

Chapter 13

Reconnaissance Operations

You can never have too much reconnaissance.

General George S. Patton Jr., *War As I Knew It*, 1947

Reconnaissance operations are those operations undertaken to obtain, by visual observation or other detection methods, information about the activities and resources of an enemy or potential enemy, or to secure data concerning the meteorological, hydrographical or geographical characteristics and the indigenous population of a particular area. Reconnaissance primarily relies on the human dynamic rather than technical means. Reconnaissance is a focused collection effort. It is performed before, during, and after other operations to provide information used in the intelligence preparation of the battlefield (IPB) process, as well as by the commander in order to formulate, confirm, or modify his course of action (COA). The four forms of reconnaissance are route, zone, area, and reconnaissance in force.

13-1. Reconnaissance identifies terrain characteristics, enemy and friendly obstacles to movement, and the disposition of enemy forces and civilian population so the commander can maneuver his forces freely and rapidly. Reconnaissance prior to unit movements and occupation of assembly areas is critical to protecting the force and preserving combat power. It also keeps the force free from contact as long as possible so that it can concentrate on its decisive operation.

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RECONNAISSANCE OBJECTIVE

13-2. The commander orients his reconnaissance assets by identifying a reconnaissance objective within the area of operation (AO). **The reconnaissance objective is a terrain feature, geographic area, or an enemy force about which the commander wants to obtain additional information.** The reconnaissance objective clarifies the intent of the reconnaissance effort by specifying the most important result to obtain from the reconnaissance effort. Every reconnaissance mission must specify a reconnaissance objective. The commander assigns a reconnaissance objective based on his priority information requirements (PIR) resulting from the IPB process and the reconnaissance asset's capabilities and limitations. The reconnaissance objective can be information about a specific geographical location, such as the cross-country trafficability of a specific area, a specific enemy activity to be confirmed or denied, or a specific enemy unit to be located and tracked. When the reconnaissance unit does not have enough time to complete all the tasks associated with a specific form of reconnaissance, it uses the reconnaissance objective to guide it in setting priorities.

13-3. A commander may need to provide additional detailed instructions beyond the reconnaissance objective, such as the specific tasks he wants accomplished or the priority of tasks. He does this by issuing additional guidance to his reconnaissance unit or by specifying these instructions in his tasks to his subordinate units in the operation order. For example, if, based on all technical and human intelligence (HUMINT) sources, a division G2 concludes that the enemy is not in an area and the terrain appears to be trafficable without obstacles, the division commander may decide he does not need a detailed reconnaissance effort forward of his unit. He may direct his cavalry squadron to conduct a zone reconnaissance mission with guidance to move rapidly and report by exception terrain obstacles that will significantly slow the movement of his subordinate maneuver brigades. Alternatively, when the objective is to locate an enemy force, the reconnaissance objective would be that force, and additional guidance would be to conduct only that terrain reconnaissance necessary to find the enemy and develop the situation.

RECONNAISSANCE FUNDAMENTALS

13-4. The seven fundamentals of successful reconnaissance operations are as follows:

- Ensure continuous reconnaissance.
- Do not keep reconnaissance assets in reserve.
- Orient on the reconnaissance objective.
- Report information rapidly and accurately.
- Retain freedom of maneuver.
- Gain and maintain enemy contact.
- Develop the situation rapidly.

ENSURE CONTINUOUS RECONNAISSANCE

13-5. Effective reconnaissance is continuous. The commander conducts reconnaissance before, during, and after all operations. Before an operation,

reconnaissance focuses on filling gaps in information about the enemy and the terrain. During an operation, reconnaissance focuses on providing the commander with updated information that verifies the enemy's composition, dispositions, and intentions as the battle progresses. This allows the commander to verify which COA is actually being adopted by the enemy and determine if his plan is still valid based on actual events in the AO. After an operation, reconnaissance focuses on maintaining contact with the enemy to determine his next move and collecting information necessary for planning subsequent operations. When information regarding the current operation is adequate, reconnaissance focuses on gathering information for branches and sequels to current plans. As a minimum, reconnaissance is conducted continuously as an integral part of all security missions, including the conduct of local security for forces not in contact. (See [Chapter 12](#).)

13-6. Reconnaissance operations over extended distances and time may require pacing reconnaissance assets to maintain the effort, or rotating units to maintain continuous coverage. The human and technical assets used in the reconnaissance effort must be allowed time for rest, resupply, troop leading procedures, additional and refresher training, and preventative maintenance checks and services. The commander must determine not only where, but also when he will need his maximum reconnaissance effort and pace his reconnaissance assets to ensure that adequate assets are available at critical times and places.

DO NOT KEEP RECONNAISSANCE ASSETS IN RESERVE

13-7. Reconnaissance assets, like artillery assets, are never kept in reserve. When committed, reconnaissance assets use all of their resources to accomplish the mission. This does not mean that all assets are committed all the time. The commander uses his reconnaissance assets based on their capabilities and METT-TC to achieve the maximum coverage needed to answer the commander's critical information requirements (CCIR). At times, this requires the commander to withhold or position reconnaissance assets to ensure that they are available at critical times and places. The rest required by reconnaissance assets to sustain the reconnaissance effort is not to be obtained by placing them in reserve. However, all reconnaissance assets should be treated as committed assets with specific missions assigned at all times. Units with multiple roles, specifically armored and air cavalry, that can conduct reconnaissance, security, and other combat missions in an economy-of-force role may be kept as a reserve for security or combat missions.

ORIENT ON THE RECONNAISSANCE OBJECTIVE

13-8. The commander uses the reconnaissance objective to focus his unit's reconnaissance efforts. Commanders of subordinate reconnaissance elements remain focused on achieving this objective, regardless of what their forces encounter during the mission. When time, limitations of unit capabilities, or enemy action prevents a unit from accomplishing all the tasks normally associated with a particular form of reconnaissance, the unit uses the reconnaissance objective to focus the reconnaissance effort.

REPORT INFORMATION RAPIDLY AND ACCURATELY

13-9. Reconnaissance assets must acquire and report accurate and timely information on the enemy, civil considerations, and the terrain over which operations are to be conducted. Information may quickly lose its value. Reconnaissance units report exactly what they see and, if appropriate, what they do not see. Seemingly unimportant information may be extremely important when combined with other information. Negative reports are as important as reports of enemy activity. Failure to report tells the commander nothing. The unit information management plan ensures that unit reconnaissance assets have the proper communication equipment to support the integrated intelligence, surveillance, and reconnaissance (ISR) plan.

RETAIN FREEDOM OF MANEUVER

13-10. Reconnaissance assets must retain battlefield mobility to successfully complete their missions. If these assets are decisively engaged, reconnaissance stops and a battle for survival begins. Reconnaissance assets must have clear engagement criteria that support the maneuver commander's intent. They must employ proper movement and reconnaissance techniques, use overwatching fires, and standing operating procedures (SOP). Initiative and knowledge of both the terrain and the enemy reduce the likelihood of decisive engagement and help maintain freedom of movement. Prior to initial contact, the reconnaissance unit adopts a combat formation designed to gain contact with the smallest possible friendly element. This provides the unit with the maximum opportunity for maneuver and enables it to avoid having the entire unit become decisively engaged. The IPB process can identify anticipated areas of likely contact to the commander. Using indirect fires to provide suppression and obscuration as well as destroy point targets is a method reconnaissance assets use to retain their freedom of maneuver.

GAIN AND MAINTAIN ENEMY CONTACT

13-11. Once a unit conducting reconnaissance gains contact with the enemy, it maintains that contact unless the commander directing the reconnaissance orders otherwise or the survival of the unit is at risk. This does not mean that individual scout and reconnaissance teams cannot break contact with the enemy. The commander of the unit conducting reconnaissance is responsible for maintaining contact using all available resources. That contact can range from surveillance to close combat. Surveillance, combined with stealth, is often sufficient to maintain contact and is the preferred method. Units conducting reconnaissance avoid combat unless it is necessary to gain essential information, in which case the units use maneuver (fire and movement) to maintain contact while avoiding decisive engagement.

DEVELOP THE SITUATION RAPIDLY

13-12. When a reconnaissance asset encounters an enemy force or an obstacle, it must quickly determine the threat it faces. For an enemy force, it must determine the enemy's composition, dispositions, activities, and movements and assess the implications of that information. For an obstacle, it must determine the type and extent of the obstacle and whether it is covered by fire. Obstacles can provide the attacker with information concerning the location

of enemy forces, weapon capabilities, and organization of fires. In most cases, the reconnaissance unit developing the situation uses actions on contact. (See [Chapter 4](#) for a discussion of actions on contact.)

HISTORICAL EXAMPLE

13-13. Military history contains numerous examples of the importance of reconnaissance operations. The following historical example illustrates the major role of reconnaissance operations in ensuring the success of an operation. This non-US, medieval example illustrates that the study of other armies and other times has a great deal to contribute in helping the tactician understand the art and science of tactics.

The Battle of the Sajo River

Reconnaissance was critical in determining enemy dispositions and taking advantage of the terrain in this and many other Mongol battles. The Mongol army conducted continuous reconnaissance with a definite reconnaissance objective, and a significant part of their success resulted from their reconnaissance operations. During operations, light cavalry preceded each of their army's main columns performing reconnaissance. They reported on terrain and weather conditions as well as the enemy's size, location, and movements. If a Mongol column met an enemy force that it could defeat, it did so. If it could not, its light cavalry maintained contact with the enemy, developed the situation to its advantage, and maintained freedom of movement. The Mongol light cavalry inflicted casualties and disrupted the enemy's movements while the main Mongol army deployed for action.

In March 1241, a Mongol army of some 70,000 crossed the Carpathian Mountains from Russia into the Hungarian Plain. By mid-April, its light cavalry located the 100,000-man Hungarian army near the cities of Buda and Pest on the Danube River. In response, the Mongol army concentrated its previously dispersed columns as it approached the Danube. Once that the Mongols knew that they had been detected by the Hungarians, they deliberately withdrew about 100 miles northeast and led the Hungarians to a previously selected spot, Mohi Heath, on the Sajo River. The Mongols crossed the Sajo using an existing stone bridge and camped east of the river. The Hungarians followed and halted on the west bank, built a camp, took the stone bridge, and left a bridgehead on the east bank. Mongol reconnaissance discovered the location and dispositions within the Hungarian camp as well as a river-crossing site north of the camp. After dark, the main body of the Mongol army moved to cross the river at the crossing site. In addition to using the ford, the Mongols constructed a bridge to aid their crossing.

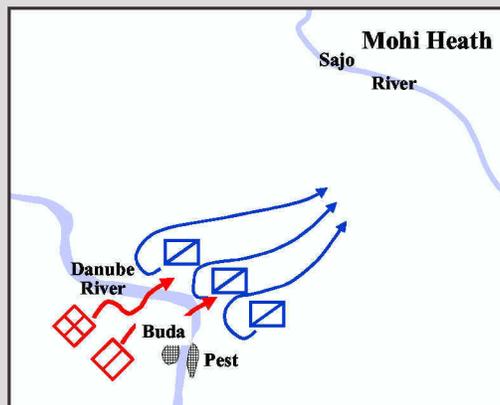


Figure 13-1. Mongol Army Route

The next morning, the remainder of the Mongol army conducted a supporting attack on the Hungarian force at the stone bridge, drawing the Hungarian army out of its camp to fight. While the supporting Mongol forces succeeded in recrossing the Sajo via the stone bridge, the fighting was hard and they nearly lost their battle while waiting for the main body to come to their support. After 2 hours, the Mongol main body fell on the Hungarian rear and flank, driving the Hungarians back into their camp. As was Mongol practice, they deliberately left an escape route from the enemy camp open. The ensuing Mongol pursuit destroyed the Hungarian army when they tried to withdraw from their camp.

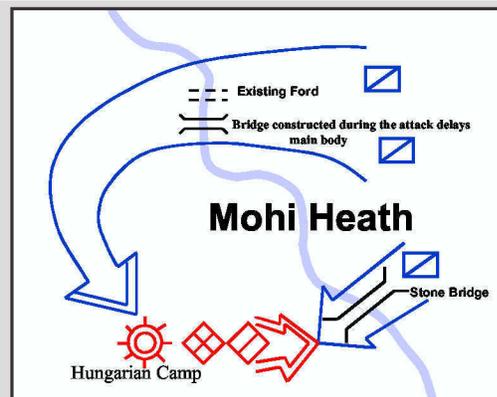


Figure 13-2. Mongol Army Pursuit

CHARACTERISTICS OF RECONNAISSANCE ASSETS

13-14. The responsibility for conducting reconnaissance does not reside solely with specifically organized units. Every unit has an implied mission to report information about the terrain, civilian activities, and friendly and enemy dispositions, regardless of its battlefield location and primary function. Frontline troops and reconnaissance patrols of maneuver units at all echelons collect information on enemy units with which they are in contact. In rear areas, reserve maneuver forces, fire support assets, air defense, military police, host nation agencies, combat support, and combat service support elements observe and report civilian and enemy activity. Although all units conduct reconnaissance, those specifically trained in reconnaissance tasks are ground and air cavalry, scouts, long-range reconnaissance units, and Special Forces. Some branches, such as the Corps of Engineers and the Chemical Corps, have specific reconnaissance tasks to perform that complement the force's overall reconnaissance effort. However, the corps and division commanders will primarily use their organic cavalry and intelligence elements to conduct reconnaissance operations.

13-15. At battalion level and above, the commander assigns missions to his ISR assets based on their organization, equipment, and training. The commander must know the capabilities and limitations of his available reconnaissance assets to ensure the employment of these assets within their capabilities and on missions for which they have been trained and equipped. [Table 13-1](#) on page 13-6 shows the typical nesting of ISR assets available at different tactical echelons.

Table 13-1. Typical ISR Assets Available

	Platoon	Co/Tm	BN/TF	Brigade	Division	Corps	EAC
Observation Post	XXX	XXX	XXX	XXX	XXX	XXX	XXX
Reconnaissance Patrol	XXX	XXX	XXX	XXX	XXX	XXX	XXX
Combat Outpost	AAA	AAA	XXX	XXX	XXX	XXX	XXX
Scout Platoon	AAA	AAA	XXX	XXX			
Brigade Recon Troop		AAA	AAA	XXX	XXX		
Cavalry Troop (Sep Bde)		AAA	AAA	XXX	XXX	XXX	XXX
Chemical Reconnaissance		AAA	XXX	XXX	XXX	XXX	XXX
FA COLT Team	AAA	AAA	XXX	XXX			
FA Target Acq Systems			AAA	AAA	XXX	XXX	
ADA Target Acq Systems			AAA	AAA	XXX	XXX	XXX
Grd Surveillance Radars		AAA	XXX	XXX			
Other MI Collection Sys			AAA	XXX	XXX	XXX	XXX
Division Cavalry Squadron				AAA	XXX	XXX	
Air Cavalry				AAA	XXX	XXX	XXX
Unmanned Aerial Vehicles			AAA*	XXX*	XXX	XXX	XXX
Cavalry Regiment					AAA	XXX	XXX
Long-Range Surveillance Unit					AAA*	XXX	XXX
SOF (SF/RGR)					AAA	AAA	XXX
Technical Surveillance Platforms			AAA	AAA	AAA	AAA	XXX
XXX = Echelon controls or routinely tasks the asset.							
AAA = Echelon can routinely expect the information from that source to be made available to it.							
* Can be found in some divisions.							

13-16. A commander primarily conducts reconnaissance with a combination of manned ground and air assets supported by technical systems. Acting in concert, these assets create a synergy, using the strengths of one system to overcome the weaknesses of another. To produce this synergy, the commander must delineate reporting procedures for all units to pass on information gathered during reconnaissance operations. This facilitates rapid mission execution.

13-17. Dedicated reconnaissance assets are easily overtasked and overextended. The commander uses all available resources, not just reconnaissance units, to satisfy his information requirements. Ground reconnaissance can involve assets not specifically tailored for the mission. Engineer reconnaissance units collect information on how the terrain affects the movement of enemy and friendly forces. Nuclear, biological, and chemical (NBC) reconnaissance teams can determine the presence or absence of NBC contamination and the extent of that contamination. Artillery forward observers, fire support teams, and combat observation and lasing teams (COLTs) report combat information as they observe the battlefield. Air defense units observe and report enemy aircraft and air corridors in use.

13-18. Ground reconnaissance elements are generally limited in the depth to which they can conduct reconnaissance. However, they can operate under weather conditions that prohibit air reconnaissance operations.

13-19. Reconnaissance conducted by manned Army aviation platforms complements ground reconnaissance by greatly increasing the speed and depth with which reconnaissance operations can be conducted over a given area. Air reconnaissance can operate easily 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 the normal capability of dedicated ground reconnaissance elements normally focused on the close fight. Thus, they provide the commander with additional time to attack or otherwise react to the enemy's presence. Scout and attack helicopters use their optics, video, thermal imaging, and communications capabilities to detect and report the enemy. All types of aviation units generate pilot reports in the course of conducting their primary missions. These reports are often a source of valuable combat information.

13-20. While several technical systems can perform reconnaissance, the majority of these types of systems can be more accurately described as surveillance platforms. Surveillance complements reconnaissance by cueing the commitment of reconnaissance assets against specific locations or specially targeted enemy units. Surveillance provides information while reconnaissance answers the commander's specific questions.

13-21. Military intelligence (MI) assets conduct both surveillance and reconnaissance missions. They provide intelligence and electronic warfare (IEW) support, such as electronic intercept, ground surveillance radars, unmanned aerial vehicles (UAVs), and remotely emplaced sensors. Theater and national reconnaissance and surveillance systems provide broadcast dissemination of information and intelligence to the commander and can provide near real-time imagery as a part of an integrated ISR effort. Artillery and air defense target acquisition radars can complement MI surveillance systems as a part

of the ISR effort. HUMINT collection occurs through face-to-face interrogation of captured enemy soldiers, screening of the civilian population, and debriefing of friendly soldiers, such as scouts and SOF.

FORMS OF RECONNAISSANCE

13-22. The four forms of reconnaissance operations are—

- Route reconnaissance.
- Zone reconnaissance.
- Area reconnaissance.
- Reconnaissance in force (RIF).

Table 13-2 shows what types of dedicated reconnaissance units are typically assigned the missions of conducting the four forms of reconnaissance operations.

Table 13-2. Dedicated Reconnaissance Units and Forms of Reconnaissance Operations

	SCOUT PLATOON	TROOP/CO TEAM	AIR CAV TROOP	AR CAV SQD/ BN	AR CAV REGT/ BDE	DIV
Route	X	X	X			
Zone	X	X	X	X	X	
Area	X	X	X	X	X	
Recon in Force				X	X	X

ROUTE RECONNAISSANCE

13-23. *Route reconnaissance* is a form of reconnaissance that focuses along a specific line of communication, such as a road, railway, or cross-country mobility corridor. It provides new or updated information on route conditions, such as obstacles and bridge classifications, and enemy and civilian activity along the route. A route reconnaissance includes not only the route itself, but also all terrain along the route from which the enemy could influence the friendly force’s movement. The commander normally assigns this mission when he wants to use a specific route for friendly movement.

Organization of Forces

13-24. The commander may assign a route reconnaissance as a separate mission or as a specified task for a unit conducting a zone or area reconnaissance. A scout platoon can conduct a route reconnaissance over only one route at a time. For larger organizations, the number of scout platoons available directly influences the number of routes that can be covered at one time. Integrating ground, air, and technical assets assures a faster and more complete route reconnaissance.

13-25. A ground reconnaissance effort is essential if the mission is to conduct detailed reconnaissance of the route or the mission requires clearing the enemy from an AO that includes the route and the terrain around the route. The

forces assigned to conduct this ground reconnaissance must be robust enough to handle expected enemy forces in the AO. If the commander expects them to make contact with enemy forces possessing more combat power than that typically found in enemy reconnaissance elements, he ensures that his forces conducting ground reconnaissance have access to readily available fire support. If the commander requires detailed information on the route, engineer reconnaissance assets can determine the classification of critical points along the route more quickly and accurately than scouts can. If the commander anticipates significant obstacles, combat engineers should be included as part of the force. If NBC contamination is expected, NBC reconnaissance assets should accompany the force conducting ground reconnaissance because they can detect and determine the extent of contamination more accurately and quickly than scouts can. Air reconnaissance can be used if the reconnaissance mission must be completed quickly. However, aerial reconnaissance can rarely clear an enemy force from a location where it can affect movement on the route and aircraft cannot breach obstacles. When time is limited, air reconnaissance is essential to determine which areas are clear of enemy forces and obstacles, and to cue ground reconnaissance regarding where to focus its efforts.

Control Measures

13-26. Control measures for a route reconnaissance create an AO for the unit conducting the reconnaissance. (See Figure 13-3.) The commander places lateral boundaries on both sides of the route, far enough out to allow reconnaissance of all terrain from which the enemy could dominate the route. He places a line of departure (LD) perpendicular to the route short of the start point (SP), allowing adequate space for the unit conducting the reconnaissance to deploy into formation. The LD creates the rear boundary of the AO. A limit of advance (LOA) is placed far enough beyond the route's release point (RP) to include any terrain from which the enemy could dominate the route. A SP and a RP define that section of the route where the unit collects detailed information.

He may add phase lines (PLs) and checkpoints to maintain coordinated reconnaissance, control movement, or designate critical points. He places additional control measures to coordinate indirect and direct fire as necessary. He

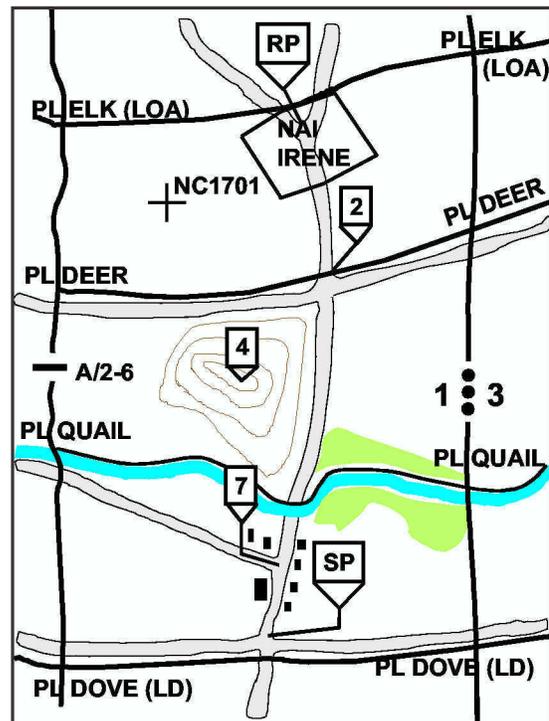


Figure 13-3. Route Reconnaissance Control Measures

places these control measures on terrain features that are identifiable from both the ground and the air to assist in air-to-ground coordination.

Tasks

13-27. Unless the commander orders otherwise, the unit conducting a route reconnaissance performs specific tasks within the limits of its capabilities. If a unit does not have the time or resources to complete all of these tasks, it must inform the commander assigning the mission. He must then issue further guidance on which tasks the unit must complete or the priority of each task, which is usually clear from the reconnaissance objective. If, after starting the reconnaissance, the unit determines that it cannot complete an assigned task, such as clearing the enemy or reducing obstacles to create lanes as required to support the maneuver of the main body along the route, it must report and await further instructions.

13-28. Route reconnaissance tasks are as follows:

- Find, report, and clear within capabilities all enemy forces that can influence movement along the route.
- Determine the trafficability of the route; can it support the friendly force?
- Reconnoiter all terrain that the enemy can use to dominate movement along the route, such as choke points, ambush sites, and pickup zones, landing zones, and drop zones.
- Reconnoiter all built-up areas, contaminated areas, and lateral routes along the route.
- Evaluate and classify all bridges, defiles, overpasses and underpasses, and culverts along the route.
- Locate any fords, crossing sites, or bypasses for existing and reinforcing obstacles (including built-up areas) along the route.
- Locate all obstacles and create lanes as specified in execution orders.
- Report the above route information to the headquarters initiating the route reconnaissance mission, to include providing a sketch map or a route overlay.

(See FM 3-34.212 and FM 3-20.95 for additional information concerning route reconnaissance.)

ZONE RECONNAISSANCE

13-29. ***Zone reconnaissance*** is a form of reconnaissance that involves a directed effort to obtain detailed information on all routes, obstacles, terrain, and enemy forces within a zone defined by boundaries. Obstacles include both existing and reinforcing, as well as areas with NBC contamination. The commander assigns a zone reconnaissance mission when he needs additional information on a zone before committing other forces in the zone. 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.

13-30. A zone reconnaissance is normally a deliberate, time-consuming process. It takes more time than any other reconnaissance mission, so the commander must allow adequate time to conduct it. A zone reconnaissance is normally conducted over an extended distance. It requires all ground elements executing the zone reconnaissance to be employed abreast of each other. However, when the reconnaissance objective is the enemy force, a commander may forgo a detailed reconnaissance of the zone and focus his assets on those named areas of interest (NAI) that would reveal enemy dispositions and intentions. A reconnaissance unit can never disregard terrain when focusing on the enemy. However, it minimizes its terrain reconnaissance to that which may influence an NAI.

Organization of Forces

13-31. Considerations for organizing a zone reconnaissance are the same as for organizing a route reconnaissance except that several subordinate units, rather than just one unit, operate abreast during the zone reconnaissance. If the commander expects significant enemy forces to be found within the zone, he should provide the force conducting the zone reconnaissance with a reserve. This reserve should have adequate combat power to extract elements of the reconnaissance force from decisive engagement. In an armored cavalry squadron of an armored cavalry regiment, the tank company normally performs this task. If a unit conducts a zone reconnaissance out of supporting range of the main body, the commander ordering the zone reconnaissance provides the reconnaissance unit with adequate fire support assets that can move with the reconnaissance unit.

Control Measures

13-32. The commander controls a zone reconnaissance by assigning an AO to the unit conducting the reconnaissance. (See Figure 13-4.) The lateral boundaries, a LD, and a LOA define this AO. Within the AO, the force conducting the zone reconnaissance further divides the AO with additional lateral boundaries to define subordinate unit AOs. Subordinate AOs are not necessarily the same size. Phase lines and contact points, located where the commander determines that it is necessary for adjacent units to make physical contact, are used to coordinate the movement of elements operating abreast. He may further designate the time that this physical contact takes place. He uses

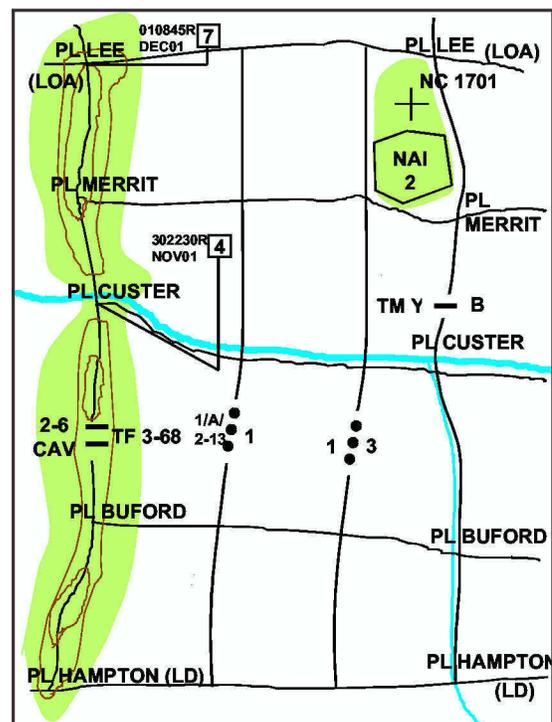


Figure 13-4. Zone Reconnaissance Control Measures

checkpoints to indicate critical terrain features and to coordinate air and ground teamwork. He may use fire support coordinating measures to control direct and indirect fires. He uses additional control measures as necessary. In addition, the commander assigning the zone reconnaissance mission must specify the route the reconnaissance unit must use to enter the AO. All control measures should be on recognizable terrain when possible.

Tasks

13-33. Unless the commander orders otherwise, a unit conducting a zone reconnaissance performs the following tasks within the limits of its capabilities. If a unit does not have the time or resources to complete all of these tasks, it must inform the commander assigning the mission. He must then issue further guidance on which tasks the unit must complete or the priority of tasks, which is usually clear from the reconnaissance objective. After starting the reconnaissance, if the unit determines that it cannot complete an assigned task, such as clear enemy or reduce obstacles in zone to create lanes as required to support the main body's maneuver, it must report and await further instructions.

13-34. Zone reconnaissance tasks are as follows:

- Find and report all enemy forces within the zone.
- Clear all enemy forces in the designated AO within the capability of the unit conducting reconnaissance.
- Determine the trafficability of all terrain within the zone, including built-up areas.
- Locate and determine the extent of all contaminated areas in the zone.
- Evaluate and classify all bridges, defiles, overpasses, underpasses, and culverts in the zone.
- Locate any fords, crossing sites, or bypasses for existing and reinforcing obstacles (including built-up areas) in the zone.
- Locate all obstacles and create lanes as specified in execution orders.
- Report the above information to the commander directing the zone reconnaissance, to include providing a sketch map or overlay.

AREA RECONNAISSANCE

13-35. **Area reconnaissance is a form of reconnaissance that focuses on obtaining detailed information about the terrain or enemy activity within a prescribed area.** This area may include a town, a ridgeline, woods, an airhead, or any other feature critical to operations. The area may consist of a single point, such as a bridge or an installation. Areas are normally smaller than zones and are not usually contiguous to other friendly areas targeted for reconnaissance. Because the area is smaller, an area reconnaissance moves faster than a zone reconnaissance.

Organization of Forces

13-36. Considerations for the organization of forces for an area reconnaissance are the same as for organizing a zone reconnaissance. (See paragraphs 13-31 to 13-33.)

Control Measures

13-37. The commander assigning an area reconnaissance specifies the area for reconnaissance with a single continuous line to enclose the area to reconnoiter. Alternatively, he may designate the area by marking lateral boundaries, a LD, and a LOA. An area reconnaissance mission always specifies the route to take in moving to the area. The commander of the unit conducting the area reconnaissance mission can use control measures for a zone reconnaissance within the AO to control the operation of his subordinate elements. (See Figure 13-5.)

Tasks

13-38. The tasks for an area reconnaissance are also the same as for a zone reconnaissance. (See paragraph 13-34.)

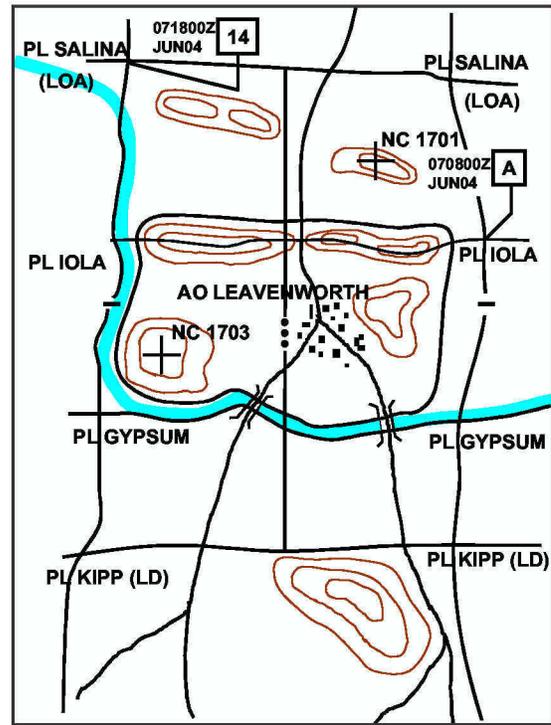


Figure 13-5. Area Reconnaissance Control Measures

RECONNAISSANCE IN FORCE

13-39. A *reconnaissance in force* is a deliberate combat operation designed to discover or test the enemy's strength, dispositions, and reactions or to obtain other information. Battalion-size task forces or larger organizations usually conduct a reconnaissance in force (RIF) mission. A commander assigns a RIF mission when the enemy is known to be operating within an area and the commander cannot obtain adequate intelligence by any other means. A unit may also conduct a RIF in restrictive-type terrain where the enemy is likely to ambush smaller reconnaissance forces. A RIF is an aggressive reconnaissance, conducted as an offensive operation with clearly stated reconnaissance objectives. The overall goal of a RIF is to determine enemy weaknesses that can be exploited. It differs from other reconnaissance operations because it is normally conducted only to gain information about the enemy and not the terrain.

Organization of Forces

13-40. While specifically trained and equipped units usually conduct the other forms of reconnaissance operations, any maneuver force can conduct a RIF. The force conducting a RIF is organized as if it is conducting offensive operations. However, the lack of enemy information dictates that the force be large and strong enough to develop the situation, protect the force, cause the enemy to react, and put the enemy at some risk. The less known about the

enemy, the stronger the force conducting the RIF must be. Because of the lack of information about the enemy, a commander normally conducts a RIF as a movement to contact or a series of frontal attacks across a broad frontage.

Control Measures

13-41. The control measures for a RIF are the same as for offensive operations. The operation is conducted as an movement to contact with limited objectives. (Chapter 4 discusses the conduct of a movement to contact.)

Tasks

13-42. A unit conducting a RIF performs the following tasks within the limits of its capabilities. If a unit does not have the time or resources to complete all of these tasks, it must inform the commander assigning the mission. He must then issue further guidance on which tasks the unit must complete or the priority of tasks, which is usually clear from the reconnaissance objective. After starting the RIF, if the unit determines that it cannot complete an assigned task, it must report and await further instructions. Reconnaissance in force tasks are—

- Penetrating the enemy's security area and determining its size and depth.
- Determining the location and disposition of enemy main positions.
- Attacking enemy main positions and attempting to cause the enemy to react by using local reserves or major counterattack forces, employing fire support assets, adjusting positions, and employing specific weapon systems.
- Determining weaknesses in the enemy's dispositions to exploit.

PLANNING A RECONNAISSANCE

13-43. Reconnaissance contributes significantly to a commander's battlefield visualization. It supports the overall integrated ISR plan, which in turn supports the commander's decision making process.

13-44. The commander must make judicious yet aggressive use of his reconnaissance assets. Reconnaissance planning ensures that available reconnaissance assets produce the greatest results. Because there are never enough assets to accomplish all tasks, the commander must set priorities. Generating many unfocused missions rapidly wears down assets, making them ineffective. Improperly using assets can also leave an enemy vulnerability undiscovered.

13-45. The commander ensures the coordination and synchronization of his reconnaissance effort at all echelons. Since the need for reconnaissance cuts across all parts of the operational framework and core functions, reconnaissance operations demand an integrated approach to planning, preparation, and execution. The two habitual participants in the reconnaissance planning process are the echelon operations and intelligence staff officers. The echelon operations staff officer (G3 or S3) has primary staff responsibility for reconnaissance planning, allocating, and tasking resources. Normally, he has staff

responsibility for ground and air reconnaissance assets, which includes engineers, NBC, and artillery. The echelon intelligence staff officer (G2 or S2) has primary responsibility for ground surveillance systems and special electronics mission aircraft. The commander ensures these two staff elements adopt an integrated combined arms approach to planning, preparing, executing, and assessing reconnaissance.

INTELLIGENCE, SURVEILLANCE, AND RECONNAISSANCE PLAN

13-46. The commander closely integrates reconnaissance missions with other intelligence-collection efforts to ensure that each ISR asset is used to its best advantage. The echelon staff, primarily the intelligence staff officer, identifies gaps in the intelligence available, based on the initial IPB and the situationally dependent CCIR. The IPB process helps determine factors that impact on the reconnaissance effort, such as—

- Avenues of approach that support friendly movement and exploit enemy weaknesses.
- Key terrain, choke points, obstacles, and danger areas.
- Enemy positions, especially flanks that can be exploited.
- Observation points.

The reconnaissance effort and the IPB process are interactive and iterative, each feeding the other. (See FM 2-0 for more information on the intelligence cycle. FM 2-01.3 addresses the IPB process.)

13-47. The intelligence staff officer develops an initial integrated ISR plan to acquire information to help answer those PIR based on available reconnaissance and surveillance assets. The ISR plan assigns specific intelligence acquisition tasks to specific units for action. It integrates surveillance and reconnaissance into the overall intelligence-collection plan.

13-48. The echelon operations staff officer uses the initial ISR plan as the base in preparing the ISR annex to the operation order. The ISR annex provides for the flexible execution of reconnaissance tasks, including providing for adequate command and control, indirect fires, and logistics when completed. (FM 5-0 discusses reconnaissance and the military decision making process.)

RECONNAISSANCE-PULL VERSUS RECONNAISSANCE-PUSH

13-49. In reconnaissance-pull, the commander uses the products of the IPB process in an interactive and iterative way. He obtains combat information from his reconnaissance assets to determine a preferred COA for the tactical situation presented by the factors of METT-TC. In reconnaissance-push, the commander uses the products of the IPB process in an interactive, but not iterative, way with combat information obtained from his reconnaissance assets in support of a previously determined COA. The time available to a commander is normally the chief reason for preferring one method over the other.

13-50. The time required to develop a preferred COA can give the enemy enough time to recover and prepare so that an objective which could be obtained with few casualties one day will cost far more to seize the next day.

There is no available model that a commander can use to determine how much is enough; that determination is part of the tactical art.

RECONNAISSANCE MANAGEMENT

13-51. No single reconnaissance asset can answer every intelligence requirement, and there are rarely enough reconnaissance assets to cover every requirement. The echelon staff uses a mix of reconnaissance management methods, such as cueing, mixing, redundancy, and task organizing, in an attempt to use limited assets most effectively and collect the most critical information with the fewest assets as quickly as possible.

13-52. **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 assets, especially limited ground reconnaissance 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 where there is no enemy presence. These assets may cue ground and air reconnaissance assets to investigate specific areas to confirm and amplify information developed by technical assets. For example, joint surveillance target attack radar system (JSTARS) and Guardrail-equipped aircraft can cover large areas and cue ground reconnaissance or UAVs once an enemy force is identified. The commander may dispatch ground reconnaissance or UAVs to verify the information and track the enemy for targeting purposes. Similarly, a ground reconnaissance asset could cue surveillance assets. The key point is to use reconnaissance assets based on their capabilities and use the complementary capabilities of other assets to verify and expand information available.

13-53. **Mixing is using two or more different assets to collect against the same intelligence requirement.** Employing a mix of systems not only increases the probability of collection, but also tends to provide more complete information. For example, a JSTARS aircraft may detect and locate a moving enemy tactical force, while the G-2 analysis and control element uses organic and supporting assets to determine its identity, organizational structure, and indications of future plans. Employing a mix of systems is always desirable if the situation and available resources permit. Mixing systems can also help uncover deception attempts by revealing discrepancies in information reported by different collectors.

13-54. **Redundancy is using two or more like assets to collect against the same intelligence requirement.** Based on the priority of the information requirement, the commander must decide which NAI justifies having more than one asset covering it. 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 detects and engages the first asset. Redundancy also improves the chances that the required information will be collected.

13-55. To increase the effectiveness and survivability of a reconnaissance asset, the commander may task organize it by placing additional assets under

the control of the unit. For example, to conduct an area reconnaissance of possible river crossing sites at extended distances from a division's current location, a ground reconnaissance troop of the division cavalry squadron could be task-organized with a COLT, a signal retransmission element, an engineer reconnaissance element, and a mechanized infantry platoon. The engineers would provide additional technical information on proposed crossing sites; the signal retransmission elements would allow the reconnaissance troop's combat net radios to reach the division tactical command post. The COLT provides additional observation, lazing, and fire coordination capabilities. Last, the infantry platoon would provide additional protection for the reconnaissance troop.

SUSTAINMENT

13-56. Sustaining reconnaissance assets before, during, and after their commitment is a vital part of maintaining the commander's capability to conduct reconnaissance. Because the way that a commander deploys his reconnaissance assets in a given situation depends on the factors of METT-TC, the methods he employs to sustain those assets are equally situationally dependent. He must address them as part of the planning process for each reconnaissance operation.

13-57. Reconnaissance elements frequently operate in locations distant from their organic sustaining base. In this event, reconnaissance elements must either carry a large enough basic load or be task organized with those assets necessary to ensure their sustainment until they can be relieved. With either COA, casualty evacuation remains a problem. An alternative solution would be to plan and coordinate their sustainment from units near their operating locations.

EXECUTING A RECONNAISSANCE

13-58. Reconnaissance can be characterized as either stealthy or aggressive. Depending on how they are employed, scout helicopters and other aerial platforms, as well as mounted and dismounted ground reconnaissance, can be characterized as either stealthy or aggressive.

13-59. A key factor in reconnaissance execution is the time available to conduct the reconnaissance mission. The commander must recognize that he accepts increased risk to both the reconnaissance element and the main body when he accelerates the pace of reconnaissance. This risk can be somewhat offset by employing air reconnaissance and technical means to cover open terrain or areas of lower threat.

13-60. Aggressive reconnaissance is characterized by the speed and manner in which the reconnaissance force develops the situation once it makes contact with an enemy force. A unit conducting aggressive reconnaissance uses both direct- and indirect-fire systems and movement to rapidly develop the situation. Firepower, aggressive exploitation of actions on contact, operations security, and training are required for the unit to survive and accomplish its mission when conducting aggressive reconnaissance. Mounted reconnaissance is normally characterized as aggressive.

13-61. Stealthy reconnaissance emphasizes avoiding detection and engagement by the enemy. It is more time consuming than aggressive reconnaissance. Stealthy reconnaissance takes maximum advantage of covered and concealed terrain and the reduced battlefield signatures associated with systems that typically conduct stealthy reconnaissance, such as dismounted scouts. However, stealth cannot be guaranteed. As a result, units attempting to conduct stealthy reconnaissance must also be drilled to react correctly once the enemy makes contact, and they must have immediate access to supporting fires.

13-62. The commander considers the factors of METT-TC to determine whether to conduct mounted or dismounted reconnaissance. Conditions that may result in a decision to conduct mounted or aerial reconnaissance include—

- Time is limited.
- Detailed reconnaissance is not required.
- Air units are available to perform coordinated reconnaissance with the ground assets.
- The IPB process has provided detailed information on the enemy.
- Terrain is relatively open.
- Environmental conditions permit this type of reconnaissance. Deep snow and muddy terrain greatly hinder mounted reconnaissance.
- Dismounted reconnaissance cannot complete the mission within existing time constraints, while mounted reconnaissance can.

13-63. The following conditions may result in the commander directing a dismounted reconnaissance effort:

- Time is available.
- Detailed reconnaissance is required.
- Stealth is required.
- The IPB process indicates close proximity to enemy positions.
- The reconnaissance force encounters danger areas.
- Restrictive terrain limits the effectiveness of mounted reconnaissance.

FM 3-21.92 describes dismounted patrolling in detail.

13-64. Typically, air reconnaissance operates in concert with ground reconnaissance units. (Friendly ground forces in an area offer additional security to aircrews.) Aviation units can insert surveillance teams at observation posts. Aircraft can observe and provide security on station for extended times using rotation techniques if they have detailed requirements in advance. Dismounting an aircrew member to evaluate bridges, fords, or crossing sights is a last alternative because of the danger to the aircrew and the aircraft. Before resorting to this, the aircrew uses the sophisticated systems on the aircraft to avoid risk and to avoid drawing attention to the area of interest.

13-65. Reconnaissance by fire is a technique in which a unit fires on a suspected enemy position to cause the enemy to disclose his presence by movement or return fire. This technique is appropriate when time is critical and

stealthy maneuver to further develop the situation is not possible. The fires may be either direct, indirect, or a combination. The advantage of indirect fire is that it does not give away friendly locations and usually causes the enemy to displace from the impact area. However, reconnaissance by fire may not cause a seasoned or prepared enemy force to react. Reconnaissance by fire is always characterized as aggressive.

13-66. Smoke and battlefield obscuration, fog, rain, and snow all result in reduced visibility. Generally, reconnaissance during limited-visibility conditions takes more time. However, these conditions provide for better stealth and enhance the survivability of reconnaissance assets. A commander frequently employs dismounted reconnaissance patrols at night. These patrols use light amplification and thermal observation devices, electronic surveillance devices, and surveillance radars to compensate for reduced visibility conditions.

13-67. In limited visibility, mounted reconnaissance tends to focus on road networks. The enemy can detect engine and track movement noises of friendly mounted reconnaissance elements at considerable distances at night, which makes them susceptible to ambush. Strict sound and light discipline, along with masking sounds, such as artillery fires, helps a mounted reconnaissance force from being compromised or ambushed.

13-68. High winds, extreme temperature, and loose topsoil or sand may adversely affect aerial reconnaissance. Air reconnaissance units plan their missions in much the same way as ground units. They use the same type of operations graphics and consider the same critical tasks. The air reconnaissance commander organizes his assets to accomplish his mission by considering the same IPB aspects as those associated with ground forces. He focuses on air hazards to navigation and anticipated enemy air defense capabilities. (The effects of weather and atmosphere conditions are discussed in FM 2-01.3.)

RECUPERATION AND RECONSTITUTION OF RECONNAISSANCE ASSETS

13-69. When any small unit is employed continuously for an extensive period of time, it can become ineffective. When this occurs, restoring the unit to an acceptable level of effectiveness may require either recuperation or reconstitution. Recuperation—a short break for rest, resupply, and maintenance—is often sufficient to return the unit to the desired degree of combat effectiveness. Leaders in reconnaissance units probably need more rest than their subordinates. If the recuperation period is extended, it can also be used to conduct refresher training, new equipment training, or any required specialized training for the next mission.

13-70. Units and systems performing reconnaissance are vulnerable to detection, engagement, and destruction by the enemy. When this occurs and the unit can no longer perform its primary mission, the commander must determine whether to reconstitute, by either regenerating or reorganizing the unit. (See FM 4-100.9 for additional information concerning reconstitution.)

13-71. Regenerating a unit requires significant resources. The organization two echelons above the unit being regenerated conducts the procedure. For example, a battalion task force can regenerate its scout platoon. In the

regeneration process, the battalion 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. These resources, combined with training, could be used to regenerate the scout platoon. Alternatively, the commander could designate one of his line platoons as the task force's new scouts. This approach has significant training implications and requires adjustments to the line platoon's table of organization and equipment.

13-72. A unit commander can reorganize his unit with the approval of the next higher commander. For example, an armored cavalry troop commander could reorganize his two scout and two tank platoons into three platoons containing a mix of scouts and tanks. This approach to reconstitution also requires training time and other equipment resources to ensure the combat effectiveness of the resulting composite organization.

Chapter 14

Troop Movement

Aptitude for war is aptitude for movement.

Napoleon I, *Maxims of War*, 1831

Troop movement is the movement of troops from one place to another by any available means. The ability of a commander to posture his force for a decisive or shaping operation depends on his ability to move that force. The essence of battlefield agility is the capability to conduct rapid and orderly movement to concentrate the effects of combat power at decisive points and times. Successful movement places troops and equipment at their destination at the proper time, ready for combat. The three types of troop movement are administrative movement, tactical road march, and approach march.

METHODS OF TROOP MOVEMENT

14-1. Troop movements are made by foot marches, motor transport, rail, water, air, and various combinations of these methods. 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 logistics considerations.

DISMOUNTED MARCHES

14-2. ***Dismounted marches***, also called foot marches, are movements of troops and equipment, mainly by foot, with limited support by vehicles. They increase the number of maneuver options available to a commander. Their positive characteristics include combat readiness—all soldiers

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can immediately respond to enemy attack without the need to dismount, ease of control, adaptability to terrain, and their independence from the existing road network. Their limitations include slow rate of movement and increased personnel fatigue—soldiers carrying heavy loads over long distances or large changes in elevation get tired. A unit conducts a dismounted march when the situation requires stealth, the distance to travel is short, transport or fuel is limited, or the situation or terrain precludes using a large number of vehicles. (FM 3-25.18 has more information on the techniques and procedures for conducting dismounted marches.)

MOUNTED MARCHES

14-3. A unit conducts mounted marches when it employs combat and tactical vehicles to move all of its personnel and equipment. Armored and mechanized units routinely conduct mounted marches. The speed of the march and the increased amounts of supplies that can accompany the unit characterize this march method. Heavy maneuver units are normally self-sufficient to conduct mounted marches over short distances. Light maneuver units and most combat support (CS) and combat service support (CSS) units are not completely motorized and need assistance from transportation elements to conduct mounted marches. Considerations for mounted marches over extended distances include:

- The ability of the route network to support the numbers, sizes, and weights of the tactical and combat vehicles assigned to or supporting the unit making the move.
- Available refueling and maintenance sites and crew-rest areas.
- The need for recovery and evacuation assets.

(FM 4-01.30 discusses considerations for mounted marches.)

ARMY AIR MOVEMENTS

14-4. **Army air movements** are operations involving the use of utility and cargo rotary-wing assets for other than air assaults. The commander conducts air movements to move troops and equipment, to emplace systems, and to transport ammunition, fuel, and other high-value supplies. He may employ air movements as a substitute for a ground tactical movement. Army air movements are generally faster than ground tactical moves. The same general considerations that apply to air assault operations also apply to Army air movements. (See Appendix C for air assault operations. See FM 3-04.113 for additional information concerning air movement.)

14-5. Tactical forces can use rail and water modes to conduct troop movement if they are available within an area of operations (AO). Their use can provide flexibility by freeing other modes of transport for other missions. Their use normally involves a mixture of military and commercial assets, such as defense freight railway interchange railcars pulled by privately owned diesel-electric engines to transport tanks along railroad right of ways from one rail terminus to another. Responsibility for coordinating the use of railroads and waterways resides within the ARFOR headquarters within the theater of operations. (FMs 4-01.41 and 4-01.50 provide additional information concerning these two transportation modes.)

14-6. In cases of tactical necessity, a unit can accelerate its rate of movement by conducting a forced march so that it arrives at its destination quickly. Both heavy and light units can conduct a forced march. Forced marches require speed, exertion, and an increase in the number of hours marched or traveled by vehicles 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 nor for as long as recommended for maintenance, rest, feeding, and fuel. The commander must understand that immediately following a long and fast march, his soldiers and combat vehicles experience a temporary deterioration in their physical condition. The combat effectiveness and cohesion of his unit also temporarily decreases. His plan must accommodate the presence of stragglers and address the increased number of maintenance failures.

ADMINISTRATIVE MOVEMENT

14-7. *Administrative movement* is a movement in which troops and vehicles are arranged to expedite their movement and conserve time and energy when no enemy interference, except by air, is anticipated (JP 1-02). The commander conducts administrative movements only in secure areas. Examples of administrative movements include rail and highway movement within the continental United States. Once a unit deploys into a theater of war, administrative movements are the exception, not the norm. Since these types of moves are nontactical, the echelon logistics officer (the G4 or S4) usually supervises the moves. (FM 4-01.40 discusses administrative movement and convoy planning.)

TACTICAL ROAD MARCH

14-8. A *tactical road march* is a rapid movement used to relocate units within an area of operations to prepare for combat operations (FM 3-0). Security against enemy air attack is maintained and the unit is prepared to take immediate action against an enemy ambush, although contact with enemy ground forces is not expected.

14-9. The primary consideration of the tactical road march is rapid movement. However, the moving force employs security measures, even when contact with enemy ground forces is not expected. Units conducting road marches may or may not be organized into a combined arms formation. During a tactical road march, the commander is always prepared to take immediate action if the enemy attacks. (See [Figure 14-1](#), page 14-4.)

ORGANIZATION FOR A TACTICAL ROAD MARCH

14-10. The organization for a tactical road march is the march column. A ***march column*** consists of all elements using the same route for a single movement under control of a single commander. The commander organizes a march column into four elements: reconnaissance, quartering party, main body, and trail party. A brigade conducting a tactical road march is an example of a march column. The subordinate elements of a march column are a march serial and a march unit. A ***march serial*** is a major subdivision of a march column that is organized under one commander

who plans, regulates, and controls the serial. An example is a battalion serial formed from a brigade-size march column. 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-size march serial.

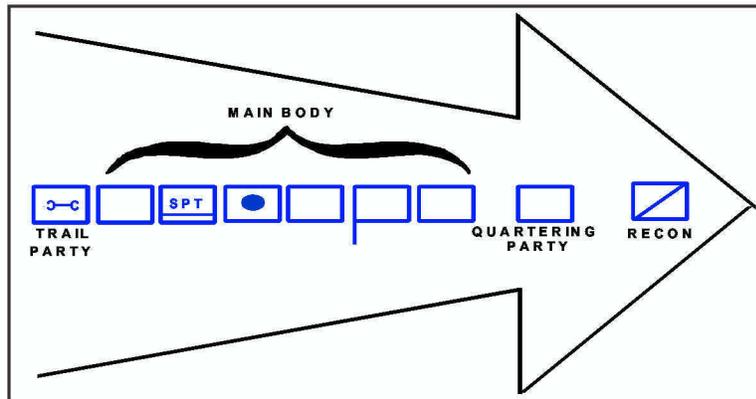


Figure 14-1. Tactical Road March

14-11. A march column provides excellent speed, control, and flexibility, but sacrifices flank security. It provides the ability to deploy forces to the front of the column. The commander uses a march column when speed is essential and enemy contact is unlikely. However, the commander spaces combat support (CS) elements, such as air defense and engineers, throughout the column to protect and support the movement. Reconnaissance elements augmented by engineer, nuclear, biological, and chemical reconnaissance, and other CS assets, as appropriate, conduct a route reconnaissance of the march routes. This reconnaissance confirms and supplements the data obtained from map studies and other headquarters.

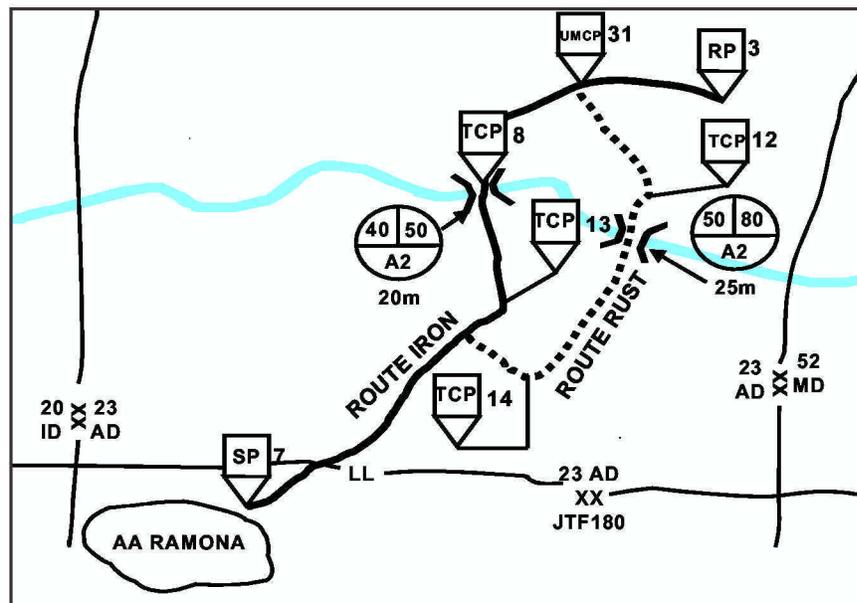
14-12. A unit quartering party usually accompanies the reconnaissance effort to the designated assembly area (AA). Unit standing operating procedures (SOP) establish the exact composition of the quartering party and its transportation, security, and communications equipment needs, and its specific duties. 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 within the AA. The quartering party guides the main body into position from the release point (RP) to precise locations within the AA.

14-13. The main body of the march column consists of the remainder of the unit, including attachments minus the trail party. The trail party is the last march unit in a march column and normally consists of primarily maintenance elements in a mounted march. It maintains communications with the main body. The function of the trail party is to recover disabled vehicles or control stragglers in a dismounted march. If the trail party cannot repair a disabled vehicle immediately, it tows the disabled vehicle and moves its crew

and passengers to a unit maintenance collection point (UMCP) located at a secure area near the movement route.

GRAPHIC CONTROL MEASURES

14-14. The commander directing a tactical road march often uses a strip map or overlay to graphically depict critical information about the route to his subordinates. The overlay or strip map should show the route of march, start points (SPs), RPs, checkpoints, critical points (such as bridges), light line, and traffic control points (TCPs). (See Figure 14-2.) Other graphic control measures include AA sand phase lines.



The *start point* is a location on a route where the marching elements fall under the control of a

Figure 14-2. Route Control Measures

designated march commander. Figure 14-3 shows SP 7. All routes must have a designated SP and it must be easily recognizable on the map and on the ground, such as a road junction. It must be far enough from the AA to allow units to organize and move at the prescribed speed and interval when they reach the SP.

14-16. A *release point* is a location on a route where marching elements are released from centralized control. Figure 14-4, page 14-6, shows RP 11. Each SP must have a corresponding 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, unit guides meet each march unit and lead it to AAs.

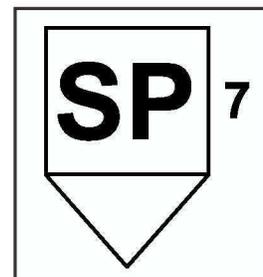


Figure 14-3. Start Point

14-17. The commander designates checkpoints along the route to assist marching units in gauging their compliance with the timetable. Also, the movement overlay identifies critical points along the route where interference with movement might occur. The commander positions manned TCPs along the route to prevent congestion and confusion. They may be manned by MPs or unit personnel. These soldiers report to the appropriate area movement control organization when each convoy, march column, and march serial arrives at and completes passage of its location.



Figure 14-4.
Release Point

14-18. A **light line** is a designated phase line, forward of which vehicles are required to use black-out lights during periods of limited visibility. Commanders at either corps or division echelon establish it based on the risk that the enemy will be able to detect moving vehicles using white light. Figure 14-5 depicts the light line for the 2nd Armored Division as the division rear boundary. (FM 4-01.40 details other march control measures, such as the bridge classification symbols depicted in [Figure 14-2](#).)

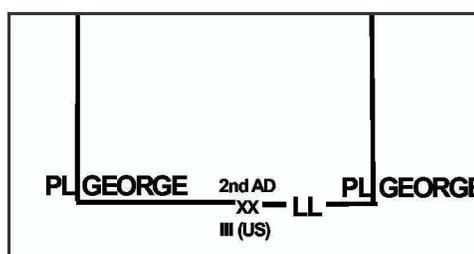


Figure 14-5. Light Line

TACTICAL MARCH TECHNIQUES

14-19. Units conducting tactical road marches employ three tactical march techniques: open column, close column, and infiltration. Each of these techniques uses scheduled halts to control and sustain the road march. The factors of METT-TC require adjustments in the standard distances between vehicles and soldiers. During movement, elements within a column of any length 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-like 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 the commander directs them not to do so for security reasons, march units report when they have crossed each control point. During the move, the commander maintains air and ground security.

Open Column

14-20. In an open column, the commander increases the distance between vehicles and soldiers to provide greater dispersion. The vehicle distance varies from 50 to 100 meters, and may be greater if required. The distance between dismounted soldiers varies from two to five meters to allow for dispersion and space for marching comfort. Any distance that exceeds five meters between soldiers increases the length of the column and hinders control. The open column technique is normally used during daylight. It may also be used at night

with 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 any given point when compared to a close column. The open column is the most common movement technique because it offers the most security while still providing the commander with a reasonable degree of control. In an open column, vehicle density varies from 15 to 20 vehicles per kilometer. A single light infantry company, with intervals between its platoons, occupies roughly a kilometer of road or trail.

Close Column

14-21. In a close column, the commander spaces his vehicles about 20 to 25 meters apart. At night, he spaces vehicles so each driver can see the two lights in the blackout marker of the vehicle ahead. The commander normally employs a close column for marches during darkness under blackout driving conditions or for marches in restricted terrain. This method of marching takes maximum advantage of the traffic capacity of a route but provides little dispersion. Normally, vehicle density is from 40 to 50 vehicles per kilometer along the route in a close column.

14-22. The dismounted equivalent to the close column is a limited-visibility march. The distance between individual soldiers is reduced to one to three meters to help maintain contact and facilitate control. Limited-visibility marches are characterized by close formations, difficult command and control (C2) and reconnaissance, a slow rate of march, and good concealment from enemy visual observation and air attack.

Infiltration

14-23. The commander dispatches 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 possible passive defense against enemy observation and attack. It is suited for tactical road marches when there is enough time and road space and when the commander desires the maximum security, deception, and dispersion. The disadvantages of an infiltration are that more time is required to complete the move, column control is nearly impossible, and recovery of broken-down vehicles by the trail party is more protracted when compared to vehicle recovery in close and open columns. Additionally, unit integrity is not restored until the last vehicle arrives at the destination, complicating the unit's onward deployment. Infiltration during troop movement should not be confused with infiltration as a form of maneuver as discussed in [Chapter 3](#).

14-24. During extended road marches, halts are necessary to rest personnel, service vehicles, and adjust movement schedules as necessary. The march order or unit standing operating procedures (SOP) regulates when to take halts. In motor movements, the commander schedules short halts for every two to three hours of movement and may last up to an hour. Long halts occur on marches that exceed 24 hours and last no more than two hours. Long halts are not scheduled at night, which allows maximum time for night movement. During halts, each unit normally clears the march route and moves to a previously selected AA to prevent route congestion and avoid being a lucrative target. Units establish security and take other measures to protect the

force. Unit leaders receive prompt notification of the time and approximate length of unscheduled halts.

14-25. The commander emphasizes the need to maintain security during halts. Once a unit stops moving, there is a natural tendency for soldiers to let their guard down and relax their vigilance. The commander addresses this problem by explicitly defining unit actions in his SOP for various types of halts, such as maintenance halts, security halts, and unexpected halts.

APPROACH MARCH

14-26. An *approach march* is the advance of a combat unit when direct contact with the enemy is intended (FM 3-0). However, it emphasizes speed over tactical deployment. Both heavy and light forces conduct tactical road marches and approach marches.

14-27. The commander employs an approach march when the enemy's approximate location is known, since it allows the force to move with greater speed and less physical security or dispersion. (See Figure 14-6.) Units conducting an approach march are task-organized before the march begins to allow them to transition to an on-order or a be-prepared mission without making major adjustments in organization. For example, artillery units march within their supported unit's columns, while engineer units are well forward to facilitate mobility. Air defense units may leapfrog short-range and medium-range assets to ensure continuous coverage. The approach march terminates in a march objective, such as an attack position, AA, or assault position, or can be used to transition to an attack. Follow-and-assume and reserve forces may also conduct an approach march forward of a LD.

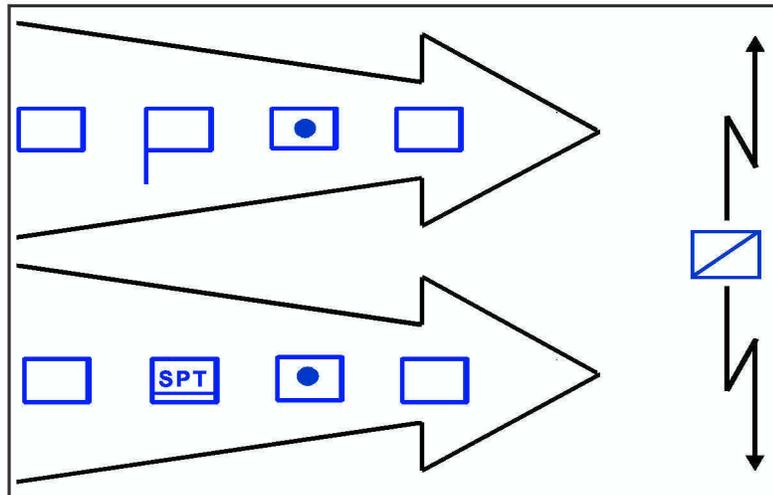


Figure 14-6. Approach March

14-28. Based on the products of his intelligence preparation of the battlefield (IPB) process, the overall commander should assign an AO or an axis of advance in combination with routes to the unit conducting the approach march. These routes, AOs, or axes should facilitate the force's movement and maximize its use of available concealment. Within the approach march, the

commander should assign the force conducting the decisive operation and forces conducting each shaping operation separate routes, AOs, or axes of advance unless an individual unit has the task of either follow-and-assume or follow-and-support.

14-29. As the approach march nears areas of likely enemy interference, the commander divides his main body into smaller, less vulnerable columns that move on additional multiple routes or cross-country while continuing to employ security elements. The commander takes advantage of successful reconnaissance and security operations to increase the distance traveled before the main body must transition to a tactical formation. As discussed in [Chapter 12](#), the advance and any flank guards remain within supporting distance of the main body, which stays in these smaller columns to facilitate rapid movement.

14-30. Tactical road marches and approach marches occur within a theater of war when contact with the enemy is possible or anticipated. This style of movement emphasizes tactical considerations such as security and de-emphasizes efficiency and ease of movement. The commander organizes his unit to conduct combat operations in a tactical movement. A unit generally maintains unit integrity throughout its movement. It plans for enemy interference either en route to or shortly after arrival at its destination. Units conducting either a tactical road march or an approach march use formations and techniques consistent with the factors of METT-TC. The unit may conduct them over unsecured routes if there are no friendly forces between the foremost elements of the moving force and the enemy. The echelon operations officer (the G3 or S3) is the primary staff officer responsible for planning these tactical movements, with input from other staff members.

14-31. There are several differences between an approach march and a tactical road march. A force conducting an approach march employs larger security forces because of its greater exposure to enemy attack. Units conducting an approach march arrange their systems into combined arms organizations. An approach march allows the commander to disperse his task-organized force into a tactical formation in unrestricted terrain without being constrained to existing roads and trails. On the other hand, road marches can organize their columns for administrative convenience; for example, vehicles of similar type, speed, and cross-country capabilities move together. Units conducting an approach march establish appropriate tactical intervals between vehicles; they do not normally employ a close column. They also use more routes than units conducting road marches.

MOVEMENT TECHNIQUES

14-32. The commander uses the combat formations described in [Chapter 3](#) in conjunction with three movement techniques: traveling, traveling overwatch, and bounding overwatch. [Figure 14-7](#) on page 14-10 shows when a unit is most likely to use each technique.

14-33. Movement techniques limit the unit's exposure to enemy fire and position it in a good formation to react to enemy contact. The commander selects the appropriate movement technique based on the chance of enemy contact. While moving, individual soldiers and vehicles use the terrain to protect

themselves anytime enemy contact is possible or expected. They use natural cover and concealment to avoid enemy fires. The following rules apply to soldiers and vehicle crews using terrain for protection:

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

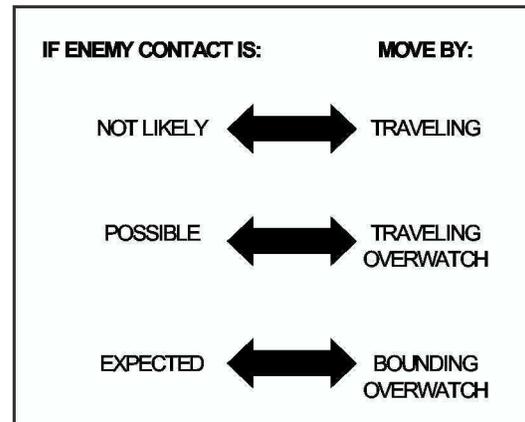


Figure 14-7. Movement Techniques

TRAVELING

14-34. The commander uses the traveling movement technique when speed is necessary and contact with enemy forces is not likely. All elements of the unit move simultaneously. The commander or small-unit leader locates where he can best control the situation. Trailing elements may move in parallel columns to shorten the column and reaction time. (See Figure 14-8.)

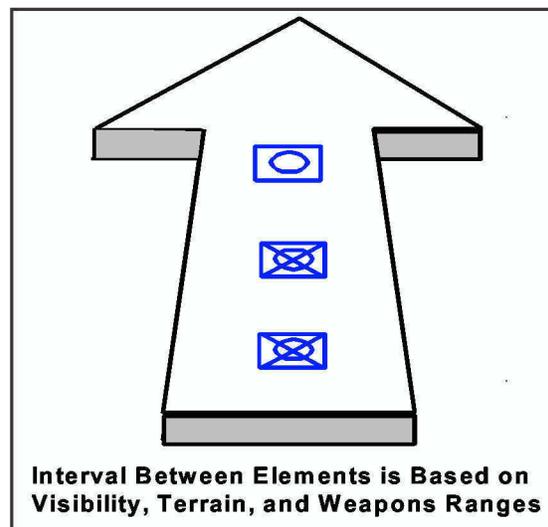


Figure 14-8. Traveling

TRAVELING OVERWATCH

14-35. The commander uses the traveling overwatch movement technique when contact with enemy forces is possible, but speed is important. The lead element is continuously moving, while the trailing elements move at variable speeds, sometimes pausing to overwatch movement of the lead element. (See Figure 14-9.) The trailing elements key their movement to the terrain, overwatching from a position where they can support the lead element if it engages the enemy. The trailing elements overwatch from positions and at distances that will not prevent them from firing or moving to support the lead element.

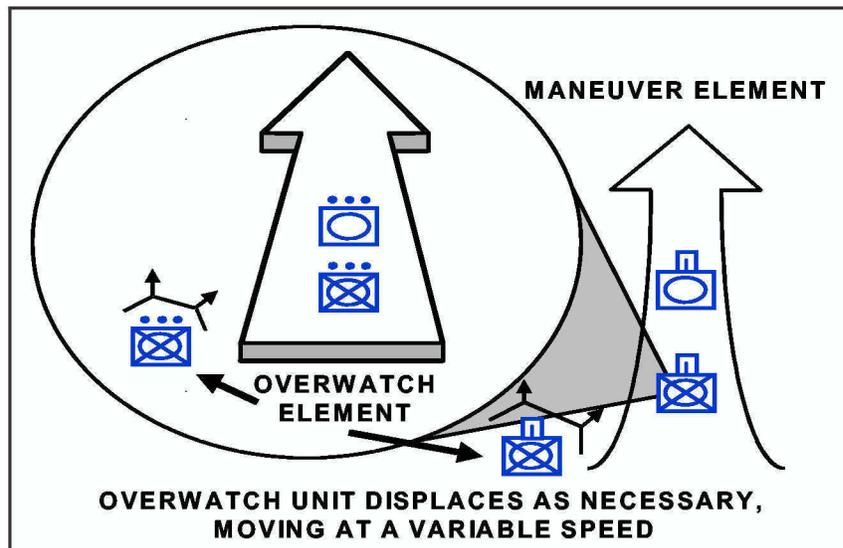


Figure 14-9. Traveling Overwatch

BOUNDING OVERWATCH

14-36. The commander uses the bounding overwatch movement technique when he expects to make contact with enemy forces. There are two variations of this technique: alternate bounds and successive bounds. In both cases, the overwatching elements cover the bounding elements from covered, concealed positions with good observation and fields of fire against possible enemy positions. They can immediately support the bounding elements with maneuver or fires alone 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. The length of the bound is based on the terrain and the range of overwatching weapons. The commander can use the uncommitted part of the force whenever he feels it is needed as part of an immediate and controlled reaction to any threat to the bounding force. In bounding overwatch, all movement keys on the next support-by-fire position, which should offer at least some of the following advantages:

- Cover and concealment.
- Good observation and fields of fire.
- Protection for stationary weapon platforms.

14-37. If the unit uses alternate bounds, the lead element moves forward, halts, and occupies a support-by-fire position that is covered at all times by the rear overwatching element. That former rear overwatching element advances past the former lead element and takes an overwatch position. The initial lead element then advances past the initial trail element and occupies a new support-by-fire position. One element moves at a time. This method is usually more rapid than successive bounds. (See [Figure 14-10](#).)

14-38. If the unit uses successive bounds, the lead element, covered by the trail element, advances and occupies a support-by-fire position. The trail 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 trail element avoids advancing beyond the lead element. (See Figure 14-11.)

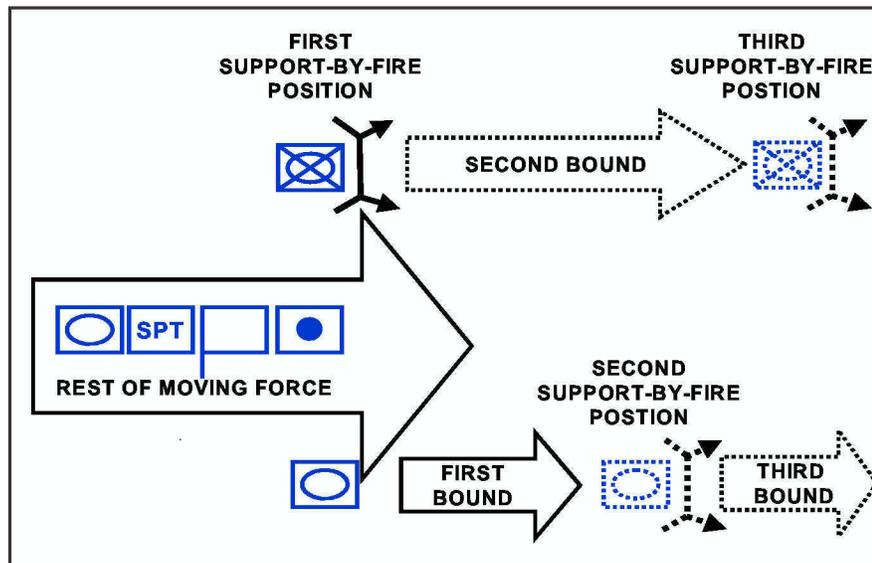


Figure 14-10. Bounding Overwatch—Alternate Bounds

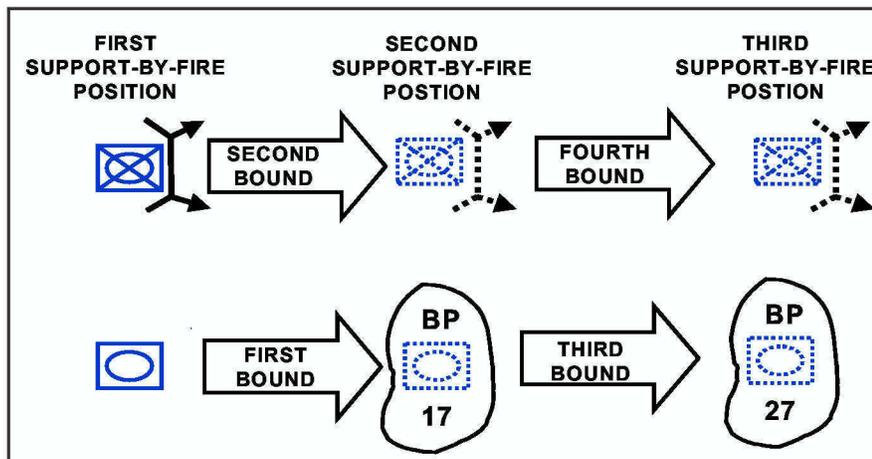


Figure 14-11. Bounding Overwatch—Successive Bounds

PLANNING A TROOP MOVEMENT

14-39. The commander plans, prepares, executes, and assesses troop movements to ensure the organized and uninterrupted flow of tactical units throughout the AO. The objective of a successful move is for the 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. The commander ensures that his unit's movement SOP contain specifics, and he conducts rehearsals to ensure that his soldiers and subordinate leaders understand them. The SOP should use a standard task organization to simplify planning, provide flexibility, and allow greater responsiveness. Such SOP allow for smoother cooperation by

establishing habitual relationships between the unit's subordinate elements and outside supporting elements.

14-40. The movement order is the end result of the commander's planning process. The movement order is prepared as an annex to an operations order (OPORD) or as a separate OPORD. Prepared in a five-paragraph format, it consists of critical information needed by a unit to plan and execute the movement. Information normally found in the movement order includes the destination, routes, orders of march, rates of march, times that each serial (or march element for serial movement orders) will arrive and clear its SP, intervals, speeds, scheduled maintenance halts, communications, and location of the commander. The commander should also identify logistics sites and services in his movement order. He need not include information and procedures contained in movement SOP in the movement order. The movement order should include a strip map or overlay. (The format for a movement order is covered in FM 5-0.)

14-41. The commander bases his movement order on the best available information on the enemy, terrain, weather, unit capabilities, and civil considerations. This plan establishes how the unit will move from its current location to the desired location. The integration of and support from combat and CS—such as artillery, air defense, intelligence, military police, and engineers—are critical for a successful tactical movement. The commander's operations staff develops the detailed movement order, with the assistance of the commander's logistics staff, in accordance with his established priorities.

14-42. The movement order and unit SOP must address the possibility of ambushes, indirect fires, and air attacks. A small-unit SOP includes drills for reacting to these circumstances. Passive measures to mitigate the effects of an air attack include route selection, vehicle intervals, and movement during limited visibility. In case of attack, the commander has an evacuation plan for casualties. This plan takes into account SOP items, such as using combat life-savers and dispersing medical evacuation assets throughout the convoy.

14-43. For units that are not 100-percent mobile in organic vehicles, such as a corps headquarters and many CSS units, the commander can either conduct a shuttle with organic vehicles or request assistance from transportation units. Shuttling requires transporting troops, equipment, and supplies by a series of round trips with the same vehicles. It may also be performed by carrying successive parts of a load for short distances while the remaining soldiers continue on foot.

14-44. The higher headquarters logistics staff normally coordinates the provision of logistics support to moving units, although units carry sufficient fuel and lubricants in their unit trains to conduct local movements. In coordination with the engineers, the logistics staff ensures that routes are adequate to support the movement of the types and numbers of vehicles and supplies projected for movement. The commander must be aware of the load-carrying capability of each route and the distances over which forces can be supported. His logistics operators determine if any logistics assets should displace to support the mission. The commander also establishes halts for refueling as part of his movement plan. Halt times should be long enough and locations large enough to allow the entire march unit to refuel.

14-45. The simplest troop movement scenario to plan and conduct is one where the commander directing the movement controls the entire AO. In this situation, he can use his normal C2 system. The headquarters ordering the tactical road march 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' AO, coordination through various movement control centers is required. Otherwise, a higher headquarters must plan and control the movement.

14-46. Whenever possible, the commander should use multiple routes to move his unit. This reduces the length of columns, the vulnerability to enemy air attack, and the amount of time the routes are not available to other units. Multiple routes provide the commander with the flexibility to react to unexpected situations and permit more rapid concentration of combat power. The two primary disadvantages of using multiple routes are difficulty in exercising C2, and the unit may not have enough resources to provide logistic and maintenance support on all routes.

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, as he determines his traffic circulation plan. A supporting engineer terrain detachment provides him the majority of this information. Engineer reconnaissance obtains necessary information not contained in existing databases. FM 3-34.212 and FM 3-34.310 defines these components and describes how to use them.

14-48. The staff depicts the echelon traffic circulation plan on overlays using transportation control measures. The traffic circulation plan takes into account—

- 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 and light lines, if applicable.
- Routes designated for one-way traffic.
- Separate routes for CSS and tactical units.
- Current data on traffic regulation and control restrictions, obstructions, detours, defiles, capacities, surface conditions, and enemy activities that affect the highway net.

From information contained in the traffic circulation plan, a traffic control plan is prepared—usually by the provost marshal—from information contained in the traffic circulation plan. The traffic control plan normally is prepared in the form of an overlay. The commander primarily uses available aviation, movement regulating teams, and MP units to assist in traffic control, but can assign this mission to other units, such as battalion scout platoons.

PREPARING A TROOP MOVEMENT

14-49. Reconnaissance precedes unit movement. Before a unit starts any march, a reconnaissance element from that unit should reconnoiter the route from its current location to the SP and determine how long it will take the unit to reach the SP. This reconnaissance effort continues beyond the start point and carefully examines the route's trafficability, including the impact of weather, such as ice, snow, and rain. This reconnaissance should also include alternative routes and choke points, such as defiles, bridges, and fords, which could slow the march. This reconnaissance effort complements map and technical reconnaissance and provides the commander with important information about the terrain, obstacles, and potential enemy forces within his AO. He can then take steps to establish TCPs at critical locations along the route or mark the route where it becomes confusing.

14-50. A quartering party often accompanies reconnaissance elements to mark routes and battle positions. The party may also secure new positions with observation posts or limited forces until the unit conducting the movement arrives.

14-51. The unit begins a tactical movement, such as a road march, fully supplied. The unit should refuel 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 road march. The commander may choose to conduct a refuel on the move (ROM) to extend the range of his vehicles. Refuel on the move is a technique in which the commander positions tankers just off the route of the march to refuel combat and tactical vehicles rapidly, but only in the previously established quantities necessary to extend their range to the desired length.

14-52. Based on the form of movement selected and the march and movement techniques adopted, the commander may have to pre-position CSS assets to conduct rapid and efficient refueling and resupply. Generally, a column formation is the easiest movement technique to support. Any other formation requires increased logistics planning. Night movements require special preparation because not all soldiers have night-vision devices. These special preparations include marking vehicles and equipment for easy identification by friendly forces and repositioning vehicles and soldiers closer together so they can detect each others' movement.

EXECUTING A TROOP MOVEMENT

14-53. A unit's ability to execute movement 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 given route and maintaining start, passage, and clear times. March discipline is absolutely 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 when the plan matches conditions and the unit's ability to move.

14-54. The strength and composition of the moving unit's security elements vary, depending on the factors of METT-TC. The commander employs his

organic assets and any supporting security assets to protect his forces from enemy activities. He positions them to the front, rear, and flanks of his formations while moving and at the halt to provide all-around security for the main body. He can also enhance security by adopting a march formation and movement technique that facilitate applying combat power in the direction he expects to make contact with the enemy.

14-55. Higher-echelon CSS organizations may support some tactical movements. When the situation permits, CSS organizations establish maintenance, ambulance exchange, and supply points along the route. While procedures, amounts, and types of external support vary among major commands, each logistics organization ensures that these sites are operational at the designated times and locations. External CSS along the route may include aeromedical evacuation, maintenance, water, and POL. Maintenance sites generally consist of UMCPs where disabled vehicles can be moved for limited maintenance and Class IX supplies. Vehicles unable to continue the movement remain at a UMCP and join their parent organization when repaired. The troop movement is complete when the last march unit clears the RP.

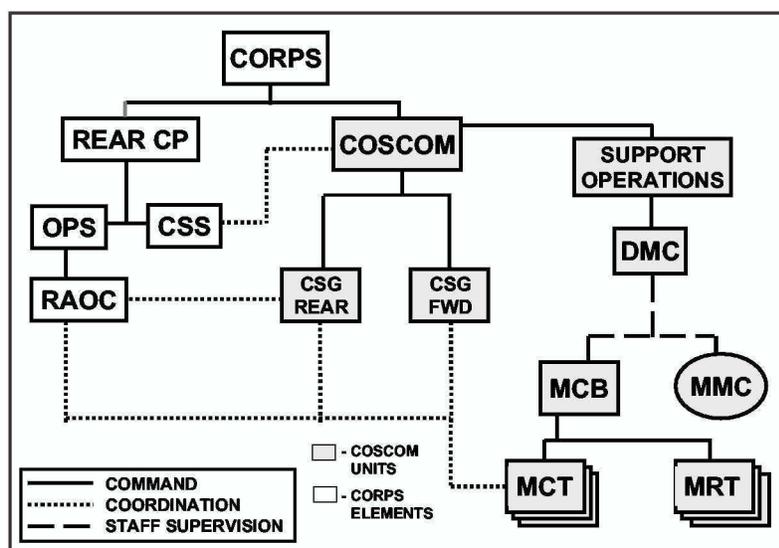


Figure 14-12. Corps Movement Control

MOVEMENT CONTROL

14-56. *Movement control* is the planning, routing, scheduling, and control of personnel and cargo movements over lines of communications (JP 1-02). It is a continuum that involves coordinating and integrating logistics, movement information, and programs that span the strategic, operational, and tactical levels of war. The balancing of requirements against capabilities and assigning resources based on the commander's priorities guides the conduct of movement control. Movement control gives the commander the ability to de-conflict the movement of units—troop movement—and the distribution of supplies and services inherent in the provision of CSS. It is not a simple system as is shown in Figure 14-12 by the number of different agencies involved in corps movement control. (FM 4-01.30 discusses movement control.)

Chapter 15

Relief in Place

... the necessity for conservation of the fighting power of the troops requires provision for the periodic relief of units in line.

FM 100-5, *Field Service Regulations: Operations*, 22 May 1941

A relief in place is a tactical enabling operation in which, by the direction of higher authority, all or part of a unit is replaced in an area by the incoming unit. The directing authority transfers the responsibilities for the mission and the assigned area of operations (AO) from the replaced elements to the incoming unit. A commander conducts a relief in place as part of a larger operation, primarily to maintain the combat effectiveness of committed units. The higher headquarters directs when and where to conduct the relief and establishes the appropriate control measures. Normally, the unit relieved is defending. However, a relief may set the stage for resuming offensive operations. A relief may also serve to free the relieved unit for other tasks, such as decontamination, reconstitution, routine rest, resupply, maintenance, or specialized training. Sometimes, as part of a larger operation, a commander wants the enemy force to discover the relief, because that discovery might cause it to do something in response that is prejudicial to its interest, such as move reserves from an area where the friendly commander wants to conduct a penetration.

15-1. There are three techniques for conducting a relief: sequentially, simultaneously, or staggered. A sequential relief occurs when each element within the relieved unit is relieved in succession, from

right to left or left to right, depending on how it is deployed. A simultaneous relief occurs when all elements are relieved at the same time. A staggered relief occurs when the commander relieves each element in a sequence determined by the tactical situation, not its geographical orientation. Simultaneous relief takes the least time to execute, but is more easily detected by the enemy. Sequential or staggered reliefs can take place over a significant amount of time.

15-2. A relief is either deliberate or hasty, depending on the amount of planning and preparations. The major differences are the depth and detail of planning and, potentially, the execution time. Detailed planning generally

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facilitates shorter execution time by determining exactly what the commander believes he needs to do and the resources needed to accomplish the mission. Deliberate planning allows him and his staff to identify, develop, and coordinate solutions to most potential problems before they occur and to ensure the availability of resources when and where they are needed.

ORGANIZATION OF FORCES

15-3. Both units involved in a relief in place should be of similar type—such as mounted or dismounted—and task organized to help maintain operations security (OPSEC). The relieving unit usually assumes as closely as possible the same task organization as the unit being relieved. It assigns responsibilities and deploys in a configuration similar to the relieved unit.

15-4. The relieving 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 headquarters of the unit being relieved. The commander may also attach additional liaison personnel to subordinate units to ensure a smooth changeover between subordinate units.

CONTROL MEASURES

15-5. Control measures associated with a relief in place are generally restrictive to prevent fratricide. As a minimum, these control measures include the AO with its associated boundaries, battle positions, contact points, start points, routes, release points, assembly areas (AAs), fire support coordinating measures, and defensive fire coordination measures, such as target reference points and engagement areas. (See [Figure 15-1](#).) Expanded discussions of all these control measures appear elsewhere in this manual. A commander may use any control measure he feels is necessary to conduct a relief in place.

PLANNING A RELIEF IN PLACE

15-6. Once ordered to conduct a relief in place, the commander of the relieving unit contacts the commander of the unit to be relieved. The co-location of unit command posts also helps achieve the level of coordination required. If the relieved unit's forward elements can defend the AO, the relieving unit executes the relief in place from the rear to the front. This facilitates movement and terrain management.

15-7. 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, the commander abbreviates the planning process and controls the execution using oral and fragmentary orders. In both cases, the relieved unit designates liaison personnel from its combat, combat support (CS), and combat service support (CSS) elements to remain with the relieving unit until completing the necessary plans. The relieving unit receives current intelligence, operations, and logistics information from the unit being relieved, as well as from common higher headquarters, adjacent units, and subordinate elements. The complexity of a relief in place requires

extensive liaison and reconnaissance. Exchanging information about the enemy and civilian situations, friendly dispositions, terrain analysis, and fire support and obstacle plans, coupled with reconnaissance, helps the relieving commander plan and execute his mission.

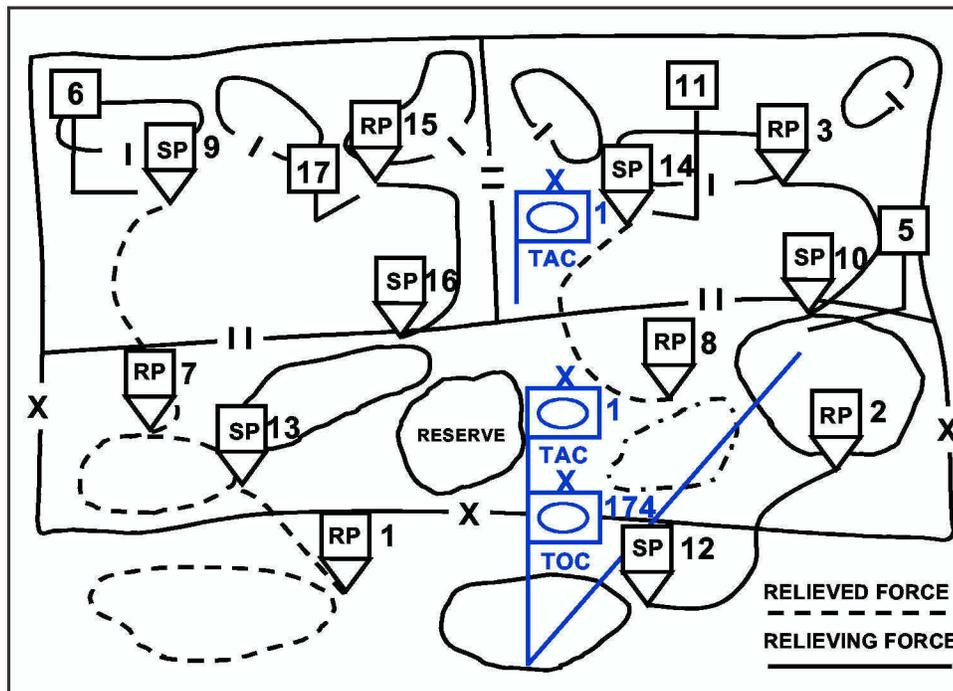


Figure 15-1. Overlay of a Brigade Relief in Place

15-8. The relief is a tactically vulnerable operation. The units involved must concentrate on security while preparing for and executing the operation. The intent of the operation is to complete the relief without discovery by the enemy. Consequently, commanders typically plan reliefs for execution during periods of reduced visibility, such as night or fog. Concealment of the relief from the enemy is a primary concern when the unit is conducting the relief as part of an economy of force measure to free forces for other operations. The enemy should perceive only one unit's command structure in operation—that of the unit being relieved—until completing the operation. This requires a detailed knowledge of friendly vulnerabilities. A counterintelligence assessment of enemy collective capabilities directed against the friendly forces involved in the relief can provide that detailed knowledge.

15-9. Generally, as soon as the mutual higher headquarters issues the warning order, the commander of the relieving unit co-locates one of his command posts with the command post of the unit being relieved. As a minimum, he establishes communications and liaison with that unit. The warning order designates the time of relief, relieving and relieved units, and sequence of events. It specifies the future missions of the relieved force, route priorities, any restrictions on advance parties, any extraordinary security measures, and the time and place for issuing the complete order.

15-10. During a relief, commanders and leaders from the relieving unit should conduct reconnaissance of the area for which they will assume responsibility. This leaders' reconnaissance should include the lowest-echelon leader allowed by the tactical situation. The reconnaissance should focus on the route into the position the unit is to occupy, the positions themselves, the current disposition of the unit being relieved, and any obstacles that could affect troop movement.

15-11. The two commanders must decide on a time or an event that initiates the passage of command. This allows the smooth transition of command and control from one commander to another. Normally, this occurs when the frontline subordinate commanders have assumed responsibility for their respective AOs and the incoming commander has sufficient communication facilities in operation to control the operation. Regardless of their parent organization, all units in the AO come under the operational control of the AO commander if the AO comes under attack or when a specified event occurs during the relief.

15-12. The fire support coordinators coordinate fire support coordinating measures and identify those artillery and other fire support units that are available to support the relief. The relieving unit adopts the fire plan of the unit being relieved. The fire support assets of both units support the relief. This is critical if the enemy detects the relief and tries to exploit the situation. Units plan their fires to deceive the enemy and expedite the relief. Units should maintain normal activity patterns. For example, a unit should continue to expend the same average number of artillery rounds per day during the relief that it expended prior to the initiation of the relief. The commander should not relieve fire support and other CS and CSS units at the same time as the maneuver units they support. The commander relieves these organizations at other times.

15-13. The relief plan must specify the method to use in relieving artillery units. If terrain allows, relieving artillery units should not occupy previously used firing positions. Instead, relieving firing units should establish firing positions nearby those firing positions of the relieved unit and carefully integrate their fire with that of the relieved unit. Occupying firing positions at night or during periods of poor visibility enhances OPSEC.

15-14. Priority of the air defense effort is to protect identified choke points, battle positions, routes to conduct the operation, and AAs. The air defense assets of both units support the relief. The air defense unit supporting the relieving force coordinates with the replaced force's supporting air defense unit. This coordination covers, but is not limited to, air intelligence preparation of the battlefield, rules of engagement, current air activity, present fire unit positions, Army airspace command and control information, the operation plan, logistics, and communications. Higher-echelon and joint air defense organizations may also support the relief. Provisions to obtain local air superiority reduce the vulnerability of the forces during the relief in place when the units involved cannot avoid congestion on the ground.

15-15. The relieving unit verifies the obstacle records of the unit being relieved. Handover of obstacles is a complex procedure. Initially, the engineer priority is on mobility to get the relieving unit into the AO. It focuses on those

routes and lanes leading into the AO. Once the relief occurs, priority of the mobility and survivability effort transitions to support the relieving unit's continuing mission. The commander may require his engineers to assist with survivability tasks to support the relieving force.

15-16. Force-intermingling inherent in a relief, places an increased burden on command and control systems. 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 between all headquarters involved. Establishing early liaison between the stationary and the relieving forces is critical.

15-17. The relieving unit is responsible for all sustaining operations. As the support elements of the unit being relieved displace, they leave the relieving unit supply stocks according to previously coordinated arrangements. If the units conducting the relief have different modified tables of organization and equipment (MTOEs), mission analysis must be conducted to determine how the relieving unit will meet all of its responsibilities and what weapon systems will be used. The unit logistics staff must determine any special support requirements the relieving unit will have and address supporting those requirements with the available supporting organizations. The unit logistics staff ensures that both commanders know of any CSS constraints that might affect the relieving unit. The two units' rear command posts also co-locate and a single headquarters coordinates traffic movement into and out of the AO.

PREPARING A RELIEF IN PLACE

15-18. The commander conceals the relief from the enemy for as long as possible. At the first indication that a relief is necessary, which is usually the warning order for the relieving unit, both the relieved unit and the relieving unit review their OPSEC plans and procedures. Commanders may use deception measures when conducting a relief in place to maintain secrecy. To maintain security during the relief in place, the relieving unit makes maximum use of the relieved unit's radio nets and operators. Both units involved in the relief operate on the command frequencies and encryption variables of the relieved unit at all levels. The relieved unit's signal officer is in charge of communications throughout the relief operation.

15-19. To enhance security, commanders impose light and noise discipline and electromagnetic emission control measures, such as radio silence or radio-listening silence. In joint and multinational operations, the senior commander specifies the frequency bands and equipment types affected. Radio silence is a condition when the commander turns off all or specific radio equipment. Radio-listening silence is a situation in which combat net radios remain turned on and monitored, with strict criteria governing when a station on the radio network is allowed to break silence. An example of radio-listening silence would be, "Maintain radio listening silence until physical contact with the enemy is made."

15-20. The units 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 relieving unit precede its movement with a route reconnaissance to the AA. They conduct reconnaissance of the routes leading from the AAs to the positions of the unit being relieved. The commander of the relieving unit normally conducts a leader's reconnaissance before starting the operation.

15-22. The commander must allocate time to construct individual vehicle fighting positions if a heavy unit is relieving a light unit. In a similar fashion, preparations for an armor heavy unit to relieve a mechanized infantry heavy unit must include expanding individual vehicle fighting positions to accommodate the larger tanks.

15-23. While the units involved plan, prepare, and execute the relief in place, their common higher headquarters and other units continue actions to mask the relief. These include using demonstrations, feints, smoke, and harassing and interdiction fires. The common higher headquarters executes operations to attack and disrupt the enemy's uncommitted and reserve forces during the relief. Its intent is to fix or distract the enemy so that he does not detect or interfere with the relief.

EXECUTING A RELIEF IN PLACE

15-24. In situations where the commander desires to conceal the relief from the enemy, such as during a sequential or staggered relief, the relieving unit may occupy the same positions as the unit it relieves. Alternatively, it may establish more favorable positions within the vicinity of the relieved unit's location. Occupying different positions makes early discovery by the enemy more likely. Any increase in activity in forward positions can reveal the relief to the enemy. Friendly intelligence, surveillance, and reconnaissance systems attempt to detect if the enemy can discover the relief before its completion.

15-25. The enemy can usually detect a relief effort because of the increased activity resulting from the movement of soldiers and equipment out of position by the relieved unit and into position by the relieving unit. Additionally, after any period of combat, there are differences in the types and amount of equipment between the relieving unit and the relieved unit, even if they have the same MTOEs. These differences can also reveal the relief to the enemy. The two units establish guidelines for exchanging compatible equipment and supplies to limit these differences. In addition, 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, a tank-heavy task force relieves a mechanized infantry-heavy task force—inoperable equipment or visual simulators may assist in hiding the change of units.

15-26. In a simultaneous relief, the relieving unit begins moving from its current location to AAs in the AO of the unit being relieved. 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 the enemy additional time to acquire and engage the forces involved. All units in the AO come under the operational

control of the relieving unit commander at the time or triggering event previously established by the plan for the operation.

15-27. As the first relieving element arrives from the AA to assume the position, it establishes a screen of the relieved unit's positions as the tactical situation permits. The remainder of the relieving unit moves forward to positions behind the unit being relieved. The relieving unit may use the relieved 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, if possible, the commander of the relieving unit informs all units involved in the relief of the passage of command.

15-28. The relieved unit continues to defend. The relieving unit's advance parties coordinate procedures for the rearward passage of the relieved unit. On order, the relieved unit begins withdrawing through the relieving unit and moves to AAs. Crew-served weapons are usually the last elements relieved after exchanging range cards. The relieving unit replaces them on a one-for-one basis to the maximum extent possible to maintain the illusion of routine activity. The relieved unit's CS and logistics assets assist both the relieved unit and the relieving unit during this period.

15-29. 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 relieved unit's artillery and other fire support assets remain in place until all other relieved elements displace and are available to reinforce the fires of the relieving 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.

15-30. Multiple main supply routes that allow only one-way traffic can simplify the forward and rearward movement of both units. The relieving unit's rear command post controls both units' military police and any other traffic management assets. (The main command post performs these functions if the echelon does not have a rear command post.) The commander uses these assets to help control unit and convoy movement on lines of communications, main supply routes, and movement routes throughout his AO.

15-31. In the future, it is likely that conflicts will involve the relief of an allied or coalition force. The commander should consider the following 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.
- Using relieved unit communications requires special signal arrangements and additional operators.
- Ammunition and equipment incompatibility may make exchanging assets more difficult.
- Impact of civilians on the operations.