other

warfighting functions when completed to ensure the reconnaissance mission is adequately supported. (See ADP 5-0 for more information on the integration of information collection—including reconnaissance—into the military decision-making process.)

12-75. Civil affairs operations staff officers plan for civil reconnaissance and civil engagement similar to the way intelligence cells plan information collection. The civil affairs operations staff officers prioritize their civil reconnaissance and civil engagement information collection tasks to fill existing information gaps. The information collected allows them to update the civil affairs operations running estimates. The civil affairs operations concept of operations takes into account the quality of existing area assessments and civil information databases. (See FM 3-57 for additional information on civil reconnaissance and civil engagement.)

RECONNAISSANCE TECHNIQUES

12-76. There are two reconnaissance techniques commanders employ to answer information requirements: reconnaissance push and reconnaissance pull. Commanders employ these techniques based on their level of understanding of the operational environment combined with the time available to refine their understanding. In selecting one technique over the other, the commander considers the following:

- Degree of the situational understanding of the enemy.
- Time available to collect the information.
- Leadership ability of subordinate commanders.
- Proficiency of subordinate units to plan and rapidly react for uncertain situations.

12-77. ***Reconnaissance pull*** is reconnaissance that determines which routes are suitable for maneuver, where the enemy is strong and weak, and where gaps exist, thus pulling the main body toward and along the path of least resistance. This facilitates the commander's initiative and agility. Reconnaissance assets initially work over a broad area to develop the enemy situation. As units gain an understanding of enemy weaknesses, they then “pull” the main body to positions of tactical advantage. Reconnaissance pull knowingly emphasizes opportunity at the expense of a detailed, well-rehearsed plan, and unity of effort. Commanders base plans on several viable branches or COAs triggered by decision points. These decision points are tied to reconnaissance assets' ability to answer commander's critical information requirements. Leaders at all levels must understand and rehearse branches and sequels. A reconnaissance pull can also be used when higher echelons have not selected a specific COA while the unit conducting the reconnaissance answers key PIRs to help develop the plan. This facilitates commanders' initiative and agility.

12-78. ***Reconnaissance push*** is reconnaissance that refines the common operational picture, enabling the commander to finalize the plan and support main and supporting efforts. It is normally used once the commander commits to a scheme of maneuver or COA. In these cases, commanders “push” reconnaissance assets into specific portions of their areas of operation to confirm, deny, and validate planning assumptions that impact operations. Reconnaissance push emphasizes detailed, well-rehearsed planning. Typically, a COA has already been selected for the echelon executing the mission when a reconnaissance push is used.

12-79. The primary reason for using one method instead of the other is the time available. The time required to develop a COA can give enemy forces more time to recover and prepare, thereby increasing the risk of higher casualties than necessary. Commanders balance the time needed to develop a COA with the need to act rapidly and decisively on the battlefield. There is no available model a commander can use to determine how much time is enough; that determination is part of the tactical art.

SUSTAINMENT SUPPORT

12-80. Sustaining reconnaissance assets before, during, and after their commitment is a vital part of maintaining reconnaissance capabilities. The methods employed by units to sustain their deployed reconnaissance assets depend on the situations. Units address reconnaissance asset sustainment as part of their planning process for each reconnaissance operation.

12-81. Reconnaissance elements frequently operate in locations distant from their sustaining base. They either carry a large enough basic load, or their units task-organize them with assets necessary to sustain them

until they can be relieved. Units carefully plan for casualty evacuation in both COAs. An alternative solution is to plan and coordinate for sustainment from nearby units.

RECONNAISSANCE METHODS

12-82. Commanders consider the mission variables and the capabilities of their reconnaissance assets when deciding on a reconnaissance method. When possible, commanders typically employ combinations of these methods to increase the reconnaissance operation's effectiveness. The reconnaissance methods include dismounted, mounted, aerial (manned and unmanned), and reconnaissance by fire.

DISMOUNTED RECONNAISSANCE

12-83. Dismounted reconnaissance is the most time-consuming method used by ground units. However, it permits the most detailed information collection about the enemy, terrain, civil considerations, and infrastructure. A commander considers using dismounted reconnaissance when—

- Stealth is required, or security is the primary concern.
- Time is available.
- Detailed information is required.
- The reconnaissance objective is a stationary threat, fixed site, or terrain feature.
- Unit expects, or has made, enemy contact through visual and/or electromagnetic means.
- Environment conditions favor dismounted reconnaissance or hinder mounted reconnaissance. (For example, terrain is muddy or swampy and is easier to traverse on foot.)
- The terrain or threat preclude use of reconnaissance vehicles.
- Vehicles are not available.
- Terrain creates a visual dead space that prevents using optics or sensors.

MOUNTED RECONNAISSANCE

12-84. Mounted reconnaissance enables a more rapid tempo while increasing the potential compromise of reconnaissance operations. Mounted reconnaissance should take advantage of standoff capabilities provided by surveillance and weapon systems to observe and engage from greater ranges. A commander considers using mounted reconnaissance when—

- Time is limited.
- Distance to reconnaissance objective requires mounted movement.
- Stealth and security are not primary concerns.
- Detailed information is not required, or the mounted method affords the same scope as the dismounted method.
- Environmental conditions permit this type of reconnaissance. (For example, the terrain is relatively flat and dry and tracked and wheeled vehicles can traverse with little difficulty.)
- Enemy location is known.

AERIAL RECONNAISSANCE

12-85. Manned and unmanned aircraft system organizations are specifically equipped, organized, and trained to conduct reconnaissance. These capabilities are a key component of BCTs and above echelons information collection activities. Both UAS and manned aircraft possess the capability to operate independently or in conjunction with ground reconnaissance elements.

12-86. Implementing airspace coordinating measures (ACMs) is a key requirement for the effective integration of aerial reconnaissance into all operations. At the BCT level and above units must ensure ACMs are planned and included in their unit airspace plans.

Manned Aerial Reconnaissance

12-87. Manned aerial reconnaissance units are specifically equipped, trained, and organized to conduct zone, area, and route reconnaissance. If properly task-organized they are capable of executing a reconnaissance in force. Both aviation formations are organized and trained to conduct reconnaissance in support of the division's maneuver plan. Aviation units employed at the troop and squadron levels, particularly the air cavalry squadron, can conduct reconnaissance at distance (up to 100 km beyond the FLOT), across restrictive terrain, and at a high tempo (weather permitting). Aviation units can insert surveillance teams at, or near, observation posts. Aircrrews can observe and provide security on station for extended times using rotation techniques if they have detailed requirements in advance. Alternatively, aviation units may be task-organized with ground reconnaissance assets to evaluate routes and obstacles and classify bridges. Units use aerial reconnaissance to cue other reconnaissance methods or sensors to specific areas increasing the overall information collection capability. (See FM 3-04 for more information on Army aviation and reconnaissance).

Unmanned Aircraft System Aerial Reconnaissance

12-88. UAS are best suited to execute route, zone, and area reconnaissance. UAS offer numerous advantages to commanders including the ability to—

- Observe areas and objectives where terrain or a threat can hinder ground or manned aerial reconnaissance.
- Operate at extended distances or extended durations, or both.
- Maximize standoff distance to retain the element of surprise and increase force security.

12-89. When employing UAS units must have procedures to execute a battle handover between a UAS and other reconnaissance assets. This could include a reconnaissance handover to another UAS platform, manned aircraft, or ground reconnaissance asset. Furthermore, units must have procedures in place in the event of a loss of data link between the UAS and its operators.

RECONNAISSANCE BY FIRE

12-90. ***Reconnaissance by fire*** is a reconnaissance technique in which a unit fires on a suspected enemy position. This technique is appropriate when time is critical and stealthy maneuver to develop the situation further is not possible. The fires may be either direct, indirect, or a combination of both to cause the enemy forces to disclose their presence by movement or return fire. The advantage of indirect fire is that it does not give away friendly locations and usually causes enemy forces to displace from the impact area. However, reconnaissance by fire may not cause a seasoned or prepared enemy force to react.

RECONNAISSANCE UNDER LIMITED-VISIBILITY CONDITIONS

12-91. Battlefield obscuration, fog, rain, and snow reduce visibility. Generally, reconnaissance during limited visibility takes more time than during periods of normal visibility. However, limited-visibility conditions provide better stealth and enhance the survivability of reconnaissance assets. Units frequently employ dismounted reconnaissance patrols at night. These patrols use light amplification devices, thermal observation devices, and electronic surveillance devices to compensate for reduced visibility conditions.

12-92. Mounted reconnaissance normally focuses on road networks during limited-visibility conditions. An enemy force can detect engine and track noises of friendly mounted reconnaissance elements at considerable distances at night. This makes mounted reconnaissance elements susceptible to ambush. Strict noise and light discipline, along with masking sounds, such as artillery fires, help mounted reconnaissance forces avoid compromise or ambush.

12-93. High winds, extreme temperature, loose topsoil, or sand may adversely affect aerial reconnaissance. Aerial reconnaissance units plan their missions in much the same way as ground units. They use the same type of operations graphic control measures and consider the same critical tasks. Aerial reconnaissance units organize aviation assets to accomplish missions by considering the same IPB aspects as ground forces. Commanders focus on air hazards to navigation and anticipated enemy air defense capabilities. (See ATP 2-01.3 for more information on the effects of weather and atmospheric conditions.)

RECUPERATION AND RECONSTITUTION OF RECONNAISSANCE ASSETS

12-94. Units must plan for the recuperation and reconstitution of reconnaissance forces. The relieving unit or units must be capable of accomplishing the reconnaissance objective assigned. Relieving units must complete a deliberate relief in place to ensure continuous reconnaissance while maintaining contact with the enemy force. When a commander employs small units continuously for extended periods, they can become ineffective. When this occurs, restoring these units to acceptable levels of effectiveness may require either recuperation or reconstitution. Recuperation—a short break for rest, resupply, and maintenance—is often sufficient to return units to effectiveness. Units can extend these recuperation periods to conduct refresher training, new equipment training, or any required specialized training for the next mission.

12-95. Reconnaissance units and systems are vulnerable to detection, engagement, and destruction by enemy forces. Commanders determine whether to reconstitute, by either regenerating or reorganizing these units, when this occurs and they can no longer perform their primary missions.

12-96. Regenerating a unit requires significant resources. The organization two echelons above the unit being regenerated directs the regeneration procedure and coordinates for the necessary personnel, equipment, and supplies from the appropriate theater sustainment command supporting organization if that headquarters lacks organic, assigned, or attached sustainment assets. For example, a BCT can regenerate one of its cavalry troops. In the regeneration process, the BCT could use a combination of weapon system replacement operations, battle damage assessment and repair, normal replacement operations, and medical returnees to provide the needed resources. Units could use these resources, combined with training, to regenerate the degraded troop's combat power. Alternatively, they could designate one of their maneuver companies to perform cavalry troop functions.

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Chapter 13

Security Operations

This chapter addresses those considerations unique to the performance of security operations. General offensive and defensive considerations discussed previously in this manual continue to apply to security operations. This chapter addresses the general security considerations and types of security operations.

GENERAL SECURITY OPERATIONS CONSIDERATIONS

13-1. *Security operations* are those operations performed by commanders to provide early and accurate warning of enemy operations, to provide the forces being protected with time and maneuver space within which to react to the enemy, and to develop the situation to allow commanders to effectively use their protected forces (ADP 3-90). They prevent surprise, reduce uncertainty, and provide early warning of enemy activities. Security operations are a dynamic effort that anticipates and thwarts enemy collection efforts. When successful, security operations allow the force to maintain the initiative.

13-2. Security operations are not to be confused with the more general term of security. *Security* is measures taken by a military unit, activity, or installation to protect itself against all acts designed to, or which may, impair its effectiveness (JP 3-10). Security includes a wide range of activities such as preventing unauthorized access into secure areas or establishing perimeter security around an operating base. Security is inherent in all operations and is always the first priority of work. Furthermore, security is the responsibility of every Soldier and unit whereas security operations are distinct missions.

13-3. The main difference between the performance of security operations and reconnaissance operations is that security operations orient on the force, area, or facility, while reconnaissance operations orient on enemy and terrain. Security operations are supporting efforts. As a supporting effort, economy of force is often a condition associated with the performance of security operations. Security operations are essential for preserving friendly forces combat power. Paragraphs 13-4 through 13-9 include general security considerations that are applicable to all security operations and units.

LOCAL SECURITY

13-4. Local security is the low-level security activities conducted near a unit to prevent surprise by the enemy. All units are responsible for their own local security and responding to Level I threats. Local security is not an operation of its own. It includes any local measure taken by units that protect against enemy actions. It involves avoiding enemy detection or deceiving the enemy about friendly positions and intention. Local security provides immediate protection to friendly forces and is typically performed by a unit for self-protection, but it may also be provided by another unit when the security requirements are greater than the unit security capabilities. Local security may include countermobility and survivability activities as well as the use of active and passive measures to provide local security.

OBSERVATION POSTS

13-5. An ***observation post*** is a position from which observations are made or fires are directed and adjusted. All observation posts should possess appropriate communications. While aerial observers and sensor systems are extremely useful, those systems do not constitute aerial observation posts. The security force unit determines tentative initial observation post locations along or behind the screen line to ensure effective surveillance of their sectors of observation and designated NAIs. The unit or asset that occupies each observation post may shift its exact location to achieve the commander's intent. Units may place more than one observation post along high-speed avenues of approach to allow the tracking of an enemy contact

from one observation post to another, which allows the maintaining of the enemy contact without requiring security forces to displace. Security force commanders task subordinate units to perform reconnaissance and combat patrols to cover gaps between observation posts. Units place restrictive FSCMs around observation post locations to prevent fratricide.

13-6. Observation posts may be either mounted or dismounted. Mounted observation posts can use their vehicular optics, weapons systems, and tactical mobility to displace rapidly when necessary. However, an enemy force can detect them more readily than dismounted observation posts. Dismounted observation posts provide maximum stealth but lack the speed of displacement, optics, and weapons of mounted ones. It takes a minimum of two Soldiers to establish an observation post, and then they can only operate effectively for no more than 12 hours. Observation posts manned for more than 12 hours require a minimum of an infantry squad or scout section to ensure continuous operation. The screening force patrols dead maneuver space and the area between observation posts, conducts resupply operations, and rests or sustains its personnel. In addition, under limited-visibility conditions, units can establish observation posts as listening posts to take advantage of the increased auditory acuteness that occurs when Soldier vision is degraded.

COMBAT OUTPOSTS

13-7. A **combat outpost** is a reinforced observation post capable of conducting limited combat operations. Using combat outposts is a technique for employing security forces in restrictive terrain that precludes mounted security forces from covering the area. Units also use combat outposts when enemy forces infiltrating into and through the security area could overrun smaller observation posts. They use a combat outpost to extend the depth of the security area, to keep friendly forward observation posts in place until they can observe the enemy force's main body, or to secure friendly forward observation posts that enemy forces might encircle. Both mounted and dismounted forces can employ combat outposts.

13-8. While the mission variables determine the size, location, and number of combat outposts a unit establishes, a reinforced platoon typically occupies each combat outpost. A combat outpost requires enough resources to accomplish its missions, but it should not seriously deplete the strength of the main body. It is usually located far enough forward of the protected force to preclude enemy ground reconnaissance elements from observing the actions of the protected force.

13-9. Units organize the combat outpost to provide an all-around defense to withstand a superior enemy force. When the enemy force has significant armored capability, commanders may give combat outposts more antitank weapons. Forces operating combat outposts can conduct aggressive patrolling, engage and destroy enemy reconnaissance elements, and engage the enemy main body before their extraction. Units plan to extract friendly forces from their outposts before enemy forces overrun them.

SECURITY OPERATIONS CONSIDERATIONS

13-10. Commanders designate a security force when using any of the types of security operations. The protected force may not always be a military force; it can also be a civilian population, civil institutions, and civilian infrastructure in the unit's assigned area. FM 3-90 describes security operations that focus on securing a force. Units may perform security operations to the front, flanks, or rear of their main body. All maneuver forces are capable of conducting security operations. To obtain proficiency in security operations, units need habitual support relationships with attachments and established SOPs. Commanders ensure that subordinate units perform the associated security tasks in support of their security operation.

13-11. In addition to the operational and mission variables, there are several general considerations when performing security operations. These apply to all security operations, but they are most applicable to the performance of screen, guard, and cover operations. These additional considerations include—

- Security fundamentals.
- Commander's security guidance.
- Security forces size.
- Location and orientation of the security forces.
- Time the security force must be established.
- Criteria for ending the security mission.

- Augmentation of security forces.
- Special requirements or constraints.
- Fires planning.
- Integration of ground and Army aviation.
- Engineer planning
- Sustainment.
- Positioning of command posts and combat trains.
- Reporting.

These considerations are in addition to the planning considerations applicable to other types of operations discussed in this publication.

SECURITY FUNDAMENTALS

13-12. Successful security operations depend on properly applying the five fundamentals:

- Provide early and accurate warning.
- Provide reaction time and maneuver space.
- Orient of the protected force, area, or facility to be secured.
- Perform continuous reconnaissance.
- Maintain enemy contact.

Provide Early and Accurate Warning

13-13. The security force provides early warning by detecting enemy forces quickly and reporting information accurately to the main body. The security force operates at varying distances from the main body based on the mission variables. At a minimum, it operates far enough from the main body to prevent enemy ground forces from observing or engaging the main body with direct fires. The earlier the security force detects enemy forces, the more time the main body has to assess the changing situation and react.

Provide Reaction Time and Maneuver Space

13-14. Each security force provides its main body with enough reaction time and maneuver space to respond effectively to likely enemy actions by operating at a distance from the main body and by offering resistance to approaching enemy forces. Units determine the amount of time and space required to respond to information provided by their IPB process and the time their main bodies require to react to enemy COAs. Security forces operating at a distance from their main bodies offer more time and space to their main bodies to react to enemy forces. Each security force attempts to hinder an enemy force's advance by acting within its capabilities and mission constraints.

Orient on the Force, Area, of Facility to be Secured

13-15. Security forces focus all their actions on protecting and providing early warning to force, area, or facility they are securing. They operate between the force, area, or facility and known or suspected enemy units. If the force they are securing moves, security forces move moves and orients on their movement. Security force units need to know the moving forces' scheme of maneuver to keep their security force between these main bodies and approaching enemy forces. The value of terrain occupied by security forces hinges on the degree of resistance those security forces can provide to their respective main bodies from that terrain.

Perform Continuous Reconnaissance

13-16. Security forces aggressively and continuously seek out enemy forces and reconnoiter key terrain within their assigned areas. They perform area or zone reconnaissance to detect enemy movement or enemy preparations for action and to learn as much as possible about the terrain. In stability-focused operations, terrain information includes a larger focus on the civilian population. The ultimate goal of security forces is to determine the enemy force's COA and assist their main bodies to counter it. Terrain information focuses

on terrain advantages or disadvantages to both the enemy and friendly forces for the performance of offensive or defensive operations. Stationary security forces use combinations of observation posts, aviation elements, patrols, and information collection assets to perform reconnaissance. Moving security forces perform area, route, or zone reconnaissance as well as using observation posts to detect enemy movements and preparations.

Maintain Enemy Contact

13-17. Once security forces make enemy contact, they do not break contact unless specifically directed by their main body commander. However, the first security asset that makes contact does not have to maintain contact if the entire security force maintains contact with the enemy force. The security force ensures that their subordinate security assets handover contact with the enemy force from one asset to another. Security forces continuously collect information on the enemy force's activities to assist their main body in determining potential and actual enemy COAs, thus preventing those enemy forces from surprising their main bodies. Maintaining continuous visual contact allows security forces freedom of maneuver and flexibility to use direct or indirect fires on enemy forces. These considerations require security forces to have depth in space and time to maneuver.

COMMANDER'S SECURITY GUIDANCE

13-18. During security operations, it is important for the ground elements conducting security operations to understand the commander's intent in a clear and concise manner so that they can accomplish the stated objectives within the required timeframe. The commander provides the guidance through dialogue throughout mission planning and the final operation order. The security guidance has three sections: focus, duration, and engagement and disengagement criteria. Paragraphs 13-19 through 13-22 outline the contents of the commander's security guidance. (See FM 3-98 for more information on commander's security guidance.)

Focus

13-19. Commanders focus their forces by identifying a security objective in support of the force, area, or facility being protected. **Security objective is the most important entity to protect during that specific security effort.** Commanders and leaders of units conducting security operations should anticipate the focus to change throughout the phases in an operation as the security objective may change to enable the execution of current and future operations. A security objective can range from creating time to allow forces to establish a defense to forcing an enemy force to travel down an avenue of approach. Furthermore, units use their security objective to guide them in setting priorities when they lack time to complete all the tasks associated with performing a specific type of security operation. Units conducting security operations need to establish, clarify, and prioritize security tasks that enable the security objective to remain protected.

Duration

13-20. The second section of a commander's security guidance covers duration. A duration can be either short or long. Short duration security operations will last no longer than 12 hours. Units usually use these security operations to take advantage of time available and to maximize the massing of reconnaissance assets through observation posts and other observing capabilities. Long duration security operations will last 12 hours or longer. The number of observation posts and capabilities will be less than short duration due to the number of personnel and support needed to continuously enable the operation. The smaller number of observation posts is due to implementing a rest cycle to ensure that dismounted Soldiers in the observation posts stay focused when in position.

Engagement and Disengagement Criteria

13-21. Commanders must clearly define the size or type of enemy force they want their subordinate elements to engage or avoid. The commander ensures that subordinate leaders understand this in order to avoid becoming decisively engaged which prevents the unit from continuing security operations.

13-22. Just like engagement criteria, it is critical for the commander to clearly state when the subordinate elements must break contact with enemy forces to prevent becoming decisively engaged and more importantly retain the ability to secure the identified protected objective. During security operations these criteria are often tied to planned transitions that are based on conditions for the security force to break contact with the enemy or the anticipated duration of the security operation.

Security Force Size

13-23. Main body commanders designate the size of the security force and its mission. This designation determines the limits of the security forces' responsibilities. Table 13-1 shows typical sizes of security forces at various echelons in relation to their missions. The limited capabilities of most maneuver platoons prohibit them from having a mission separate from their parent company. Scout platoons are the exception to this rule.

Table 13-1. Typical size of security forces for a given mission and echelon

Echelon	Security mission			
	Screen	Advance guard	Flank or rear guard	Cover
Battalion task force	Scout platoon	Company team		
Brigade combat team (BCT)	Company team or cavalry squadron	Battalion task force or reinforced cavalry squadron	Company team or cavalry squadron	Reinforced combined arms battalion, battalion task force or reinforced cavalry squadron
Division	Cavalry squadron, combined arms battalion, or battalion task force	Reinforced cavalry squadron or BCT	Reinforced cavalry squadron, combined arms battalion, or battalion task force	Reinforced BCT
Corps	Combat aviation brigade, combined arms battalion, battalion task force	Division, armored BCT, Stryker BCT	Division, armored BCT, Stryker BCT, combined arms battalion, battalion task force	Reinforced division or armored BCT
Echelons above corps (joint force land component or numbered Army)	Combat aviation brigade, armored BCT, Stryker BCT	Reinforced division or corps	Combat aviation brigade, armored BCT, or Stryker BCT	Reinforced division or corps

LOCATION AND ORIENTATION OF THE SECURITY AREA

13-24. Main body units determine the location, orientation, and depth of the security area where their security forces operate. Units identify avenues of approach and NAIs. Depth in the security area provides the main body with time to react to approaching enemy. Occupying a deep security area allows the security force to destroy enemy reconnaissance assets without compromising critical observation posts or positions. It also prevents enemy forces from penetrating the security area and prevents gaps from occurring when observation posts or units displace or are lost. Security forces cover less depth in a wide area because they have fewer resources to position in depth. Very shallow security areas may require units to resource their security forces to perform guard operations to provide more reaction time.

13-25. Security force units conduct a detailed analysis of the terrain in the security area. They establish the initial dispositions of their security forces (usually a screen line) as far forward as possible on terrain that provides good observation of avenues of approach. Next, they assign clear responsibility for identified avenues of approach and designated NAIs. When conducting screen or guard operations, their initial screen lines are within supporting range of their main bodies yet provide the desired amount of early warning.

TIME THE SECURITY FORCE MUST BE ESTABLISHED

13-26. Main body units determine when to establish their security forces. They base their decision on the actions of the main body and enemy forces. They allow enough time for their security force to move and occupy their security areas to prevent enemy forces from penetrating those security areas undetected. The mission variables influence how these security forces deploy and occupy their positions. Units position their security forces so they can continue performing security tasks after completing their initial mission. This frequently occurs when a reconnaissance mission halts at a designated phase line.

CRITERIA FOR ENDING THE SECURITY MISSION

13-27. Security missions are usually time or event driven and determined by the security force's higher headquarters. The commander gives the unit the necessary details through the commander's security guidance. The criteria for ending a security mission can be an action by the main body (such as completing a specific mission), a fixed time (for example, not allowing an enemy force to penetrate a PL for two hours), or criteria based on the enemy force (such as its size). Security force units normally require the permission of their main body commanders to withdraw behind their rear boundaries to terminate their security missions.

AUGMENTATION OF SECURITY FORCES

13-28. The assignment of security areas larger than the areas of influence of these security forces' organic weapons requires the augmentation of those forces' organic combat power. Main body units are responsible for reinforcing their security forces in this case. They place additional maneuver and functional and multifunctional support assets under the operational control or in support of their security force. Units commonly attach engineers, chemical, civil affairs, or EMS reconnaissance elements to their security forces at the company or troop level. Additionally, any unique security mission requirements may require assets not organic to these security forces.

13-29. Information collection assets greatly enhance the performance of security tasks. These assets conduct rapid surveillance of large areas to detect enemy presence. Data from remote sensors, UAS sensors, unattended ground sensors, signals intelligence systems, and downlinks from national assets can expand the areas under surveillance and cue security forces. Rotary-wing aircraft detect and report enemy forces at extended ranges with thermal imaging and other advanced detection equipment. This permits security force units to concentrate their forces on likely enemy avenues of approach, NAIs, targeted areas of interest, and restrictive terrain that degrades sensor performance. They employ their information collection assets to detect enemy force movements. This gains time to reposition their security forces and mass other assets to counter enemy actions. Main body units request higher echelon support if their security force intelligence assets cannot provide sufficient advance warning.

SPECIAL REQUIREMENTS OR CONSTRAINTS

13-30. Main body commanders may impose special requirements or constraints, including engagement, disengagement, and bypass criteria (located in the commander's security guidance). They may order their security forces to avoid decisive engagements or avoid falling below a certain combat strength. Units may be willing to accept a lesser degree of security, which results from either the loss of more terrain or reduced preparation time by the main body, to preserve their security forces for later use. The opposite is also true, main body commanders may be willing to risk their security force becoming decisively engaged to create time for the main body.

FIRE PLANNING

13-31. Main body units request nonlethal effects and position fire support assets to support screen and guard forces. They allocate additional artillery to support covering forces. If they assign their security forces wide assigned areas, units may have to position fire support assets and other nonlethal capabilities to provide effective coverage of only the most likely enemy avenues of approach. This is particularly important for a screen because often the screening force relies on indirect fire to delay or disrupt enemy forces. Providing adequate indirect fire support to their security forces may require main body units to position their artillery systems well forward in the main body formation.

INTEGRATION OF GROUND AND ARMY AVIATION OPERATIONS

13-32. Integrating ground and Army aviation operations is critical to the successful performance of security tasks. Aviation units and systems, including rotary-, fixed-wing, and UAS can conduct reconnaissance of the security area while the ground element of the security force moves forward. They can perform these tasks:

- Screen beyond the location of the security force (front, flank, or rear).
- Conduct reconnaissance of areas between ground maneuver units.
- Assist in maintaining contact between the security force and the main body.
- Assist in clearing areas between flank security elements and their main body during the performance of moving flank security tasks.
- Assist in disengaging security forces, especially when conducting battle handover and passage of lines with their main bodies.
- Surveilling terrain that is hard to reach or would require too much time to cover with ground reconnaissance assets.

ENGINEER PLANNING

13-33. Countermobility plays a critical role in providing security. Security forces can maintain a mobility advantage over enemy forces by employing properly integrated obstacles. In the defense, units may initially mass engineer support in their security area and then shift support to their MBAs once their MBA units are prepared to begin developing engagement areas. They also enhance security force mobility by identifying alternate routes that allow them to reposition and task-organize engineers to provide breaching capabilities. Main body units determine the risk of prioritizing their countermobility efforts in their security areas rather than in their MBAs. In the offense, units can employ situational obstacles (covered by fire) on the flanks of an advancing force to provide additional security.

SUSTAINMENT

13-34. Main body staffs embed their security force sustainment requirements in the operation order and annexes. A key component in security force sustainment is developing, maintaining, and using SOPs. Sustainment requirements ensure that staffs include their security force requirements in their sustainment rehearsals.

13-35. Security force units designate an individual or element in their security force who is responsible for sustaining their force. They also designate individuals and elements who coordinate for sustainment support. This is normally a senior noncommissioned officer in platoons and companies (or troops) assigned to perform security tasks. For example, the platoon sergeant of a scout platoon establishing a flank screen for a battalion task force may have to coordinate with the first sergeant of the adjacent company team to ensure sustainment of the scout platoon. Likewise, the first sergeant or executive officer of a cavalry troop accomplishing a screening mission away from the rest of the cavalry squadron may coordinate directly with the BCT logistics staff officer or the forward support company of the maneuver battalion closest to the troop's assigned area and the brigade support battalion staff for resupply and medical treatment. This individual requires access to the appropriate communications networks to coordinate logistics support and medical evacuation.

13-36. The individual responsible for sustaining the security force coordinates with the appropriate supporting sustainment points of contact as soon as possible after receiving the mission warning order. The security force commander gives the exact sustainment requirements for the security force—including any specialized items of supply required by the mission, such as cratering charges—to the supporting sustainment organization. Security force units ensure that the supporting sustainment organization establishes communication links with the security force and receives a copy of the supported security force's sustainment overlay or concept of sustainment.

13-37. Units place special attention on treating and evacuating casualties for security forces operating away from normal medical support because of time, terrain, or distance factors, or a need for the security force to remain undetected by enemy forces. For this reason, the security force should include as many Soldiers trained as combat lifesavers as possible. The more combat lifesavers in the security force, the more prepared

it is for casualties. Rehearsals at all levels within the security force are also paramount to prepare for potential casualties.

POSITIONING OF SECURITY FORCE COMMAND POST AND COMBAT TRAINS

13-38. Security force commanders move to where they can best control the operation. This is often where they can observe the most dangerous enemy avenue of approach. Security force units position their command post to provide continuous control and reporting during initial movements. They position the security force's combat trains behind masking terrain, but the combat trains remain close enough to the combat elements of the security force to provide rapid response. Units position the combat trains along routes that provide good mobility laterally and in depth.

REPORTING

13-39. Security forces report enemy force activities to their main bodies. The main body headquarters is responsible for disseminating that information to other affected friendly forces. Main body units ensure their security forces are provided the current intelligence assessment and combat information obtained by their main bodies. This supplements their security forces' information collection capabilities. By continuously exchanging information, security force units and main body units have time to choose suitable COAs. Digital systems greatly assist units in maintaining situational understanding to create a common operational picture.

MOVEMENT CONSIDERATIONS FOR SECURITY MISSIONS

13-40. Security forces use different movement techniques between stationary and moving security missions based on the operational and mission variables and the commander's security guidance. These techniques are divided into those used during stationary missions and those used during moving missions.

Movement into Security Areas for Stationary Security Missions

13-41. When deploying into the security area, the security force addresses two competing requirements: to establish the security area quickly to meet mission requirements and to provide the necessary level of security for itself. The security force moves into the security area using one of three methods: tactical movement, movement to contact, or zone reconnaissance.

13-42. The first technique of deploying is a tactical movement from the rear boundary of the security area to the initial positions. This method is the fastest but least secure. The security force moves to a release point on the rear boundary. From the release point, subordinate elements deploy to occupy initial positions, moving by the quickest means possible. This method is appropriate when the security force unit does not expect enemy contact, time is critical, or previous zone reconnaissance of the security area conducted by aviation units or aerial assets found no enemy in the security area.

13-43. In the second technique, the security force conducts a movement to contact from a LD (usually the rear boundary of the security area) to the initial positions. This method is slower than a tactical road march but more secure. It is appropriate when enemy contact is likely, time is limited, the situation does not require detailed reconnaissance of the terrain, or aviation elements or other assets conducting zone reconnaissance forward of the ground element detect enemy forces in the security area.

13-44. The third technique for moving to the initial position is for the security force to conduct a zone reconnaissance from the security area's rear boundary to its initial security line positions or the forward limit of the security area. This is the most secure method. Given adequate time, this method is preferred because it allows the security force to clear the security area and become familiar with the terrain that it may have to defend. The security force reconnoiters potential subsequent positions and fire support system firing positions as it moves to its initial positions. A zone reconnaissance is appropriate when time is available and information about enemy forces or terrain is unknown. While this technique provides information of tactical value on the enemy forces and terrain in the area, it also consumes time. Using aerial reconnaissance forward of the ground units increases the speed and security of the movement.

Movement During Moving Flank Security Missions

13-45. There are three techniques of occupying and moving in a flank security area for moving security missions. These techniques are based on how the security force crosses the LD:

- Separately from the main body and deploys to perform the mission.
- Separately from main body, lead elements conduct a movement to contact.
- With the main body and conducts a zone reconnaissance out to the limit of the security area.

13-46. Commanders should not require the security force to make its own penetration when it faces prepared enemy defenses. This may prevent or significantly delay the security force from assuming its duties. They often combine the three techniques described in paragraphs 13-47 through 13-49.

Separately from the Main Body and Deploys to Perform the Mission

13-47. In the first technique, the security force crosses the LD separately from the main body and deploys to execute the mission. The security force then conducts a tactical movement parallel to the main body and drops off observation posts or occupies BPs along the flank of the main body. This technique keeps the two forces from interfering with each other during deployment. When another force penetrates the line of contact and the main body is not in contact with the enemy force and moves quickly, it is appropriate that the LD is uncontested, and outputs from the IPB process indicate unlikely enemy contact. It is the fastest but least secure technique. Figure 13-1 depicts this technique.

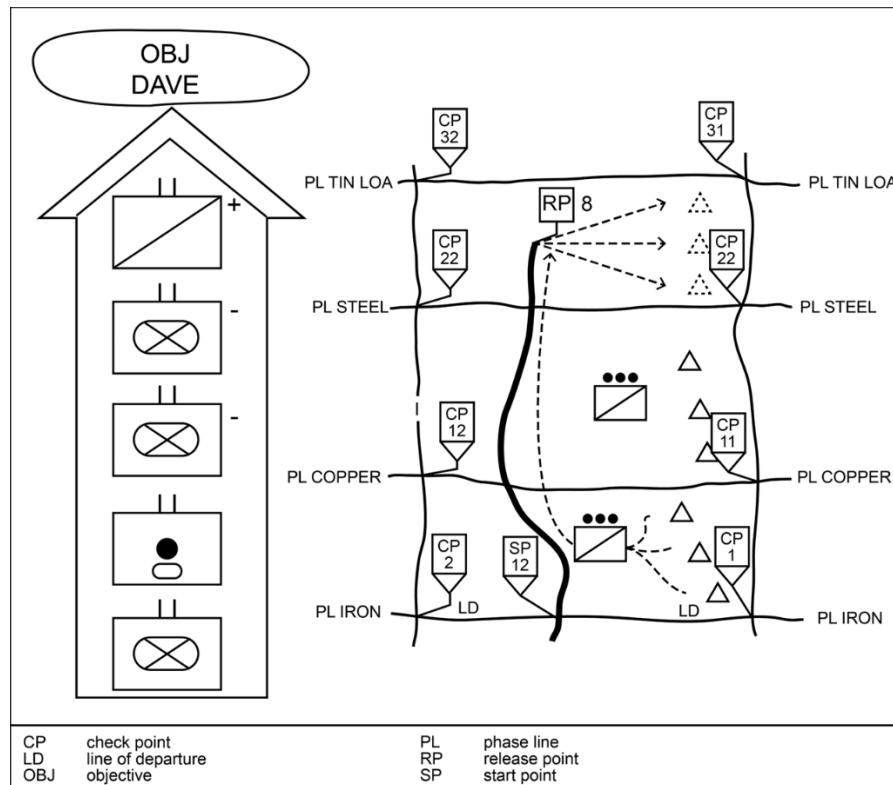


Figure 13-1. Example of the security force crossing LD separately to deploy and establish a flank screen

Separately from the Main Body and Lead Elements Conduct a Movement to Contact

13-48. Figure 13-2 on page 13-10 illustrates a second technique. The security force crosses the LD separately from the main body, and its lead elements conduct a movement to contact. Follow-on elements occupy positions as they reach them. This technique is appropriate when the main body is moving slower

than in the first method, the LD is uncontested, and the IPB process estimates possible enemy contact. It is slower than the previous technique but provides better security.

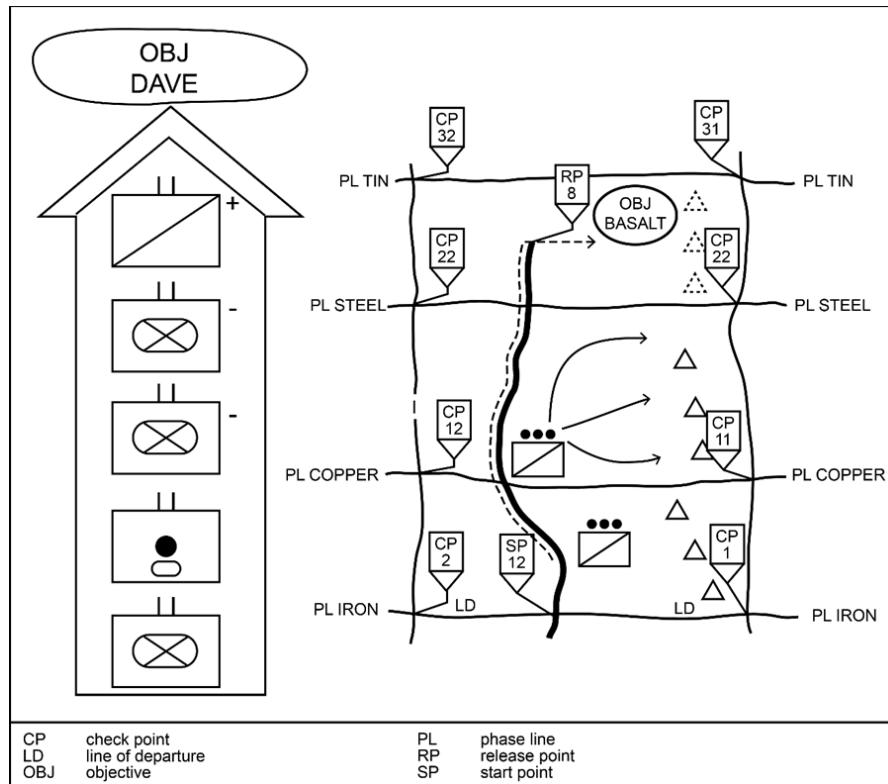


Figure 13-2. Example of the security force crossing separately and the lead element conducting a movement to contact

With the Main Body and Conducts a Zone Reconnaissance out to the Limit of the Security Area

13-49. Finally, in the third technique, the security force crosses the LD with the main body and conducts a zone reconnaissance out to the far limit of the security area. This technique is appropriate when the LD is also the line of contact, the main body makes its own penetration of the enemy defenses along the line of contact, the main body is moving slowly, and leaders do not clearly understand the enemy situation. The security force may follow the lead element of the main body through the gap and deploy when the situation permits. This technique provides increased security for both the security force and the main body; it is also the most time consuming. Figure 13-3 depicts this third technique.

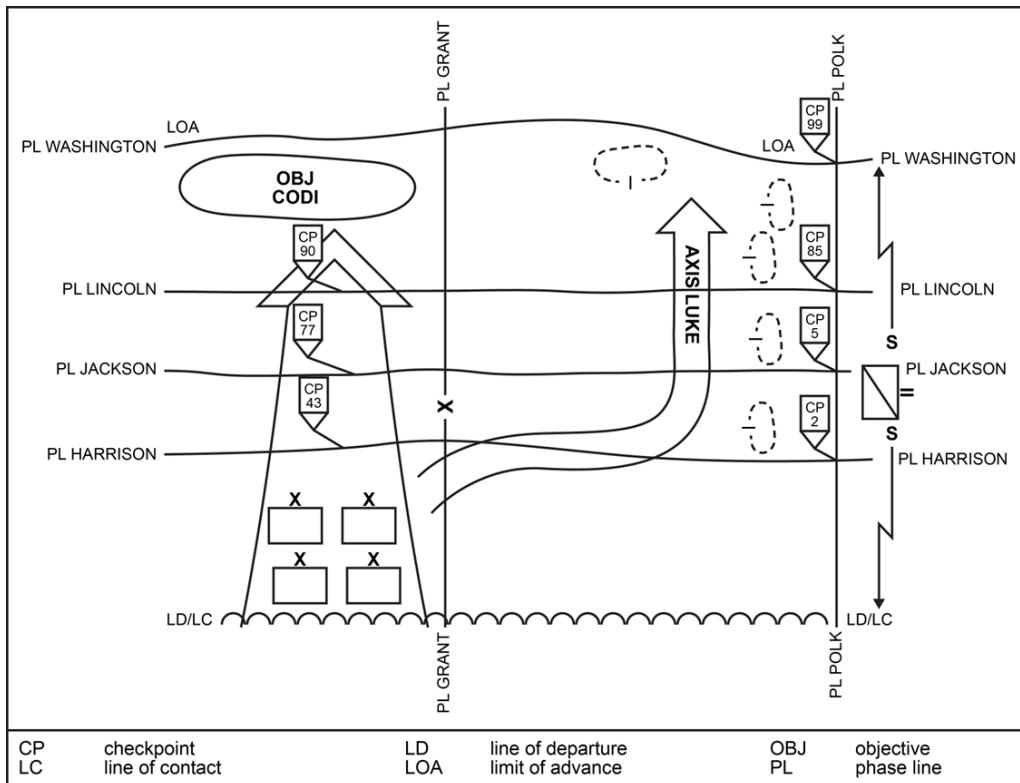


Figure 13-3. Example of the security force crossing with the main body and conducting a zone reconnaissance

TYPES OF SECURITY OPERATIONS

13-50. Commanders assign security missions based on the degree of security desired and the amount of combat power required. The four types of security operations and their associated methods and formations are—

- Screen.
 - Stationary.
 - Moving (flank and rear).
- Guard.
 - Advance guard (stationary and moving).
 - Flank guard (stationary and moving).
 - Rear guard.
- Cover.
 - Offensive cover (advance and flank).
 - Defensive cover (front, flank, and rear).
- Area security.
 - Site security.
 - Line of communication and route security.
 - Convoy security.
 - Response force operations.
 - Area damage control.

13-51. The four types of security operations provide increasing levels of security for the main body. However, more combat power in the security force means less for the main body. Screen operations provide early warning to the main body. Guard operations prevent enemy observation and direct fire on the main body. Cover operations protect the main body from enemy observation and effective direct fire. Area security protects friendly installations, routes, units, and facilities within a prescribed area. All types of security operations provide protection and early warning to the protected forces, which provides reaction time and maneuver space to the commander preserving freedom of action.

13-52. The screen, guard, and cover operations share many common control measures, starting with boundaries defining the security area. The force's main body establishes the security area. For a security force operating to the front of the main body, the lateral boundaries of the security area are normally an extension of the lateral boundaries of the main body. The security force's rear boundary is normally the battle handover line.

13-53. Commanders depict the performance of security operations on overlays using a lightning bolt on either side of the symbol representing the unit performing the security operations. They are labeled with the letter S, G, or C to denote screen, guard, or cover. The end of the lightning bolt has arrowheads that touch the designated control measures, which define the left and right limits of the security operation. Figure 13-4 depicts guard and screen control measures for the security forces performing those operations.

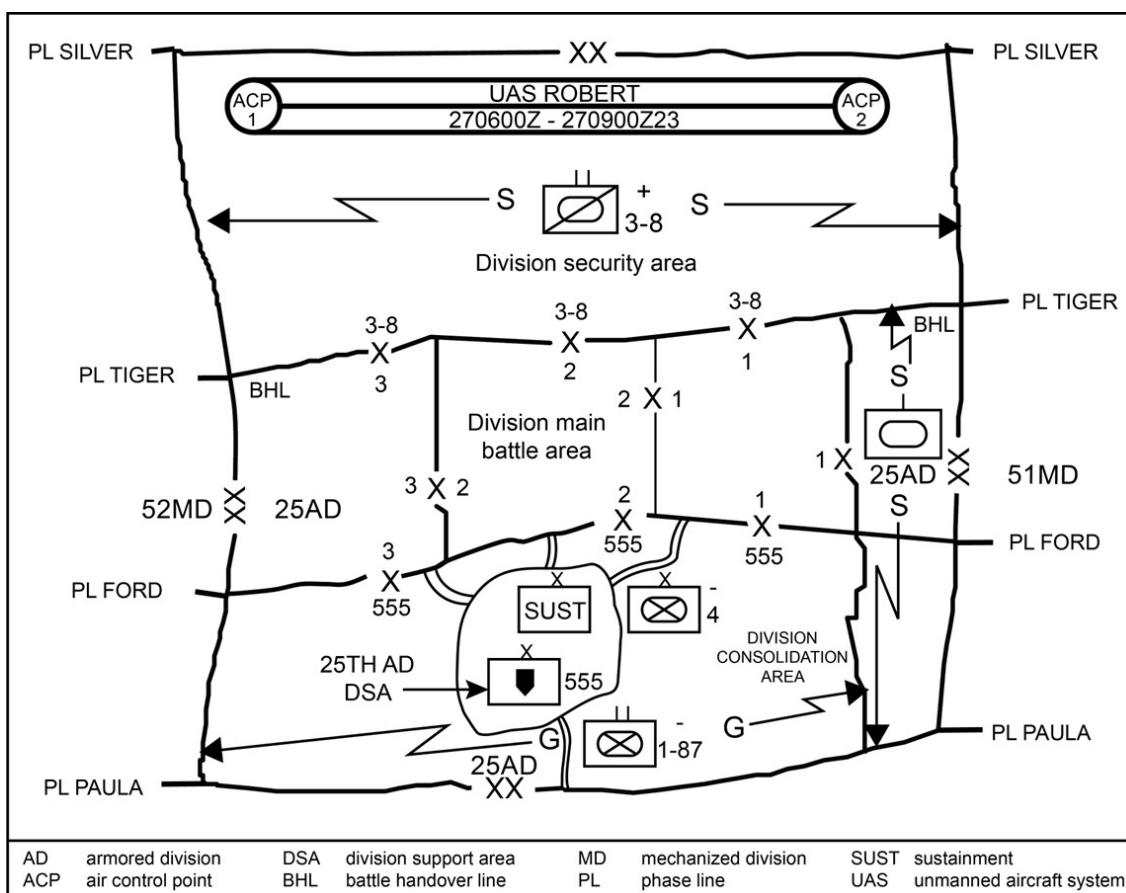


Figure 13-4. Example security operations control measures

13-54. The main body or the security force may designate additional PLs to control the operation. These PLs may serve as subsequent screen or delay lines. Each security force element reports to the commander when crossing PLs or occupying screen or delay lines. Displacement to these subsequent PLs is event driven (enemy or friendly) or time driven. The approach of an enemy force, relief of a friendly unit, or movement

of the protected force dictates the movement of security forces. Security force commanders normally assign additional lateral boundaries in their security areas to delineate assigned areas for subordinate units.

13-55. Units use checkpoints and NAIs to coordinate and synchronize movement and collection. They use contact points to facilitate coordination with flank units during front and rear security missions or between elements of a security force in the security area. Units conducting flank security for a moving force physically contact their main bodies at contact points. Security force units establish observation posts or coordinate for aerial assets to ensure coverage of specific NAIs or avenues of approach as necessary.

Note. For the descriptions below, the security force's security objective is their higher headquarters' main body.

SCREEN

13-56. *Screen* is a type of security operation that primarily provides early warning to the protected force (ADP 3-90). Screens provide less protection than guards or covers. Screen missions are defensive in nature and accomplished by establishing a series of observation posts and patrols to ensure observation of the assigned sector. The screen force gains and maintains enemy contact consistent with the fundamentals and destroys or repels enemy reconnaissance units by conducting counterreconnaissance. Counterreconnaissance is a tactical mission task that encompasses all measures taken by a unit to counter enemy reconnaissance and surveillance efforts. A unit performing a screen observes, identifies, and reports enemy actions. Generally, a screening force engages and destroys enemy reconnaissance elements within its capabilities—augmented by indirect fires—but otherwise fights only in self-defense. The screen has the minimum combat power necessary to provide early warning and allows commanders to retain the bulk of the main body's combat power for commitment at the decisive place and time. A screen provides the least amount of protection of any security mission; it does not have the combat power to develop the situation.

13-57. A screen is appropriate to cover gaps between forces, exposed flanks, or the rear of stationary and moving forces. Units can place a screen in front of a stationary formation. Designed to provide minimum security with minimum forces, a screen is usually an economy of force operation. Units assign and resource a guard or cover mission instead of a screen if they expect significant enemy forces or they require a significant amount of time and space to provide the required degree of protection. The security element forward of a moving force conducts a guard or cover because a moving screen lacks the combat power to defeat or contain the lead elements of an enemy force.

13-58. A security force normally conducts a screen by establishing a series of observation posts and patrols to ensure adequate surveillance of the assigned area. Units use reconnaissance patrols (mounted, dismounted, and aerial), relocate observation posts, and employ technical assets to ensure continuous and overlapping surveillance. They also employ terrain data-base analytical support systems to ensure the integration of friendly information collection assets to provide necessary coverage.

Screen Tasks

13-59. Unless the commander orders otherwise, a security force conducting a screen performs these tasks within the limits of its capabilities:

- Detect and report all enemy elements attempting to pass through the screen, both ground and aerial, and provide the protected force commander early warning of enemy activities.
- Conduct counterreconnaissance to destroy, defeat, or disrupt all enemy reconnaissance elements within capabilities and according to engagement criteria. Allow no enemy ground element to pass through the screen undetected and unreported.
- Maintain contact with the protected force and other forces operating on its flank.
- Maintain contact with enemy forces and report activity in the assigned area.
- Maintain continuous observation of all avenues of approach that affect the main body's mission.
- Locate and identify the lead elements that indicate the enemy's main attack, as prescribed in the enemy's order of battle based on the IPB (when facing an echeloned enemy force).

- While displacing, determine the direction of enemy movement, maintain contact, and report threat activities.

13-60. A unit can normally screen an avenue of approach two echelons larger than itself, such as a battalion scout platoon screening a battalion-sized avenue of approach or a cavalry troop screening a brigade-sized avenue of approach. Security force units inform their higher echelon commanders of shortfalls when their forces lack the time or other resources to complete all screen operations. They request guidance on which tasks they must complete and their priority. After initiating the screen, if security force units determine their forces cannot complete all assigned tasks—such as maintain continuous observation of all avenues of approach that affect the main body's mission—they inform their higher echelon commanders and await further instructions while the unit continues to screen to the best of their ability.

Organization of Forces

13-61. A screen normally requires the subordinate elements of the security force to deploy abreast. A screen force normally organizes itself into a number of observation posts determined by the number of avenues of approach into the main body and any additional NAIs the security force must cover, as specified by the main force commander. The screening force may retain a small reserve to extract endangered observation posts.

Screen Control Measures

13-62. The control measures necessary to conduct a screen include phase lines, observation posts, named areas of interest, handover lines, and contact points. Figure 13-5 depicts example screen control measures.

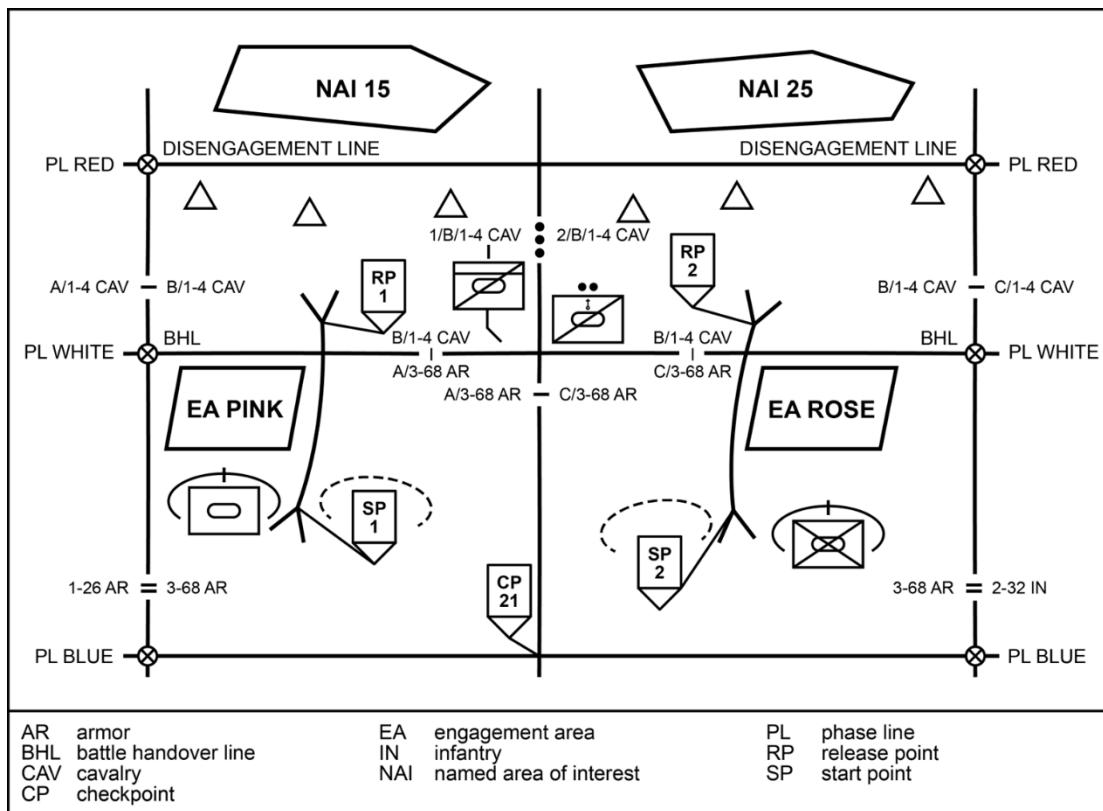


Figure 13-5. Control measures used in a screen mission

Executing a Stationary Screen

13-63. Screening forces establish observation posts with overlapping fields of observation when establishing screens. Security force units adjust the locations of subordinate screening elements to take

advantage of established links with higher echelon sensors and collection assets. Patrols reconnoiter areas that observation posts cannot observe. The force retains a small reserve, if possible. The screening force establishes observation posts in depth on high-speed avenues of approach if forces are available and the depth of the security area allows. Screening force units plan routes between their initial and subsequent screen lines to facilitate rapid occupation of these subsequent screen lines. They deploy their assets in depth in positions where those assets can react to contingencies that develop during the screen mission. They take advantage of surveillance, target acquisition, and night observation equipment and information provided by higher level systems to expand the area and quality of security provided.

13-64. Established observation posts employ cover and concealment to remain undetected. They report the presence of enemy elements. Prompt, accurate reporting of enemy force locations is essential to keep enemy forces from overrunning friendly observation posts. Units can reposition observation posts to keep contact with enemy forces. Observation posts employ fire support channels to request and control indirect fires to engage detected enemy forces. This helps screening observation posts avoid detection and prevents enemy forces from penetrating the screen line. Observation posts may engage enemy reconnaissance assets with their direct fire systems if indirect fires cannot destroy those enemy reconnaissance assets. Observation posts also attempt to slow the movement of other enemy elements, primarily using indirect fires and close air support.

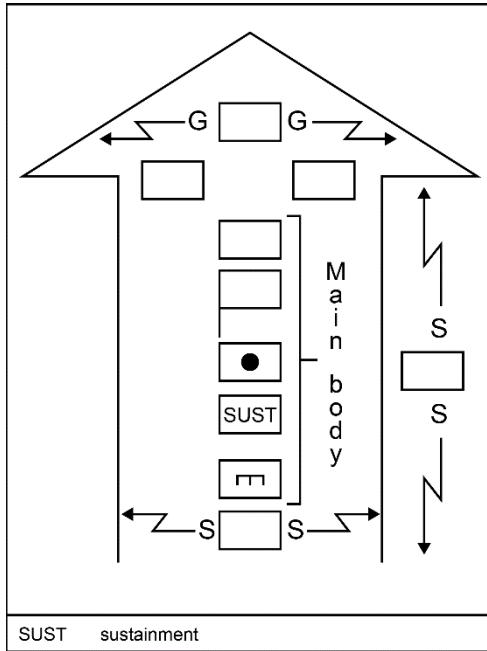
13-65. Observation posts report and request to move to the next screen line as enemy pressure threatens their security. Commanders establish criteria based on certain enemy or friendly actions that allow their screening forces to displace to subsequent screen lines. These criteria allow subordinates to use their initiative when conducting operations. Screening forces emphasize rapid movement while maintaining contact with enemy forces when displacing from one screen line to another. This ensures the rapid closing of any gaps in observation that occurred during movement. Likewise, screening force command elements displace as required to maintain control and avoid enemy detection and destruction. Screening forces repeat this procedure as often as necessary.

13-66. Screening force commanders decide when to move from one screen to another. However, main body commanders decide when the screening force can conduct either a reconnaissance handover with the next echelon of reconnaissance or a battle handover with the main body.

Executing a Moving Screen

13-67. A screening force maintains a moving screen along the flanks and rear of the protected force, never to the front of a moving formation. A screening force is not employed in front of a moving formation because a screen does not prevent enemy forces from penetrating it and making contact with the protected force. Zone reconnaissance, reconnaissance in force, and guard are missions given to units in front of a moving force. The screen movement is keyed to time and distance factors associated with the main body's movement. (See figure 13-6 on page 13-16.) Responsibilities for a moving flank screen begin at the front of the main body's lead combat element and end at the rear of the protected force. They do not include front and rear security forces. A force executes a moving screen in the same way it conducts a stationary screen, except for the movement techniques.

13-68. The lead element of a moving screen performs three tasks. It maintains contact with the protected force's main body, reconnoiters the area between the main body and the security force's routes of advance, and reconnoiters the security force's route. It performs these tasks by conducting a zone reconnaissance.

**Figure 13-6. Moving flank screen**

13-69. The screening force may use several methods to move the screen as the protected force moves. Table 13-2 summarizes each method's advantages and disadvantages.

Table 13-2. Screen movement methods

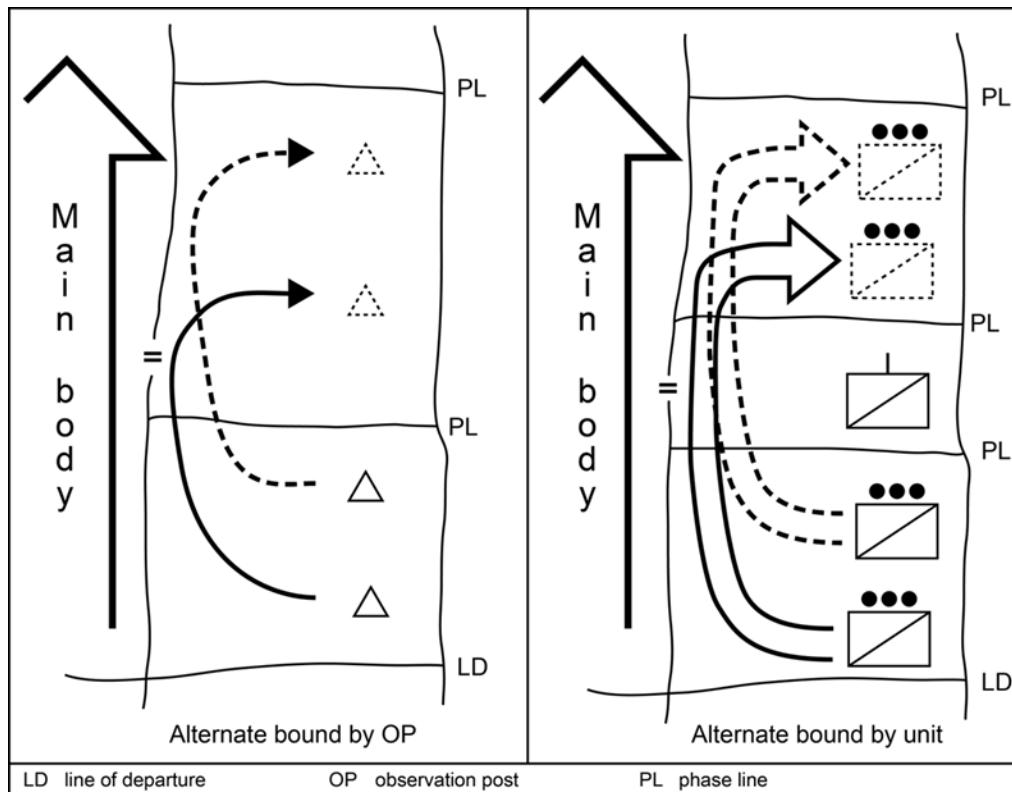
Method	Characteristics	Advantages	Disadvantages
Alternate bounds by observation posts	<ul style="list-style-type: none"> Main body moves faster. Conducted by platoon, company, or troop. Contact is possible. Conducted from rear to front. 	<ul style="list-style-type: none"> Very secure method. Maintains maximum surveillance over the security area. 	<ul style="list-style-type: none"> Execution takes time. Disrupts unit integrity.
Alternate bounds by units	<ul style="list-style-type: none"> Main body moves faster. Conducted by platoon, company, or troop. Contact is possible. Conducted from rear to front. 	<ul style="list-style-type: none"> Execution does not take a great deal of time. Maintains good surveillance over the security area. Maintains unit integrity. 	<ul style="list-style-type: none"> May leave temporary gaps in coverage.
Successive bounds	<ul style="list-style-type: none"> Main body moves slowly. Conducted by platoon, company, or troop. Contact is possible. Conducted simultaneously or in succession. Unit should maintain an air screen during ground movement. 	<ul style="list-style-type: none"> Most secure method. Maintains maximum surveillance. Maintains unit integrity. 	<ul style="list-style-type: none"> Execution takes the most time. Unit is less secure when all elements are moving simultaneously. Simultaneous movement may leave temporary gaps.

Table 13-2. Screen movement methods (continued)

Method	Characteristics	Advantages	Disadvantages
Continuous marching	<ul style="list-style-type: none"> Main body is moving relatively quickly. Performed as a route reconnaissance. Enemy contact is not likely. Unit should maintain an air screen on the flank. 	<ul style="list-style-type: none"> Observation posts displace quickly. Maintains unit integrity. 	<ul style="list-style-type: none"> Least secure method.

13-70. Units consider the mission variables when deciding which movement method to employ. Figures 13-7 below and 13-8 on page 13-18 illustrate four methods of controlling movement along a screen line. These methods are—

- Alternate bounds by individual observation posts from the rear to the front. (Company-sized and smaller units usually employ this method.)
- Alternate bounds by subordinate units from the rear to the front.
- Successive bounds by units along the screen line.
- Continuous marching along the route of advance.

**Figure 13-7. Examples of alternate bound by OP and alternate bound by unit**

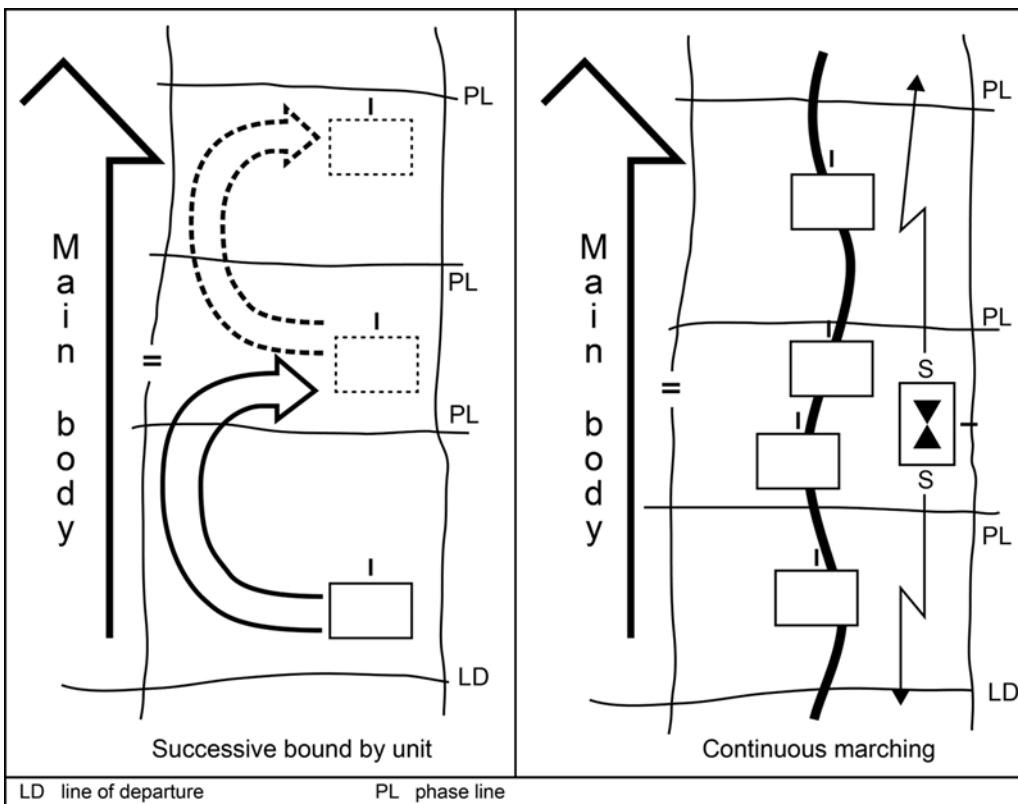


Figure 13-8. Example of successive bound by unit and continuous marching methods of displacement

Screening Operations During Limited Visibility

13-71. Limited visibility often affects the screening force's ground and air observation. During limited visibility, the screening force uses all available night and thermal observation devices and electronic surveillance devices. Although the screening force can use technical information collection assets to offset limited visibility, it should also adjust its techniques and procedures to the conditions. For example, screening force units may adjust the number and location of observation posts in limited-visibility conditions. They can establish more observation posts to cover avenues of approach that these conditions mask. They plan for illumination and use it when necessary. Screening force units closely coordinate their combat and reconnaissance patrols to prevent misidentification and friendly fire incidents. Noise and light discipline prevents compromise of observation posts by enemy reconnaissance forces. Additional observation posts along enemy avenues of approach can provide depth to facilitate the detection of enemy forces that eluded forward security elements.

GUARD

13-72. *Guard* is a type of security operation conducted to protect the main body by fighting to gain time while preventing enemy ground observation of and direct fire against the main body (ADP 3-90). A guard differs from a screen in that a guard force contains sufficient combat power to defeat, cause the withdrawal of, or fix the lead elements of an enemy ground force before it can engage the main body with direct fire. A guard force routinely engages enemy forces with direct and indirect fires. A screening force, however, primarily uses indirect fires or close air support to destroy enemy reconnaissance elements and slow the movement of other enemy forces. A guard force uses all means at its disposal to prevent enemy forces from penetrating to a position to observe and engage the main body. It operates within the range of the main body's

fire support weapons, deploying over a narrower front than a comparable-sized screening force to permit concentrating combat power.

13-73. Units employ a guard when enemy contact is expected, and they require additional security beyond that provided by a screen. The multiple requirements of the guard mission often occur simultaneously over large areas. While the guard force's exact size is determined by prevailing mission variables, table 13-1 on page 13-5 provides guidance on the size of an echelon's guard force.

13-74. The three types of guard operations are advance, flank, and rear guard. Commanders can assign a guard mission to protect either a stationary or a moving force.

13-75. A unit conducting a guard performs tasks within its capabilities unless ordered otherwise. If a unit lacks the time, lacks resources, or is unable to complete all tasks, it must inform the higher echelon assigning the mission of the shortfall and request guidance on which tasks to complete or the priority of tasks. Guard tasks, within capability are to—

- Detect and report all enemy elements attempting to pass through the guard, both ground and aerial, and provide the protected force commander early warning of enemy activities.
- Conduct counterreconnaissance to destroy or defeat all enemy reconnaissance elements according to engagement criteria. Must prevent ground observation and direct fire against the main body.
- Maintain contact with the protected force and other forces operating on its flanks.
- Maintain contact with enemy forces and report activity in the assigned area.
- Maintain observation of avenues of approach that affect the protected forces mission.
- Locate and identify the lead elements that indicate the enemy's main attack, as prescribed in the enemy's order of battle based upon IPB (when facing an echeloned enemy force).
- While displacing, determine the direction of enemy movement, maintain contact, and report threat activities.
- While displacing, impede and harasses the enemy, within capability, to provide the protected force commander with additional time and maneuver space.
- Cause the enemy main body to deploy prematurely.
- Prevent visual contact and direct fire against the protected force.
- Deny the enemy information about the size, strength, composition, and objective of the main body.

13-76. If a guard turns into a meeting engagement—

- Destroy enemy reconnaissance and lead elements of the main body.
- Determine the location of enemy assailable flanks.
- Fix enemy forces to allow the main body to maneuver around enemy strengths or through weaknesses.

Organization of a Guard Force

13-77. Whether the guard force is stationary or moving, the types of guard missions, knowledge of the terrain, and enemy dictate the task organization of the guard force. The guard force commander normally organizes the guard force as an area defense, a delay, a zone reconnaissance, or a movement to contact.

Control Measures

13-78. Units use control measures to control the operations of guard forces in the security area. The mission also influences the size of the assigned areas given to subordinate elements. For example, a movement to contact normally occurs across a narrower unit frontage than a zone reconnaissance to allow adequate concentration of combat power.

13-79. Guard force commanders may task subordinate elements to conduct screen missions to the front and flanks of the guard force. This provides early warning of enemy forces and helps maintain contact with flank forces and any higher echelon security force. An example is a cavalry squadron screen in front of a brigade operating as a division advance guard. The presence of a higher echelon security force also influences how

guard force commanders organize available forces and conduct their tasks. It specifically influences the areas of fire support and sustainment.

Advance Guard

13-80. An advance guard for a stationary force operates defensively. It defends or delays in accordance with the main body commander's intent. An advance guard for a moving force operates offensively as depicted in figure 13-9. The advance guard develops the situation so the main body can use its combat power to the greatest effect. Units do not dissipate the main body's combat power through piecemeal commitment. The full combat power of the main body must be available to mass and defeat the main enemy force.

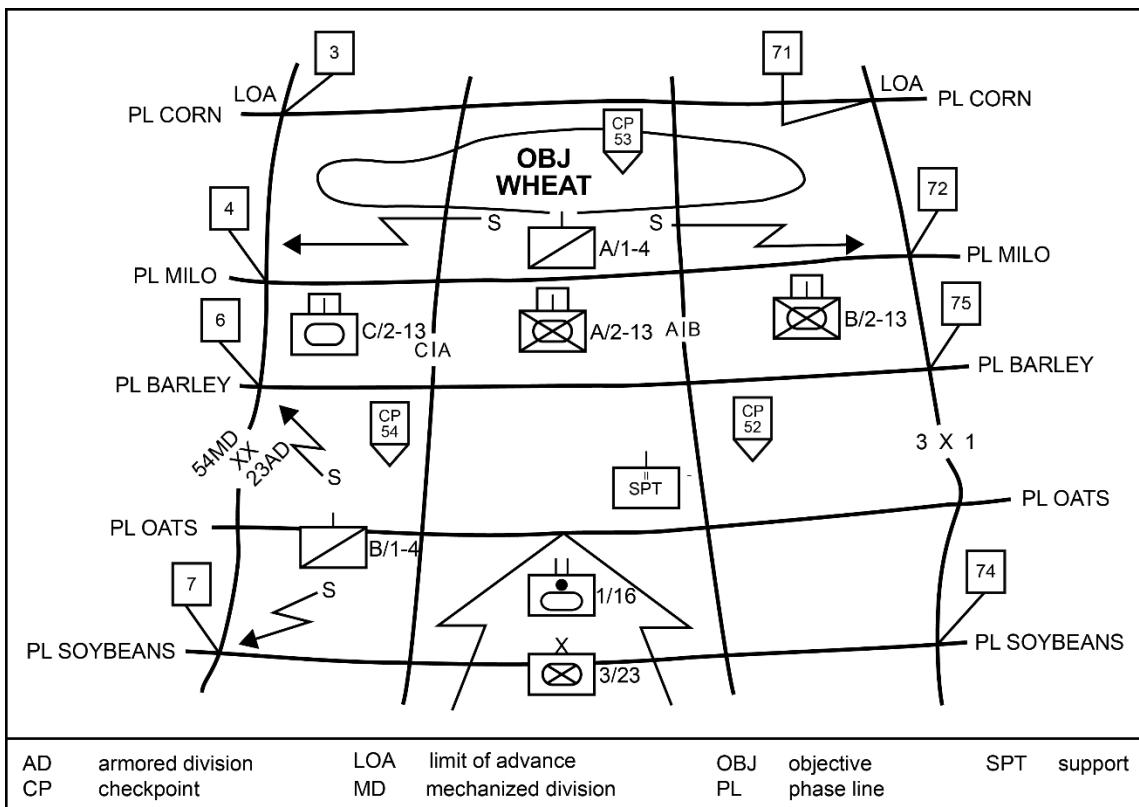


Figure 13-9. Advance guard for division attack

13-81. An advance guard for a moving force normally conducts a movement to contact. It organizes and uses the control measures typically associated with the conduct of a movement to contact. Advance guard force units normally deploy their ground elements abreast to cover the axis of advance or the main body's assigned area.

13-82. The advance guard clears enemy elements from the axis of advance or designated portions of the assigned area. This allows the main body to move unimpeded, prevents the unnecessary delay of the main body, and defers the deployment of the main body for as long as possible.

13-83. The advance guard can operate behind the security force of a higher echelon. For example, a division may use a reinforced reconnaissance squadron as an advanced guard, while each brigade column organizes one of its battalion task forces into an advance guard. (See figure 13-9.) The higher echelon security force initially develops the situation. Commanders may task the advance guard within their capability to—

- Coordinate and conduct the rearward passage of lines of the security force.
- Reduce obstacles to create lanes or improve existing lanes as required to support the maneuver of the main body.

- Eliminate enemy forces bypassed by the security force.
- Coordinate and conduct a forward passage of lines through the security force and fix enemy forces in the enemy's main defensive positions to allow the friendly main body to maneuver.

13-84. The movement of multiple security forces and the handover of a detected enemy force from the higher echelon security force to the lower echelon security force are controlled using checkpoints, contact points, PLs, handover lines, and disengagement criteria, in addition to other graphic control measures. At a minimum, the higher echelon security force has a rear boundary that is also the forward boundary of the advance guard.

13-85. The advance guard engages in offensive operations when necessary to accomplish the mission. After the guard makes enemy contact, the commander determines whether the guard mission requires an attack, a defense, or a delay based on the mission variables. For example, if the guard force has sufficient combat power to defeat an enemy force, it conducts a hasty attack. The guard force avoids assaulting strong enemy positions from the front. If the enemy forces attempt to withdraw, the advance guard continues the attack with the intent to destroy the enemy force. If the advance guard encounters an enemy force that it cannot stop from interfering with the movement of the main body, the security force reports its presence to the main body. It then establishes a defense, continues conducting reconnaissance, and prepares to pass elements of the main body forward while facilitating the deployment of the main body.

13-86. Guard force units can delay rearward one or more positions to avoid decisive engagement if the depth of the security area permits, and they do not have enough combat power to defeat an approaching enemy force. This reduces the enemy force's combat power. Guard forces accept decisive engagement to prevent enemy ground forces from employing their direct-fire systems to engage the main body unless their higher echelon commanders relieve them of their mission.

Flank Guard

13-87. A flank guard protects an exposed flank of the main body. A flank guard is similar to a flank screen except that the unit plans defensive positions in addition to observation posts.

13-88. Main body units assign an area to each flank guard that is sufficiently deep to provide early warning and reaction time. However, each flank guard remains within supporting range of the main body's indirect fire systems. Flank guard units consider the front and rear of the flank of the main body, the axis taken by the main body, the enemy's capabilities, and the available avenues of approach when determining the exact positions their forces initially occupy.

13-89. Each flank guard moves to its initial positions using one of the movement techniques. On reaching its initial position, the flank guard establishes defensive positions in assigned BPs or in its assigned area and establishes a screening element forward of these positions. In situations where knowledge about the enemy force is vague, the flank guard maintains a larger reserve than in situations where the enemy force's actions are more predictable. Figure 13-10 on page 13-22 depicts an example stationary flank guard.

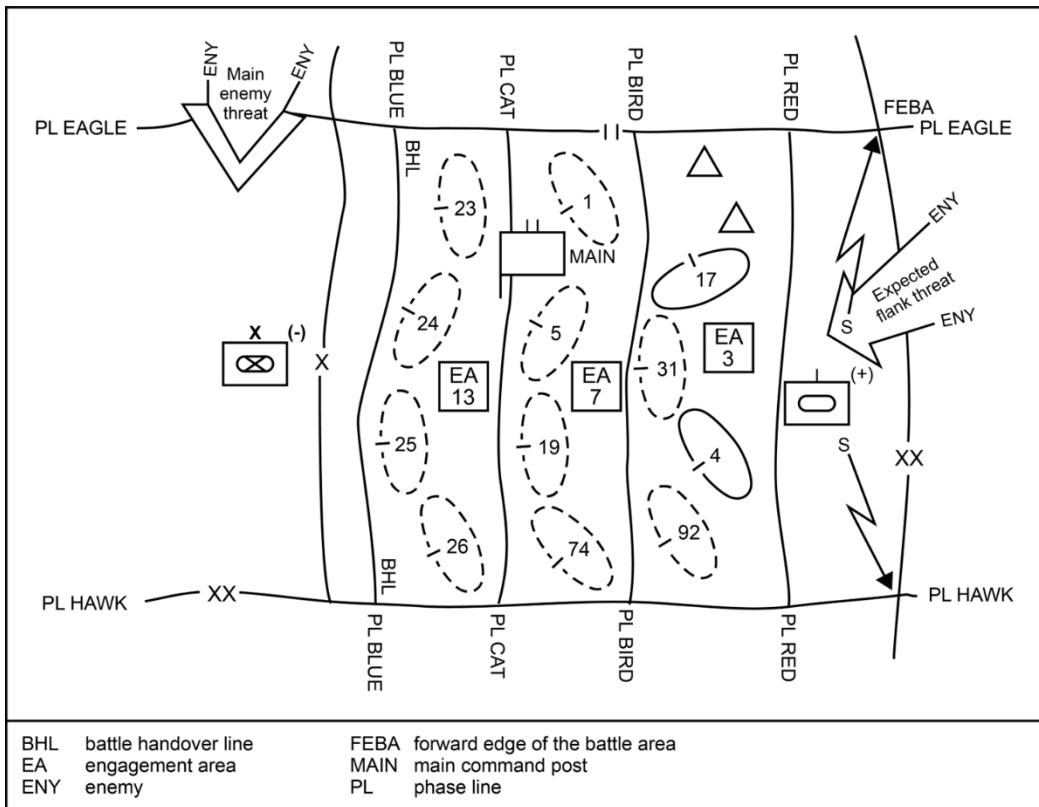


Figure 13-10. Stationary flank guard

13-90. When conducting a moving flank guard, units address additional considerations beyond those applying to a moving flank screen. Instead of occupying a series of observation posts, the security force plans a series of BPs. Figure 13-11 depicts example control measures for a moving flank guard. The security force monitors potential enemy avenues of approach for as long as the enemy threatens the main body. Once the flank guard makes contact with enemy forces, it can attack, defend to defeat, or fix enemy ground forces in their current positions before they can engage the friendly main body or conduct a delay as the situation requires.

13-91. The lead element of a moving flank guard performs three tasks. It maintains contact with the protected force's main body, reconnoiters the area between that main body and the flank guard's routes of advance, and reconnoiters the flank guard's route. It performs these tasks by conducting a zone reconnaissance.

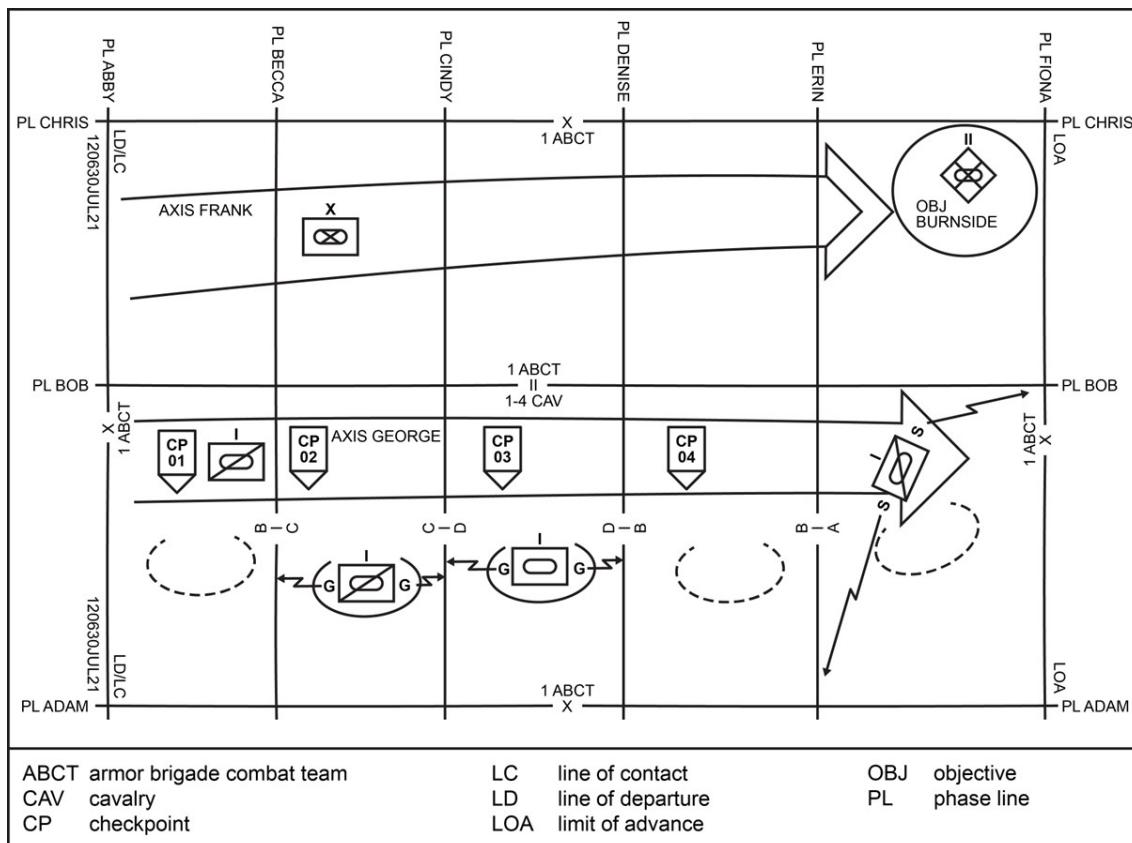


Figure 13-11. Moving flank guard control measures

13-92. The speed the guard force can maintain needs to be a deliberate planning consideration as generally the guard force will be in less desirable terrain on the flank compared to the main body, which normally is on an avenue of approach suited to support its movement. The exact size of the assigned area for any unit conducting a guard depends on the mission variables. For example, a commander assigns an armor brigade combat team cavalry squadron an assigned area with a frontage no larger than 13km. In this example an armored cavalry troop would be assigned an area with a frontage no larger than 5km. If the security force is assigned a frontage larger than they can support, the main body commander can mitigate the lack of coverage by providing additional ground or aerial assets to supplement the security force's mission and maintain contact between the security force and main body.

13-93. The rest of the flank guard marches along the route of advance and occupies BPs as necessary. The criteria for the route are the same as in a moving flank screen. The unit designates company-sized BPs parallel to the axis of the main body. The flank guard unit places BPs outside the flank guard's route of advance and along avenues of approach into the flank guard. The flank guard occupies observation posts along a screen line forward of these BPs.

13-94. Since the flank guard is moving in one direction and orienting on providing protection to the secured force in another direction, the flank guard unit plans control measures to facilitate this dual orientation. These control measures are normally associated with the moving screen, as well as PLs that run parallel to the direction of movement of the main body. Units use these PLs to control the delay or defense if enemy forces attack from the protected flank. (See figure 13-12 on page 13-29 for an attack using a covering force.) The main body commander may also assign the flank guard a new security objective that secures the flank for the main body's objective during the main body's actions on the objective.

13-95. The flank guard regulates its movement along the route of advance by the pace of the main body, the distance to the objective, and the enemy force's situation. The three methods of movement are successive

bounds, alternate bounds, or continuous marching. If the main body stops, the flank guard occupies blocking positions. As the speed of the main body changes, the flank guard changes its movement methods, which could result in the ability of the guard force's capability to fight to gain time for the main body. If the main body continues to increase its rate of march, the guard force will either need to have additional resources attached to maintain tempo or the main body assumes more risk by screening a portion of the flank. The guard commander must not allow the force to fall behind the main body or stay stationary along the route becoming a lucrative target.

13-96. If the flank guard becomes overextended, the guard commander informs the main body commander and recommends one of the following COAs:

- Reinforce the flank guard.
- Reduce the size of the flank guard's assigned area.
- Screen a portion of the area and guard the rest.

Rear Guard

13-97. The rear guard protects the exposed rear of the main body. This occurs during offensive operations when the main body breaks contact with flanking forces or during a retrograde. Units may deploy a rear guard behind both moving and stationary main bodies. The rear guard for a moving force displaces to successive BPs along PLs or delay lines in depth as the main body moves. The nature of enemy contact determines the exact movement method or combination of methods used in the displacement (successive bounds, alternate bounds, and continuous marching).

13-98. During a retrograde, the rear guard normally deploys its ground maneuver elements abreast, behind the main body's forward maneuver units, generally across the entire assigned area. After the main body conducts a rearward passage of lines, the rear guard accepts battle handover and then defends or delays. Alternatively, the rear guard may conduct a relief in place as part of a military deception plan or may take advantage of defendable terrain. In both cases, the rear guard establishes passage points and assists the rearward passage of the main body, if necessary. The rear guard accomplishes its defensive mission in the same way as any other guard operation after the main body clears the security area. As the main body moves, the rear guard moves to subsequent PLs in depth. Contact with the enemy force may eventually be lost if it does not follow the retrograding friendly force. Fighting a defense or a delay is necessary if an enemy force detects the movement and attacks.

COVER

13-99. *Cover* is a type of security operation done independent of the main body to protect them by fighting to gain time while preventing enemy ground observation of and direct fire against the main body (ADP 3-90). The covering force's distance forward of the main body depends on the main body commander's intentions and instructions, the terrain, the enemy location and strength, and the main body and covering force's rates of march. The frontage assigned to a security force executing a cover is the same frontage as the assigned area of the main body. It is here that the covering force executes assigned tasks. The biggest difference between a guard force and a covering force is that a covering force is able to operate independently of the main body, while a guard force relies on indirect support from the main body.

13-100. A covering force, or portions of it, often become decisively engaged with enemy forces. Therefore, the covering force must have substantial combat power to engage the enemy and accomplish its mission. A covering force develops the situation earlier than a screen or a guard force. It engages longer and more often and defeats larger enemy forces.

13-101. While a covering force provides more security than a screen or guard force, it also requires more resources. Before assigning a cover mission, the main body commander determines if the unit has enough combat power to resource a covering force and the main effort. When the commander lacks the resources to support both, the main body commander must assign the security force a less resource intensive security mission, either a screen or a guard.

13-102. A covering force performs all the tasks of screening and guard forces. A covering force for a stationary force performs a defensive mission, while a covering force for a moving force generally conducts

offensive actions. A covering force normally operates forward of the main body in the offense or defense, or to the rear for a retrograde operation. Unusual circumstances could dictate a flank covering force, but this is normally a screen or guard mission.

Organization of a Covering Force

13-103. Whether the cover is for a stationary (defending) or moving (attacking) force, the various types of cover missions, as well as knowledge of the terrain and enemy forces, dictate the specific task organization of the covering force. The covering force unit normally plans to conduct the cover mission as an area defense. The covering force also normally employs tactics associated with the conduct of a delay, a zone reconnaissance, and a movement to contact.

13-104. Commanders normally assign subordinate units one of these missions or the mission of screen or guard. The covering force organizes and uses control measures associated with the before-mentioned missions. In addition, units establish control measures necessary for conducting the covering force's passage of lines (forward and rearward).

13-105. Corps normally build their covering force around a reinforced armored BCT or a division, although they can deploy any mobile force as their covering force. Both have the control structures necessary for the forces involved and the capability to cover the geographic area typically required in a cover security mission. Corps tailor these units to be self-contained by reinforcing them with assets such as joint fires, attack helicopters, field artillery, engineers, air defense, tanks, and infantry units with appropriate sustainment assets. They usually allocate additional artillery and engineer support to their covering force because it operates beyond support range of their main body. Covering force commanders normally maintain a sizable reserve to conduct counterattacks in the defense and to defeat enemy counterattacks in the offense.

13-106. A division covering force is normally a reinforced BCT. It performs reconnaissance or other security missions. If the division assigned area is narrow enough, an adequately reinforced combined arms battalion, reconnaissance squadron, or Stryker battalion may perform a cover mission. At both corps and division echelons, the amount of reinforcement provided to the covering force determines the distance and time it can operate away from the main body. These reinforcements typically revert to their parent organizations once the covering mission is complete. BCTs and battalions typically organize a guard force instead of a covering force because their resources are limited.

13-107. Since one task of the covering force is to deceive the enemy commander into thinking enemy forces have found the main body, commanders should supply the covering force with combat systems that are representative of the main body. For example, if the main body has organic or reinforcing systems (such as the M270 multiple launch rocket system) available to it, they should organize the covering force with the same systems.

Offensive Cover

13-108. An offensive covering force seizes the initiative early for the main body, allowing the main body to attack decisively. Figure 13-12 on page 13-26 shows an attacking main body with an advance covering force and a flank guard.

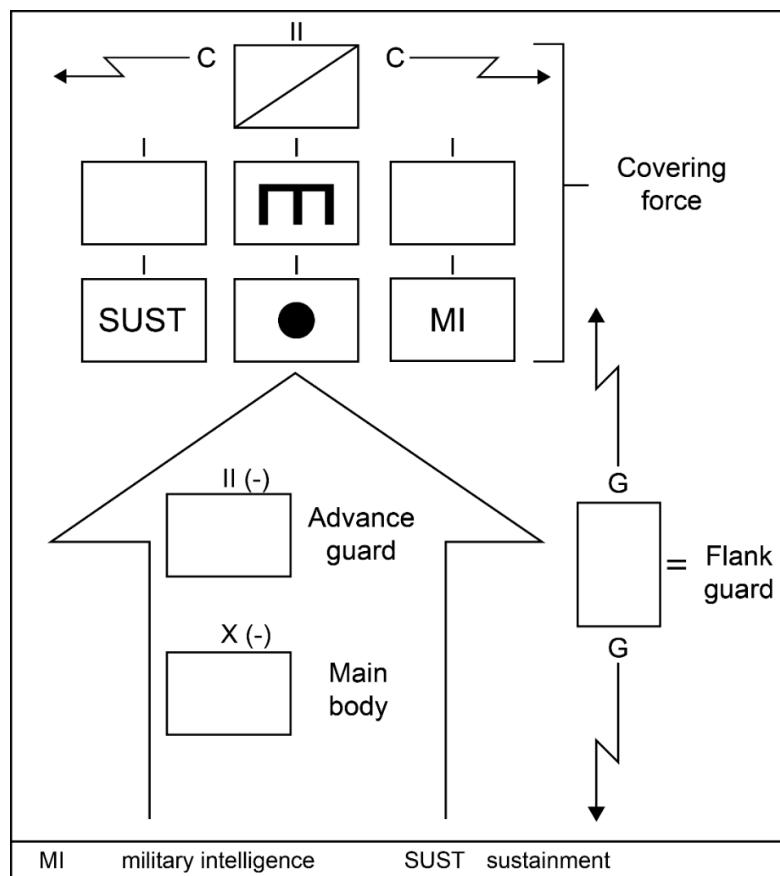


Figure 13-12. Attack using a covering force

13-109. Unless the higher echelon orders otherwise, an offensive covering force performs specific tasks within its capabilities. If a covering force lacks the time or other resources to complete all these tasks, it must inform the higher headquarters assigning the mission of the shortfall and request guidance on which tasks to complete or the priority of tasks. After starting the mission, if the unit determines that it cannot complete an assigned task, such as destroying or repelling enemy reconnaissance and security forces in the enemy security area, it must report to the higher echelon and await further instructions while the unit continues to execute their assigned mission. Offensive covering force tasks include—

- Destroy, disrupt, or fix enemy forces and reconnaissance assets in the disruption zone.
- Conduct counterreconnaissance to destroy or defeat all enemy reconnaissance elements. Must prevent ground observation and direct fire against the main body.
- Maintain contact with the protected force and other forces operating on its flanks.
- Gain and maintain contact with enemy forces and report activity in the assigned area.
- Maintain observation of avenues of approach that affect the protected forces' mission.
- Locate and identify enemy forces in the battle zone and conduct handover to follow-on forces.
- Cause the enemy to commit resources to counter the cover force that would have been used against the main body.
- Deny the enemy information about the size, strength, composition, and objective of the main body.
- Determine enemy strengths, weaknesses, and disposition, and exploit opportunities until main body forces are committed.
- Clear or bypass enemy forces in the assigned area in accordance with engagement criteria.
- Conduct reconnaissance along the main body's axis of advance.
- Penetrate the enemy's disruption zone to locate enemy main defensive positions.

- Locate gaps or weaknesses in the enemy's defensive scheme.
- Defeat or repel enemy forces as directed by the higher commander.
- Fix enemy forces to allow the main body to maneuver around enemy strengths or through enemy weaknesses.

13-110. If the mission turns into a meeting engagement—

- Destroy enemy reconnaissance and lead elements of the main body.
- Determine the location of enemy assailable flanks.
- Fix enemy forces to allow the main body to maneuver around enemy strengths or through weaknesses.

13-111. Planning for offensive covering force operations is similar to planning for zone reconnaissance or movement to contact. Mission analysis using the products of the IPB process helps determine the width of the area to cover and areas (NAIs and TAIs) or routes of special importance. Commanders determine specific missions for subordinate elements and assign boundaries. The covering force retains a reserve that is ready to deploy anywhere in the covering force area. This reserve may be centrally located; the commander typically locates it on the most dangerous or critical avenue of approach in the security area.

13-112. The covering force advances on a broad front, normally with its subordinate ground maneuver elements abreast (except for the reserve). This force clears the enemy's disruption zone of small combat elements while penetrating the enemy force's main defenses. Attack reconnaissance aircraft normally reconnoiter forward of advancing ground covering force elements. On enemy contact, the attack reconnaissance crews report the enemy force's location to the appropriate ground unit and maintain contact. Once attack reconnaissance aircraft make contact, the covering force rapidly develops the situation. It reports enemy dispositions immediately to the main body, so that the main body can exploit enemy weaknesses. The covering force fixes encountered enemy forces and destroys them. The covering force does not bypass enemy forces without the guidance of the main body commander.

13-113. If the covering force discovers a gap in the enemy force's defenses, it prepares to exploit the gap and disrupt the integrity of that defense. The covering force immediately reports this to the main body, so the main body commander can divert main body follow-on forces to support the penetration. The main body synchronizes the covering force's penetration with the other arriving maneuver units, functional and multifunctional support units, and sustainment units to prevent counterattacking enemy forces from isolating and destroying the penetrating elements of the covering force.

13-114. When the covering force cannot advance, it defends and prepares to assist the forward passage of lines of main body units. It continues to perform reconnaissance of enemy positions to locate gaps or assailable flanks. The covering force may guide main body units as they attack through or around the covering force. If the covering force has accomplished its mission, the main body attacks the enemy's weak point with previously uncommitted main body forces at the appropriate time.

Flank Cover

13-115. When the main body commander perceives a significant threat to a flank, the main body normally establishes a flank covering force. That force conducts its mission in much the same way as a flank guard performs its mission. The main differences between the two missions are the scope of operations and the distance the covering force operates away from the main body.

13-116. Flank covering forces clear the area between their route of advance and their main body just as flank guards do. They also maintain contact with specified main body elements. These elements are normally part of the advance guard for the flank unit of the main body.

Defensive Cover

13-117. A defensive covering force prevents enemy forces from attacking at the time, place, and combat strength of their choosing. Defensive cover gains time for the main body, enabling it to deploy, move, or prepare defenses in the MBA. It accomplishes this by disrupting the enemy force's attack, contesting the enemy's possession of the initiative, and establishing the conditions for friendly operations. The covering

force makes the enemy force deploy repeatedly to fight through the covering force and commit the enemy force's reserve or follow-on forces to sustain momentum. Figure 13-13 depicts a defensive cover.

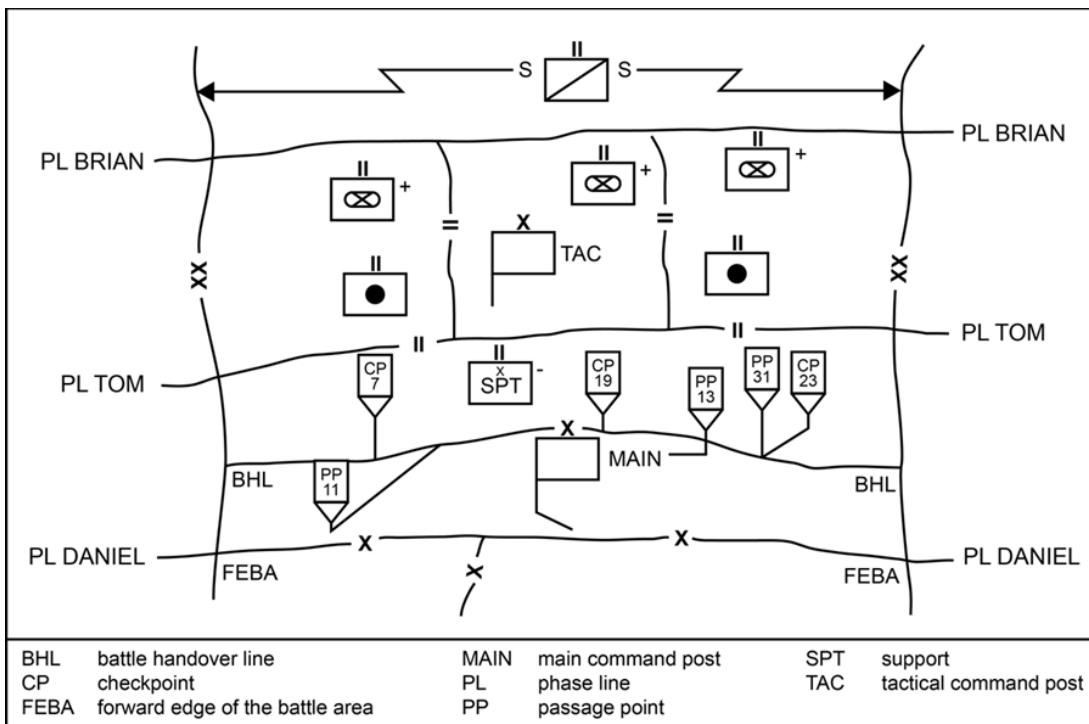


Figure 13-13 Example of a defensive cover

13-118. Unless the higher echelon commander orders otherwise, a defensive covering force performs certain tasks within its capabilities. If a unit does not have the time or resources to complete all of these tasks, it must inform the headquarters assigning the mission of the shortfall and request guidance on which tasks to complete or on the priority of tasks. After starting the mission, if the unit determines it cannot complete an assigned task, such as defeat enemy advance guard formations, it must report to the higher echelon commander and await further instructions while the unit continues its assigned mission. A defensive covering force emphasizes these tasks within their capability:

- Detect, report, and destroy all enemy elements attempting to pass through the cover, both ground and aerial, and provide the protected force commander early warning of enemy activities.
- Conduct counterreconnaissance to destroy or defeat all enemy reconnaissance elements. Must prevent ground observation and direct fire against the main body.
- Maintain contact with the protected force and other forces operating on its flanks.
- Maintain contact with enemy forces and report activity in the assigned area.
- Maintain observation of avenues of approach that affect the protected forces mission.
- Locate and identify the lead elements that indicate the enemy's main attack, as prescribed in the enemy's order of battle based upon IPB (when facing an echeloned enemy force).
- While displacing, determine the direction of enemy movement, maintain contact, and report threat activities.
- While displacing, impede and harass the enemy to provide the protected force commander with additional time and maneuver space.
- Cause the enemy main body to deploy prematurely and then report its direction of travel.
- Deny the enemy information about the size, strength, composition, and location of the MBA.
- Determine enemy strengths, weaknesses, and disposition, and exploit opportunities until main body forces are committed.

13-119. The defensive covering force may be required to defend, delay, or counterattack. The covering force may have to reconnoiter and clear the area before establishing the cover if another unit is not currently occupying the covering force area. As in offensive operations, aerial reconnaissance is necessary to extend the covered area. Army aviation units can screen less threatened areas and rapidly reinforce with their fires when an enemy force heavily engages other elements of the covering force.

13-120. Enemy forces may attempt to force the covering force back toward the MBA during the operation. If this happens, the covering force conducts a rearward passage of lines and a battle handover with the main body. Once the covering force completes its battle handover with the main body, they can do one of three things, separately or in combination. They can undergo reconstitution, execute economy of force missions, or become part of the echelon reserve. Alternatively, they may use them to locate and follow the movement of the enemy's follow-on forces. They only establish BPs in the MBA as a last resort.

13-121. The conduct of a rearward passage of lines is part of a defensive cover with its associated requirement to transfer responsibility for the battle between units. Units thoroughly plan this complex task as an integral part of the covering force mission. Covering force elements begin their rearward passage of lines either upon meeting disengagement criteria or upon order of the covering force commander. When any element of the covering force begins rearward movement to pass through the MBA, the higher commander must be informed. Passage of lines may not occur simultaneously for all covering force units. As some units begin passage, others may still be taking advantage of offensive opportunities in other parts of the security area. The covering force prepares to continue fighting in those portions of the security area where friendly subordinate forces are successful to set up offensive opportunities for the main body.

13-122. The covering force exercises caution when issuing orders. Commanders at each echelon have a different perspective of the battle. This is never truer than in a covering force action. For example, while the covering force may be told to delay forward of a river line for 72 hours, the covering force commander may tell subordinate task force units to defend in certain BPs, perhaps for a specified period. Once the period expires, the covering force should not automatically retire from the covering force area. It must create enough resistance to force the enemy commander to deploy the enemy's main forces. Commanders at each echelon precisely state the mission to their subordinate units without telling them how to do it. (See ADP 6-0 for doctrine on mission command.) Units, when told to delay, must fight the urge to shoot too little, pull back too early, and move back too far. It is imperative that commanders convey to subordinates precisely what their purpose is in the context of the overall mission.

Rear Cover

13-123. A rear cover mission is similar to a rear guard mission. A rear covering force protects the main body moving away from the enemy. The covering force deploys behind the forward maneuver units of the main body, conducts battle handover and passage of lines, and then defends or delays. Alternatively, the covering force may conduct a relief in place as part of a deception plan or to take advantage of the best defensive terrain.

13-124. The covering force establishes passage points and assists the rearward passage of the main body. Following the passage of the main body, the mission is conducted the same as any other defensive cover operation. As the main body moves, the covering force displaces to subsequent phase lines in depth. If the enemy does not follow the withdrawing forces, contact may eventually be lost. Fighting a defense or delay is necessary if the enemy detects the movement and attacks.

AREA SECURITY

13-125. Area security is a type of security operation conducted to protect friendly forces, lines of communications, and activities within a specific area. Area security operations occur during all types of operations. The synchronization and integration of area and local security are essential to protecting the force. Area security operations support a higher echelon's overall operation and require them to take advantage of local security measures performed by all units in the area, regardless of their command and control relationships. Although vital to the success of military operations, area security is normally an economy-of-force mission, often designed to ensure the continued conduct of sustainment operations that generate and maintain combat power.

13-126. Units executing area security focus on the protected force, installation, route, or area. Protected forces range from echelon headquarters, artillery, and echelon reserves to the sustaining base. Protected installations can also be part of the sustaining base, or they can constitute part of the area's infrastructure. Areas to secure range from specific points (bridges and defiles) to terrain features (ridgelines and hills), to large civilian population centers and their adjacent areas. Population-centric area security missions are conducted at any time but are almost a fixture during irregular warfare. These population-centric area security missions typically combine aspects of the area defensive and offensive operations to eliminate the effect of internal defense threats.

13-127. Typically, units assigned an area security mission operate in a division or higher echelon's rear area and facilitate the positioning, employment, and protection of resources required to sustain, enable, and control forces. Area security in the rear area preserves the commander's freedom to move reserves, position fire support capabilities, provide command and control, and conduct sustaining operations.

13-128. Forces engaged in area security are typically organized in a manner that emphasizes their mobility, lethality, and communications capabilities. The task organization of the unit assigned the area security mission should correspond with the level of threat. For example, if the threat is a Level II threat, a military police company should be sufficient. If the threat is a Level III threat, a combined arms team from a brigade combat team is a more appropriate unit. Friendly forces conducting area security initially provide early warning against an unexpected enemy or adversary attack and then, within capabilities, defeat those attacks. Early warning may come from ground, aerial, or space-based sensors. Area security may provide reconnaissance on NAIs to answer commander's critical information requirements, aiding in tactical decision making and confirming or denying threat intentions.

13-129. All commanders apportion combat power and dedicate assets based on an analysis of the operational environment, the likelihood of threat action, the relative value of friendly resources, and risk to civilian populations. Although all friendly resources have value, the mission variables of METT-TC (I) make some resources, assets, or key terrain more essential to successful mission accomplishment from enemy or adversary and friendly perspectives. Commanders create and use a decision support matrix and template to facilitate decision making, issue guidance, and allocate resources. Criticality, vulnerability, and recoverability are some of the most significant considerations in determining protection priorities that become the focus of area security.

13-130. A unit restrains its use of force when conducting area security operations when civilians are present. However, commanders remain responsible for protecting the force, and they consider this responsibility when establishing rules of engagement. They explain restrictions on conducting operations to ensure everyone understands those restrictions. Soldiers must understand that their actions may have far-reaching positive or negative effects. Commanders communicate that media and adversaries can quickly exploit Soldiers' actions, especially the way they treat civilians.

13-131. Sometimes area security forces must retain readiness over long periods without contact with enemy forces. This occurs most often when the enemy special purpose forces or insurgents are overmatched. In this case, the enemy normally tries to avoid engaging friendly forces unless it is on terms favorable to the enemy. Forces conducting area security should not develop a sense of complacency, even if the enemy force appears to have ceased operations in the secured area. Additionally, friendly forces should be mindful of mines and booby traps in these situations. Successful units assume that the enemy force regularly observes friendly operations to identify routines, weak points, and lax security for the opportunity to strike with minimum risk. This requires leaders to maintain vigilance and discipline in their Soldiers to prevent that opportunity from developing.

13-132. Area security focuses on the following activities:

- Site security. Area security forces provide protection through area security techniques that involve the employment of protection and security assets in a layered, integrated, redundant manner. A unit conducting site security may protect locations such as—
 - Base/base camp defense. *Base defense* consists of the local military measures, both normal and emergency, required to nullify or reduce the effectiveness of enemy attacks on, or sabotage of, a base, to ensure that the maximum capacity of its facilities is available to United States forces (JP 3-10).

- Assembly area security. Protection is critical for forces that are arrayed in tactical assembly areas and do not possess comprehensive, organic protection capabilities or are focused on other mission objectives.
- Critical asset security. *Critical asset security* is the protection and security of personnel and physical assets or information that is analyzed and deemed essential to the operation and success of the mission and to resources required for protection (ADP 3-37). For example, command posts and operations centers are often protected through area security techniques that involve the employment of protection and security assets in a layered, integrated, and redundant manner. This can often keep hostile threats at a distance by maximizing the standoff distance from explosive effects, while keeping the protected asset outside the range of enemy or adversary direct-fire weapons and observation.
- Port area and pier security. Ground forces may provide area security for air and seaports along with pier areas. (See JP 3-10 for additional information on dedicated port security units.)
- Line of communication and route security. The security and protection of lines of communications and supply routes are critical to military operations because most support traffic moves along these routes. The security of lines of communications and supply routes (rail, pipeline, highway, and waterway) presents one of the greatest security challenges in an AO. Line of communication and route security operations are defensive in nature and are terrain oriented. A route security force prevents an enemy or adversary force from impeding, harassing, or destroying traffic along a route or portions of a route.
- Convoy security. A convoy security operation is a specialized type of line of communication or route security operations. Units conduct convoy security operations when there are insufficient friendly forces to continuously secure routes in an AO and there is a significant danger of enemy or adversary ground action directed against the convoy. Commanders may also conduct convoy security operations in conjunction with route security operations. Planning includes designating units for convoy security; providing guidance on techniques for units to provide for their own security during convoys; or establishing protection and security requirements for convoys carrying critical assets. Local or theater policy typically dictates when and which convoys receive security and protection. (See ATP 4-01.45/MCRP 3-40F.7/NTTP 4-01.6/AFTTP 3-2.58 for more information on convoy security training.)
- Response force operations. Response forces take measures to prevent enemy attacks. Response force operations expediently reinforce unit organic protection capabilities or complement that protection with maneuver capabilities based on the threat. (See FM 3-39 for more information on quick response force operations.)
 - Mobile security force. A *mobile security force* is a highly mobile and dedicated security force with the capability to defeat Level I and II threats in a joint security area (JP 3-10). Typically, a mobile security force is a military police unit.
 - Tactical combat force. A *tactical combat force* is a rapidly deployable, air-ground, mobile combat unit with appropriate combat support and combat service support assets assigned to, and capable of defeating Level III threats, including combined arms (JP 3-10). Typically, a tactical combat force is either a combined arms battalion, Stryker infantry battalion, or a cavalry squadron.
 - Quick response force. *Quick response forces* are a dedicated force on a base with adequate tactical mobility and fire support designated to defeat Level I and Level II threats and shape Level III threats until they can be defeated by a tactical combat force or other available response forces (ATP 3-37.10/MCRP 3-4D.13).
- Area damage control. *Area damage control* consists of measures taken before, during, and/or after hostile actions or natural or man-made disasters to reduce the probability of damage and minimize its effects (JP 3-10). Units assigned this activity immediately begin hardening critical assets and take action to prevent damage before hostile actions. During and after hostile action, when the damage and scope of the attack is limited, units respond and recover with local assets and resources. This recovery involves resuming operations, maintaining or restoring order, evacuating casualties, isolating danger or hazard areas, and mitigating personnel and material losses. (See JP 3-10 for more information on area damage control.)

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Chapter 14

Troop Movement

This chapter discusses the general considerations of troop movement. Those considerations include types of troop movements, methods of troop movements, how to organize, march techniques, and graphic control measures. This chapter also discusses the planning, preparation, and execution of troop movements.

GENERAL CONSIDERATIONS OF TROOP MOVEMENT

14-1. The ability of units to posture friendly forces in the right starting location to conduct operations depends on their ability to move forces. The essence of battlefield agility is the capability to conduct rapid and orderly movement to concentrate combat power at decisive points and times. Units can expect the enemy to attempt to deny freedom of movement throughout their assigned area. Successful movement places troops and equipment at their destination at the proper time, ready for combat. Units can expedite dismounted and mounted movements by the conduct of forced marches when necessary.

TYPES OF TROOP MOVEMENT

14-2. ***Troop movement*** is the movement of Soldiers and units from one place to another by any available means. Units perform troop movements using different methods such as dismounted and mounted movements using tactical vehicles and motor transport for air, rail, and water means in various combinations. The method employed depends on the situation, the size and composition of the moving unit, the distance the unit must cover, the urgency of execution, and the condition of the troops. It also depends on the availability, suitability, and capacity of the different means of transportation. Troop movements over extended distances have extensive sustainment considerations. The two types of troop movement are nontactical and tactical movement.

Nontactical Movement

14-3. ***Nontactical movement*** is a movement in which troops and vehicles are arranged to expedite their movement and conserve time and energy when no enemy ground interference is anticipated. Units only conduct nontactical movements in secure areas. Examples of nontactical movements include rail and highway movement in the continental United States. Once units deploy into a theater of operations, they do not normally conduct nontactical movements.

Tactical Movement

14-4. ***A tactical movement*** is a movement in which troops and vehicles are arranged to protect combat forces during movement when a threat of enemy interference is possible. Units maintain security against enemy attacks from both the air and ground and prepare to take immediate action against enemy ambushes, although they do not expect contact with significant enemy ground forces. During movement, the moving force employs security measures, even when contact with enemy ground forces is not expected. During a tactical movement, units are always prepared to take immediate action. There are three methods of a tactical movement that units of all types can conduct: approach march, forced march, and tactical road march. Figure 14-1 on page 14-2 depicts a tactical movement.

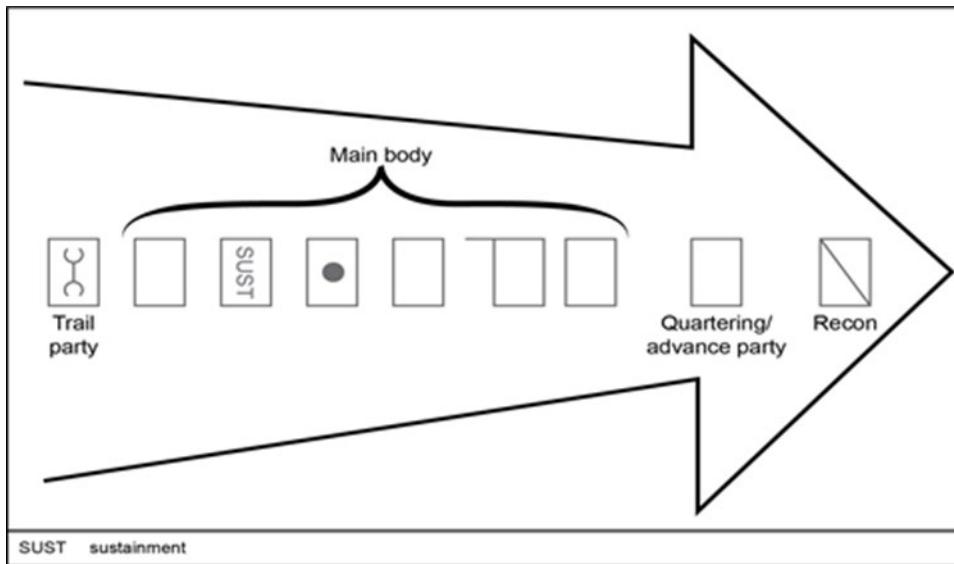


Figure 14-1. Tactical movement

Approach March

14-5. An **approach march** is the advance of a combat unit when direct contact with the enemy is intended. Units employ an approach march when they know the approximate location of enemy forces. Commanders task-organize units conducting an approach march before the march begins to allow them to transition to an on-order or be-prepared mission without making major organizational adjustments. For example, commanders direct artillery units to march in their supported unit's columns, while engineer units are well forward to facilitate mobility. The approach march terminates in a march objective—such as an attack position, assembly area, assault position—or it can be used to transition to an attack. Reserve and follow and assume forces may also conduct an approach march forward of a LD. Figure 14-2 depicts an approach march.

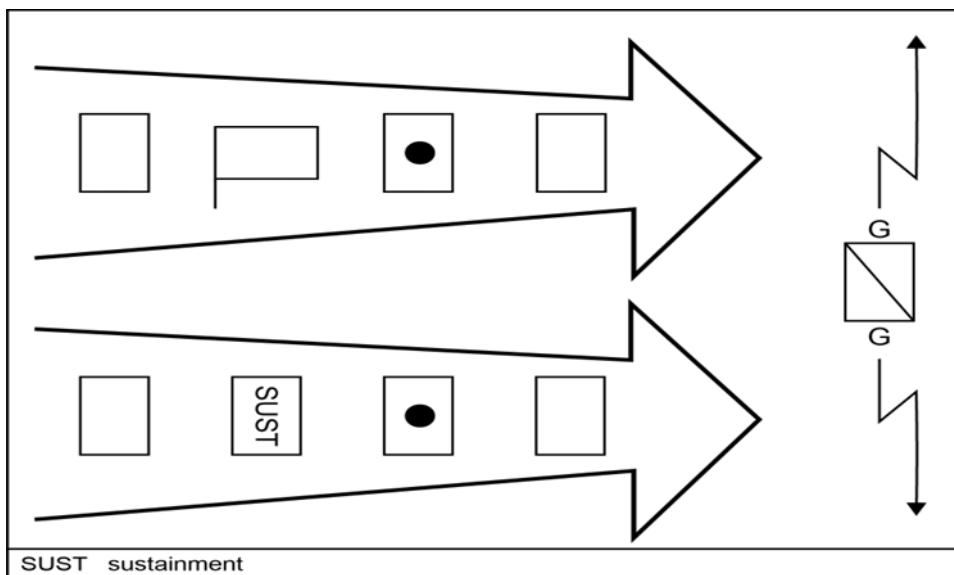


Figure 14-2. Approach march

14-6. Based on the products of the IPB process, the overall commander assigns an area or an axis of advance in combination with routes to a unit conducting an approach march. These routes, assigned areas, or axes facilitate the force's movement and maximize its use of concealment. Commanders assign the force conducting the main effort and forces conducting each supporting effort separate routes, assigned areas, or axes of advance unless an individual subordinate unit has the task of either follow and assume or follow and support.

14-7. As the approach march nears areas of likely enemy interference, commanders divide their unit's main body into smaller, less vulnerable columns that move on additional multiple routes or cross country while continuing to employ security elements. They take advantage of successful reconnaissance and security operations to increase the distance traveled before the main body begins to maneuver. As discussed in Chapter 13, the advance and any flank guards remain within supporting distance of the main body, which stays in these smaller columns to conceal their movement.

Forced March

14-8. **A forced march is a march longer or faster than usual or in adverse conditions.** Forced marches require speed, exertion, and an increase in the number of hours marched each day beyond normal standards. Soldiers cannot sustain forced marches for more than a short period. In a forced march, a unit may not halt as often or for as long as recommended for maintenance, rest, feeding, and fuel. Units must understand that immediately following a long and fast march, Soldiers and combat vehicles experience a temporary deterioration in their physical condition. The combat effectiveness and cohesion of the unit also temporarily decreases. The plan must accommodate stragglers and address increased maintenance failures.

Tactical Road March

14-9. **A tactical road march is a rapid movement used to relocate units within an assigned area to prepare for combat operations.** The primary consideration of the tactical road march is rapid movement. Typically, a unit executes a tactical road march using the mounted method of troop movement. Based on the mission variables a unit can execute a dismounted tactical road march. However, the moving force employs security measures, even when contact with enemy ground forces is not expected. Units conducting tactical road marches may or may not be organized into combined arms formation. For example, a forward support company providing supplies to its supported maneuver companies can execute a tactical road march. During a tactical road march, the commander is always prepared to take immediate action if the enemy attacks.

METHODS OF TROOP MOVEMENTS

14-10. There are five methods of troop movements that units can execute. These methods are—

- Dismounted movement (foot marches).
- Mounted movement (road marches).
- Air movement.
- Rail movement.
- Water movement.

Generally, units can execute these methods in combination. For example, a unit can initially execute a mounted movement and then transition to a dismounted movement. Additionally, each method can be applied to nontactical or tactical movement.

Dismounted Movement

14-11. **A dismounted movement is a movement of troops and equipment mainly by foot, with limited support by vehicles.** Dismounted movements are also called foot marches. Dismounted movements increase units' maneuver options. Their positive characteristics include combat readiness (because all Soldiers can immediately respond to enemy attack without the need to dismount), ease of control, adaptability to terrain, and independence from the existing road network. Their limitations include a slow movement rate and increased personnel fatigue. A unit conducts a dismounted movement when the situation requires stealth, the distance to travel is short, transportation or fuel is limited, or the situation or terrain precludes moving other

ways. (See ATP 3-21.18 for more information on the techniques and procedures for conducting dismounted movement.)

Mounted Movement

14-12. A **mounted movement** is the movement of troops and equipment by combat and tactical vehicles. Mounted movements are also called road marches. Armored and mechanized units routinely conduct mounted movements. The speed of the march and the increased supplies that can accompany the unit characterize this movement method. Armored and Stryker maneuver units are normally self-sufficient when conducting mounted movements over short distances. Infantry maneuver units cannot move themselves with organic truck assets and require assistance from transportation elements to conduct mounted movements. Considerations for mounted movements over extended distances include—

- The ability of routes to support the numbers, sizes, and weights of the tactical and combat vehicles assigned to or supporting the moving unit.
- Available refueling and maintenance sites and crew rest areas.
- The need for recovery and evacuation assets.

See ATP 4-16 for more information on route synchronization and movement planning.

Air Movement

14-13. *Air movement* is an air transport of units, personnel, supplies, and equipment including airdrops and air landings (JP 3-36). Units conduct air movements to move troops and equipment; to emplace systems; and to transport ammunition, fuel, and other high-value supplies through transport by helicopter and fixed wing aircraft. They may employ air movements as a substitute for ground tactical movements or to augment ground tactical movements. Air movements are generally faster than ground tactical movements and they can bypass ground threats. (See FM 3-04 for additional information concerning air movement.)

Rail Movement

14-14. Units use rail assets to conduct troop movement if they are available in an assigned area. Rail movements involve United States, partner nation, and local nation commercial trains. Rail movement can move a significant quantity of supplies and vehicles over extended distances on land quickly. Responsibility for coordinating the use of railroads resides in the Army Forces headquarters in the theater of operations. (See ATP 4-14 for additional information concerning rail movement.)

Water Movement

14-15. Water movements use vessels to transport equipment, supplies, and personnel. Water movement involves United States, partner nation and local nation commercial and military vessels. Water movements are slower than air movements, however they can move larger quantities of equipment and supplies and are more cost efficient than air movement. (See ATP 4-15 for additional information concerning water movement.)

ORGANIZATION FOR TACTICAL TROOP MOVEMENTS

14-16. There are several differences between the organization of troop movements. An approach march prioritizes security over speed while nontactical movement, tactical road march, and forced march prioritizes speed over security. A unit conducting an approach march employs larger security forces because of its greater chance for enemy contact. Units conducting approach marches arrange into combined arms organizations. An approach march allows units to disperse their task-organized forces into tactical formations without being constrained to existing roads and trails. A nontactical movement, tactical road march, or forced march can organize into columns for rapid movement. For example, vehicles of similar type, speed, and cross-country capabilities move together. Units conducting troop movements establish appropriate tactical intervals between vehicles. They also use fewer routes than units conducting approach marches.

Approach March Organization

14-17. Units use approach marches in a theater of operations when contact with an enemy force is possible or anticipated. This style of movement emphasizes tactical considerations such as security over the efficiency of movement. Units organize their subordinate forces to conduct combat operations in an approach march and generally maintain unit integrity throughout its movement. Units plan for enemy interference while moving or shortly after arriving at its destination. Units conducting an approach march use formations and techniques consistent with the mission variables. The unit may conduct them over unsecured routes if no friendly forces exist between the foremost elements of the moving force and enemy forces. The echelon operations officer is responsible for planning these tactical movements with input from other staff members.

14-18. During approach marches, units use movement formations and movement techniques to balance security and speed throughout the operation. The seven movement formations are—

- Column.
- Line.
- Wedge.
- Echelon (left or right).
- Vee.
- Diamond.
- Box.

14-19. The three movement techniques are—

- Traveling.
- Traveling overwatch.
- Bounding overwatch.

See Chapter 2 for more information on movement formations and movement techniques.

Tactical Road March or Forced March Organization

14-20. The organization for a tactical road march and forced march is the march column. A **march column is all march serials using the same route for a single movement under control of a single commander**. The subordinate element for a march column is a march serial. A **march serial is a subdivision of a march column organized under one commander**. An example is a battalion serial formed from a brigade-sized march column. The subordinate element for the march serial is a march unit. A **march unit is a subdivision of a march serial**. It moves and halts under the control of a single commander who uses voice and visual signals. An example of a march unit is a company from a battalion-sized march serial.

14-21. A march column provides excellent speed, control, and flexibility but only provides local security. Units use a march column when speed is essential and enemy contact is unlikely. However, units space functional and multifunctional support elements, such as air defense and engineers, throughout the column to protect and support the movement. Prior to movement, reconnaissance elements conduct route reconnaissance of the predetermined march route to determine trafficability. Units organize a march column into four elements: reconnaissance, quartering party, main body, and trail party.

14-22. The reconnaissance element conducts route reconnaissance and area reconnaissance of the assembly areas. A thorough reconnaissance of the route leading to the start point will assist units in crossing the start point on time. Each serial should conduct its own reconnaissance. The reconnaissance element uses the reconnaissance fundamentals and executes reconnaissance tasks discussed in Chapter 12.

14-23. A **quartering party is a group dispatched to a new assigned area in advance of the main body**. A unit quartering party usually accompanies the route reconnaissance effort to the designated assembly area or established RP. Unit SOPs establish the exact composition of the quartering party and its transportation, security, communications equipment needs, and specific duties. However, it is small enough to move quickly while still maintaining a significant self-defense capability. The leader of the quartering party is empowered by the commander of the main body to make tactical decisions. The quartering party secures, reconnoiters, and organizes an area for the main body's arrival and occupation. It typically reconnoiters and confirms the tentative locations selected by the commander of its parent element based on a map reconnaissance. When

necessary, the quartering party changes previously assigned unit locations in the assembly area. The quartering party guides the main body into position from the RP to precise locations in the assembly area.

14-24. The main body of the march column consists of the remainder of the unit, including attachments and minus the trail party. The *main body* is the principal part of a tactical command or formation. It does not include detached elements of the command, such as advance guards, flank guards, and covering forces (ADP 3-90). **The *trail party* is the last march unit in a march column.** It maintains communications with the main body. The function of the trail party is to recover disabled vehicles or control stragglers during a movement. If the trail party cannot repair a disabled vehicle immediately, it tows the disabled vehicle and moves its crew and passengers to a secure maintenance collection point along the movement route.

14-25. During extended movements, halts are necessary to rest personnel, service vehicles, and adjust movement schedules. The march order or unit SOP regulates when to take halts. In short motor movements, units schedule short halts every two to three hours of movement, and a halt may last up to an hour. Long halts occur on marches that exceed 24 hours. When possible, these halts are not to exceed two hours. Units do not schedule long halts at night to allow maximum time for night movement. During halts, each unit normally clears the march route and moves to a previously selected assembly area to prevent route congestion and avoid possible enemy attack. Units establish security and take other measures to protect the force. Unit leaders promptly notify commanders of the time and approximate length of unscheduled halts.

MARCH TECHNIQUES

14-26. Organized march columns employ three march techniques: open column, close column, and infiltration march. All techniques use scheduled halts to control and sustain the road march. The mission variables influence the distances between vehicles and dismounted Soldiers. During movement, elements in a column may encounter many different types of routes and obstacles simultaneously. Consequently, parts of the column may be moving at different speeds, which can produce an undesirable accordion effect. The movement order establishes the order of march, rate of march, interval or time gaps between units, column gap, and maximum catch up speed. Unless commanders direct them not to do so for security reasons, march units report when they have crossed each control point. Units maintain air and ground security throughout the movement.

Open Column

14-27. In an open column, units increase distances between vehicles and dismounted Soldiers for greater dispersion. The distance between vehicles varies from 50 to 100 meters (54 to 110 yards), and it may be greater if required. The distance between dismounted Soldiers varies from two to five meters (2 to 5 yards) to allow for dispersion and maneuver space for marching comfort. Any distance that exceeds five meters (5 yards) between dismounted Soldiers increases the length of the column and hinders control. Units normally use the open column technique during daylight. They may also employ it at night by use of infrared lights, blackout lights, or passive night vision equipment. Using an open column roughly doubles the column's length and thereby doubles the time it takes to clear a point when compared to a close column moving at the same speed. The open column is the most common march technique because it offers the most security while still providing leaders a reasonable degree of control. In an open column, vehicle density varies from 15 to 20 vehicles per kilometer. A single infantry company, with intervals between its platoons, occupies roughly a kilometer of road or trail.

Close Column

14-28. In a close column, units space vehicles approximately 20 to 25 meters apart. At night, vehicles are spaced so each driver can see the two lights in the blackout marker of the vehicle ahead. Units normally employ a close column for marches during darkness under blackout driving conditions or for marches in restricted terrain. This method of marching provides maximum traffic capacity of a route, but it provides little dispersion. Normally, vehicle density is 40 to 50 vehicles per kilometer along the route in a close column. During dismounted movements, leaders reduce the distance between individual Soldiers to one to three meters to help maintain contact and facilitate control.

Infiltration March

14-29. Units dispatch vehicles in small groups, or at irregular intervals, at a rate that keeps the traffic density down and prevents undue massing of vehicles during a move by infiltration. Infiltration provides the best passive defense against enemy observation and attack. It is suited for tactical movements when there is enough time and road space and a commander desires the maximum security, military deception, and dispersion. The disadvantages of an infiltration are that more time is required to complete the move, column control is challenging, and it protracts the recovery of broken-down vehicles by the trail party when compared to vehicle recovery in close and open columns. Additionally, units cannot restore their unit integrity until the last vehicle arrives at the destination, complicating the unit's onward deployment.

Note. Infiltration as a tactical march technique during troop movement differs from Chapter 2's discussion of infiltration as a form of maneuver.

14-30. Units emphasize security during halts. Soldiers tend to let their guard down and relax their vigilance during halts. Units address this by defining unit actions in SOPs for various types of halts, such as maintenance or security halts.

GRAPHIC CONTROL MEASURES

14-31. Units executing tactical and nontactical movements often use strip maps or overlays to depict critical information graphically about the route to subordinates. The overlay or strip map shows the route, SPs, RPs, checkpoints, critical points (such as bridges), light lines, and traffic control posts (TCPs). Figure 14-3 depicts some of these route control measures. A **light line** is a designated line forward of which vehicles are required to use blackout lights during periods of limited visibility. (Figure 14-4 on page 14-8 shows a sample strip map.) Other graphic control measures include assembly areas and phase lines.

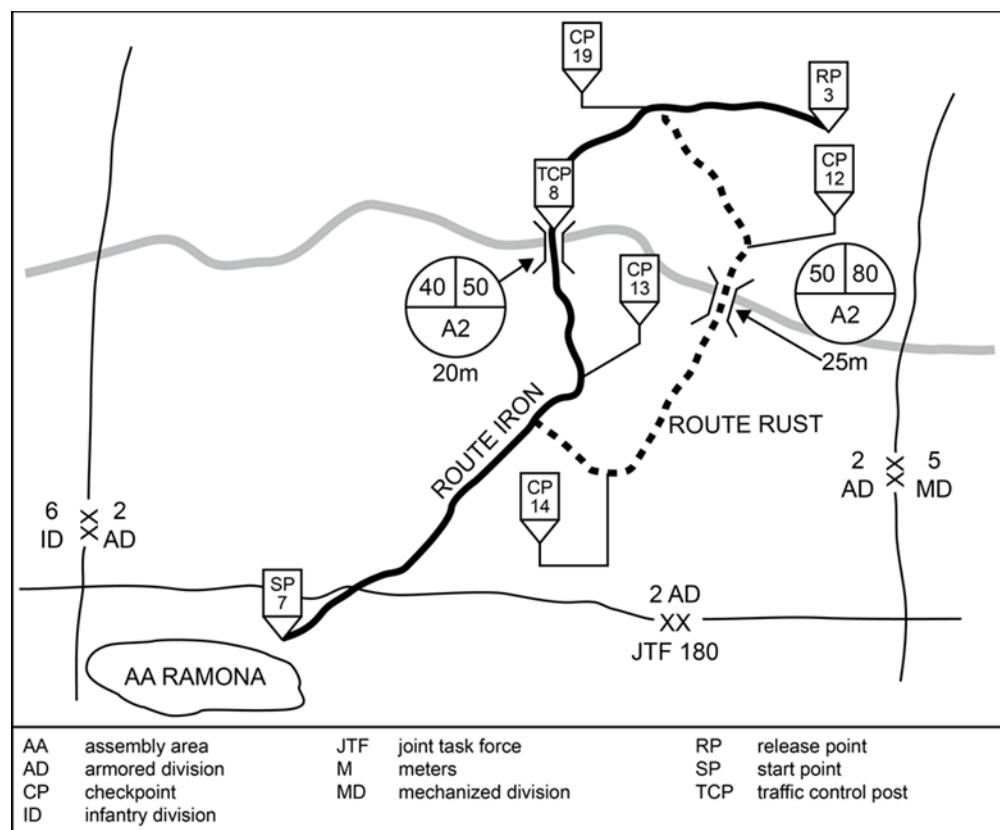


Figure 14-3. Example overlay with route control measures

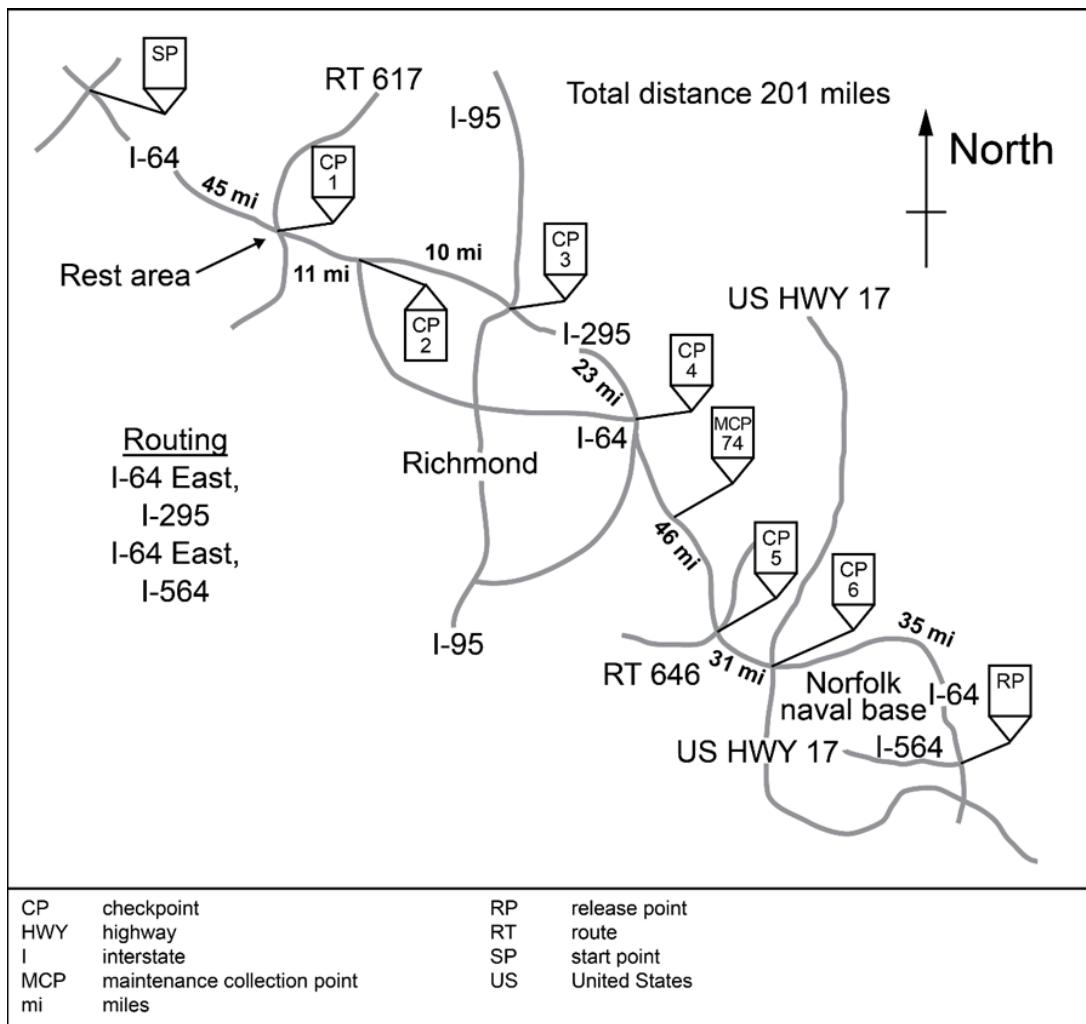


Figure 14-4. Example strip map

14-32. The start point is a point on a route on which marching elements fall under the control of a designated march commander. All routes have a designated SP. It is an easily recognizable point on a map and on the ground, such as a road junction. It is far enough from the assembly area to allow units to organize and move at the prescribed speed and interval when the unit reaches the SP.

14-33. A release point is a point on a route where marching elements move out of centralized control. Each SP has a corresponding RP. It is an easily recognizable point on the map and on the ground. Marching units do not stop at their RPs. Instead, as they move through their RPs, either they transition to a follow-on mission or a unit guide meets marching units and leads them to assembly areas. For example, a unit conducting a route reconnaissance reaching their RP can transition to a screen.

14-34. Units designate checkpoints along routes to facilitate control over the movement of marching forces. The movement overlay identifies critical points along the route where interference with movement might occur. Units position TCPs along routes to prevent congestion and confusion. Military police or unit personnel may operate TCPs. These Soldiers report to the appropriate area movement control organization when each convoy, march column, and march serial arrives at their TCP.

14-35. There are five route classification designations: open route, supervised route, dispatch route, prohibited route, and reserved route. Each route's designation varies based on the mission variables. See table 14-1.

Table 14-1. Route designations

Type	Description	Control
Open route	This is the least restrictive control measure. Any unit may use the route without a movement credit.	Minimum control is exercised.
Supervised route	The movement control headquarters will specify the size of convoys, the type of traffic, or characteristics of vehicles that require a movement credit to use the route.	Limited control is exercised.
Dispatch route	A movement credit is required to use this route regardless of the number or types of vehicles. A dispatch route will normally be designated when traffic volume is expected to exceed capacity or when the route is critical to operations and priority of use must be strictly enforced.	Full control is exercised.
Reserved route	The route is reserved for the exclusive use of a particular unit(s) or type of traffic and no other units or traffic may use the route. Reserved routes may be identified for large-unit movements.	
Prohibited route	The route is closed and units or traffic may not use the route. A route may be prohibited due to washouts, destroyed bridges, maintenance, construction work, or enemy activity. It may be prohibited for only short periods, such as the time necessary to do repairs.	

PLANNING A TROOP MOVEMENT

14-36. Commander's plan, prepare, execute, and assess troop movements to ensure the organized and uninterrupted flow of units throughout an area. The objective of a successful move is for a unit to arrive at its destination in a condition suitable to its probable employment. The goal of all movement planning is to retain flexibility to execute a variety of plans to meet ever-changing conditions. Leaders ensure that unit movement SOPs contain specifics. Leaders conduct rehearsals to ensure that the unit's Soldiers and subordinate leaders understand the movement SOPs. These SOPs use standard task organizations to simplify planning, provide flexibility, and allow greater responsiveness by establishing habitual relationships among the unit's subordinate elements and outside supporting elements.

14-37. The movement order is the result of the unit's planning process. The Army movement order is prepared as Tab C (Transportation) of Annex F (Sustainment) to an operation order or as a separate operation order. Prepared in five-paragraph format, Tab C provides critical information to plan and execute movement. Information normally found in Tab C includes the destination, routes, orders of march, rates of march, times that each serial (or march element for serial movement orders) arrives and clears its SP, intervals, speeds, scheduled maintenance halts, communications, and location of the commander. Units also identify logistics sites and services in Tab C. Information and procedures contained in the unit's movement SOP are not included. The movement order should include a strip map or overlay. (See FM 5-0 for more information on operation orders.)

14-38. The movement order discusses procedures for succession of command in the march unit, march serial, and march column if those procedures vary from the unit's established SOP. It also addresses the procedures for disseminating information; the transmission of changes in command location, including the activation of alternate command nodes. The alternate means of internal and external communications to each march unit that vary from established SOPs are included. It also addresses who has the authority to activate alternative routes.

14-39. Units base the movement order on the mission variables. The movement order establishes how the unit moves from its current location to the desired location. The integration of and support from maneuver and functional and multifunctional support—such as artillery, intelligence, military police, engineers, aviation, and air support—are critical for successful tactical and nontactical movement. The commander's staff develops the detailed movement order based on established priorities.

14-40. The movement order and unit SOP address the possibility of ambushes, indirect fires, and air attacks. These SOP includes drills for reacting to these circumstances. Passive measures mitigating an air attack include route selection, vehicle intervals, and movement during limited visibility. In case of attack, units have

casualty evacuation plans. These plans take into account SOP items such as using combat lifesavers and dispersing medical evacuation assets throughout the convoy.

14-41. For units that are not completely mobile with organic vehicles, such as an Army division headquarters and many sustainment units, units can either conduct a shuttle with organic vehicles or request assistance from transportation units. Shutting requires transporting troops, equipment, and supplies by a series of round trips with the same vehicles. Units may also shuttle by carrying successive parts of a load for short distances while the remaining Soldiers continue on foot.

14-42. The higher headquarters sustainment staff normally coordinates the sustainment to moving units, although units carry sufficient fuel and lubricants in their unit trains to conduct local movements. In coordination with the engineers, the sustainment staff ensures that routes suffice for the projected types and numbers of vehicles and supplies. Units need to know the load carrying capability of routes and the maximum distances that they can support their forces. Also, units may need to re-task or consolidate troop carry capacity if troop transport is not provided. Sustainment operators determine if any sustainment assets displace to support the mission. Units also establish halts for refueling as part of the movement plan. Halt times should be long enough and locations large enough to allow the entire march unit to refuel.

14-43. The simplest troop movement to plan and conduct is one where the commander directing the movement controls the assigned area. In this situation, units use established command and control systems. The headquarters ordering the movement schedules the movement times and approves the routes, while its movements control organization allocates the required space and time on the approved routes. If the movement results in a unit going outside its parent headquarters' area, that unit requires coordination through various movement control centers. Otherwise, a higher headquarters must plan and control the movement.

14-44. Whenever possible, units disperse their forces by using multiple routes to move their forces. This reduces the length of columns, vulnerability to enemy air attack, and amount of time the routes are unavailable to other units. Multiple routes provide units with the flexibility to react to unexpected situations and permit more rapid concentration of combat power. The three primary challenges of using multiple routes are in exercising command and control, providing logistic and maintenance support on all routes, and the reassembly or consolidation of forces at the movement's conclusion.

14-45. Since enemy contact is less likely for troop movements that occur behind the forward line of troops or line of departure, units use march columns and serials to control the movement of forces on limited routes. Units use dispersion and multiple routes to avoid detection and increase survivability. Units plan for reconsolidation to occur after the march column or march serial passes their assigned release point. Regardless of the type of area a unit will occupy at the movement's conclusion, planners must ensure the area where forces will consolidate is defendable and large enough for all forces.

14-46. For movements beyond the forward line of troops or line of departure units use their preferred tactical movement formations and techniques. Tactical units do not use march columns or serials unless necessary, since enemy contact is likely and security should be balanced with speed. Units maintain dispersion between formations and plan to consolidate forces prior to entering their assault positions.

14-47. The echelon transportation officer uses route classification components, such as route widths, route types, military load classifications, overhead clearance, route obstructions, and special conditions to determine the traffic circulation plan. A supporting geospatial engineer team provides most of this information. Engineer reconnaissance obtains necessary information not contained in existing geospatial databases.

14-48. The staff depicts the echelon traffic circulation plan on overlays using transportation control measures. The traffic circulation plan considers—

- The most restrictive route features and route designations.
- Direction of movement over each route.
- Location of boundaries, units, highway regulation points, TCPs, and principal supply points.
- Major geographic features.
- Routes designated for one-way traffic.
- Separate routes for sustainment and tactical units.

- Current data on traffic regulations and control restrictions, obstructions, detours, defiles, capacities, surface conditions, and enemy activities that affect the highway net.

14-49. The provost marshal prepares a traffic control plan from information contained in the traffic circulation plan. The traffic control plan is normally prepared in the form of an overlay. Units use available aviation elements, movement regulating teams, and military police units to assist in traffic control, but they can assign this mission to other elements, such as battalion scout platoons.

PREPARING A TROOP MOVEMENT

14-50. Reconnaissance precedes unit movement. Before a unit starts any march, a reconnaissance element from that unit reconnoiters the route from its current location to the SP and determines how long it will take the unit to reach the SP. This reconnaissance element continues beyond the SP and carefully examines the route's trafficability, including the impact of weather, road surfaces, and terrain and civil considerations, such as local nation use. This reconnaissance also includes alternative routes and choke points, such as defiles, bridges, and fords, which could slow the march. This reconnaissance element complements map and technical reconnaissance and provides units with important information about the terrain, obstacles, and potential enemy forces in the area. Units then establish TCPs at critical locations or mark important information to avoid confusion.

14-51. A quartering party often accompanies reconnaissance elements to mark routes and BPs. The quartering party may also secure new positions with observation posts or limited forces until the unit conducting the movement arrives.

14-52. The unit begins a tactical movement, such as an approach march, fully supplied. The unit refuels at every opportunity, such as at halts and on arrival at the final destination. The transportation of fuel and the security of existing stockpiles are major factors in any mounted movement. Commanders may choose to conduct a refuel on the move to extend the range of the unit's vehicles. Refuel on the move is a technique where units position tankers just off the route to refuel vehicles rapidly. Such refueling provides only established quantities necessary to extend the vehicles' range to the desired distance. The type and method of movement selected will determine the need for pre-positioned sustainment assets to conduct rapid and efficient refueling and resupply.

EXECUTING A TROOP MOVEMENT

14-53. A unit's ability to move depends on its march discipline and ability to maintain required movement standards and procedures as prescribed by its movement SOP and movement order. This includes staying on the route and maintaining start, passage, and clear times. March discipline is essential throughout the movement. Any deviation from the movement order may interfere with the movements of other units and may have serious consequences. However, march discipline can only be maintained with established movement control.

14-54. *Movement control* is the dual process of committing allocated transportation assets and regulating movements according to command priorities to synchronize distribution flow over lines of communications to sustain land forces (ADP 4-0). It is on a continuum involving coordinating and integrating logistics, movement information, and programs that span all the levels of warfare. The balancing of requirements against capabilities and assigning resources based on the commander's priorities guide the conduct of movement control. Movement control gives commanders the ability to deconflict the movement of units—troop movement—and the distribution of supplies and services inherent in sustainment.

14-55. Units may not move across boundaries into another unit's assigned area without receiving clearance from the owning unit. The designation, maintenance, route security, and control of movement along routes in an assigned area are the responsibility of the owning unit unless the higher echelon's coordinating instructions direct otherwise. An example is when one or more routes are reserved for the exclusive use of a combined arms battalion operating forward of a BCT as a guard force. (See ATP 4-16 for a more information on movement control and the establishment of route synchronization measures.)

14-56. The strength and composition of the moving unit's security elements vary depending on the mission variables. Units employ organic assets and supporting security assets to protect forces from enemy activities.

They position them to the front, rear, flanks, and above, of formations while moving and at the halt to provide all around security for the main body. Units can also enhance security by adopting a march formation and movement technique that facilitates applying combat power in the direction enemy contact is expected.

14-57. Higher echelon sustainment organizations may support some tactical movements. When the situation permits, sustainment organizations establish maintenance, ambulance exchange, and supply points along the route to support the movement. While procedures, amounts, and types of external support vary, each sustainment organization ensures that these sites are operational at the designated times and locations. External sustainment along the route may include aeromedical evacuation, maintenance, water, petroleum, oils, and lubricants. Maintenance sites generally consist of maintenance collection points where disabled vehicles can be moved for limited maintenance and Class IX supplies. Vehicles unable to continue the movement remain at maintenance collection points and join their parent organization when repaired. The troop movement is complete when the last march unit clears the RP.

Chapter 15

Relief in Place

This chapter discusses the general considerations of conducting a relief in place. It then discusses the organization of forces, control measures, planning, and preparation associated with a relief in place. Lastly, this chapter discusses the execution of a relief in place.

GENERAL CONSIDERATIONS OF A RELIEF IN PLACE

15-1. Units conduct a relief in place as part of a larger operation, primarily to maintain the combat effectiveness of committed force. The higher echelon headquarters directs when and where to conduct the relief and establishes the appropriate control measures. A relief may serve to free the relieved unit for other tasks such as decontamination, reconstitution, routine rest, resupply, maintenance, specialized training, resuming offensive operations, or as part of a deception operation. For example, the enemy's reaction to friendly forces conducting a relief may cause it to move reserves from an area where the friendly commander wants to conduct a penetration.

15-2. A *relief in place* is an operation in which, by direction of higher authority, all or part of a unit is replaced in an area by the incoming unit and the responsibilities of the replaced elements for the mission and the assigned zone of operations are transferred to the incoming unit (JP 3-07.3). In this operation, the responsibilities of the replaced elements for the mission and the assigned area transfer to the incoming unit. The three variations of a relief are sequential, simultaneous, or staggered:

- A *sequential relief in place* occurs when each element within the relieved unit is relieved in succession, from right to left, left to right, front to rear, or rear to front (ADP 3-90).
- A *simultaneous relief in place* occurs when all elements are relieved at the same time (ADP 3-90).
- A *staggered relief in place* occurs when each element is relieved in a sequence determined by the tactical situation, not its geographical orientation (ADP 3-90).

15-3. Simultaneous relief takes the least time to execute but is more easily detected by enemy forces. Sequential or staggered reliefs can occur over a significant amount of time. These three relief techniques can occur regardless of the type of operation in which the unit is participating.

15-4. A relief in place is characterized as either deliberate or hasty, depending on the amount of planning and preparations associated with the relief in place. The major differences are the depth and detail of planning and, potentially, the execution time. Detailed planning generally facilitates shorter execution time by determining exactly what units need to do and the resources needed to accomplish the mission. Deliberate planning allows commanders and staffs to identify, develop, and coordinate solutions to potential problems before they occur and to ensure the availability of resources when and where needed.

ORGANIZATION OF FORCES FOR A RELIEF IN PLACE

15-5. When possible, both units involved in a relief in place should be of similar type—such as Armor company or light infantry battalion—and task-organized to help maintain operations security. If not, the incoming commander decides on which positions to man, which to not man, and where to establish new positions. The incoming unit assumes the same task organization as the outgoing unit but adjusts it based on its modified tables of organization and equipment. It assigns responsibilities and deploys in a configuration similar to the outgoing unit.

15-6. The incoming unit establishes advance parties to conduct detailed coordination and preparations for the operation, down to the company level and possibly to the platoon level. These advance parties infiltrate

forward to avoid detection. They normally include the echelon's tactical command post, which co-locates with the main command post of the outgoing unit. Commanders may also attach liaison personnel to subordinate units to ensure a smooth transition between units.

CONTROL MEASURES FOR A RELIEF IN PLACE

15-7. Control measures associated with a relief in place are generally restrictive to prevent fratricide. At a minimum, these measures include the assigned area with its associated boundaries and current positions. Other graphics to help with the coordination of the relief in place include—

- Point control measures such as coordination points, contact points, start points, and release points.
- Movement control measures such as routes, passage lanes, and gaps.
- Assembly areas.
- Fire support coordination measures such as target reference points and engagement areas and defensive direct fire control measures, such as TRPs and engagement areas.

Units may use any additional graphic control measures necessary to prevent fratricide and to control a relief in place. Figure 15-1 depicts an example brigade relief in place.

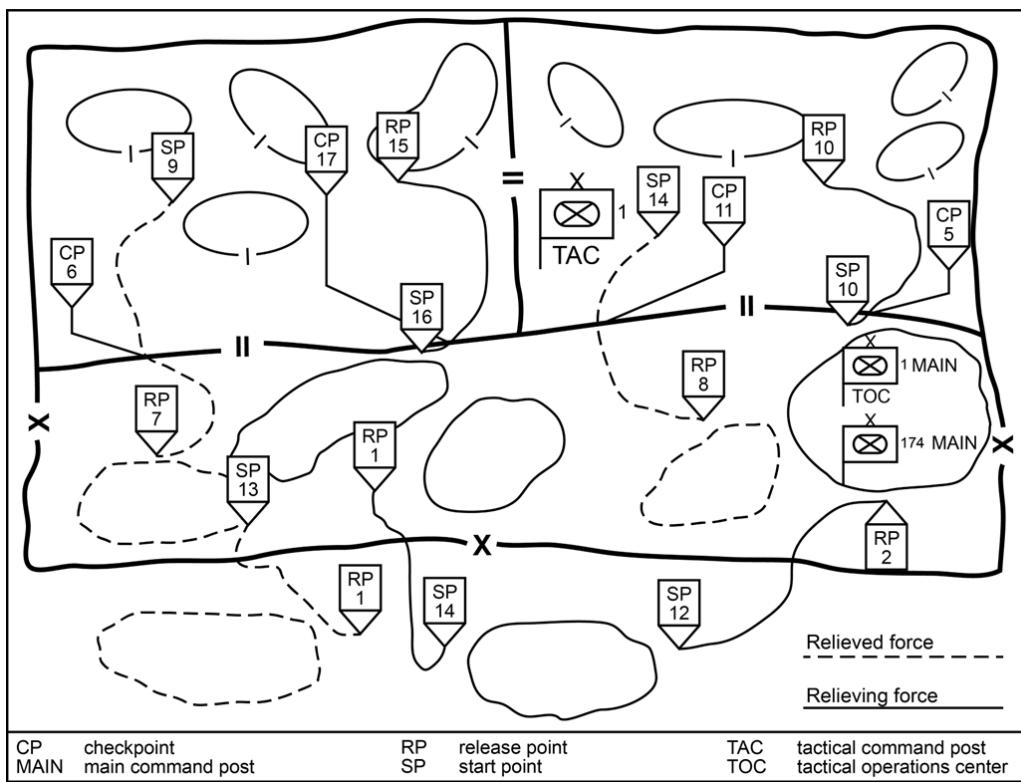


Figure 15-1. Example of a brigade relief in place

PLANNING A RELIEF IN PLACE

15-8. Once ordered to conduct a relief in place, the incoming unit contacts the outgoing unit. If possible, they coordinate to co-locate their command posts to facilitate coordination between the two units. If the outgoing unit's forward elements can defend the assigned area, the incoming unit executes the relief in place from the rear to the front. This facilitates movement and terrain management.

15-9. In a deliberate relief, units exchange plans and liaison personnel, conduct briefings, perform detailed reconnaissance, and publish orders with detailed instructions. In a hasty relief, commanders abbreviate the planning process and control execution. In both cases, the outgoing unit designates liaison personnel from its

combat, functional, and multifunctional support and sustainment elements to remain with the incoming unit until completing the necessary plans. The incoming unit receives current intelligence, operations, and sustainment information from the outgoing unit as well as from common higher echelon headquarters, adjacent units, and subordinate elements. The complexity of a relief in place requires extensive liaison and reconnaissance. Exchanging information about enemy forces and civilian situations, friendly dispositions, terrain analysis, and fire support and obstacle plans—coupled with reconnaissance—helps relieving units plan and execute the mission.

15-10. The relief is a vulnerable operation. The units involved concentrate on security while preparing for and executing the operation. The intent of the operation is to complete the relief without discovery by enemy forces. Consequently, units typically plan reliefs for execution during periods of reduced visibility such as night or fog. Concealing the relief from enemy forces is a primary concern when the unit conducts the relief as part of an economy of force measure to free forces for other operations. Enemy forces should perceive only one unit's command structure in operation—the outgoing unit—until the operation is complete. This requires a detailed knowledge of friendly vulnerabilities. If the enemy should detect the relief and attack during the transition, the outgoing unit commander controls all units in the assigned area unless otherwise specified in the operation order.

15-11. Generally, as soon as the mutual higher echelon headquarters issues the warning order, the commander of the incoming unit co-locates the tactical command post—with the main command post of the outgoing unit. At a minimum, the incoming unit establishes communications and liaison with the outgoing unit. The warning order designates the time of relief, relieving and relieved units, and sequence of events. It specifies the future missions of the outgoing unit, route priorities, any restrictions on advance parties, any extraordinary security measures, and the time and place for issuing the complete order. During a relief in place, commanders and leaders from the incoming unit conduct a reconnaissance of the area they are to assume. The reconnaissance focuses on routes into the area, routes to positions, the positions themselves, the current disposition of the outgoing unit, and any obstacles that could affect troop movement.

15-12. The two commanders of the units conducting the relief decide on a time or an event that initiates the passage of command. This allows the smooth transition of command from one commander to another. Normally, this occurs when the frontline subordinate commanders have assumed responsibility for their respective assigned areas, and the incoming commander has established sufficient communications to control the operation. Regardless of their parent organization, all units in the assigned area come under the operational control of a single commander if the units come under attack or when a specified event occurs during the relief.

15-13. The fire support coordinators establish FSCMs and identify artillery and other available fire support units to support the relief. The incoming unit adopts the fire plan of the outgoing unit, and both units support the relief. This maintains fire support if enemy forces detect the relief and try to exploit the situation. Units plan their fires to deceive enemy forces and expedite the relief. Units also ensure that they maintain normal activity patterns. For example, a unit continues to expend the same average number of artillery rounds per day during the relief that it expended before the initiation of the relief. Units do not relieve fire support or functional and multifunctional support and sustainment units at the same time as the maneuver units they support. They relieve those organizations before or after the primary relief operation.

15-14. The relief plan specifies the method used in relieving artillery units. If terrain allows, incoming artillery units do not occupy previously used firing positions. Instead, incoming firing units establish firing positions near the firing positions of the outgoing unit and carefully integrate their fires with the relieved unit. Occupying firing positions at night or during periods of poor visibility enhances OPSEC.

15-15. Units ensure air and missile defense units provide area coverage of the incoming forces. Typically, air defense units focus their available assets at critical sites, such as identified choke points, BPs, assembly areas, and command posts.

15-16. Handover of obstacles is a complex procedure. The incoming unit verifies the obstacle records of the outgoing unit. Initially, the engineer priority is to provide mobility to the incoming unit. It focuses on the routes and lanes leading into the assigned area. Once the relief occurs, priority of the mobility and survivability effort transitions to support the incoming unit's continuing mission. Units may require additional engineer support to assist with survivability tasks to support the incoming force.

15-17. Force intermingling is inherent in a relief. The consequences of mutual interference between the units and the complexity associated with such areas as traffic control, fire support coordination, obstacle plans, and communications require close coordination among all headquarters involved. Commanders establish early liaison between the incoming and outgoing forces. The relief plan also addresses the relief in place of these computer networks and information systems.

15-18. The incoming unit is responsible for all sustainment operations. As the support elements of the outgoing unit displace, they leave the incoming unit supply stocks based on previous coordination. If the units conducting the relief have different modified tables of organization and equipment, units conduct a mission analysis to determine the method the relieving unit will use to meet its responsibilities and the weapons systems it will use. The unit staff must determine any special support requirements the incoming unit will have and address supporting those requirements with the available supporting sustainment organizations. The unit sustainment staff ensures that both commanders are aware of constraints that may affect the incoming unit. The headquarters of the outgoing unit coordinates traffic movement into and out of the assigned area.

PREPARING FOR A RELIEF IN PLACE

15-19. Units conceal the relief from enemy forces for as long as possible. At the first indication that a relief is necessary, which is usually the warning order for the incoming unit, both the outgoing and incoming units review their OPSEC plans and procedures. Units may use military deception measures when conducting a relief in place to maintain secrecy. To maintain security during a relief in place, the incoming unit makes maximum use of the outgoing unit's radio networks and operators. Both units involved in the relief operate on the command frequencies and encryption variables of the combat net radios of the outgoing unit at all levels.

15-20. The units conducting a relief in place conduct rehearsals to discover any weaknesses in the plan and familiarize all elements of both forces with the plan. Finding time for rehearsals requires commanders and staffs to focus on time management.

15-21. Reconnaissance elements of the incoming unit precede its movement with a route reconnaissance of the assembly area. They conduct reconnaissance of the routes leading from the assembly areas to the positions of the outgoing unit. The commander of the incoming unit normally conducts a leader's reconnaissance before starting the operation.

15-22. While the units are conducting the relief in place, their common higher headquarters and other units continue actions to mask the relief and prevent enemy forces from detecting or interfering with the relief. These include using demonstrations, feints, smoke, and indirect fires.

EXECUTING A RELIEF IN PLACE

15-23. Units strive to conceal the relief from enemy forces. For example, during a sequential or staggered relief, the incoming unit may occupy the same positions as the outgoing unit. Alternatively, the incoming unit may establish positions near the outgoing unit. However, occupying different positions makes early discovery by enemy forces more likely. Any increase in activity in forward positions can reveal the relief to enemy forces. Information-collection efforts focus on establishing if enemy forces have discovered the relief before its completion.

15-24. An enemy force usually detects a relief effort from the increased activity from the movement of the incoming and outgoing units by Soldiers and equipment moving into and out of positions. Additionally, after any period of combat, differences in the types and amount of equipment exist between the incoming unit and the outgoing unit even if they have the same modified tables of organization and equipment. These differences can also reveal the relief to enemy forces. The two units establish guidelines for exchanging compatible equipment and supplies to limit these differences. It may be necessary to exchange certain weapons, supplies, equipment, and occasionally, vehicles between units. When major differences in the number of combat systems between the units exist—for example, when a tank-heavy task force relieves a mechanized infantry task force—inoperable equipment or vehicle decoys may assist in hiding the change of units.

15-25. In a simultaneous relief, the incoming unit begins moving from its current location to assembly areas in the assigned area of the outgoing unit. Once the relief begins, all elements involved execute the relief as quickly as possible. Both units are vulnerable to enemy attack because of the concentration, movement, and intermingling of forces in a simultaneous relief. Any unnecessary delay during execution provides enemy forces additional time to acquire and engage the forces involved. All units in the assigned area start under the operational control of the outgoing unit commander until the time or event established in the operation order when the responsibility and authorities change to the incoming unit commander. Usually, the trigger to change from the outgoing commander to the incoming commander is when the incoming commander has sufficient communications to control the operation and roughly two thirds of the personnel responsible or security active in the assigned area.

15-26. As the first incoming element arrives from the assembly area to assume the position, it establishes a screen of the outgoing unit's positions as the tactical situation permits. The remainder of the incoming unit moves forward to positions behind the outgoing unit. The incoming unit may use the outgoing unit's alternate and supplementary defensive positions to take advantage of any previous defensive preparations. At the previously established time or event, passage of command takes place. At that point the commander of the incoming unit informs all units involved in the relief of the passage of command.

15-27. The relieved unit continues to defend. The incoming unit's advance parties coordinate procedures for the rearward passage of the outgoing unit. On order, the outgoing unit begins withdrawing through the incoming unit and moves to assembly areas. Crew-served weapons are usually the first elements relieved after exchanging range cards. The incoming unit replaces them on a one for one basis to the maximum extent possible to maintain the illusion of routine activity. The outgoing unit's functional and multifunctional support and sustainment assets assist both the outgoing and incoming units during this period.

15-28. A relief does not normally require artillery units to relieve weapon system for weapon system unless the terrain limits the number of firing positions available. Generally, the outgoing unit's artillery and other fire support assets remain in place until all other outgoing elements displace and are available to reinforce the fires of the incoming unit in case the enemy tries to interfere. If the purpose of the relief is to continue the attack, the artillery of both forces generally remains in place to support the subsequent operation.

15-29. Multiple routes that allow only one-way traffic can simplify the forward and rearward movement of both units. The incoming unit controls both units' traffic management assets. Commanders use these assets to help control unit and convoy movement on LOCs throughout their assigned area.

15-30. A relief in place may involve the relief of an allied or coalition multinational force. Units consider these additional points when such reliefs occur:

- Dissimilar unit organizations may require special adjustments in assigned areas.
- Control of fire support may require special liaison.
- Language difficulties may require an increased use of guides and translators and require more time to execute.
- Using outgoing unit communications requires special signal arrangements and additional operators.
- Ammunition and equipment incompatibility may make exchanging assets more difficult.

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Chapter 16

Passage of Lines

This chapter discusses the performance of forward and rearward passages of lines. It first discusses general considerations, organization of forces, and control measures for a passage of lines. Next, the chapter discusses planning considerations associated with a passage of lines. Finally, it discusses a forward and rearward passage of lines.

GENERAL CONSIDERATIONS FOR A PASSAGE OF LINES

16-1. A *passage of lines* is an operation in which a force moves forward or rearward through another force's combat positions with the intention of moving into or out of contact with the enemy (JP 3-18). There are two types: a forward passage of lines and a rearward passage of lines. Units perform a passage of lines to continue their attacks or perform counterattack, retrograde, and security operations that involve advancing or withdrawing through other units' positions. A passage of lines potentially involves close combat. It involves transferring the responsibility for the assigned area between two units. That transfer of authority usually occurs when roughly two thirds of the passing force have moved through one or more passage points. The headquarters directing the passage of lines is responsible for determining when the passage of lines starts and ends. If not directed by higher authority, the stationary unit commander and the passing unit commanders determine—by mutual agreement—the time to pass command. They disseminate this information to the lowest levels of both organizations.

16-2. Units have several reasons for conducting a passage of lines. These reasons include to—

- Sustain offensive tempo.
- Maintain the viability of the defense by transferring responsibility from one unit to another.
- Transition from the performance of delay or security operation by one force to the defense.
- Transition a unit for another mission or task.

16-3. Units can conduct two variations of a passage of lines: a forward passage of lines or a rearward passage of lines. A *forward passage of lines* occurs when a unit passes through another unit's positions while moving toward the enemy (ADP 3-90). A *rearward passage of lines* occurs when a unit passes through another unit's positions while moving away from the enemy (ADP 3-90). Ideally, the passing unit's operations do not interfere with the stationary unit.

16-4. The headquarters directing the passage of lines is responsible for determining when the passage of lines starts and finishes. Because of the difficulty and risks inherent in a passage of lines, the headquarters directing the passage of lines usually positions C2 to oversee and deconflict the operation. The passing unit is responsible for establishing communications with the stationary unit. The only exception to this is when the passing unit is in direct contact, at which point to assist the unit in contact the stationary unit works to establish communications. Ideally, the headquarters responsible for the passage of lines co-locates the stationary force. If the headquarters responsible for the passage of lines is unable to co-locate with the stationary unit, then the passing unit establishes communications with the stationary unit.

16-5. After receiving the warning order that directs a passage of lines, the passing unit's commander and key staff representatives generally co-locate with the command post of the stationary unit to facilitate in planning the passage and establishing common situational understanding. If the passing unit cannot co-locate one of its command posts to help plan the passage, it conducts extensive liaison with the stationary unit.

16-6. The planning focus for both the passing unit and the stationary unit is on operations following the passage. While this occurs, the two units involved coordinate the following:

- The exchange of intelligence and combat information to include products and databases.
- Current friendly dispositions and tactical plans, especially deception and obstacle plans.
- Direct and indirect fires and close air support plans.
- Any graphic control measures and graphics not directed by the higher headquarters, such as boundary changes, the battle handover lines, emergency logistics points, and assembly area and firing positions for artillery, air defense, and other units.
- Long-range and short-range recognition symbols and vehicle markings to reduce the probability of fratricide.
- Signal operating instruction details, such as call signs, frequencies, and recognition signals.
- Time and conditions for transfer control of the assigned areas from one headquarters to the other, if not previously established.
- Provisions for movement control, including contact points, start and release points, primary and alternate routes, route selection, priorities for using routes and facilities, passage points, and provision for guides.
- Reconnaissance by elements of the passing unit.
- Security measures during the passage, including nuclear, biological, and chemical reconnaissance or biological detection systems.
- Fires, obscurants, and any other combat sustainment provided by the stationary unit.
- Measures to reduce both units' vulnerability to attack by enemy weapons of mass destruction.
- Operations security measures required before or during the passage.
- Allocation of terrain for use by the passing force.
- Air defense cover—up to and forward of the battle handover line.
- Sustainment support for the passing unit provided by the stationary unit, especially fuel, maintenance, and medical treatment.
- Population of icons within computer systems that track friendly system and unit locations to increase situational awareness and reduce the probability of friendly fire incidents.
- Detailed isolated Soldier guidance.

ORGANIZATION OF FORCES FOR A PASSAGE OF LINES

16-7. A unit may participate in a passage of lines as either the passing or the stationary force. Performance of a passage of lines does not require a special task organization with the exception that the stationary force provides guides and sustainment assets to expedite the movement of the passing force. Both the passing and stationary forces maintain their previous combat organization during the passage. The stationary unit conducts operations against enemy forces that can interfere with the passage if it has the capability to do so. However, operations directed against enemy forces may be the responsibility of a higher echelon, depending on the echelon at which the passage takes place.

16-8. A forward passing unit's order of march is generally reconnaissance and security elements first. The main body moves next, followed by functional and multifunctional support and sustainment elements. The overall headquarters integrates artillery and engineers into the order of march based on the mission variables. The passing unit reverses this order of march in a rearward passage of lines. Attack helicopters and armed UASs are useful in providing security to the passing force.

CONTROL MEASURES FOR A PASSAGE OF LINES

16-9. Control measures associated with a passage of lines are generally restrictive to prevent fratricide. At a minimum, they include:

- Assigned area.
- Assembly areas.
- Attack positions.

- BHL.
- Contact points.
- Passage points.
- Passage lanes
- Routes.
- Gaps.
- Phase lines.
- Recognition signals.
- The headquarters directing the passage of lines designates or recommends:
- Routes.
- Start and end times for the passage of lines.

Units may also use SPs, RPs, FSCMs such as CFLs, and other control measures as necessary to conduct this operation. Figure 16-1 depicts these control measures.

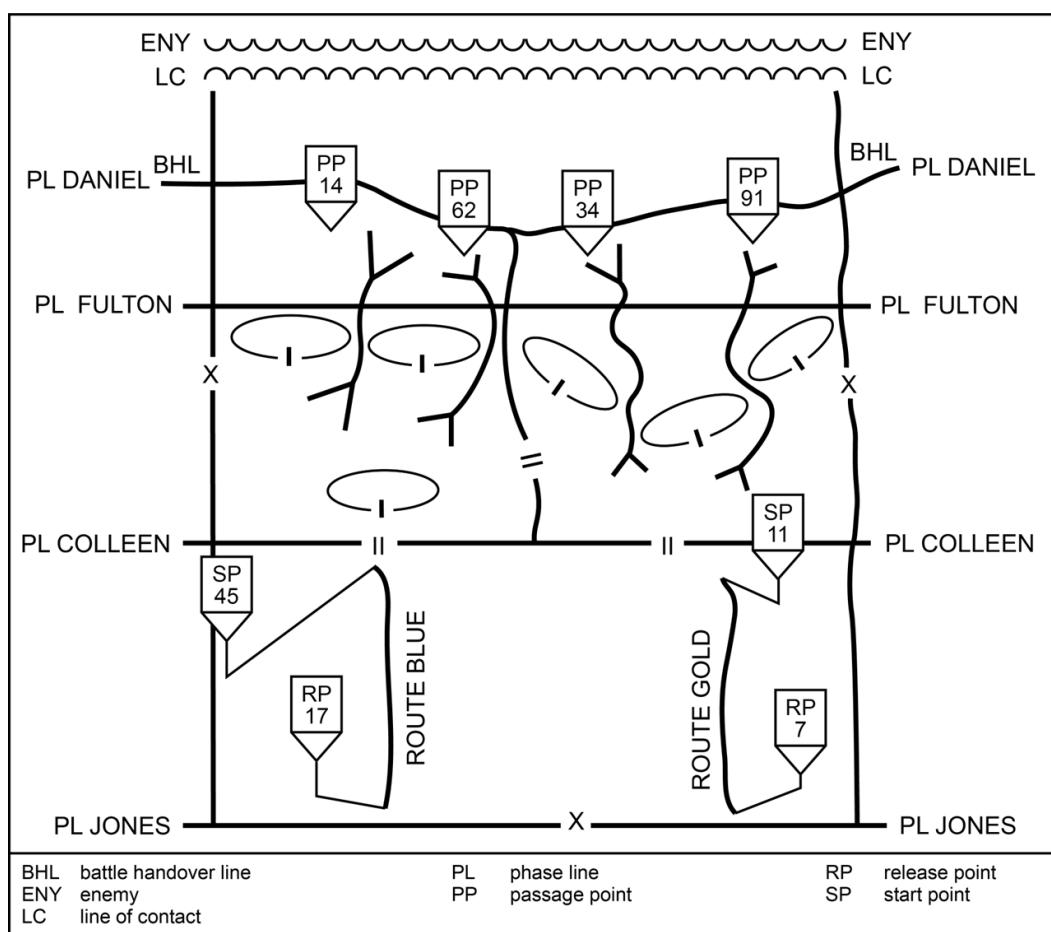


Figure 16-1. Control measures associated with a rearward passage of lines

16-10. The stationary unit establishes the necessary graphic control measures for the passage after coordination with the passing unit commander. The stationary unit establishes these measures because it controls the terrain. It knows the location of its obstacles and the tactical plan. In some cases, the higher echelon headquarters directing the passage may have previously established the necessary control measures. If the control measures dictated by the higher echelon headquarters are not sufficient—because they do not contain enough passage points, lanes, and so forth—the two units can agree to add the necessary measures and report to higher the additional control measures.

16-11. A passage point is a designated place where passing units pass through the stationary unit. (See paragraph A-32 for more information and symbol.) The location of this point is where the commander wants subordinate units to execute a passage of lines. In a forward passage of lines, the passage point marks the location where stationary force restrictions placed on the passing unit no longer bind the actions of the passing unit. On the other hand, in a rearward passage of lines, the passage point marks the location where the stationary unit can restrict the movement and maneuver of the passing force. Between the contact point and the release point, the stationary unit controls the passing force's movement.

16-12. A passage lane is a lane through an enemy or friendly obstacle that provides safe passage for a passing force. (See paragraph A-30 for more information and symbol). The lane may be cleared, including being reduced and proofed, as part of a breach operation, or it may be included as part of the design of a friendly obstacle. It is a clear route through an obstacle. Passage lanes normally end where a route begins. That route should allow the passing unit to move rapidly through the stationary unit's area.

PLANNING A PASSAGE OF LINES

16-13. As with any activity involving transferred combat responsibility from one unit to another, the complex nature of a passage of lines involves risk. The passage of lines is either hasty or deliberate. In a hasty passage of lines, commanders use verbal orders. In a deliberate passage of lines, both the stationary and moving force have time to—

- Exchange plans, intelligence, databases, and liaison personnel.
- Conduct reconnaissance.
- Publish written orders.
- Conduct briefings and rehearsals.

16-14. The higher commander directing the passage of lines is responsible for designating—

- Subsequent missions for both forces.
- When and under what conditions passage of command takes place.
- Start and end times for the passage.
- Contact points between the units involved.
- Any necessary common control measures.

That higher echelon commander normally establishes this designated information in an order directing the passage. Close coordination and understanding between the units are essential in the absence of higher guidance.

COMMAND AND CONTROL

16-15. Units plan their passages of lines to maintain enemy contact and provide constant fires on enemy forces. They reduce risk and ensure synchronization through detailed planning and centralized execution. The need for positive control increases during the passage because of the intermingling of passing and stationary forces. The passage requires close coordination, clearly understood control measures, and liaison among all headquarters and echelons involved in the passage. Clear identification of the moment or event that causes one force to assume responsibility for the assigned area from another is vital to successfully performing this task.

16-16. A passage of lines requires clear determination of responsibilities. During a passage of lines, two parallel chains of command operate simultaneously in one area, and this may cause confusion. The passing unit's command posts may co-locate at the stationary unit's command post after receiving the warning order. This co-location reduces the risk associated with a passage because it makes it easier to coordinate between the two units. It facilitates planning the passage and establishing common situational understanding. If the passing unit cannot co-locate one of its command posts to help plan the passage, it conducts extensive liaison with the stationary unit. Following completion of the passage, the planning focus for both units is on their operations.

16-17. Passing forces focus their planning efforts on two general areas: coordination with stationary forces and guidance to their subordinate units performing these passages. These planning efforts occur

simultaneously. Passing forces' plans address necessary branches and sequels in case enemy forces attack them during the execution of their passages to prevent degrading friendly maneuver.

16-18. The passage of lines requires effective communication between passing and stationary forces. Units build redundancy of communication signals and means into their passage plans. They also designate contact points to ensure effective communication between these forces at the lowest possible tactical level.

MOVEMENT AND MANEUVER

16-19. The stationary unit identifies multiple routes through its assigned area. The passing unit begins reconnaissance of these routes as soon as possible. The stationary unit physically shows all obstacles, routes, and gaps through them to the passing unit. It provides guides for the passing unit—especially through obstacles—and occupies contact points and passage points. The passing unit begins to reconnoiter its routes to the established contact points with the stationary unit's troops. The stationary unit establishes a security area in which responsibility transitions from the stationary force to the moving force. Normally, a BHL designates the forward edge of this area. The BHL is within direct fire range and observed indirect fire range of the stationary force.

16-20. Passing unit commanders prefer to perform their passages through gaps in stationary unit positions rather than through lanes or routes that traverse those positions. This reduces the vulnerability of both passing and stationary units resulting from concentrating systems when units pass directly through the positions of other units. It also avoids the danger associated with concentrating passing units into passage lanes.

16-21. Table 16-1 depicts the minimum number of passage lanes a BCT requires to execute a passage of lines. The routes and lanes should provide cover, concealment, and rapid movement of the passing force. Units may designate alternative routes and lanes for CBRN-contaminated elements of the moving force. These lanes disrupt the combat capability of the stationary unit to the minimal possible amount. If the terrain and enemy situation allow, units seek additional lanes to speed the process.

Table 16-1. Brigade Combat Team passage lane requirements

Brigade Combat Team Minimum Passage Lanes	
Forward Passage of Lines	2
Rearward Passage of Lines	1
In any passage of lines, a BCT needs at least one additional lane for its tactical vehicles	

16-22. Passing units normally have priority of route use to and within stationary unit assigned areas. Clearing and maintaining passage routes up to the BHL are the responsibility of the stationary force. Stationary forces provide passing forces with obstacle overlays. Passing units prepare to help maintain these routes, and they position their engineer equipment accordingly. Stationary units control traffic within their assigned areas until passing units assume control. Passing units augment the traffic control capabilities of stationary units as required during the passage.

INTELLIGENCE

16-23. Prior to a passage of lines, the stationary unit's intelligence staff must exchange all intelligence products and databases with the intelligence staff of the passing force. This intelligence includes known and suspected enemy locations, enemy unit strengths, and enemy activity focusing on the previous 72 hours.

16-24. In a forward passage of lines information collection assets are primarily tasked to support offensive operations following passage of lines completion. In a rearward passage of lines information collection assets are primarily tasked to support defensive operations following passage of lines completion.

FIRE

16-25. Generally, the stationary unit commander controls the allocation of firing positions until the execution of the BHL. The fires cells of the stationary and the passing units agree on the allocation of firing positions. These positions are far enough forward to support the performance of the passage without having

to displace artillery assets during critical stages of the passage. Ideally, enemy forces have not previously identified these positions.

16-26. Detailed air and missile defense planning is essential. Passing units tend to move slowly and often in some type of column formation during their passage. Passing and stationary unit vehicle congestion presents lucrative targets to enemy aircraft and missiles. Dissemination of early warning and airspace control information reduces the risk of fratricide to friendly aviation assets while increasing the probability of the timely detection of enemy aircraft and missiles. Strict weapons control status among pilots and air and missile defense units is critical, especially during limited visibility.

SUSTAINMENT AND PROTECTION

16-27. Stationary forces furnish passing forces with necessary assistance (within their capabilities) as far forward as possible, but behind the BHL. Staffs can coordinate this assistance in advance or provide it on an emergency basis. The types of assistance typically provided includes—

- Evacuating casualties and detainees.
- Using areas and facilities such as water points and medical facilities.
- Controlling routes and traffic management.
- Recovering disabled vehicles and equipment.
- Controlling dislocated civilians.

This assistance expedites the passage of lines.

FORWARD PASSAGE OF LINES

16-28. The purpose of a forward passage of lines is to move forces forward to conduct offensive operations. Units performing forward passages of lines maintain enemy contact while allowing the relief of previously committed forces. Stationary units control and secure their assigned areas far enough to their front that moving units can pass through them and deploy into movement formations prior to those moving units making enemy contact. Generally, stationary units support passing units with direct fires until those passing units mask those direct fires. Stationary units continue providing fire support to passing units until those passing units move beyond the range of those systems. Stationary units secure the lines of departure of forward passing units until these later units can assume those responsibilities. The boundaries of forward passing units after they complete their passage do not have to coincide with the boundaries of stationary units. Figure 16-2 depicts a forward passage of lines.

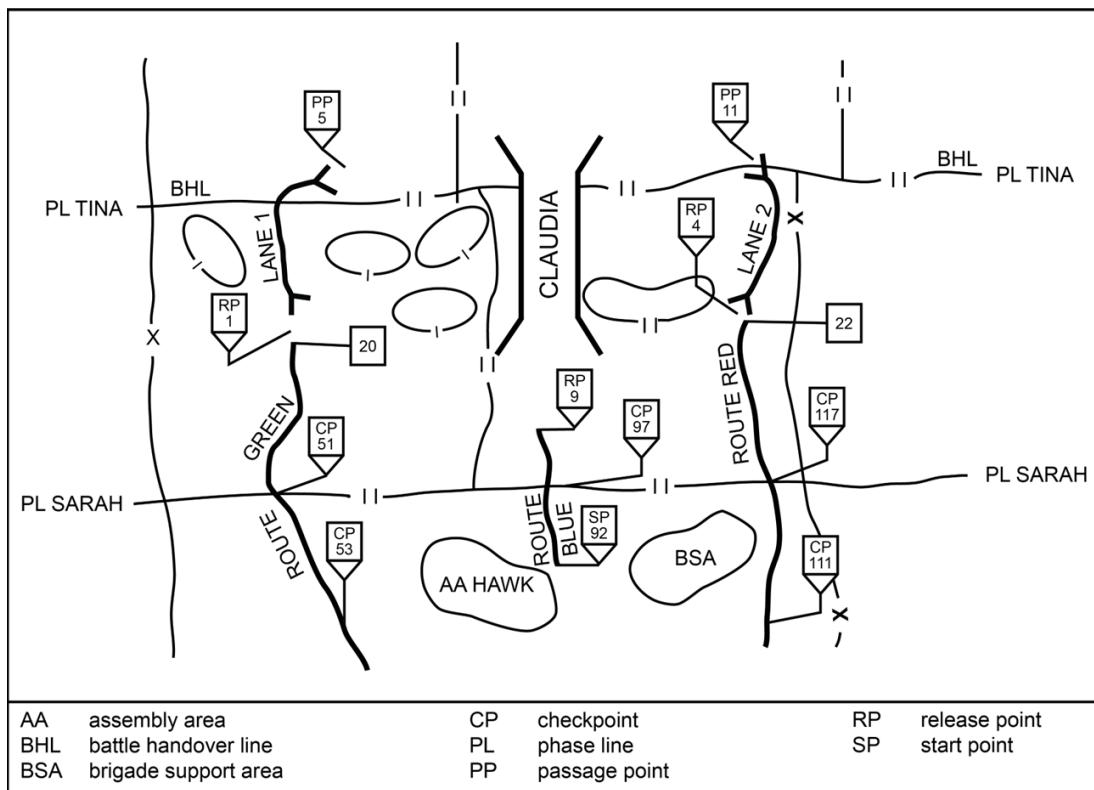


Figure 16-2. Forward passage of lines

PLANNING A FORWARD PASSAGE

16-29. Planning considerations discussed in paragraphs 16-13 through 16-27 apply during forward passage of lines. Close coordination between the passing and stationary force is crucial to enable the successful execution of the forward passage and subsequent transfer of responsibility. The stationary force controls and secures the assigned area far enough to its front that the moving force can pass through the stationary force and reform into a combat formation before contact with an enemy force. Generally, passing units assume control of their respective assigned areas forward of the BHL after two-thirds of forward passing combat elements move through their passage points.

PREPARING A FORWARD PASSAGE

16-30. Passing units perform reconnaissance from their current locations to their designated assembly areas for the passage of lines. These assembly areas are generally located to the rear of stationary units. These passing units occupy their designated assembly areas after completing this reconnaissance. Commanders task-organize their passing units in those assembly areas for their subsequent missions before initiating their forward passages of lines. Units preparing for forward passages of lines avoid regrouping in their attack positions.

EXECUTING A FORWARD PASSAGE

16-31. Ideally, forward passing forces move in their desired movement formations as move through gaps in stationary unit positions without halting. This minimizes the time both forces are concentrated in forward areas and makes them less vulnerable to enemy attack. If not, they deploy to their desired movement formation as soon as they can.

16-32. Passages of lines occur rapidly once initiated. Units perform a passage of lines when and where enemy forces have the least capability to detect it, such as at night or during periods of reduced visibility. Units consider using obscuration to screen friendly movement in any passage of lines, even at night. Each forward passing force's command post passes through the stationary force's lines as soon as possible after its lead elements complete their forward passage and locates where it can best control operations.

16-33. Direct fire support by stationary forces ends when combat elements of passing forces, including their reserves, mask that support or move beyond direct fire range. However, artillery, air defense, and other long-range systems continue to support forward passing forces until previously designated events occur or a higher echelon headquarters directs them to conduct another mission.

16-34. Stationary forces provide security throughout the performance of the forward passages of lines. The movement of the forward passing main body units begin from their assembly areas to attack positions. Passing forces conduct their final preparations for the passage of lines and the attack in those attack positions. Passing forces move to and occupy attack positions when enemy observation is unlikely. Stationary forces clear any obstacles from designated passage gaps, lanes, or routes. They guide passing force elements from contact points through passage points.

16-35. Stationary forces' direct and indirect fire assets normally support the movement of passing forces. Commanders direct any supporting electromagnetic warfare capabilities—especially electromagnetic attack—against enemy command and control nodes. Their objective is to disrupt the enemy force's dissemination of information and ability to react effectively to friendly operations. Any preparation or covering fires coincide with the movement of passing forces from their attack positions to passage lanes.

16-36. After the forward moving unit commander assumes responsibility for the area, that commander coordinates all fire support. Depending on the situation, the passing commander may continue to use only the fire support assets of the stationary force until the passage of lines is complete. This allows forward passing force fire support assets to move forward with the rest of their unit and conserve their ammunition for later expenditures. On passage of responsibility, the passing unit commander also assumes control of fire forward of the BHL. For example, the passing unit commander moves the CFL forward to conform to the movement of forward security elements.

16-37. The stationary unit provides the passing unit with the previously coordinated sustainment as far forward as possible. The stationary unit concentrates on providing the passing unit with emergency medical, recovery, and fuel supplies to enable the passing unit to move through the stationary unit's positions rapidly.

16-38. The principles of a forward passage of lines are the same when dissimilar forces, such as dismounted infantry and armored forces, are involved. However, the execution differs in that the type and amount of assistance provided by stationary forces changes because of the different capabilities and requirements of these different types of forces. The higher echelon commander ordering the passage can direct the provision of additional resources from other sources to meet the assistance requirements of forward passing forces.

REARWARD PASSAGE OF LINES

16-39. A rearward passage of lines is similar in concept to a forward passage of lines. It continues the defense, maintaining enemy contact while allowing for recovery of security or other forward deployed forces. Units may or may not conduct this operation under enemy pressure.

PLANNING A REARWARD PASSAGE

16-40. The planning considerations discussed in paragraphs 16-13 through 16-27 continue to apply during a rearward passage of lines. However, rearward movement is likely to be more difficult because—

- The enemy force probably has the initiative, which tends to reduce the time available to perform liaison, reconnoiter, and make detailed plans.
- If rearward moving forces have been in action, Soldiers are tired and possibly disorganized.
- The enemy force may be applying pressure on the passing force.
- Possible intermixing of friendly and enemy forces increases the probability of fratricide.

16-41. Close coordination between the passing and stationary force is crucial to successful execution of the rearward passage and subsequent transfer of responsibility. This requirement for close coordination is even more critical when the tactical situation results in a staggered or incremental rearward passage across an assigned area. Passing force commanders relinquish control of their subordinate elements remaining in contact at the time of the transfer of responsibility to stationary force commanders. Generally, stationary units assume control of their respective assigned areas forward of the BHL after two-thirds of rearward passing combat elements move through their passage points.

PREPARING A REARWARD PASSAGE

16-42. Rearward passing forces begin coordination with those stationary forces through which they are going to move after receiving their warning orders. The command posts of both forces involved move to a position where they can co-locate as part of the preparations for the rearward passage.

16-43. The commanders of these forces coordinate the same details as those outlined for a forward passage of lines. If necessary, fire support assets from the stationary force occupy positions forward of their primary positions to give maximum coverage of forces to the rearward moving unit. The two staffs coordinate those control measures necessary to support retrograde operations and their associated rearward passage of lines. (See paragraphs 16-9 through 16-12 for a discussion of control measures.) These two commanders establish a probable time to initiate passage.

EXECUTING A REARWARD PASSAGE

16-44. Passing forces maintain command of their subordinate elements throughout their retrograde and rearward passage. The normal order of march in a rearward passage of lines is sustainment elements, main command post, functional and multifunctional support elements, tactical command post, and combat units. Passage points mark the locations where rearward passing forces come under the control of restrictions placed by stationary forces. If enemy forces continue to press their attacks, passing forces continue to control operations from the co-located command posts while stationary forces monitor and control the passage of lines in their assigned areas until battle handover occurs. Passing force command posts pass through the lines as soon as possible after the lead elements complete their passage. On passage of command, stationary forces assume control of ongoing operations.

16-45. Stationary forces provide rearward passing forces with as much assistance as possible, just as they do during a forward passage of lines. The provision of indirect and direct fire support to passing forces by stationary forces is crucial for the success of these passages. This is especially important in covering the withdrawal of detachments left in contact during a delay. Stationary force fire support assets answer calls for fire from the passing force until battle handover occurs. The passing force's fire support assets echelon rearward to provide continuous fire support for the passing force until it can successfully disengage. Stationary forces initiate and clear calls for all fires forward of their locations once passing forces transfer control operations to them. The same procedure applies to any direct support air and missile defense assets.

16-46. Stationary forces ensure that passing forces are able to move through passage routes and lanes. They employ available engineer assets to maintain these routes and lanes for use by passing forces. Stationary force commanders shift these assets to close gaps in their obstacles and defensive positions once passing forces and their forward security elements disengage and withdraw through their forward security areas.

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Chapter 17

Countermobility

Countermobility operations is a combined arms activity. This chapter addresses the general considerations for countermobility, terrain reinforcement, obstacle intent, obstacle employment principles, and obstacle emplacement.

GENERAL COUNTERMOBILITY CONSIDERATIONS

17-1. *Countermobility* is a set of combined arms activities that use or enhance the effects of natural and man-made obstacles to prevent the enemy freedom of movement and maneuver (ATP 3-90.8/MCTP 3-34B). The primary purposes of countermobility are to shape enemy movement and maneuver and to prevent the enemy from gaining a position of advantage. Countermobility directly supports offensive and defensive operations, but only indirectly supports stability and defense support of civil authorities tasks. Offensive and defensive operations are always combined with stability operations; defense support of civil authorities tasks are typically only performed in support of homeland defense.

17-2. Countermobility can be confused with other tasks or activities that may also employ obstacles. An *obstacle* is any barrier designed or employed to disrupt, fix, turn, or block the movement and maneuver, and to impose additional losses in personnel, time, and equipment (JP 3-15). Antiterrorism, physical security, survivability, safety, and traffic operations often employ obstacles such as perimeter fencing, concrete walls, and vehicular barriers. However, only countermobility involves tactical obstacle employment with effects directly linked to tactical mission tasks. Another discernible difference of countermobility is that it is a combined arms activity conducted to directly support offensive and defensive operations, which may be combined with stability and defense support of civil authorities tasks.

17-3. Countermobility enables combined arms forces to shape enemy movement and maneuver and prevent the enemy from gaining a position of advantage. In the offense, countermobility is conducted to help isolate objectives and prevent the enemy from repositioning, reinforcing, and counterattacking. It enables flank protection along an axis of advance or as an integrated economy-of-force effort to provide general flank security. In the defense, countermobility disrupts enemy attack formations and enables friendly forces to defeat the enemy in detail. Obstacles help channel the enemy into engagement areas throughout and protect the flanks of friendly forces conducting a counterattack.

17-4. In support of offensive operations, countermobility may be required to defend a lodgment and protect selected sites and positions from which combat power must be generated and sustained. The unit's options for emplacing reinforcing obstacles in the offense are often limited because of challenges in gaining early access to much of the assigned area. This increases the importance of taking advantage of existing obstacles and the natural restrictiveness of the terrain. It also increases the unit's reliance on rapid obstacle emplacement capabilities, especially remotely delivered obstacles to reinforce the terrain.

17-5. In support of defensive operations, countermobility operations use tactical obstacles to shape engagements and maximize the effects of fires and use protective obstacles to provide close-in protection around defensive positions. Protective obstacles help warn, prevent, and mitigate intrusion into critical fixed sites such as assembly areas and sustainment sites, or a final enemy assault onto a unit position. Erecting obstacles is also a critical supportive task to conducting denial operations. In the defense, earlier access to more of the assigned areas typically provides units with the time and information to consider a broader range of options for reinforcing the terrain. In addition to the rapid obstacle emplacement capabilities often used in the offense, units can often use more time- and resource-intensive techniques to reinforce the terrain for longer periods. This may or may not be the case in support of lodgments. Such techniques include mostly

constructed obstacles and some demolition obstacles. During a retrograde, including security force passage, the requirement for obstacle control will typically be increased.

17-6. Units must weigh the risks of employing obstacles, especially lethal obstacles, near civilians and consider enhancing marking and restrictions to mitigate their risk. Units rely heavily on command-detonated, self-deactivating, or nonexplosive obstacles to deny the enemy freedom of movement and provide close-in protection. Denying enemy freedom of movement may involve disrupting the transportation of weapons and supplies and the emplacement of explosive hazards along roads or routes. Networked munitions are ideal when conducting countermobility in support defensive efforts around base camps and other critical fixed sites and infrastructure.

17-7. The conduct of countermobility typically involves engineers and includes proper obstacle integration with the maneuver plan, adherence to obstacle emplacement authority, and positive obstacle control. Combined arms obstacle integration synchronizes countermobility into the concept of operations. Because most obstacles have the potential to deny freedom of movement and maneuver to friendly forces and enemy forces, it is critical that units properly weigh the risks and evaluate the trade-offs of employing various types of obstacles. Countermobility includes the following tasks:

- Site obstacles.
- Construct, emplace, or detonate obstacles.
- Mark, report, and record obstacles.
- Maintain obstacle integration.

TERRAIN REINFORCEMENT

17-8. Units reinforce terrain by employing existing, reinforcing, tactical, and protective obstacles to prevent the enemy from gaining a position of advantage. They take full advantage of the natural restrictiveness of the existing terrain to minimize the time, effort, and materiel needed to achieve the desired effects and offset the limited, available quantities of scatterable mines and networked munitions.

EXISTING OBSTACLES

17-9. Existing obstacles are inherent aspects of the terrain that impede movement and maneuver. Existing obstacles may be natural (intractable soils, rivers, mountains, wooded areas) or manmade (enemy explosive and nonexplosive obstacles and structures, including bridges, canals, railroads, and embankments associated with them). Although not specifically designed or intended as an obstacle, structures may pose as an obstacle based on existing characteristics or altered characteristics that result from combat operations or a catastrophic event. Structures such as bridges and overpasses present an inherent impediment to mobility based on weight and clearance restrictions. Existing obstacles are shown on the modified combined obstacle overlay (also known as a MCOO) developed as part of the IPB process.

REINFORCING OBSTACLES

17-10. Reinforcing obstacles are those manmade obstacles that strengthen existing terrain to achieve a desired effect. For U.S. forces, reinforcing obstacles on land consist of land mines, networked munitions, and demolition and constructed obstacles:

- **Land mines.** A *land mine* is a munition on or near the ground or other surface area that is designed to be exploded by the presence, proximity, or contact of a person or vehicle (ATP 3-90.8/MCTP 3-34B). Land mines can be employed in quantities within a specific area to form a minefield, or they can be used individually to reinforce nonexplosive obstacles. Land mines fall into the two general categories:
 - **Nonpersistent.** Nonpersistent land mines are capable of self-destructing or self-deactivating. Land mines can be further defined as antivehicle or antipersonnel. They can be air-, artillery-, or ground-delivered.
 - **Persistent.** Persistent land mines are not capable of self-destructing or self-deactivating.

Note. As of 1 January 2011, U.S. forces are no longer authorized to employ persistent (those that are not self-destructing or self-deactivating) or nondetectable land mines.

- **Networked munitions.** *Networked munitions* are remotely controlled, interconnected, weapons systems designed to provide rapidly emplaced ground-based countermobility and protection capability through scalable application of lethal and nonlethal means (JP 3-15).
- **Demolition obstacles.** Demolition obstacles are created using explosives. Examples include bridge or other structure demolition (rubble) and road craters. (See ATP 3-90.8/MCTP 3-34B for more information on demolition obstacles.)
- **Constructed obstacles.** Constructed obstacles are created without the direct use of explosives. Examples include wire obstacles, antivehicle ditches, or similar construction that typically involves the use of heavy equipment. (See ATP 3-90.8/MCTP 3-34B for more information on constructed obstacles.)

17-11. The use of some obstacles, specifically mines, is governed by U.S. law, U.S. policies, and international treaties or agreements. The United States regards mines as lawful weapons when employed according to accepted legal standards. These laws and policies are complex and subject to change; therefore, it is essential that commanders coordinate with legal advisors when developing local rules of engagement (ROE) and ensure that legal advisors review law and policies for legal sufficiency. (See JP 3-15 for more information on the laws, agreements, and policies that are most significant to the employment of obstacles.)

TACTICAL OBSTACLES

17-12. The primary purposes of tactical obstacles are to shape enemy maneuver and to maximize the effects of fires. Tactical obstacles directly attack the ability of a force to move, mass, and reinforce; therefore, they affect the tempo of operations. Units integrate obstacles into the scheme of maneuver to enhance the effects of fires. Preexisting obstacles that a unit reinforces and integrates with observation and fires may become tactical obstacles. The types of tactical obstacles are clearly distinguished by the differences in execution criteria. The three types are—

- Directed obstacles.
- Situational obstacles.
- Reserved obstacles.

17-13. A *directed obstacle* is an obstacle directed by a higher commander as a specified task to a subordinate unit (ATP 3-90.8/MCTP 3-34B). The higher commander directs and resources these obstacles as specified tasks to a subordinate unit. Units plan, prepare, and execute directed obstacles during the preparation of the area of operations. Most tactical obstacles are directed obstacles.

17-14. A *situational obstacle* is an obstacle that a unit plans and possibly prepares prior to starting an operation but does not execute unless specific criteria are met (ATP 3-90.8/MCTP 3-34B). Situational obstacles are preplanned obstacles as part of a TAI. They provide the commander with flexibility for emplacing tactical obstacles based on battlefield development.

17-15. A *reserved obstacle* is an obstacle of any type, for which the commander restricts execution authority (ATP 3-90.8). The commander specifies a unit that is responsible for preparing, guarding, and executing reserved-obstacle emplacement. Units execute reserved obstacles only on command of the authorized commander or based on specific criteria identified by the commander. The purpose of a reserved obstacle is to retain control over the mobility along an avenue of approach. Commanders use reserved obstacles when failure to maintain control over the mobility along an avenue of approach will have disastrous effects on the current battle or future operations.

PROTECTIVE OBSTACLES

17-16. Protective obstacles are employed to protect people, equipment, supplies, and facilities against threats. Protective obstacles have two primary roles, defense and security:

- **Defense.** Protective obstacles provide friendly forces with local, close-in protection. They prevent the enemy from delivering a surprise assault from areas close to a position and are integrated with FPFs to defeat the final assault of the enemy. Protective obstacles are employed to defeat mounted and dismounted threats.
- **Security.** Protective obstacles are used to prevent or mitigate hostile actions against friendly forces and critical fixed sites (such as air facilities, bases or base camps, critical infrastructure, and sustainment sites). Protective obstacles used for security produce scalable effects that range from lethal to nonlethal and are appropriate for the situation based on the ROE.

17-17. Protective obstacles are key enablers to survivability operations, physical security, and antiterrorism. Units on the move rely on rapidly emplaced protective obstacles that units can quickly recover, deactivate, or destroy. Stationary units continuously improve their security posture. (See ADP 3-37 for more information on the use of obstacles in supporting protection tasks that are not considered countermobility tasks.)

OBSTACLE INTENT

17-18. Obstacle intent describes how obstacles support the commander's concept of operations. Obstacle intent consists of the—

- Target.
- Effect.
- Relative location.

TARGET

17-19. The target is the enemy force that the commander wants to affect with tactical obstacles. The commander usually identifies the target in terms of the enemy size and type, the echelon, the avenue of approach, or a combination of these things.

EFFECT

17-20. Tactical obstacles and fires—direct and indirect—manipulate the enemy in a way that supports the commander's intent and scheme of movement and maneuver (or scheme of maneuver). Obstacle effect describes the effect that the commander wants the obstacles, combined with fires, to have on the enemy. The obstacle effect—

- Drives integration.
- Focuses subordinate fires.
- Focuses obstacle effort.
- Multiplies firepower effects.

17-21. It is important to remember that obstacle effects occur because of the combined effects of fires and obstacles, rather than from obstacles alone. Tactical obstacles produce one of the following effects (see paragraphs 17-24 through 17-45 for protective obstacle effects):

- Block.
- Disrupt.
- Fix.
- Turn.

17-22. Each obstacle effect is graphically represented by an obstacle effect symbol, as shown in table 17-1. Obstacle effect symbols are used as control measures for obstacle groups and as elements of the control measures for obstacle zones and belts. During COA development, obstacle effect symbols are also used in developing and showing the initial obstacle plan that supports each COA.

Table 17-1. Tactical obstacle effects

Function	Template	Example <i>Note.</i> Symbols colored gray are used to help explain how the control measure is used and are not a part of the control measure.
Obstacle effect symbols Obstacle effect describes the effect that the commander wants obstacles and fires to have on the enemy (see ATP 3-90.8/MCTP 3-34B)		
Block An obstacle effect that integrates fire planning and obstacle effort to stop an attacker along a specific avenue of approach or to prevent the attacking force from passing through an engagement area.		
Disrupt An obstacle effect that focuses fire planning and obstacle effort to cause the enemy to break up its formation and tempo, interrupt its timetable, commit breaching assets prematurely, and attack in a piecemeal effort.		
Fix An obstacle effect that focuses fire planning and obstacle effort to slow an attacker's movement within a specified area, normally an engagement area.		
Turn An obstacle effect that integrates fire planning and obstacle effort to divert an enemy formation from one avenue of approach to an adjacent avenue of approach or into an engagement area.		

17-23. Obstacle effects and their symbols resemble some of the tactical mission tasks and symbols described in Appendix A. However, obstacle effects and obstacle effect symbols differ from tactical mission tasks and tactical mission task symbols. Tactical mission task symbols are used during COA development to show information (the *what* or *why*) about a friendly force action. Obstacle effect symbols are used during COA development to show how obstacles will support each COA. Obstacle effects must support tactical mission tasks, but the best way to do that may require designating an obstacle effect that differs from the supported tactical mission task or placing it in a different location; for example, achieving the tactical mission task fix in a specified location may require turn or block obstacle effects in front of, behind, or adjacent to

that location depending on the effects of terrain. Similarly, the obstacle effect symbols in table 17-1 have different orientation, meaning, and application than the tactical mission task symbols they resemble.

Block Effect

17-24. Block is an obstacle effect that integrates fire planning and obstacle efforts to stop an attacker along a specific avenue of approach or to prevent the attacking force from passing through an engagement area. To accomplish the block effect, the obstacles and fires must—

- Prevent the enemy from bypassing or breaching the obstacles.
- Maximize available standoff.
- Stop enemy forward movement.

17-25. Units consider obstacle protection when planning fire control measures. The first mission of the overwatching force is to stop any bypassing or breaching attempt. They respond to any attempt to breach or bypass with direct and indirect fires. Block obstacles stop enemy maneuver and cause the enemy to commit breaching assets that can be destroyed by fire.

17-26. To support survivability, units position forces to provide standoff so that the force can survive. The engagement area must cover the width of the entire avenue of approach. The maximum effective range of the overwatching weapons minus the standoff distance limits the depth of the engagement area. The commander positions forces so that they can mass interlocking fires across the entire avenue of approach. The defending force must be able to concentrate all available fires within the obstacle group. Units array weapon systems in depth based on their maximum effective ranges.

17-27. The success of a block obstacle is measured by its impact on the enemy advance, not by enemy losses. The block effect is the most resource-intensive obstacle effect to achieve and is usually only limited to critical points on the battlefield. Normally, the purposes of forces overwatching a block obstacle is to defeat lead enemy units and cause the attacker to reconsider the deployment of follow-on forces. Commanders allocate sufficient combat power to achieve all effects of the obstacle which demand protecting the obstacle and defeating enemy forces encountering it.

17-28. Achieving the block effect requires the integration of complex obstacles—those that require more than one reduction technique to create a lane—with massed fires to defeat the breaching effort of the attacking force. Units array obstacles successively in a concentrated area. When the attacking force reduces one obstacle integrated with massed fires, it encounters another obstacle integrated with massed fires. Obstacles must defeat the mounted and dismounted breaching efforts of the attacking force. They must span the entire width of the assembly area, allowing no bypass. Obstacles intended to prevent an attacking force from using a specific assembly area should be readily visible to discourage further progress forward. Obstacles used to prevent an attacking force from passing through an engagement area should be less visible to avoid discouraging the enemy from entering the engagement area. Fires should be planned, not on the obstacles, but on the locations where enemy forces will move to when they are blocked.

Disrupt Effect

17-29. Disrupt is an obstacle effect that focuses fire planning and obstacle effort to cause the enemy to break up its formation and tempo, interrupt its timetable, commit breaching assets prematurely, and attack in a piecemeal effort. The disrupt effect also helps to deceive the enemy concerning the location of friendly defensive positions, separate combat echelons, or separate combat forces from its logistics support. To accomplish the disrupt effect, the obstacles and fires must—

- Cause the enemy to deploy early.
- Slow and disrupt part of the enemy force.
- Allow part of the enemy force to advance unimpeded.

17-30. Obstacles must normally attack half of the targeted avenue of approach to achieve the disrupt effect. The obstacles should not require extensive resources for construction or emplacement. Units normally use the disrupt effect beyond engagement areas, while being careful not to inadvertently discourage the enemy from entering the engagement area.

17-31. Indirect fires and long-range direct fires are used to cause the enemy to change from a march formation to a prebattle or attack formation, resulting in reduced closure speed and increased time to engage the enemy in the engagement area. Generally, indirect fires alone will not force an enemy to deploy except when dismounted.

17-32. Units plan suppression and neutralization indirect fire targets or groups on the obstacles in a disrupt obstacle group. Indirect fires are used with the obstacles to slow the part of the enemy force that makes contact with the obstacles. Units also use every means available to disrupt enemy command and control throughout the enemy formation. Units use electromagnetic warfare, obscuration, and indirect fires to disrupt the decision cycle of the enemy and increase the direct fire window on the unimpeded part of the enemy force.

17-33. Units use target reference points to mass direct fires against the part of the enemy formation that is not impeded by obstacles and indirect fires. Units do not execute those fires until the enemy force separates from its parent formation. They use direct fire weapons that can deliver a lethal initial volley of fire. A quick volley is critical if the enemy has good command and control and can react quickly to the disruption of its formation. Disengagement criteria are also a consideration in weapons selection. If units plan a short engagement, they choose a weapon system that can fire and maneuver without becoming decisively engaged. If they expect a long engagement, they select a weapon system that can sustain rapid fire with sufficient survivability to support the engagement.

17-34. Units plan fire control measures that allow for the shift of direct or indirect fires to the enemy that are slowed by the obstacle or to the enemy bypassing the obstacle. Key leaders are positioned where they can best assess the obstacle effect. If the enemy is rapidly breaching the obstacles, they may shift direct fires against the enemy breaching assets. If a large force bypasses, units may shift all fires against the unimpeded enemy to inflict maximum losses and then reposition friendly forces to subsequent positions.

Fix Effect

17-35. Fix is an obstacle effect that focuses fire planning and obstacle effort to slow an attacker's movement within a specified area, normally an engagement area. The fix effect allows time to acquire, target, and destroy the enemy with direct and indirect fires throughout the depth of an engagement area or avenue of approach. The fix effect helps fires to defeat the enemy in detail or to gain the necessary time for forces to reposition while inflicting maximum casualties. To accomplish the fix effect, the obstacles and fires must—

- Cause the enemy to deploy into attack formation early.
- Cause the enemy to advance slowly into the engagement area.
- Make the enemy fight in multiple directions within the engagement area.

17-36. Units specify the amount of time or effect that the combined effect of fires and obstacles must achieve. The fix effect may generate the time necessary for the defending force to break contact and disengage as the attacking force maneuvers into the area. To achieve the fix effect, units array obstacles in depth to cause the attacking formation to react and breach repeatedly. The obstacles must influence the entire width of the avenue of approach but not make the terrain impenetrable. The individual obstacles must look as if they could be easily bypassed or reduced. Units combine obstacles that are clearly visible with others that are unseen (such as obstacles on the reverse slope help to confuse the attacking force once it encounters the obstacles).

17-37. Units plan artillery- and aviation-delivered fires forward of the obstacles to suppress or neutralize the enemy. They synchronize indirect fires with long-range direct fires that cause the enemy to deploy out of a march or a prebattle formation. If the enemy is in an attack formation, this allows obstacles and fires to attack the full frontage of the enemy.

17-38. Initially, units' orient fires on the enemy force as a whole; however, destroying enemy breaching assets becomes increasingly important as the enemy continues to advance into the engagement area. To maximize obstacle effect and inflict maximum losses on the enemy, the fire plan requires an increase in the intensity of fires as the enemy advances. Units plan successive TRPs, integrated with obstacles closer to the BPs, which trigger engagement by additional weapons. They vary the intensity of fires through fire control to allow the enemy to continue a slowed advance. When the enemy fully commits, friendly forces complete its destruction.

17-39. Once the enemy commits in the engagement area, the fire plan causes the enemy to fight in as many directions as possible. This serves to further slow its advance, disrupt its command and control, and reduce its ability to mass, allowing friendly forces to provide interlocking fires with flank shots on individual targets. Combining fires from multiple directions with the random orientation of individual obstacles further confuses the attacker. For direct fires, units consider the use of TRPs and supplementary positions to reorient fires. They also consider the use of protective obstacles to protect the force. The fire support officer and fire support teams plan targets to hold the enemy in the engagement area and aim final protective fires on critical mobility corridors that may let the enemy threaten friendly positions.

Turn Effect

17-40. Turn is an obstacle effect that integrates fire planning and obstacle effort to divert an enemy formation from one avenue of approach to an adjacent avenue of approach or into an engagement area. To accomplish the turn effect, the obstacles and fires must—

- Prevent the enemy from bypassing or breaching the obstacle.
- Cause the enemy to bypass in the desired direction.
- Maintain pressure on the enemy throughout the turn and exploit its exposed flank.

17-41. Developing a turn obstacle requires mobility corridors and avenues of approach that are well defined by restricted terrain. To achieve a turn effect, the obstacles must have a subtle orientation relative to the approach of the attacking force. The obstacles and fires allow bypasses in the direction that is desired by the friendly scheme of movement and maneuver (or scheme of maneuver). Obstacles at the start of the turn are visible to the attacking force and look more complex than those in the direction of the turn.

17-42. The anchor point, the initial point of the turn, is where most turn obstacles fail. Therefore, it is critical that units reinforce the anchor point with concentrated direct and indirect fires to achieve the turn effect. Units normally anchor turn obstacle groups to restricted terrain or to a strong point. They approve fire support coordination measures, which enable the focus of all available fires first at the anchor point. When the enemy encounters the obstacle, the combination of fires, obstacles, and terrain must limit their ability to breach or bypass at the anchor point.

17-43. Units plan an indirect fire target or group to turn the enemy away from the anchor point. They focus enough direct fire assets to deal with the size of the enemy force expected at that point; for example, if an enemy company is expected at the anchor point, then at least one friendly platoon should be allocated to mass fires at that point. If the enemy breaches the obstacle at the anchor point, the turning effect could be lost—compromising the friendly defensive plan.

17-44. The critical task in achieving the turn effect is to use obstacles and overwhelming fires to cause the enemy to move in the direction that is desired by the friendly unit. As the engagement progresses, the friendly force prevents enemy attempts to breach the obstacle by designating enemy breaching assets as priority targets. Direct fire weapon systems are the primary means for destroying enemy breaching equipment. Artillery- and aviation-delivered fires can attack individual targets, but they may be less timely. Plan indirect fires—artillery and mortars—in front of, on top of, to the side of, and behind obstacles to maximize their effect as combat multipliers. Developing fire control measures through the planning of NAIs, TAIs, triggers, and targets to support obstacles in the obstacle group will make indirect fires more responsive and effective.

17-45. Units develop a fire plan with fire control measures that allow them to shift fires as necessary to cover the turn effect. Direct and indirect fires shift in unison to attack and maintain pressure on the enemy force's flank. Fires covering the length of the turn effect are less focused than at the turn point. Company commanders facilitate this by assigning platoon sectors of fire between TRPs. Units usually execute indirect fires in groups instead of aiming at individual targets. Direct and indirect fires continue throughout the length and depth of the turn effect. These fires simultaneously exploit the vulnerability created by the turn effect and protect the integrity of the obstacles.

RELATIVE LOCATION

17-46. Relative location refers to the location of a tactical or protective obstacle in relation to maneuver or fire control measures such as avenues of approach, BPs, or engagement areas. Engineers and other countermobility planners describe planned obstacle locations in relation to maneuver or fire control measures

to help maneuver commanders visualize linkages between obstacles, fires, and maneuver and to ensure obstacle integration.

OBSTACLES EMPLOYMENT PRINCIPLES

17-47. The basic employment principles for obstacles are—

- Support the maneuver commander's plan.
- Integrate with observation and fires.
- Integrate with other obstacles.
- Employ in depth.
- Employ for surprise.

See ATP 3-90.8/MCTP 3-34B for more information on obstacle employment principles.

OBSTACLE EMPLACEMENT AUTHORITY

17-48. Obstacle emplacement authority is the authority to emplace reinforcing obstacles. Geographic combatant commanders have the authority to emplace obstacles in their areas of responsibility within the ROE. They may delegate emplacement authority to subordinate commanders, down to the lowest echelon necessary to allow for maximum flexibility in executing tactical missions, while ensuring that the employment of reinforcing obstacles is consistent with the ROE and supportive of current and future operations. Commanders consider the particular system characteristics, including inherent hazards that it might pose to friendly forces and civilians and the ROE in determining the emplacement authority for scatterable mines. The duration of scatterable mines employment is a primary consideration in determining the extent to which emplacement authority should be delegated. When used as protective obstacles, higher commanders typically delegate emplacement authority to the commanders of small units (platoon or company or team) and base camps. The commander's guidance on emplacement authority is stated in the unit's order.

17-49. Commanders use obstacle control measures and other specific guidance or orders to grant or withhold obstacle emplacement authority to subordinate commanders and provide obstacle control. For example, a commander may withhold authority by shaping obstacle control measures within the area of operations of a subordinate unit so that a specific area is not included, such as a counterattack axis, to ensure the freedom of movement and maneuver of other units in that area. Likewise, the commander may also state in an order that a specific area, such as a counterattack axis, is an obstacle-restricted area.

17-50. Subordinate commanders who desire to emplace an obstacle outside a zone, belt, or group must submit a report of intention for that obstacle. The report doubles as a request when units initiate it at levels below emplacement authority. Units do not submit the report if the higher headquarters grants emplacement authority. Commanders give the authorization to emplace obstacles when they establish obstacle control measures. As an exception, units do not submit reports of intention for directed obstacles that are part of an operation plan or operation order approved by the obstacle emplacement authority.

17-51. Commanders and staffs consider time, width, and depth when planning for obstacle control. For example, a commander may use an on-order obstacle zone to give a subordinate obstacle emplacement authority only after a certain time or event. Likewise, a commander may direct that only scatterable mines with a certain self-destruct time or networked munitions with on and off features can be emplaced in a specific area. Maneuver control measures can aid in focusing the width and depth of obstacle control measures.

17-52. Typical graphics that may be used include—

- Unit boundaries and PLs.
- BHLs and forward edges of the battle area.
- Lines of departure and lines of contact.
- Fire support coordination line, no-fire areas, and coordinated fire lines.
- Passage lanes and corridors.

- Counterattack axis and movement routes.
 - Objectives, future BPs, and avenues of approach.
- 17-53. Obstacle control planning is guided by—
- Supporting current operations.
 - Maximizing subordinate flexibility.
 - Facilitating future operations.
- 17-54. Commanders use obstacle control to focus obstacle effort where it will clearly support their intent and concept of operations. They also use obstacle control to ensure that obstacles will not interfere with current operations or limit their ability to respond to unforeseen situations.

OBSTACLE CONTROL MEASURES

17-55. Obstacles can be natural, manmade, or a combination of both. Forces emplace tactical and protective obstacles that reinforce terrain restrictions and existing obstacles and integrate them with fires to affect enemy movement or maneuver and shape engagements. ***Obstacle control measures*** are specific measures that grant obstacle-emplacing authority. They consist of—

- Zones.
- Belts.
- Groups.
- Restrictions.

The remainder of this chapter discusses these control measure with Figure 17-1 on page 17-12 providing a brief summary of each control measure in a single graphic. Commanders with an assigned area can only emplace protective obstacles unless authorized by a higher echelon commander.

17-56. An analysis of the higher echelon headquarters' mission and commander's intent identifies information that may impact the mission. The components of this analysis are intent, assigned areas, military deception, directed and implied tasks, limitations, available assets, risk, and emplacement timelines and risk. Among the directed obstacle tasks are the planning, preparation, and execution of reserve obstacles. Reserve obstacles allow the force to retain control over the mobility along a given avenue of approach.

Obstacle Zones

17-57. An *obstacle zone* is a division-level command and control measure to designate specific land areas where lower echelons are allowed to employ tactical obstacles (JP 3-15). Corps and division commanders use them to grant obstacle emplacement authority to brigades (including other major subordinate units). Obstacle zones are permissive, allowing a brigade combat team to place reinforcing obstacles to support its scheme of maneuver without interfering with future operations.

17-58. If the obstacle zone encompasses the entire brigade combat team assigned area, another graphic is unnecessary. Commanders may designate the entire assigned area as an obstacle zone with the unit boundaries defining the geographic limits of the zone. Obstacle zones do not cross brigade combat team boundaries. Commanders assign obstacle zones to a single subordinate unit to ensure unity of effort, just as they would when assigning defensive assigned areas or BPs. This keeps tactical obstacle responsibility along the same lines as control of direct and indirect fires. This does not normally create vulnerabilities on the boundary between units since the commander bases the assignment of both subordinate assigned areas and obstacle zones on defined avenues of approach.

17-59. A commander does not normally assign an obstacle effect (block, fix, turn, or disrupt) to an obstacle zone. This allows subordinate commander's flexibility in using obstacles. The commander should establish construction and resourcing priorities between different obstacle zones.

Obstacle Belts

17-60. An *obstacle belt* is a brigade-level command and control measure, normally depicted graphically, to show where within an obstacle zone the ground tactical commander plans to limit friendly obstacle employment and focus the defense (JP 3-15). It assigns an intent to the obstacle plan and provides the

necessary guidance on the overall effect of obstacles within a belt. Commanders plan obstacle belts within assigned obstacle zones to grant obstacle emplacement authority to their major subordinate units. Obstacle belts also focus obstacles to support the brigade scheme of maneuver and ensure that obstacles do not interfere with the maneuver of any higher headquarters.

17-61. Obstacle belts are restrictive. Commanders can direct a subordinate unit to construct one or more obstacles to create an effect in an area. They do not specify the type or number of obstacles. Obstacle belts do not cross unit boundaries for the same reasons discussed in obstacle zones. (See discussion beginning in paragraph 17-57 for more information). A single unit is responsible for a belt; however, a commander may assign more than one belt to a unit.

17-62. A brigade combat team commander normally assigns an obstacle effect and priority to each obstacle belt. As with the obstacle zone, the target and relative location are apparent. Adding a specific obstacle effect gives purpose and direction to subordinate battalion obstacle planning. When brigade combat team commanders assign an obstacle effect, they ensure that obstacles within the belt complement the brigade combat team fire plan.

17-63. A corps, division, or brigade commander may authorize emplacement certain types of protective obstacles outside obstacle zones or belts. Normally, the commander authorizes company team and base commanders to emplace protective obstacles within 500 meters (546 yards) of their positions, depending on the mission variables. The commander usually limits the types of obstacles a unit may use for protective obstacles that are outside obstacle control measures. For example, the commander may allow only wire- and command-detonated mines outside of control measures for protective obstacles. Furthermore, commanders may require that minefields be fenced on all sides, after obtaining legal guidance concerning current rules and policies on mine emplacement, to prevent friendly fire incidents.

Obstacle Groups

17-64. *Obstacle groups* are one or more individual obstacles that provide a specific obstacle effect. Battalions use obstacle groups to ensure that company teams emplace individual obstacles supporting their maneuver schemes. In rare cases, brigades, divisions, or even corps may use obstacle groups for specific tactical obstacles. Units integrate obstacle groups with their direct and indirect fire plans. Brigade and maneuver battalion commanders plan their placement within designated obstacle zones or belts, respectively.

17-65. Unlike obstacle zones or belts, obstacle groups are not areas but relative locations for actual obstacles. Commanders normally show obstacle groups using the obstacle effect symbols. When detailed planning is possible (including detailed ground reconnaissance), commanders may show obstacle groups using individual obstacle symbols.

17-66. Company team commanders and engineers can adjust obstacles in the group if the intent and link to the fire plan remain intact. They make minor changes to obstacles and fire control measures based on terrain realities. For example, a commander may move a fixing obstacle group and direct fire TRPs 100 meters (109 yards) to avoid having them masked by rolling terrain. However, a major change to the obstacle group location requires the approval of the commander who ordered the obstacle group emplacement.

Individual Obstacles

17-67. Each type of individual obstacle, such as abatis and antitank ditches, has its associated symbol. Once a unit constructs an individual obstacle, it records the obstacle's location and reports its emplacement through the chain of command. Commanders must report individual obstacles in sufficient detail so that any unit moving through the area can bypass or reduce the obstacle without excessive risk. Each headquarters is responsible to ensure the dissemination of exact obstacle locations throughout its organization. Commanders rarely depict individual obstacle symbols on maps above the battalion echelon. This publication does not depict individual obstacle symbols. TM 3-34.85/MCRP 3-17A discusses individual obstacles.

Obstacle Restrictions

17-68. Commanders may use obstacle restrictions to provide additional obstacle control and to limit the specific types of obstacles used, such as restricting the use of buried mines. These restrictions ensure that subordinates do not use obstacles with characteristics that impair future operations. These restrictions also allow commanders to focus the use of limited resources for the main effort by restricting their use elsewhere.

Obstacle restricted areas is a command and control measure used to limit the type or number of obstacles within an area (JP 3-15). The commander with emplacement authority uses obstacle restricted areas to restrict obstacle placement. The graphic for obstacle restricted areas depicts the impacted area, the unit imposing the restriction, and the restrictions in effect. (See ATP 3-90.8/MCTP 3-34B for more information on obstacle control measures.)

Obstacle-control measure	Emplacement authority		Obstacle graphic	Examples
	From	To		
Zone	Corps DIV	Corps BDE		
Belt	Corps DIV BDE	BDE TF		
Group	DIV BDE TF	BDE TF Co/ Troop		
Restrictions	Incorporated into the emplacement authority		Examples: No buried mines; obstacle free; No scatterable mine; scatterable mine short duration only; reserve obstacle	
BDE Co	brigade company	DIV TF	division task force	

Figure 17-1. Obstacle control measures and intent symbols

Chapter 18

Mobility

Mobility is a combined arms activity. This chapter focuses on mobility and the different mission and tasks associated with combined arms mobility.

MOBILITY

18-1. Freedom to move and maneuver in an operational area is essential to the application of combat power and mission accomplishment. The operational environment will present numerous challenges to movement and maneuver. Combined arms mobility overcomes these challenges by integrating the framework of assured mobility in support of offensive, defensive, and other enabling operations.

18-2. *Mobility* is a quality or capability of military forces which permits them to move from place to place while retaining the ability to fulfill their primary mission (JP 3-36). Mobility is necessary for the conduct of successful offensive operations. When discussing Army tactics, mobility includes both movement and maneuver, generally, applying to both collectively unless stated as movement or maneuver. Its major focus is to enable friendly forces to move and maneuver freely on the battlefield or an assigned area. Units require the capability to move, exploit, and pursue the enemy across a wide front.

18-3. When attacking, the commander wants to concentrate the effects of combat power at select locations. This may require the unit to improve or construct combat trails through areas where routes do not exist. The surprise achieved by attacking through an area believed to be impassable may justify the effort expended in constructing these trails. The force bypasses existing obstacles that are identified before starting the offense instead of breaching them, when possible. However, this must be done with caution because it might give the enemy an advantage. Bypassed obstacles are reported to higher headquarters, and they are marked as the situation allows.

18-4. Maintaining the momentum of an offensive operation requires the attacking force to quickly pass through obstacles as it encounters them. This involves a deliberate effort to capture enemy bridges and other enemy reserved obstacles intact. In some cases, using air assault and airborne forces is an effective technique to accomplish this goal. Hasty breaching is the preferred method when time and resources are unavailable to conduct a deliberate breach. The commander plans how and where subordinate forces conduct breaching.

18-5. Rivers and other gaps larger than navigable by mounted and dismounted forces remain major obstacles despite advances in high-mobility vehicles and increased aviation support. Wet-gap crossings are among the most critical, complex, and vulnerable combined arms missions. While units conduct hasty crossings, when possible, they continue the attack with speed. Operational risk is much higher with hasty crossings, and staff planning must still incorporate the breaching tenets and gap crossing fundamentals. The size of the gap and the enemy and friendly situation will dictate the specific tactics, techniques, and procedures used in conducting the crossing. Gap crossing includes the deliberate, hasty, and covert capabilities. Initial combat crossings may be further developed in support of LOCs.

MOBILITY TASKS

18-6. *Mobility tasks* are combined arms activities that mitigate the effects of obstacles to enable freedom of movement and maneuver (ATP 3-90.4/MCTP 3-34A). There are six primary mobility tasks:

- Breach.
- Gap crossing.
- Clear (areas and routes).
- Combat roads and trails.

- Construct and maintain forward airfields and landing zones.
 - Traffic management and enforcement.
-

Note. Chapter 18 only discusses breaching, gap crossing, and clearing. For additional information on combat roads and trails, forward airfield and landing zones, and traffic management and enforcement, see ATP 3-90.4/MCTP 3-34A.

18-7. Mobility tasks are conducted to enable friendly forces to move and maneuver freely on the battlefield. Mobility tasks depend on information collection and intelligence. Breaching and gap crossing in support of maneuver are primarily conducted using combat engineer units that have, or are augmented by, gap-crossing equipment. Gap-crossing equipment includes the rapidly emplaced bridge system that is organic to the Stryker BCT and the joint assault bridge organic to the armored BCT. Units may also receive gap crossing assets from echelons above brigade such as those typically found in a multi-role bridge company. These echelons above brigade assets may include the dry support bridge fixed bridging for dry-gaps or the improved ribbon bridge, which is also capable of rafting, for wet-gap crossing.

18-8. Typically, BCTs are able to execute breaches, dry-crossing, and wet-gap crossings up to a certain width with little assistance from a division or corps headquarters. Any wet-gap crossing that requires a multi-role bridge company will usually be at least a division level operation and require additional assistance from a corps. Engineers at all echelons and can conduct clearing operations.

BREACH

18-9. A successful obstacle breach is a synchronized and rehearsed combined arms activity, under the control of the maneuver unit. Breaching is a mission undertaken to execute a breach. Breaching allows maneuver despite the presence of the enemy reinforcing obstacles with direct and indirect fire. For additional information, see paragraph Chapter 20B-7.

18-10. Breaching begins when friendly forces detect an obstacle and begin to apply the breaching fundamentals. Breaching ends when battle handover occurs between follow-on forces and the unit conducting the breach. A breach includes the reduction of minefields, other explosive hazards, and other obstacles. Generally, breaching requires significant combat engineer support to accomplish.

18-11. *Reduction* is the creation of lanes through a minefield or obstacle to allow passage of the attacking ground force (JP 3-15). A *lane* is a route through, over, or around an enemy or friendly obstacle that provides passage of a force (ATP 3-90.4/ MCTP 3-34A). The route may be reduced and proofed as part of breaching, constructed as part of the obstacle, or marked as a bypass. The number and width of lanes vary depending on the enemy situation, size and composition of the assaulting force, and the scheme of movement and maneuver. *Proof* is the verification that a lane is free of mines or explosive hazards and that the width and trafficability at the point of breach are suitable for the passing force (ATP 3-90.4/ MCTP 3-34A). Proofing can be conducted visually, electronically, or mechanically. Some mines are resistant to reduction assets and may require a combination of breaching techniques; for example, magnetic and double impulse mines may resist a mine clearing line charge blast. Proofing is an important component of breaching considering the wide variety of explosive obstacle threats in use today.

Breach Control Measures

18-12. The *breach area* is a defined area where a breach occurs (ATP 3-90.4/ MCTP 3-34A). It is established and fully defined by the higher headquarters of the unit conducting the breach. Within the breach area is the point of breach, the reduction area, the far side objective, and the point of penetration. Their definitions follow in paragraphs 18-13 through 18-16.

18-13. *Point of breach* is the location at an obstacle where the creation of a lane is being attempted (ATP 3-90.4/ MCTP 3-34A). Initially, points of breach are planned locations only within the directed breach area. Normally, the breach force determines the actual point of breach during the breach.

18-14. *Reduction area* is a number of adjacent points of breach that are under the control of the breaching commander (ATP 3-90.4/ MCTP 3-34A). The commander conducting the attack determines the size and

location of the reduction area that supports the seizure of a point of penetration. The reduction area is indicated by the area located between the arms of the control graphic for breach. As shown in figure 18-1, the length and width of the arms extend to include the entire depth of the area that must be reduced.

18-15. *Far side objective* is a defined location oriented on the terrain or on an enemy force that an assaulting force seizes to eliminate enemy direct fires to prevent the enemy from interfering with the reduction of the obstacles and allows follow-on forces to move securely through created lanes (ATP 3-90.4/ MCTP 3-34A). A far side objective can be oriented on the terrain or on an enemy force. The higher headquarters assigns the objective; however, the attacking unit normally subdivides the objective into smaller objectives to assign responsibilities and to control and focus the assault of subordinate forces. When breaching as part of a larger force, seizing the far side objective provides the necessary maneuver space for the higher unit follow-on forces to move securely through the lanes, assemble or deploy, and continue the attack without enemy interference.

18-16. *Point of penetration* is the location, identified on the ground, where the commanders concentrate their efforts at the weakest point of the enemy to seize a foothold on the far side objective (ATP 3-90.4/ MCTP 3-34A). This is achieved along a narrow front through maneuver and direct and indirect fires that are accurately placed against enemy forces. A commander conducting a breach establishes a point of penetration that supports planning locations for the reduction area and the seizure of the far side objective.

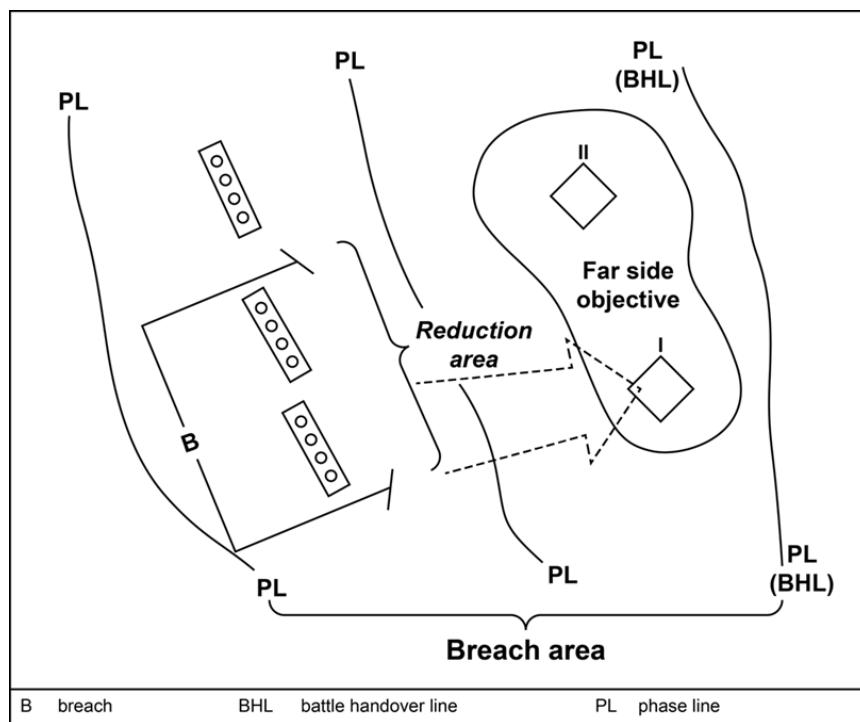


Figure 18-1. Breach

Breach Types

18-17. Breaching activities must be adapted to best exploit the situation. The level and type of planning distinguish which of the three general types of breaching:

- Deliberate.
- Hasty.
- Covert.

Deliberate Breach

18-18. A *deliberate breach* is the systematically planned and executed creation of a lane through a barrier or obstacle (ATP 3-90.4/MCTP 3-34A). Typically, a unit uses a deliberate breach against a strong defense or complex obstacle system. It is characterized by the most planning, preparation, and buildup of combat power on the near side of obstacles. It is similar to a deliberate attack, requiring detailed knowledge of the defense and obstacle systems. Subordinate units are task-organized to accomplish the breach. The breach may require securing the far side of the obstacle with an assault force before or during reduction.

Hasty Breach

18-19. A *hasty breach* is the creation of lanes through enemy minefields by expedient methods such as blasting with demolitions, pushing rollers or disabled vehicles through the minefields when the time factor does not permit detailed reconnaissance, deliberate breaching, or bypassing the obstacle (JP 3-15). A hasty breach is an adaptation to the deliberate breach and is conducted when less time is available. It may be conducted during a deliberate or hasty attack due to lack of clarity on enemy obstacles or changing enemy situations.

18-20. An in-stride breach is a type of hasty breach used to describe the situation when a subordinate unit is expected to be able to organize for a conduct a hasty breach with its organic or task-organized assets, without affecting the higher unit scheme of movement and maneuver or commander's intent. In-stride breach is generally not used below the company level since a platoon is unable to form effective support, breach, and assault forces with its squads.

Covert Breach

18-21. A covert breach is the creation of lanes through minefields or other obstacles that is planned and intended to be executed without detection by an adversary. Its primary purpose is to reduce obstacles in an undetected fashion to facilitate the passage of maneuver forces. A covert breach is conducted when surprise is necessary or desirable and when limited visibility and terrain present the opportunity to reduce enemy obstacles without being seen. Through surprise, the commander conceals their capabilities and intentions and creates the opportunity to position support and assault forces to strike the enemy while unaware or unprepared. The support force does not usually provide suppressive fire until the initiation of the assault or in the event that the breach force is detected. Covert breaches are usually conducted during limited visibility. It uses elements of deliberate and hasty breaching, as required.

Breaching Tenets

18-22. Successful breaching missions are characterized by applying breaching tenets. See table 18-1. These tenets are integrated into the planning process. The tenets are—

- Intelligence.
- Breaching fundamentals (suppress, obscure, secure, reduce, and assault [SOSRA]).
- Breaching organization.
- Mass.
- Synchronization.

See ATP 3-90.4/MCTP 3-34A for more information on the breaching tenets.

Breach Fundamentals

18-23. Breaching fundamentals are integrated into the planning process and applied when a defended obstacle must be reduced. This includes breaching, gap crossing, and route clearance missions. The fundamentals are described by the memory aid *SOSRA*:

- Suppress.
- Obscure.
- Secure.
- Reduce.

- Assault.

See ATP 3-90.4/MCTP 3-34A for information on breaching.

Table 18-1. Breaching tenets

Breaching Tenets	Actions	
Intelligence	<p>Template enemy obstacles on the SITEMP for each enemy COA during IPB based on—</p> <ul style="list-style-type: none"> The enemy ability to emplace obstacles based on its capabilities (manpower, equipment, and materials) and time available. The effects of terrain and weather. The range of enemy weapon systems covering obstacles and emplacing scatterable mines. <p>Develop information requirements on enemy engineer units, equipment, activities, and obstacles (location, composition, and mine types).</p> <p>Integrate information requirements and engineer reconnaissance capabilities into the information collection plan.</p>	
Breaching fundamentals (SOSRA)	<p>Implement fire control measures to allow the support force to provide effective direct and indirect suppressive fires (suppress).</p> <p>Determine the placement (wind condition), density, and timing of placing obscurants on enemy positions and placing screening obscuration between the enemy and the reduction area (obscure).</p> <p>Resource the breach force based on the combat power of enemy forces overwatching the obstacle (secure).</p> <p>Determine the number and width of lanes based on the scheme of movement and maneuver (one lane per company and two lanes per battalion), determine reduction methods (explosive, mechanical, or physical), and establish a lane marking system (reduce).</p> <p>Complete the breach by destroying the enemy on the far side of the obstacle (assault).</p>	
Breaching organization	<p>Suppress enemy direct fire and observed indirect fires on the reduction area (support force).</p> <p>Control indirect fires and indirect fire obscuration within the breach area (support force).</p> <p>Prevent the enemy from repositioning or counterattacking to place direct fires on breach force (support force).</p> <p>Create and mark lanes for the breach element (breach force).</p> <p>Secure the obstacle near side and far side for the security element (breach force).</p> <p>Report lane status and location (breach force).</p> <p>Assault through the obstacle and destroy the enemy on the far side (assault force).</p>	
Mass	<p>Mass effects to create enemy weakness at the POB.</p> <p>Prevent enemy from massing effects at the POB.</p>	
Synchronization	<p>Conduct detailed reverse planning.</p> <p>Communicate clear instructions to subordinate units.</p> <p>Provide effective command and control.</p> <p>Perform combined arms rehearsals.</p>	
COA IPB	<p>course of action (Army) intelligence preparation of the battlefield</p>	<p>POB SITEMP SOSRA</p> <p>point of breach situation template suppress, obscure, secure, reduce, and assault</p>

Suppress

18-24. Suppressive fires in sufficient volume serve to secure the reduction area. The purpose of suppression during breaching is to protect forces reducing obstacles and maneuvering through the reduction area.

Successful suppression generally triggers the rest of the actions at the POB. Fire control measures ensure that all fires are synchronized with other actions at the POB. The mission of the support force is to suppress the enemy overwatching the obstacle. The breach force also provides additional suppressive fires as the situation dictates; however, it's primary roles are first, to secure the near side objective, and then to reduce the obstacle.

18-25. In complex or restrictive terrain, effective suppression may have to be achieved through close-in fighting. Defenders will tend to be more fortified when defending in urban terrain and may be more difficult to suppress. Forces tasked with suppressing the enemy may find it necessary to seize terrain at or on the far side of the obstacle to achieve their mission. Fighting to achieve enemy suppression will likely be decentralized, and the ability to use indirect fires will be restricted due to the proximity of friendly and enemy forces and civilians.

Obscure

18-26. Breach forces conduct breaching using available natural cover and concealment. They employ battlefield obscuration, which hampers enemy observation and target acquisition of the breach force as it reduces the obstacle and the assault force as it passes through the obstacle. Obscuration requires close coordination, control, and detailed planning to maximize the desired effects on the enemy while not degrading friendly capabilities. This is especially important when conducting breaching in complex or restrictive terrain due to the close-in nature of the fighting. In urban areas, indirect delivered obscuration and suppressive fires will be more restricted. In some situations, using mortars (because of the ability to fire high-level trajectory), smoke pots, and smoke grenades rather than artillery-fired obscurants may be more effective. Planners consider the effects of wind and the time and assets required to build and maintain effective obscuration for the desired duration. Using indirect fire to provide obscuration often competes with other mission requirements and requires priorities to be established. Obscuration employed in multiple locations and at various times can confuse the enemy on the specific location and timing of breaching. (See ATP 3-11.50 for more information on obscuration.)

Secure

18-27. Forces conducting a breach secure the reduction area to prevent the enemy from interfering with obstacle reduction and the passage of the assault force through the created lanes. The reduction area must be secured before attempting to reduce the obstacle. The higher headquarters breaching unit is responsible for isolating the breach area by fixing enemy forces in their current positions, attacking enemy reserves in-depth, and providing counterfire.

18-28. Identifying the extent of the enemy defense is critical in selecting the appropriate technique to secure the point of breach. The point of breach is secured before reducing the obstacle.

18-29. The breach force is resourced with sufficient maneuver assets to provide local security against the enemy that the support force cannot adequately engage. Elements within the breach force that secure the reduction area may also be used to suppress the enemy once reduction is complete. Breaching elements prepare their breaching assets for employment throughout the secure phase.

Reduce

18-30. Normally, engineers and reduction assets (mobility capabilities) are used to reduce an obstacle. The number and width of lanes needed depend on the enemy situation, terrain, size and composition of the assault force, and scheme of maneuver. The lanes must allow the assault force to pass through the obstacle rapidly. In complex or restrictive terrain, the assault force may be constrained to a single lane and the assault force commander must ensure that the sequencing of forces through the lane is appropriate to achieve the mission. The breach force will reduce, proof, mark, and report lane locations and the lane marking method to higher headquarters. Follow-on units will further reduce or clear the obstacle, as required. Reduction begins when effective suppression and obscuration have been established, the obstacle has been confirmed, and the reduction area is secure.

Assault

18-31. A breach is complete when the attacking force has assaulted through the obstacle, seized the far side objective, eliminated enemy direct and observed indirect fires on the reduction area and, if planned, the battle handover with follow-on forces. Engineers support the flow of combat forces through the lanes or bridges to build combat power quickly on the far side. These forces may entail follow-on breakout forces if the initial assault forces culminate or establishes defensive areas to manage operational reach and sustainment for future operations.

Breach Organization

18-32. Units organize into the following three forces to conduct a breach:

- Support.
- Breach.
- Assault.

Establishing the breach organization facilitates the application of the breaching fundamentals. Table 18-2 shows the responsibilities of the support, breach, and assault forces.

Table 18-2. Support, breach, and assault force responsibilities

Breach Organization	Responsibilities
Support force	<p>Suppress an enemy capable of placing direct fires on the reduction area to protect the breach force as it reduces the obstacle and the assault force as it passes through the created lane.</p> <p>Fix enemy forces to isolate the reduction area.</p> <p>Control obscuration.</p> <p>Control other suppressive effects such as electromagnetic warfare and air and missile defense.</p>
Breach force	<p>Reduce, proof, and mark the necessary number of lanes through the obstacle.</p> <p>Report the status and location of created lanes.</p> <p>Provide local security on the near side and far side of the obstacle.</p> <p>Provide additional suppression of enemy overwatching the obstacle.</p> <p>Provide additional obscuration in the reduction area.</p> <p>Assist the passage of the assault force through created lanes.</p>
Assault force	<p>Seize the far side objective.</p> <p>Reduce the enemy protective obstacles.</p> <p>Provide clear routes from the reduction area to the battle handover line for follow-on forces.</p> <p>Prevent the enemy from placing direct fires on follow-on forces as they pass through the created lanes.</p> <p>Conduct battle handover with follow-on forces.</p> <p>Provide reinforcing fires for the support force.</p> <p>Destroy the enemy on the obstacle far side that is capable of placing direct fires on the reduction area.</p>

Planning a Breach

18-33. Units use the reverse planning process when planning a breach. The reverse planning process begins with actions on the objective and moves backward to the LD, since seizing an objective is typically the decisive point at the tactical level and directly tied to mission accomplishment. Maneuver planners use reverse planning and force ratios to determine the size and composition of the maneuver forces that will perform the tasks that support the main and supporting effort for each COA. Actions on the objective drive the size and composition of the force that conducts the final assault onto the objective as part of an attack, which dictates lane requirements (the number and location of required lanes). Lane requirements and the

composition of obstacles drive the amount and type of reduction assets needed by the breach force. The engineer staff officer and other planners use reverse planning to determine how best to allocate mobility assets within the arrayed forces to facilitate the scheme of movement and maneuver for each COA. The engineer staff officer focuses on the allocation of reduction assets. The situational template depicting enemy direct- and indirect fire coverage of template enemy obstacles determines the size and composition of the support force. Reverse planning for breaching is performed using the following steps:

- Step 1. Identify available reduction assets.
- Step 2. Template enemy obstacles.
- Step 3. Understand the scheme of movement and maneuver.
- Step 4. Identify the number of required breach lanes.
- Step 5. Identify the assets required to reduce, proof, and mark lanes.
- Step 6. Task-organize reduction assets within the maneuver force.

See ATP 3-90.4/MCTP 3-34A for more information on the reverse planning process for a breach.

18-34. Successful breaching depends on preparation and planning. During preparation, units continue to review IPB products against the current situation and redirect information collection assets to focus on the most important requirements remaining, while emphasizing the commander's critical information requirements. Plans are continuously refined based on IPB updates and reporting from information collection assets.

18-35. Key preparation activities for breaching include—

- Planning refinement based on IPB updates and reporting from information collection assets, to include adjustments to the breach organization (support, breach, and assault forces), the scheme of movement and maneuver, and the fire support plan.
- Implementing the task organization (breach organization), to include coordinating the linkup of breaching assets (units and equipment) with the supported unit to allow combined arms breaching rehearsals to be conducted.
- Performing pre-combat checks and inspections.
- Rehearsals with key breaching assets.
- Position and staging of breaching assets.

18-36. A breaching rehearsal site should reflect the actual obstacle system in as much detail as possible based on obstacle intelligence. At a minimum, rehearsals should include a leader and key personnel walk-through and individual rehearsals by support, breach, and assault forces. As time permits, full-scale rehearsals should be conducted. When possible, friendly forces rehearse the mission under the same conditions (obscuration and darkness) expected during the actual mission. Rehearsals should also include contingencies such as enemy counterattacks and attacks by enemy indirect-fire systems, attack helicopters, other air assets, and enemy use of CBRN material. If updates become available after the last possible rehearsal, the information should be immediately passed on to affected elements. A key output of rehearsals is that all participants understand unit-specific brevity codes, and signals associated with the breach.

18-37. Executing task organization changes of critical reduction assets during mission execution may be required. This situation presents even more challenges, especially with regard to terrain management, because unit positions and fire control measures may have shifted. War gaming these actions during mission planning and rehearsals, implementing the necessary control measures, and coordinating instructions are critical to avoid fratricide.

Execution

18-38. Execution involves monitoring the situation, assessing the mission, and adjusting the order as needed. When the situation deviates from the order, commanders direct adjustments to exploit opportunities and counter threats. Adjustments that may be necessary during breaching might include—

- Allocating additional assets to the support, breach, or assault force due to attrition.
- Changing the location of the POB or point of penetration.
- Modifying the scheme of movement and maneuver and changing the order of the units passing through the created lane.

18-39. For breaching, the commander focuses on monitoring, assessing, and adjusting the critical events of a breach that were rehearsed. The critical events that are generally associated with a breach are—

- Occupying support by fire positions.
- Suppressing the far side objective.
- Employing obscuration.
- Reducing the obstacle.
- Assaulting the far side objective.
- Consolidating on the far side objective.
- Passage of follow-on forces.

GAP CROSSING

18-40. A *gap* is a ravine, mountain pass, river, or other terrain feature that presents an obstacle that may be bridged (ATP 3-90.4/MCTP 3-34A). Gap crossing in support of maneuver is similar to a breach in that the force is vulnerable while moving through a lane or across a gap. Maneuver units are forced to break movement formations, concentrate within lanes or at crossing points, and reform on the far side before continuing to maneuver. While much of the terminology and planning associated with gap crossing is the same as that used in a breach, gap crossing and breach differ in scope. The amount and type of assets involved also differ. Combined arms breaching sometimes includes gap crossings as a reduction method. Since the primary focus of planning and preparation is on the breach, they are typically discussed as a subordinate part of the breach rather than as a separate gap crossing.

18-41. Gaps will exist in the operational environment and present a significant challenge to movement and maneuver. A *gap crossing* is the projection of combat power across a linear obstacle (wet or dry gap) (ATP 3-90.4/MCTP 3-34A). Historically, gap crossings were described only in the context of crossing rivers. A river crossing is a special type of gap crossing required before ground combat power can be projected and sustained across a water obstacle. A centrally planned and controlled offensive mission requires the allocation of specialized crossing resources and a force dedicated to the security of the bridgehead. While river crossing is still considered one of the most challenging of gap crossings, a river is only one type of gap that can obstruct freedom of mobility. The fundamentals of crossing any type of gap are essentially the same as those fundamentals that have been associated with river crossing. River crossings are simply one focused set of challenges among all of the possible types of gap crossings. A gap crossing encompasses wet or dry gaps in any type of environment or uses organic and augmenting engineer (and other) elements best suited to accomplish the mission.

Types of Gap Crossing

18-42. The gap crossing types are—

- Deliberate.
- Hasty.
- Covert.

18-43. Each gap crossing type has a general list of conditions that help define the category. The planning requirements for each type of gap crossing are similar. However, the required degree of detail and necessary conditions for a high degree of success will vary based on the type and the unique features associated with a crossing mission. In all cases, the ability to conduct any type of crossing begins by providing a crossing force

with the necessary gap-crossing means and control elements and identifying those requirements early during planning.

Note. A retrograde gap crossing is not a fourth type of gap crossing. In reality, it is merely a variation of a deliberate or hasty gap crossing, and it is typically performed as a deliberate gap crossing. It may be performed with or without enemy pressure on the crossing force. Clearly, it is more difficult when performed under enemy pressure.

Deliberate Gap Crossing

18-44. A *deliberate crossing* is the crossing of an inland water obstacle or other gap that requires extensive planning and detailed preparations (ATP 3-90.4/MCTP 3-34A). A deliberate gap crossing is classified as wet or dry, and it is usually accomplished with one or more bridge companies in support of combat maneuver. It is normally accomplished when a hasty crossing is not feasible or has failed. Any deliberate crossing requires detailed reconnaissance, detailed planning, coordination of fire plans, extensive preparations and rehearsals, and significant engineer assets. While a BCT is capable of making a deliberate crossing, this type of crossing normally requires a higher headquarters to assist in planning and command and control since it generally involves more than one BCT. Deliberate crossings can involve general and combat engineering elements. Some additional considerations for conducting deliberate gap crossings include the—

- Complexity and the assets required to accomplish the crossing.
- Opposition from a defending enemy and obstacle severity.
- Necessity to clear entry and exit crossing points of enemy forces.

18-45. Normally, deliberate crossings involve gaps that are greater than 65 feet (20 meters). A gap of this length limits the effectiveness of tactical bridging assets, and the gap will typically require other bridging assets. Crossing gaps of this magnitude normally require support bridging in the form of float bridging (wet-gap) or other types of standard bridging (dry-gap).

Deliberate Wet-Gap Crossing

18-46. The deliberate wet-gap crossing is one that requires the use of rafting (non-bridging) and bridging assets. The use of assault craft (boats and helicopters), rafting, or ferries and the emplacement of bridging assets may occur sequentially or concurrently. The objective in deliberate wet-gap crossings is to project combat power to the exit bank of a river or other type of significant water obstacle at a faster rate than the enemy can concentrate forces for a counterattack. Typically, wet-gap crossings are one of the most difficult types. They generally require significant augmentation of mobility support assets.

Deliberate Dry-Gap Crossing

18-47. Deliberate dry-gap crossings are usually determined by the strength of the enemy defense and the magnitude of the gap. These assets are labor intensive and expose personnel to enemy fire during construction, while providing stable gap-crossing support for continuous mobility.

Hasty Gap Crossing

18-48. A *hasty crossing* is the crossing of an inland water obstacle or other gap using the crossing means on hand or those readily available and made without pausing for elaborate preparations (ATP 3-90.4/MCTP 3-34A). Hasty gap crossings are usually focused on a combined arms activity to project combat power across a terrain feature (wet or dry) that can be overcome by self-bridging assets within the BCT. These assets may be organic, provided to the BCT as augmentation, or found as expedient crossing materials within the assigned area. Typically, a hasty gap crossing is a gap that is under 20 meters (65 feet) or less in width. They are normally accomplished with tactical bridging assets.

18-49. Hasty gap crossings are most often used when enemy resistance is weak, and the gap is not a severe obstacle. Hasty gap crossings also feature decentralized control at the BCT level and below, using a task-organized mobility augmentation company, organic assets, or expedient crossing means at multiple sites along a broad front. Due to the limited organic crossing assets, additional support from echelons above the

BCT is often necessary. That support is only available when those headquarters have taken purposeful action to position the assets at the right time and place and to integrate them with the maneuver force to make a hasty gap crossing feasible. Coordination for these assets must be made early in the planning phase. Some additional considerations for conducting hasty gap crossings include the—

- Size of the gaps in the maneuver area.
- Availability of existing bridges, fords, bypasses, or expedient crossing materials.
- Recovery of assets.
- Aviation (rotary-wing) asset availability.

18-50. A hasty crossing is conducted in an effort to maintain the momentum of the maneuver force by quickly massing combat power on the far side of the gap with no intentional pause. This promotes speed, facilitates surprise, and provides a continuation of maneuver momentum. The planning process is critical to identify gap locations and their dimensions and request or allocate the necessary assets to ensure unimpeded movement.

18-51. Hasty crossings are planned, organized, and executed much like a hasty breach. The unit must consider the integration of the crossing assets in its movement formation, redundancy in crossing means, traffic flow across the gap, and the recovery of the crossing assets. Units task-organize their force in a manner that supports the overall mission and facilitates a successful gap crossing followed by a quick recovery. To accomplish gap crossing efficiently, bridging assets should be in a position within the maneuver formation where positive control can be maintained. This is an important consideration, as all gap-crossing equipment does not have the necessary communications means to maneuver effectively as maneuver formations. Additionally, some of the gap-crossing equipment is less maneuverable and slower than the combat vehicles support and it is also less survivable in some cases. This may slow down the movement speed for the maneuver elements. In spite of these challenges, proper planning and command and control can minimize these negative impacts.

18-52. Two other considerations are the desirability for redundancy of crossing equipment and the capability to rapidly recover the crossing means. Tactical bridging is designed with these considerations in mind. Commanders should plan on the use of multiple crossing means, depending on the criticality of the crossing and the time available. The terrain, transporter, and bridge maintenance, as well as crew training, rehearsals, and experience can impact bridge launch and recovery.

18-53. The recovery of crossing assets and transition after the crossing is important for units to sustain their momentum. Typically, units can expect crossing assets to recover and join the maneuver force on the far side of the gap. The units have at least two options:

- The unit can halt movement on the far side of the gap and wait for the crossing asset to recover the bridge.
- The unit can continue movement and leave an adequate security force during the recovery, which can also assist the crossing asset in rejoining the maneuver force.

If the assets are intended to stay with the unit, consideration must be given to follow-on support or LOC bridging assets to ensure that support or follow-on forces can adequately continue to follow the maneuver force. The higher headquarters may direct the unit to keep its crossing assets in place for follow-on forces to use, which will degrade or eliminate that unit's ability to cross any subsequent gaps unless it has been resourced with sufficient tactical bridging. If the higher headquarters intends for tactical bridging to remain in place, it must augment the unit with sufficient assets to accomplish this task while retaining sufficient tactical gap-crossing capability to facilitate continued maneuver and movement.

18-54. Because a gap crossing constricts and splits the maneuver force at the crossing site, the plan must be flexible enough for the commanders or their designated representative to execute decisions based on acceptable opportunity and threat variances. The unit's command post can assist the command group by controlling the execution of the crossing and maintaining a status of the location and operational readiness of the crossing assets.

Hasty Wet-Gap Crossing

18-55. The depth and width of the wet gap, bank conditions, and the current velocity are major factors that impact the ability of a maneuver unit to conduct a hasty wet-gap crossing. These factors will determine if the maneuver force can cross by fording, if expedient materials can be used, or if specific bridging assets are required. Identifying wet gaps early and deploying the required resources allow hasty crossings of known or anticipated gaps to occur.

Hasty Dry-Gap Crossing

18-56. An antivehicle ditch, crater, dry riverbed, partially blown bridge, or similar obstacle is normally what maneuver forces encounter as a dry-gap crossing obstacle. Maneuver forces can use equipment to push down the sides of ditches or fill in craters. Substantial fill material placed in the dry gaps allows the passage of combat tracked vehicles. The crossing site can be improved and maintained for wheeled traffic use by follow-on forces.

In-Stride Gap Crossing

18-57. The in-stride gap crossing is a variant of the hasty gap (wet or dry) crossing that consists of a rapid gap-crossing adaptation conducted by forces organic to (or task-organized with) the attacking force. It consists of preplanned, well-trained, and well-rehearsed gap-crossing battle drills and the use of the unit SOPs. The in-stride gap crossing takes advantage of surprise and momentum to bridge or defeat gaps and relies on good and timely reconnaissance for its success as well. The force uses the in-stride gap crossing against weak defenders or very simple gaps and executes the battle drills on the move. Attacking maneuver forces generally move configured to be able to execute an in-stride gap crossing, except when a deliberate gap crossing is planned. In-stride gap crossings may occur when a gap is not the same as the unit planned or anticipated. To conduct an in-stride crossing, the unit must be well trained, have established SOPs, and be task-organized with the necessary tactical bridging assets and capabilities.

18-58. Generally, the battalion is the principal unit to plan, coordinate, and control an in-stride gap crossing; but a company will normally conduct the actual crossing. The battalion will normally designate specific support forces, and it is responsible for synchronizing the breaching fundamentals as they apply to a gap crossing through detailed planning and well-rehearsed immediate action drills. (See paragraph 18-23 for breaching fundamentals.)

18-59. The commander planning for an in-stride gap crossing must also plan for a transition to a deliberate gap crossing should an in-stride gap crossing be unsuccessful. An unclear situation (enemy and exact gap dimensions and conditions) will make it necessary for several lead company-sized units to be capable of conducting an independent gap crossing. Accurate and timely reconnaissance of the gap (obstacle) and the enemy force that defend the gap set the conditions for properly focusing the location of the in-stride gap crossing.

Covert Gap Crossing

18-60. A *covert crossing* is a planned crossing of an inland water obstacle or other gap in which the crossing is intended to be undetected (ATP 3-90.4/MCTP 3-34A). The primary purpose of the covert crossing is to facilitate undetected infiltration of the far side of a gap. Battalion and smaller forces normally conduct a covert crossing. It is used when surprise is essential to infiltrate over a gap and when limited visibility and terrain present the opportunity to reduce or defeat the enemy obstacle (gap) without being seen. Through surprise, the commander conceals capabilities and intentions and creates the opportunity to position support and assault forces to strike the enemy unaware or unprepared. Like a covert breach, it is normally conducted by a battalion or smaller unit (dismounted or in wheeled vehicles). A BCT is typically too large to maintain the level of stealth necessary to conduct a successful covert gap crossing. A covert gap crossing requires a level of detailed planning, information collection, and command and control that is normally beyond the capability of a company.

18-61. A covert gap crossing can be used in a variety of situations to support various missions but should be considered (as opposed to deliberate or hasty) only when there is a need or opportunity to cross a gap without being discovered. The covert crossing can be used to cross forces that will support a follow-on

crossing of a larger or similar size element; however, it is planned and conducted as a separate mission. If conducted as a mission that does not involve crossing additional elements, planning and consideration should be given to the recovery of the crossing assets. If the crossing is a precursor to a larger, follow-on crossing, recovery of the crossing assets may be accomplished as part of that follow-on task. If the covert gap crossing is being used as a precursor to a deliberate crossing and is detected by the enemy, the higher headquarters may need to reevaluate other potential crossing sites before conducting the deliberate crossing. A contingency plan must always be included in the planning of covert missions in the event that the mission is compromised. A covert crossing should not be confused with the assault phase of a deliberate gap crossing.

Gap Fundamentals

18-62. Successful gap crossing is characterized by applying gap-crossing fundamentals. These fundamentals are applied when a gap is encountered in the operational area. These fundamentals are—

- Surprise.
- Extensive preparation (less for hasty crossing).
- Flexible planning.
- Traffic management.
- Organization.
- Speed.

See ATP 3-90.4/MCTP 3-34A for more information on gap fundamentals.

Task Organization for Gap Crossing

18-63. Units use the same organic command and control nodes for gap crossings as they do for other missions. These nodes, however, take on additional functions in deliberate gap crossings. For this reason, commanders specify which nodes and staff positions have specific planning and control duties for the crossing. Typically, units designate a crossing area commander, engineer, and headquarters to focus specifically on the efforts needed to cross the gap. Additional engineer units may also provide additional command and control nodes depending on the size and complexity of the gap crossing. This may require some temporary co-location of headquarters cells (or individual augmentation) and an increase in communication means. Units conducting a deliberate gap crossing organize into the following groups:

- Assault force.
- Assured mobility units.
- Bridgehead force.
- Breakout forces.

Assault Force

18-64. Assault forces seize the far side objective to eliminate direct fire on the crossing sites. Assault forces may cross by any means to include rubber pneumatic boats, air assault, or the use of civilian boats if available. The assault force may also be the unit that first secured terrain on the near side and identified if existing bridges were operational and where enemy forces are fighting or defending. The assault force normally crosses in waves, as sufficient boats are seldom available to carry the entire force across at once. It is a very complex operation, requiring synchronization, training and extensive rehearsals.

Assured Mobility

18-65. Mobility support forces (such as combat engineer companies, multi role bridge companies, and military police units) provide crossing means, traffic control, and other critical tasks supporting the crossing site. These supporting units are task-organized to perform specific tasks and are controlled using specified procedures that are clear, simple, and rehearsed by all elements to ensure responsive support of the plan and unity of command and effort.

Bridgehead Force

18-66. A *bridgehead force* is a force that assaults across a gap, after the crossing is established, to secure the enemy side (the bridgehead) to allow the buildup and passage of a breakout force during gap crossing (ATP 3-90.4/MCTP 3-34A). The *bridgehead* is an area on the enemy side of the linear obstacle that is large enough to accommodate the majority of the crossing force, has adequate terrain to permit defense of the crossing sites, provides security of crossing forces from enemy direct fire, and provides a base for continuing the attack (ATP 3-90.4/MCTP 3-34A). The *bridgehead line* is the limit of the objective area in the development of the bridgehead (ATP 3-90.4/MCTP 3-34A).

Breakout Force

18-67. Breakout forces attack to seize objectives beyond the bridgehead as a continuation of the offense. (See ATP 3-90.4/MCTP 3-34A for more information on gap organization.)

Gap Crossing Planning

18-68. The discussion on planning mobility applies to gap crossing in ATP 3-90.4/MCTP 3-34A; however, force allocation against enemy units has an added dimension of time that is affected by the crossing rate. Friendly forces can only arrive at the crossing site at the rate at which they can cross the gap. This rate will change at various times throughout the crossing. The rate at which combat forces need to cross will directly affect the number of crossing sites.

18-69. A major control mechanism category is graphic control measures. The unit uses graphic control measures to delineate areas of responsibility for subordinates and to ease traffic control. (See ATP 3-90.4/MCTP 3-34A for more information on graphic control measures for a gap crossing.)

Gap Crossing Execution

18-70. A deliberate river crossing is costly in terms of manpower, equipment, and time. Generally, units conduct it against a well-organized defense when a hasty river crossing is not possible or when one has failed. A deliberate river crossing requires the concentration of combat power on a narrow front, capitalizing on the element of surprise.

18-71. A division or corps deliberate river crossing is an operation conducted as part of an offensive operation. A division is normally the smallest organization that can conduct a deliberate wet-gap crossing. It is usually an implied task in a larger mission given by the corps. A gap crossing is usually not the final objective; however, units must quickly cross a river and rapidly secure the bridgehead line to support follow-on offensive action against the enemy. The enemy will normally use the gap as a tactical obstacle system to slow and gain positional advantage against the division advance. The intent of the division is to maintain its momentum through the crossing.

18-72. A deliberate wet-gap crossing has six phases. They are distinct phases for planning, but there is no pause between them in execution. See table 18-3 for the phases.

Table 18-3. Deliberate wet-gap crossing phases

Phase	Description
Set the Conditions	The planning and continued targeting operations in the deep, close, and support areas to defeat enemy forces deep as well as close to synchronize one or more gap crossing operations with all warfighting function capabilities in five domains against an adaptive enemy force.
Advance to the gap	The attack to seize objectives that secure the near side terrain, which offers favorable crossing sites and road networks and provides enough area to stage crossing forces while preventing congestion and an undesirable massing of assets.
Assault across the gap	The units assaulting across the gap to seize the far side objective, eliminating direct fire into the crossing sites.

Advance from the far side	The attack to secure the exit bank and intermediate objectives that eliminates direct and observed indirect fires into the crossing area.
Secure the bridgehead line	The tasks necessary to secure bridgehead objectives, defeating any enemy counterattacks. This gains the necessary time and space for the buildup of forces for the attack out of the bridgehead.
Continue the attack	The attack out of the bridgehead to defeat the enemy at a subsequent or final objective. It is considered as a phase of the gap crossing because the timing and initiation of this phase are typically dependent on the success of the other four phases of the gap crossing.

CLEAR

18-73. Clear is both a tactical mobility task and a mobility task. The mobility task involves the total elimination of an obstacle that is usually performed by follow-on engineers and explosive ordnance disposal units. It is not normally performed under the threat of direct or indirect fire. Clearing is conducted to eliminate tactical and protective obstacles affecting the operational area. Units may order clearing to facilitate movement within an assigned area based on the mission variables. They may also order a critical route or area cleared of obstacles. The task is conducted as a single mission to open or reopen routes not under persistent surveillance or it may be conducted on a recurring basis in support of movement along routes where a sustained threat exists along critical routes. (See ATP 3-90.4/MCTP 3-34A for more information on clearing.)

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Chapter 19

Tactical Deception

This chapter addresses those considerations unique to tactical deception operations. It provides an overview of tactical deception, principles, types, means, and variations. It then discusses tactical deception planning, tactical deception in offensive and defensive operations, and risk.

OVERVIEW OF DECEPTION

19-1. As a principle of war surprise is a combat multiplier that amplifies the effects of the other principles of war. Its effective use allows friendly units to strike at a time and place or in a manner that the enemy is unprepared for, which induces shock and causes hesitation. Every echelon works to achieve surprise in an operation and only by multiple echelons working together is surprise achieved.

19-2. The easiest way to achieve surprise is to use deception. Units throughout history have used deception to their advantage. It is an effective way to cause the enemy to dissipate their efforts and resources. Deception enhances the conditions that allow friendly units to concentrate forces at decisive times and locations. Executing tactical deception comes with costs. These costs include time, material, and risk. However, history shows that executing deception at any scale and echelon is almost always worth the costs.

19-3. The enemy commander is the focus of tactical deception, but the enemy can delegate command authority to an alternate decision maker. This means that someone other than the commander needs to be deceived. Therefore, this chapter will refer to the enemy decision maker or commander as the deception target. The *deception target* is the adversary decision maker with the authority to make the decision that will achieve the deception objective (JP 3-13.4).

19-4. Well planned and executed deception, not luck, achieves surprise and its benefits—in both the offense and defense. Deception can be as simple as using camouflage to conceal friendly forces' locations, capabilities, or intent. It could be the use of decoys to create false data for the deception target to deal with. Or it could be as complicated as a multi-phase and echelon operation that works in accordance to a larger deception operation. To understand this better, there are two types of deception—military deception and tactical deception.

MILITARY DECEPTION

19-5. *Military deception* is actions executed to deliberately mislead adversary military, paramilitary, or violent extremist organization decision makers, thereby causing the adversary to take specific actions (or inactions) that will contribute to the accomplishment of the friendly mission. (JP 3-13.4). Military deception is typically executed at the combatant command level and requires planning, approval, and execution to adhere to theater-level instructions and AR 525-21. Additionally, information pertaining to tactical deception (TAC-D) executed in support of a military deception, to include operations, training, and exercises are generally classified at the Secret or higher level. The rest of this chapter is focused on tactical deception and the principles, types, means, and variations used. (See FM 3-13.4 for more information and details on military deception planning.)

TACTICAL DECEPTION

19-6. Tactical deception concepts do not tie into an overall military deception operation. Units must understand that when executing TAC-D, they are not executing military deception at the tactical level. ***Tactical deception is a friendly activity that causes enemy commanders to take action or cause inaction***

detrimental to their objectives. Tactical deception operations are designed to support the commander's plan by enhancing the probability of mission success. It allows units to create windows of opportunity by causing the target to react or falsely interpret friendly operations. The purpose of TAC-D is to—

- Gain the initiative.
- Reduce overall operational risk.
- Preserve combat power.

19-7. Properly planned and executed deception operations will make it possible for units to "hide the real" and "display the false." Units use all available types, means, and variations of tactical deception to conceal friendly locations, capability, or intent until a time and place of the friendly commander's choosing.

19-8. TAC-D by itself is never decisive, although it may be a main effort at some point during the operation. This distinguishes TAC-D from offensive, defensive, or stability operations and solidifies it as an enabling operation. As with all enabling operations, units use TAC-D operations to complement current operations; transition between phases; transition between offense, defense, or stability; or set conditions for future operations.

19-9. Tactical deception is an effective way to cause the enemy to squander time and resources on irrelevant objectives. Leaders conduct TAC-D at every echelon with either the resources they have or with assistance from their higher echelon. Integrating deception between echelons can be a useful tool in altering how the enemy views, analyzes, decides, and acts in response to friendly operations.

19-10. If the deception effect would affect the friendly force scheme of maneuver outside the echelon's assigned area, it needs to be approved by the commander two echelons above the executing unit. For example, by using decoys in the defense to make friendly forces look three times bigger than it is and cause the enemy to attack elsewhere needs to be coordinated and approved by higher echelon commanders. If a unit is directly told to execute a deception action by their higher headquarters, the assumption is the higher headquarters has already received approval for that order.

19-11. TAC-D is a commander driven activity that is structured around principles, types, means, and variations used to set favorable conditions to achieve friendly objectives. Commanders decide the location and time to employ deception in support of operations. The principles of tactical deception provide subordinates fundamental guidance during the planning of all tactical deception operations. The desired effect describes the level of uncertainty that the friendly commander wants to achieve against an enemy decision maker. The means are the tools that friendly commanders use to accomplish tactical deception. Typically, the means are found in either the coordinating instructions of an order or through commander's guidance. Variations of tactical deception are missions that a higher headquarters can assign to a subordinate unit. Vital to the unit's ability to execute tactical deception is through maintaining operational security and ensuring the realism.

PRINCIPLES OF TACTICAL DECEPTION

19-12. Just as the principles of war provide general guidance for the conduct of military operations, the six principles of tactical deception provide guidance to planning deception. The principles of deception are—

- Centralized planning and control.
- Focus.
- Integration.
- Objective.
- Security.
- Timing.

CENTRALIZED PLANNING AND CONTROL

19-13. A centralized approach is necessary to provide clarity and to ensure various elements portray the same story and do not conflict with other objectives or evolving conditions in an operational environment. Execution of tactical deception may be decentralized as long as all participating organizations adhere to a single plan. Once the commander approves the deception plan, the designated operational element monitors

the situation and its effects on the target, as well as friendly and partnered forces to ensure synchronization, deconfliction, and OPSEC.

FOCUS

19-14. The deception plan should focus on the thought process of the deception target since they have the authority and capability of triggering the desired actions. The enemy's intelligence, surveillance, and reconnaissance assets are normally targeted. The nine forms of contact are the primary conduit used in the deception plan to convey selected information to the deception target. Focused deception must cause the enemy force to commit an action or inaction. See discussion beginning in paragraph 1-60 for the nine forms of contact.

INTEGRATION

19-15. Units should integrate deception throughout the planning process at all levels since deception is an integral part of any operation. This integration includes developing a concept for deception that supports the overall mission as part of COA development. An integration of the deception operation throughout all phases of the operation begins with planning, continues through execution, and concludes with the termination of the deception.

OBJECTIVE

19-16. Deception plans focus actions and resources that motivate an enemy to cause desired actions or inactions. The plan cannot focus solely on motivating the deception target to believe certain things. It must lead to the deception target taking a specific course of action, known as the objective of the deception.

SECURITY

19-17. Successful deception requires strict security that begins before execution with measures to deny the enemy knowledge of the friendly force's intent to deceive. Successful deceptions apply strict need to know criteria to each aspect of the plan. Maintaining this operational security means limiting the number of planners and participants to those needed.

TIMING

19-18. Critical to deception planning is proper synchronization with the commander's intent and maintaining synchronization during execution. Timing in deception operations is crucial. The challenge is to get the deception target to act in accordance with the deception plan within the timelines required by the friendly operation. Planners should conduct a thorough analysis to understand the amount of time required for an effect to pass through the forms of contact before reaching a deception target. Friendly deception executions must be completed in a manner that accounts for the time consumed by the enemy's intelligence collection and analysis process. The enemy's decision-making process and current activity is what must be exploited by friendly forces.

TYPES OF TACTICAL DECEPTION

19-19. All deception aims to either increase or decrease the level of uncertainty in the mind of the deception target. This dilemma has the potential to compel the deception target to mistakenly perceive friendly motives, intentions, capabilities, and vulnerabilities thereby altering the enemy's assessment and ultimately their actions. Two generally recognized types of deception are—

- Ambiguity-increasing (confusion effect).
- Ambiguity-decreasing (confirmation effect).

AMBIGUITY-INCREASING DECEPTION (CONFUSION EFFECT)

19-20. Ambiguity-increasing deception provides the presentation of excessive true and false information to confuse the deception target and create internal conflict. This provides the enemy with many plausible

friendly courses of action through evidence of intentions and capabilities that the friendly force does not possess. Critical to the confusion effect is that the evidence presented must be doctrinally feasible. The desired outcome would be action or inaction from the enemy that would lead to a tactical advantage for the friendly force. These actions could include a delay of a specific decision, operational paralysis, or the distribution of enemy forces to locations that cannot influence friendly efforts. This effect is best used when the deception target tends to be indecisive or risk adverse.

AMBIGUITY-DECREASING DECEPTION (CONFIRMATION EFFECT)

19-21. Ambiguity-decreasing deception exploits deception targets' pre-existing beliefs by confirming their desired expectations. This is provided to them through conditioning and diversion of intentional observations that convinces the enemy to be at the wrong place, at the wrong time, and under equipped. The intent is to hide the real friendly intentions and current capabilities from the enemy through a vigorous defense of friendly force information requirements. This information, if uncovered, would be detrimental to the accomplishment of the mission for the friendly unit. The confirmation effect is best employed when deception targets tend to accept higher levels of risk with their force and are resolute in their decision making.

19-22. Both types are applied by using the deception principles. These principles can be best employed when the friendly unit has a reliable understanding of the current situation because desired effects of tactical deception provide a foundation to build their deception plan on in the planning process.

TACTICAL DECEPTION MEANS

19-23. Deception means are applied to observables to increase the probability of being accepted by the deception target. *Deception means* are methods, resources, and techniques that can be used to convey information to the deception target (JP 3-13.4). There are two tactical deception means categories: physical and technical. Planners normally employ deception plans to supplement several means that aim to mislead multiple types of enemy sensors. This increases credibility and the likelihood of deceiving the deception target. Tactical deception means provide the signatures, associations, and profiles of friendly alleged activities to the enemy. Units employ as many means as possible within their capabilities to support tactical deception during all types of operations.

PHYSICAL MEANS

19-24. Physical means are resources, methods, and techniques used to convey information normally derived from direct observation or active sensors by the deception target. Most physical means also have technical signatures visible to sensors that collect scientifically or electronically. Planners typically evaluate physical means using characteristics such as shape, size, function, quantity, movement pattern, location, activity, and association with the surroundings. Examples might include—

- Movement of forces.
- Decoy equipment and devices.
- Security measures, such as camouflage and concealment.
- Tactical actions, such as feints and demonstrations.
- Reconnaissance, security, and surveillance activities.

Movement of Forces

19-25. Units frequently reposition forces to increase ambiguity to ongoing or planned operations. They also do this to hide the main effort. This repositioning is not limited to only maneuver forces but can also apply to command and control nodes, fires, and sustainment assets. This frequent repositioning requires detailed terrain management and coordination across all echelons to prevent inadvertent concentration of forces, unnecessary congestion of routes, and reduce the likelihood of the repositioning creating unanticipated seams and gaps between units.

Decoy Equipment and Devices

19-26. Within their capabilities units use decoys to mislead enemy intelligence collection and direct the enemy's attention away from actual forces. These actions can include creating artificial pieces of equipment to constructing false battle positions that include appropriate cover and concealment. These include using devices that create false electromagnetic signatures.

Security Measures

19-27. Units employ OPSEC and execute survivability operations to protect friendly forces from enemy detection. Camouflage blends friendly actions and capabilities with their surroundings while concealment makes those actions and capabilities unobservable to the enemy. When used in conjunction with other physical and technical means, camouflage and concealment aid in protecting friendly forces while simultaneously seeking to deceive an enemy. OPSEC includes denying the enemy access to information on friendly forces. From a physical means perspective examples include but are not limited to denying personnel access to friendly bases and locations and establishing blocking positions to hinder an enemy's ability to obtain visual contact on unit assembly areas by establishing checkpoints along routes.

Tactical Actions

19-28. Units can employ any number of actions to support tactical deception. These can range from larger scale actions, such as feints and demonstrations, to small unit actions such as frequent repositioning of forces. Commanders at all levels ensure their units incorporate tactical deception within their plans.

Reconnaissance, Security Operations, and Surveillance

19-29. As the enemy begins to lose its active intelligence collection capability, its ability to detect the friendly force's deception becomes progressively more difficult. Established procedures and doctrine make friendly deception operations easier to conduct. These procedures result in distinct and recognizable offensive patterns. Many units have enhanced their offensive capabilities by applying deception variations.

19-30. Increasing patrol and reconnaissance activities in areas away from the main attack may confuse the enemy. However, friendly activities should not vary with normal procedures to the extent that they reveal friendly forces who are engaged in deception. For example, a friendly commander may conduct reconnaissance in an area away from the main effort's objective, potentially causing the enemy to shift focus away from the friendly force's main effort.

TECHNICAL MEANS

19-31. Technical means are resources, methods, and techniques used to convey or deny selected information or signatures. Often technical means use technical equipment, to or from the deception target, by manipulating electromagnetic, acoustic, or other forms of energy, or through smell. Technical means may be applied with corresponding physical means or alone to replicate something physical that is absent from visual contact. Planners integrate technical means with other technical activities of the operation. Higher headquarters may impose restrictions and limitations on the use of specific technical means for TAC-D. This is because they might interfere with an ongoing military deception or the effects of the technical means might extend into another friendly units assigned area. Examples of technical means might include—

- The establishment of communications networks and interactive transmissions that replicate a specific unit type, size, or activity.
- Emission or suppression of chemical or biological odors associated with a specific capability or activity.
- Organic capabilities that disrupt an enemy sensor or affect data transmission.

Table 19-1 on page 19-6 describes how both physical and technical means enable techniques to provide deception.

Table 19-1. Sample deception techniques

Technique	Deception created	Example
Amplifying signatures	To make a force appear larger and more capable or to simulate the deployment of critical capabilities.	Increase radio traffic through the use of scripts.
Suppressing signatures	To make a force appear smaller and less capable or to conceal the deployment of critical capabilities.	Radio silence and communication windows.
Overloading enemy sensors	To confuse or corrupt their collection assets by providing multiple false indicators and displays.	Use of decoys to portray a larger force.
Repackaging known organizational or capability signatures	To generate new or deceptive profiles that increase or decrease the ambiguity of friendly activity or intent.	Movement of critical assets to mislead organizational size.
Conditioning the enemy	To desensitize to particular patterns of friendly behavior and to induce enemy perceptions that are exploitable at the time of friendly choosing.	Increased targeting of enemy observation points to delude their threat template.
Reinforcing the impression	To mislead by portraying one course of action when actually taking a different one.	Suppression fires at a false breach.
Conditioning the target by repetition	To believe that an apparently standard routine will be pursued while in fact preparing a quite different course of action.	Increased reconnaissance on the most favorable friendly avenue of approach.
Leading the enemy by substitution	To believe that nothing has changed by covertly substituting the false for the real, and vice versa.	Using unfavorable weather conditions (limited visibility) to replace a real force with a decoy force.
Leading the enemy by mistake	To believe that valuable information has come into their possession through a breach of security, negligence, or inefficiency.	Leaving a partially deconstructed terrain model for enemy recon to find.

VARIATIONS OF TACTICAL DECEPTION

19-32. Tactical deception variations are operational constructs that encompass a broad range of deceptive activity and information integrated as a component of the overall plan. A unit may be told to conduct one of the two variations of TAC-D: feints and demonstrations. These variations are often best employed in TAC-D to support the commander's objectives. These variations should not be confused with the tactical deception means; they are deliberate operations that require higher echelons approval. The selected variation and its use depend on the planners' understanding of the current situation as well as the commander's desired end state. All other deception guidance should be issued in the coordinating instructions or done to accomplish the commander's intent.

19-33. Units should consider cost of tactical deception in terms of resource expenditure. For tactical deception to appear real, units must dedicate adequate resources. Units should also measure costs in risk and flexibility. For example, it may be very risky for the success of a unit's main effort to rely solely on the success of a planned demonstration. Should the demonstration not produce the expected enemy reaction, it could cause the main effort to fail. Flexibility is built into the plan by using branches, sequels, or executable deceptions.

19-34. While feints and demonstrations are specific tactical deception operations, they are not the sole way a unit should use tactical deception. Units can use many of the variations of offensive and defensive operations to deceive an enemy. For example, units can incorporate a retrograde that forces the enemy into an engagement area. Units use their collective creativity, within the time, resources, and authorities allowed to develop plans that achieve the commander's end state.

19-35. Whenever units determine to use feints, demonstrations, or another variation of offensive or defensive operations as a means of deception they are required to gain approval. This approval comes from the commander that is two echelons higher than the requesting units, for example a corps commander is the

approval authority for a brigade commander requesting to execute a feint or demonstration as part of their plan,

19-36. Units have two options to disseminate the tactical deception plan to their subordinates. It is imperative that the unit maintains operational security for the success of the operation. The first option is for the unit's leaders to know the true task and purpose of the organization, subordinates may receive a different task and purpose in order to maintain operational security. The second option is for the unit to provide complete briefings to their subordinates. In both options, caution must be exercised to ensure that deception details are not mentioned in their operation orders. OPSEC must be recognized as a vital element of the variation of the tactical deception.

FEINT

19-37. A **feint** is a variation of tactical deception that makes contact solely to deceive the adversary as to the location, time of attack, or both. The feint leads the enemy into erroneous conclusions about friendly dispositions. Feints are usually offensive in nature and closely resemble an attack; however, they can be executed during other operations. A feint requires engagement with the enemy to give the appearance of the main attack. See table 19-2 on page 19-9 for the tactical planning symbol.

19-38. The principal difference between a feint and an attack is that friendly forces assign their troops an objective limited in size, scope, or some other measure. It should contribute to the overall accomplishment of the mission and deceive the enemy. Forces conducting feints make direct fire contact with enemy forces and potentially decisively engage to draw resources from the enemy to enable the success of the friendly force's main effort. Several purposes for feints include causing the deception target to—

- Employ their second-echelon forces other than intended.
- Move away from the main attack toward the feint or to hold the enemy's second echelon force in its current location.
- Shift its supporting fires from the friendly main attack to the feint.
- Reveal enemy defensive fires and capabilities.

19-39. A single event feint might not always deliver the desired effect. Instead, a series of recurring feints might be necessary to deceive the enemy decision maker. For example, repeated raids may condition the enemy to confirm the commander's perception that the friendly commander lacks the combat power to conduct a main attack. The enemy may become so accustomed to the pattern of raids that it takes little or no action when the friendly main attack actually occurs. The enemy will consider it as another raid.

19-40. Another important consideration for the execution of a feint is the location. Observing the terrain and enemy disposition, the commander or staff considers—

- The enemy's area of interest. The deception target may not react as desired to the presented threat because it is of little value to the enemy.
- Whether or not the enemy may displace its force if the feint is deployed beyond the range of its direct and indirect fires, based on its current positions.
- An assigned area that is sufficient for the successful execution of the feint without interfering with the main attack.

19-41. Units conduct feints before or during the main attack. Therefore, planners consider the timing of the main attack in determining the time for the feint. The estimated time necessary for the enemy to react in the desired manner also influences the timing of the tactical deception. A feint before a main attack usually requires carefully determined lead time.

19-42. The precise time a feint occurs will vary depending on the commander's intent. Moving additional forces will require more time than shifting fires. For example, if the intent is to move the second echelon forces, the feint has to be initiated well ahead of the main effort.

19-43. A feint conducted simultaneously with the main attack may cause the enemy to divert its attention and possibly a portion of its forces and supporting fires. A feint conducted after the main attack is launched can hold the enemy's uncommitted forces in its present location. Faced with a new threat, the enemy becomes uncertain about the location of the main effort.

19-44. Friendly forces consider the pattern of previous operations. For example, if friendly forces have regularly made attacks two hours before daylight, it may be desirable to conduct a feint at this time. Although the timing of a feint is influenced by such factors, the timing of the main effort would most likely be the main consideration.

DEMONSTRATION

19-45. A **demonstration** is a variation of tactical deception used as a show of force in an area where a unit does not seek a decision and attempts to mislead an adversary. It is similar to a feint, but direct or indirect contact with the adversary is not intended. A demonstration may be conducted for the purpose of deceiving the enemy by visual contact with the expectation of luring them into a COA favorable to friendly lines of operation. While a demonstration has certain advantages over the feint, it lacks the realism. Paragraphs 19-46 and 19-47 lists some advantages and disadvantages of using a demonstration. See table 19-2 for the tactical planning symbol.

19-46. The advantages of a demonstration are—

- Absence of direct and indirect contact with the enemy facilitates subsequent employment of the demonstration force elsewhere.
- A full force is not always necessary because no contact is made with the enemy. It is essential that a demonstration is combined with real capabilities to provide a creditable threat.
- It permits the use of simulation devices, when available, in place of real items to deceive the enemy's information collection.

19-47. The disadvantages of a demonstration are—

- It is more difficult to validate the threat to the enemy without direct or indirect contact.
- It is more likely that a demonstration will be identified as a deception earlier in the operation than a feint.

19-48. A demonstration can be used successfully when there is time and distance between the enemy positions and the demonstration force that makes the lack of contact appear realistic to enemy forces. In essence, a demonstration attempts to gain enemy response in an area where a friendly force is displayed. However, as the enemy reacts the friendly force withdraws without engagement.

19-49. The direct exposure of sustainment operations can illustrate a demonstration. Many times, sustainment operations are much more visible than combat preparations and become a key indicator of location, type, and time for when combat operations will be conducted. Sustainment operations used in support of tactical deception seek to confirm the deception target's perceptions as to where friendly forces will commit their main efforts.

19-50. After the unit determines what variation of tactical deception it wants to use to enable its operation, the unit determines its observables. Observables are often made up of executions, which can include events, activities, or elements of information that must be seen or sensed by the target to form the desired perceptions.

Table 19-2. Forms of tactical deception and planning symbols

<i>Forms of Tactical Deception</i>	<i>Tactical Symbol</i>
Feint	
Demonstration	

TACTICAL DECEPTION PLANNING

19-51. Units should consider deception in all activities of the operations process. It is unlikely that an under resourced and nonintegrated tactical deception will succeed, and the longer tactical deception is not accounted for in the operations process, the more probability it will fail. Tactical deception can be used to support a range of missions and to prevent duplication of deception efforts; therefore, leaders should coordinate tactical deceptions both laterally and vertically. Preparing and executing a tactical deception requires the same considerations as any operation but has some key additions in the planning phase.

19-52. Tactical deception is integrated early during the planning process to increase its effectiveness in causing the enemy to act or react in a desired manner. Prior to the integration of deception, commanders must determine the desired effects on the enemy. Tactical deception focuses on the enemy's decision-making process. Tactical deception must end in an enemy decision to act or not act in a way that supports an operation. The enemy decision-making process occurs in the see-think-do planning methodology:

- See: What significant physical and technical indicators can the enemy see, sense, or detect?
- Think: Do these indicators lead the enemy to believe what it sees, senses, or detects?
- Do: Has the enemy decided on an action or inaction based on what it believes?

19-53. Planners use the see-think-do planning methodology in reverse to guide deception planning, execution, and assessment. Planners begin by identifying what they want the enemy to do, then determining what the enemy must think in order to act as desired, and finally establishing what the deception target must see to encourage thinking that way. Successful deception operations are those that do more than make the target believe or think the deception is true. The deception target must make a decision to act or not act in a way that favors friendly operations.

19-54. Deception planners use this planning methodology to ensure that each tactical deception is properly constructed. They develop courses of action based on the tactical plan. They integrate any revised commander's guidance and updated intelligence analysis to refine and complete their deception plan using the six-step deception planning process. (See FM 3-13.4 for more detail on tactical deception planning process.)

TACTICAL DECEPTION IN OFFENSIVE OPERATIONS

19-55. The intent of TAC-D in the offense is to enhance the friendly force's course of action by avoiding the enemy's strengths, striking their weaknesses, and gaining overall surprise. An important consideration in tactical deception is that the unit must be able to exercise some influence over its assigned area. The unit needs to influence through some offensive action and not merely react to the enemy's defensive actions.

Showing the enemy multiple observables of a particular intention is the most convincing way to sell the tactical deception.

19-56. The unit's tactical deception should be employed in an environment in which the unit has more options available than the enemy has combat power to cover. If the enemy can effectively defend against all avenues of approach, then deceiving it as to the friendly choice becomes much less significant. As influence over the assigned area begins to increase, the unit's options and, therefore, its opportunity for deception begin to increase. As the enemy's influence begins to diminish, its intelligence collection capability becomes more degraded by increasing friendly control of the assigned area. Consequently, the enemy's ability to assess friendly capabilities and probable intentions shifts to an environment of relative uncertainty. The opportunities for deception continue to increase. The enemy is required to make more tactical decisions based on the remaining, often uncorroborated, intelligence.

19-57. Deception operations induce the enemy decision maker to view the operation from multiple courses of action. This provides friendly commanders the ability to develop favorable and exploitable courses of action. Because of induced misperceptions of the battlefield, the enemy in defense is not given time to identify the composition, location, and time of the friendly force's attack.

19-58. As the enemy begins to lose its active intelligence collection capability, its ability to detect the friendly force's deception becomes progressively more difficult. Established procedures and doctrine make friendly deception operations easier to conduct. These procedures result in distinct and recognizable offensive patterns. Many units have enhanced their offensive capabilities by applying deception variations.

19-59. Increasing patrol and reconnaissance activities in areas away from the main attack may confuse the enemy. However, friendly activities should not vary with normal procedures to the extent that they reveal friendly forces who are engaged in deception. For example, a friendly commander may conduct reconnaissance in an area away from the main effort's objective, potentially causing the enemy to shift focus away from the friendly force's main effort.

TACTICAL DECEPTION IN DEFENSIVE OPERATIONS

19-60. Due to the relatively static nature of defensive operations at the lower tactical levels, tactical deception takes on an increased importance. Tactical deception is used in the defense to preserve combat power by hiding the location of friendly forces in the main battle area, the main effort, and friendly reserves. By concealing friendly defensive positions, this preserves combat power and improves survivability. This causes the enemy to expend combat power and exhaust intelligence efforts and resources unprofitably. Creating false targets to cause the enemy to misuse reconnaissance efforts and firepower is a concurrent, coordinated activity during all phases of the defense to cause the enemy to pursue a COA favorable to friendly operations.

19-61. At the point of the attack, the enemy has decided on its course of action. It is easier to convince the enemy to continue that course rather than alter its plans or tactics. A successful tactical deception operation conducted by a defender can result in the inappropriate deployment of attacking enemy forces. Maintaining that tactical deception can result in the continued commitment of enemy forces at a time and location least advantageous to the enemy.

19-62. In the defense, operational security is an ally of tactical deception. For example, the enemy has decided on a course of action, it is easier to convince them to continue their course of action than alter their plan. A successful deception in the defense can result in the inappropriate deployment of attacking enemy forces. The far easier task of maintaining that deception can result in the continued commitment of enemy forces at a time and location least advantageous to them.

RISK TO TACTICAL DECEPTION

19-63. Tactical deception, by its very nature, implies taking calculated risks to gain the tactical advantage over the enemy. Planned deceptions allow friendly forces to sequence the presentation of the battlefield to the enemy in the manner in which friendly forces allows the enemy to view the battlefield.

19-64. Units should be aware that deceptions may produce unintended and unwanted consequences. Believing that a threat is real, an enemy can act unpredictably. Proper planning and coordination and knowing the enemy can reduce the chance that deceptions will result in unfavorable action. Friendly forces consider second- and third-order effects of the deception plan to mitigate unintended consequences. The possibility of failure stems from the uncertainties surrounding how the target receives and interprets information intended for the target and, eventually, how it affects the target's desired perceptions. If discovered, resources used for the deception may be in jeopardy. As with any military operation that puts forces at risk, leaders decide to use deception after a deliberate assessment that weighs opportunity against need and cost against benefit.

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Chapter 20

Linkup

This chapter addresses those considerations unique to a linkup. This chapter addresses the general considerations for a linkup, planning and preparing a linkup, and types of linkup.

LINKUP OPERATIONS

20-1. A *linkup* is a type of enabling operation that involves the meeting of friendly ground forces, which occurs in a variety of circumstances. For example, when converging maneuver forces meet, when an advancing force reaches an objective area previously seized by an airborne or air assault force, when an encircled force breaks out to rejoin friendly forces, and when a force comes to the relief of an encircled force. During optimal linkup conditions, there is a stationary force and a linkup force. However, both forces may be moving toward each other simultaneously. Whenever possible, the joining forces exchange as much information as possible prior to starting the linkup.

PLANNING A LINKUP

20-2. A linkup is a complex operation that requires detailed planning and coordination. Planning for a linkup is coordinated as far in advance as possible to allow coordination between the two or more friendly units. Commanders and staffs coordinate responsibilities to preventing fratricide and ensure mission success.

Command and Control

20-3. The headquarters directing the linkup operation must establish command relationships and responsibilities of the forces involved. Both the linkup force and the force with which linkup is to be made can remain under control of the directing headquarters. The communications plan includes the channels for radio communications between the two forces. It must prescribe day and night identification procedures, including primary and alternate means. Aircraft can extend communications range. Units can use visual signals such as flares or panels during daylight and flashlights or infrared devices during darkness. To prevent friendly troops from exchanging fires, recognition signals must be established and communicated between the linkup forces. They may be pyrotechnics, armbands, vehicle markings, panels, colored smoke, distinctive light patterns, and passwords.

20-4. The headquarters ordering the linkup establishes—

- A common operational picture using available command and control systems, ideally both digitally and analog.
- Command relationship and responsibilities of each force before, during, and after linkup.
- Coordination of fire support before, during, and after linkup, including control measures.
- A linkup method.
- Recognition signals (near and far) and communication procedures, such as pyrotechnics, vehicle markings, gun tube orientation, panels, colored smoke, lights, and challenge and passwords.
- Operations to conduct following linkup.

Intelligence

20-5. The linkup force will begin the IPB process in preparation for the operation essentially as for any offensive or defensive operation. The significant difference is that the commander and staff will have to consider the location and effect of other friendly forces on the enemy forces within the assigned area. As a

result, the probable enemy course of action, situation template, and event template must include both the stationary and maneuvering forces perspective of the operation.

Movement and Maneuver

20-6. Linkup operations of two or more friendly forces are conducted to—

- Complete the encirclement of an enemy force.
- Assist the breakout of an encircled friendly force.
- Join an attacking force with a force operating adjacent to it.
- Join an attacking force with airborne or air assault elements following a vertical envelopment.

20-7. The two forces carefully define and coordinate their schemes of maneuver, placing particular attention to graphic control measures and the subsequent mission to be performed by each force after linkup is complete. A linkup point is normally positioned behind or along one flank of the enemy's positions.

20-8. A linkup point is a designated place where two forces are scheduled to meet. This point should be large enough for all forces to assemble and it should offer cover and concealment for these forces. When planning a linkup point, the staff should look for an easily identifiable point on the ground. The staff should position linkup points on defensible terrain located away from normal enemy movement routes. Planned alternate linkup points provide needed flexibility. A liaison is normally established during planning and continues throughout the operation to facilitate coordination between the two forces. See paragraph A-27 for definition and symbol.

20-9. Units carefully coordinate linkup operations with forces of other nations. This is especially true if the two forces are not both members of an alliance with established internationally standardized procedures, or if the forces involved have not previously established the necessary procedures. In such situations, extensive use of liaison is necessary to ensure understanding and synchronization of operations. Additional rehearsals may be necessary to ensure maneuver forces clearly understand the operation or to ensure no hostile actions affect the stationary force. Aircraft can improve and expedite this coordination.

20-10. The engineers will be task-organized to conduct mobility operations. The speed of the operation will be essential, whether it is designed to assist in the movement towards the linkup point with an encircled force or to complete the encirclement of the enemy.

Fires

20-11. When a division or corps directs a linkup operation, they normally establish fire support coordination measures for both forces. Fire support coordination measures are adjusted as one force moves toward the other. A restricted fire line is established between the forces when necessary, usually at the point where the two forces plan to establish contact. During linkup operations, particularly with airborne or air assault forces, indirect fire support becomes extremely important. The division artillery headquarters must ensure timely dissemination of information and coordination so that fires do not engage friendly aircraft supporting the airborne or air assault forces.

Sustainment

20-12. Sustainment support requirements may be greater during linkup operations than during other operations. Additional considerations for planning logistics support in linkup operations include—

- Distance to the objective area.
- Duration to hold the objective area.
- Planned operations or movement out of the objective area.
- Resupply of the stationary force.
- Movement of drop zones and landing zones of airborne or air assault forces involved in the linkup.
- LOCs secured by follow-on forces.

20-13. Supply requirements for a linkup operation may exceed the transportation capability of the unit conducting the linkup. The sustainment elements may have to request additional vehicles or resupply by air. In linkup operations with airborne and air assault forces, priority for supply by air is given to the forces

assaulting the objective area. Supplies for the linkup forces normally move by land transportation. However, when the objective area is to be defended jointly by the linkup and airborne or air assault force, supplies for the linkup force maybe flown into the objective area and stockpiled.

20-14. Evacuation of equipment and wounded may create major problems for a linkup force. If supply routes are open, the normal evacuation procedures apply. When ground routes are not secure, helicopters may be used for evacuation of wounded while damaged equipment may be moved forward with the linkup forces until a suitable opportunity for evacuation is available.

PREPARATION FOR A LINKUP

20-15. Preparation creates conditions that improve friendly forces opportunities for success during the linkup. Units rehearse, refine the linkup plan, and conduct liaison activities prior to the execution for the linkup.

Command and Control

20-16. Staffs will walk the subordinate forces through a rehearsal of the operation. While this occurs, they will ensure that the control measures established for the operation are effective. Specifically, they will want to monitor the progress of the subordinate forces as they maneuver along the axis of advance. Simultaneously, they will be prepared to issue a fragmentary order for a hasty defense or attack, depending on the situation. Actions on contact and operating within the commander's guidance are aspects of the operation that the commander will want to ensure that subordinates completely understand.

Intelligence

20-17. The intelligence staffs will prepare for the linkup by war-gaming the operation with the commander. They will want to ensure that the unit is prepared for likely enemy's actions, preventing the linkup from occurring. Additionally, they will want to practice the conduct of the linkup and subsequent operations within the context of the enemy situation.

Movement and Maneuver

20-18. There will probably be little time to conduct a combined arms rehearsal for movement and maneuver, especially due to the time-sensitive nature of the operation. The commanders will issue the order and attempt to walk the executing forces through the operation. The rehearsal will stress the linkup and the coordination required to linkup without confusion. Moreover, it will ensure that each force is prepared to respond to a meeting engagement or enemy attack during the linkup. A commander's primary concern is that subordinate forces focus on the complexity of the linkup.

Fires

20-19. The fire support coordination cell will ensure that the counterpart force in the linkup operation, whether moving or stationary, has the fire support plan. Specifically, the cell will want to ensure that both forces completely understand the fire control measures, coordinated fire lines and restricted fire lines. Further, if these control measures shift during the operation, the conditions and signals under which the change occurs must also be coordinated. Units position air defense assets to support the force as in a movement to contact or deliberate attack. Units will want to ensure that air defense will be prepared to protect the forces at the linkup point. This is where the two forces could collide and become congested.

Sustainment

20-20. The sustainment elements will organize as they do for any other offensive operation. However, as mentioned earlier, they will carry additional supplies and material if they are conducting the linkup with an encircled force. Generally, this will include Class I, III, V, and VIII items. The logistic staffs will also ensure that each force understands the distribution plan, including traffic control. They will want to push as much material forward as possible during this operation. This is because the force will not only expend supplies as

it attacks, but once having conducted the linkup, it can expect to continue the mission (even if it is to remain in place and defend), which will require even more supplies.

EXECUTION FOR A LINKUP

20-21. The commander must be able to observe the progress of the operation. Generally, this means that the commander will follow the lead force. If a particular flank is of concern during the operation or a supporting attack is required to penetrate the enemy's lines, then the unit will place a headquarters where it can observe the force's secondary action. The commander and operations officer must remain in communication throughout the operation, using the main command post if necessary to relay messages. The staff must maintain the tempo of the operation because a stalled force is difficult to get moving again. Forces must have the ability to move forward from time to time to continue the forward momentum on the operation. The staff monitors the actions of subordinate forces to ensure that the control measures established in planning the operation are still valid. The staff will issue a fragmentary order for changes as necessary.

20-22. As the force begins to maneuver, the intelligence staffs will monitor the enemy situation. They will also monitor the situation facing the linkup force. Together this information will portray an overall enemy disposition which will greatly assist the intelligence staffs in calculating the enemy's most probable course of action. The intelligence staffs identify as far in advance as possible the direction, strength, and time of the enemy counterattack. Likewise, they will also advise the commander of any identifiable weaknesses within the counterattack.

20-23. The initial conduct of the linkup will be identical to a movement to contact or deliberate attack, depending on the enemy situation. As the forces begin to maneuver, they will attempt to establish and maintain contact with their corresponding friendly force. Each force will monitor the progress of the other, adjusting the plan as necessary. The linkup point can be moved closer to the linkup force if it is unable to travel at a speed proportionate with the plan. Similarly, the fire control measures will also adjust. As the two forces draw closer, higher headquarters controls the maneuvering forces. If possible, the forces will also attempt to establish contact on a predesignated frequency to control the actual linkup. At this point, the momentum of the operation will slow to help prevent fratricide. The tradeoff may be that some enemy forces may slip between the two closing forces. Coordination signals identify each force as it approaches the linkup point.

20-24. The fire control measures shift based on the progress of the forces and the enemy situation. Specifically, the coordinated fire lines, which will initially protect each force as it maneuvers, change to protect the two forces as they begin to meet. Restricted fire lines prevent fratricide between the linkup forces. Once the linkup has occurred, the stationary and linkup forces organize as per the higher headquarters' plan for future operations. If possible, the air defense elements in both linkup forces should monitor the same early warning net. This is particularly important if the linkup is attempting to reach an encircled force. This unity of air defense effort will ensure the most appropriate use of weapon systems and reduce unnecessary redundancy. Once the linkup is complete, air defense assets may be reorganized to support the next operation.

20-25. The engineers will provide mobility support to the higher headquarters, probably as attached elements of the lead forces. Once the linkup is complete, engineers may assist in countermobility or survivability operations depending on the plan. Another task organization may be required on the objective to accomplish the new missions.

20-26. Sustainment priorities focus on the forward movement of the force. Evacuation will be forward to logistics resupply points, reducing the turnaround time for recovery assets. As the linkup forces begin to close, sustainment assets must be as far forward as possible. Time is essential to the success of this operation, so assets must be prepared to keep pace with extremely fast operations. They must be prepared to address the immediate needs of the encircled force, to stockpile ammunition, or to move to other positions if the force should revert to a defensive posture.

TYPES OF LINKUPS

20-27. The linkup force concentrates its efforts on completing the linkup. Linkup operations frequently will require a passage of lines. Regardless of the purpose of the linkup, the operation will take on one of two forms:

- Linkup of a moving force with a stationary force.
- Linkup of two moving forces.

LINKUP OF A MOVING FORCE WITH A STATIONARY FORCE

20-28. To ensure the forces join without engaging one another, linkup points are at locations where the axis of advance of the linkup force intersects the security elements of the stationary force. (See figure 20-1.) These points must be readily recognizable to both forces. Units plan alternate points in the event enemy activities cause linkup at places other than those planned. The number of linkup points selected depends on the terrain and number of routes used by the linkup force. Personnel in the linkup force must be thoroughly familiar with mutual identification procedures and plans for rapid passage of lines. Stationary forces assist in the linkup by opening lanes in minefields, breaching or removing selected obstacles, furnishing guides, and designating avenues of approach. Use of a common radio frequency enhances coordination and responsiveness between forces.

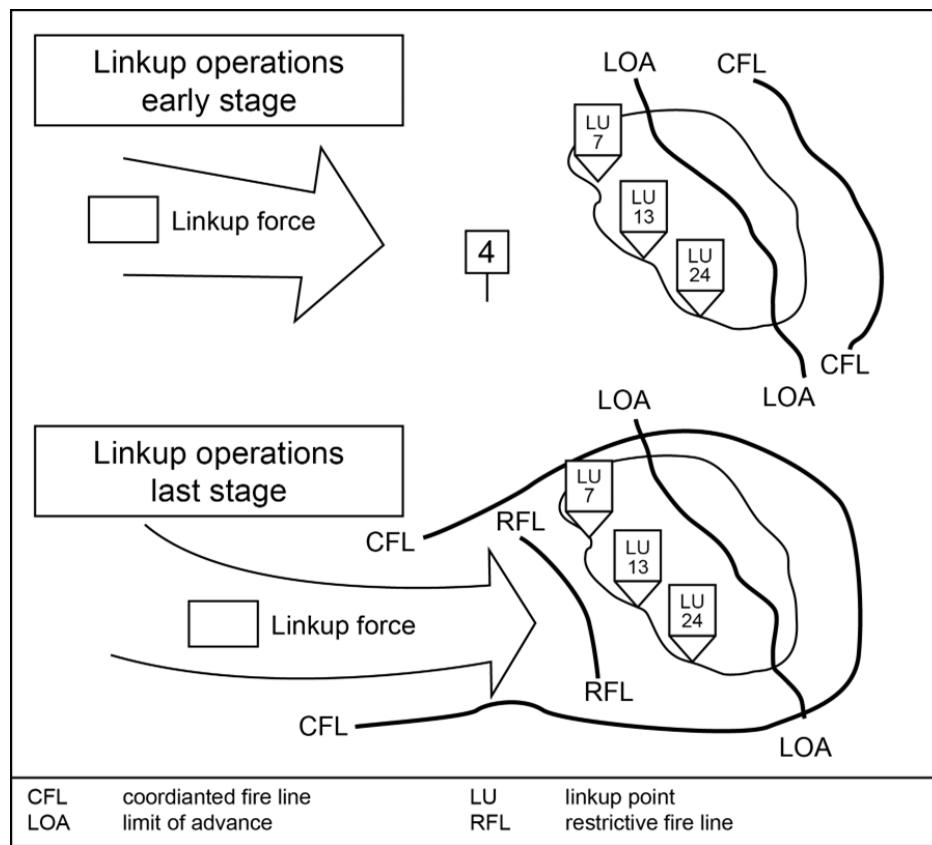


Figure 20-1. Linkup of a moving force with a stationary force

LINKUP OF TWO MOVING FORCES

20-29. Linkup between two moving forces is one of the most difficult operations often conducted to complete the encirclement of an enemy force. Units plan primary and alternate linkup points for two moving forces on boundaries where the two forces are expected to converge. As linking forces move closer, positive control must be coordinated to ensure they avoid firing on one another. This deliberate coordination ensures

the enemy does not escape between the two forces. Leading elements of each force should monitor a common radio network. Figure 20-2 depicts a linkup of two moving forces.

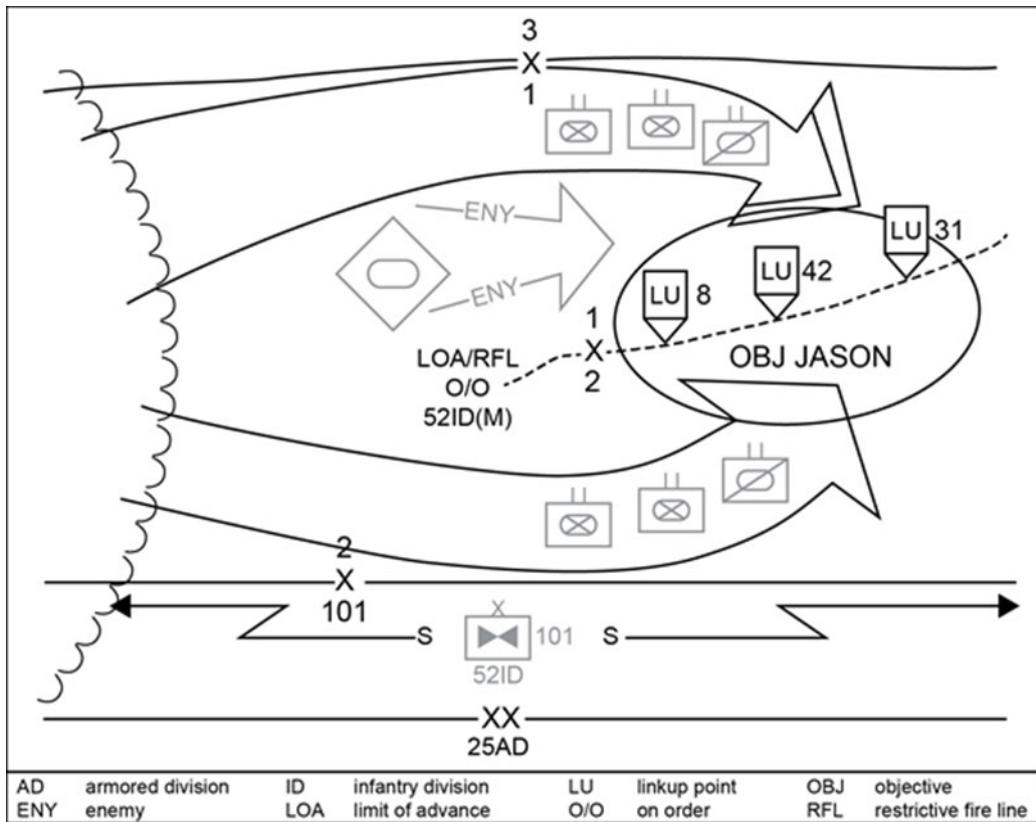


Figure 20-2. Linkup of two moving forces

ACTIONS FOLLOWING LINKUP

20-30. When the linkup is made, the linkup force may join the stationary force, or it may pass through or around to continue the attack. If the linkup force is to continue operations in conjunction with the stationary force, a single commander for the overall force should be designated. The linkup force may immediately pass through the perimeter of the stationary forces, be assigned objectives within the perimeter, or be assigned objectives outside the perimeter, depending on its mission. Plans for these operations must be made in advance.

Appendix A

Tactical Control Measures

This appendix expands the control measure discussion from Chapter 1 and explains maneuver control measures, fire support coordination measures, and airspace coordination measures common to offensive, defensive, and enabling operations. These control measures apply to both automated and hand drawn graphics or symbols, displays, and overlays. Most tactical control measures are used in both planning products and operation overlays.

GENERAL CONSIDERATIONS FOR CONTROL MEASURES

- A-1. Units use control measures to assign responsibilities, coordinate the warfighting functions, control operations, and prevent fratricide. Well-conceived control measures facilitate current and future operations. Throughout an operation, commanders adjust control measures as necessary to maintain synchronization and ensure mission accomplishment.
- A-2. Control measures apply to all forces. Control measures are used throughout the operations process and are graphically depicted within digital systems and on analog map overlays. Commanders ensure that all higher echelon control measures are incorporated into their units' orders and common operational picture. Subordinate units develop additional control measures to command and control their forces and ensure those control measures are shared with adjacent, higher, and subordinate units and staffs. They reference the control measures established by higher headquarters when making reports to that headquarters.
- A-3. Units generally establish and follow standard operating procedures for naming common control measures. During operations, units follow the timelines or procedures prescribed by their higher headquarters regarding control measure updates. For example, a division artillery headquarters will normally establish rhythmic times for subordinate units to provide updates to their current and planned fire support coordination measures.
- A-4. The sections below consist of common maneuver control measures, fire support coordination measures, airspace coordination measures, and obstacle control measures. These control measures are not a comprehensive listing of all possible control measures a unit may employ during operations. (See FM 1-02.2 for a listing of all control measures.)

MOVEMENT AND MANEUVER CONTROL MEASURES

- A-5. Maneuver control measures are used by maneuver forces and headquarters at all echelons to control the movement and maneuver of forces. Paragraphs A-7 through A-41 list and describe control measures commonly used during offensive, defensive, and enabling operations. Paragraphs A-44 through A-61 list and describe control measures commonly used in offensive operations while paragraphs A-62 through A-79 include those control measures that are only applicable to defensive operations. Paragraphs A-80 through A-88 include direct fire control measures.

COMMON CONTROL MEASURES

- A-6. Many graphical control measures are applicable to offensive, defensive, and enabling operations. The following are control measures discussed throughout FM 3-90. However, this list is not inclusive of all control measures. For a comprehensive listing of all approved control measures see FM 1-02.2.

Area of Operations

A-7. An *area of operations* is an operational area defined by a commander for land and maritime forces that should be large enough to accomplish their missions and protect their forces (JP 3-0). An area of operations (AO) is always completed enclosed by boundaries. An AO could consist of a singular boundary. An AO can also be enclosed with forward, rear, and lateral boundaries as shown in figure A-1. Figure A-2 depicts a division AO with subordinate BCT assigned areas. See paragraph 1-56 for more information on an AO.

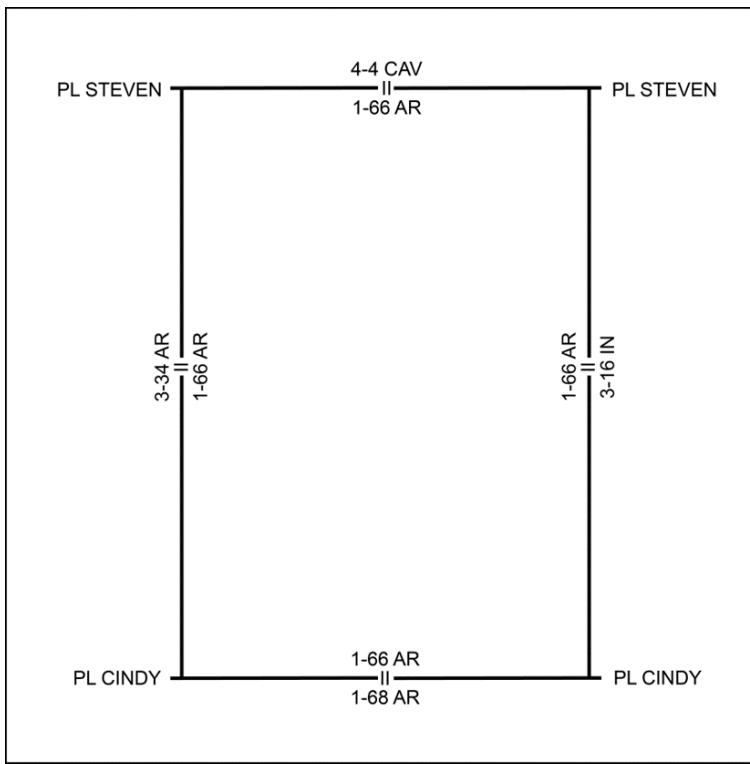


Figure A-1. AO with forward, rear, and lateral boundaries

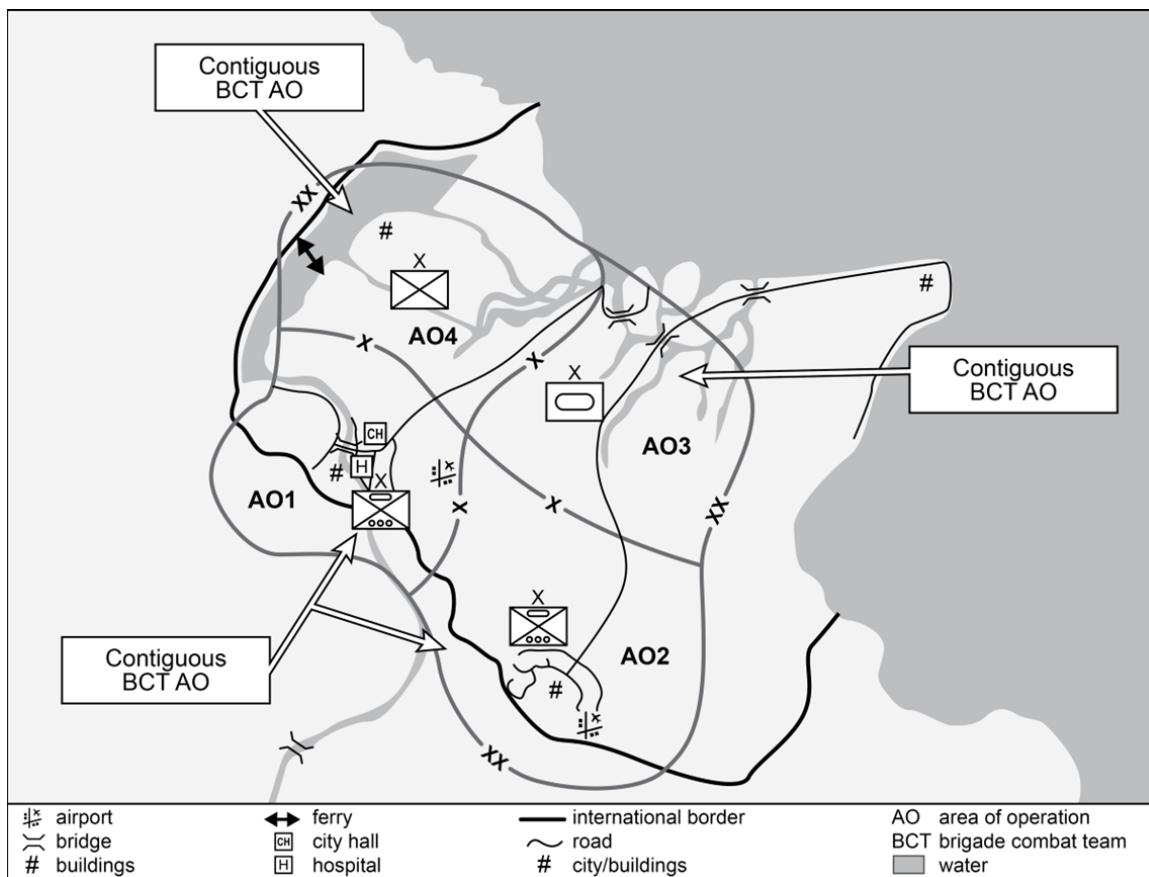


Figure A-2. Division AO with single boundary and contiguous BCT assigned areas

Assembly Areas

A-8. An **assembly area** is an area a unit occupies to prepare for an operation. Units of all types and echelons can be assigned assembly areas. In figure A-3 on page A-4, are examples of multiple units occupying one assembly area is a graphical shortcut taken when the map scale makes depiction of multiple assembly areas unreadable. In reality, the higher echelon commander would subdivide ASSEMBLY AREA THOMAS into two smaller assembly areas, one for each unit. A unit assembly area is normally within the assigned area of a higher headquarters and are typically noncontiguous. This means that a unit has the same responsibilities within its assigned assembly area as it has for any other assigned area.

A-9. A **tactical assembly area** is an area that is generally out of the reach of light artillery and the location where units make final preparations (precombat checks and inspections) and rest, prior to moving to the line of departure (JP 3-35). Tactical assembly areas are where enemy contact is likely and the commitment of a unit into combat is possible or anticipated. Examples of tactical assembly areas include locations occupied by units designated as tactical reserves, by units after completing a rearward passage of lines, temporarily by units during tactical movement, and by units during reconstitution. Units in tactical assembly areas are typically preparing to move forward to execute a forward passage of lines followed by offensive operations or have been assigned a reserve mission by their higher commander.

A-10. Planning for, occupying, and departing an assembly area is difficult and time consuming and requires careful consideration. Ideally, an assembly area provides—

- Concealment from air and ground observation.
- Adequate entrances, exits, and internal routes.
- Space for dispersion

- Enough distance from other areas and units to preclude mutual interference.
- Cover from direct fire.
- Good drainage and soil conditions that can sustain unit vehicles and individual Soldier movements.
- Terrain masking of electromagnetic signatures.
- Terrain allowing observation of ground and air avenues into the assembly area.
- A location beyond enemy medium artillery range.

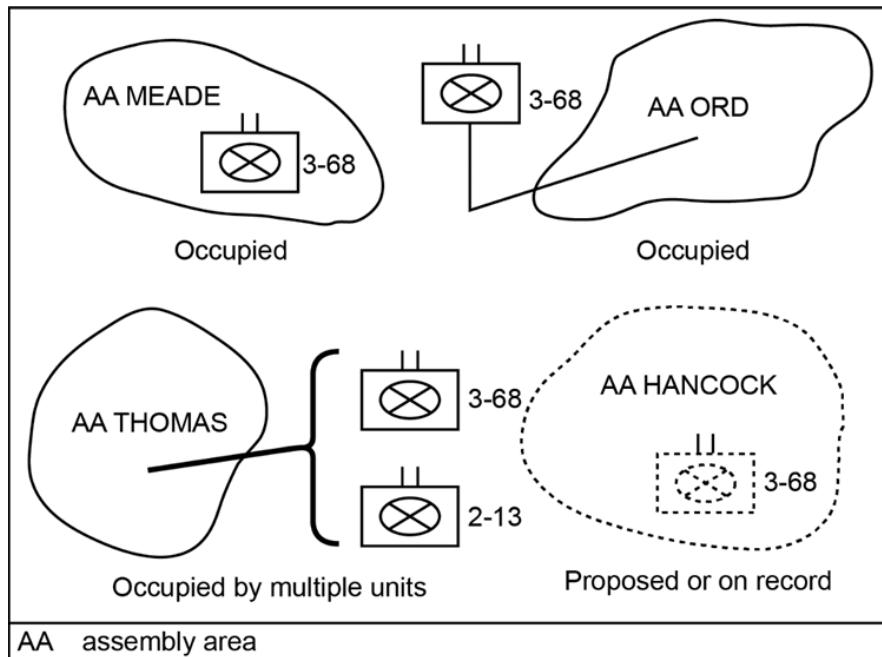


Figure A-3. Assembly areas

A-11. The proper location and size of assembly areas contributes significantly to both security and flexibility. The location should facilitate future operations, so movement to subsequent positions can take place smoothly and quickly by concealed routes. An assembly area must be large enough to accommodate the type and size of the force occupying it. Generally, dismounted infantry assembly areas are smaller than those assigned to armored or Stryker units. Because of their smaller signature, infantry units can use assembly areas closer to enemy forces than armored and Stryker units without excessive risk of enemy detection. The tactical mobility of armored and Stryker units allows them to occupy assembly areas at a greater distance from the LD than infantry units.

A-12. There are three methods to organize an assembly area: as a single area, as part of a large assembly area, or dispersed. The biggest difference between the three methods is the amount of security required since every assembly area inherently conducts a perimeter defense. See Figures A-4, A-5, and A-6 for examples of each method.

A-13. The single area method configures a unit in a perimeter defense with maneuver units deployed along the entire perimeter. Command and control, sustainment, and any other supporting units are located within the interior of the assembly area. Figure A-4 is an example of a single area assembly area for a battalion task force.

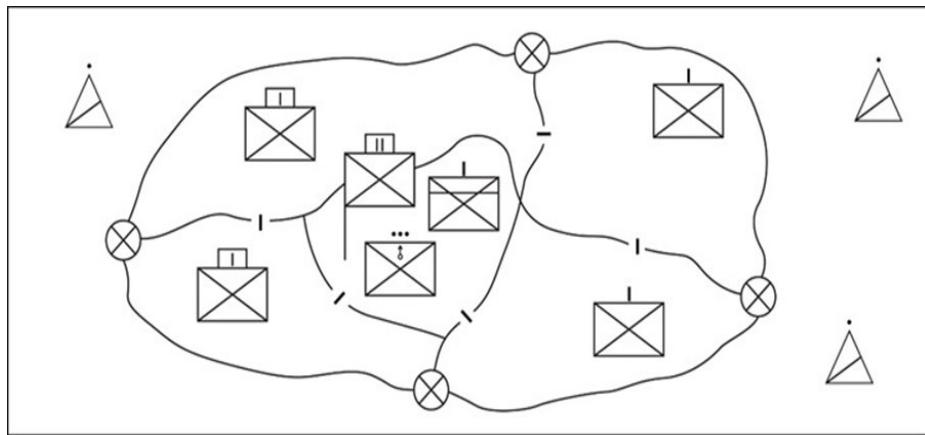


Figure A-4. Single assembly area method

A-14. A unit can also occupy a portion of a larger assembly area. This typically occurs when a subordinate formation occupies a portion of their higher headquarters assembly area. With this method, a unit has boundaries with adjacent units and may only have a portion of their assembly area focused on a perimeter. See figure A-5 for an example of an armor battalion occupying a portion of a larger assembly area.

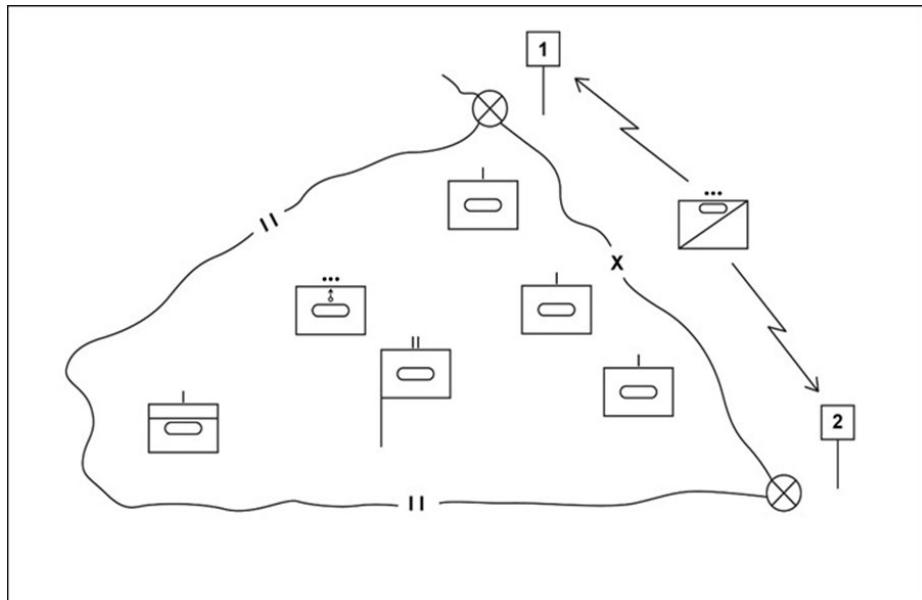


Figure A-5. Portion of a larger assembly area method

A-15. A unit may also use a dispersed method to assign assembly areas. In this method subordinate units are assigned individual assembly areas. These subordinate units maintain their own 360-degree security. Similar to the single assembly area method, maneuver units occupy perimeter assembly areas with command and control, sustainment, and other units located within the interior. See figure A-6 on page A-6 for an example of the dispersed method by a division.

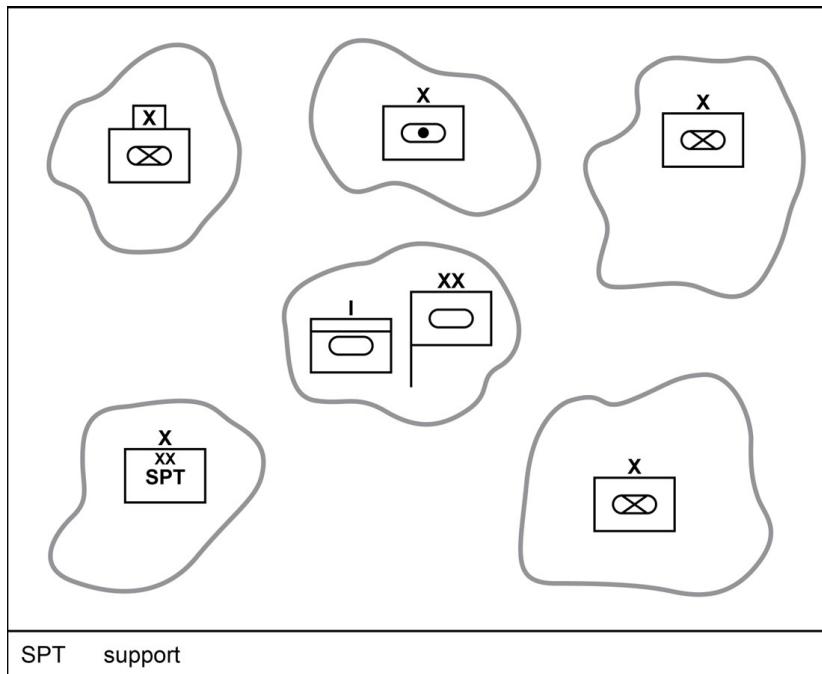


Figure A-6. Dispersed assembly area method

Boundaries

A-16. A *boundary* is a line that delineates surface areas for the purpose of facilitating coordination and deconfliction of operations between adjacent units, formations, or areas (JP 3-0). Boundaries are normally drawn along identifiable terrain features and are used to delineate responsibility between adjacent units and between higher and lower echelon headquarters. Boundaries should not split responsibilities for key or decisive terrain, roads, rivers, or railways. Within their assigned areas, units may maneuver within the overall plan without close coordination with neighboring units unless otherwise restricted. Direct fire may be placed across boundaries on clearly identified enemy targets without prior coordination, provided friendly forces are not endangered. Indirect fire also may be used after prior coordination with the adjacent unit. Commanders adjust boundaries as necessary in response to the evolving tactical situation.

A-17. Boundaries by themselves or with other control can be used to define a unit's assigned area: area of operations, zone, or sector. A *forward boundary* is a boundary that delineates the forward edge of a unit's area of operation. A *lateral boundary* is a boundary defining the left or right limit of a unit's assigned area. A *rear boundary* is a boundary that delineates the rearward limits of a unit's assigned area. The forward boundary is the farthest limit in the direction of the enemy, of an organization's responsibility. The rear boundary also defines the start of the next echelon's rear area. Figure A-1 on page A-2 depicts an AO with forward, rear, and lateral boundaries.

Checkpoint

A-18. A ***checkpoint*** is a predetermined point on the ground used to control movement, tactical maneuver, and orientation. Checkpoints are used by all units in all types of operations. Units may use checkpoints to supplement or as substitutes for phase lines. Units can also use a checkpoint as a fire control measure in lieu of the preferred control measure, a TRP. Figure A-7 depicts CHECKPOINT 13.

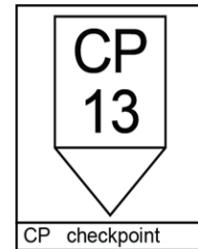


Figure A-7. Checkpoint 13

Contact Point

A-19. In land warfare, a ***contact point*** is a point on the terrain, easily identifiable, where two or more units are required to make contact (JP 3-50). A commander establishes a contact point where a PL crosses a lateral boundary or another identifiable terrain feature as a technique to ensure coordination between two units. The commander provides a date-time group to indicate when to make that physical contact. Figure A-8 depicts CONTACT POINT 8.

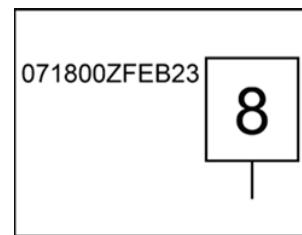


Figure A-8. Contact point 8

Coordination Point

A-21. A ***coordination point*** is a point that indicates a specific location for the coordination of tactical actions between adjacent units. It is used when a PL crosses a lateral boundary between two units or whenever a boundary crosses the forward edge of the battle area (FEBA). The difference between a contact point and a coordination point is that the establishing headquarters does not dictate the exact time when contact is required. Figure A-9 depicts a coordination point.

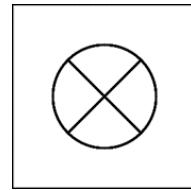


Figure A-9. Coordination point

Forward Line of Own Troops

A-22. The ***forward line of own troops*** is a line that indicates the most forward positions of friendly forces in any kind of military operation at a specific time. The forward line of own troops (FLOT) normally identifies the forward location of security forces. In the defense, it may be beyond, at, or short of the FEBA. It does not include small, long-range reconnaissance assets and similar stay-behind forces. Friendly forces forward of the FLOT may have a restrictive fire coordination measure, such as a restrictive fire area (RFA), placed around them to preclude friendly fire incidents. An enemy FLOT indicates the forward most position of enemy forces. Figure A-10 depicts the symbol for the FLOT.

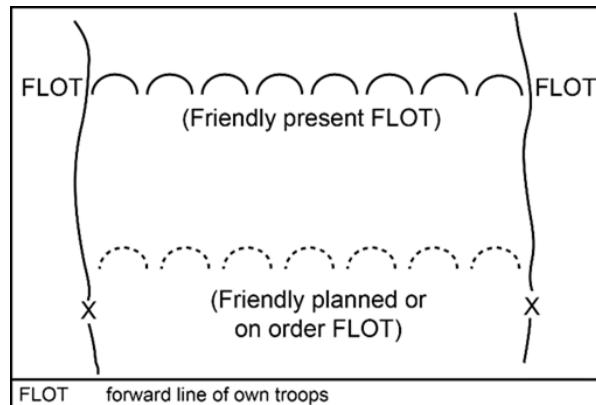


Figure A-10. Forward line of own troops

Gap

A-23. A **gap** is an area free of obstacles that enables forces to maneuver in a tactical formation. It is wide enough to allow a friendly force to pass through while dispersed in a tactical formation. The presence of gaps prevents inadvertent concentrations of Soldiers and equipment around the entry points of lanes. Figure A-11 depicts the graphic control measure for a gap.

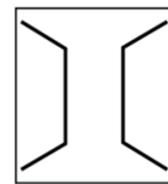


Figure A-11. Gap

Infiltration Lane

A-24. An **infiltration lane** is a control measure that coordinates forward and lateral movement of infiltrating units and fixes fire planning responsibilities. Commanders select infiltration lanes that avoid enemy forces, provide cover and concealment, and facilitate navigation. Each unit assigned an infiltration lane picks its own routes within the lane and switches routes as necessary. The left and right limits of the infiltration lane act as lateral boundaries for the unit conducting the infiltration. Staffs must coordinate with the infiltrating unit any attacks by rotary- or fixed-wing aircraft, indirect fires, or munitions effects that impact the lane. Units leaving their assigned lane run the risk of impact by friendly fires. Company-sized units normally have a single infiltration lane, although they can use more than one lane. Larger organizations are always assigned more than one infiltration lane. Figure A-12 depicts the graphic control measure for INFILTRATION LANE MICHAEL.

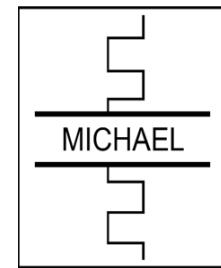


Figure A-12. Infiltration lane MICHAEL

Line of Contact

A-25. The **line of contact** is a general trace delineating the location where friendly and enemy forces are engaged. Units develop their line of contact (LC) based on the maximum effective range of the direct fire weapons systems or the visual line of sight from known or templated enemy locations. The commander designates the enemy side of the LC by the abbreviation "ENY." In the defense, a LC is often synonymous with the FLOT. In the offense, commanders may combine the LC with the LD. When combined with the LD, it is represented by a phase line with LD/LC written next to the name. Figure A-19 on page A-11 depicts PL JOHN being used as a LD/LC.

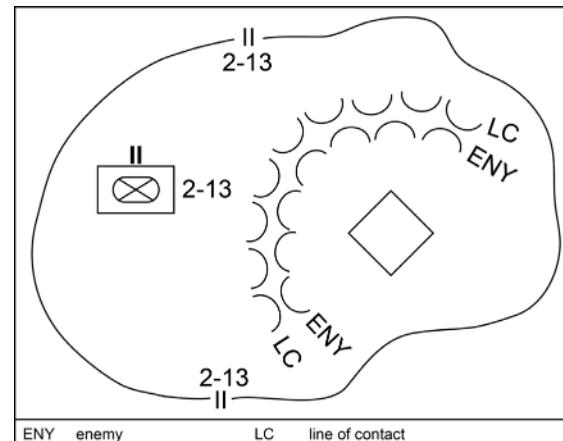


Figure A-13. Line of contact

A-26. For other forms of contact, a phase line can be designated as a probable line of contact. For example, based on IPB and information collection friendly forces can depict known or anticipated locations of enemy artillery assets and determine a probable line of contact for enemy indirect fires. Figure A-13 shows an example line of contact.

Linkup Point

A-27. A *linkup point* is a designated place where two forces are scheduled to meet. This easily identifiable point on the ground is where two forces meet or consolidate before proceeding on with their mission. Besides being easily identifiable, the linkup point must also be rather inconspicuous, or the enemy will be able to predict the location of the coordination and quickly target it. It should also be relatively isolated from direct fire and observation of possible enemy elements located on the surrounding terrain. Alternate linkup points must meet the same criteria and should be reconnoitered to the same degree as primary linkup points. Linkup points are normally positioned behind or along one flank of the enemy's positions on defensible terrain and located away from normal enemy troop movement routes. The linkup point should be large enough for all infiltrating elements to assemble, and it should offer cover and concealment for these elements. Figure A-14 depicts LINKUP POINT 8.

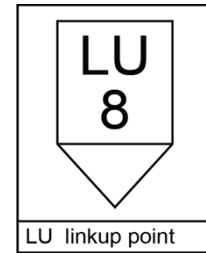


Figure A-14. Linkup point 8

Named Area of Interest

A-28. A *named area of interest* is the geospatial area or systems node or link against which information that will satisfy a specific information requirement can be collected, usually to capture indications of enemy and adversary courses of action (JP 2-0). In this latter case, the NAI may be a person, group, or portion of cyberspace. Staffs tailor the shape of their NAI symbols to the actual area they want observed rather than using a prescribed shape. It is possible to re-designate a NAI as a target area of interest (TAI) when Soldiers confirm enemy activity in the area and have assets that can target it. This allows commanders to mass the effects of combat power on that area. Figure A-15 depicts NAI AUGUSTA.

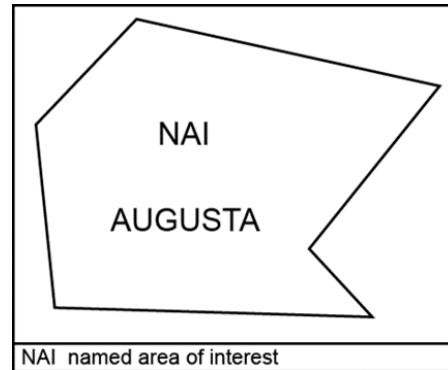


Figure A-15. Named area of interest AUGUSTA

Objective

A-29. An *objective* is a location used to orient operations, phase operations, facilitate changes of direction, and provide for unity of effort (ADP 3-90). Objectives should be easily identifiable on the ground to facilitate their recognition. They normally assign subordinate commanders only their final objectives, but they can assign intermediate objectives as necessary. Figure A-19 on page A-11 depicts OBJECTIVE PAT. OBJECTIVE PAT is further divided into two subordinate objectives: OBJECTIVE KAI and OBJECTIVE ZEKE.

Passage Lane

A-30. A *passage lane* is a lane through an obstacle that provides safe passage for a passing force. It is a clear route through an obstacle. The lane may be cleared, including being reduced and proofed, as part of a breach operation, or it may be included as part of the design of a friendly obstacle. Passage lanes normally end where a route begins. That route should allow the passing unit to move rapidly through the stationary unit's area. Figure A-16 depicts the graphic control measure for a passage lane.

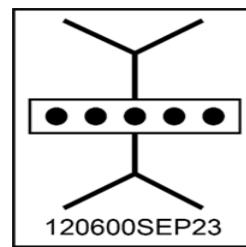


Figure A-16. Passage lane

Passage of Lines

A-31. A passage of lines occurs under two conditions. A *forward passage of lines* occurs when a unit passes through another unit's positions while moving toward the enemy (ADP 3-90). A *rearward passage of lines* occurs when a unit passes through another unit's positions while moving away from the enemy (ADP 3-90). Ideally, a passage of lines does not interfere with the conduct of the stationary unit's operations. Figure A-17 shows the symbols for both a forward and a rearward passage of lines. The arrow goes in the direction the passing unit is moving.

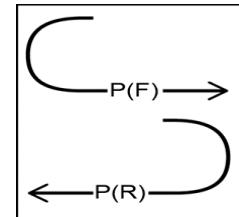


Figure A-17. Forward and rearward passage of lines

Passage Point

A-32. A *passage point* is a designated place where the passing units pass through the stationary unit. The location of this point is where the commander wants subordinate units physically to execute a passage of lines. Figure A-18 depicts the graphic control measure for PASSAGE POINT 7.

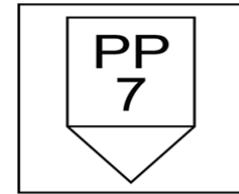


Figure A-18. Passage point

Phase Line

A-33. A *phase line* is an easily identified feature in the operational area utilized for control and coordination of military operations (JP 3-09). A commander establishes PLs to control the maneuver of the units. PLs are not boundaries unless designated as such and do not establish any specific responsibilities between units, unless the operation order so specifies. When possible, commanders place them along easily recognizable terrain features—such as roads, railroad tracks, rivers, and ridgelines—to ensure easy identification. Units normally report crossing PLs, but do not halt unless specifically directed. Some PLs have additional designations for specific purposes, such as an LD or a PLD. Figure A-19 depicts five phase lines being used for an offensive operation.

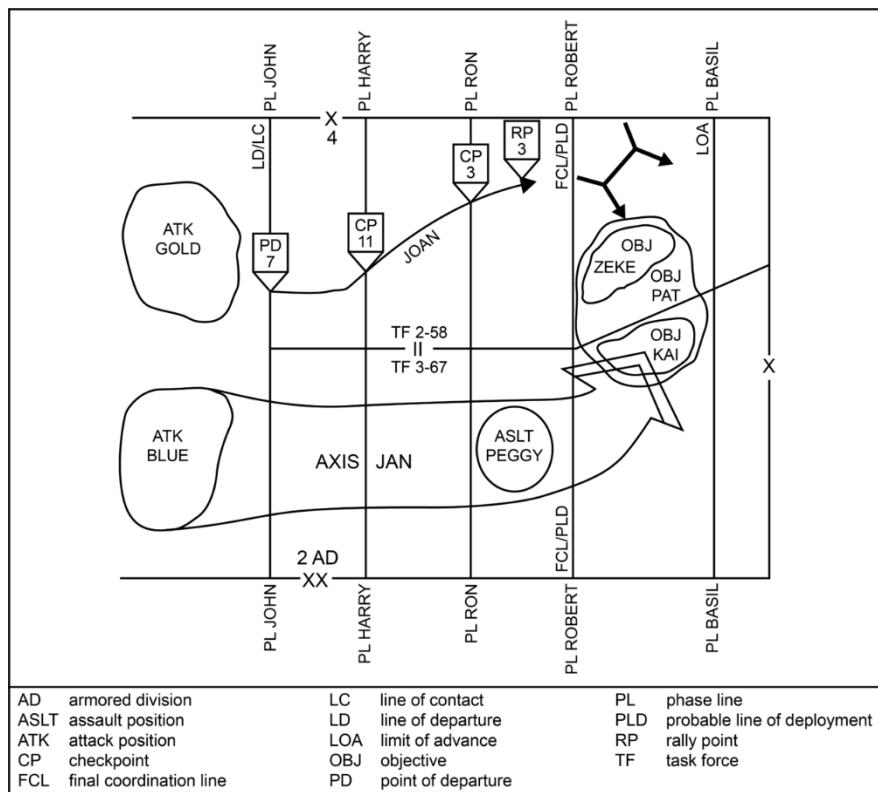


Figure A-19. Phase lines

Position Area for Artillery

A-34. A **position area for artillery** is an area assigned to an artillery unit to deliver surface to surface fires. A position area for artillery (PAA) is not an AO for the artillery unit occupying it. Commanders assign PAAs for terrain management and for locations where individual artillery systems can maneuver to increase their survivability. Establishing a PAA lets other subordinate units know they should avoid occupying that same terrain. While the exact size of a PAA depends on mission variables, a Paladin platoon normally requires a PAA encompassing over 4 square kilometers whereas a multiple launch rocket system (known as MLRS) platoon requires 9 square kilometers. Figure A-20 depicts a PAA.

A-35. The maneuver echelon operations officer of the unit that owns the terrain establishes the PAA. The occupying artillery unit does not have the same authority and responsibilities toward the PAA that are associated with a unit assigned an assigned area. For example, other units can move through a PAA without clearing that movement with the artillery unit. However, to prevent fratricide or inadvertently concentrating forces units should make attempt to contact the artillery unit to determine if the PAA is occupied. Additionally, units moving through or occupying terrain within a PAA should be cognizant of the increased risk of receiving indirect fire from enemy artillery due to enemy counterbattery or preparatory fires. The artillery unit occupying a PAA establishes liaison with the unit that owns the assigned area where the PAA

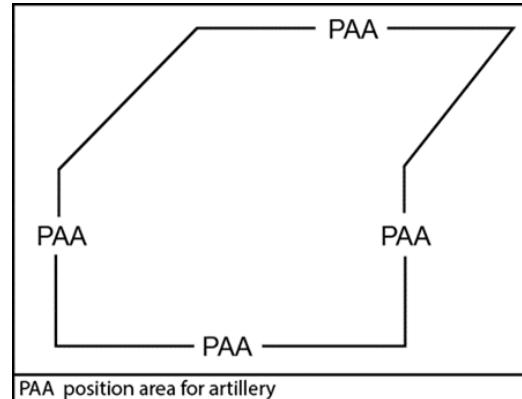


Figure A-20. Position area for artillery

is located. The echelon fire support officer usually conducts this liaison in accordance with standard command and support relationships.

A-36. The decision to establish a PAA affects airspace control for rotary-wing, fixed-wing, unmanned, and tilt-rotor aircraft integration. A PAA is a base upon which to establish future grid target lines for lateral deconfliction and areas for rotary-wing, fixed-wing, unmanned, and tilt-rotor aircraft to avoid, depending on high or low angle artillery fires.

Rally Point

A-37. A **rally point** is an easily identifiable point on the ground at which units can reassemble and reorganize if they become dispersed. Forces conducting a patrol or an infiltration commonly use this control measure. Figure A-21 depicts RALLY POINT 14.

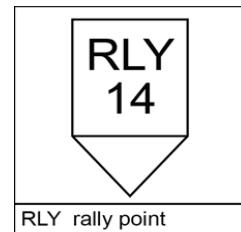


Figure A-21. Rally point 14

Release Point

A-38. A **release point** is a designated place on a route where elements are released from centralized control. Once released from centralized control they are released back to the authority of their respective commanders. Each start point (SP) must have a corresponding release point (RP), which must also be easy to recognize on the ground. Marching units do not stop at the RP; instead, as they move through the RP and continue toward their own appropriate destination. Figure A-23 shows RP 3 on ROUTE IRON.

Relief in Place

A-39. A **relief in place** is an operation in which, by direction of higher authority, all or part of a unit is replaced in an area by the incoming unit and the responsibilities of the replaced elements for the mission and the assigned zone of operations are transferred to the incoming unit (JP 3-07.3). Figure A-22 depicts a relief in place. (See Chapter 15 for more information on relief in place.)

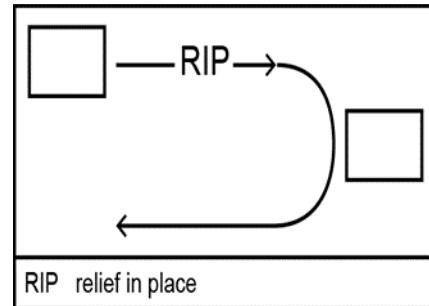


Figure A-22. Relief in place

Route

A-40. A **route** is the prescribed course to be traveled from a point of origin to a destination. Routes can have different functions. Commanders can add those functions as adjectives to specify different types of routes. Examples of such routes include a passing route, main supply route, and alternate supply route. Commanders can further designate routes as open, supervised, dispatch, reserved, or prohibited. They can assign names, numbers, or alphanumeric designations to routes within their assigned areas. Figure A-23 depicts ROUTE IRON.

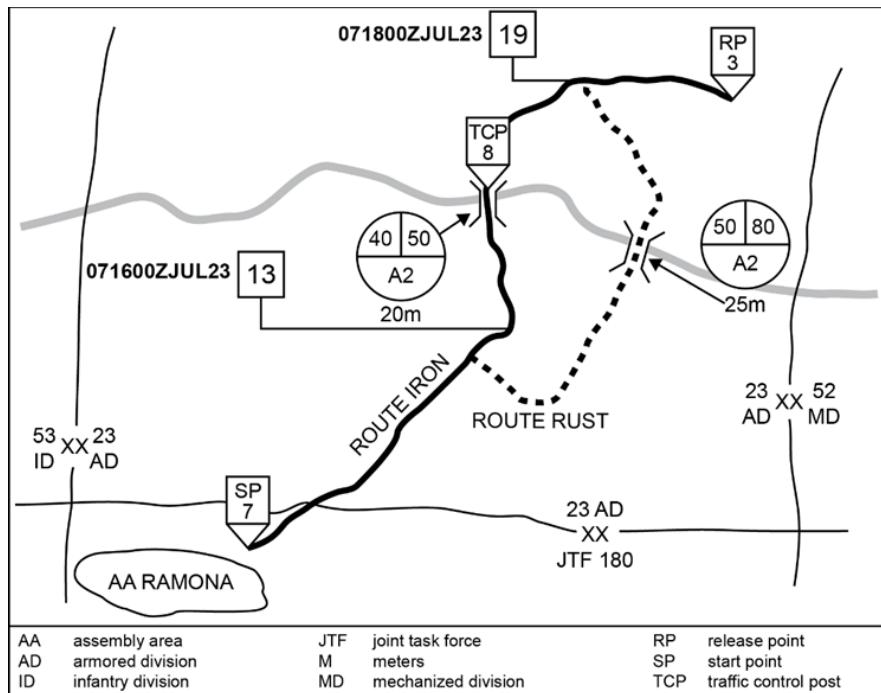


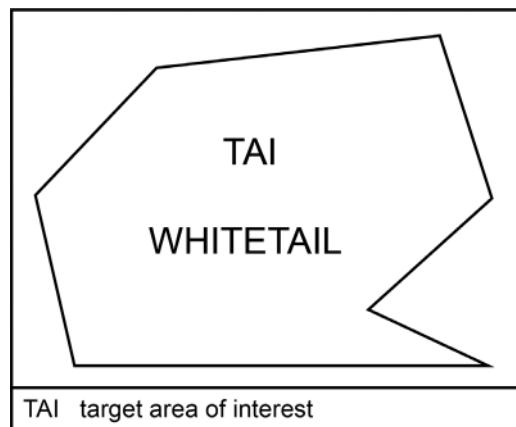
Figure A-23. Routes

Start Point

A-41. The **start point** is a designated place on a route where elements fall under the control of a designated march commander. All routes have a designated SP and RP that are easily recognizable on the map and on the ground, such as a road junction. It is far enough from the assembly area to allow units to organize and move at the prescribed speed and interval when they reach the SP. Figure A-23 depicts SP 7 on ROUTE IRON.

Target Area of Interest

A-42. A **target area of interest** is the geographical area where high-value targets can be acquired and engaged by friendly forces (JP 2-0). Commanders use TAIs to apply a specific effect against a specific target with a defined outcome. The difference between a TAI and an NAI is that an NAI is established to obtain information and answer a specific information requirement whereas a TAI is established to create a pre-determined effect. The unit staff develops TAIs during the MDMP, based on the currently available products resulting from the IPB. These TAIs are further refined during course of action analysis and finally approved by the commander during course of action approval. The shape of a TAI reflects the target and effect intended for the TAI. Information collection assets normally cue their use. Commanders designate TAIs for any organic or supporting systems. TAIs differ from engagement areas. Engagement areas plan for the use of all available weapons, while TAIs might be engaged by a single weapon or system. Figure A-24 depicts TAI WHITETAIL.

Figure A-24. Target area of interest
WHITETAIL

OFFENSIVE OPERATIONS CONTROL MEASURES

A-43. This section defines in alphabetical order those common offensive control measures commanders use to synchronize the effects of combat power. The commander uses the minimum control measures required to successfully complete the mission while providing subordinates the flexibility needed to respond to changes in the situation. Figure A-25 depicts some of the common offensive control measures that will be further discussed throughout this section.

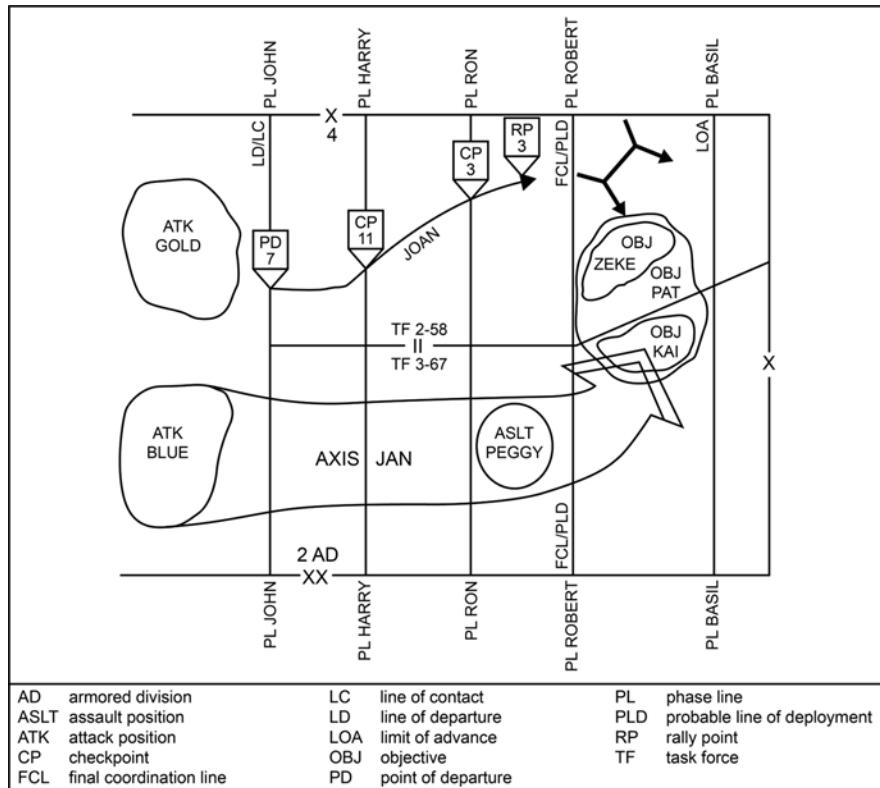


Figure A-25. Common offensive control measures

Assault Position

A-44. An *assault position* is a covered and concealed position short of the objective from which final preparations are made to assault the objective (ADP 3-90). Assault positions are typically only assigned to attacking maneuver formations. Units supporting and maneuvering with the maneuver force execute their final preparations in the same assault positions as the maneuver force. These final preparations can involve tactical considerations, such as a short halt to coordinate the final assault, reorganize to adjust to combat losses, or make necessary adjustments in the attacking force's dispositions. These preparations can also involve technical activities, such as engineers conducting their final checks on obstacle clearing systems and the crews of plow and roller equipped tanks removing their locking pins. Commanders may locate their assault positions near either a final coordination line (FCL) or a probable line of deployment (PLD). Figure A-25 depicts ASSAULT POSITION PEGGY. (Paragraphs A-52 and A-57 define a FCL and PLD respectively.)

Assault Time

A-45. The *assault time* is the moment to attack the initial objectives throughout the geographical scope of the operation (ADP 3-90). Higher echelon headquarters impose this control measure to achieve simultaneous results from several different units. Using an assault time synchronizes the moment an enemy force feels the effects of friendly combat power. Assault times are similar to the time-on-target control method used by field

artillery units when processing fire missions. A commander uses an assault time instead of a time of attack because of differences in distance, tactical mobility, and known obstacles among subordinate units. (See paragraph A-59 for more information on a time of attack).

Attack by Fire Position

A-46. An *attack by fire position* designates the general position from which a unit performs the tactical task of attack by fire (ADP 3-90). The purpose of these positions is to mass the effects of direct fire systems for one or multiple locations toward enemy forces. Attack by fire positions rarely apply to units larger than a company. An attack by fire position does not indicate the specific site. Figure A-26 depicts ATTACK BY FIRE POSITION BRANDON. (See paragraph B-3 for more information on the tactical mission task of attack by fire).

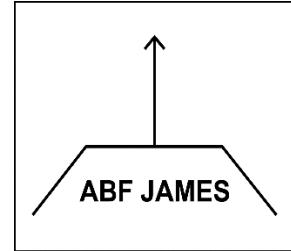


Figure A-26. Attack by fire position JAMES

Attack Position

A-47. The *attack position* is the last position an attacking force occupies or passes through before crossing the line of departure (ADP 3-90). An attack position facilitates an attacking force's deployment and last-minute coordination before it crosses the LD. Located on the friendly side of the LD, an attack position offers cover and concealment for the attacking force. Commanders use it primarily at battalion level and below. Whenever possible, units move through the attack position without stopping. An attacking unit occupies an attack position for various reasons, including when the unit is waiting for specific results from preparation fires or when it is necessary to conduct additional coordination, such as a forward passage of lines. If the attacking unit occupies the attack position, it stays there for the shortest amount of time possible to avoid offering enemy forces a lucrative target. Figure A-25 on page A-14 depicts ATTACK POSITIONS BLUE and GOLD.

Axis of Advance

A-48. An *axis of advance* designates the general area through which the bulk of a unit's combat power must move (ADP 3-90). A commander uses an axis of advance for three primary reasons:

- To direct the bypass of locations that could delay the progress of the advancing force, such as known contaminated areas.
- To indicate that the force is not required to clear the entire assigned area as it advances. The force will be required to clear the axis based on specified bypass criteria.
- To indicate to a unit involved in offensive encirclement, exploitation, or pursuit operations the need to move rapidly toward an objective.

A-49. An axis of advance can be used by any maneuver echelon. Subordinate maneuver units can develop their own axis of advance within the confines of their higher headquarters axis of advance. For example, a battalion can establish multiple company level axis of advance as long as each company's axis of advance remains within the bounds of the battalion's axis of advance. The width of the axis varies based on factors such as terrain, size and type of friendly forces, and time. Generally, a wider axis of advance is used in unrestricted terrain. When using an axis of advance, the risk is that friendly forces do not detect enemy forces outside the axis and the enemy is inadvertently bypassed. Figure A-25 on page A-14 depicts AXIS OF ADVANCE JAN. When developing the axis of advance, commanders also establish bypass criteria (see paragraph 12-27 for bypass criteria).

Battle Handover Line

A-50. The *battle handover line* is a designated phase line where responsibility transitions from the stationary force to the moving force and vice versa (ADP 3-90). The common higher echelon commander of the two forces establishes the battle handover line (BHL) after consulting both commanders. The stationary commander determines the location of the line. The BHL is forward of the FEBA in the defense or the FLOT

in the offense. Commanders draw it where the direct fires of forward combat elements of the stationary unit can effectively support the passing unit until completion of the passage of lines. The area between the BHL and the stationary force belongs to the stationary force commander. The stationary force commander may employ security forces, obstacles, and fires in the area. Figure A-27 depicts a BHL at PL DANIEL used in conjunction with other control measures during a forward passage of lines.

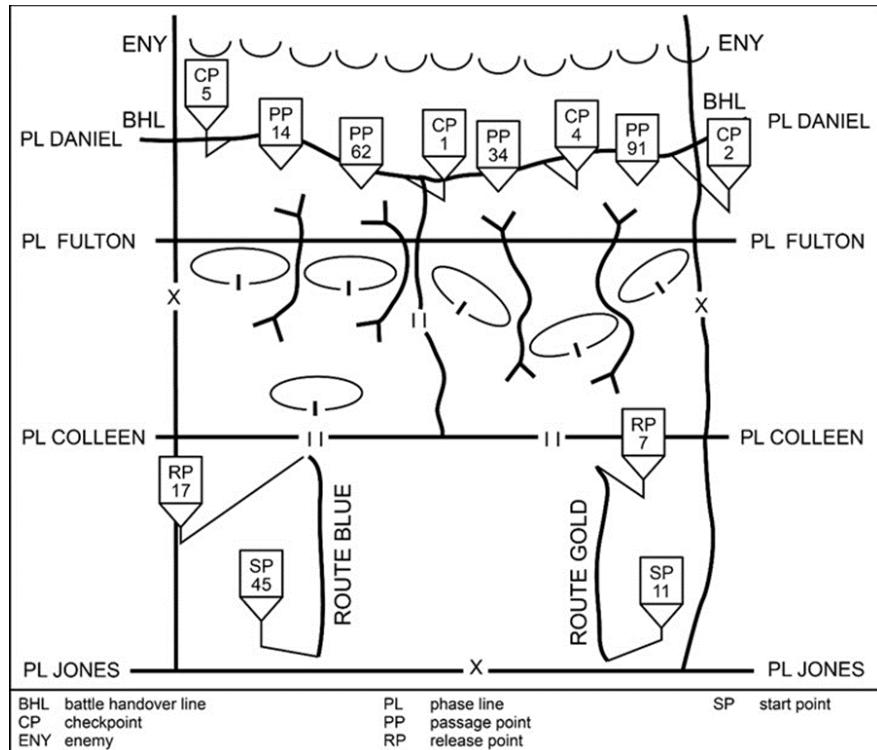


Figure A-27. Battle handover line DANIEL

Direction of Attack

A-51. The *direction of attack* is a specific direction or assigned route a force uses and does not deviate from when attacking (ADP 3-90). It is a restrictive control measure that requires a subordinate unit to attack as indicated and is not normally allowed to bypass the enemy. It is normally used at battalion and lower levels. Direction of attack is a more restrictive control measure than axis of advance and units are not free to maneuver off the assigned route. Direction of attack is normally used in counterattacks or to ensure that supporting attacks make maximal contribution to the main attack. It is also used during night attacks, infiltrations, and when attacking through obscuration. When using a direction of attack, commanders designate a PD at the beginning. Figure A-25 on page A-14 depicts DIRECTION OF ATTACK JOAN.

Final Coordination Line

A-52. The *final coordination line* is a phase line close to the enemy position used to coordinate the lifting or shifting of supporting fires with the final deployment of maneuver elements (ADP 3-90). Brigade and below maneuver formations typically use an FCL. The FCL should be placed on easily recognizable terrain. Final adjustments to supporting fires necessary to reflect the actual versus the planned tactical situation take place before crossing the FCL. The FCL is not a FSCM. Figure A-25 on page A-14 depicts PL ROBERT as an FCL.

Limit of Advance

A-53. The *limit of advance* is a phase line used to control forward progress of the attack (ADP 3-90). A LOA is a restrictive control measure because the attacking unit does not advance any of its elements or assets beyond the LOA, but the attacking unit can push its security forces to that limit. Units can employ direct and indirect fires beyond the LOA. A LOA is typically established by a higher echelon headquarters. Commanders usually select linear terrain features, perpendicular to the direction of attack, on the far side of the objective as LOAs because such terrain features are easily identifiable. They employ LOAs to prevent overextending the attacking force and to reduce the possibility of fratricide and friendly fire incidents by fires supporting the attack. They position LOAs far enough beyond their objectives to allow their units to defend the objective. A LOA prevents units from exploiting success and launching a pursuit; therefore, commanders should only use LOAs if they do not want to perform an exploitation or pursuit. A forward boundary is always a LOA, but a LOA is not necessarily a forward boundary. In fact, a LOA and the unit's forward boundary should rarely coincide because of the resulting limitations that a forward boundary places on supporting fires beyond the forward boundary. Figure A-25 on page A-14 shows PL BASIL used as a LOA.

Line of Departure

A-54. In land warfare, the *line of departure* is a line designated to coordinate the departure of attack elements (JP 3-31). The purpose of the LD is to coordinate the advance of the attacking force so that its elements strike the enemy in the order and at the time desired. The LD also marks where the unit often transitions from movement to maneuver. Commanders can also use it to facilitate the coordination of fires. Generally, it should be perpendicular to the direction the attacking force will take on its way to the objective. Friendly forces should control the LD. Commanders analyze the terrain before designating an LD. Different units have different movement rates on leaving their assembly areas based on their inherent mobility characteristics and the terrain traversed. Commanders consider these different characteristics when establishing an LD to prevent these differences from affecting the synchronization of the operation. When possible, commanders select the LD so that the terrain the attack unit traverses before crossing the LD provides sufficient cover for the attacking unit's final deployment into a maneuver formation before crossing the LD. In many cases, the LD is also the LC because the unit in contact is conducting the attack from its current positions. Figure A-25 on page A-14 depicts PL JOHN as a combined LD and LC.

Objective Rally Point

A-55. The *objective rally point* is an easily identifiable point where all elements of the infiltrating unit assemble and prepare to attack the objective (ADP 3-90). It is typically near the infiltrating unit's objective; however, there is no standard distance from the objective to the objective rally point. It should be far enough away from the objective so that the enemy will not detect the infiltrating unit's attack preparations.

Point of Departure

A-56. The *point of departure* is the point where the unit crosses the line of departure and begins moving along a direction of attack (ADP 3-90). Units conducting reconnaissance and security patrols and other operations in a low-visibility environment commonly use a point of departure (PD) as a control measure. Like the LD, it marks the point where the unit transitions from movement to maneuver under conditions of limited visibility. Figure A-28 depicts PD 7.

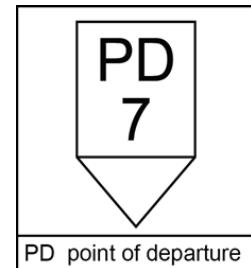


Figure A-28. Point of departure 7

Probable Line of Deployment

A-57. A *probable line of deployment* is a phase line that designates the location where the commander intends to deploy the unit into assault formation before beginning the assault (ADP 3-90). Commanders at battalion-sized and smaller units primarily employ PLDs when their units do not cross their LD in an assault formation. It is usually a linear terrain feature perpendicular to the direction of attack and recognizable under conditions

of limited visibility. The PLD should be located outside the range where enemy forces can place the attacking force under effective direct fire. In figure A-25 on page A-14, PL ROBERT is designated as the PLD.

Support by Fire Position

A-58. A *support by fire position* designates the general position from which a unit performs the tactical mission task of support by fire (ADP 3-90). Paragraph B-58 defines the tactical mission task of support by fire. The purpose of these positions is to increase the supported force's freedom of maneuver by placing direct fires on an objective that a friendly force is going to assault. Support by fire positions are located within the maximum friendly direct fire range of the enemy positions. Commanders select them so that a moving assault force does not mask its supporting fires. For this reason, support by fire positions are normally located on the flank of an assault force, elevated above the objective if possible. Support by fire positions are rarely applicable to units larger than company size. When used as a planning symbol, the support by fire position depicted in figure A-29 indicates the general location and direction from which the unit provides fires. When used as a control measure, the position of the symbol dictates the actual location of the position, and the arrows define the left and right limits of the unit's sector of fire.

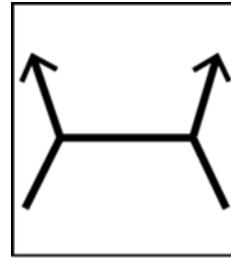


Figure A-29. Support by fire position

Time of Attack

A-59. The *time of attack* is the moment the leading elements of the main body cross the line of departure, or in a limited-visibility attack, the point of departure (ADP 3-90). Commanders use it when conducting simultaneous operations where supporting efforts must accomplish their mission to create conditions for the success of the main effort. When determining a time of attack, they consider the time subordinates require to—

- Conduct necessary reconnaissance, prepare plans, and issue orders.
- Synchronize plans among all subordinate units.
- Complete attack preparations, such as pre-combat inspections.
- Move to the LD or PD.

A-60. Orders normally designate the time of attack as H hour. This occurs when the main body crosses the LD. However, H-hour can also designate the time to implement a phase of an operation, such as an airborne or air assault phase. The headquarters planning the operation specifies the term's exact meaning. This is usually a part of the unit's standard operating procedures.

Zone

A-61. A *zone* is an operational area assigned to a unit in the offense that only has rear and lateral boundaries (FM 3-0). By not emplacing a boundary to a unit's front it allows them to move quicker and synchronize fires better against the enemy they are facing. A zone is different from an area of operations in that instead of a forward boundary to restrict movement and fires a higher headquarters uses maneuver control measures and fire support coordination measures. Example control measures to use include things such as a limit of advance and a coordinated fire line. Zones are most appropriate for any unit likely to make direct fire contact with the enemy during high-tempo offensive operations or when there is a fluid FLOT. Units assigned a zone treat areas behind the FLOT as an AO. Zone can be further subdivided as needed into area of operations, zones, or sectors as appropriate. Any unit not expecting to be in direct fire contact with the enemy should use an area of operations or other means of terrain management. If a unit is attacking in a zone and culminates and transitions to a hasty defense, they will continue to use the zone because they eventually expect to go back on the offense and the defense is a temporary thing. Figure A-30 depicts a battalion zone for 1-66 Armor.

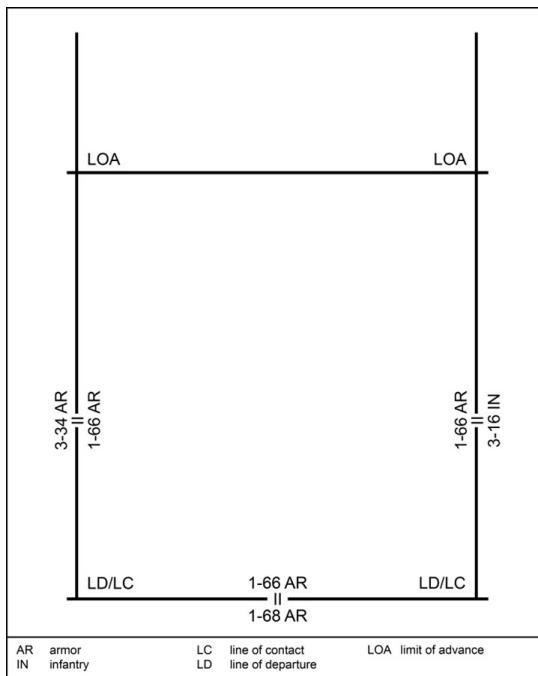


Figure A-30. Example zone for 1-66 Armor

DEFENSIVE OPERATIONS CONTROL MEASURES

A-62. The commander controls the defense by using control measures to provide the flexibility needed to respond to changes in the situation and allow the defending commander to rapidly concentrate combat power at the decisive point. Defensive control measures within a commander's assigned area include designating the security area, BHL, MBA with its associated FEBA, and the echelon support area. The commander can use battle positions and additional direct fire control and FSCMs in addition to those control measures discussed earlier in appendix A to further synchronize the employment of combat power. The commander designates disengagement lines to trigger the displacement of subordinate forces. These common defensive control measures are discussed in alphabetical order in paragraphs A-63 through A-79.

Battle Positions

A-63. A *battle position* is a defensive location oriented on a likely enemy avenue of approach (ADP 3-90). A battle position is generally only used during defensive operations. The battle position (BP) is a symbol that depicts the location and general orientation of most of the defending forces. A commander's use of a battle position does not direct the position of the subordinate's entire force within its bounds since it is not an assigned area. There are five kinds of BPs—primary, alternate, supplementary, subsequent, and strong point. When assigning BPs, the higher echelon always designates the primary BP. The subordinate unit designates and prepares alternate, supplementary, and subsequent positions as time and other resources permit and if the terrain or situation requires them. Figure A-31 on page A-20 depicts the five kinds of BPs.

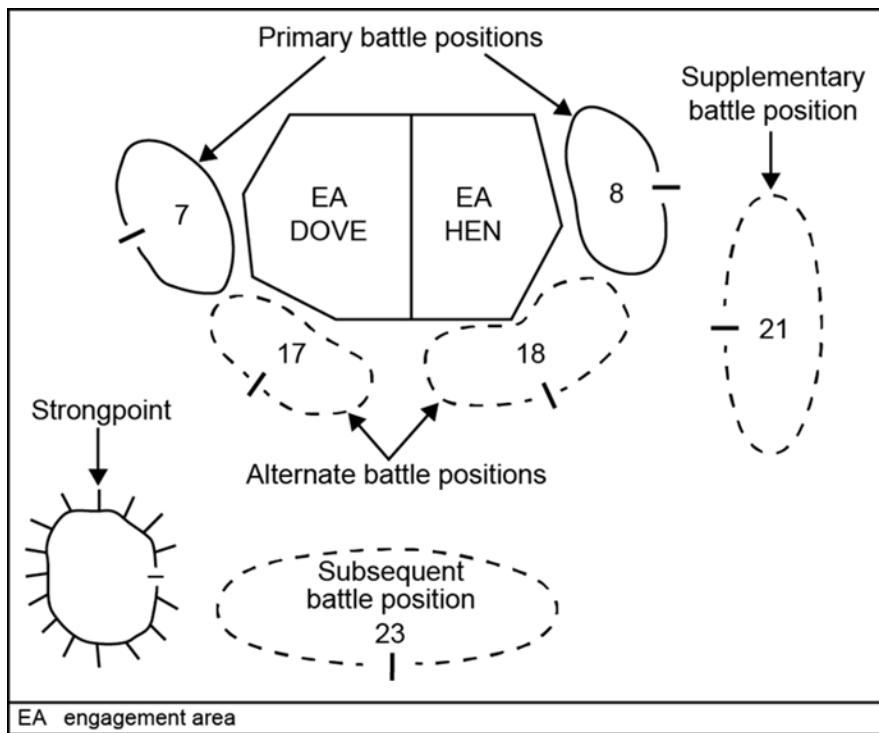


Figure A-31. Five kinds of battle positions

A-64. The **primary position** is the position that covers the enemy's most likely avenue of approach into the assigned area. It is the best position from which to accomplish the mission, such as cover an engagement area.

A-65. An **alternate position** is a defensive position that the commander assigns to a unit or weapon system for occupation when the primary position becomes untenable or unsuitable for carrying out the assigned task. It covers the same area as the primary position. Commanders locate alternate positions so the occupants can continue to fulfill their original tasks, such as covering the same avenue of approach or engagement area as their primary positions. These positions increase the defenders' survivability by allowing defenders to engage enemy forces from multiple positions. For example, a unit moves to its alternate positions when enemy forces bring suppressive fires on the primary position.

A-66. A **supplementary position** is a defensive position located within a unit's assigned area that provides the best sectors of fire and defensive terrain along an avenue of approach that is not the primary avenue where the enemy is expected to attack. For example, an avenue of approach into a unit's assigned area from one of its flanks normally requires establishing supplementary positions to allow a unit or weapon system to engage enemy forces traveling along that avenue.

A-67. A **subsequent position** is a position that a unit expects to move to during the course of battle. A planned and, to some extent, prepared location for a defense or delay that is behind the primary positions initially occupied for a defense. A defending unit may have a series of subsequent positions. Subsequent positions can be further organized into primary, alternate, and supplementary positions.

A-68. A **strong point** is a heavily fortified battle position tied to a natural or reinforcing obstacle to create an anchor for the defense or to deny the enemy decisive or key terrain (ADP 3-90). Strong points require extensive engineer support to create obstacles and increase survivability efforts. This include providing all assets overhead protection, trenches, and other protective construction using both natural and man-made terrain. Commanders prepare a strong point for all around defense. Commanders also establish a strong point when anticipating that enemy actions will isolate a defending force retaining terrain critical to the defense.

A-69. Before assigning a strong point mission, commanders ensure that the strong point force has sufficient time and resources to construct the position. A minimally effective strong point typically requires one day of effort from an engineer unit the same size as the unit defending the strong point. Normally, companies and battalions occupy strong points, although brigades may construct them. Units do not normally establish strong points for units smaller than company size. This is because a platoon or squad cannot secure a perimeter large enough to contain all required assets and supplies.

A-70. Units as large as battalion task forces and as small as squads or sections use BPs. Commanders select positions based on terrain, enemy capabilities, and friendly capabilities. A commander can assign all or some subordinates' BPs within their BP. Figure A-32 depicts a combined arms battalion BP.

A-71. A commander may assign subordinates BPs in situations when there is a need to retain a greater degree of control over the maneuver of subordinate units than that provided through only using an assigned area, as the higher unit controls maneuver outside the general location of the BP. A commander can assign multiple BPs to a single unit, which allows that unit to maneuver between BPs. The commander specifies mission and engagement criteria to the unit assigned to a BP. Security, functional and multifunctional support, and sustainment forces typically operate outside a unit's BP. Figure A-33 on page A-22 depicts a brigade assigned area with battalion BPs.

A-72. Units occupy or depart BPs as part of the overall plan. The commander assigning a unit to a BP should specify when and under what conditions the unit can displace from the position, since a BP is not normally held at all costs. If a higher echelon commander orders a unit to defend a BP, its commander has the option of moving off the BP. If a higher echelon commander directs a unit to retain a BP, the subordinate commander needs to know the specific conditions that need to exist before the unit can displace.

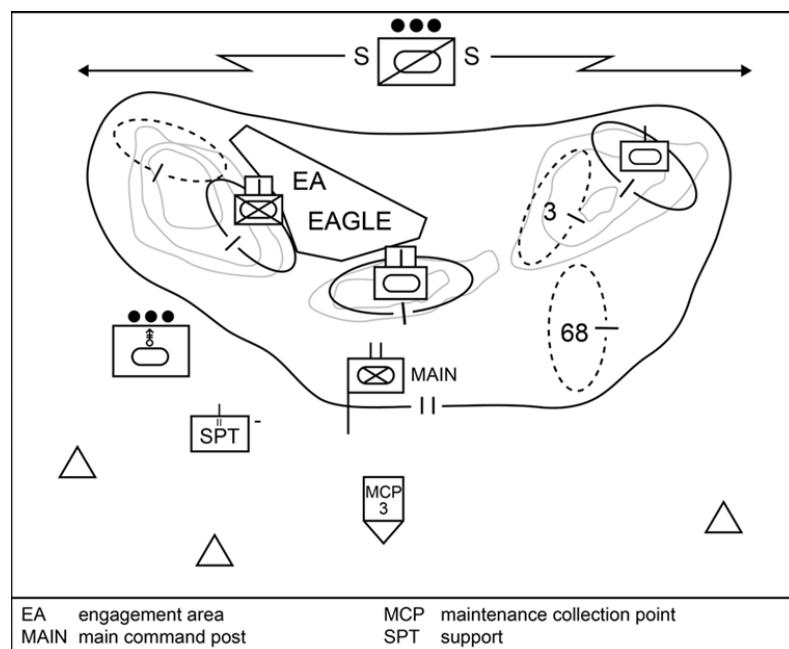


Figure A-32. Combined arms battalion with company battle positions

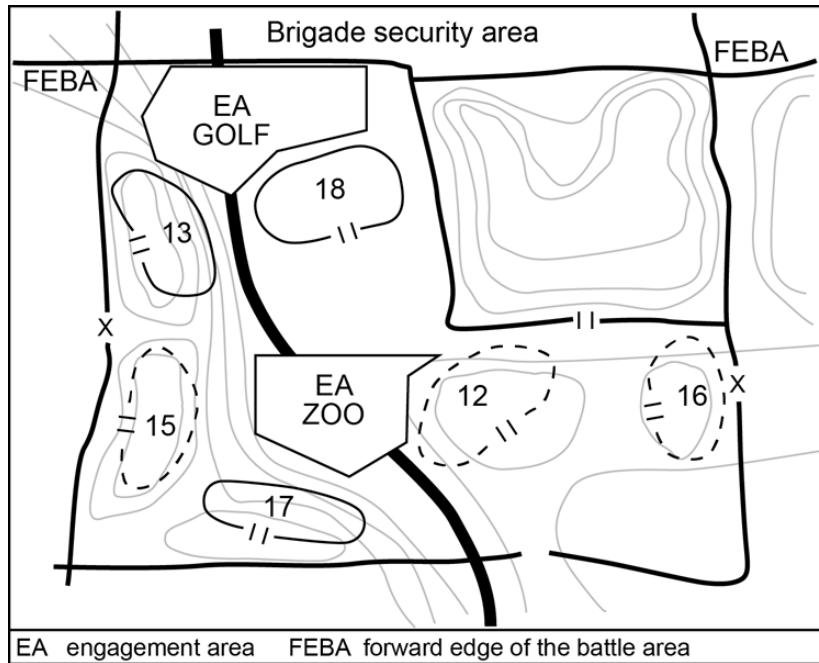


Figure A-33. Brigade assigned area with battalion battle positions

Disengagement Line

A-73. A *disengagement line* is a phase line located on identifiable terrain that, when crossed by the enemy, signals to defending elements that it is time to displace to their next position (ADP 3-90). Commanders use these lines in the delay and the defense when they want their defending units to avoid becoming decisively engaged. They establish criteria, either time or condition based, for disengagement, such as number of enemy vehicles by type, friendly losses, or enemy movement to flanking locations. They may designate multiple disengagement lines, one for each system in the defense, or if they want the unit to conduct multiple displacements. Figure A-34 depicts PL JOAN as a disengagement line.

Engagement Area

A-74. An *engagement area* is an area where the commander massed effects to contain and destroy an **enemy force**. This includes organic direct fire systems and supporting systems, such as close air support. The size and shape of the engagement area is determined by the relatively unobstructed intervisibility from the weapon systems in their firing positions and the maximum effective range of those systems. Commanders designate EAs to cover each enemy avenue of approach into unit positions. The commander routinely subdivides their EA into smaller EAs for subordinates using one or more target reference points or by prominent terrain features. While subordinates are assigned sectors of fire, responsibility for an avenue of approach or key terrain is never split. Commanders at battalion and below typically use this control measure. The seven steps of engagement area development are: identify all likely enemy avenues of approach, determine likely enemy schemes of maneuver, determine where to kill the enemy force, plan and integrate obstacles, emplace weapon systems, plan and integrate indirect fires, and rehearse. Figure A-34 depicts a sketch of several engagement areas used within the context of a reinforced battalion task force defense.

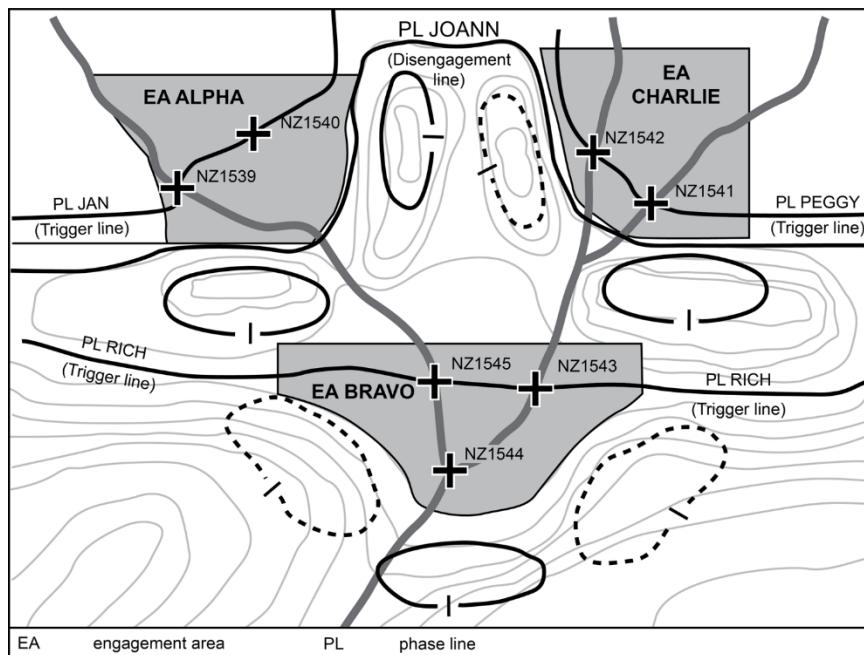


Figure A-34. Task force engagement areas

Final Protective Fire

A-75. *Final protective fire* is an immediately available, prearranged barrier of fire designed to impede enemy movement across defensive lines or areas (JP 3-09.3). Both direct and indirect fire weapons can provide final protective fires (FPFs). A commander can only assign each firing battery or platoon a single FPF. Firing units should lay on their FPFs (or other assigned priority targets) but do not “engage” or fire them unless directed. A FPF is a priority target for an element or system, and those fire units engage that target when they are not engaged in other fire missions. When an enemy force initiates its final assault into a defensive position, the defending unit initiates its FPFs to engage enemy infantry soldiers and armored vehicles. Figure A-35 depicts an FPF to be fired by A/1-16 Field Artillery.

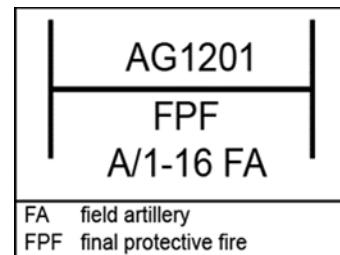


Figure A-35. Final protective fire

Final Protective Line

A-76. A *final protective line* is a selected line of fire where an enemy assault is to be checked by interlocking fire from all available weapons and obstacles. Whenever possible, units reinforce the final protective line (FPL) with protective obstacles. All company and below echelons identify their final protective lines as part of their defensive preparations. Typically, initiation of FPFs is the signal for all elements to shift fires to their assigned portion of the final protective line and spare no ammunition in repelling the enemy assault. Figure A-36 depicts a FPL.

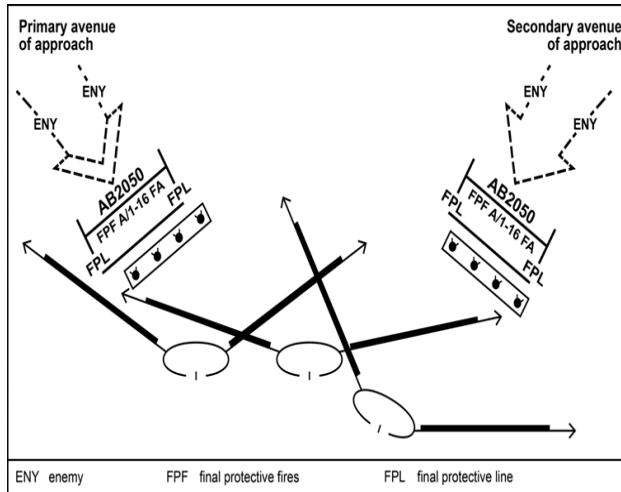


Figure A-36. Final protective line

Forward Edge of the Battle Area

A-77. *Forward edge of the battle area* is the foremost limits of a series of areas in which ground combat units are deployed to coordinate fire support, the positioning of forces, or the maneuver of units, excluding areas in which covering or screening forces are operating (JP 3-09.3). A FEBA is not a boundary, but a phase line designating the forward most point of the MBA and helps convey the commander's intent. It marks the foremost limits of the areas in which most ground combat units deploy, excluding the areas in which security forces are operating. MBA forces can temporarily move forward of the FEBA to expedite the retrograde operations of security forces. A commander designates a FEBA to coordinate fire support and to help maneuver subordinate forces. The FEBA shows the senior commander's planned limit for the effects of direct fires. Defending units must address this area in their scheme of maneuver and exchange information regarding tactical plans at contact points. The Army only uses a FEBA during defensive operations. Figure A-37 depicts the current FEBA and a proposed FEBA.

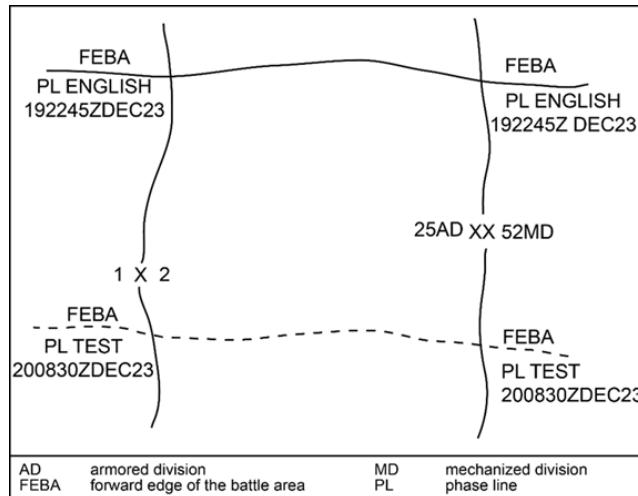


Figure A-37. Forward edge of the battle area

The diagram illustrates the current FEBA (top line) and a proposed FEBA (bottom line). The proposed FEBA is currently designated as a PL TEST. The diagram also shows a mechanized division phase line (MD PL) and an armored division forward edge of the battle area (AD FEBA).

Main Battle Area

A-78. The *main battle area* is the area where the commander intends to deploy the bulk of their unit to defeat an attacking enemy. The bulk of a unit's combat power is deployed in MBA. The MBA extends from the FEBA to the unit's rear boundary. Security forces are located outside of the MBA.

Sector

A-79. A *sector* is an operational area assigned to a unit in the defense that has rear and lateral boundaries with interlocking fires (FM 3-0). By not emplacing a boundary to a unit's front it allows them to synchronize fires better against the enemy they are facing. A sector is different from an area of operations in that instead

of a forward boundary to restrict movement and fires a higher headquarters uses maneuver control measures and fire support coordination measures. Example control measures to use include things such as a battle position and a coordinated fire line. Sectors are most appropriate for any unit likely to make direct fire contact with the enemy during high-tempo defensive operations or when there is a fluid FLOT. Units assigned a sector treat areas behind the FLOT as an AO. Sectors can be further subdivided as needed into area of operations, sectors, or zones as appropriate. Any unit not expecting to be in direct fire contact with the enemy should use an area of operations or other means of terrain management. If a unit is defending in a sector and transitions to a hasty attack to exploit the enemy, they will continue to use the sector until an order can be issued that will better control the attack, which will then change it to either a zone or area of operations. Figure A-38 depicts a battalion sector for 1-66 Armor.

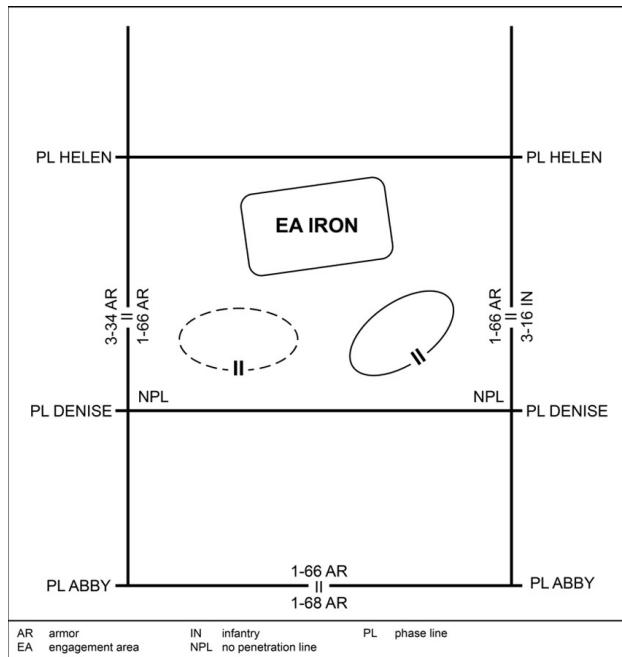


Figure A-38. Example sector for 1-66 Armor

DIRECT FIRE CONTROL MEASURES

A-80. Commanders communicate to subordinates the manner, method, and time to initiate, shift, and mass direct fires by using direct fire control measures. The commander controls unit fires to direct the engagement of enemy systems and gain the greatest effect. The commander uses IPB products and reconnaissance to determine the most advantageous way to use direct fire control measures to mass the effects on the enemy and reduce friendly fire incidents from direct fire systems. The commander must understand the characteristics of weapon systems and available munitions (such as the danger to unprotected Soldiers when tanks fire discarding sabot ammunition over their heads or near them). Direct fire control measures defined in this publication include engagement criteria, engagement priorities, sectors of fire, TRPs, and trigger line. Maneuver platoon and company publications address and go into further detail on other direct fire control measures, such as frontal, cross, or depth fire patterns and simultaneous, alternating, or observed techniques of fire. Figure A-39 on page A-26 depicts common graphical direct fire control measures.

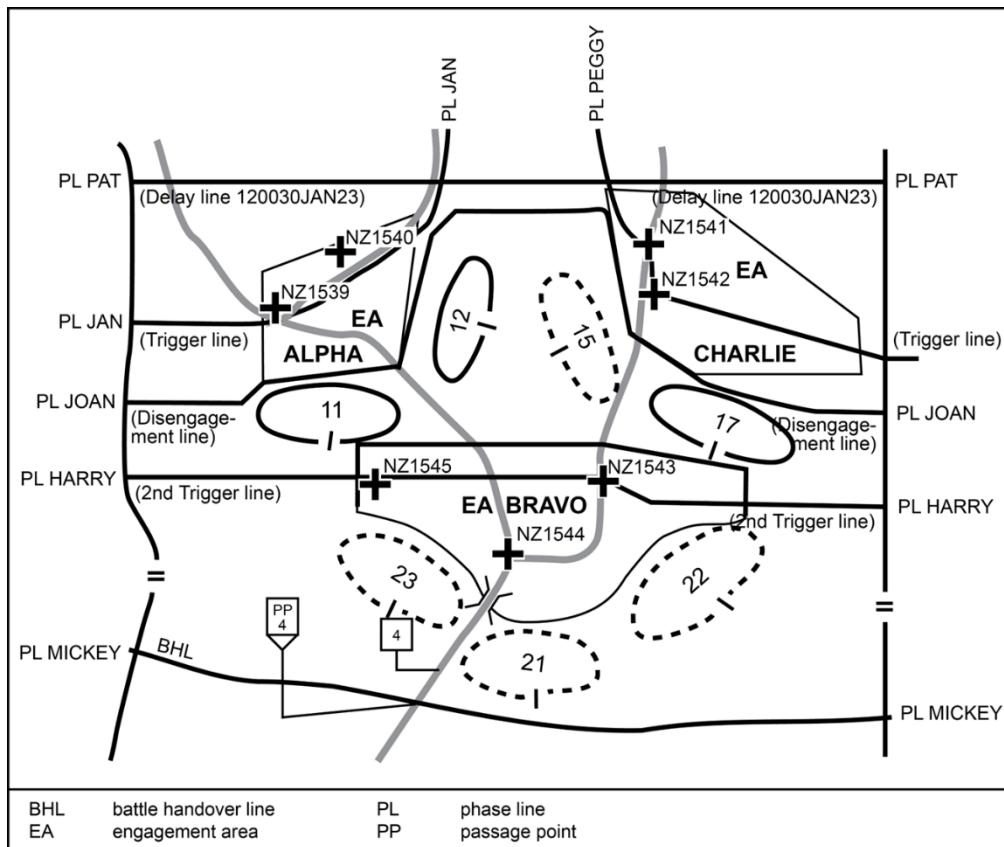


Figure A-39. Direct fire control measures

Engagement Criteria

A-81. Engagement criteria are protocols that specify those circumstances for initiating engagement with an enemy force. They may be restrictive or permissive. Commanders establish engagement criteria during direct fire planning. Commanders and leaders of small tactical units use engagement criteria in conjunction with engagement priorities and other direct fire control measures to mass fires and control fire distribution.

Engagement Priority

A-82. **Engagement priority identifies the order in which the unit engages enemy systems or functions.** Commanders assign engagement priorities based on the type or level of threat at different ranges to match organic weapon systems capabilities against enemy vulnerabilities. Engagement priorities depend on situations. Commanders use engagement priorities to distribute fires rapidly and effectively. Subordinate elements can have different engagement priorities. Normally, units engage the most dangerous targets first, followed by targets in depth or specialized systems, such as engineer vehicles.

Sector of Fire

A-83. A *sector of fire* is the area assigned to a unit or weapon system in which it will engage the enemy in accordance with established engagement priorities. Battalions and smaller echelons primarily use this direct fire control measure. Each sector of fire can extend from a firing position to the maximum engagement range of the weapon, or it can be an enclosed area at a distance from the firing position. Commanders assign each subordinate unit or available weapon system a primary sector of fire and a secondary sector of fire to increase the capability of concentrating fire in certain areas. The primary sector of fire is that area in which the assigned unit, individual, or crew-served weapon is initially responsible for engaging and destroying enemy targets located in that sector based on established priorities for engagement. Fire shifts to the secondary sector on order when there are no targets in the primary sector or when the movement of another friendly element needs covering. This secondary sector of fire should correspond to another element's primary sector of fire to obtain mutual support. Subordinate commanders may impose additional fire control measures as required. Figure A-40 depicts primary, secondary, and enclosed sectors of fire.

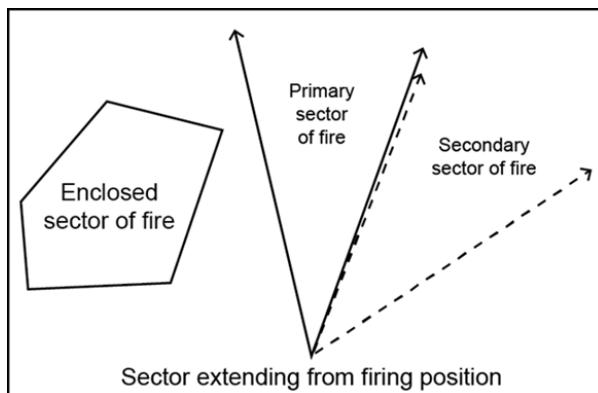


Figure A-40. Sectors of fire

Target Reference Point

A-84. A *target reference point* is a predetermined point of reference, normally a permanent structure or terrain feature that can be used when describing a target location (JP 3-09.3). A target reference point (TRP) is an easily recognizable point on the ground, either natural or manmade used to initiate, distribute, and control fires. Maneuver leaders at battalion and lower echelons designate TRPs to define unit or individual sectors of fire and observation, usually within an engagement area. A TRP can also designate the center of an area where a commander plans to rapidly distribute or converge fires. Leaders designate TRPs using the standard target symbol and numbers. Once approved by the echelon fire support officer, TRPs can be designated as indirect fire targets by using the standard target symbol and target numbering identification (using two letters and four numbers). If a TRP is not also used as an indirect fire target, it is designated using numeric marking only. Figure A-41 depicts the symbol for TRP 032, a direct fire only TRP. The rest of the TRPs in the figures in this publication are both direct and indirect fire targets and are thus designated using indirect fire procedures.

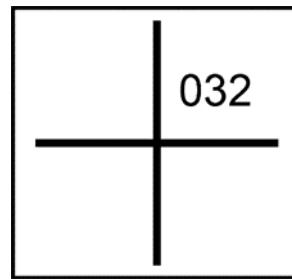


Figure A-41. Target reference point 032

Trigger Line

A-85. A *trigger line* is a phase line used to initiate and mass fires into an engagement area or an objective at a predetermined range for all or like weapon systems. Event or time-oriented criteria are used to initiate planned actions directed toward achieving surprise and inflicting maximum destruction on the enemy. Commanders can designate one trigger line for all weapon systems or separate trigger lines for each weapon or type of weapon system. Commanders specify the engagement criteria for this situation. The criteria may be either time or event driven, such as when a certain number or certain types of vehicles cross the trigger line before initiating engagement. Commanders can use a time-based fires delivery method or a geography-based fires delivery. Commanders may reserve the authority to initiate engagement by firing the commander's own individual weapon or giving the command to fire.

A-86. Commanders designate a PL as the trigger line for available supporting fire support systems. They base the location of the trigger line on the mission variables, including such variables as the time of flight for artillery shells, positioning of the guns, and the existence of quick-fire links. The trigger line's location varies from situation to situation. Its position reflects the distance an enemy force is likely to traverse in the time it takes from when fires are requested to when artillery rounds impact at a given enemy's movement speed. This gives time for supporting fire support systems to respond to the initial call for fire. For example, in a desert environment an enemy force is expected to travel two kilometers in three minutes. The battalion creates an indirect fire trigger line that is approximately two kilometers beyond the point where the commander wants to engage enemy forces with indirect fires since it takes three minutes to process a call for fire and for rounds to impact. Figure A-42 depicts both direct fire and fire support trigger lines based on enemy movement.

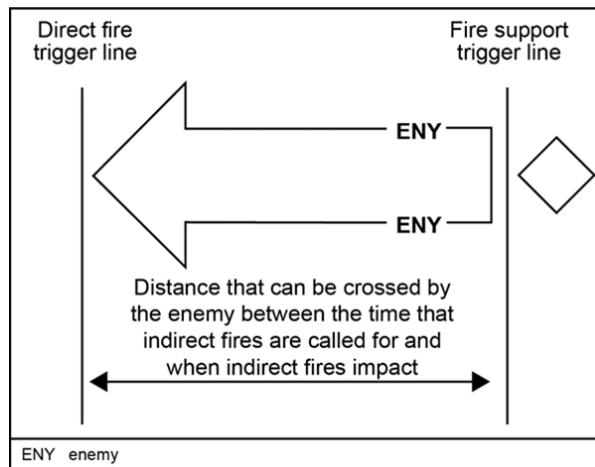


Figure A-42. Trigger line

A-87. Commanders can establish another trigger line for the unit's most accurate long-range weapon system in the vicinity of the area where the fire support impacts to capitalize on the asymmetric attack. However, dust and debris resulting from the artillery fire may prevent direct fire systems from engaging enemy forces. Commanders establish other trigger lines and TRPs for shorter-range systems. Commanders may give guidance to extremely proficient crews to engage enemy forces at longer than normal ranges or give them different engagement priorities than the rest of the force, such as giving priority to engaging air defense or engineer breaching systems.

A-88. As enemy forces advance, commanders establish a decision point to help force a determination on whether to continue to fire in depth or to concentrate unit fires on a single point. Many factors impact this decision, most of which concern enemy forces regarding their methods of maneuver and the effects of the defending force's fires.

COMMON FIRE SUPPORT COORDINATION MEASURES

A-89. Commanders employ FSCMs to facilitate rapid target engagement and simultaneously provide safeguards for friendly forces. The fire support coordinator recommends FSCMs to the commander based on the commander's guidance, location of friendly forces, scheme of maneuver, and anticipated enemy actions. Locations and implementing instructions for FSCMs are disseminated electronically and via overlays through command and fire support channels to higher, lower, and adjacent units. Once established, FSCMs are entered into or posted on all the command's displays and databases. Below are some of the most commonly used FSCMs. FSCMs are either permissive or restrictive. (See ADP 3-19 and FM 3-09 for a detailed explanation on the use of all FSCMs.)

PERMISSIVE FIRE SUPPORT COORDINATION MEASURES

A-90. Permissive FSCMs facilitate the attack of surface targets. Permissive FSCMs do not include the clearance of airspace and all fires require terrain and airspace clearance prior to engagement. FSCMs will change frequently during operations and the commander adjusts FSCMs as required to keep pace with operations. Common permissive FSCMs include a coordinated fire line (CFL), a fire support coordination line (FSCL), kill box, and a free-fire area (FFA).

Coordinated Fire Line

A-91. A *coordinated fire line* is a line beyond which conventional surface-to-surface direct fire and indirect fire support means may fire at any time within the boundaries of the establishing headquarters without additional coordination but does not eliminate the responsibility to coordinate the airspace required to conduct the mission (JP 3-09). The purpose of the CFL is to expedite the surface-to-surface attack of targets beyond the CFL without coordination with the ground commander in whose area the targets are located. Such fires still comply with rules of engagement and law of war targeting constraints; designation of a CFL is not authorization to fire indiscriminately into the area. Brigade combat teams or divisions usually establish a CFL although a maneuver battalion may establish one, particularly during amphibious operations. It is possible for each echelon to establish a CFL so a unit would need to be aware of the several constraints. A CFL should be placed on identifiable terrain, however, additional considerations include the limits of ground observation, the location of the initial objectives in the offense, and the requirement for maximum flexibility in both maneuver and the delivery of supporting fires. Subordinate CFLs may be consolidated by higher headquarters. Figure A-43 depicts a CFL.

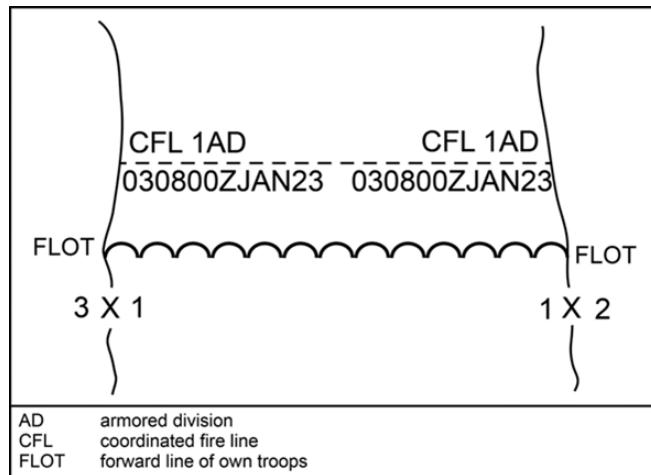


Figure A-43. Coordinated fire line

Fire Support Coordination Line

A-92. The *fire support coordination line* is a fire support coordination measure established by the land or amphibious force commander to support common objectives within an area of operations, beyond which all fires must be coordinated with affected commanders prior to engagement and, short of the line, all fires must be coordinated with the establishing commander prior to engagement (JP 3-09). FSCLs facilitate the expeditious attack of surface targets of opportunity beyond the coordinating measure. The FSCL is not a boundary, the synchronization of operations on either side of the FSCL is the responsibility of the establishing commander, out to the limits of the land or amphibious force boundary. FSCLs apply to all fires of air-, land-, and sea-based weapon systems using any type of ammunition. If possible, the FSCL should follow well-defined terrain features to assist identification from the air. The joint force land component commander (JFLCC) and joint force maritime component commander (JFMCC) cannot employ fires long of the FSCL without coordination with affected commanders, and the joint force air component commander (JFACC) cannot employ fires short of the FSCL without coordination with the JFLCC or JFMCC. Supporting elements attacking targets beyond the FSCL must ensure that an attack will not produce adverse effects on, or to the rear of, the line. Short of a FSCL, all air-to-ground and surface-to-surface attack operations are controlled by the appropriate land or amphibious force commander. Coordination of attacks beyond the FSCL is especially critical to commanders of air, land, and special operations forces. Figure A-44 depicts an example FSCL.

PL	3rd ARMY FSCL
IRON	EFF 202100Z-270800 SEP 23
3d XXXX III (U.S.)	
Army	
EFF	effective
FSCL	fire support coordination line
PL	phase line
U.S.	United States

Figure A-44. Fire support coordination line

A-93. The decision on where to place or even whether to use a FSCL requires careful consideration. If used, its location is based on estimates of the situation and concept of operations. The establishment of a FSCL does not create a free-fire area (FFA) beyond the FSCL. Engagements beyond the FSCL must be consistent with the establishing commander's priorities, timing, and desired effects. Location of enemy forces, anticipated rates of movement, concept and tempo of the operation, organic weapon capabilities such as wide-area munitions, or those with delayed effects, and other factors are all considered by the commander. The establishing commander adjusts the location of the FSCL as required to keep pace with operations. A series of disseminated "on-order" FSCLs will help accelerate the coordination required. The establishing commander quickly transmits the change to higher, lower, adjacent, and supporting headquarters to ensure that appropriate controlling agencies coordinate engagement operations. Changes to the FSCL require notification of all affected forces within the AO and must allow sufficient time for these forces and/or components to incorporate the FSCL change. Current technology and collaboration tools between the elements of the joint force determine the times required for changing the FSCL. The FSCL is normally positioned closer to the forward line of own troops in the defense than in the offense; however, the exact positioning depends on the situation. Placing the FSCL at greater depths will typically require support from higher headquarters and other supporting commanders. Also, when the FSCL is positioned at greater depth, there is greater requirement for detailed coordination with the establishing commander and can slow the expeditious clearance of fires short of the FSCL. By establishing a FSCL close in, yet at sufficient depth so as to not limit high tempo maneuver, land and amphibious force commanders ease the coordination requirements for engaging targets within their assigned areas by forces not under their control, such as naval surface fire support or air interdiction.

Note. During large-scale combat operations, it is likely that divisions and corps are operating as a tactical headquarters and will only provide input on proposed FSCL locations to the land component commander.

Free-Fire Area

A-94. A *free-fire area* is a specific region into which any weapon system may fire without additional coordination with the establishing headquarters (JP 3-09). Where indirect fires and aircraft share a FFA, units should establish an airspace coordination area to assist in deconflicting operations. Normally, division or higher echelon headquarters establish a FFA on identifiable terrain. Figure A-45 depicts a FFA.

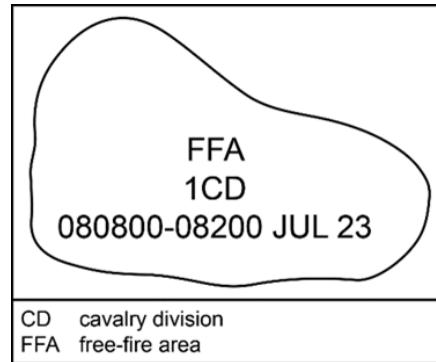


Figure A-45. Free fire area

Kill Box

A-95. A *kill box* is a three-dimensional permissive fire support coordination measure with an associated airspace coordinating measure used to facilitate the integration of fires (JP 3-09). It is used to facilitate integrating joint fires and coordinating associated airspace. The two types of kill boxes are blue kill box and purple kill box. A blue kill box facilitates the attack of surface targets with air-to-surface munitions without coordination with the AO commander's headquarters. Within its boundaries a blue kill box extends from the surface to a ceiling altitude agreed upon by the requesting unit, AO commander, and airspace control authority. A purple kill box facilitates the attack of surface targets with subsurface-to-surface, surface-to-surface, and air-to-surface munitions without coordination with the AO commander's headquarters. Within its boundaries a purple kill box extends from the surface, through an airspace coordinating measure floor to a ceiling altitude agreed upon by the requesting unit, AO commander, and airspace control authority.

Figure A-46 depicts a blue kill box. Figure A-47 depicts a purple kill box. (See ATP 3-09.34/MCRP 3-31.4/NTTP 3-09.2.1/AFTTP 3-2.59 for more information on kill box planning and employment.)

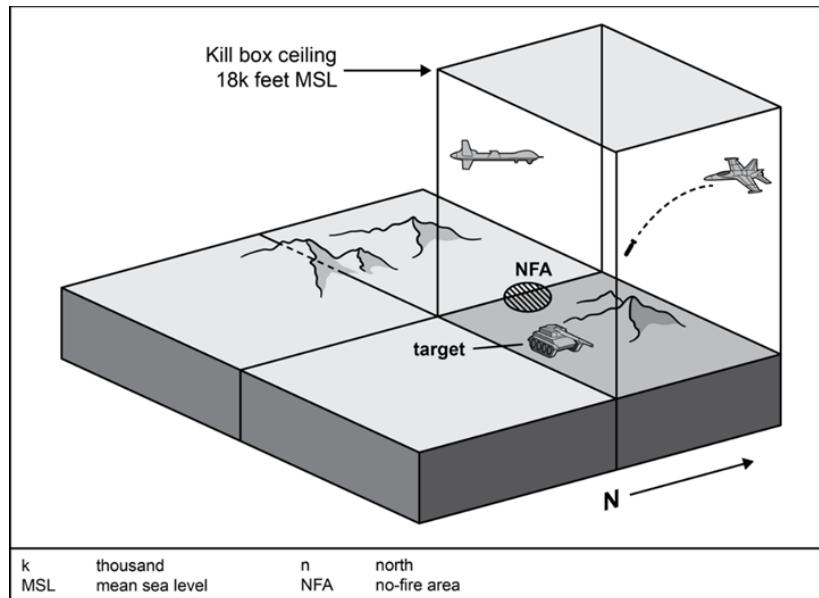


Figure A-46. Blue kill box

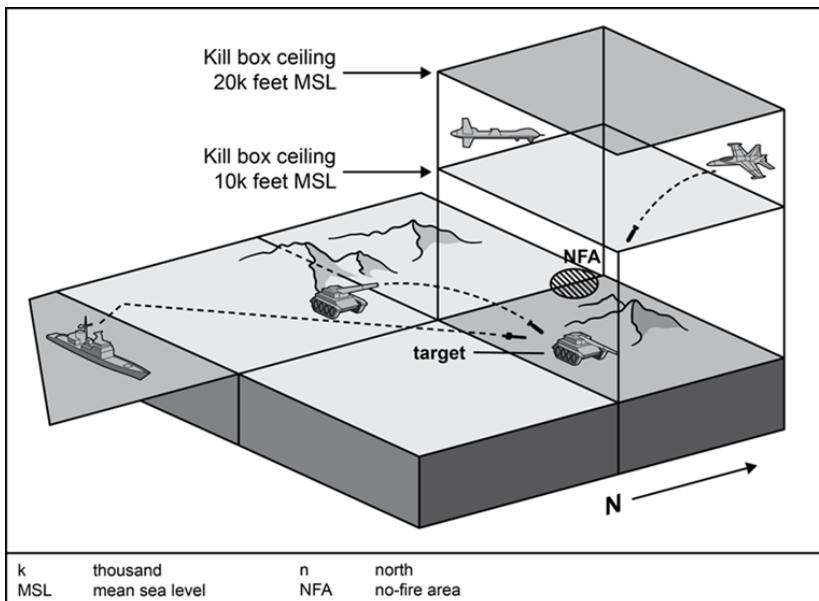


Figure A-47. Purple kill box

RESTRICTIVE FIRE SUPPORT COORDINATION MEASURES

A-96. Restrictive fire support coordination measures prevent fires into or beyond the control measure without detailed coordination. Their primary purpose is to provide safeguards for friendly forces, noncombatants, facilities, or terrain. Restrictive FSCMs include a no-fire area (NFA), a restrictive fire area (RFA), and a restrictive fire line (RFL). Establishing a restrictive measure imposes certain requirements for specific coordination before the engagement of those targets affected by the measure.

No-Fire Area

A-97. A *no-fire area* is an area designated by the appropriate commander into which fires or their effects are prohibited (JP 3-09.3). Any echelon commander uses a no-fire area to protect independently operating elements, such as forward observers and special operations forces. A commander can also use it to protect friendly forces in the echelon support area and for humanitarian reasons, such as preventing the inadvertent engagement of dislocated civilian concentrations, or to protect sensitive areas, such as cultural monuments. Figure A-48 depicts a no-fire area. This rule has two exceptions:

- The establishing headquarters may approve fires within a no-fire area on a case-by-case mission basis.
- When an enemy force within a no-fire area engages a friendly force, the friendly force may engage a positively identified enemy force to defend itself.

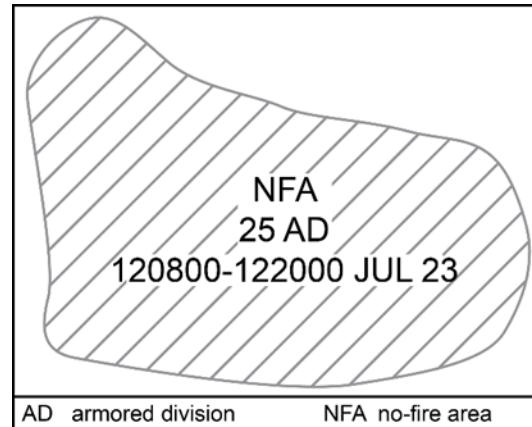


Figure A-48. No fire area

Restrictive Fire Area

A-98. A *restrictive fire area* is a location in which specific restrictions are imposed and into which fires that exceed those restrictions will not be delivered without coordination with the establishing headquarters (JP 3-09). The purpose of the RFA is to regulate fires into an area according to the stated restrictions, such as no unguided conventional or dud-producing munitions. Maneuver battalion or larger ground forces normally establish RFAs. On occasion, a company operating independently may establish an RFA. Usually, it is located on identifiable terrain by grid or by a radius (in meters) from a center point. Commanders may depict RFA restrictions on a map or overlay, or they can reference an operation order that contains the restrictions. Figure A-49 depicts a restricted fire area.

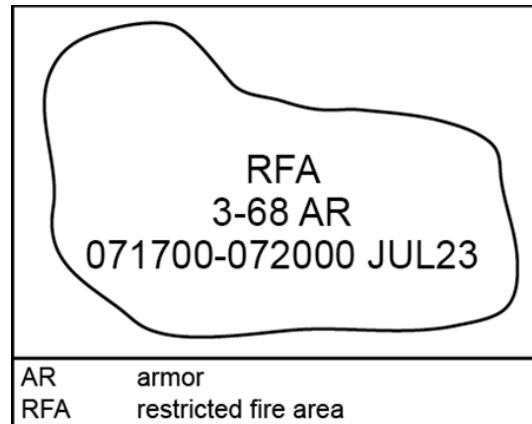


Figure A-49. Restrictive fire area

Restrictive Fire Line

A-99. A *restrictive fire line* is a specific boundary established between converging, friendly surface forces that prohibits fires or their effects from crossing (JP 3-09). Both or only one of those converging forces may be moving. Fires and their effects can cross a RFL when the event has been coordinated with the affected force. The purpose of the line is to prevent interference between converging friendly forces, such as what occurs during a linkup operation. The next higher common commander of the converging forces establishes the RFL. Located on identifiable terrain, it is usually located closer to the stationary force—if there is one—than to the moving force. Alternatively, a commander can use an RFL to protect sensitive areas, such as cultural monuments. Figure A-50 depicts a restricted fire line.

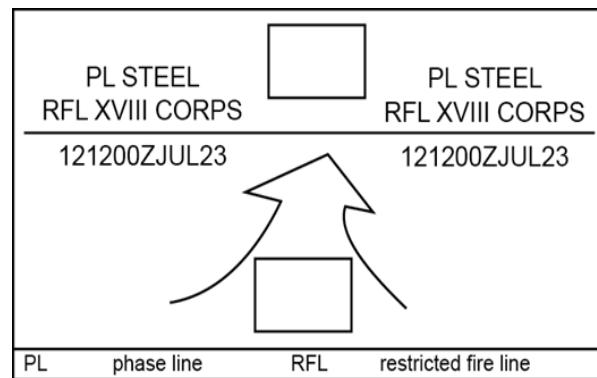


Figure A-50. Restrictive fire line

FIRE SUPPORT TARGETS

A-100. A *target* is an entity or object that performs a function for the threat considered for possible engagement or other action (JP 3-60). There are control measures for point targets, circular targets, rectangular targets, and linear targets. Commanders designate fire support targets using a two-letter and four-digit code established in field artillery doctrine.

A-101. Commanders may choose to attack two or more targets simultaneously or sequentially. A group of targets consists of simultaneously engaging two or more targets. Commanders graphically show a group of targets by circling the targets and identifying the group with a group designator. This group designator consists of the two letters assigned to the block of target numbers assigned to a unit with a number inserted between the two letters. A series of targets consists of engaging two or more targets sequentially. A series can include individual targets or combinations of individual and group targets. Commanders show a series of targets as individual targets or groups of targets within a prescribed area. Commanders assign each series a code name or nickname. The designation of a series or group of targets does not preclude the attack of individual targets within the series or group. It also does not preclude the attack of one or more groups of targets within the series. Figure A-51 depicts the different fire support targets.

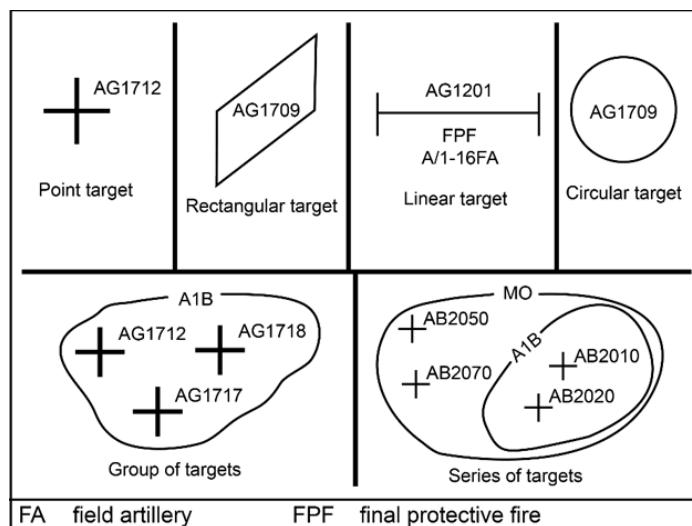


Figure A-51. Fire support targets

COMMON AIRSPACE COORDINATING MEASURES

A-102. *Airspace coordinating measures* are measures employed to facilitate the efficient use of airspace to accomplish missions and simultaneously provide safeguards for friendly forces (JP 3-52). Airspace coordinating measures (ACMs) are employed to facilitate the efficient use of airspace to accomplish missions and simultaneously provide safeguards for friendly forces. ACMs provide the three-dimensional description

of the airspace, associated restrictions, requests for access and other applicable coordination procedures. The details of each ACM are provided in the airspace control order. Airspace elements establish ACMs to accomplish one or more functions:

- Establish reserved airspace for specific airspace users.
- Restrict the actions of some airspace users.
- Create airspace in which units can use weapons with minimal risk of friendly fire incidents. (Friendly fire incidents include death by fratricide, injury, and property damage.)
- Control actions of specific airspace users.
- Require airspace users to accomplish specific actions.

A-103. Paragraphs A-104 through A-112 discuss some of the common airspace coordinating measures. (See JP 3-52 for a complete listing of ACMs and their uses see.)

AIR CORRIDORS

A-104. An *air corridor* is a restricted air route of travel specified for use by friendly aircraft established for the purpose of preventing friendly aircraft from being fired upon by friendly forces (JP 3-52). It is used to route Army aviation elements between areas such as holding areas and forward arming and refueling points. An air corridor's altitude will not exceed the coordinating altitude prescribed in the airspace control order. There are seven specific uses of air corridors. Two examples of these uses are the minimum risk route and standard use army aircraft flight route.

Minimum Risk Route

A-105. A *minimum risk route* is a temporary air corridor of defined dimensions recommended for use by aircraft that presents the minimum known hazards to low-flying aircraft transiting the combat zone (JP 3-52). These routes are recommended by the ground commander and are used primarily for cross FLOT operations. They are established based on known threats and friendly unit locations. Aircraft executing close air support missions do not usually use these routes in the vicinity of the target area.

Standard Use Army Aircraft Flight Route

A-106. A *standard use Army aircraft flight route* is a route established below the coordination level to facilitate the movement of Army aircraft (JP 3-52). It is generally used by Army aircraft for administrative and logistic purposes. If a coordination level has been established the using authority can implement it as long as it remains below the coordination level. If no coordination level has been established the airspace control authority establishes it upon the ground commander's request.

COORDINATING ALTITUDE

A-107. A *coordinating altitude* is an airspace coordinating measure that uses altitude to separate users and as the transition between different airspace control elements (JP 3-52). The establishment of a coordinating altitude allows the airspace control authority to assign a volume of airspace to another airspace control organization. Army forces must be aware that any airspace user that transits or fires through an established coordinating altitude must coordinate with the appropriate airspace control agency. For example, all artillery fires that exceed the coordinating altitude must be coordinated and approved prior to execution. The coordinating altitude is normally expressed in feet above mean sea level.

A-108. The joint force airspace control authority establishes the coordinating altitude, typically after consultation with the other Service components. The airspace control authority publishes the coordinating altitude as part of the airspace control order. Army forces can request adjustments to the coordinating altitude based on mission requirements for approval by the airspace control authority. Typically, the only echelon that does this is a division if has a joint air-ground integration center. Figure A-52 depicts a coordinating altitude of 13,000 feet mean sea level.

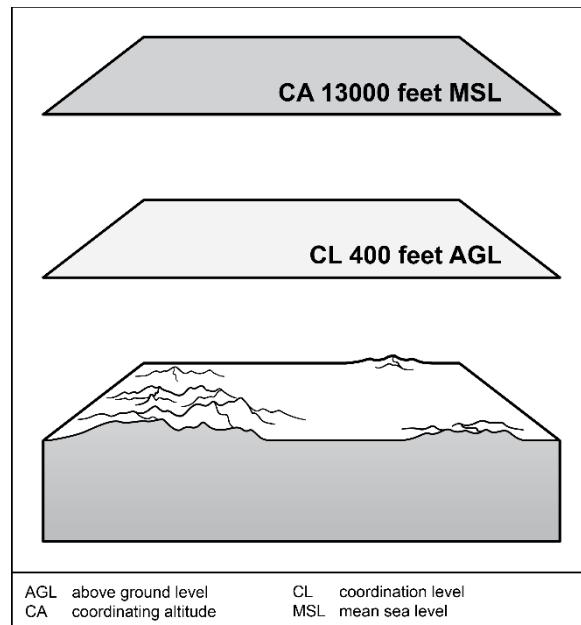


Figure A-52. Coordinating altitude and coordination level

COORDINATION LEVEL

A-109. A *coordination level* is an airspace coordinating measure below which fixed-wing aircraft by normally will not fly (JP 3-52). The coordination level and coordinating altitude are not synonymous terms. The key distinction being that a coordination level is used to separate fixed- and rotary-wing aircraft while a coordinating altitude is used to separate different airspace control elements. Additionally, a coordination level can be established with or without a coordinating altitude. Army forces recommend a coordination level, or any adjustments to an existing coordination level to the airspace control authority for approval. BCTs and above can initiate a request for a coordination level within their air defense airspace management/brigade aviation element cell or joint air-ground integration center. A coordination level is established by the airspace control authority and is reflected in the airspace control order. The coordination level is normally expressed in feet above ground level. Figure A-52 depicts a coordination level.

RESTRICTED OPERATIONS ZONE

A-110. A *restricted operations zone* is airspace reserved for specific activities in which the operations of one or more airspace users is restricted (JP 3-52). A restricted operations zone (ROZ) ACM has fourteen specific uses. Example uses include close air support and unmanned aircraft.

Close Air Support ROZ

A-111. A close air support ROZ is airspace designated for holding orbits and is used by rotary- and fixed-wing aircraft in proximity to friendly forces. This ROZ is used in support of air assets performing close air support missions in support of ground maneuver forces. When determining the appropriate ROZ size units need to consider the type of aircraft providing support and altitude limits. This ROZ is requested by the applicable ground maneuver force and is established by the airspace control authority.

Unmanned Aircraft ROZ

A-112. An unmanned aircraft ROZ is airspace of defined dimensions created specifically for UAS operations. Generally, this airspace defines where UAS operations are conducted, and does not include en route airspace. This ROZ is only for use with UAS. Requesting units should request sufficient airspace to facilitate the requirements unique to the UAS platform such as turn radius requirements. This ROZ is requested by the applicable ground maneuver for and is established by the airspace control authority.

Appendix B

Tactical Mission Tasks

The tactical mission tasks in this appendix describe the results or effects commanders want to achieve—the *what* of a mission statement. These tasks have specific military definitions.

TASKS FOR TACTICAL MISSIONS

B-1. Tactical mission tasks are the “what” of a mission statement. Most of these actions and effects have associated military symbols. Staffs use them in course of action development and sketches as part of the military decision-making process. Some are also graphic control measures or obstacle effects and are used as such. See table B-1 for a list of all tactical mission tasks.

Table B-1. Tactical mission tasks

Attack by fire	Control	Fix	Reduce
Block	Counterreconnaissance	Follow and assume	Retain
Breach	Destroy	Follow and support	Secure
Bypass	Disengage	Interdict	Seize
Canalize	Disrupt	Isolate	Support by fire
Clear	Exfiltrate	Neutralize	Suppress
Contain		Occupy	Turn

B-2. Commanders are not limited to the tactical mission tasks listed in this appendix in specifying desired subordinate actions in operation orders or operation plans. Many of the words and terms used to describe the *what* of a mission statement do not have special connotations beyond their common English language meanings. However, units must have a shared understanding of the *what* of the operation. Tasks involving only actions by friendly forces rarely provide sufficient clarity for a mission statement, thus the addition of a solid purpose coupled with the task adds understanding and clarity. Commanders ensure that missions assigned to subordinate units are consistent with their schemes of maneuver and resources allocated to those subordinates. For example, a defending unit requires far greater effort (resources) to destroy an enemy force than to disrupt it. Likewise, an attacking unit requires more combat power to clear enemy forces from a given area than to contain enemy forces in that same area.

ATTACK BY FIRE

B-3. **Attack by fire** is a tactical mission task using direct and indirect fires to engage an enemy from a distance. Friendly forces use direct fires, supported by indirect fires, to engage an enemy force without closing with the enemy to destroy, suppress, fix, or deceive that enemy. This task is usually given when the mission does not dictate or support occupation of the objective. An attack by fire is not done in conjunction with a maneuvering force. When assigning this task, the commander must state the desired effect on enemy forces, such as neutralize, fix, or disrupt. A commander may assign the force conducting an attack by fire to a battle position with either a sector of fire or an engagement area. The arrow points at the targeted force or objective, and the commander places the base of the arrow in the general area from which

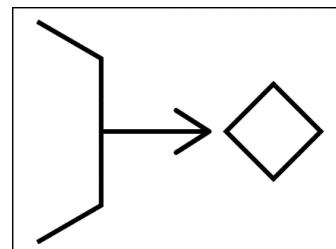


Figure B-1. Attack by fire task

the commander wants to deliver the attack. Attack by fire positions are rarely applicable to units larger than company size. Figure B-1 on page B-1 depicts the attack by fire tactical mission task.

B-4. An attack by fire closely resembles the task of support by fire. The chief difference is that one unit conducts the support by fire task to support another unit, so the second unit can maneuver against enemy forces. The attack by fire task includes—

- Assigning sectors of fire or engagement areas to each subordinate weapon system to include the enemy force's defensive positions or avenues of approach.
- Designating control measures for massing, distributing, and shifting of direct and indirect fires.
- Designating BPs, an assigned area, or an axis of advance to allow the friendly force to engage the enemy force.
- Providing for security and all-around defense, including control measures to ensure tie in of subordinate elements and maximum use of hide positions.
- Using OPSEC to deceive enemy forces about movement, occupation, and intent of the operation.
- Reconnoitering, preparing, and securing movement routes and firing positions before the movement of the main body, and stocking class V items.
- Providing movement instructions to the initial battle positions.

BLOCK

B-5. **Block** is a tactical mission task that denies the enemy access to an area or an avenue of approach. A blocking task normally requires the friendly force to block the enemy force for a certain time, or until a specific event has occurred. The line perpendicular to the enemy's line of advance indicates the limit of enemy advance. A blocking unit may have to hold terrain and become decisively engaged. Block as a tactical mission task differs from the tactical mission task of fix. A blocked enemy force can move in any direction other than the obstructed one, while a fixed enemy force cannot move in any direction. Figure B-2 depicts the block tactical mission task.

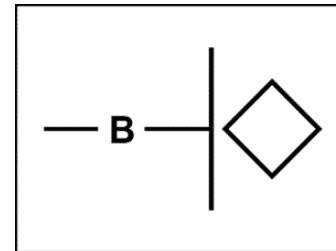


Figure B-2. Block task

B-6. **Block** is also an obstacle effect that integrates fire planning and obstacle effort to stop an attacker along a specific avenue of approach or prevent the attacking force from passing through an engagement area. The vertical line in the obstacle effect graphic indicates the limit of enemy advance. It also indicates where the obstacle ties in to restricted terrain. A force may employ blocking obstacles to assist in the task. Blocking obstacles are complex, employed in depth, and integrated with fires to prevent enemy forces from proceeding along an avenue of approach or to proceed only at unacceptable cost. When employed, blocking obstacles serve as a limit, not allowing enemy forces beyond that point. Obstacles alone cannot accomplish a blocking task. Figure B-3 depicts the block obstacle effect. (See Chapter 17 for more information on the block obstacle effect.)

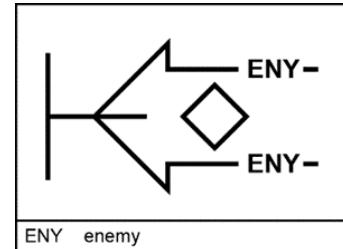


Figure B-3. Block obstacle effect

BREACH

B-7. **Breach** is a tactical mission task in which a unit breaks through or establishes a passage through an enemy obstacle. An enemy obstacle can include enemy defenses, obstacles, minefields, or fortifications. Units attempt to bypass and avoid obstacles and enemy defensive positions to the maximum extent possible to maintain tempo and momentum. Breaching enemy defenses and obstacle systems is normally the last choice. If a breach is necessary, units employ all available means to break through or establish a passage. A breach is a synchronized combined arms operation under the control of the maneuver commander.

B-8. The area located between the arms of the graphic shows the general location for the breach. The length of the arms extend to include the entire depth of the area that must be breached. Breaching operations may be required to support an attack anywhere along the continuum from a deliberate to a hasty attack. Regardless of where the attack falls along the continuum, the breaching tenets—intelligence, breaching fundamentals, breaching organization, mass, and synchronization—apply when conducting breaching operations in support of an attack. Figure B-4 depicts the breach tactical mission task. (See ATP 3-90.4/MCTP 3-34A for more information concerning breaching operations.)

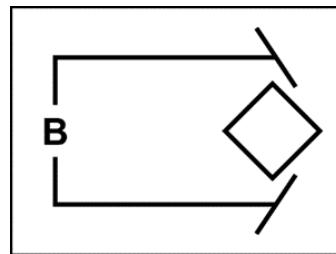


Figure B-4. Breach task

BYPASS

B-9. **Bypass** is a tactical mission task in which a unit deliberately avoids contact with an obstacle or an enemy force. A commander orders a bypass to maintain momentum while deliberately avoiding combat with an enemy force. A bypass can take place in offensive or defensive actions. The arms of the graphic go on both sides of the location or unit that will be bypassed. Figure B-5 depicts the bypass tactical mission task.

B-10. Commanders base the bypass decision on—

- The requirement to maintain momentum and aggressive action.
- Knowledge of the enemy force's strength, intent, or mission.
- The degree to which the bypassed enemy force can interfere with the advance.
- The general state of the enemy force; for example, if enemy resistance is crumbling, the friendly force can take greater risks.
- Any bypass criteria established by a higher echelon headquarters.

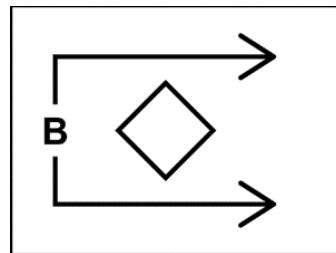


Figure B-5. Bypass task

B-11. The force conducting the bypass immediately reports any bypassed obstacles and enemy forces to its higher echelon headquarters. This force normally keeps the bypassed enemy force under observation until relieved by another force unless it is part of a raid. A senior commander does not normally delegate authority to bypass below the battalion task force level. Commanders establish bypass criteria to limit the size of enemy forces that subordinates can bypass without their approval. Before approving the bypass, commanders ensure that the bypassing force checks the bypass route for enemy presence and trafficability. The bypassing force prevents the bypassed enemy force from interfering with the moving friendly force.

B-12. The two bypass techniques that a force can employ are—

- Avoiding the enemy force totally.
- Fixing the enemy force in place with fires and then conducting the bypass.

B-13. If the bypassing force cannot avoid the enemy force, then the bypassing force fixes the enemy force with part of its maneuver elements and bypasses it with the balance of the force. (See figure B-6.) Generally, a commander will not attempt to bypass an enemy force if more than a third of the unit's combat power is required to fix the enemy force. The commander assigns one subordinate unit the mission of fixing the enemy force in this situation, reinforcing the fixing force as required by the mission variables. The fixing force coordinates with the unit assigned to relieve the fixing force as soon as possible and provides the new unit with all available information about the enemy and terrain. The relieving unit is normally another unit assigned a follow and support task. Once relieved, the force fixing the enemy force either rejoins its parent organization or becomes part of the following element and comes under its control.

B-14. Occasionally a commander may direct the fixing force to break contact with the enemy force after the bypassing force completes the bypass. This occurs when the bypassing force has no requirement to maintain an uninterrupted logistics flow, such as in a raid. In this case, the fixing force fixes the enemy force by employing defensive and limited offensive actions in synchronization with all available fire support until ordered to rejoin the bypassing force.

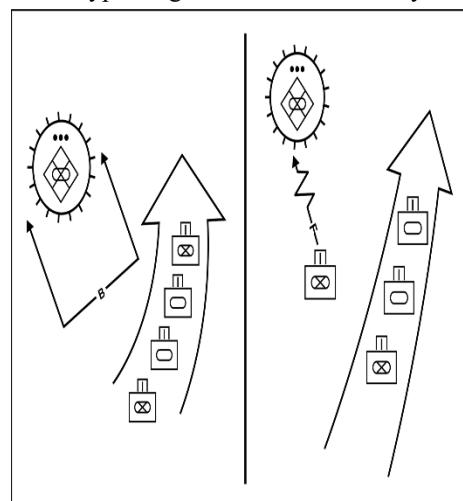


Figure B-6. Task force conducting a fix and a bypass

CANALIZE

B-15. **Canalize** is a tactical mission task in which a unit restricts enemy movement to a narrow zone. Friendly forces do this by exploiting terrain coupled with the use of obstacles, fires, or friendly maneuver. Successful canalization results in moving the enemy formation, individual Soldiers, or weapon systems into a predetermined position where they are vulnerable to piecemeal destruction. Figure B-7 depicts the canalize tactical mission task.

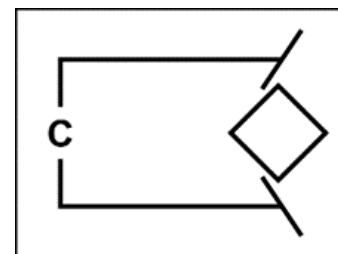


Figure B-7. Canalize task

CLEAR

B-16. **Clear** is a tactical mission task in which a unit eliminates all enemy forces within an assigned area. Friendly forces do this by destroying, capturing, or forcing the withdrawal of enemy forces, so they cannot execute organized resistance and interfere with the friendly unit's mission. In all cases, this task requires a thorough reconnaissance to discover the enemy force's locations. After discovering the enemy force's location, the clearing force maneuvers against the enemy force. The bar connecting the arrows designates the desired limit of advance for the clearing force. The bar also establishes the width of the area to clear. Figure B-8 depicts the clear tactical mission task.

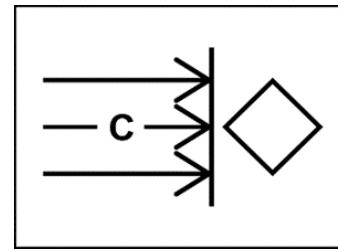


Figure B-8. Clear task

B-17. This task requires significant time and other resources. In the mission statement, a commander can modify the objective associated with this task to destroying, capturing, or forcing the withdrawal of only enemy forces larger than a stated size. In this case, the clearing force keeps smaller enemy forces under observation, while the rest of the friendly force bypasses them.

B-18. Clear is also a mobility task that involves the total elimination of an obstacle that is usually performed by follow-on engineers and is not done under fire. Units conduct clearing operations to eliminate completely the enemy's obstacle effort or the residual obstacles affecting the operational area. (See FM 3-90.4 for more information on mobility clearing operations.)

CONTAIN

B-19. **Contain** is a tactical mission task in which a unit stops, holds, or surrounds an enemy force. This causes the enemy to center their activity on a given front and prevent them from withdrawing any part of their forces for use elsewhere. Contain may identify a specific enemy unit, or geographic terms or time may express the limits of the containment. Containment allows an enemy force to reposition itself within the designated geographic area, while fixing an enemy does not. The contain graphic encompasses the entire area desired to contain enemy forces during the development of alternative courses of action. Figure B-9 depicts the contain tactical mission task.

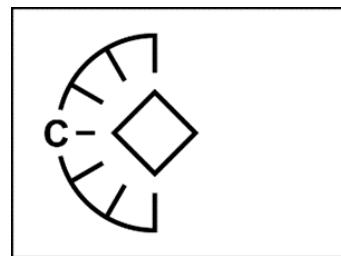


Figure B-9. Contain task

CONTROL

B-20. **Control** is a tactical mission task in which a unit maintains physical influence over an assigned area. By controlling an area, units prevent its use by an enemy force or create conditions necessary for friendly operations. That influence can result from friendly forces occupying the specified area or dominating that area by their weapon systems. Control of an area does not require the complete clearance of all enemy soldiers from that area. The tactical mission task of control differs from that of secure because secure does not allow enemy fires to impact on the secured area. Enemy forces can engage targets within the controlled area, but they cannot move ground forces through that area. A unit designated to control a route or area directs and regulates the use of the area, to include movement of friendly traffic through the designated area or route. Control may also mean a command relationship or a function commanders exercise through their command and control systems. Figure B-10 depicts the control tactical mission task. (See ADP 3-0 and ADP 6-0 for more information on command and control.)

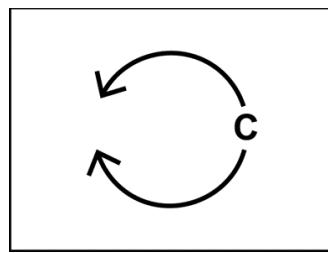


Figure B-10. Control task

COUNTERRECONNAISSANCE

B-21. **Counterreconnaissance** is a tactical mission task that encompasses all measures taken by a unit to counter enemy reconnaissance and surveillance efforts. Counterreconnaissance is not a distinct mission, but a component of all security operations and local security measures. It prevents hostile observation of a force or area. It involves both active and passive elements and includes combat action to destroy or repel enemy reconnaissance units and surveillance assets, such as unmanned aircraft systems.

B-22. Destroying enemy ground and aerial reconnaissance assets while denying the enemy information through other collection systems allows friendly force commanders to operate against an enemy who is operating blindly. The enemy commander's inability to see the battlefield eventually desynchronizes the enemy commander's actions and renders that commander's force vulnerable to aggressive action by friendly forces. (See Chapter 13 for additional information on counterreconnaissance.)

DESTROY

B-23. **Destroy** is a tactical mission task that physically renders an enemy force combat-ineffective until it is reconstituted. Alternatively, to destroy a combat system is to damage it so badly that it cannot perform any function or be restored to a usable condition without being entirely rebuilt. The amount of damage needed to render a unit combat ineffective depends on the unit's type, discipline, and morale. Destroying armored or dug in targets with area fire weapons requires considerable ammunition and time, so forces do not normally attempt it unless they have terminally guided munitions. Figure B-11 depicts the destroy tactical mission task.

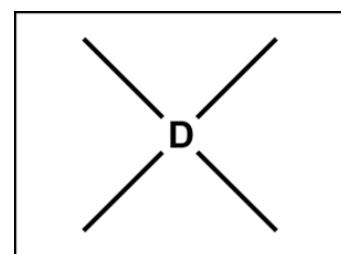


Figure B-11. Destroy task

DISENGAGE

B-24. ***Disengage*** is a tactical mission task in which a unit breaks contact with an enemy to conduct another mission or to avoid becoming decisively engaged. It involves moving to a location where enemy forces cannot engage the friendly force with either direct fires or observed indirect fires. Disengaging from enemy forces while displacing from one position to the next is a difficult procedure. Figure B-12 depicts the disengage tactical mission task.

B-25. A disengagement plan includes—

- The maneuver concept of operations for tactical elements after disengagement, along with the movement routes for each subordinate unit.
- Fires to suppress enemy forces and cover the unit's movement.
- Screening smoke to conceal the unit's movement, as part of a military deception operation, or to cover passage points.
- Contact and passage points if moving through friendly lines.
- The time disengagement starts.
- The earliest time that functional and multifunctional support and sustainment elements move.

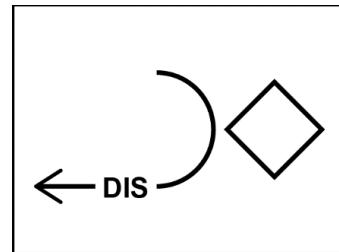


Figure B-12. Disengage task

B-26. The senior headquarters conducts operations to support the disengaging forces and relieve pressure on units in contact with enemy forces. For example, if a division is conducting a delay, the division commander uses attached aviation assets to help a BCT disengage from close operations. Simultaneously, the division uses its long-range artillery, rocket, and electromagnetic warfare systems to destroy or disrupt enemy follow-on echelons to prevent them from interfering with the disengagement. The intent is to create conditions that allow the unit to disengage while avoiding decisive combat.

B-27. To facilitate disengagement, units suppress the enemy force in contact by bombarding the enemy force with large volumes of both direct and indirect fires provided by forces other than the disengaging unit. In open terrain, a unit generally moves its short-range systems first. In close terrain, a unit generally moves its long-range systems first to support by fire positions. The time involved to move a system to its next position also affects when that system moves. Small-unit leaders usually direct this movement because of the limited range of combat net radios and the fact that the tactical situation varies across a unit's front. This process is repeated as necessary. Once disengagement starts, units must complete it rapidly. A commander can employ supporting units or reserves to protect the disengaging unit's flanks and assist in freeing any closely engaged elements. The unit then moves to its next position using the appropriate movement techniques.

B-28. If enemy combat systems have not closed within direct fire range of the friendly disengaging unit, all its elements may be able to move simultaneously under the cover of massed fires and smoke. Speed of execution and continued coordination are essential to the success of this task.

DISRUPT

B-29. ***Disrupt*** is a tactical mission task in which a unit upsets an enemy's formation or tempo and causes the enemy force to attack prematurely or in a piecemeal fashion. Units disrupt an enemy force by integrating direct and indirect fires, terrain, and obstacles. This increases an enemy force's vulnerability to friendly fires. It may temporarily knock a unit out of a battle. Disruption is not an end; it is the means to an end. The center arrow points toward the targeted enemy unit. Figure B-13 depicts the disrupt tactical mission task.

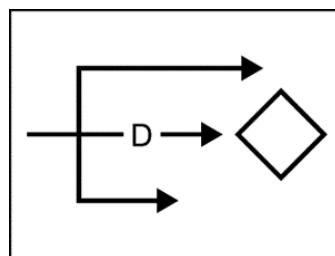


Figure B-13. Disrupt task

B-30. The maneuver force attempting to disrupt an enemy force must attack the defending enemy force with enough combat power to achieve the desired results with one mass attack or sustain the attack until it achieves the desired results. It may involve attacking the enemy force while it is still in its assembly areas or

in an approach march before it can deploy into a movement formation. A commander determines the degree of acceptable risk based on anticipated friendly losses, the location of the attack, the number of attacks, and other risk management factors.

B-31. ***Disrupt*** is an obstacle effect that focuses fire planning and obstacle effort to cause the enemy to break up its formation and tempo, interrupt its timetable, commit breaching assets prematurely, and attack in a piecemeal effort. It also helps to deceive an enemy force concerning the location of friendly defensive positions, to separate combat echelons, or to separate combat forces from their logistics support. The short arrows in the obstacle effect graphic indicate where obstacles impact the enemy's ability to maneuver. The longer arrows indicate where units allow enemy forces to bypass the obstacle effect, so the defending force can engage the enemy force with fires. The arrows indicate the direction of an enemy attack. A defending unit normally uses the disrupt obstacle effect forward of engagement areas. Obstacles alone cannot disrupt an enemy unit. Figure B-14 depicts the disrupt obstacle effect. (See Chapter 17 for more information on the disrupt obstacle effect.)

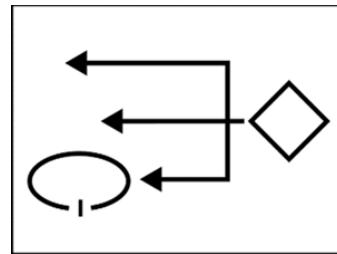


Figure B-14. Disrupt obstacle effect

EXFILTRATE

B-32. ***Exfiltrate*** is a tactical mission task in which a unit removes Soldiers or units from areas under enemy control by stealth, deception, surprise, or clandestine means. Friendly forces use stealth, deception, surprise, or other clandestine means to exfiltrate the area. Friendly forces exfiltrate when they have been encircled by enemy forces and cannot conduct a breakout or be relieved by other friendly forces. Forces returning from a raid, an infiltration, or a patrol behind enemy lines can also conduct an exfiltration. A commander exfiltrates an encircled force to preserve a portion of the force; it is preferable to the capture of the entire force. A force exfiltrates only after destroying or incapacitating all equipment, except medical, that it must leave behind. Only as a last resort, when the alternative is the capture of the entire force, does a force conducting an exfiltration leave its casualties in place with supplies, chaplain support, and medical personnel. Figure B-15 depicts the exfiltrate tactical mission task.

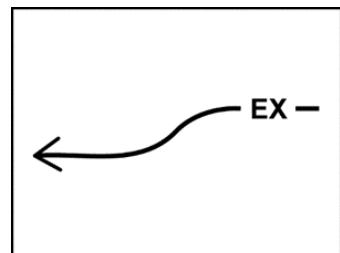


Figure B-15. Exfiltrate task

B-33. Exfiltration is most feasible through rough or difficult terrain in areas lightly covered by enemy observation and fire. These conditions often allow undetected movement of small elements when movement of the entire force would present more risk. Exfiltration requires resourcefulness, a high degree of discipline, expert land navigation skills, and motivation. It is unlikely that the entire force will be able to exfiltrate since part of it may have to create a diversion. Good, small-unit leadership is essential in this type of operation.

B-34. The exfiltrating force first establishes its rally points and exfiltration lanes. It coordinates its linkup plans with other friendly units. A commander designates exfiltration lanes as RFAs or no-fire areas. The exfiltrating force uses preparation fires to cover its movement and to expend stockpiled ammunition. Based on reconnaissance and available intelligence, the exfiltrating force subdivides into small groups and exfiltrates during periods of limited visibility, passing through or around enemy defensive positions. If detected, it tries to bypass enemy forces. Exfiltration may be more difficult with combat and tactical vehicles because the noise they make and the limitations they impose on exfiltration routes make detection more likely.

FIX

B-35. **Fix** is a tactical mission task in which a unit prevents the enemy from moving from a specific location for a specific period. This may occur by engaging an enemy force to prevent its withdrawal for use elsewhere, or by using deception, such as transmitting false orders. A commander uses fix in offensive and defensive actions; it is always a supporting effort. The point of the arrow faces toward the desired enemy unit to fix. The broken part of the arrow indicates the desired location for that event to occur. Figure B-16 depicts the fix tactical mission task.

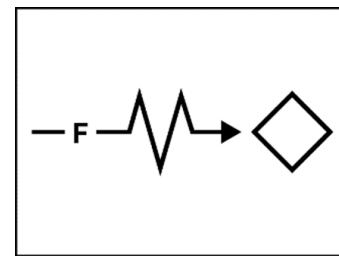


Figure B-16. Fix task

B-36. Fixing an enemy force does not mean destroying it. The friendly force has to prevent the enemy force from moving in any direction. This task usually has a time constraint, such as “fix the enemy reserve force until OBJECTIVE FALON is secured.” The tactical mission task of fix differs from that of block in that a fixed enemy force cannot move from a given location, but a blocked enemy force can move in any direction other than the one obstructed.

B-37. **Fix** is an obstacle effect that focuses fire planning and obstacle effort to slow an attacker’s movement within a specified area, normally an engagement area. The primary use of this effect is to give a friendly force time to acquire, target, and destroy an attacking enemy force with direct and indirect fires throughout the depth of an engagement area or avenue of approach. The irregular part of the arrow in the obstacle intent graphic indicates the location where complex obstacles slow the enemy force’s rate of advance. The arrow indicates the direction of enemy force’s advance. Figure B-17 depicts the fix obstacle effect.

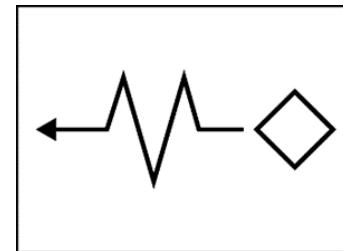


Figure B-17. Fix obstacle effect

FOLLOW AND ASSUME

B-38. **Follow and assume** is a tactical mission task in which a committed force follows and supports a lead force conducting an offensive operation and continues the mission if the lead force cannot continue. The lead force may be unable to continue for several reasons such as becoming fixed or attrited by enemy forces. The follow and assume force is not a reserve, but it is committed to accomplish specific tasks. Planners place the box part of the associated task military symbol around the icons of units assigned this task. Figure B-18 depicts the follow and assume tactical mission task.

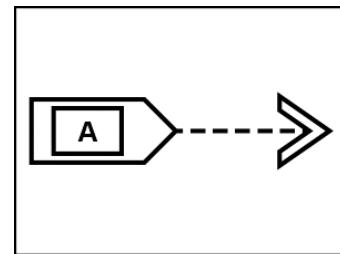


Figure B-18. Follow and assume task

B-39. Tasks for a follow and assume force include—

- Preparing to execute all missions of the followed unit.
- Maintaining contact with the trail elements of the leading force.
- Preparing to conduct a forward passage of lines through the force it is following.
- Monitoring all combat information and intelligence being provided to and from the force it is following.
- Avoiding engaging enemy forces bypassed by the force it is following.

B-40. A commander assigns a follow and assume mission to ensure that the attacking force maintains the momentum of its offensive action. The follow and assume force ensures it can immediately execute a forward passage of lines and assume the lead force’s mission.

B-41. A commander assigning a unit mission the task of follow and assume has two options in establishing the relationship between the lead and trail units. Commanders normally retain command of both units and

require that all requests for support from the supported unit to the supporting unit pass through their headquarters. Alternatively, in situations where a commander will not be able to maintain control over both units, the supporting unit is placed in a standard command relationship with the supported unit, such as attached or operational control. An example of this occurs when both units are trying to encircle a retrograding enemy force and the commander remains with the direct pressure force.

FOLLOW AND SUPPORT

B-42. ***Follow and support*** is a tactical mission task in which a committed force follows and supports a lead force conducting an offensive operation. A follow and support force is not a reserve but is a force committed to specific tasks. It contains an arrow graphic around the symbol of the unit being assigned this task. Figure B-19 depicts the follow and support tactical mission task.

B-43. Missions of a follow and support force include—

- Destroying bypassed enemy units when the lead unit does not clear the assigned area as it advances.
- Blocking movement of enemy reinforcements.
- Relieving in place any direct pressure or encircling force halted to contain enemy forces.
- Securing lines of communications.
- Clearing obstacles.
- Guarding prisoners, key areas, and installations.
- Recovering friendly battle losses.
- Securing key terrain.
- Controlling dislocated civilians.

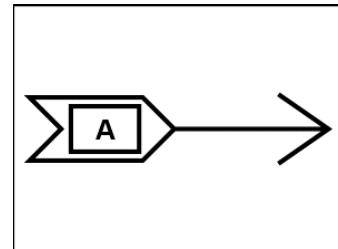


Figure B-19. Follow and support task

B-44. A commander assigns a unit the task of follow and support to keep the supported force from having to commit its combat power to tasks other than the main effort, which would slow the momentum and tempo of the offense. The follow and support force accomplishes its tasks to prevent enemy forces, obstacles, and other factors from interfering with offensive actions, especially along the lines of communications.

B-45. A commander assigning the follow and support task has two options in establishing the relationship between the supported and the supporting units. A commander can place the follow and support unit in a standard command relationship with the supported unit, such as attached or operational control. Alternatively, a commander can retain command of the follow and support force and require that all tasking requests from the supported unit go through that commander's headquarters.

INTERDICT

B-46. ***Interdict*** is a tactical mission task where a unit prevents, disrupts, or delays the enemy's use of an area or route in any domain. It is an offensive action that desynchronizes the enemy. Interdiction is a supporting effort conducted to complement and reinforce other ongoing offensive or defensive operations. The two arrows should cross on the unit or location targeted for interdiction. An interdiction tasking must specify how long to interdict, defined as a length of time or some event that must occur before the interdiction is lifted, and the exact effect desired from the interdiction. Figure B-20 depicts the interdict tactical mission task.

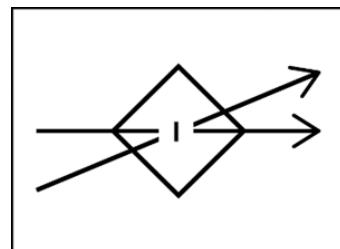


Figure B-20. Interdict task

B-47. A friendly force's capability to interdict may have a devastating impact on an enemy force's plans and ability to respond to friendly actions. For example, interdiction efforts that result in an enemy force's maneuver being delayed or disrupted enhance the friendly force's ability to achieve tactical advantages. Delaying or disrupting enemy resupply efforts limits the enemy force's ability to sustain intense, high tempo offensive or defensive actions and restricts enemy mobility. Space and

cyberspace capabilities prevent, disrupt, or delay enemy communications capabilities, which degrades the enemy's ability to command and control their forces.

B-48. The depth at which the attacking force conducts the interdiction generally determines the friendly force's freedom of action. Increasing the depth of operations reduces the danger of fratricide to air and surface forces, reduces the coordination required, and allows increasingly flexible operations. Aerial forces, such as manned and unmanned aircraft, can attack enemy forces to interdict their movement throughout the assigned area.

B-49. The depth at which interdiction takes place also determines the speed with which units observe its effects. Normally, ground maneuver units first focus on targets close to the FLOT. Interdiction efforts there immediately impact enemy forces near the interdiction target, but they do not affect the enemy force's ability to mass effects. Attacks at greater distances from the FLOT have a delayed impact on close combat but eventually degrade the enemy force's ability to mass effects.

B-50. Interdicting the movement of enemy units can be extremely effective in assisting the encirclement of those forces and their eventual destruction. Fixed enemy ground forces—or those trapped by the loss of their mobility—provide lucrative targets. A commander plans to interdict withdrawing enemy forces to enhance the pursuit. While interdiction can contribute to success by hampering reinforcement and resupply, it can also contribute by trapping enemy forces or canalizing their maneuvers, leading to their destruction in detail.

ISOLATE

B-51. **Isolate** is a tactical mission task in which a unit seals off an enemy, physically and psychologically, from sources of support and denies it freedom of movement. An isolated force is prevented from having contact with other enemy forces. A unit does not allow an isolated enemy force sanctuary within its present position. Instead, a unit continues to conduct offensive actions against an enemy force. The position or direction of the arrow has no significance, but the graphic surrounds the targeted enemy unit. Figure B-21 depicts the isolate tactical mission task.

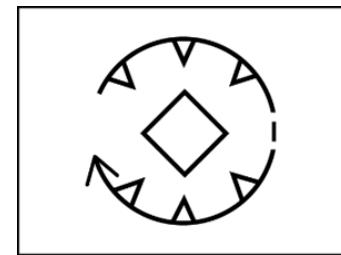


Figure B-21. Isolate task

NEUTRALIZE

B-52. **Neutralize** is a tactical mission task in which a unit renders the enemy incapable of interfering with an operation. The two lines cross over the symbol of the unit or facility targeted for neutralization. When assigning a task to neutralize, a commander specifies the enemy force or materiel to neutralize and the duration, which is time or event driven. The neutralized target may become effective again when casualties are replaced, damage is repaired, or effort resulting in the neutralization is lifted. A unit normally uses a combination of lethal and nonlethal effects to neutralize enemy personnel or materiel. The assets required to neutralize a target vary according to the type and size of the target and the weapon and munitions combination used. Figure B-22 depicts the neutralize tactical mission task.

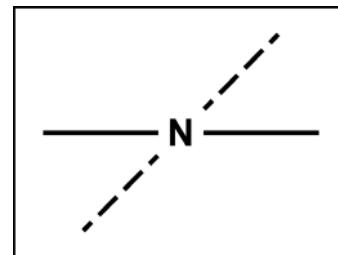


Figure B-22. Neutralize task

OCCUPY

B-53. **Occupy** is a tactical mission task in which a unit moves into an area to control it without enemy opposition. Both the friendly force's movement to and occupation of the area occur without enemy opposition. A unit can control an area without occupying it, but not vice versa. That is the difference between the tactical mission tasks of occupy and control. The symbol should encompass the entire area that a commander desires to occupy. Units typically occupy assembly areas, objectives, and defensive positions. Figure B-23 depicts the occupy tactical mission task.

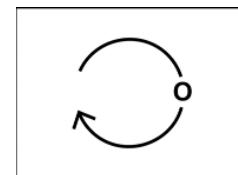


Figure B-23. Occupy task

REDUCE

B-54. **Reduce** is a tactical mission task in which a unit destroys an encircled or bypassed enemy force. This task can occur at any location on the battlefield. *Reduce* is also a mobility task to create and mark lanes through, over, or around an obstacle to allow the attacking force to accomplish its mission (ATP 3-90.4/MCTP 3-34A). There is no symbol for this task.

RETAIN

B-55. **Retain** is a tactical mission task in which a unit prevents enemy occupation or use of terrain. A commander assigning this task specifies the area to retain and the duration of the retention, which is time or event driven. While a unit is conducting this task, it expects enemy forces to attack and prepares for decisive engagement. A unit tasked to retain a specific piece of terrain does not necessarily have to occupy it. The direction of the arrow has no significance, but the symbol includes the entire area to be retained. Figure B-24 depicts the retain tactical mission task.

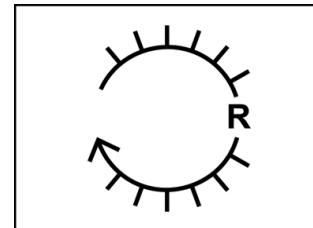


Figure B-24. Retain task

SECURE

B-56. **Secure** is a tactical mission task in which a unit prevents the enemy from damaging or destroying a force, facility, or geographical location. This task normally involves conducting area security operations. A force given the mission of securing a unit, facility, or geographic location, such as a route or base, not only prevents enemy forces from over running or occupying the secured location, but also prevents enemy direct fires and observed indirect fires from impacting the secured location, unit, or facility. Stated simply, the secured area or location is safe enough to build and project combat power. There is a difference between control and secure. The control tactical mission task allows enemy direct and indirect fires to affect the location being controlled while secure does not. A unit does not have to physically occupy the area immediately around the unit, facility, or geographic location it is securing if it can prevent the enemy from occupying or firing at that location by other means. The commander states the mission duration in terms of time or event when assigning a mission to secure a given unit, facility, or geographic location. The direction of the arrow has no significance, but the symbol includes the entire area to be secured. Figure B-25 depicts the secure tactical mission task.

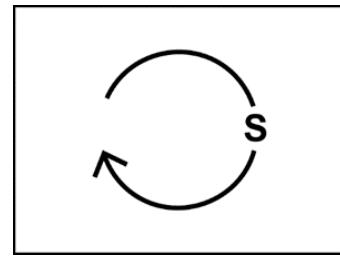


Figure B-25. Secure task

SEIZE

B-57. **Seize** is a tactical mission task in which a unit takes possession of a designated area by using overwhelming force. An enemy force can no longer place direct fire on a seized objective. The arrow points to the location or objective to seize. This task differs from secure because it requires offensive action to obtain control of the designated area or objective. It differs from the task of occupy because it involves overcoming anticipated enemy opposition. Once a friendly force seizes a physical objective, it clears the terrain within that objective by killing, capturing, or forcing the withdrawal of all enemy forces. Figure B-26 depicts the seize tactical mission task.

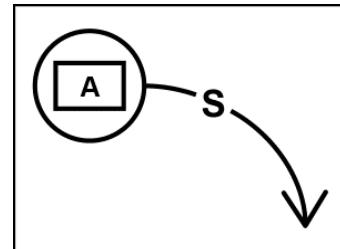


Figure B-26. Seize task

SUPPORT BY FIRE

B-58. ***Support by fire*** is a tactical mission task in which a unit engages the enemy by direct fire in support of another maneuvering force. The primary objective of the support force is normally to fix and suppress enemy forces so that they cannot effectively fire on the maneuvering force. The secondary objective is to destroy enemy forces if they try to reposition. The commander specifies the desired effect on enemy forces when assigning this task. The support by fire tasked is rarely applicable to units larger than company size. Figure B-27 depicts the support by fire tactical mission task.

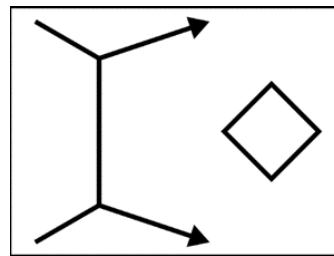


Figure B-27. Support by fire task

B-59. A unit conducting the task of support by fire does not maneuver to capture enemy forces or terrain. A commander gives this task to another unit as part of a larger maneuver. When assigning a support by fire mission, a commander designates the enemy force, when to attack, the general location from which to operate, the friendly force to support, and the purpose of the task, such as fix or suppress. The ends of the arrows point in the general direction of the targeted unit or location. The base of the area indicates the general area from which to deliver fires.

B-60. Once a commander gives an element the task of support by fire, it should occupy support by fire positions that have cover and concealment, good observation, and clear fields of fire. Elements occupying support by fire positions should—

- Check the security of the position.
- Search for targets.
- Orient weapons on likely or suspected enemy positions.
- Occupy fighting positions providing some degree of protection. Armored and Stryker forces occupy hull-down firing positions, while infantry forces use trees, natural berms, and similar existing terrain features.
- Assign observation sectors to each Soldier or weapon system in the support by fire element.
- Use available thermal sights to locate heat sources not visible to the naked eye, such as vehicles concealed in tree lines or other wooded areas or personnel serving at observation posts.

B-61. Support by fire closely resembles the task of attack by fire. The difference is that support by fire supports another force so that it can maneuver against enemy forces, while an attack by fire does not support the maneuver of another friendly force.

SUPPRESS

B-62. ***Suppress*** is a tactical mission task in which a unit temporarily degrades a force or weapon system from accomplishing its mission. It occurs when a unit employs direct or indirect lethal and nonlethal effects, such as artillery, electromagnetic warfare, or smoke on enemy personnel, weapons, and equipment to prevent or degrade enemy fires, sensors, and visual observation of friendly forces. Unlike the neutralization task, the original target regains its effectiveness without needing to reconstitute once the effects of the systems involved in the suppression effort lift or shift to another target. Figure B-28 depicts the suppress tactical mission task.

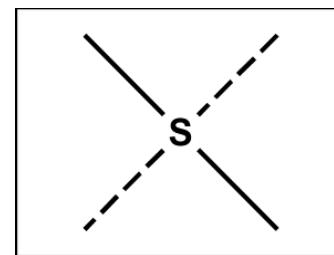


Figure B-28. Suppress task

TURN

B-63. **Turn** is a tactical mission task in which a unit forces an enemy force from one avenue of approach or movement corridor to another. A commander relates obstacles, fires, and terrain to improve the friendly tactical situation while degrading the enemy force's situation. For example, in the offense, a commander might want to turn a pursued enemy force to place it in a position where the friendly force can destroy it. In the defense, a commander might want to turn an attacking enemy force to allow the friendly force to conduct a counterattack into the enemy force's flank. The place where the arrow breaks indicates the general location of the obstacle complex that will make enemy forces move from one avenue of approach to another. Figure B-29 depicts the turn tactical mission task.

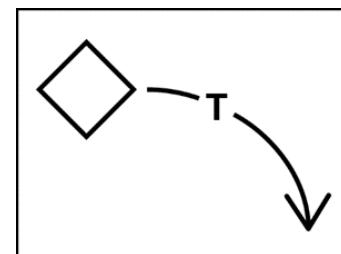


Figure B-29. Turn task

B-64. **Turn** is an obstacle effect that integrates fire planning and obstacle effort to divert an enemy formation from one avenue of approach to an adjacent avenue of approach or into an engagement area. Its development requires well-defined mobility corridors and avenues of approach. To achieve this effect, the obstacles have a subtle orientation relative to the enemy force's approach. The obstacles and their associated fires allow bypasses in the direction desired by the friendly scheme of maneuver. Finally, the obstacles tie into restrictive terrain at the initial point of the turn. A commander normally uses the turn effect on the flanks of an engagement area. The direction of the arrow indicates the desired direction of turn. Figure B-30 depicts the turn obstacle effect.

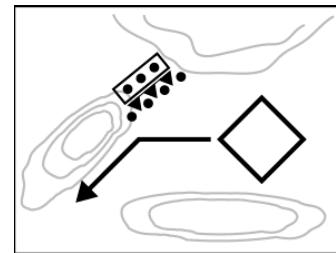


Figure B-30. Turn obstacle effect

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Appendix C

Encirclements

Encirclements are an outcome that can result from offensive operations to isolate and destroy enemy forces or result from a friendly force being isolated by enemy forces. This appendix provides an overview of encirclement operations and consists of the organization of forces for an encirclement, control measures, and planning and execution of encirclement operations. It also includes what to do if a unit is encircled and how to break out from an encirclement.

ENCIRCLEMENT OVERVIEW

C-1. ***Encirclement*** is where one force loses its freedom of maneuver because an opposing force is able to isolate it by controlling all ground lines of communications and reinforcement. A unit can conduct offensive encirclement operations designed to isolate an enemy force or they could become encircled resulting from the unit's isolation by the actions of an enemy force. Encirclements occur because combat operations involving modernized forces are likely to be chaotic, intense, and highly destructive, extending across large areas containing relatively few units as each side maneuvers against the other to obtain positional advantage.

C-2. Typically, encirclements result from penetrations and envelopments, or are extensions of exploitation and pursuit operations that bypass large enemy forces in order to maintain momentum. As such, they are not a separate form of maneuver but an extension of an ongoing operation. They may be planned sequels or result from exploiting an unforeseen opportunity. They usually result from the linkup of two encircling arms conducting a double envelopment. However, they can occur in situations where an attacking unit uses a major obstacle, such as a shoreline, as a second encircling force. Although a commander may designate terrain objectives in an encirclement, isolating and destroying or defeating enemy forces are the focus. Ideally, an encirclement results in the surrender of the encircled force. This minimizes friendly force losses and resource expenditures. A key consideration prior to executing an encirclement is understanding that the encircling force is fixed and therefore unavailable for other operations until the enemy force being encircled is reduced.

ORGANIZATION OF FORCES FOR AN ENCIRCLEMENT

C-3. An encirclement operation usually has at least two phases—the actual encirclement and actions taken against the isolated enemy forces. Commanders consider adjusting subordinate units' task organizations between phases to maximize unit effectiveness in each phase. The first phase is the actual encirclement that results in the enemy force's isolation. The organization of forces for an encirclement is similar to that of a movement to contact or an envelopment. The unit executing an encirclement organizes encircling forces into a direct pressure force and one or more encircling arms. Armored, mechanized, and motorized infantry, air assault, and airborne units are especially well suited for use as an encircling force since they have the tactical mobility to reach positions that cut enemy ground lines of communication. Bypassed and non-encircled enemy forces on the flanks and rear of advancing friendly forces require all around security.

C-4. A commander should direct the encirclement effort. However, there must also be unity of command for each encircling arm. The encircling force headquarters may name one of its subordinate units as the headquarters for an encircling arm. Alternatively, that force's headquarters may create a temporary command post from organic assets, such as its tactical command post, to control one or more arms of the encirclement. If that encircling arm has subordinate inner and outer arms, each of them also requires separate subordinate commanders. The missions and spatial orientation between the inner and outer encircling arms are sufficiently different; therefore, one force cannot act in both directions at once. Figure C-1 on page C-2 depicts an encirclement.

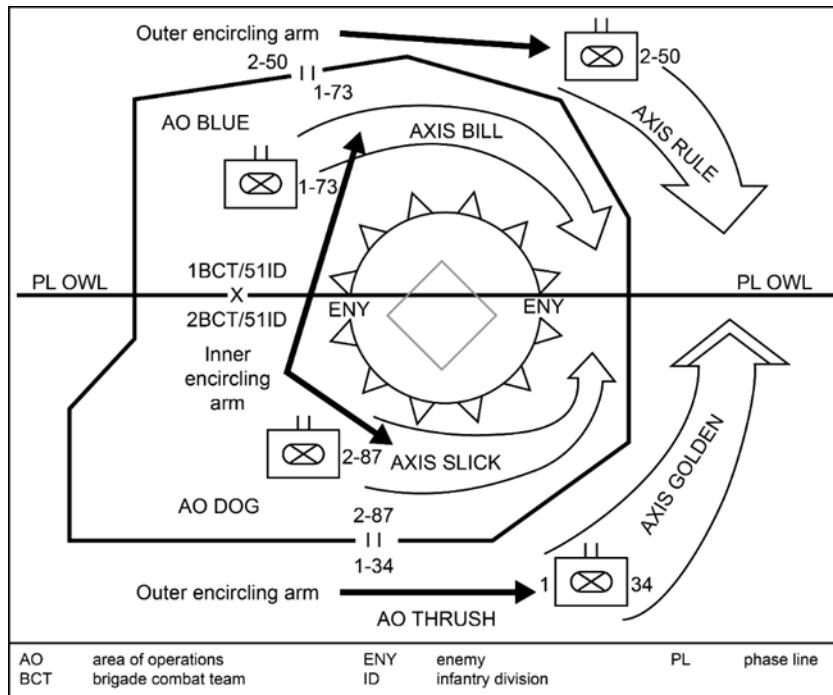


Figure C-1. Inner and outer arms of an encirclement

C-5. The encirclement unit organizes only an encircling arm if there is no possibility of the encircled forces receiving relief from enemy forces outside the encirclement. If there is danger of an enemy relief force reaching the encircled enemy force, the unit organizes both an inner and outer encircling arms. The commander assigns the outer encircling arm a security mission, an offensive mission to drive away any enemy relief force, or a defensive mission to prevent the enemy relief force from making contact with the encircled enemy force. Once the encirclement is complete, these inner or outer encircling arms form a perimeter.

C-6. The second phase of an encirclement operation involves actions taken against an isolated enemy force. The commander's decision to fix, contain, or destroy isolated enemy forces affects the task organization of subordinate units, as do enemy attempts to break out from the encirclement or linkup with the encircled force. All these possible outcomes require resources in terms of units and supplies, but some require more resources than others do. If the unit's mission is to contain or fix an isolated enemy force, the unit organizes subordinate forces for defensive action and arranges them around the enemy force's perimeter. If the unit's mission is to reduce or destroy that same enemy force, that unit organizes subordinate forces for offensive action. A higher echelon commander often assigns either mission to the commander of a follow and support force.

C-7. Regardless of whether a commander decides to fix, contain, or destroy enemy forces, the unit conducts reconnaissance to maintain contact and monitor enemy force actions in response to the encirclement. This allows the unit to respond effectively to any enemy movement. The most effective reconnaissance combines ground, aerial, and surveillance systems to provide constant coverage and multiple assessments of enemy activities throughout the encircled area.

ENCIRCLEMENT CONTROL MEASURES

C-8. As shown in figure C-2, control measures for an encirclement are similar to those of other offensive operations, especially an envelopment, but with a few additional considerations. If the encirclement unit uses both an inner and an outer encircling arm, the unit must establish a boundary between them. The unit places the boundary so that each element has enough space to accomplish their mission. The inner force requires enough space to fight a defensive battle to prevent the encircled force from breaking out. The outer force requires adequate terrain and depth in its assigned area to defeat any attempt to relieve the encircled force.

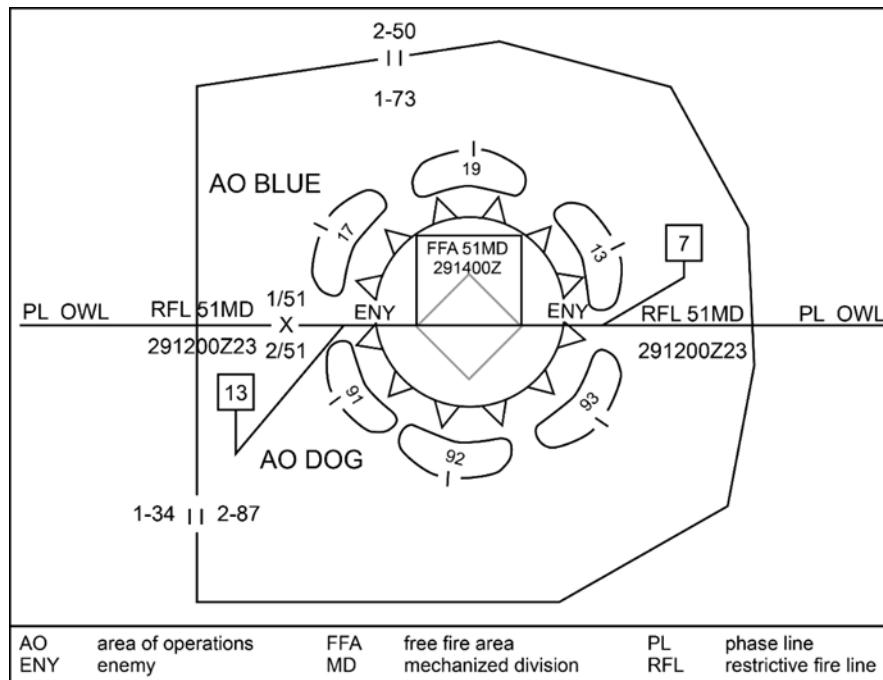


Figure C-2. Example of encirclement control measures

C-9. The commander who controls both converging forces establishes a RFL between them. The unit may also establish a free-fire area, which encloses the area occupied by a bypassed or encircled enemy forces. The unit may also establish contact points.

PLANNING AN ENCIRCLEMENT

C-10. Encirclement operations may require allocating large forces and significant resources. They take a great deal of time and usually slow an advance. The encircling force maintains contact with an encircled enemy force, the following general planning considerations apply. Units—

- Determine the best available assets that gain and maintain contact with enemy forces.
- Keep encircled enemy forces isolated and incapable of receiving intelligence, logistics, and fire support from enemy formations outside of the encirclement.
- Use reconnaissance and surveillance assets so that they know the capabilities of the encircled force and, as much as possible, its commander's intentions.
- Retain freedom of maneuver.
- Control fires and fields of fire to avoid fratricide.

C-11. Units apply the general planning considerations for the offense or the defense depending on the overall mission. Units plan to rotate the forces involved in reducing the encircled pocket to maintain constant pressure on the enemy.

C-12. Every encircled enemy unit reacts differently. Initially, some become demoralized and cannot offer any serious resistance. Additional methods for psychologically affecting enemy personnel and reducing their mental and physical capabilities is by disrupting their sleep and rest patterns. However, if left undisturbed, most enemy units recover and attempt to break out and regain contact with their main force or attack the flank and rear of advancing friendly units. The encircling force must plan for the enemy force's most probable reactions.

C-13. If the enemy force is not reduced, and it can be resupplied or has access to considerable supply stocks, then it continues to be a serious threat to encirclement units in future operations. The encircling force must be approximately equal in size to this type of encircled force to fix or contain it. This situation occurred when

German forces occupied various fortified French ports after Allied armies liberated the rest of France in 1944. Each encircled German division took approximately one Allied division to maintain its isolation. Conversely, an enemy force isolated without adequate supplies either surrenders or faces containment by considerably smaller forces. This situation occurred in Egypt during the 1973 Arab-Israeli War when an Israeli division isolated the Egyptian 3rd Army.

EXECUTING AN ENCIRCLEMENT

C-14. When feasible, encircling forces advance parallel to the enemy's direction of movement. They attempt to reach key passes, bridges, and other critical points before the main enemy force reaches them. When the encircling force cannot outdistance the enemy force, it engages the enemy force's flanks to force the enemy to fight under the most unfavorable conditions possible, ultimately in two or more directions simultaneously. Engineer units rapidly breach obstacles in the path of the encircling force. Friendly forces emplace obstacle complexes, supported by fires, to block probable avenues of escape, as they counter attempted enemy breakouts from encirclement. Units may use air assault and airborne forces to seize key passes or other critical terrain objectives to cut enemy LOCs. The encircling force completes the encirclement when it cuts all enemy ground LOCs. This generally occurs when the two arms of a double envelopment complete their linkup.

C-15. Intervals in an attacking force can also occur during combat operations as the result of different rates of advance by movement formations that face different levels of enemy resistance and different terrain. An encircled enemy force attempts to discover intervals and take advantage of them as it tries to escape or breakout of the encirclement. Once the enveloping force completes the linkup that creates the encirclement, it must close these intervals as quickly as possible to prevent enemy forces from exploiting them.

C-16. An enemy force may attempt to cut off an encircling force and extend its flank beyond the area of the friendly attack. If the enveloping unit attempts to outflank such a hostile extension, it may lead to the overextension of the enveloping force or to a dangerous separation of the enveloping force from support. It is usually better to take advantage of the enemy force's extension and subsequent weakness by penetrating the thinly held front of an enemy force rather than risk the overextension of the enveloping force in an effort to outflank the enemy force's positions completely. Alternatively, in response to the unfolding encirclement an enemy force may attempt a frontal, spoiling attack. In this case, the friendly force in contact defends itself or engages in a delaying operation, while the enveloping force continues the envelopment or moves directly toward the enemy force in a counterattack.

C-17. Commanders of highly mobile forces forming the inner encircling arm may choose not to establish a continuous series of positions around an encircled enemy force. They may order subordinate forces to occupy only key terrain from which they can strike at encircled enemy forces to prevent them from concentrating forces and to isolate them further. Units who adopt this technique need to be able to detect enemy attempts to breakout and concentrate sufficient combat power against these attempts to thwart their efforts to isolate encircled enemy forces. Units of the outer encircling arms prevent additional enemy forces from reinforcing the isolated enemy force or interfering with the activities of the inner encircling arm.

C-18. Once units decide to destroy encircled enemy forces, they reduce those enemy forces as rapidly as possible to free resources for use elsewhere. The reduction of an encircled enemy force continues without interruption, using the maximum concentration of forces and fires, until the encircled enemy force's complete destruction or surrender. Units may destroy encircled enemy forces by fires or by maneuver.

Reduction by Fires

C-19. Reducing an encircled enemy force by fires alone is the least preferred method to destroy an enemy force. This method implies that the encircling friendly forces commander will use fire support as the primary or sole means of reducing the encircled enemy force. It includes the use of artillery, mortars, direct fires, fixed- and rotary-wing aviation (including armed UAS), and cyber and electromagnetic warfare capabilities.

C-20. This method has advantages and disadvantages. An advantage is that it generally reduces the number of casualties suffered by the encircling force. Disadvantages of this method include an extensive amount of attack/delivery systems, ammunition, and time to reduce the encircled force. Additionally, fires alone might not be sufficient to force the surrender of the encircled enemy force. In most cases, reducing an encircled enemy force requires using fires and movement.

Reduction by Maneuver

C-21. Reduction by maneuver uses a combination of fire and ground maneuver forces to attack and destroy an encircled enemy force. In many cases the constraints of time, munitions, and availability of sufficient fires assets will lead a commander to use the reduction by fires and movement method. The four techniques for reducing an encircled enemy are squeeze, hammer and anvil, wedge, and escape route.

Squeeze Technique

C-22. The squeeze technique uses simultaneous, coordinated attacks on enemy forces from various directions. Following the initial encirclement, the capture or destruction of an enemy force is methodical and thorough. Units use fire and movement together in a controlled contraction of the encirclement. As an enemy's perimeter contracts, commanders remove units from the inner perimeter and add them to the reserve depending on the terrain and other mission variables. This technique is effective against battalion-size or smaller groups of encircled enemy forces. Figure C-3 depicts the squeeze technique.

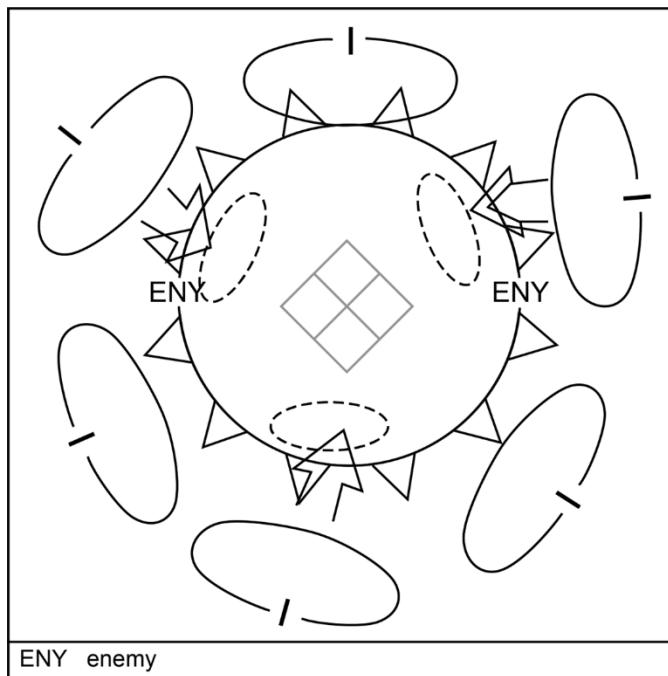


Figure C-3. Squeeze technique

C-23. The squeeze technique promotes an enemy force's confusion and rapid dispersion of combat power and prevents an enemy commander from using the enemy's reserves in a decisive manner. The friendly unit shapes the operation by initially concentrating on destroying enemy command nodes, air defense systems, artillery systems, and sustainment capabilities. These sustainment capabilities include any drop zones, landing zones, or airstrips available to the enemy forces that would allow them to receive support from outside the encirclement.

Hammer and Anvil Technique

C-24. The hammer and anvil technique employs a stationary blocking force as an anvil on one or more sides of the inner perimeter, while other elements of the encircling force use offensive action as a hammer to force the encircled enemy force against the blocking force. Either the anvil or the hammer can destroy the enemy force. Usually the hammer, as the attacking element, accomplishes this task. This technique is most effective when the blocking force is located on or to the rear of a natural terrain obstacle. On favorable terrain, units can use an airborne or air assault force as the anvil or blocking element. Figure C-4 depicts the hammer technique.

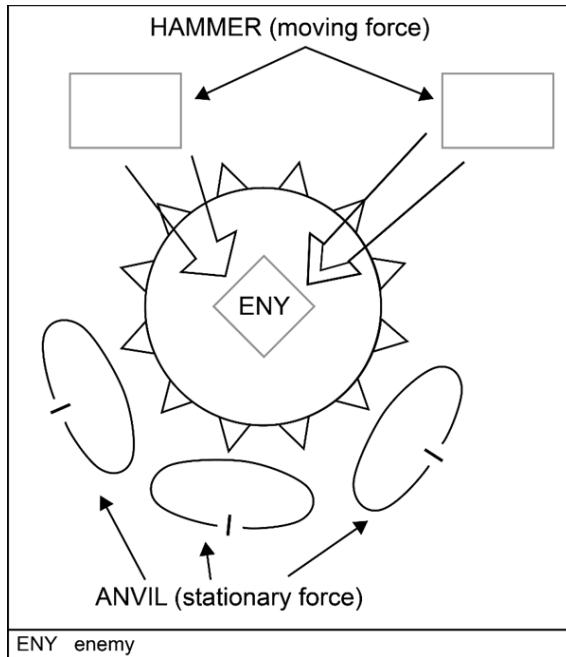


Figure C-4. Hammer technique

Wedge Technique

C-25. The wedge technique uses a unit to divide enemy forces in the pocket while the rest of the encircling force remains in place. This technique allows units to concentrate against a small portion of the encircled enemy force. However, the encircling force maintains pressure on other encircled enemy forces to prevent them from reinforcing or supporting the threatened area. The unit dividing the pocket conducts sudden and swift attacks immediately after the end of supporting preparation fires. Figure C-5 depicts the wedge technique.

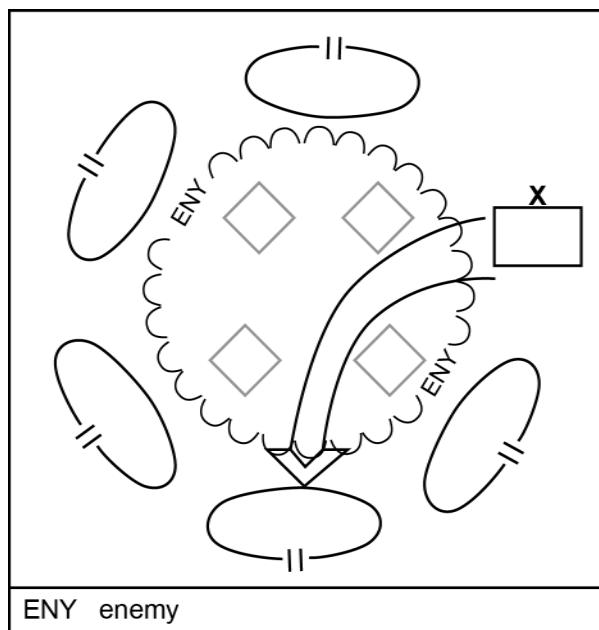


Figure C-5. Wedge technique

Escape Route Technique

C-26. The escape route technique involves leaving one or more gaps in the inner encircling arm to entice enemy forces to attempt a breakout. Once an enemy force starts moving and is no longer sheltered in defensive positions, that moving enemy force is more vulnerable to acquisition, attack, and destruction. A unit using this technique should integrate military information support operations with constant offensive action to demoralize the escaping enemy force.

C-27. The negative aspect of these techniques is that they require considerable forces and supplies, which are not always available. Therefore, at times the encircling force has to limit itself to less decisive measures. These include temporarily containing or fixing bypassed enemy forces until resources become available to enable the encircling force to destroy the enemy force. Continued isolation of the encircled force can only be guaranteed when the enemy force cannot strengthen its forces by inserting additional units and supplies by air. Even total, long-term isolation does not necessarily lead to decisive defeat of an encircled enemy. It is a temporary measure designed to provide additional time to the attacking force.

DEFENDING ENCIRCLED

C-28. Encirclement of a friendly force is likely to occur during highly mobile and fluid operations or when operating in restrictive terrain. Unit offensive actions may result in encirclement. Likewise, encirclements may occur when units employ detachments left in contact. Units anticipate becoming encircled when assigned stay-behind missions or when occupying either a strong point or a combat outpost. Units make appropriate preparations in these situations.

C-29. If a unit finds itself encircled, they immediately form a perimeter defense which can evolve into defending an encirclement. If this happens, distinct tactics exist for the encircled force. An encircled force has the following options: continue to defend encircled, conduct a breakout, exfiltrate toward other friendly forces, or attack deeper into enemy-controlled territory. Once encircled, the unit's form of maneuver depends on the senior commander's intent and mission variables, including the—

- Availability of defensible terrain.
- Relative combat power of friendly and enemy forces.
- Sustainment status of the encircled force and its ability to be resupplied, including the ability to treat and evacuate wounded Soldiers.

- Morale and fighting capacity of the Soldiers.

C-30. The senior commander in an encirclement assumes command over all encircled forces and takes immediate action to protect them. In the confusion leading to an encirclement, it may be difficult to determine what units are encircled, let alone identify the senior commander. However, the senior commander is identified within the encirclement as quickly as possible. That senior commander needs to decide quickly what assets should stay within the potential encircled pocket and what assets should leave. The senior commander immediately informs their higher echelon headquarters of the situation. Simultaneously, the senior commander directs the performance of the following tasks:

- Establish security.
- Re-establish a chain of command.
- Establish a reserve.
- Establish security elements as far forward as possible to provide early warning.
- Reorganize and centralize control of all artillery.
- Maintain morale.
- Centralize the control of all supplies.

C-31. The senior commander positions security elements as far forward as possible to reestablish contact with enemy forces and provide early warning. Vigorous patrolling begins immediately. Each unit clears its position to ensure that there are no enemy forces within the perimeter. Units use technical assets and electromagnetic warfare systems to augment local security and locate areas along the perimeter where enemy forces are deploying additional forces.

C-32. The senior commander re-establishes unity of command. The senior commander reorganizes any fragmented units and places Soldiers separated from their parent units under the control of other units. The senior commander establishes a clear chain of command throughout the entire encircled force, adjusts support relationships with the encirclement, and re-establishes communications with units outside the encircled force.

ORGANIZATION OF FORCES FOR AN ENCIRCLED DEFENDER

C-33. With the establishment of a perimeter defense, the commander learns about the specific capabilities and limitations of the different friendly units isolated in the encirclement. The commander uses this information to design a defense to maximize the capabilities of available forces. Forward units establish mutually supporting positions around the perimeter and in depth along principal avenues of approach. Units occupy the best available defensible terrain. It may be necessary to attack to seize key or decisive terrain to incorporate that terrain into the perimeter defense. Once a unit is given an assigned area, preparations are the same as in the defense. Figure C-6 illustrates an encircled division's perimeter defense. Encircled units make their defensive positions as strong as possible, given time and resource constraints. The unit anticipates that enemy forces will attempt to split the defenses of the encircled force and defeat it in detail.

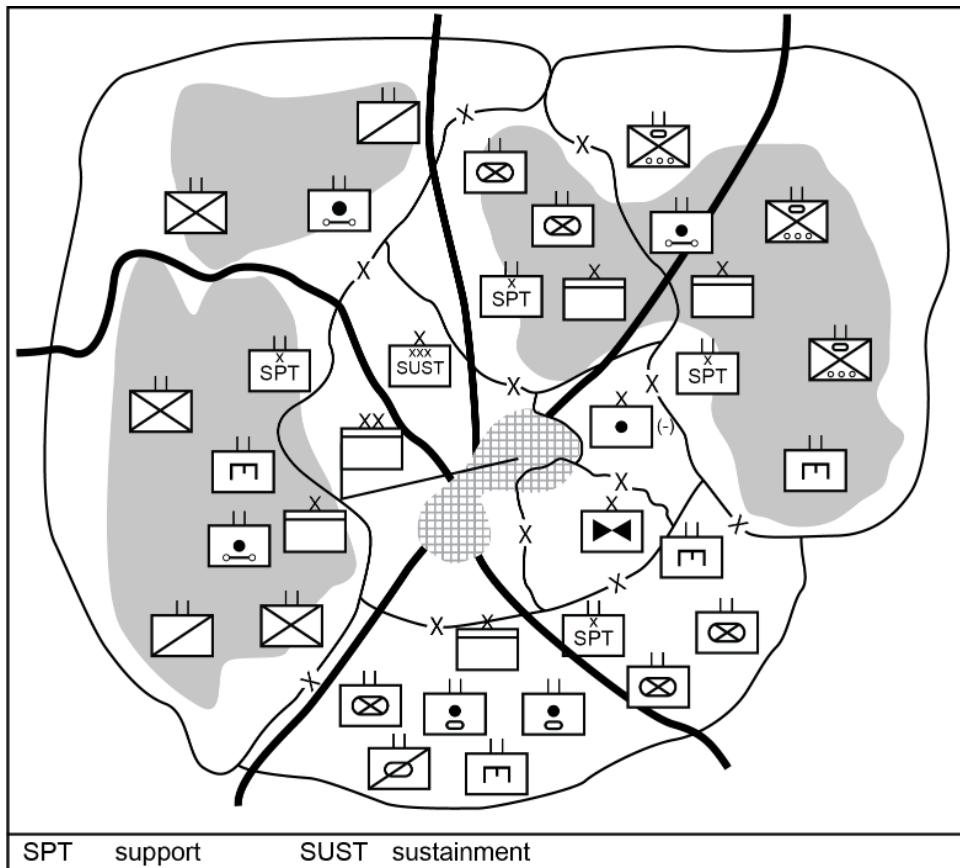


Figure C-6. Encircled division perimeter defense

C-34. The encircled force commander establishes a reserve that is mobile enough to react quickly to events anywhere along the perimeter. Therefore, given the availability of sufficient fuel, the unit constitutes a reserve using some of any available armored, mechanized, and Stryker units. The unit centrally positions this mobile reserve to take advantage of interior lines, which exist if the encircled force commander can maneuver the reserve or reinforce threatened positions on the perimeter faster than an enemy force can shift location or reinforce. A unit can achieve interior lines through a central position (with operations diverging from a central point) from superior lateral LOCs or greater tactical mobility. If only dismounted infantry forces are available, the unit establishes small local reserves to react to potential threats. The unit organizes a mobile anti-armor element from the best available anti-armor systems. If possible, subordinate echelons also retain reserves.

C-35. While defending encircled, a unit may use the reserve to limit penetrations along the perimeter. The reserve may conduct spoiling attacks or counterattacks. The commander initiates a counterattack at the decisive moment and location as the enemy force attempts to penetrate friendly defensive positions.

BREAK OUT FROM AN ENCIRCLEMENT

C-36. A *breakout* is an operation conducted by an encircled force to regain freedom of movement or contact with friendly units (ADP 3-90). It differs from other attacks only in that a simultaneous defense in other areas of the perimeter must be maintained. A breakout is both an offensive and a defensive operation. An encircled force normally attempts to conduct breakouts when one of the following four conditions exist:

- The commander directs the breakout or the breakout falls within the intent of a higher echelon commander.
- The encircled force lacks sufficient relative combat power to defend itself against enemy forces attempting to reduce the encirclement.

- The encircled force lacks adequate terrain available to conduct its defense.
- The encircled force cannot sustain itself long enough for relief by forces from outside the encircled pocket.

ORGANIZATION OF FORCES FOR A BREAKOUT

C-37. Encircled units conducting a breakout attack typically task-organize to perform rupture, follow and assume, main body, and rear guard missions. The senior commander within an encirclement organizes a reserve and a separate deception force if sufficient forces exist. Previous combat may have attired the combat power of encircled units. The commander prioritizes which ones to resource if sufficient combat power does not exist to resource each of the forces. See the applicable organization depicted in figure C-7.

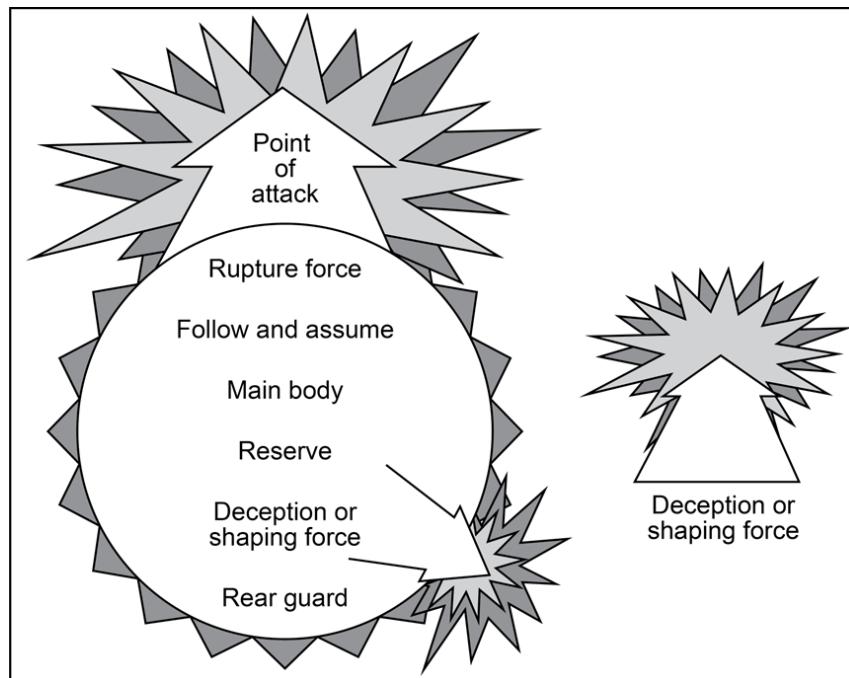


Figure C-7. Organization of forces for a breakout operation

C-38. Normally, the commander's first priority is to resource the force with the rupture mission. The commander typically assigns multiple missions to subordinate forces because there are typically not enough forces in the encirclement to have separate forces for each required mission. For example, the follow and assume force could receive a be-prepared mission to help extract the rear guard, a mission generally given to the reserve. Forces located outside the encirclement assist the breakout by conducting shaping operations. Above all, the encircled force maintains the momentum of the breakout attack; otherwise, it is more vulnerable to destruction than it was before the breakout attempt.

C-39. The encircled force reorganizes to conduct the breakout based on available resources. Without resupply, armored, mechanized, and motorized infantry units may not be able to move all their vehicles during the breakout attack. Priority of support may be limited to the rupture force and the rear guard, with the remaining force keeping only sufficient transportation assets to move the wounded and critical assets and supplies. The breakout plan outlines the commander's destruction criteria for equipment or supplies left behind. The unit destroys all vehicles, critical munitions, supplies, and equipment (except medical supplies) it cannot move.

C-40. An encircled force attacks using the rupture force to penetrate the enemy defensive positions in at least one location. The unit produces overwhelming combat power at each breakout point. The unit assigns the rupture force, which varies in size from one-third to two-thirds of the total encircled force, the mission to penetrate the enemy force's encircling position, widen the gap, and hold the shoulders of the gap until all

other encircled forces can move through. The rupture force must have sufficient strength to penetrate the enemy force's position. This force must use surprise, mobility, and firepower to achieve a favorable combat power ratio over the enemy force at the point of attack.

C-41. Initially, the rupture force is the main effort. The attack occurs where the unit anticipates a successful rupture of the enemy force's inner ring, which facilitates subsequent operations by enabling the unit to attack enemy units from their flanks and rear. The rupture force unit probably has additional attached assets, such as additional maneuver forces and engineers. The unit should integrate these assets to achieve the rupture.

C-42. The follow and assume force follows the rupture attack and is committed to maintain the momentum of the attack and seize objectives past the rupture. After the rupture force seizes a gap in the enemy encirclement, the follow and assume force normally main effort until completing linkup operations with another friendly force. When a unit receives a follow and assume mission in a breakout, its commander must coordinate closely with the rupture force commander regarding the location of the gap, the enemy situation at the rupture point, and the enemy situation, if known, along the direction of attack past the rupture point. The commander does not assign this force supporting shaping tasks, such as clear routes and fix bypassed enemy forces, if those tasks dissipate its available combat power. If executing these support tasks is vital to the success of the breakout and resources permit, then the unit designates a separate follow and support force to perform these tasks.

C-43. The main body consists of the main command post, the bulk of encircled sustainment assets, the unit's casualties, and some functional and multifunctional support assets. It contains combat forces not required for other missions and has sufficient combat power to protect itself. The overall commander places one subordinate commander in charge of the various elements of the main body to ensure orderly movement. Typically, the main body establishes a flank security force that deploys once the main body passes through the point of penetration and performs a flank screen or guard mission for the main body.

C-44. The rear guard consists of Soldiers and equipment left on the perimeter to provide protection for the rupture attack and any supporting efforts, such as deception forces. Forces left in contact must conduct a vigorous delaying operation on the perimeter so that the enemy force cannot isolate any portion of the rear guard. Under a single commander, the rear guard protects the main body from attack while it moves from the area. In addition to providing security, the rear guard deceives the enemy forces about the intentions of the encircled force, simulating its activities until the main body clears the gap.

C-45. A reserve primarily aims to retain flexibility through offensive action. The unit makes every attempt to keep a small portion of the encircled force uncommitted for employment at the decisive moment to ensure the breakout's success. The unit may be unable to establish a separate reserve force because of the need to resource either the rupture force, the follow and assume force, or the rear guard. In this event, the unit assigns and prioritizes various be-prepared missions to the follow and assume force.

C-46. A successful diversion is important to the success of any breakout operation. If the diversion fails to deceive the enemy commander regarding the intentions of the encircled force, the enemy commander could direct the enemy's full combat power at the rupture point. On the other hand, the deception force may rupture the enemy's lines. If a rupture occurs, the diversion force commander follows the intent of the commander of the encircled force. The encircled force commander may choose to exploit the success of forces conducting a diversion, or the commander may have to disengage them for use elsewhere in the breakout attempt.

CONTROL MEASURES FOR A BREAKOUT

C-47. At a minimum, units use boundaries, a LD or line of contact, a time of the attack, phase lines, an axis of advance or direction of attack, objectives, and a limit of advance to control and synchronize breakouts. Units only impose those control measures necessary to synchronize operations.

PLANNING A BREAKOUT

C-48. The encircled commander initiates a breakout attack as quickly as possible after encirclement by enemy forces. At this time, enemy forces are normally also somewhat disorganized, and they may not respond in a coordinated manner. Commanders should initiate a breakout attack even though detailed combat information about the enemy force's dispositions is probably not available. The enemy force probably has not yet brought

in sufficient combat power to encircle the friendly force in strength, and weak points probably exist in the enemy force's perimeter.

C-49. Early in an encirclement, there are gaps between or weaknesses in the enemy's encircling forces. The friendly unit uses available reconnaissance and surveillance assets, including available joint systems, to provide information that increases the accuracy of the unit's situational understanding and determines enemy weak points. The unit's plans for the breakout attack capitalize on those identified weak points. Although the resulting attack may be along a less direct route or over less favorable terrain, it is the best COA because it avoids enemy strength and increases the chance for surprise.

C-50. An encircled force may be operating under adverse conditions and may not have its normal information collection capabilities. This forces the encircled unit to conduct aggressive reconnaissance to collect information on enemy forces. The encircled unit also obtains information from joint assets, stay-behind units, and special operations forces in the area. If the enemy force is in close contact, the encircled unit may need to conduct a reconnaissance in force to ascertain enemy strengths. In any case, the unit quickly selects a COA and develops a plan accordingly.

C-51. A supporting effort, such as a deception, assists a breakout by diverting enemy attention and resources away from the rupture effort. The force conducting a supporting effort may be located either inside or outside the encirclement area. The enemy force must regard the efforts of this force as credible and a threat to the continuity of the enemy force's maneuver plan. The encircled commander directs the friendly force's deception efforts to a point where the enemy force might expect a breakout or relief effort. The deception force is as mobile as available vehicles, fuel stocks, and trafficability allow, so it can reposition to take part in the breakout or maneuver elsewhere to support the breakout. Mobile, self-propelled weapons systems suit the needs of forces conducting supporting efforts. Additionally, the probability of a successful breakout increases measurably if another friendly force attacks toward the encircled force as it attempts to breakout.

C-52. The encircled unit conducts tactical deception along with cyberspace electromagnetic activities tasks to assist the breakout attempt. *Cyberspace electromagnetic activities* is the process of planning, integrating, and synchronizing cyberspace operations and electromagnetic warfare operations in support of unified land operations (ADP 3-0). Tactical deception operations mislead enemy forces about the intentions of the encircled force, especially the location of the breakout attempt. For example, unmanned aircraft can concentrate their activities in an area away from where the rupture effort occurs to deceive enemy forces as to the exact location of the rupture. If it is not possible to breakout immediately, the encircled unit attempts to deceive enemy forces regarding the time and place of the breakout by concealing friendly breakout preparations and changing positions. The encircled unit can also make it appear that the encircled force will make a resolute stand and await relief.

C-53. Units can use dummy radio traffic for the enemy to monitor or landlines that the enemy might be able to tap to convey false information. The breakout should not be along the obvious route toward friendly lines, unless there is no other alternative. In this respect, breakout preparations mirror the preparations for any other offensive operation. As in other offensive actions, secrecy, tactical deception, and surprise allow for success. The other planning considerations for the breakout are the same as for any other attack.

EXECUTING A BREAKOUT

C-54. The unit exploits darkness and limited visibility during a breakout if friendly encircled forces have superior night vision capabilities. Concealment provided by darkness, fog, smoke, or severe weather conditions favor breakout by mitigating the effectiveness of the encircling enemy weapon systems or night vision devices/optics. The enemy has difficulty following the movements of the breakout force during conditions of limited visibility. However, if the encircled force waits for darkness or limited visibility, the encircling enemy may have time to consolidate containment positions. If friendly forces have air superiority, they may initiate a daylight breakout attack to exploit close air support capabilities.

C-55. The encircled force takes all possible precautions to deceive the enemy force about the location of the main effort. The rupture force minimizes occupation of attack positions before starting the breakout. An encircled unit may require one or more supporting effort to assist the rupture force in penetrating enemy positions and expanding the shoulders of the rupture. The encircled unit may use feints and demonstrations

to deceive enemy forces concerning the location and time of the main effort. However, deception attacks need not always occur first.

C-56. The encircled commander organizes and controls the rupture force in the same manner as during an attack or movement to contact. Figure C-8 illustrates an example organization of forces for a breakout by an encircled division. The rupture force generates overwhelming combat power at the point of penetration and rapidly overwhelms enemy positions and expands the penetration. Encircled units unable to generate sufficient combat power for both the rupture force and the perimeter defense can thin their defensive perimeter in certain areas by using a detachment left in contact in conjunction with a withdrawal before executing the attack. They may also shorten the perimeter's length, which reduces the size of the area occupied by the encircled force.

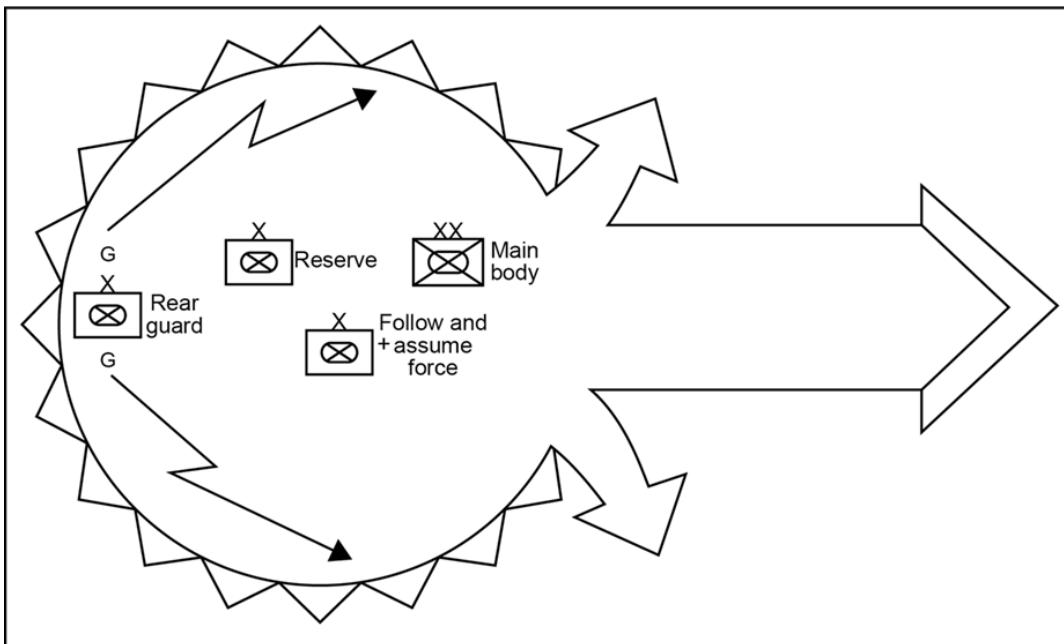


Figure C-8. Example breakout organization of forces by an encircled division

C-57. The rupture force applies the breaching fundamentals of suppress, obscure, secure, reduce, and assault to ensure its success at the point of penetration. These fundamentals always apply, but their application varies based on the prevailing mission variables.

C-58. The encircled commander orders the rupture force to hold the shoulders of the penetration while the follow and assume force moves forward, if enemy forces at the penetration point have roughly the same combat power as the rupture force. As depicted in figure C-9 on page C-14, the actions of the follow and assume force then become the main effort. The encircled commander may have the rupture force continue its attack if enemy forces are not strong. If there are no identified enemy forces beyond the penetration, the rupture force may transition to a movement to contact. After the encircled friendly force breaks out, it moves toward other friendly forces and links up with them.

C-59. Initially, the follow and assume force passes through the gap created by the rupture force. This force continues to move rapidly from the encircled area toward its final objective. If the follow and assume force becomes the encircled unit's main effort, it cannot allow itself to become bogged down. Preparation fires by artillery, Army aviation, close air support, and air interdiction help the follow and assume force in maintaining momentum out of the encircled area.

C-60. Once the breakout attack starts, the rear guard and any deception forces disengage or delay toward the area of the rupture. Perimeter forces integrate smoothly into the rear of the breakout column. Once the breakout succeeds, the commander shifts priority of fires as required by the mission variables.

C-61. As other encircled units support or move through the area of penetration, the rear-guard commander must deploy forces over an extended area. The rear guard requires flexibility and mobility. The rear guard maintains the perimeter against enemy pressure. If the enemy force succeeds in destroying or encircling the original rear guard in the breakout process, then the unit must reconstitute a new rear guard.

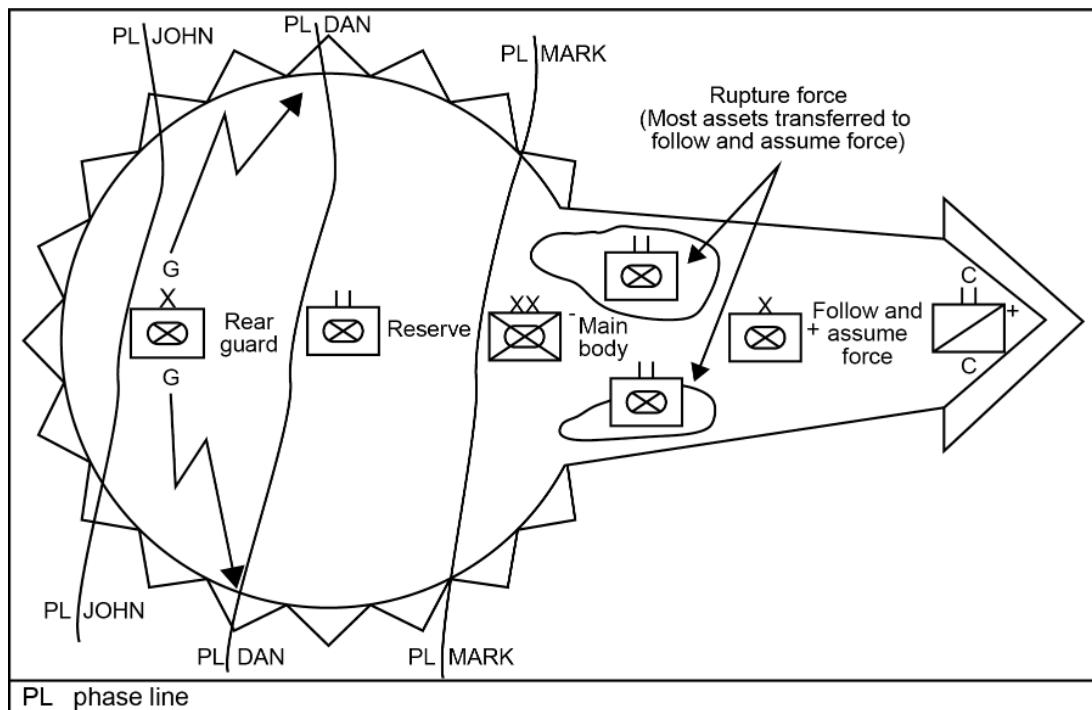


Figure C-9. Example breakout by an encircled division

C-62. The main body follows the follow and assume force. It moves rapidly on multiple routes in an approach march immediately behind the follow and assume force, protected on its flanks by security elements. It should contain sufficient combat power to protect itself and reinforce the flank or rear security forces if they come under attack.

C-63. Normally, the rear guard initially conducts a withdrawal to break contact with the enemy forces around the perimeter. It contracts the perimeter as it delays behind the main body. If enemy forces closely pursue the breakout force, the efforts of the rear guard may become the main effort for the encircled force. The unit should position the reserve where it can also support the rear guard.

C-64. Initially, the priority for fire support is with the rupture force. Those fires focus on suppressing and obscuring the point of penetration. Fire support assets move as part of the main body and rear guard so security forces have adequate fire support. Target identification difficulties resulting from proximity and intermixing of forces, as well as the rapidly changing ground situation during the execution of a breakout, make close air support difficult.

C-65. Engineers with the rupture force focus on mobility operations. Engineers with the follow and assume force or the reserve improve routes as necessary. Engineers supporting flank security elements focus on conducting countermobility operations. The rear guard must also have enough engineer support to conduct countermobility operations.

C-66. The senior commander prioritizes supporting AMD assets to protect the rupture force, the rear guard, and the main body. This support may come from outside the encircled perimeter. The rear guard is second in priority of protection to help prevent enemy forces targeting the main body from overrunning it.

C-67. Commanders can relieve sustainment shortfalls by using aerial resupply, ordering external forces to establish support areas, and using captured supplies. All units and vehicles carry the maximum supplies possible, with emphasis on carrying petroleum, oils, and lubricants and ammunition. The encircled force only

takes vehicles it can support. It may be possible for the higher echelon headquarters of the encircled force to establish an intermediate staging base as the breakout attack moves toward a linkup with other friendly forces.

CONSIDERATIONS FOR AN ENCIRCLED DEFENDER

C-68. When defending an encircled area, units consider employing aviation, fires, engineer, and sustainment assets. Divisions and corps may consider relocating aviation systems from any attached combat aviation brigades to locations that are not in danger of encirclement. Aviation assets can rapidly bring additional firepower to bear on an encircling enemy force or rapidly move reaction forces to threatened locations along a defensive perimeter. Generally, aviation assets fly out of an encirclement when it becomes small enough to allow the enemy force's artillery to range throughout the area.

C-69. The commander centrally controls fire support systems, such as artillery, to provide support at numerous points along the perimeter and mass fires. The commander designates the senior field artillery staff officer, such as the chief of fires or brigade fire support officer, to control fire support. At the BCT level, the field artillery battalion commander also advises the commander. At lower echelons, commanders may co-locate mortars from various units under centralized control, especially if there are insufficient artillery assets.

C-70. Generally, engineers concentrate first on countermobility, then survivability, and then mobility. Defensive protective positions include, but are not limited to, command posts, signal nodes (and other facilities for the command and control warfighting function), critical equipment (to include sensors), supply and ammunition storage/holding areas, and other items that are likely to be targeted by enemy action. Dispersal is difficult in a perimeter type defense; therefore, the next best alternative is position hardening by constructing field fortifications.

C-71. Encircled units closely monitor their sustainment assets and supply stocks, especially if they cannot be resupplied for an extended period. Leader's conserve and centrally control available resources. A commander may force units on the perimeter to cease all vehicle movement to allocate remaining fuel assets to the reserve. The senior commander within an encirclement retains essential sustainment capabilities to sustain the defense under the control of a senior sustainment operator or commander. When possible, that commander positions these units and their assets beyond the reach of potential penetrations in protected and concealed locations. The senior commander may incorporate other sustainment units into defensive positions in depth or around key facilities. A commander may choose to augment maneuver units with non-maneuver Soldiers, although this action may affect the non-maneuver (sustainment) capabilities of the encircled force.

C-72. Casualty evacuation and mortuary affairs pose challenges for an encircled force. The unit evacuates wounded from the encirclement whenever possible for humanitarian reasons. This also reduces the burden of providing long-term medical care to wounded Soldiers.

C-73. Soldiers have an inherent fear of encirclement by enemy forces. Unchecked, this fear can lead to a degradation in morale and discipline. When encircled, Soldiers under the firm control of their leaders can withstand the mental strain. Discipline can disintegrate rapidly in an encirclement. Officers and noncommissioned officers must uphold the highest standards of discipline. Their personal conduct sets the example. Encircled Soldiers need to see their senior commander and other leaders frequently. Leaders at all levels need to display a calm and confident manner. Soldiers in an encirclement must not regard their situation as desperate or hopeless. Commanders and leaders at all levels maintain the confidence of Soldiers by resolute action and a positive attitude. They must keep their Soldiers informed to suppress rumors and counter enemy propaganda.

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Glossary

The glossary lists acronyms and terms with Army, multi-Service, or joint definitions, and other selected terms. Where Army and joint definitions are different, (Army) follows the term. Terms for which FM 3-90 is the proponent publication (the authority) are marked with an asterisk (*). The proponent publication for other terms is listed in parentheses after the definition.

SECTION I – ACRONYMS AND ABBREVIATIONS

ACM	airspace coordinating measure
ADP	Army doctrine publication
AMD	air and missile defense
AO	area of operations
ATP	Army techniques publication
AR	Army regulation
BCT	brigade combat team
BHL	battle handover line
BP	battle position
C2	command and control
CASEVAC	casualty evacuation
CBRN	chemical, biological, radiological, and nuclear
CFL	coordinated fire line
COA	course of action
COP	common operational picture
DA	Department of the Army
DLIC	detachment left in contact
DOD	Department of Defense
DODD	Department of Defense Directive
EA	engagement area
EMS	electromagnetic spectrum
EPW	enemy prisoner of war
FCL	final coordination line
FEBA	forward edge of the battle area
FLOT	forward line of own troops
FM	field manual
FPF	final protective fire
FPL	final protective line
FSCL	fire support coordination line
FSCM	fire support coordination measure

IPB	intelligence preparation of the battlefield
JP	joint publication
LC	line of contact
LD	line of departure
LOA	limit of advance
LOC	line of communication
MBA	main battle area
MDMP	military decision-making process
MEDEVAC	medical evacuation
METT-TC(I)	mission, enemy, terrain and weather, troops and support available, time available, civil considerations, and informational considerations
MSR	main supply route
NAI	named area of interest
OPSEC	operations security
PAA	position area for artillery
PD	point of departure
PIR	priority intelligence requirement
PL	phase line
PLD	probable line of deployment
POB	point of breach
RFA	restrictive fire area
RFL	restrictive fire line
ROE	rules of engagement
ROZ	restricted operations zone
RP	release point
SOP	standard operating procedure
SP	start point
TAC-D	tactical deception
TAI	target area of interest
TCP	traffic control post
TM	technical manual
TRP	target reference point
UAS	unmanned aircraft system
U.S.	United States

SECTION II – TERMS

***actions on contact**

A process to help leaders understand what is happening and to take action.

air and missile defense

Direct [active and passive] defensive actions taken to destroy, nullify, or reduce the effectiveness of hostile air and ballistic missile threats against friendly forces and assets. (JP 3-01)

air corridor

A restricted air route of travel specified for use by friendly aircraft established for the purpose of preventing friendly aircraft from being fired upon by friendly forces. (JP 3-52)

air movement

An air transport of units, personnel, supplies, and equipment including airdrops and air landings. (JP 3-36)

airspace control

The exercise of delegated authority over designated airspace and users through control procedures and coordination measures to maximize operational effectiveness. (JP 3-52)

airspace control order

An order implementing the airspace control plan that provides the details of the approved requests for airspace coordinating measures. (JP 3-52)

airspace coordinating measures

Measures employed to facilitate the efficient use of airspace to accomplish missions and simultaneously provide safeguards for friendly forces. (JP 3-52)

airspace management

The planning, coordination, integration, and regulation of airspace by airspace control elements in support of airspace control. (JP 3-52)

***alternate position**

A defensive position that the commander assigns to a unit or weapon system for occupation when the primary position becomes untenable or unsuitable for carrying out the assigned task.

***ambush**

A variation of attack from concealed positions against a moving or temporarily halted enemy.

antiterrorism

Defensive measures used to reduce the vulnerability of individuals and property to terrorist acts, including limited response and containment by local military and civilian forces. (JP 3-26)

***approach march**

The advance of a combat unit when direct contact with the enemy is intended.

area damage control

Measures taken before, during, and/or after hostile actions or natural or man-made disasters to reduce the probability of damage and minimize its effects. (JP 3-10)

area defense

A type of defensive operation that concentrates on denying enemy forces access to designated terrain for a specific time rather than destroying the enemy outright. (ADP 3-90)

area of influence

A geographical area wherein a commander is directly capable of influencing operations by maneuver or fire support systems normally under the commander's command or control. (JP 3-0)

area of operations

An operational area defined by a commander for land and maritime forces that should be large enough to accomplish their missions and protect their forces. (JP 3-0)

***area reconnaissance**

A form of reconnaissance operation that focuses on obtaining detailed information about the terrain or enemy activity within a prescribed area.

***area security**

A type of security operation conducted to protect friendly forces, lines of communications, installation routes and actions within a specific area.

Army personnel recovery

The military efforts taken to prepare for and execute the recovery and reintegration of isolated personnel. (FM 3-50)

***assault**

(Army) A short and violent well-ordered attack against a local objective.

assault position

A covered and concealed position short of the objective from which final preparations are made to assault the objective. (ADP 3-90)

assault time

The moment to attack the initial objectives throughout the geographical scope of the operation.
(ADP 3-90)

***assembly area**

An area a unit occupies to prepare for an operation.

***attack**

A type of offensive operation that defeats enemy forces, seizes terrain, or secures terrain.

***attack by fire**

A tactical mission task using direct and indirect fires to engage an enemy from a distance.

attack by fire position

The general position from which a unit performs the tactical task of attack by fire. (ADP 3-90)

attack position

(Army) The last position an attacking force occupies or passes through before crossing the line of departure. (ADP 3-90)

axis of advance

The general area through which the bulk of a unit's combat power must move. (ADP 3-90)

base defense

Consists of the local military measures, both normal and emergency, required to nullify or reduce the effectiveness of enemy attacks on, or sabotage of, a base, to ensure that the maximum capacity of its facilities is available to United States forces. (JP 3-10).

basic load

(DOD) The quantity of supplies required to be on hand within, and moved by a unit or formation, expressed according to the wartime organization of the unit or formation and maintained at the prescribed levels. (JP 4-09)

battle damage assessment

The estimate of damage composed of physical and functional damage assessment, as well as target system assessment, resulting from the application of fires. (JP 3-0)

battle drill

Rehearsed and well understood actions made in response to common battlefield occurrences.
(ADP 3-90)

***battle handover**

A coordinated mission between two units that transfers responsibility for fighting an enemy force from one unit to another.

battle handover line

A designated phase line where responsibility transitions from the stationary force to the moving force and vice versa. (ADP 3-90)

battle position

A defensive location oriented on a likely enemy avenue of approach. (ADP 3-90)

***block**

1. A tactical mission task that denies the enemy access to an area or an avenue of approach. 2. An obstacle effect that integrates fire planning and obstacle effort to stop an attacker along a specific avenue of approach or prevent the attacking force from passing through an engagement area.

boundary

A line that delineates surface areas for the purpose of facilitating coordination and deconfliction of operations between adjacent units, formations, or areas. (JP 3-0)

***bounding overwatch**

A movement technique used when contact with enemy forces is expected.

***box formation**

A movement formation with elements arranged in a box or square, or two elements up and two elements back.

***breach**

A tactical mission task in which a unit breaks through or establishes a passage through an enemy obstacle.

breach area

The area where a breaching operation occurs. (ATP 3-90.4/MCTP 3-34A)

breakout

An operation conducted by an encircled force to regain freedom of movement or contact with friendly units. (ADP 3-90)

***breakthrough**

A rupturing of the enemy's forward defense that occurs as a result of an attack.

bridgehead

An area on the enemy's side of the linear obstacle that is large enough to accommodate the majority of the crossing force, has adequate terrain to permit defense of the crossing sites, provides security of crossing forces from enemy direct fire, and provides a base for continuing the attack. (ATP 3-90.4/MCTP 3-34A)

bridgehead force

A force that assaults across a gap, after the crossing is established, to secure the enemy side (the bridgehead) to allow the buildup and passage of a breakout force during gap crossing. (ATP 3-90.4/MCTP 3-34A)

bridgehead line

The limit of the objective area in the development of the bridgehead. (ATP 3-90.4/MCTP 3-34A)

***bypass**

A tactical mission task in which a unit deliberately avoids contact with an obstacle or enemy force.

***bypass criteria**

Measures established by higher echelon headquarters that specify the conditions and size under which enemy units and contact may be avoided.

***canalize**

(Army) A tactical mission task in which a unit restricts enemy movement to a narrow zone.

casualty evacuation

(Army) Nonmedical units use this to refer to the movement of casualties aboard nonmedical vehicles or aircraft without en route medical care. (FM 4-02)

***checkpoint**

A predetermined point on the ground used to control movement, tactical maneuver, and orientation.

civil reconnaissance

A targeted, planned, and coordinated observation and evaluation of specific civil aspects of the environment such as areas, structures, capabilities, organizations, people, or events. (JP 3-57)

***clear**

A tactical mission task in which a unit eliminates all enemy forces within an assigned area.

close combat

Warfare carried out on land in a direct-fire fight, supported by direct and indirect fires, and other assets. (ADP 3-0)

***column formation**

A movement formation with elements arranged one behind another.

combat load

The minimum mission-essential equipment and supplies as determined by the commander responsible for carrying out the mission, required for Soldiers to fight and survive immediate combat operations. (FM 4-40)

***combat outpost**

A reinforced observation post capable of conducting limited combat operations.

combat power

The total means of destructive and/or disruptive force that a military unit/formation can apply against an opponent at a given time. (JP 3-0)

combined arms

The synchronized and simultaneous application of arms to achieve an effect greater than if each element was used separately or sequentially. (ADP 3-0)

command and control warfighting function

The related tasks and a system that enable commanders to synchronize and converge all elements of power. (ADP 3-0)

***consolidate**

To organize and strengthen a captured position to use it against the enemy.

contact point

In land warfare, a point on the terrain, easily identifiable, where two or more units are required to make contact. (JP 3-50)

***contain**

A tactical mission task in which a unit stops, holds, or surrounds an enemy force.

***control**

(Army) A tactical mission task in which a unit maintains physical influence over an assigned area.

control measure

A means of regulating forces or warfighting functions. (ADP 6-0)

coordinated fire line

A line beyond which conventional surface-to-surface direct fire and indirect fire support means may fire at any time within the boundaries of the establishing headquarters without additional coordination but does not eliminate the responsibility to coordinate the airspace required to conduct the mission. (JP 3-09)

coordinating altitude

An airspace coordinating measure that uses altitude to separate users and as the transition between different airspace control elements. (JP 3-52)

coordination level

An airspace coordinating measure below which fixed-wing aircraft normally will not fly. (JP 3-52)

***coordination point**

A point that indicates a specific location for the coordination of tactical actions between adjacent units.

***cordon and search**

A variation of movement to contact where a friendly force isolates and searches a target area.

counterair

A mission at the theater level that integrates offensive and defensive operations to attain and maintain a desired degree of control of the air and protection by neutralizing or destroying enemy aircraft and missiles, both before and after launch. (JP 3-01)

***counterattack**

A variation of attack by a defending force against an attacking enemy force.

countermobility

A set of combined arms activities that use or enhance the effects of natural and man-made obstacles to prevent the enemy freedom of movement and maneuver. (ATP 3-90.8/MCTP 3-34B)

***counterreconnaissance**

A tactical mission task that encompasses all measures taken by a unit to counter enemy reconnaissance and surveillance efforts.

cover

(Army) A type of security operation done independent of the main body to protect them by fighting to gain time while preventing enemy ground observation of and direct fire against the main body.
(ADP 3-90)

covert crossing

A planned crossing of an inland water obstacle or other gap in which the crossing is intended to be undetected. (ATP 3-90.4/MCTP 3-34A)

combined arms

The synchronized and simultaneous application of arms to achieve an effect greater than if each element was used separately or sequentially. (ADP 3-0)

critical asset security

The protection and security of personnel and physical assets or information that is analyzed and deemed essential to the operation and success of the mission and to resources required for protection.
(ADP 3-37)

***cueing**

The integration of one or more types of reconnaissance or surveillance systems to provide information that directs follow-on collecting of more detailed information by another system.

cyberspace defense

Actions taken within protected cyberspace to defeat specific threats that have breached or are threatening to breach cyberspace security measures. (JP 3-12)

cyberspace electromagnetic activities

The process of planning, integrating, and synchronizing cyberspace operations and electromagnetic warfare operations in support of unified land operations. (ADP 3-0)

cyberspace security

Actions taken within protected cyberspace to prevent unauthorized access to, exploitation of, or damage to computers and networks, including platform information technology. (JP 3-12)

deception goal

Commander's statement of the purpose of military deception as it contributes to the successful accomplishment of the assigned mission. (JP 3-13.4)

Glossary

deception means

Methods, resources, and techniques that can be used to convey information to the deception target.
(JP 3-13.4)

deception objective

The desired result of a deception operation expressed in terms of what the adversary is to do or not to do at the critical time and/or location. (JP 3-13.4)

deception target

The adversary decision maker with the authority to make the decision that will achieve the deception objective. (JP 3-13.4)

decisive terrain

Key terrain whose seizure and retention is mandatory for successful mission accomplishment.
(ADP 3-90)

***decisively engaged**

A fully committed force or unit that cannot maneuver or extricate itself.

decoy

An imitation in any sense of a person, object, or phenomenon that is intended to deceive enemy surveillance devices or mislead enemy evaluation. (JP 3-13.4)

defeat

To render a force incapable of achieving its objectives. (ADP 3-0)

defense support of civil authorities

(DOD) Support provided by U.S. Federal military forces, Department of Defense civilians, Department of Defense contract personnel, Department of Defense component assets, and National Guard forces (when the Secretary of Defense, in coordination with the governors of the affected States, elects and requests to use those forces in Title 32, United States Code, status) in response to requests for assistance from civil authorities for domestic emergencies, law enforcement support, and other domestic activities, or from qualifying entities for special events. (DODD 3025.18)

defensive operation

An operation to defeat an enemy attack, gain time, economize forces, and develop conditions favorable for offensive or stability operations. (ADP 3-0)

delay

When a force under pressure trades space for time by slowing down the enemy's momentum and inflicting maximum damage on enemy forces without becoming decisively engaged. (ADP 3-90)

***delay line**

A phase line over which an enemy is not allowed to cross before a specific date and time or enemy condition.

deliberate breach

The systematically planned and executed creation of a lane through a barrier or obstacle. (ATP 3-90.4/MCTP 3-34A)

deliberate crossing

The crossing of an inland water obstacle or other gap that requires extensive planning and detailed preparations. (ATP 3-90.4/MCTP 3-34A)

deliberate operation

An operation in which the tactical situation allows the development and coordination of detailed plans, including multiple branches and sequels. (ADP 3-90)

***demonstration**

A variation of tactical deception used as a show of force in an area where a unit does not seek a decision and attempts to mislead an adversary.

***denial operations**

Actions to hinder or deny the enemy the use of terrain, supplies, or facilities.

***destroy**

A tactical mission task that physically renders an enemy force combat-ineffective until reconstituted.

***detachment left in contact**

An element left in contact as part of the previously designated security force while the main body conducts its withdrawal.

***diamond formation**

A movement formation with one element leading, one element positioned on each flank, and the remaining elements to the rear.

***direct pressure force**

A force employed in a pursuit that orients on the enemy main body to prevent enemy disengagement or defensive reconstitution.

directed obstacle

An obstacle directed by a higher commander as a specified task to a subordinate unit.
(ATP 3-90.8/MCTP 3-34B)

direction of attack

A specific direction or assigned route a force uses and does not deviate from when attacking.
(ADP 3-90)

***disengage**

A tactical mission task in which a unit breaks contact with an enemy to conduct another mission or to avoid becoming decisively engaged.

***disengagement criteria**

Protocols that specify those circumstances where a friendly force must break contact with the direct fire and observed indirect fire to avoid becoming decisively engaged or to preserve friendly combat power.

disengagement line

A phase line located on identifiable terrain that, when crossed by the enemy, signals to defending elements that it is time to displace to their next position. (ADP 3-90)

***dismounted movement**

A movement of troops and equipment mainly by foot, with limited support by vehicles.

***disrupt**

1. A tactical mission task in which a unit upsets an enemy's formation or tempo and causes the enemy force to attack prematurely or in a piecemeal fashion.. 2. An obstacle effect that focuses fire planning and obstacle effort to cause the enemy to break up its formation and tempo, interrupt its timetable, commit breaching assets prematurely, and attack in a piecemeal effort.

***double envelopment**

A variation of envelopment where forces simultaneously attack along both flanks of an enemy force.

***echelon formation**

A movement formation with elements arranged on an angle to the left or to the right of the direction of attack (echelon left, echelon right).

electromagnetic protection

A division of electromagnetic warfare involving actions taken to protect personnel, facilities, and equipment from any effects of friendly or enemy use of the electromagnetic spectrum that degrade, neutralize, or destroy friendly combat capability. (JP 3-85)

electromagnetic reconnaissance

The detection, location, identification, and evaluation of foreign electromagnetic radiations. (JP 3-85)

electromagnetic spectrum operations

Coordinated military actions to exploit, attack, protect, and manage the electromagnetic environment.
(JP 3-85)

emission control

The selective and controlled use of electromagnetic, acoustic, or other emitters to optimize command and control capabilities while minimizing, for operations security: a. detection by enemy sensors, b. mutual interference among friendly systems, and/or c. enemy interference with the ability to execute a military deception plan. (JP 3-85)

***enabling operation**

An operation that sets the friendly conditions required for mission accomplishment.

***encirclement**

Where one force loses its freedom of maneuver because an opposing force is able to isolate it by controlling all ground lines of communications and reinforcement.

***encircling force**

The force that maneuvers to the rear or flank of the enemy to prevent the enemy's escape.

***engagement area**

An area where the commander masses effects to contain and destroy an enemy force.

***engagement criteria**

Protocols that specify those circumstances for initiating engagement with an enemy force.

***engagement priority**

Identifies the order in which the unit engages enemy systems or functions.

***envelopment**

A form of maneuver in which an attacking force avoids an enemy's principal defense by attacking along an assailable flank.

***exfiltrate**

A tactical mission task in which a unit removes Soldiers or units from areas under enemy control by stealth, deception, surprise, or clandestine means.

***exploitation**

(Army) A type of offensive operation following a successful attack to disorganize the enemy in depth.

far side objective

A defined location oriented on terrain or an enemy force that an assaulting force seizes to eliminate enemy direct fires to prevent the enemy from interfering with the reduction of the obstacles and allow follow-on forces to move securely through the created lanes. (ATP 3-90.4/MCTP 3-34A)

***feint**

A variation of tactical deception that makes contact solely to deceive the adversary as to the location, time of attack or both.

***field of fire**

The area that a weapon or group of weapons may cover effectively from a given position.

final coordination line

A phase line close to the enemy position used to coordinate the lifting or shifting of supporting fires with the final deployment of maneuver elements. (ADP 3-90)

final protective fire

An immediately available, prearranged barrier of fire designed to impede enemy movement across defensive lines or areas. (JP 3-09.3)

***final protective line**

A selected line of fire where an enemy assault is to be checked by interlocking fire from all available weapons and obstacles.

***fire superiority**

The dominating fires of one force over another force that permits that force to maneuver at a given time and place without prohibitive interference by the other.

fire support coordination

The planning and executing of fire so targets are adequately covered by a suitable weapon or group of weapons. (JP 3-09)

fire support coordination line

A fire support coordination measure established by the land or amphibious force commander to support common objectives within an area of operation, beyond which all fires must be coordinated with affected commanders prior to engagement and, short of the line, all fires must be coordinated with the establishing commander prior to engagement. (JP 3-09)

fire support planning

The continuing process of analyzing, allocating, and scheduling fires to describe how fires are used to facilitate the actions of the maneuver force. (FM 3-09)

fires warfighting function

The related tasks and systems that create and converge effects in all domains against the adversary or enemy to enable operations across the range of military operations. (ADP 3-0)

***fix**

1. A tactical mission task in which a unit prevents the enemy from moving from a specific location for a specific period. 2. An obstacle effect that focuses fire planning and obstacle effort to slow an attacker's movement within a specified area, normally an engagement area.

fixing force

A force designated to supplement the striking force by preventing the enemy from moving from a specific area for a specific time. (ADP 3-90)

***follow and assume**

A tactical mission task in which a committed force follows and supports a lead force conducting an offensive operation and continues mission if lead force cannot continue.

***follow and support**

A tactical mission task in which a committed force follows and supports a lead force conducting an offensive operation.

force health protection

(Army) Measures that promote, improve, or conserve the behavioral or physical well-being of Soldiers comprised of preventative and treatment aspects of medical functions that include: combat and operational stress control, dental services, veterinary services, operational public health, and laboratory services. (FM 4-02)

***forced march**

A march longer or faster than usual or in adverse conditions.

forms of maneuver

Distinct tactical combinations of fire and movement with a unique set of doctrinal characteristics that differ primarily in the relationship between the maneuvering force and the enemy. (ADP 3-90)

***forward boundary**

A boundary that delineates the forward edge of a unit's area of operation.

forward edge of the battle area

The foremost limits of a series of areas in which ground combat units are deployed to coordinate fire support, the positioning of forces, or the maneuver of units, excluding areas in which covering or screening forces are operating. (JP 3-09.3)

***forward line of own troops**

A line that indicates the most forward positions of friendly forces in any kind of military operation at a specific time.

forward passage of lines

Occurs when a unit passes through another unit's positions while moving toward the enemy.
(ADP 3-90)

free-fire area

A specific region into which any weapon system may fire without additional coordination with the establishing headquarters. (JP 3-09)

friendly force information requirement

Information the commander and staff need to understand the status of friendly force and supporting capabilities. (JP 3-0)

***frontal attack**

A form of maneuver in which an attacking force seeks to destroy a weaker enemy force or fix a larger enemy force in place over a broad front.

***gap**

An area free of obstacles that enables forces to maneuver in a tactical formation.

gap

A ravine, mountain pass, river, or other terrain feature that presents an obstacle that may be bridged.
(ATP 3-90.4/MCTP 3-34A)

graphic control measure

A symbol used on maps and displays to regulate forces and warfighting functions. (ADP 6-0)

gap crossing

The projection of combat power across a linear obstacle (wet or dry gap). (ATP 3-90.4/MCTP 3-34A)

guard

A type of security operation conducted to protect the main body by fighting to gain time while preventing enemy ground observation of and direct fire against the main body. (ADP 3-90)

hasty breach

The creation of lanes through enemy minefields by expedient methods such as blasting with demolitions, pushing rollers or disabled vehicles through the minefields when the time factor does not permit detailed reconnaissance, deliberate breaching, or bypassing the obstacle. (JP 3-15)

hasty crossing

The crossing of an inland water obstacle or other gap using the crossing means at hand or those readily available, and made without pausing for elaborate preparations. (ATP 3-90.4/MCTP 3-34A)

hasty operation

An operation in which a commander directs immediately available forces, using fragmentary orders, to perform tasks with minimal preparation, trading planning and preparation time for speed of execution.
(ADP 3-90)

health service support

(Army) The support and services performed, provided, and arranged by the Army Medicine to promote, improve, conserve, or restore the behavioral and physical well-being of personnel by providing direct patient care that include medical treatment (organic and area support) and hospitalization, medical evacuation to include medical regulating, and medical logistics to include blood management. (FM 4-02)

***infiltration**

A form of maneuver in which an attacking force conducts undetected movement through or into an area occupied by enemy forces.

***infiltration lane**

A control measure that coordinates forward and lateral movement of infiltrating units and fixes fire planning responsibilities.

intelligence warfighting function

The related tasks and systems that facilitate understanding the enemy, terrain, weather, civil considerations, and other significant aspects of the operational environment. (ADP 3-0)

***interdict**

A tactical mission task in which a unit prevents, disrupts, or delays the enemy's use of an area or route in any domain.

interoperability

The ability to act together coherently, effectively, and efficiently to achieve tactical, operational, and strategic objectives. (JP 3-0)

***isolate**

A tactical mission task in which a unit seals off an enemy, physically and psychologically, from sources of support and denies it freedom of movement.

joint fires

Fires delivered during the employment of forces from two or more components in coordinated action to produce desired effects in support of a common objective. (JP 3-0)

key terrain

(Army) An identifiable characteristic whose seizure or retention affords a marked advantage to either combatant. (ADP 3-90)

kill box

A three-dimensional permissive fire support coordination measure with an associated airspace coordinating measure used to facilitate the integration of fires. (JP 3-09)

***kill zone**

The location where fires are concentrated in an ambush.

land mine

A munition on or near the ground or other surface area that is designed to be exploded by the presence, proximity, or contact of a person or vehicle. (ATP 3-90.8/MCTP 3-34B)

lane

A route through, over, or around an enemy or friendly obstacle that provides passage of a force. (ATP 3-90.4/MCTP 3-34A)

***lateral boundary**

A boundary defining the left or right limit of a unit's assigned area.

***light line**

A designated line forward of which vehicles are required to use blackout lights during periods of limited visibility.

Glossary

limit of advance

A phase line used to control forward progress of the attack. (ADP 3-90)

***line formation**

A movement formation in which elements move abreast of each other.

***line of contact**

A general trace delineating the location where friendly and enemy forces are engaged.

line of departure

In land warfare, a line designated to coordinate the departure of attack elements. (JP 3-31)

***linkup**

A type of enabling operation that involves the meeting of friendly ground forces, which occurs in a variety of circumstances.

***linkup point**

A designated place where two forces are scheduled to meet.

local security

The low-level security activities conducted near a unit to prevent surprise by the enemy. (ADP 3-90)

***logistics package**

A grouping of multiple classes of supply and supply vehicles under the control of a single convoy commander.

***main battle area**

The area where the commander intends to deploy the bulk of their unit to defeat an attacking enemy.

main body

The principal part of a tactical command or formation. It does not include detached elements of the command, such as advance guards, flank guards, and covering forces. (ADP 3-90)

main effort

A designated subordinate unit whose mission at a given point in time is most critical to overall mission success. (ADP 3-0)

maneuver

Movement in conjunction with fires. (ADP 3-90)

***march column**

All march serials using the same route for a single movement under control of a single commander.

***march serial**

A subdivision of a march column organized under one commander.

***march unit**

A subdivision of a march serial.

mass casualty

any number of human casualties produced across a period of time that exceeds available medical support capabilities. (JP 4-02).

medical evacuation

The timely and effective movement of the wounded, injured, or ill to and between medical treatment facilities on dedicated and properly marked medical platforms with en route care provided by medical personnel. (ATP 4-02.2)

***meeting engagement**

A combat action that occurs when a moving force engages an enemy at an unexpected time and place.

military deception

Actions executed to deliberately mislead adversary military, paramilitary, or violent extremist organization decision makers, thereby causing the adversary to take specific actions (or inactions) that will contribute to the accomplishment of the friendly mission. (JP 3-13.4)

minimum-risk route

A temporary air corridor of defined dimensions recommended for use by aircraft that presents the minimum known hazards to low-flying aircraft transiting the combat zone. (JP 3-52)

mission statement

A short sentence or paragraph that describes the organization's essential task(s), purpose, and action containing the elements of who, what, when, where, and why. (JP 5-0)

mission variables

Categories of specific information needed to conduct operations. (ADP 1-01)

***mixing**

Using two or more different capabilities to collect against the same information requirement.

mobile defense

A type of defensive operation that concentrates on the destruction or defeat of the enemy through a decisive attack by a striking force. (ADP 3-90)

mobile security force

A highly mobile and dedicated security force with the capability to defeat Level I and II threats in a joint security area. (JP 3-10)

mobility

A quality or capability of military forces which permits them to move from place to place while retaining the ability to fulfill their primary mission. (JP 3-36)

mobility tasks

Combined arms activities that mitigates the effects of obstacles to enable freedom of movement and maneuver. (ATP 3-90.4/MCTP 3-34A)

***mounted movement**

The movement of troops and equipment by combat and tactical vehicles.

movement

The positioning of combat power to establish the conditions for maneuver. (ADP 3-90)

movement and maneuver warfighting function

The related tasks and systems that move and employ forces to achieve a position of relative advantage over the enemy and other threats. (ADP 3-0)

movement control

The dual process of committing allocated transportation assets and regulating movements according to command priorities to synchronize distribution flow over lines of communications to sustain land forces. (ADP 4-0)

movement corridor

A designated area established to protect and enable ground movement along a route. (ADP 3-37)

movement formation

An ordered arrangement of forces for a specific purpose and describes the general configuration of a unit on the ground. (ADP 3-90)

***movement to contact**

(Army) A type of offensive operation designed to establish or regain contact to develop the situation.

multidomain operations

The combined arms employment of joint and Army capabilities to create and exploit relative advantages that achieve objectives, defeat enemy forces, and consolidate gains on behalf of joint force commanders. (FM 3-0)

multinational operations

A collective term to describe military actions conducted by forces of two or more nations, usually undertaken within the structure of a coalition or alliance. (JP 3-16)

named area of interest

The geospatial area or systems node or link against which information that will satisfy a specific information requirement can be collected, usually to capture indications of enemy and adversary courses of action. (JP 2-0)

networked munitions

Remotely controlled, interconnected, weapons systems designed to provide rapidly emplaced ground-based countermobility and protection capability through scalable application of lethal and nonlethal means. (JP 3-15)

***neutralize**

A tactical mission task in which a unit renders the enemy incapable of interfering with an operation.

no-fire area

An area designated by the appropriate commander into which fires or their effects are prohibited. (JP 3-09.3)

***nontactical movement**

A movement in which troops and vehicles are arranged to expedite their movement and conserve time and energy when no enemy ground interference is anticipated.

objective

(Army) A location used to orient operations, phase operations, facilitate changes of direction, and provide for unity of effort. (ADP 3-90)

objective rally point

An easily identifiable point where all elements of the infiltrating unit assemble and prepare to attack the objective. (ADP 3-90)

***observation post**

A position from which observations are made or fires are directed and adjusted.

obstacle

Any barrier designed or employed to disrupt, fix, turn, or block the movement and maneuver, and to impose additional losses in personnel, time, and equipment. (JP 3-15)

obstacle belt

A brigade-level command and control measure, normally depicted graphically, to show where within an obstacle zone the ground tactical commander plans to limit friendly obstacle employment and focus the defense. (JP 3-15)

***obstacle control measures**

Specific measures that grant obstacle-emplacing authority.

***obstacle group**

One or more individual obstacles that provide a specific obstacle effect.

obstacle restricted areas

A command and control measure used to limit the type or number of obstacles within an area. (JP 3-15)

obstacle zone

A division-level command and control measure to designate specific land areas where lower echelons are allowed to employ tactical obstacles. (JP 3-15)

***occupy**

A tactical mission task in which a unit moves into an area to control it without enemy opposition.

offensive operation

An operation to defeat or destroy enemy forces and gain control of terrain, resources, and population centers. (ADP 3-0)

operation

A sequence of tactical actions with a common purpose or unifying theme. (JP 1, Vol 1)

operational environment

The aggregate of the conditions, circumstances, and influences that affect the employment of capabilities and bear on the decisions of the commander. (JP 3-0)

operations security

A capability that identifies and controls critical information, indicators of friendly force actions attendant to military operations, and incorporates countermeasures to reduce the risk of an adversary exploiting vulnerabilities. (JP 3-13.3)

operational variables

A comprehensive set of information categories used to describe an operational environment.
(ADP 1-01)

***passage lane**

A lane through an obstacle that provides safe passage for a passing force.

passage of lines

An operation in which a force moves forward or rearward through another force's combat positions with the intention of moving into or out of contact with the enemy. (JP 3-18)

***passage point**

A designated place where passing units pass through the stationary unit.

***penetration**

A form of maneuver in which a force attacks on a narrow front.

phase line

An easily identified feature in the operational area utilized for control and coordination of military operations. (JP 3-09)

point of breach

The location at an obstacle where the creation of a lane is being attempted. (ATP 3-90.4/MCTP 3-34A)

point of departure

The point where the unit crosses the line of departure and begins moving along a direction of attack.
(ADP 3-90)

point of penetration

The location, identified on the ground, where the commanders concentrate their efforts at weakest point of the enemy to seize a foothold on the far side objective. (ATP 3-90.4/MCTP 3-34A)

policing

The application of control measures within an area of operation to maintain law and order, safety, and other matters affecting the general welfare of the population. (FM 3-39)

***position area for artillery**

An area assigned to an artillery unit to deliver surface to surface fires.

***primary position**

The position that covers the enemy's most likely avenue of approach into the assigned area.

probable line of deployment

A phase line that designates the location where the commander intends to deploy the unit into assault formation before beginning the assault. (ADP 3-90)

proof

The verification that a lane is free of mines or explosive hazards and that the width and trafficability at the point of breach are suitable for the passing force. (ATP 3-90.4/MCTP 3-34A)

protection warfighting function

The related tasks, systems, and methods that prevent or mitigate detection, threat effects, and hazards to preserve combat power and enable freedom of action. (FM 3-0)

***pursuit**

A type of offensive operation to catch or cut off a disorganized hostile force attempting to escape, with the aim of destroying it.

***quartering party**

A group dispatched to a new assigned area in advance of the main body.

quick response force

A dedicated force on a base with adequate tactical mobility and fire support designated to defeat Level I and Level II threats and shape Level III threats until they can be defeated by a tactical combat force or other available response forces. (ATP 3-37.10/MCRP 3-4D.13)

***quick reaction force**

A commander designated force to respond to threat attacks or emergencies.

radio silence

The status on a radio network in which all stations are directed to continuously monitor without transmitting, except under established criteria. (ATP 6-02.53)

***raid**

(Army) A variation of attack to temporarily seize an objective with a planned withdrawal.

***rally point**

An easily identifiable point on the ground at which units can reassemble and reorganize if they become dispersed.

***rear boundary**

A boundary that delineates the rearward limits of a unit's assigned area.

rearward passage of lines

Occurs when a unit passes through another unit's positions while moving away from the enemy. (ADP 3-90)

reconnaissance

A mission undertaken to obtain information about the activities and resources of an enemy or adversary, or to secure data concerning the meteorological, hydrographic, geographic or other characteristics of a particular area, by visual observation or other detection methods. (JP 2-0)

***reconnaissance by fire**

A technique in which a unit fires on a suspected enemy position.

***reconnaissance in force**

A form of reconnaissance operation designed to discover or test the enemy's strength, dispositions, and reactions or to obtain other information.

***reconnaissance objective**

The most important result desired from that specific reconnaissance effort.

***reconnaissance-pull**

Reconnaissance that determines which routes are suitable for maneuver, where the enemy is strong and weak, and where gaps exist, thus pulling the main body toward and along the path of least resistance.

***reconnaissance-push**

Reconnaissance that refines the common operational picture, enabling the commander to finalize the plan and support main and supporting efforts.

reconstitution

An operation that commanders plan and implement to restore units to a desired level of combat effectiveness commensurate with mission requirements and available resources. (ATP 3-94.4)

***reduce**

A tactical mission task in which a unit destroys an encircled or bypassed enemy force.

reduce

A mobility task to create and mark lanes through, over, or around an obstacle to allow the attacking force to accomplish its mission. (ATP 3-90.4/MCTP 3-34A)

reduction

The creation of lanes through a minefield or obstacle to allow passage of the attacking ground force. (JP 3-15)

reduction area

A number of adjacent points of breach that are under the control of the breaching commander. (ATP 3-90.4/MCTP 3-34A)

***redundancy**

Using two or more like capabilities to collect against the same information requirement.

regeneration

The rebuilding of a unit through large-scale replacement of personnel, equipment, and supplies, including the reestablishment of essential command and control and the conduct of mission-essential training for the unit. (ATP 3-94.4)

***release point**

A designated place on a route where elements are released from centralized control.

relief in place

An operation in which, by direction of higher authority, all or part of a unit is replaced in an area by the incoming unit and the responsibilities of the replaced elements for the mission and the assigned zone of operations are transferred to the incoming unit. (JP 3-07.3)

reorganization

All measures taken by the commander to maintain unit combat effectiveness or return it to a specified level of combat capability. (ATP 3-94.4)

reserve

(Army) That portion of a body of troops that is withheld from action at the beginning of an engagement to be available for a decisive movement. (ADP 3-90)

reserved obstacle

(Army) An obstacle of any type, for which the commander restricts execution authority. (ATP 3-90.8)

restricted operations zone

Airspace reserved for specific activities in which the operations of one or more airspace users is restricted. (JP 3-52)

restrictive fire area

A location in which specific restrictions are imposed and into which fires that exceed those restrictions will not be delivered without coordination with the establishing headquarters. (JP 3-09)

restrictive fire line

A specific boundary established between converging, friendly surface forces that prohibits fires or their effects from crossing. (JP 3-09)

***retain**

A tactical mission task in which a unit prevents enemy occupation or use of terrain.

retirement

When a force out of contact moves away from the enemy. (ADP 3-90)

retrograde

(Army) A type of defensive operation that involves organized movement away from the enemy.
(ADP 3-90)

***retrograde movement**

Any movement to the rear or away from the enemy.

***route**

The prescribed course to be traveled from a point of origin to a destination.

***route reconnaissance**

A form of reconnaissance operation to obtain detailed information of a specified route and all terrain from which the enemy could influence movement along that route.

screen

A type of security operation that primarily provides early warning to the protected force. (ADP 3-90)

***search and attack**

A variation of a movement to contact where a friendly force conducts coordinated attacks to defeat a distributed enemy force.

sector

An operational area assigned to a unit in the defense that has rear and lateral boundaries with interlocking fires. (FM 3-0)

***sector of fire**

That area assigned to a unit or weapon system in which it will engage the enemy according to the established engagement priorities.

***secure**

A tactical mission task in which a unit prevents the enemy from damaging or destroying a force, facility, or geographical location.

security

Measures taken by a military unit, activity, or installation to protect itself against all acts designed to, or which may, impair its effectiveness. (JP 3-10)

security area

That area occupied by a unit's security elements and includes the areas of influence of those security elements. (ADP 3-90)

***security objective**

The most important entity to protect during that specific security effort.

security operations

Those operations performed by commanders to provide early and accurate warning of enemy operations, to provide the forces being protected with time and maneuver space within which to react to the enemy, and to develop the situation to allow commanders to effectively use their protected forces. (ADP 3-90)

***seize**

(Army) A tactical mission task in which a unit takes possession of a designated area by using overwhelming force.

sequential relief in place

Occurs when each element within the relieved unit is relieved in succession, from right to left, left to right, front to rear, or rear to front. (ADP 3-90)

simultaneous relief in place

Occurs when all elements are relieved at the same time. (ADP 3-90)

***single envelopment**

A variation of envelopment where a force attacks along one flank of an enemy force.

situational obstacle

An obstacle that a unit plans and possibly prepares prior to starting an operation, but does not execute unless specific criteria are met. (ATP 3-90.8/MCTP 3-34B)

special reconnaissance

Reconnaissance and surveillance actions conducted as a special operation in hostile, denied, or diplomatically and/or politically sensitive environments to collect or verify information of strategic or operational significance, employing military capabilities not normally found in conventional forces. (JP 3-05)

***spoiling attack**

A variation of an attack employed against an enemy preparing for an attack.

stability operation

An operation conducted outside the United States in coordination with other instruments of national power to establish or maintain a secure environment and provide essential governmental services, emergency infrastructure reconstruction, and humanitarian relief. (ADP 3-0)

staggered relief in place

Occurs when each element is relieved in a sequence determined by the tactical situation, not its geographical orientation. (ADP 3-90)

standard use Army aircraft flight route

Route established below the coordination level to facilitate the movement of Army aircraft. (JP 3-52)

***start point**

A designated place on a route where elements fall under the control of a designated march commander.

***stay-behind operation**

An operation in which a unit remains in position to conduct a specified mission while the remainder of the force withdraws or retires from an area.

striking force

A dedicated counterattack force in a mobile defense constituted with the bulk of available combat power. (ADP 3-90)

strong point

A heavily fortified battle position tied to a natural or reinforcing obstacle to create an anchor for the defense or to deny the enemy decisive or key terrain. (ADP 3-90)

***subsequent position**

A position that a unit expects to move to during the course of battle.

***supplementary position**

A defensive position located within a unit's assigned area that provides the best sectors of fire and defensive terrain along an avenue of approach that is not the primary avenue where the enemy is expected to attack.

***support by fire**

A tactical mission task in which a unit engages the enemy by direct fire in support of another maneuvering force.

support by fire position

The general position from which a unit performs the tactical mission task of support by fire.
(ADP 3-90)

supporting distance

The distance between two units that can be traveled in time for one to come to the aid of the other and prevent its defeat by an enemy or ensure it regains control of a civil situation. (ADP 3-0)

***suppress**

A tactical mission task in which a unit temporarily degrades a force or weapon system from accomplishing its mission.

surveillance

The systematic observation of aerospace, cyberspace, surface, or subsurface areas, places, persons, or things by visual, aural, electronic, photographic, or other means. (JP 3-0)

survivability

(Army, Marine Corps) A quality or capability of military forces which permits them to avoid or withstand hostile actions or environmental conditions while retaining the ability to fulfill their primary mission. (ATP 3-37.34/MCTP 3-34C)

survivability move

A move that involves rapidly displacing a unit, command post, or facility in response to direct and indirect fires, the approach of a threat or as a proactive measure based on intelligence, meteorological data, and risk assessment of enemy capabilities and intentions. (ADP 3-90)

survivability operations

Those protection activities that alter the physical environment by providing or improving cover, camouflage, and concealment. (ATP 3-37.34/MCTP 3-34C)

sustainment warfighting function

The related tasks and systems that provide support and services to ensure freedom of action, extend operational reach, and prolong endurance. (ADP 3-0)

tactical assembly area

An area that is generally out of the reach of light artillery and the location where units make final preparations (precombat checks and inspections) and rest, prior to moving to the line of departure. (JP 3-35)

tactical combat force

A rapidly deployable, air-ground, mobile combat unit with appropriate combat support and combat service support assets assigned to, and capable of defeating level III threats, including combined arms. (JP 3-10)

***tactical deception**

A friendly activity that causes enemy commanders to take action or cause inaction detrimental to their objectives.

***tactical mission task**

The specific activity a unit performs while executing a tactical operation or form of maneuver.

***tactical movement**

A movement in which troops and vehicles are arranged to protect combat forces during movement when a threat of enemy interference is possible.

***tactical road march**

A rapid movement used to relocate units within an assigned area to prepare for combat operations.

tactics

(Army) The employment, ordered arrangement, and directed actions of forces in relation to each other. (ADP 3-90)

target

An entity or object that performs a function for the threat considered for possible engagement or other action. (JP 3-60)

target area of interest

The geographical area where high-value targets can be acquired and engaged by friendly forces. (JP 2-0)

target reference point

A predetermined point of reference, normally a permanent structure or terrain feature that can be used when describing a target location. (JP 3-09.3)

task

A clearly defined action or activity specifically assigned to an individual or organization, or derived during mission analysis, that must be done as it is imposed by an appropriate authority. (JP 1, Vol 1)

tempo

The relative speed and rhythm of military operations over time with respect to the enemy. (ADP 3-0)

***terrain management**

The process of allocating terrain by specifying locations for units and activities to deconflict activities that might interfere with each other.

time of attack

The moment the leading elements of the main body cross the line of departure, or in a limited-visibility attack, the point of departure. (ADP 3-90)

***trail party**

The last march unit in a march column.

***traveling**

A movement technique used when speed is necessary and contact with enemy forces is not likely.

***traveling overwatch**

A movement technique used when contact with enemy forces is possible.

***trigger line**

A phase line located on identifiable terrain used to initiate and mass fires into an engagement area at a predetermined range.

***troop movement**

The movement of Soldiers and units from one place to another by any available means.

***turn**

1. A tactical mission task in which a unit forces an enemy force from one avenue of approach or movement corridor to another. 2. An obstacle effect that integrates fire planning and obstacle effort to divert an enemy formation from one avenue of approach to an adjacent avenue of approach or into an engagement area.

***turning movement**

(Army) A form of maneuver in which the attacking force seeks to avoid the enemy's principal defensive positions by attacking to the rear of their current positions forcing them to move or divert forces to meet the threat.

unified action

The synchronization, coordination, and/or integration of the activities of governmental and nongovernmental entities with military operations to achieve unity of effort. (JP 1, Vol 1)

Glossary

***vee formation**

A movement formation with two elements abreast and one or more elements trailing.

***vertical envelopment**

A variation of envelopment where air-dropped or airlanded troops attack an enemy forces rear, flank, or both.

warfighting function

A group of tasks and systems united by a common purpose that commanders use to accomplish missions and training objectives. (ADP 3-0)

***wedge formation**

A movement formation with one lead element and the trail elements are paired off abreast of each other on the flanks.

withdraw

To disengage from an enemy force and move in a direction away from the enemy. (ADP 3-90)

zone

An operational area assigned to a unit in the offense that only has rear and lateral boundaries. (FM 3-0)

***zone reconnaissance**

A form of reconnaissance operation that involves a directed effort to obtain detailed information on all routes, obstacles, terrain, and enemy forces within a zone defined by boundaries.

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