

Chapter 16

Passage of Lines

The principal task involved in a passage of lines is the preparation for continuing the attack.

FM 1005, *Field Service Regulations: Operations*, 22 May 1941

Passage of lines is a tactical enabling operation in which one unit moves through another unit's positions with the intent of moving into or out of enemy contact. A commander conducts a passage of lines to continue an attack or conduct a counterattack, retrograde security or main battle forces, and anytime one unit cannot bypass another unit's position. The conduct of a passage of lines potentially involves close combat. It involves transferring the responsibility for an area of operations (AO) between two commanders. That transfer of responsibility usually occurs when roughly two-thirds of the passing force has moved through the passage point. If not directed by higher authority, the unit commanders determine—by mutual agreement—the time to pass command. They disseminate this information to the lowest levels of both organizations.

- 16-1. The commander's reasons for conducting a passage of lines are to—
- Sustain the tempo of an offensive operation.
 - Maintain the viability of the defense by transferring responsibility from one unit to another.
 - Transition from a delay or security operation by one force to a defense.
 - Free a unit for another mission or task.

The headquarters directing the passage of lines is responsible for determining when the passage starts and finishes.

16-2. A passage of lines occurs under two basic conditions. A **forward passage of lines** occurs when a unit passes through another unit's positions while moving toward the enemy. A **rearward passage of lines** occurs when a unit passes through another unit's positions while

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moving away from the enemy. Ideally, a passage of lines does not interfere with conducting the stationary unit's operations.

ORGANIZATION OF FORCES

16-3. A unit may participate in a passage of lines as either the passing or stationary force. Except for co-locating command posts and providing for guides by the stationary force, conducting a passage of lines does not require a special task organization. Both the passing force and the stationary force maintain their previous combat organization during the passage. Usually, if the stationary unit has the capability, it is responsible for conducting operations against uncommitted enemy forces. However, operations directed against uncommitted enemy forces may be the responsibility of a higher echelon, depending on the echelon at which the passage takes place.

16-4. A forward passing unit's order of march is generally reconnaissance and security elements first. The ground combat force move next, followed by combat support (CS) and combat service support (CSS) units. The commander integrates his artillery, air defense, and engineers into the order of march in accordance with the factors of METTTC. The passing unit reverses this order of march in a rearward passage of lines. The stationary unit normally provides the moving unit with guides to expedite the passage. Attack helicopters and air cavalry are useful in providing security.

CONTROL MEASURES

16-5. Control measures associated with a passage of lines are generally restrictive to prevent fratricide. As a minimum, they include the AO, assembly areas (AAs), attack positions, battle handover line (BHL), contact points, passage points, passage lanes, routes, gaps, phase lines, and recognition signals. The headquarters directing the passage designates or recommends contact points, passage lanes, AAs, routes, and start and end times for the passage. The commander may also use start points, release points, fire support coordinating measures, such as coordinated fire lines (CFLs), and other control measures as necessary to conduct this task. (See [Figure 16-1](#), page 16-2.) Unless the higher headquarters of the two units establishes the necessary graphic control measures, the stationary unit establishes them for the passage. However, the stationary unit commander must coordinate them with the passing unit commander. The stationary unit establishes these measures because it owns the terrain, it knows where the obstacles are, and it knows the tactical plan. If the control measures dictated by the higher headquarters are not sufficient—because they do not contain enough passage points, lanes, and so forth—the two units can agree to add the necessary measures.

16-6. A **passage point** is a specifically designated place where the passing units pass through the stationary unit. The location of this point is where the commander wants subordinate units to physically execute a passage of lines. In a forward passage of lines, the passage point marks the location where the passing unit is no longer bound by the restrictions placed on it by the stationary force. On the other hand, in a rearward passage of lines, the passage point marks the location where the stationary unit can restrict the movement and maneuver of the passing force. Between the contact

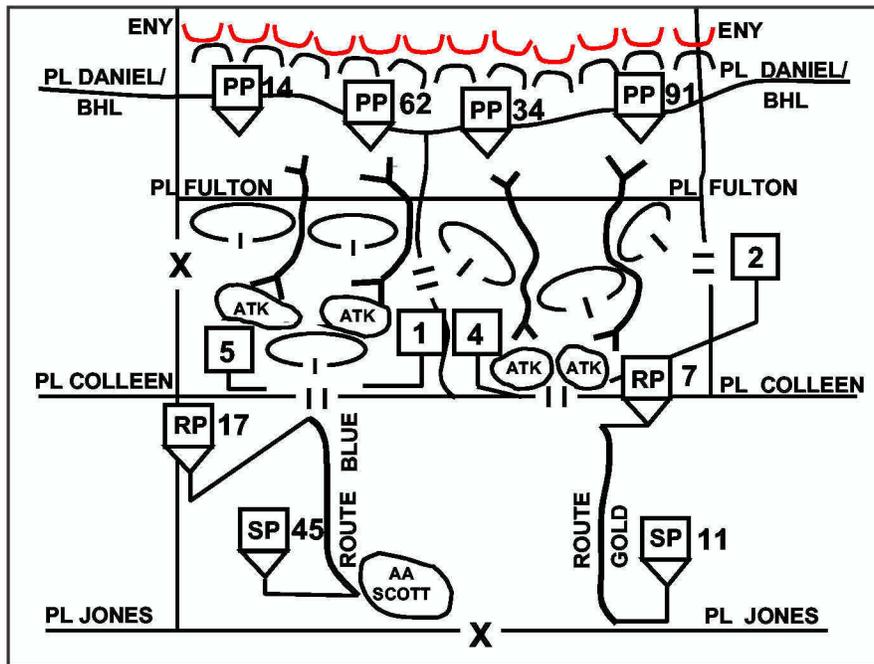


Figure 16-1. Control Measures Associated with a Forward Passage of Lines

point and the passage point, the stationary unit controls the passing force's movement. Figure 16-2 depicts the graphic control measure for passage point 8.

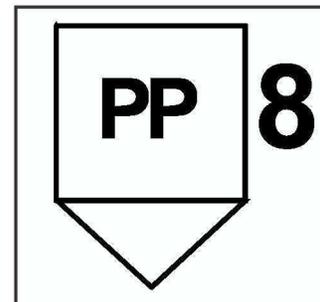


Figure 16-2. Passage Point 8

16-7. A **passage lane** is a lane through an enemy or friendly obstacle that provides safe passage for a passing force. The lane may be cleared, including being reduced and proofed, as part of a breach operation, or it may be included as part of the design of a friendly obstacle. It is a clear route all the way through an obstacle.

Passage lanes normally end where a route begins. That route should allow the passing unit to move rapidly through the stationary unit's area. Figure 16-3 depicts the graphic control measure for a lane.

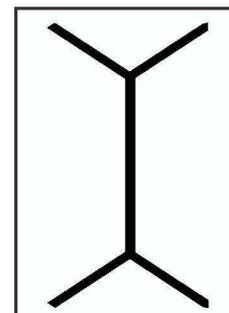


Figure 16-3. Lane

16-8. A **gap** is an area free of armed mines or obstacles whose width and direction allow a friendly force to pass through the area containing obstacles while dispersed in a tactical formation. The presence of gaps prevents inadvertent concentrations of soldiers and equipment around the entry points of lanes. Figure 16-4 depicts the graphic control measure for a gap.

PLANNING A PASSAGE OF LINES

16-9. As with any activity involving transferring combat responsibility from one unit to another, the complex nature of a passage of lines involves risk. As with other operations, a passage of lines may be categorized as deliberate or hasty. During a passage of lines, the commander normally maintains the established tempo. Sustaining that established tempo requires detailed planning and preparations for a deliberate passage of lines. In this case, both the stationary and moving force have time to—

- Publish written orders.
- Exchange plans, intelligence information, databases, and liaison personnel.
- Conduct briefings and detailed reconnaissance.
- Conduct rehearsals.

The commander uses oral and fragmentary orders to conduct a hasty passage of lines.

16-10. In a passage of lines, the headquarters directing the passage is responsible for designating—

- Subsequent missions for both forces.
- When and under what conditions passage of command takes place.
- Start and finish times for the passage.
- Contact points between the units involved.
- Common maneuver control measures and graphics.

The directing headquarters normally establishes this information in either the warning order or the order directing the passage. In the absence of higher-echelon guidance, close coordination and understanding between the commanders and staffs of the two units are essential to a smooth passage.

16-11. The unit commanders plan the passage of lines to maintain enemy contact and provide constant fires on the enemy. Commanders reduce risk and ensure synchronization through detailed planning and decentralized execution. With forces intermingling during the passage, the need for positive control increases. The passage requires close coordination, clearly understood control measures, liaison between all headquarters and echelons involved in the passage, and clear identification of the moment or event that causes one force to assume responsibility for the AO from another.

16-12. After receiving the warning order that directs a passage of lines, the passing unit's commander and key staff representatives generally co-locate with the command post of the stationary unit to facilitate in planning the passage and establishing common situational understanding. If the passing unit cannot co-locate one of its command posts to help plan the passage, it conducts extensive liaison with the stationary unit. The planning focus for both the passing unit and the stationary unit is on operations following the passage. While this occurs, the two units involved coordinate the following:

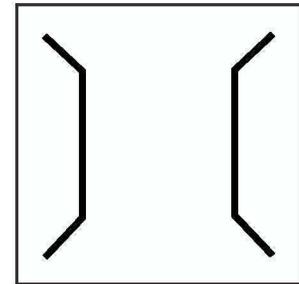


Figure 16-4. Gap

- The exchange of intelligence and combat information.
- Current friendly dispositions and tactical plans, especially deception and obstacle plans.
- Direct and indirect fires and close air support plans.
- Any necessary maneuver control measures and graphics not directed by the higher headquarters, such as boundary changes, the BHL, emergency CSS points, and AA and firing positions for artillery, air defense, and other units.
- Long-range and short-range recognition symbols and vehicle markings to reduce the probability of fratricide.
- When and under what conditions control of the AO transfers from one headquarters to the other, if not previously established.
- Provisions for movement control, including contact points, start and release points, primary and alternate routes, route selection, priorities for using routes and facilities, passage points, and provision for guides.
- Reconnaissance by elements of the passing unit.
- Signal operating instruction details, such as call signs, frequencies, and recognition signals.
- Security measures during the passage, including nuclear, biological, and chemical reconnaissance or biological detection systems.
- Fires, obscurants, and any other combat, CS, and CSS provided by the stationary unit.
- Measures to reduce both units' vulnerability to attack by enemy weapons of mass destruction.
- Operations security measures required before or during the passage.
- Allocation of terrain for use by the passing force.
- Air defense cover—up to and forward of the BHL.
- Logistics support for the passing unit provided by the stationary unit, especially fuel, maintenance, and medical treatment.

16-13. The fire support elements of both the stationary and the passing unit must agree on allocating firing positions. The AO commander controls the allocation of firing positions in case of disagreement. These positions must be far enough forward to support the operation without having to redeploy during critical stages of the battle. The fire support elements normally position in areas not identified by the enemy.

16-14. Detailed air defense planning is essential for a passage of lines. Moving units tend to move slowly and often in some type of column formation during the passage. Vehicle congestion presents lucrative targets to enemy aircraft. In most cases, the stationary air defense elements can protect the passing force, allowing the air defense units supporting the passing force to move with the passing force. Dissemination of early warning and Army airspace command and control information reduces the risk of fratricide to friendly aviation assets while increasing the probability of the timely detection of enemy air. Strict adherence to identification, friend-or-foe (IFF)

procedures among pilots and air defense fire units is critical, especially during periods of limited visibility. Local air superiority also reduces the vulnerability of the two forces when congestion cannot be avoided on the ground.

16-15. Once a passage of lines begins, it occurs quickly. Where possible, the operation takes place when the enemy has the least capability to detect it, such as at night or during periods of reduced visibility. In any passage of lines, the commander considers using smoke to screen friendly movement, even at night.

16-16. The passing unit prefers to conduct the passage through a gap in the stationary unit's positions rather than through a lane or a route that traverses those positions. This reduces the vulnerability that results from concentrating forces when one unit passes directly through the occupied positions of another unit. It also avoids the danger of concentrating the passing unit into passage lanes.

16-17. In a forward passage of lines, when there are no gaps through the stationary unit's positions, each battalion task force normally needs at least two passage lanes. In a rearward passage of lines, each battalion needs at least one passage lane. In both cases, a brigade needs at least one additional lane for its tactical vehicles. The routes and lanes provide cover, concealment, and rapid movement of the passing force. The commander may designate alternative routes and lanes for elements of the moving force that are contaminated. They should not disrupt the combat capability of the stationary unit. The commander seeks additional lanes to speed the process if the terrain and enemy situation allow.

16-18. The passing unit normally has priority of route use to and within the stationary unit's AO. Clearing and maintaining passage routes up to the BHL are the responsibility of the stationary force. The stationary force must provide an obstacle overlay of its obstacles. The passing unit must be prepared to help maintain these routes, and it positions its engineer equipment accordingly. The stationary unit is responsible for traffic control within its AO until the passing unit assumes control. During the passage, the passing unit augments the traffic-control capability of the stationary unit as required.

16-19. Based on the commander's concept and intent, the passing force focuses its planning effort on two general areas: coordination with the stationary force and guidance to subordinate units conducting the passage. These planning efforts occur simultaneously. If the enemy attacks during the passage, the plan probably requires modification to prevent hampering friendly maneuver.

16-20. Executing a passage of lines successfully requires effective communication between the two units. The commanders build redundancy of communication signals and means into their passage plans, such as using mobile subscriber equipment and combat net radios. The commanders also designate contact points to ensure effective communication between the two forces at the lowest tactical level.

FORWARD PASSAGE OF LINES

16-21. The purpose of a forward passage of lines is to move forces forward to conduct operations. It ensures the maintenance of enemy contact while allowing the relief of previously committed forces. The stationary force must control and secure the AO far enough to its front that the moving force can pass through the stationary force and reform into a combat formation prior to contact with an enemy force. Generally, the stationary unit supports the passing unit until the passing unit masks the stationary unit's direct fires. The stationary unit continues to support the passing force with its fire support systems until the passing unit moves beyond the supporting range of the stationary force. The stationary unit is also responsible for the security of the line of departure of the forward passing unit until it is able to assume that responsibility. The boundaries of the forward passing force after it completes its passage do not have to coincide with the boundaries of the stationary force. (See Figure 16-5.)

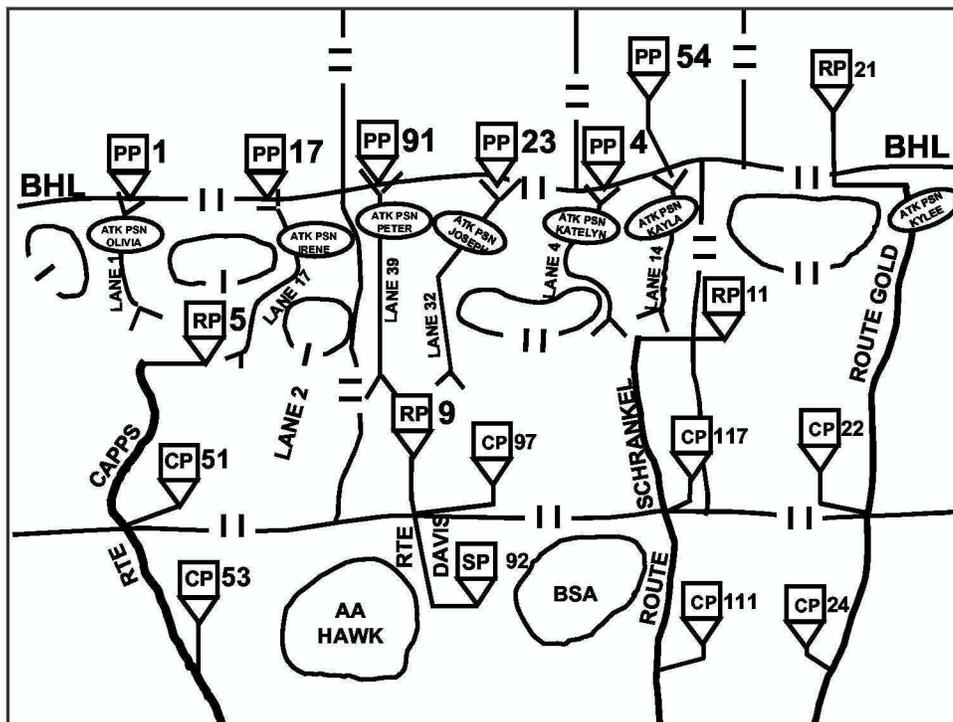


Figure 16-5. Forward Passage of Lines

PREPARING A FORWARD PASSAGE

16-22. The passing unit conducts reconnaissance from its current location to its designated AAs, which are generally located to the rear of the stationary unit. After completing its reconnaissance, the passing unit occupies these AAs.

16-23. The commander should organize the passing force for its subsequent mission before initiating the forward passage of lines. The passing force avoids regrouping in forward AAs or attack positions.

EXECUTING A FORWARD PASSAGE

16-24. When the passing force moves forward, it should move without a halt through the stationary unit while deployed in a combat formation. That minimizes the time the two forces are concentrated in the forward area, making them less vulnerable to enemy attack.

16-25. Support by the stationary force ends when the combat elements of the moving force, including the reserve, have moved beyond direct-fire range. However, artillery, air defense, and other long-range systems may remain to support the passing unit until a previously designated event occurs or a higher headquarters directs another mission.

16-26. When executing the forward passage, the passing unit's reconnaissance elements operate forward of the release points and establish a screen in front of the passing unit. The stationary unit continues to conduct aggressive security operations throughout the passage of lines. The movement of main body forces begins from their AAs to attack positions, where the passing unit conducts its final preparations for the passage of lines and the attack. The passing unit moves to and occupies attack positions when observation by the enemy is unlikely. The stationary unit clears any obstacles from designated passage gaps, lanes, or routes, and guides elements of the passing unit from the contact point through the passage points.

16-27. The direct and indirect-fire assets of the stationary unit normally support the movement of the passing unit. Offensive information operations—especially electronic attack—directed against enemy command and control (C2) nodes disrupt his dissemination of information and his reaction to friendly operations. Any preparatory or covering fires should coincide with the passing unit's movement from the attack position to the passage lanes. After the forward moving unit commander assumes responsibility for the AO, he coordinates all fire support. Depending on the situation at the time, the passing commander may continue to use only the fire support assets of the stationary force until the passage of lines is complete. This allows the passing unit's fire support assets to move forward, in the case of artillery, or remain available to support the passing unit's forward movement, in the case of attack helicopters and close air support. On passage of command, the passing commander also assumes control of fires forward of the BHL. For example, he moves the CFL forward to conform to the movement of his forward security elements.

16-28. The superior headquarters of the forces involved should exercise overall C2 of the passage. In a forward passage, the commander of the passing force normally assumes responsibility for conducting operations beyond the BHL once the attack begins. In practice, however, it is useful to complete the transfer of responsibility, including fire support, just before starting the operation. During the passage, two parallel chains of command are operating in one area simultaneously, and the possibility of confusion exists. A successful passage of lines requires clear C2 responsibilities. The passing unit's command post passes through the lines as soon as possible after the lead elements complete their passage and locates where it can best control operations.

16-29. The stationary unit furnishes the passing unit with any previously coordinated or emergency logistics assistance within its capabilities. These typically include—

- Evacuating casualties and enemy prisoners of war.
- Controlling dislocated civilians.
- Using areas and facilities such as water points and medical facilities.
- Controlling routes and traffic management.
- Recovering disabled vehicles and equipment.

The passing force normally assumes full responsibility for its CSS support forward of the BHL.

16-30. When dissimilar units, such as light infantry and mounted forces, are involved in a passage of lines, the principles involved are the same; however, the execution is different. For example, the type and amount of support provided by the stationary unit will change. In some cases, the higher headquarters ordering the passage needs to provide assets to support the passage.

REARWARD PASSAGE OF LINES

16-31. A rearward passage of lines is similar in concept to a forward passage of lines. It continues the defense or retrograde operation, maintaining enemy contact while allowing for recovery of security or other forward forces. This operation may or may not be conducted under enemy pressure. Counterintelligence analysis provides an assessment of enemy collection against friendly forces, specified by gaps and vulnerabilities, and countermeasures to enemy collection. Additionally, that analysis provides the commander with a view into the enemy's decision making and intelligence cycles and the time period in which the enemy may discover the movement.

PLANNING A REARWARD PASSAGE

16-32. Planning procedures for a rearward passage of lines closely resemble the planning procedures for a forward passage of lines. However, rearward movement is likely to be more difficult because of the following:

- The enemy probably has the initiative, which tends to reduce the time available to conduct liaison and reconnaissance and make detailed plans.
- If the rearward moving force has been in action, its soldiers are tired and possibly disorganized to some degree.
- The enemy may be applying pressure on the passing force.
- Friendly forces may be more difficult to recognize because enemy forces may be intermixed with them.

16-33. Close coordination between the two commanders is crucial to successfully executing the rearward passage and subsequent transfer of responsibility. This requirement for close coordination is even more critical when the tactical situation results in a staggered or incremental rearward passage across an AO. The passing commander relinquishes control of his elements remaining in contact at the time of the transfer of responsibility to the stationary commander. Generally, the stationary unit assumes control of the AO

forward of the BHL after two-thirds of the passing force's combat elements move through the passage points.

16-34. After receiving the warning order, the passing unit begins coordination and establishes communication with the stationary unit. The commanders of these units coordinate the same details as those outlined for a forward passage of lines. For example, the stationary commander coordinates for fires to support the rearward passing force. The two staffs coordinate those control measures necessary to support retrograde operations and their associated rearward passage of lines. (See paragraphs 16-5 to 16-8.) The commanders establish a probable time to initiate passage. The stationary commander assigns responsibility for closing and executing obstacles.

16-35. The stationary unit identifies multiple routes through its AO and across its rear boundary to AAs. The passing unit begins reconnaissance of these routes as soon as possible. The stationary unit must physically show all obstacles and routes and gaps through them to the passing unit. It provides guides for the passing unit—especially through obstacles—and mans contact points and passage points. The passing unit begins to reconnoiter its routes to the established contact points with the stationary unit's troops. The stationary unit establishes a security area in which responsibility transitions from the moving force to the stationary force. Normally, a BHL designates the forward edge of this area. The BHL is within direct-fire range and observed indirect-fire range of the stationary force.

PREPARING A REARWARD PASSAGE

16-36. The command posts of both units involved should move to a position where they can co-locate as part of the preparations for the rearward passage. This co-location reduces the risk associated with a passage because it makes it easier to coordinate between the two units. If circumstances prevent the units' command posts from co-locating, they must exchange liaison teams to ensure thorough coordination. If necessary, fire support assets from the stationary force occupy positions forward of their primary positions to give maximum coverage of forces of rearward moving unit.

EXECUTING A REARWARD PASSAGE

16-37. The passing unit maintains command of its subordinate elements throughout the retrograde and rearward passage. The normal order of march in a rearward passage of lines is CSS elements, main command post, CS elements, tactical command post, and combat units. The passage point marks the location where the passing unit comes under the control of restrictions placed by the stationary unit. (See [Figure 16-6](#).) Note that the unit on the far right does not have a passage point because of the gap existing at that location. If the enemy continues to press his attack during the passage, the passing unit controls the battle from co-located command posts while the stationary unit monitors and controls the passage of lines until battle handover occurs. The passing unit's command post passes through the lines as soon as possible after the lead elements complete their passage. On passage of command, the stationary unit assumes the defense of the AO.

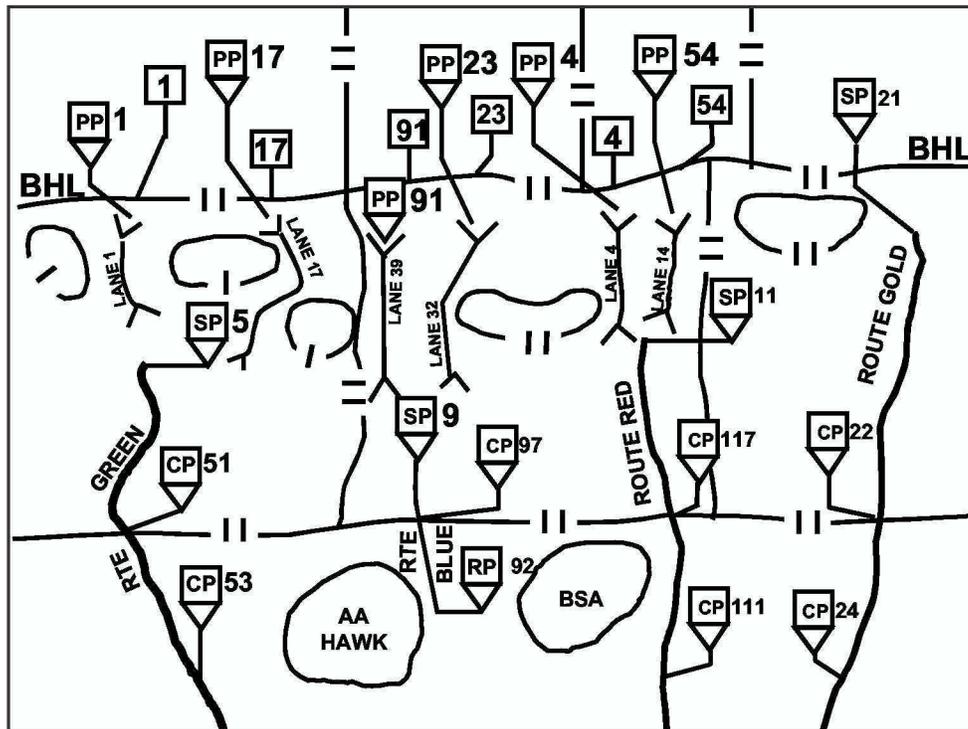


Figure 16-6. Rearward Passage of Lines

16-38. The stationary unit provides the passing unit with as much assistance as possible. Pivotal to the success of the rearward passage of lines is providing indirect and direct fire support by the stationary unit to the passing unit. This is especially important in covering the withdrawal of elements left in contact during a delay. The stationary unit's fire support assets answer calls for fire from the passing unit until battle handover occurs. The passing unit's fire support assets echelon rearward to provide continuous fire support for the passing unit until it successfully disengages. Once the passing unit hands over control of the battle to the stationary unit, the stationary unit initiates and clears calls for all fires forward of its location. The same procedure applies to the dedicated air defense assets of the passing and stationary units.

16-39. The stationary unit's engineer assets provide support to prepare the defense and execute the passage. Priority of effort initially ensures that the passing unit is able to move through passage lanes around the stationary unit's defensive positions. It shifts to close these passage lanes once the passing unit and any security elements disengage and withdraw through the security area and obstacles.

16-40. The stationary unit provides the passing unit with the previously coordinated CSS as far forward as possible. The stationary unit concentrates on providing the passing unit with emergency medical, recovery, and fuel supplies to enable the passing unit to rapidly move through the stationary unit's positions.

Appendix A

Army Branches and Tactical Echelons

It is not so much the mode of formation as the proper combined use of the different arms which will insure victory.

Antoine Henri, Baron de Jomini: *Precis de l'Art de la Guerre*, 1838

The Army consists of the active component, reserve components, and civilians acting in concert with other US services and allies. Its flexibility, versatility, and adaptability are based on a broad range of branch capabilities and echelons that can be rapidly tailored for deployment and task-organized for the prevailing conditions of METT-TC. The Army groups its force structure into three general categories: combat, combat support (CS), and combat service support (CSS). Each category incorporates diverse capabilities of varying degrees of lethality, deployability, sustainability, and survivability. There are more than 400 types of Army units. Each category complements and reinforces the others and the joint force. Appropriate combinations provide a balanced and versatile force mix, maximizing the commander's freedom of action in virtually any METT-TC condition.

A-1. There is no primary or dominant branch or arm. One branch reinforces or complements the effects of another, such as heavy forces in a support-by-fire position reinforcing an assault by light forces with their large-caliber, direct-fire weapons. Some branches have capabilities that can be described as combat arms, CS, or CSS, depending on the specific situation. Much of a

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commander's effectiveness during an operation relies on his ability to rapidly reinforce and complement weapon systems' effects in symmetrical and asymmetrical ways.

COMBAT ARMS

A-2. **Combat arms** are units and soldiers who close with and destroy enemy forces or provide firepower and destructive capabilities on the battlefield. Combat branches of the US Army include Air Defense Artillery, Armor, Aviation, Engineers, Field Artillery, Infantry, and Special Forces (SOF). Figure A-1 lists some types of units that deploy to support operations. The Army classifies combat arms units as heavy, light, or special operations forces. However, the Army is currently developing a medium weight force capable of increased strategic responsiveness in full spectrum operations.

<ul style="list-style-type: none"> • AIR DEFENSE ARTILLERY <ul style="list-style-type: none"> ▪ Short Range ▪ Theater Air Defense ▪ Theater Ballistic Missile Defense • ARMOR <ul style="list-style-type: none"> ▪ Armor ▪ Armored Cavalry ▪ Light Cavalry • AVIATION <ul style="list-style-type: none"> ▪ Attack ▪ Assault ▪ Air Cavalry • ENGINEERS <ul style="list-style-type: none"> ▪ Mobility ▪ Countermobility ▪ Survivability 	<ul style="list-style-type: none"> • INFANTRY <ul style="list-style-type: none"> ▪ Light ▪ Mechanized ▪ Motorized ▪ Air Assault ▪ Airborne • FIELD ARTILLERY <ul style="list-style-type: none"> ▪ Target Acquisition ▪ Cannon Artillery ▪ MLRS/ATACMS • SPECIAL OPERATIONS FORCES <ul style="list-style-type: none"> ▪ Ranger ▪ Special Forces ▪ Special Operations Aviation
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Figure A-1. Combat Arms Capabilities

A-3. Heavy forces employ a combination of armored and mechanized forces that use their tactical mobility, protection, and firepower to close with and destroy the enemy, seize and hold terrain, and conduct reconnaissance. They consist of armor, mechanized infantry, aviation, and armored cavalry. Heavy forces employ tanks, armored fighting vehicles, attack and utility helicopters, and dismounted infantry to form the nucleus of a combined arms team that delivers mobile, protected firepower to create tremendous shock effect. The combination of mobile, protected firepower with dismounted infantry achieves complementary and reinforcing effects that neither can attain separately. However, restricted and urban terrain place limits on where the commander can employ them.

A-4. Light forces close with and destroy the enemy, seize and hold terrain, and gain information. Light forces traditionally include light infantry,

airborne, and air assault forces. Light forces are particularly suited to operations in restricted and urban terrain, where they have a mobility advantage over heavy forces. Light forces are limited by a relative lack of protection against direct and indirect fires and limited firepower compared with heavy forces. They also have limited organic tactical mobility once deployed into an area of operations (AO) compared to heavy forces. While light forces may be lifted into engagement areas (EAs) by truck, helicopter, or airplane, they fight mainly on foot. Depending on the factors of METT-TC, light forces either complement or are complemented by heavy forces.

A-5. Special operations are actions conducted by specially organized, trained, and equipped military forces to achieve military, diplomatic, economic, or psychological objectives by unconventional means. Special operations forces can reinforce, augment, and complement conventional forces, heightening the effectiveness of the total effort. These forces can also conduct independent operations in situations that demand a small, discrete, highly trained force. The principal SOF missions are—

- Unconventional warfare.
- Foreign internal defense.
- Psychological operations. (See Paragraph A-37.)
- Civil affairs. (See Paragraph A-36.)
- Information operations.
- Direct action.
- Special reconnaissance.
- Combating terrorism.
- Counterproliferation.

Five types of units compose Army SOF. Army special operations aviation (SOA), rangers, and special forces (SF) units are combat arms forces. Civil affairs (CA) and psychological operations (PSYOP) units are CS organizations. FM 3-05 is the capstone manual for Army SOF.

A-6. The Army is currently fielding two initial brigade combat teams (IBCTs) as the prototypes of a medium weight force designed for increased strategic responsiveness across all types of military operations. After experimentation, these two IBCTs will transform into an interim, strategically responsive force, which may expand to encompass almost a third of the regular Army's ground maneuver brigades. The desired end state of the objective force is an operational force strategically responsive through increased deployability and greatly reduced sustainability requirements when compared with current heavy forces. The goal for the objective force is to deploy a brigade anywhere in the world and close within 96 hours, given sufficient ports and strategic lift. The objective force will also retain or increase the tactical agility, lethality, and survivability of current heavy forces and the versatility of current light forces. Developing the objective force's combat and tactical vehicles requires scientific and technological breakthroughs.

AIR DEFENSE ARTILLERY

A-7. Air defense artillery (ADA) units provide force protection against air and missile threats. Tactical air defense supports the overall objectives of divisions and corps. Air defense artillery air and missile defense units protect

maneuver forces and vital assets. Divisional ADA units provide short-range air defense (SHORAD) protection for units conducting tactical combat operations. Corps ADA brigades have both SHORAD and high-to-medium altitude air defense (HIMAD) missile defense units to protect corps assets and reinforce divisional ADA units.

A-8. Air defense artillery units contribute to intelligence and information operations by gathering and disseminating information about the enemy air order of battle. They also contribute by denying the enemy the ability to operate his own reconnaissance and command and control (C2) aircraft. (FM 3-01 is the capstone ADA manual. FM 3-01.12 discusses Army theater missile defense.)

ARMOR

A-9. The tank is the primary offensive ground weapon in mounted warfare. Its firepower, protection from enemy fire, and speed create the shock effect necessary to disrupt or defeat the enemy. Tanks can destroy enemy armored vehicles, infantry, and antitank guided missile carriers. Tanks can break through suppressed defenses, exploit the success of an attack by striking deep into the enemy's rear area, and pursue defeated enemy forces. Armored units can also blunt enemy attacks and launch counterattacks as part of a defense.

A-10. The primary missions of cavalry units are reconnaissance and security. A cavalry unit's ability to find the enemy, develop the situation, and provide the commander with reaction time and security also makes it ideal for operating in an economy-of-force role. Cavalry forces can delay an attacking enemy and assist in a withdrawal. (There is no capstone manual for armor operations. Doctrine on heavy combined arms echelons is found in FMs 3-91.1, 3-91.2, 3-91.3, and 3-93. FM 3-20.95 addresses cavalry operations.)

AVIATION

A-11. The firepower, agility, and speed of Army aviation permit ground commanders to close with and defeat a wide range of enemy forces. Attack helicopters are ideally suited for rapid reaction during decisive, shaping, and sustaining operations where the terrain restricts or prohibits ground force occupation. Attack helicopters can influence the battle when ground forces are decisively engaged. The tactical mobility provided to airborne, air assault, and light infantry by assault aviation is limited by weather and lift asset availability.

A-12. Air cavalry platoons and troops can reconnoiter and maintain surveillance coverage over a much larger area in a shorter period of time than ground platoons and troops, but with less detail on ground features. During security operations, air cavalry reconnoiters, screens forward and to the flanks of ground forces, and acts as a rapid-reaction force. Scout helicopters provide a wide range of reconnaissance and security capabilities. Air cavalry scouts are essential in detecting and identifying enemy forces throughout the battlefield—an important source of real-time battlefield information. On-board radars and digital communications are key to the rapid dissemination

of combat information that these systems obtain. (FM 3-04.100 is the capstone manual for aviation doctrine.)

ENGINEERS

A-13. The commander task organizes combat engineer units with maneuver units and integrates them into a combined arms formation. The engineer unit provides demolition and breaching capabilities to the combined arms team. The engineer unit also can employ direct-fire weapon systems to aid in employing demolition and breaching assets. These breaching assets include assault bridges, rafts, and mechanized breaching systems. Regardless of the mission, armored engineer vehicles are combat vehicles and provide a significant contribution to the combat power of the entire formation. To accomplish the mission, engineers fire and move under the direction of the formation commander, as necessary, using engineer skills where appropriate. (FM 3-34 is the capstone engineer manual.)

A-14. When involved in an assault, engineers fight dismounted on the objective, focusing on breaching enemy close-in protective obstacles, as well as demolishing fighting positions and dug-in vehicles. Demolition charges produce significant shock and concussion effects on defenders, as well as destroying critical positions, munitions, and combat vehicles.

A-15. Combat engineers employed on reserve demolition targets in the defense mainly execute the technical procedures necessary to ensure target destruction. However, the engineer demolition party responds to enemy contact. They assist the demolition guard in securing the target by holding it open or gaining time to ensure that it is destroyed. The engineer force may assist in target defense by installing command-detonated mines to support the defensive scheme.

A-16. Combat-engineer units have a secondary mission to fight as infantry. While engineers fight continually as engineers, employing them as infantry requires serious considerations. Engineers employed as infantry require augmentation, including crew-served weapons and medical support. Any commander who owns engineers in a command relationship has the authority to employ them as infantry unless otherwise prohibited. A commander must carefully weigh the gain in infantry strength against the loss of engineer support. Engineers provide far more combat power in their primary mission than when configured as infantry. Stopping the engineer work may reduce the combat power of the commander's entire force. Because of the long-term impact, a commander notifies the next higher headquarters when he employs his engineers as infantry.

FIELD ARTILLERY

A-17. Field artillery (FA) is the commander's principal means for providing indirect-fire support to his maneuver forces. Self-propelled or towed FA units contain cannon or multiple rocket launchers. Field artillery can neutralize, suppress, or destroy enemy direct-fire forces, attack enemy artillery and mortars, and deliver scatterable mines to isolate and interdict enemy forces or protect friendly operations. The commander may use artillery fires to cover key terrain, flanks, obstacles, and dead space to reduce his risk when

maneuver forces are not available. Field artillery elements within maneuver organizations serve as the integrating center for all fire support elements. Field artillery units contribute both to attacking the enemy throughout the depth of his formations and suppressing enemy air defense systems to facilitate ground and air operations. Artillery fires can provide simultaneous precision strikes of targets at long ranges that other means cannot attack without significant risk. As mobile as the maneuver force it supports, FA systems provide continuous fires in support of the commander's scheme of maneuver. (FM 3-09 is the capstone FA manual.)

INFANTRY

A-18. There are many different types of infantry units, such as airborne, air assault, light, long-range reconnaissance, mechanized, and ranger. Each different type of infantry unit has its own unique skills and organizational design, but all share the common mission: "To close with and destroy the enemy by means of close combat, fire, and movement." Regardless of their mode of conveyance to the battlefield—aircraft, tracked or wheeled armored fighting vehicle, truck, or foot—they all serve as a key source of combat power in close combat. (There is not a capstone infantry manual. Echelon and unit specific manuals, such as FMs 3-21.7, 3-21.8, 3-21.10, 3-21.20, and 3-21.30, describe infantry operations at different tactical echelons.)

A-19. Airborne infantry units have the greatest capability for large-scale force-projection operations. They rapidly deploy over great distances and conduct combined arms parachute or air-landing assaults to seize and secure vital objectives. The commander can insert these units on virtually any objective area under almost any weather conditions. Once on the ground, their capabilities and lethality are similar to other nonmechanized infantry units.

A-20. Air assault infantry units have great tactical mobility and train to fight across the range of military operations. Their significant antiarmor capability—coupled with strategic deployability—makes them well suited as an early deploying force in contingency operations against heavy forces. They train and fight as a team in combination with artillery, attack, and lift aviation. They can penetrate deep into enemy territory to cut lines of communications, seize airfields, destroy C2 nodes, block reinforcing units, or seize key terrain. Because of their agility and mobility, air assault infantry units are well suited for covering force operations in appropriate terrain.

A-21. Light infantry units can operate effectively in most terrain and weather conditions. They may be the dominant arm in fast-breaking operations because of their rapid strategic deployability. In such cases, they can wrest the initiative early, seize and hold ground, and mass fires to stop the enemy. They are particularly effective in urban terrain, where they can infiltrate and move rapidly to the rear of enemy positions. The commander can enhance their tactical mobility by using helicopters and tactical airlift.

A-22. Mechanized and motorized infantry forces integrate mobile, survivable, and lethal, vehicle-mounted direct-fire and indirect-fire weapon systems and dismounted infantry skills into an effective fighting system that enhances the striking power of the combined arms force. Mechanized infantry has the same mobility as armor forces, but less firepower and protection. Armor and

mechanized infantry train and fight as a team to defeat enemy heavy forces. When equipped with infantry fighting vehicles, mechanized infantry can accompany tanks in mounted assaults. The commander must carefully determine if, when, and where his infantry must dismount to accomplish its mission. Mechanized infantrymen can act as fixing forces in an attack and serve as pivot points for maneuvering tank-heavy forces in the defense.

SPECIAL OPERATIONS FORCES

A-23. Special operations are actions conducted by specially organized, trained, and equipped personnel to achieve military, political, economic, or psychological objectives by nonconventional means in hostile, denied, or politically sensitive areas. They are conducted in peace, conflict, and war, independently or in coordination with operations of conventional forces. Politico-military considerations frequently shape special operations, requiring clandestine, covert, or low-visibility techniques and oversight at the national level. Special operations usually differ from conventional operations in their degree of risk, operational techniques, mode of employment, independence from friendly support, and dependence on operational intelligence and indigenous assets. (The Army's capstone manual on special operations is FM 3-05.)

A-24. Army SOA units are specialized aviation assets dedicated to conducting special operations missions. They provide a mix of short-, medium-, and long-range lift and light attack capabilities to support all principal and collateral mission areas and conduct autonomous special operations.

A-25. Ranger units are rapidly deployable, airborne-capable, and trained to conduct joint strike operations with or in support of special operations units of all services in any environment. They plan and conduct special military operations to support national policies and objectives. They also conduct direct-action missions to support conventional operations and operate as conventional light infantry units when integrated with other combined arms elements. (FM 3-21.85 is the capstone manual for ranger operations.)

A-26. Special Forces units plan, conduct, and support special operations activities in all operational environments, throughout the range of military operations. The US Army organizes, trains, and equips SF units to perform seven primary missions:

- Unconventional warfare.
- Foreign internal defense.
- Information operations.
- Counterproliferation.
- Direct action.
- Special reconnaissance.
- Combating terrorism.

Mission priorities vary from theater to theater. Special Forces missions are dynamic because politico-military considerations affect them directly. A change in national security policy or national military strategy may radically alter the nature of a SF mission. (FM 3-05.20 is the capstone SF manual.)

COMBAT SUPPORT

A-27. *Combat support* encompasses critical combat functions provided by units and soldiers, in conjunction with combat arms units and soldiers, to secure victory. Those functions include Army Aviation, Chemical Corps, Engineers, Military Intelligence, Military Police Corps, Signal Corps, and Special Operations Forces (CA and PSYOP units). Figure A-2 lists some CS units and their capabilities that support tactical operations.

<ul style="list-style-type: none"> • AVIATION <ul style="list-style-type: none"> ▪ Air Traffic Services ▪ C2 Aircraft • CHEMICAL CORPS <ul style="list-style-type: none"> ▪ Staff Support ▪ Decontamination ▪ NBC Reconnaissance & Surveillance ▪ Smoke & Obscuration • ENGINEERS <ul style="list-style-type: none"> ▪ Mobility ▪ Countermobility ▪ Survivability ▪ Topographic Support • SIGNAL CORPS <ul style="list-style-type: none"> ▪ Signal Support ▪ Combat Camera 	<ul style="list-style-type: none"> • MILITARY INTELLIGENCE <ul style="list-style-type: none"> ▪ Counterintelligence ▪ Analysis ▪ HUMINT ▪ IMINT ▪ MASINT ▪ SIGINT ▪ TECHINT ▪ Electronic Warfare • MILITARY POLICE CORPS <ul style="list-style-type: none"> ▪ Criminal Investigation ▪ EPW Support ▪ Military Police CS • SPECIAL OPERATIONS FORCES <ul style="list-style-type: none"> ▪ Civil Affairs ▪ Psychological Operations
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Figure A-2. Combat Support Capabilities

AVIATION

A-28. Army aviation units provide CS to the commander in the following areas:

- C2, communications, and intelligence.
- Air movement of combat power.
- Aerial delivery of mines.
- Search and rescue.
- Air traffic services.

CHEMICAL CORPS

A-29. The chemical corps provides CS to the Army through two major activities. The first is chemical staff support organic from the battalion through the corps echelon. Integrating organizational equipment and individual technical expertise permits units to continue operations with minimal degradation of capability. The second activity is the support provided by chemical units at corps and higher levels, including nuclear, biological, and chemical (NBC) reconnaissance, decontamination, smoke and obscuration, and further staff augmentation. Both activities are critical; the former optimizes unit effectiveness under NBC conditions, the latter augments and reinforces unit combat

power and sustainability. (FM 3-11 is the capstone manual for chemical operations.)

ENGINEERS

A-30. Engineers multiply the effectiveness of friendly forces on a lethal battlefield. Four of the five primary engineer functions are CS. Combat engineers operate as an integral member of the combined arms team to provide a full range of mobility, countermobility, survivability, and topographic capabilities. Engineers advise the maneuver commander on the effective use of terrain; construct, improve, and maintain routes, bridges, and airfields; and reorganize to fight as infantry when required.

A-31. In offensive operations, combat engineers concentrate their efforts to support maneuver by breaching and crossing obstacles, assisting in the assault of fortified positions, and emplacing obstacles to protect the flanks of friendly attacking forces. In defensive operations, engineers reinforce the terrain to anchor the defense in critical areas, maximize the effects of defenders' fires, provide maximum protection to friendly fighting positions, and facilitate the movement of counterattack forces. Topographic engineer units furnish detailed terrain analysis products, maps, and digital terrain data. Topographic engineering products help the commander identify avenues and routes, obstacle locations, EAs, unit positions, and possible target areas.

MILITARY INTELLIGENCE

A-32. Military intelligence (MI) units provide the commander with early warnings of enemy intentions, intelligence preparation of the battlefield products, aid in the development of his situational understanding, and assist in target development, force protection, and battle damage assessment. They participate in offensive information operations, as well as provide critical counterintelligence support to friendly command force protection programs. (FM 2-0 is the capstone intelligence manual.)

A-33. Military intelligence involves four intelligence disciplines—human intelligence, imagery intelligence, measurement and signature intelligence, and signals intelligence. There are two multidiscipline intelligence functions—counterintelligence and technical intelligence. However, rarely will a single discipline or function produce a comprehensive picture of the enemy. Each of these disciplines and functions complement and cue each other. Each discipline or function produces bits and pieces of information that analysts use to create the enemy and environment portion of the common operational picture and other products that facilitate the commander's situational understanding. The commander should compare information gained by one discipline or function with information provided by the other disciplines and functions whenever the situation permits to avoid deception by enemy information operations. United States Code prohibits collecting intelligence information on US personnel or institutions by MI assets except under specific situations.

MILITARY POLICE CORPS

A-34. Military police units provide the commander with a versatile, responsive force capable of performing a wide range of combat, CS, and CSS missions that include—

- Maneuver and mobility operations—MP units enhance maneuver and mobility by expediting and monitoring the flow of personnel and materials throughout the depth and breadth of the battlefield.
- Area security operations—MP units provide security to critical personnel and facilities within their assigned AO because of their tactical mobility, firepower, and communications capabilities.
- Internment and resettlement operations—MP units conduct internment and resettlement operations for US military prisoners, enemy prisoners of war, and dislocated civilians to relieve the tactical commander of the burden they impose.
- Police intelligence operations—MP and MI units collect, analyze, and disseminate police intelligence, aiding commanders in identifying and defeating threats from criminals, saboteurs, and terrorists.
- Law and order operations—MP units assist the commander in maintaining law and order in both garrison and the field.

Military police units perform these operations independently or in combination with other units. United States Code prohibits MP and other Army units from performing routine law enforcement operations within US territory. State and federal law allow Army National Guard units to conduct law enforcement operations within their sponsoring state when performing their mission as state militia. (FM 3-19.1 is the capstone MP manual.)

SIGNAL CORPS

A-35. The signal corps provides worldwide information systems and networks for real-time C2 of Army, joint, and multinational forces. Signal corps units enable effective control systems to operate. In force-projection operations, signal units make split-based operations possible by employing satellite down-link equipment. (FM 6-02 is the capstone signal manual.)

SPECIAL OPERATIONS FORCES

A-36. Civil affairs units are organized, trained, and equipped specifically to conduct CA activities and to support civil-military operations. These operations focus on the civil center of gravity and establish, maintain, influence, and support the commander's moral obligations and legal responsibilities with government organizations, nongovernmental organizations, and international organizations. Civil Affairs activities include populace and resources control, foreign nation support, humanitarian assistance, military civil action, civil defense, civil assistance, and civil administration in recently liberated friendly territory and in occupied territory. Civil Affairs efforts enhance the relationships between military forces, civilian authorities, and populations in friendly, neutral, or hostile AOs through these activities. They provide opportunities to use local human and material resources to support the assigned mission. Civil Affairs forces facilitate military operations by reducing civilian interference with military operations and gaining popular understanding, support, and compliance with measures required to accomplish the mission. In the aftermath of combat, CA units conduct activities that stabilize disrupted areas. They are often tasked to create a military government to temporary control institutions, populations, and resources. Civil Affairs functional specialist's capabilities reside in the reserve component and are additional

areas of expertise, normally acquired through civilian education, training, and experience. These special functions teams include—

- Emergency services
- Public administration
- Public education
- Public health
- Public safety
- Public welfare
- Civilian supply
- Economic development
- Food and agriculture
- Public communications
- Public transportation
- Public works and utilities
- Civil information
- Cultural relations
- Dislocated civilians
- International law
- Environmental management

(FM 3-57 is the capstone manual for civil affairs operations.)

A-37. Psychological operations are planned operations to convey selected information and indicators to foreign audiences to influence their emotions, motives, objective reasoning, and ultimately the behavior of foreign governments, organizations, groups, and individuals. The purpose of psychological operations is to induce or reinforce foreign attitudes and behavior favorable to the originator's objectives (JP 3-53). PSYOP is a functional area and not a branch. PSYOP units provide the commander with the ability to communicate information to non-US audiences via radio, television, leaflets, and loudspeakers. The PSYOP soldier's language skills, regional orientation, and knowledge of communication media provide a means of delivering critical information to host nation, neutral, and enemy audiences. Joint direction from the operational-level commander characterizes PSYOP. Federal law prohibits using PSYOP against US citizens or organizations. (FM 3-05.30 is the capstone PSYOP manual.)

COMBAT SERVICE SUPPORT

A-38. The primary role of Army tactical CSS units is to sustain Army forces. The CSS effort is successful only when it concentrates and supports forces by focusing on the sustainment and reconstitution of tactical units. Warfare consumes massive amounts of resources. The CSS system must provide resources in a way that minimizes constraints on the commander. Tactical-level CSS support must be responsive. (Figure A-3 on page A-12 illustrates CSS branch capabilities.)

A-39. While not traditional Army branches, forward elements of the US Army Materiel Command (USAMC) and the Military Traffic Management Command within a theater of operations assist in providing that combat service

support necessary to sustain tactical forces. These forward elements provide logistic assistance, conduct port operations, sustainment at Army field support centers, control Army prepositioned stocks, and manage USAMC contract support. Those forward commands or subordinate logistics support elements deploy to support operations. Logistics assistance personnel, who are part of USAMC forward elements, deploy with major combat units. They assist and advise the unit; they also can reach back to the continental United State for required additional augmentation of sustainment capabilities.

<ul style="list-style-type: none"> • ADJUTANT GENERAL <ul style="list-style-type: none"> ▪ Personnel Services ▪ Postal ▪ Replacement • AVIATION (GS AVN) • CHAPLAIN • ENGINEERS (GEN ENG) • FINANCE CORPS <ul style="list-style-type: none"> ▪ Support To Local Procurement ▪ Pay Services ▪ Resource Management • JUDGE ADVOCATE GENERAL CORPS <ul style="list-style-type: none"> ▪ Court Martial Trial & Defense ▪ Legal Assistance ▪ Contract Advisory Assistance 	<ul style="list-style-type: none"> • MEDICAL <ul style="list-style-type: none"> ▪ Combat Stress ▪ Dental ▪ Hospital ▪ Medical Evacuation/Support/ Surveillance ▪ Veterinary • ORDNANCE CORPS <ul style="list-style-type: none"> ▪ Ammunition Maintenance ▪ Ammunition Supply ▪ Electronic Maintenance ▪ Explosive Ordnance Disposal ▪ Mechanical Maintenance ▪ Missile Maintenance • QUARTERMASTER CORPS <ul style="list-style-type: none"> ▪ Supply & Field Services • TRANSPORTATION CORPS <ul style="list-style-type: none"> ▪ Highway/Rail/Water Transportation ▪ Movement Control ▪ Intermodal (Terminal) Operations
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Figure A-3. Combat Service Support Capabilities

ADJUTANT GENERAL CORPS

A-40. The Adjutant General Corps helps to build and sustain combat readiness through planning, operating, and managing all human resources support activities. Human resources support functions include manning the force; personnel services; personnel readiness management; personnel accounting; replacement management; personnel information management; casualty operations management; postal operations management; morale, welfare, and recreation; and band support. (FM 1-0 is the capstone manual for military personnel activities.)

AVIATION

A-41. Aviation units provide CSS to sustain combat forces, primarily through air movement of personnel, supplies, and equipment and performing aero-medical evacuation and aviation maintenance. Air movement CSS missions include the aerial movement of personnel and supplies, to include—

- Over-the-shore logistics operations.
- Aerial preplanned and immediate resupply.
- Air movement of critically short or sensitive supplies.

- Pre-positioning and movement of fuel and ammunition.
- Air movement of security forces.
- Medical evacuation.

CHAPLAIN CORPS

A-42. The chaplain corps advises the commander on matters of religion, morals, and morale as affected by religion; to include the impact of indigenous religions on the mission. The role of the chaplain is the personal delivery of religious support—worship care and counseling—to the soldier. Chaplains assist in reducing the rate and severity of psychiatric casualties by working with combat stress teams. (FM 1-05 is the capstone doctrinal manual for chaplains and chaplain assistants.)

FINANCE CORPS

A-43. Financial management operation provides a commander with—

- Financial support for soliders.
- Financial support for non-US military personnel and all Department of Defense civilians.
- Pay for local hire civilians.
- Contract support.
- Payments to commercial vendors that provide services and supplies in support of military forces on an immediate or recurring basis.
- Disbursements of public funds to support an Army presence on an area-support basis.
- Accounting and disclosing expended funds.

(FM 1-06 is the capstone doctrinal manual for financial management support.)

ENGINEERS

A-44. Sustainment engineering is the primary CSS engineer function. It involves a variety of roles, such as civil engineering, fire fighting, maintaining lines of communications, managing inland waterways, prime power, and environmental protection.

MEDICAL CORPS

A-45. The Army's health care team provides all types of medical support to the commander and his soldiers. The Army's health care team comprises six medical corps: Medical Corps, Dental Corps, Medical Service Corps, Nurse Corps, Veterinary Corps, and Medical Specialist Corps. (FM 4-02, is the capstone doctrinal manual for health service support.)

A-46. Ordnance units sustain the commander's weapon systems, ammunition, missiles, and ground-mobility materiel. Ordnance soldiers are trained to repair and manage tank-automotive/ground-mobility materiel, missile materiel, and ammunition materiel, including explosive ordnance disposal. (There is no capstone manual addressing all the activities of the ordnance corps, but FM 4-0 provides references and information on ordnance support.)

A-47. Future maintenance concepts call for the consolidation of the current four levels of maintenance into two levels—field and sustainment. Field maintenance combines the current organizational and direct support levels of maintenance. Field maintenance includes those tasks performed by operators and maintainers at the point of breakdown or the point of repair. This maintenance level focuses on the repair of vehicles through the replacement of major system components. Sustainment maintenance consists of tasks normally focused on the repair of component items, and it combines the current general support and depot maintenance levels. Additionally, it includes some current direct support-level tasks. At this level of maintenance, maintainers focus on the repair of component items, such as major assemblies, line-replaceable units, and reparable items and their return to the distribution system.

ORDNANCE CORPS

A-48. Ordnance units sustain the commander's weapon systems, ammunition, missiles, and ground-mobility materiel. Ordnance soldiers are trained to repair and manage tank-automotive/ground-mobility materiel, missile materiel, and ammunition materiel, including explosive ordnance disposal. There is no capstone manual addressing all the activities of the ordnance corps, but FM 4-0 provides references and information on ordnance support.

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QUARTERMASTER CORPS

A-50. The quartermaster corps arranges for or provides supplies, materiel management, distribution, procurement, and field services to support and sustain soldiers, units and their equipment. These support functions are broken down into two areas: supply and field services. Supplies provided by quartermaster units include—

- Class I—substance and commercial bottled water.
- Class II—clothing, individual equipment, tentage, tool sets, and administrative and housekeeping supplies equipment including nonclassified maps.
- Class III—petroleum, oils, and lubricants (POL), including petroleum fuels, lubricants, hydraulic and insulating oils, preservatives, liquid and compressed gases, chemical products, and coolants.

- Class IV—construction materials, including installed equipment and all fortification and barrier materials.
- Class VI—health and comfort packs/support to tactical field exchanges.
- Class VII—major end items
- Class IX—repair parts
- Class X—miscellaneous supplies

A-51. Field services provided by the quartermaster corps includes—

- Airdrop—parachute packing, air-item maintenance, slingload operations, and rigging of supplies and equipment for airdrop.
- Field feeding—the standard is three quality meals each day, with the capability to distribute, prepare, and serve at least one heated unitized group rations, with semi-perishable components (UGR-A), meal per day to include supplements in accordance with the factors of METT-TC.
- Laundry—soldiers will each be provided with up to 15 pounds of laundry support a week.
- Shower—the army standard is one shower per soldier per week, with a goal of two showers per week.
- Water purification. (Note that storage and distribution of purified water are supply functions.)
- Mortuary affairs—recovery, tentative identification, and processing of human remains.
- Clothing and light textile repair—minor repairs made at the laundry.

(FM 4-20 is the capstone manual for quartermaster units.)

TRANSPORTATION CORPS

A-52. The transportation corps provides transportation services to the commander. These services include—

- Performing transportation unit operations, to include truck, boat, rail and trailer/cargo transfer operations. Planning, scheduling, and supervising the use of each mode of transportation for effectively moving personnel and cargo.
- Providing terminal services for all modes of transportation and stevedoring services at fixed ports and unimproved beach sites.
- Providing transportation engineering services.
- Providing direct maintenance and supply for marine and rail equipment.

(FM 4-01 is the capstone doctrinal manual for the transportation corps.)

TACTICAL ECHELONS

A-53. The Army echelons its broad array of capabilities to perform diverse functions. These functions vary with the type of unit and, particularly at operational echelons, with the organization of the theater, the nature of the conflict, and the number of friendly forces committed to the effort. For a discussion of operational echelons, including ARFOR, joint force land component, and joint task force (JTF) see FMs 3-0 and 3-93.

A-54. At each echelon, the commander task organizes his available capabilities to accomplish the mission. The commander's purpose in task organization is to maximize subordinate commanders' abilities to generate a combined arms effect consistent with the concept of operations. Commanders and staffs work to ensure the distribution of capabilities to the appropriate components of the force to weight the decisive operation. The relationships between units within and supporting an echelon are described in terms of command and support relationships. (See FM 5-0 for a discussion of these relationships.)

COMPANIES, BATTERIES, AND TROOPS

A-55. A **company** is a unit consisting of two or more platoons, usually of the same type, with a headquarters and a limited capacity for self-support. A **troop** is a company-size unit in a cavalry organization. A **battery** is a company-size unit in a field artillery or air defense artillery organization. A company normally consists of more than 75 soldiers. Exceptions to this rule are some aviation and tank companies. Companies and air defense and artillery batteries are the basic elements of battalions. Armored, light, and air cavalry troops are the basic elements of squadrons. Companies, batteries, and troops may also be assigned as separate units of brigades and larger organizations. Some companies, such as SF companies, have subordinate detachments, instead of platoons, which are organized and trained to operate independently for extended periods.

A-56. Company-size combat units can fight in mass or by subordinate platoons. In attack helicopter battalions, companies fight as integral units. Cavalry troops fight more frequently with their platoons in separate areas. In infantry and armor battalions, companies fight either as integral units or as task-organized teams reinforced with close-combat platoons of the same or different types. A **company team** is a combined arms organization formed by attaching one or more nonorganic tank, mechanized infantry, or light infantry platoons to a tank, mechanized infantry, or light infantry company, either in exchange for, or in addition to, its organic platoons. These company teams can include other supporting squads or platoons, such as short-range air defense (SHORAD) and ground surveillance radar teams. Company teams are task-organized for a specific mission. Such teams can match capabilities to missions with greater precision. However, the attachment of different units at the company level demands thorough training to achieve the maximum complementary effects. Whenever possible, platoons and detachments should train together before they are committed.

A-57. FA batteries are the basic firing units of FA battalions. They are organized with firing platoons, a headquarters, and limited support sections. They may fire and displace together or by platoons. Normally, batteries fight as part of their parent battalions, but the commander can attach them to other batteries or FA battalions. In rare cases they respond directly to a maneuver battalion or company. Multiple Launch Rocket System (MLRS) batteries usually operate independently. Regimental armored cavalry squadrons have organic howitzer batteries.

A-58. ADA batteries operate as the fighting elements of ADA battalions or, if they are SHORAD batteries, in direct support of maneuver brigades or

battalions. Separate SHORAD batteries exist in separate brigade-size organizations.

A-59. Combat engineer companies control three or four engineer platoons. Their parent battalion may employ them in a variety of tasks, or they may support maneuver brigades or battalions.

A-60. Most CS and CSS units organize as separate companies with greater self-sustainment capabilities than normally found in comparable size combat arms organizations. However, they may receive unit-level sustainment support on an area basis. Such CS and CSS companies vary widely in size, employment, and assignment.

BATTALIONS AND SQUADRONS

A-61. A **battalion (or a cavalry squadron)** is a unit consisting of two or more company-, battery-, or troop-size units and a headquarters. Most combat arms battalions are organized by branch, arm, or service and, in addition to their line companies, contain a headquarters company that gives them the ability to perform some administrative and logistic services. Typically, battalions have three to five companies in addition to their headquarters.

A-62. The commander can reinforce his maneuver battalions with other combat and CS companies to form task forces for special missions. A **battalion task force** is a combat arms battalion-size unit consisting of a battalion headquarters, at least one assigned company-size element, and at least one attached company-size element from another combat arms or combat support unit. Task organization increases the capability of maneuver battalions. For example, based on a brigade commander's understanding of the factors of METT-TC, he may task-organize tank, mechanized infantry, and light infantry battalions by cross-attaching companies between these units. (See Figure A-4.) FA battalions can be reinforced with batteries of any kind to form artillery task forces. The commander can reinforce engineer battalions with the same or different types of engineer companies and platoons to form engineer task forces.

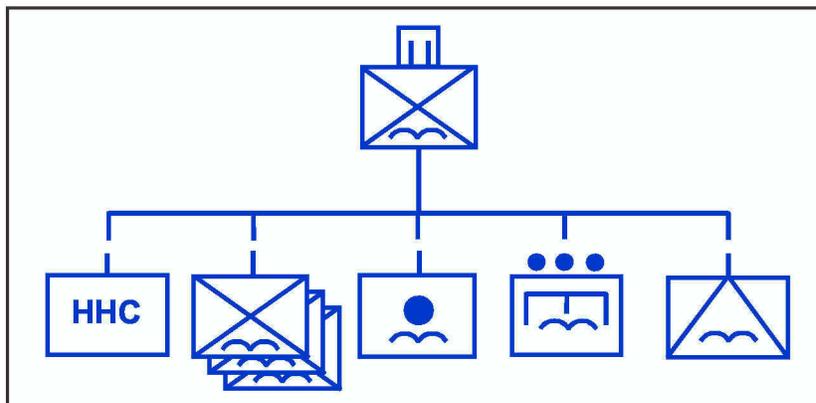


Figure A-4. Airborne Battalion-Size Task Force

A-63. CS and CSS battalions vary widely in type and organization. They may be separate divisional or nondivisional battalions, performing functional services for a larger supported unit within that unit's AO. All battalions are capable of short-term limited, self-defense. ADA and signal battalions assigned to or supporting divisions routinely operate throughout the division AO. Their commanders also perform the additional duties of division special staff officers.

BRIGADES, REGIMENTS, AND GROUPS

A-64. A **brigade** is a unit consisting of two or more battalions and a headquarters. Its capacity for independent action varies by type. A commander can use separate infantry, armor, FA, ADA, engineer, and aviation brigades and armored cavalry regiments to reinforce corps or divisions and shift these units from one division or corps to another to tailor forces for combat. (See Figure A-5.)

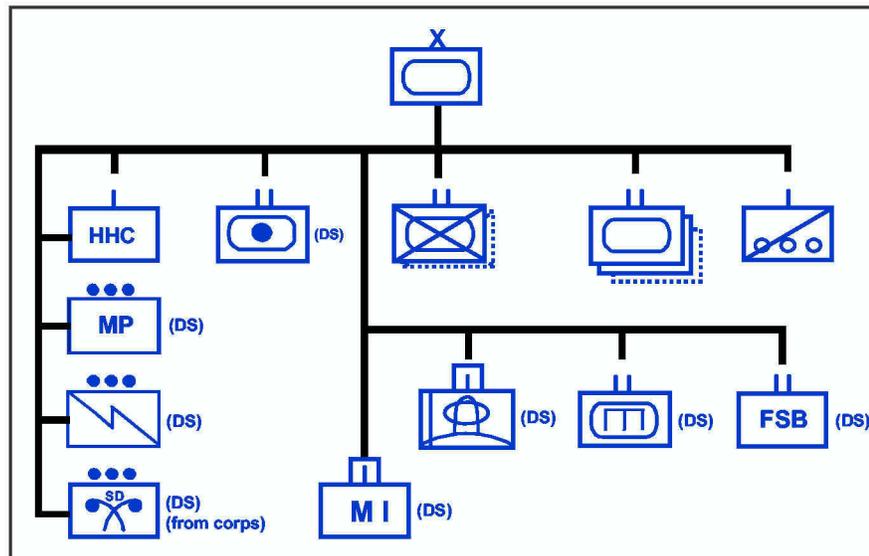


Figure A-5. Heavy Brigade Combat Team

A-65. Maneuver brigades are the major combat units of divisions; they can employ any combination of maneuver battalions. Division commanders adjust the organization of their brigades and change their task organization into brigade combat teams as required by the factors of METT-TC. A **brigade combat team** is a semipermanent combined arms organization consisting of a brigade headquarters, at least two combat arms battalions, and all necessary supporting combat support and combat service support, formed for the purpose of carrying out a continuing specific task. They normally include a direct support FA battalion, a combat engineer battalion (in heavy divisions and heavy separate brigades), forward support battalions, and smaller combat, CS, and CSS units. Brigades combine the efforts of their battalions and companies to fight engagements and battles and perform tactical tasks within division-level battles and engagements. Their

chief tactical responsibility is synchronizing the plans and actions of their subordinate units to accomplish tasks for the division or corps.

A-66. Separate maneuver brigades and armored cavalry regiments have a fixed organization with organic cavalry, engineer, air defense, FA, MI, chemical, and CSS units. The commander can use separate brigades and armored cavalry regiments to reinforce corps or divisions, but they are capable of operating as independent units. The two initial brigade combat teams (IBCTs) at Fort Lewis, Washington, are organized as separate brigades even though they are designated as divisional brigades. (See Figure A-6.)

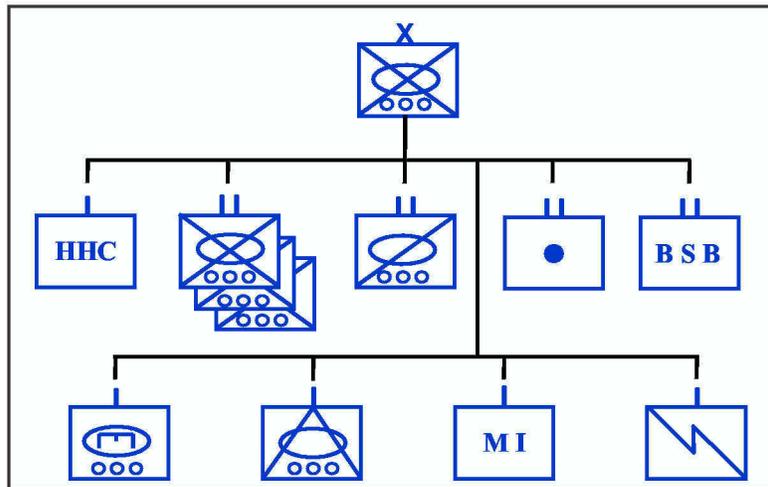


Figure A-6. IBCT Organization

A-67. The commander organizes other combat, CS, and CSS brigades and groups to control capabilities for divisions, corps, and larger units. Engineer, ADA, signal, aviation, MP, and transportation brigades are typical of such units. They may also be the building blocks of large-unit support structures, such as corps and theater army support commands, and CS commands, such as engineer commands. When the span of control for a brigade exceeds seven battalion-size subordinate units, the commander can establish a group headquarters under the brigade as an intermediate headquarters for two or more CS and CSS battalions. Organic, brigade-size division artillery (DIVARTY), an aviation brigade, and a division support command (DISCOM) of CSS battalions and separate companies provide support for divisions. Heavy divisions have an organic engineer brigade.

DIVISION

A-68. The division possesses great flexibility. **Divisions** are the largest fixed organizations in the Army that train and fight as tactical teams, and are organized with varying numbers and types of combat, CS, and CSS units. Their commanders task organize their organic brigades and attached forces for specific combat missions. The division commander may attach or place any or all divisional CS and CSS battalions and separate companies in support of one or more brigades for particular missions. (Figure A-7 on page A-20 depicts a heavy division's organic elements.) They are

capable of performing any tactical mission over a wide range of environments and are largely self-sustaining for up to 72 hours. The Army's division organizational concept embraces six types of divisions—armored, mechanized infantry, medium, light infantry, airborne and air assault—with each having specific capabilities and resources for conducting military operations. The Army continues to examine its divisional design to ensure it possesses forces that are decisive across the full spectrum of operations. The Army is currently experimenting with Force XXI and Interim Division variants in a search for designs that have greater strategic responsiveness and effectiveness.

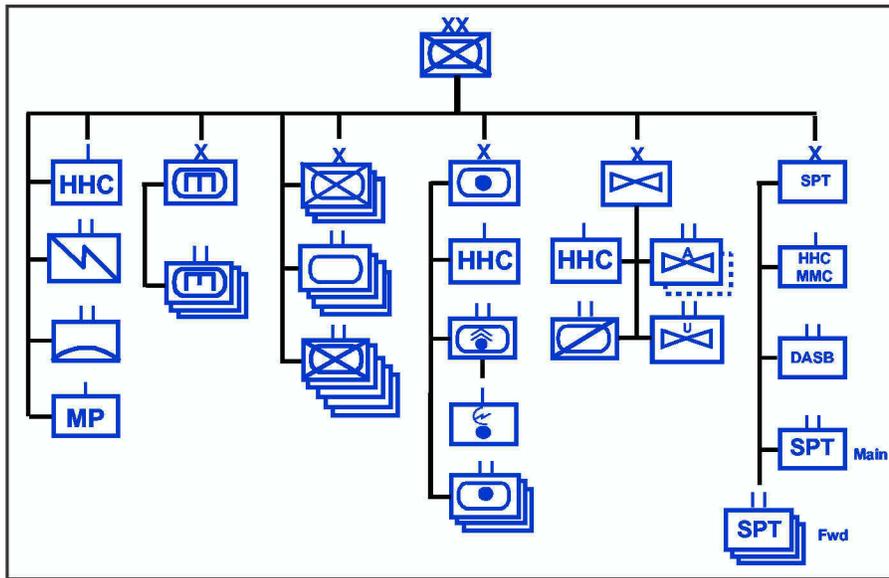


Figure A-7. Heavy Division

A-69. Divisions perform major tactical operations for the corps and conduct sustained engagements. With significant augmentation, a corps or a numbered army may direct a division to perform tasks of operational importance. These may include exploiting tactical advantages to seize objectives in depth, moving to gain contact with enemy forces, or moving by air to seize positions behind an enemy force.

A-70. Critical division roles include—

- Deployment.
- Conduct of full spectrum operations as part of a corps.
- Airborne and air assault divisions able to conduct force entry operations.

With augmentation a division headquarters can perform as the ARFOR or joint force land component headquarters. (FM 3-91 describes how divisions conduct full spectrum operations.)

CORPS

A-71. **The corps is the Army's largest tactical unit and the instrument by which higher echelons of command conduct maneuver at the operational level.** There is no standard organizational structure for a corps,

although every corps typically has the components shown in Figure A-8. Operational headquarters tailor corps to the theater and mission for which they are deployed. Once tailored a corps contains all the combat, CS, and CSS capabilities required to sustain its operations for an extended period.

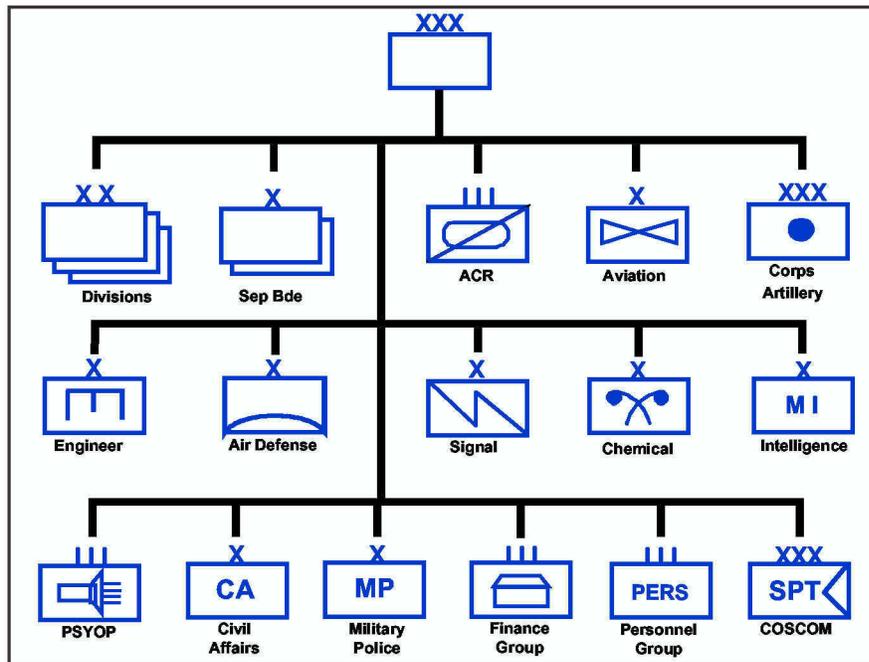


Figure A-8. Representative Corps Organizational Diagram

A-72. A corps is normally tailored to comprise two to five divisions of any type and combination required by the theater and the mission. It possesses organic support commands and is assigned combat and CS organizations based on its needs for a specific operation. Armored cavalry regiments and FA, engineer, ADA, and aviation brigades are the nondivisional units commonly available to the corps to weight its decisive operation and to perform special combat functions. The commander may also assign separate infantry or armor brigades to corps. Signal brigades, MI groups, and MP groups are the CS organizations normally present in a corps.

A-73. A corps plans and conducts battles and major operations. Corps operations are combined arms operations that synchronize tactical activities, including the maneuver of divisions, the fires of artillery units and supporting aerial forces, and the actions of CS and CSS units. A corps may operate under the control of a higher echelon, such as a numbered army. Its headquarters may provide the headquarters for a land component command of a unified or subunified command or JTF. The corps headquarters could also be employed as the ARFOR headquarters of a JTF. A corps commander may serve as a JTF commander. A corps normally exercises a mixture of operational and tactical responsibilities. It may have a key role in translating strategic and operational objectives of higher echelons into the specific and detailed tactics used to achieve those objectives.

A-74. Critical corps roles in the planning, preparing, executing, and assessing full spectrum operations include—

- Planning, preparing, and executing operations with other elements of the joint force to achieve campaign objectives, including force projection of corps units to the AO.
- Integrating available joint, interagency, and multinational assets in support of sustained land operations, including intelligence, target acquisition, target attack, electronic warfare, suppression of enemy air defenses, and CSS.
- Collecting intelligence, and anticipating enemy activities and intentions.
- Providing the information pipelines over which the corps distributes the common operational picture to all corps units.
- Planning, preparing, executing, and assessing shaping and sustaining operations by corps troops that support the corps decisive operations.

With augmentation a corps headquarters can perform as an ARFOR, joint force land component, or JTF headquarters. (FM 3-92 describes how corps conduct full spectrum operations.)