Chapter 8

OTHER OPERATIONS

The corps may be required to conduct other operations (such as river crossings, encirclements, movement, reconstitution and so on) in combination, sequentially, or as part of the offense or defense. Such operations are difficult, complex, and often involve risk. Methods for conducting other operations vary according to METT-T factors as they apply to each situation.

RIVER CROSSING

River crossings are a division responsibility and are planned in detail at division level. The corps has specific fundamental planning and resourcing responsibilities for river-crossing operations, especially for deliberate crossings of large water obstacles.

The corps develops its river-crossing plan concurrently with the scheme of maneuver for the overall operation the river crossing supports. The goal of the river crossing, whether an offensive or retrograde crossing, is to move corps units across a water obstacle with the minimum impact on the corps' ability to rapidly generate combat power.

Offensive Crossing

The corps designates the bridgehead for an offensive river crossing and normally depicts it graphically using a bridgehead line or a set of division objectives. The bridgehead is the area on the far bank the corps must secure to continue the offensive. It must provide space for combat, CS, and critical CSS elements necessary for the corps to continue the attack. It must also:

- Be defensible.
- Be large enough to maneuver and deploy the force required to continue the mission.
- Facilitate continuation of the operation.

The bridgehead's depth depends on both terrain considerations and the corps' scheme of maneuver. If the division(s) conducting the crossing also continue the attack beyond the bridgehead, they use a shallow bridgehead.

If the corps intends to pass a follow-on division through the bridgehead, it will need more depth. The river-crossing operation is complete once the bridgehead is secure, the necessary elements have moved to the far shore, and the river obstacle no longer limits the continuation of the attack.

In some cases, the division conducting the assault crossing of the river will not have the combat power or will not be organized to fight all the way from the river to the bridgehead line. The corps may then designate a division intermediate objective or phase line where the lead division can pause to reorganize, build up combat power, or where the corps can commit trailing forces.

The corps determines if its subordinate divisions will cross the river on a wide front, involving two or more divisions, or on a narrow front, involving one division (Figure 8-1). Generally, a crossing on a wide front is preferred because it projects combat power more rapidly across the obstacle and keeps the corps more dispersed. The corps might cross on a narrow front if the scheme of maneuver requires it or if the corps does not have the equipment it needs to support a wide front crossing.

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The corps controls much of the special equipment and support units that maneuver units require to conduct river crossings. To support a one-division crossing of a large river generally requires the following corps units:

- Two or more corps combat engineer battalions (one battalion per brigade crossing area).
- One or more engineer assault bridge companies (depending on the river’s width and crossing frontages).
- One or more smoke generator and NBC reconnaissance companies (depending on the crossing frontages).

One MP company with augmentation from a corps MP company to support the traffic control plan (at least one platoon per brigade crossing area).

One or more ADA battalions (depending on the crossing frontages and the number of bridge and/or raft sites) and possibly defensive counter air support.

Combat service support for the divisions conducting the river crossing is no different than sustainment operations during the offense or defense. Transportation support for engineer units and bridging material is the primary concern; maintenance of
bridging equipment and fuel requirements are secondary considerations.

Other corps support to maneuver units could include specific intelligence-collection concerning river conditions or helicopter support to a division or brigade conducting air assaults on the far shore. (See FM 90-13 for more information.)

Retrograde Crossing

Planning and executing river crossings during retrograde operations are similar to offensive river crossing operations. However, there are two special considerations.

First, command, control, and coordination are difficult in a retrograde crossing. Delaying, defending, and supporting forces must have explicit missions and tasks. Commanders are to plan and execute deception to conceal the extent of the operation and the sites of the actual crossing. Smoke, electronic deception, and dummy sites reduce the enemy’s capability to disrupt the crossing. Units must also apply OPSEC measures.

Second, there may be few retrograde crossing sites that friendly forces control. Therefore, they will be vulnerable to attack early in the operation. Planning and developing additional crossing sites help mitigate this probability.

The force must protect crossing sites. The commander should expect detection and counter it. The enemy’s pursuit may well include envelopment tactics to secure crossing sites and to cut off the retrograde force before it can cross. Security forces position early to counter all enemy attempts, including those of battalion-size air assault or airborne insertions.

The commander must get all nonessential CS and CSS across the river early and disperse them in locations that can support the operation. Units may have to destroy bridging equipment they cannot quickly recover and that is in danger of being captured.

When possible, units should recover bridging equipment early and replace it with assault float bridging and unit assets that they can recover quickly. Units might need to destroy existing bridging and other crossing means (such as ferries).

Close coordination with the delaying force is necessary to keep from cutting off friendly forces not yet across. (See FMs 5-102 and 90-13 for detailed discussions.)

ENCIRCLEMENT OF A FRIENDLY FORCE

Encirclement occurs when the enemy has cut all ground routes of evacuation and reinforcement. A unit may become encircled—

- When ordered to remain in a strong position on key terrain to deny the enemy passage through a
vital chokepoint following an enemy breakthrough.

- When given a mission of becoming encircled as part of a larger plan.
- When unintentionally cut off from friendly forces.

Through its own maneuvers, losses, errors, exhaustion, or other cause, a friendly attacking force may find itself in such an unfavorable position that the advantage passes to the enemy. The enemy then has a prospect of success using an encirclement. From the corps' perspective, encirclement is a concern whether it pertains to the entire corps or to a portion of the corps.

Once encircled, the corps commander must clearly understand the mission, if assigned, and the higher commander's plan. Knowing the overall mission and plan helps him determine whether the next higher commander wants his force to breakout or to defend the position.

If the force is free to break out, timing is critical. The corps should attempt to break out before the enemy has time to effectively block escape routes. If the corps cannot break out, the commander continues to defend while planning for linkup or exfiltration.

In all cases, the commander must promptly make his decision to break out, attack deep, defend, or exfiltrate and execute it with resolve. The longer a force remains encircled, the more depleted it becomes, and the more organized and stronger the containing enemy becomes.

If the mission is to defend, the corps must act rapidly to preserve itself. The commander assumes control of all encircled forces and assesses the overall defensive posture of the force. In assuming an effective defense and contributing to the combat effort, the commander has several responsibilities. He must reestablish the chain of command and a viable defense. That is, he must quickly establish an all-round defense on defensible terrain. The force may have to attack to seize the ground. The commander must expeditiously reorganize and consolidate his force.

To establish security, the commander positions security forces as far out as possible to provide early warning. He initiates vigorous reconnaissance, establishes local security throughout, and insists on passive measures. The commander must also rapidly establish communications with higher headquarters and internally between units.

The commander must stay informed about the battle outside the encirclement. This information will help him plan his breakout as well as enable him to provide information about the enemy's rear area to higher headquarters. The commander must also plan procedures for caring for EPWs and civilian refugees.

The commander must also establish a reserve. If mobile forces are available, he establishes a centrally located reserve to take advantage of interior lines. If only light forces are available, he establishes small local reserves to react to potential threats.

The commander is to reorganize fire support under centralized control. He positions ADA and aviation assets throughout the area to limit vulnerability to counterfires. When considering available fires, he includes the possible use of CAS from outside the encirclement.

The defensive commander must also reorganize CSS. After he assesses the corps' CSS posture, he centralizes all supplies and establishes strict rationing and supply economy procedures. If possible, he should arrange aerial resupply and casualty evacuation by aviation and air support. He must also establish centralized medical and graves registration operations.

Other considerations include limiting vulnerability to enemy nuclear or chemical weapons, including planning to break out early based on anticipated enemy use; maintaining morale; or continuing the defense.

The commander can use engineers to improve the defended area to preclude enemy forces from splitting the force through penetrations of the perimeter. An energetic defense and rapid reaction by reserves and the defense in depth can defeat such attempts. As the battle weakens the force, it may have to reduce the size of the perimeter. The force must maintain a cohesive defense.

The encircled commander must also plan subsequent operations. There are two options available. The commander can conduct a breakout in the direction of friendly forces or attack deeper toward
enemy forces and installations. The second option is that the commander can defend encircled or exfiltrate. The commander bases his decision on which option to take on the intent or orders of his higher commander (Figure 8-2).

### Breakout Operations

The attack to break out only differs from a deliberate attack in that the force must maintain a simultaneous defense in other areas of the perimeter. With this in mind, the commander must recognize some essentials. The first is that the force must deceive the enemy about preparations, if immediate breakout is not possible, and take advantage of limited visibility to conduct breakout operations.

Early in the encirclement there will be gaps or weaknesses in the encircling force. Intelligence and reconnaissance will reveal them and the attack should capitalize on them. An attack over less favorable terrain may be the best course of action if it avoids enemy strength and increases the chance for surprise. The breakout should not take the obvious route toward friendly lines unless there is no other alternative.

The commander normally reorganizes the force so armor leads the attack while the remainder of the force fights a delaying action or defends the perimeter during the initial stage of the breakout. There must be a sufficient number of engineers to support the mobility of the breakout force.

After penetrating the encirclement, the main body moves out of the area behind the attacking force and is followed by a rear guard. Combat service support elements integrate into the main body. The commander may organize a diversionary attack if sufficient forces are available.

The commander must coordinate internal and external supporting attacks and concentrate combat power, producing overwhelming combat power at the breakout point. Forces left in contact must fight a vigorous delaying action on the perimeter so no portion of the force is cut off.

The commander of perimeter forces must smoothly integrate them into the column. Supporting fires, including air support, should be concentrated at the breakout point. The rear guard may receive priority of fires once the breakout occurs.

If sick, injured, or wounded soldiers must be abandoned because of the method of extraction (such as, exfiltration) or the inability of the force to move them, medical personnel and the appropriate medical supplies and equipment must remain to care for the soldiers. Also, all nonmedical equipment which must be left behind should be incapacitated or destroyed before the force departs. Finally, as part of a breakout toward friendly forces, the commander plans linkup operations.

### Defend Encircled

The corps commander may require encircled forces to maintain their positions and defend encircled. Important considerations are:

- The mission of the unit and the mission of the higher headquarters.
- The terrain available for a defense.
- The ability to reinforce or relieve the force before the enemy can eliminate it.
- The mobility differential of enemy forces being greater, allowing the enemy to destroy encircled forces during a breakout attempt.
Exfiltrate

If a breakout appears too risky, and the commander does not plan a relief operation, one way to preserve a portion of the force might be through exfiltration. The same considerations that apply in a breakout regarding personnel and equipment that cannot be expeditiously removed from the area also apply in an exfiltration.

In all cases, the corps must plan how to support the encircled force with commitment of additional forces and fire support, including CAS, Army aviation, and ADA. If the commander orders a breakout, the corps assists with a supporting attack to divert the enemy. If the commander plans a linkup, the corps provides axes and fire support measures for both forces. In doing so, the commander carefully considers air defense ROE.

ENCIRCLEMENT OF AN ENEMY FORCE

The force conducts encirclement operations to deprive enemy forces the freedom of maneuver, thus denying them the capability to defend or delay in an organized fashion. Encircling operations also seek to cutoff evacuation and reinforcement routes. Encirclements may be deliberately planned, or they may result from other offensive operations.

Prior planning is probably the most important consideration of encirclement operations. The encircling command identifies and sets the conditions of the encirclement before it develops in order to deny the enemy as many advantages (such as securing advantageous terrain) as possible before surrounding him.

Encirclements can occur as a consequence of an operational action, a tactical action, or a combination of both. However, its reduction is strictly a tactical action. An encirclement consists of five actions:

1. Penetrating the enemy’s defenses.
2. Exploiting and attacking on converging axes.
3. Linking up forces and establishing the inner encirclement.
4. Establishing an outer ring to counter enemy reserves and continuing the exploitation.
5. Destroying the encircled force.

The initial state of the encirclement is the penetration of the enemy’s defenses in several sectors. Heavy task forces then quickly advance into the enemy’s depths and lock the ring of the encirclement. Following forces accept the inner ring and focus on destroying the pocket while armored task forces continue the exploitation and develop the offensive on the external front.

Encirclement of the enemy is complete only after the creation of an interior ring, an exterior front, and the organization of an air blockade (and naval blockade where applicable). The force must prevent the enemy from resupplying the encircled forces.

Commanders and staff must plan for dealing with bypassed forces, the challenges that EPWs and displaced civilians cause, and force ratio considerations. Once a decision is made to reduce an encirclement, the commander normally uses one of two possible methods of reduction—fire alone or fire and maneuver.

Reduction by fire alone implies that the encircling commander will use fire support as the predominant or sole means of subduing the encirclement. This would include employing improved munitions by artillery, CAS, and possibly, attack helicopters. Reduction by fire alone also provides the encircling force with the advantage of manpower preservation.

Unfortunately, reduction by fire alone has disadvantages. Perhaps the most apparent is the fact that it is ammunition-, weapon-, and time-intensive. Another disadvantage is the inability to guarantee results. Bombardment alone might not be sufficient to compel submission.

Reduction by fire and maneuver uses a combination of fire and ground maneuver forces to attack and destroy the encirclement. It is the surest method of reduction because it forces the enemy to surrender, displace, or face annihilation.

This method also allows the encircling force commander to retain the majority of the initiative. The major drawback of reduction by fire and maneuver is that it reduces the strength of the encircling force through attrition.
Once the commander selects his reduction method, he must determine his reduction technique, or simply, how he will employ that reduction method. Reduction by fire alone contains only one technique—application of overwhelming fire—and requires decisions on selection of munitions, delivery means, and targets. Reduction by fire and maneuver incorporates at least four techniques: reduction by continuous external pressure, divide-and-conquer, selective reduction, and reduction by infiltration.

The first technique, reduction by continuous external pressure, is the classic siege. The encircling force contains the encirclement, bombards the pocket with fire, and attacks the perimeter of the pocket in a battle of attrition.

This technique is obviously not the most advantageous technique for the encircling force. In the first place, the encircled force usually has the advantage of the stronger form of combat—the defense. Second, the encircled force usually has the advantage of interior lines, allowing it quickly to transfer forces within its defensive perimeter. Last, as a result of these two defensive advantages, the attacking force can expect to suffer a greater number of casualties in comparison with those the defenders will experience. In comparison with the other techniques, reduction by continuous external pressure has few, if any, advantages unless the encircling force has an overwhelming force advantage.

The technique of divide-and-conquer, on the other hand, is a much more viable and less costly operation. It is also the technique German and Soviet armies used against pockets of resistance during World War II. Once the force surrounds and contains a pocket, the encircling force launches a penetration to divide the pocket in two. Another penetration then divides these pockets into smaller ones. These penetrations and divisions continue until resistance subsides. This technique eliminates the pocket’s advantage of interior lines.

The third technique, selective reduction, attacks the cohesion of the encircled force by focusing on the sequential destruction of specific targets (for example, a situation where the encircled force is strong in AD and artillery assets). The encircling force might focus on eliminating the pocket’s AD systems first, then use air and ground forces to eliminate its artillery. Armored attacks on CSS assets and infantry attacks on vulnerable armored formations could follow. The objective being the eroding of the total combined arms strength of the pocket by eliminating specific combat and CS elements. Commanders and staffs can use this technique in combination with the other reduction techniques.

The fourth technique, reduction by infiltration, moves friendly forces through the perimeter of the encirclement, isolating and reducing small portions of the pocket without external interference.

In addition to selecting reduction methods and techniques, the encircling commander identifies special planning considerations for his entire force as well as for specific members of his combined arms team, including—

- The effects of a pause to reorganize.
- Maneuver and fire support control measures.
- Continuous reconnaissance.
- Encirclement isolation.
- Psychological operations.
- Electronic warfare.
- Use of nuclear weapons.
- Creation and employment of a mobile reaction force.
- Combat service support.
- Dealing with an outside enemy force attempting to assist the encircled force.

**LARGE-UNIT MOVEMENT**

Commanders must understand the magnitude and importance of corps-size movement. Those movements will be successful when based on anticipation and prior planning, command involvement at all levels, and strict discipline.

Corps, divisions, and brigades will be powerful weapons in any kind of conflict as long as they have the space to move and concentrate quickly in fast-developing situations. They can only do that where the road nets or cross-country conditions allow them to march and maneuver on multiple routes and avenues of approach.
Movements are generally classified into two broad categories—tactical and administrative. However, the distinction is often not clear. The primary consideration in movements is to ensure that forces arrive at the proper place, at the proper time, in effective condition, and in the best formation to accomplish assigned missions.

Joint Publication 1-02 and FM 101-5-1 define an administrative movement as one in which the commander arranges troops and vehicles to expedite their movement and to conserve time and energy when he anticipates no enemy interference, except by air. A tactical movement is a movement within a combat zone when contact with the enemy is possible or anticipated.

The critical difference is in the organization of the moving units. In a tactical movement, the commander organizes elements to facilitate combat while administrative movements maximize transportation resources.

The G3 plans and directs all tactical movements. Under the direction of the G3, the G4, with the COSCOM MCC, plans and coordinates the execution of administrative moves. The forms of tactical movement include tactical road march, approach march, and combat formations.

Detailed plans are necessary for either type movement. The staff must consider the same elements they evaluate in planning combat operations as in planning movements.

Elements having the greatest influence on the disposition of forces are the mission, proximity of enemy ground forces, terrain, and enemy aviation. If the movement is a tactical move, the organization must be combat-loaded or organized. If it is not tactical, planners organize for efficiency.

Planners also include contingencies for actions during the movement, therefore the organization for administrative movements cannot disregard combined arms and combat considerations (C², maneuver, fire support, intelligence, engineers, and CSS).

Command and control includes terrain management, A²C², and ROE. Planners also address the scheme of maneuver, timing, security, deception, enemy, weather, organization of forces, and the transportation network, including traffic regulation and control.

For movements, planners must plan for fire support. The corps also acquires and provides the necessary intelligence to allow planning and execution of the move. The engineers build, upgrade, and repair routes and bases needed to support large unit movements.

For CSS, the corps’ initial concern is to sustain the movement, primarily by providing adequate refueling and maintenance support. However, the corps must also consider echelonment of assets to best support the follow-on operation, the extent the move will disrupt normal resupply activities, and the impact civilian vehicles and refugees will have on the move.

These considerations exist whether or not the commander anticipates enemy contact during or after completing the movement. There are also several concerns which arise as a result of the size of the task. For example, the staff must analyze the transportation network to ensure it is sufficient to accommodate the anticipated move while allowing the continued support of ongoing operations.

Large-unit movements can heavily impact the operations of other formations. The diversion of assets necessary to accomplish such movements will limit support to other units until completion of the move.

Huge columns of vehicles cutting across virtually all MSR will make it difficult to accomplish anything more than routine resupply for the duration of the move. Proper march discipline and traffic control should permit infiltration traffic to pass between serial and convoy gaps in the columns, but the amount of such traffic would be limited.

In most AOs, a large-unit move at night will require a time-consuming incremental shifting of forces over multiple nights and multiple routes. Another major consideration is the significant amount of time required for the formations to close into their AAs on arrival at a new location, followed by additional time required to resupply and reorganize.

The movement of large-size formations requires considerable planning and careful control during execution. Planning must be expeditious, giving all concerned sufficient time to prepare.

There must be a complex control and support apparatus in position to facilitate the execution of the move. For corps, these considerations are
similar whether the movement is of a subordinate unit, a unit passing through the corps, or the entire corps conducting the move.

Additional control measures for which the corps is responsible include route designations, ground and air traffic control, and establishing time lines. Corps can move either by rail, water, air, or road marches.

Movement of large forces is more economical by rail, but the staff must conduct an availability study of transportation means, as well as consider the effect on such movements, before making a decision. The lack of fuel, tires, or motor facilities may direct movement of all or a portion of the force by rail. See FM 55-20 and FM 55-65 for in-depth information on rail movements.

The responsibilities of a unit being moved by water are the same as for rail movement. Field Manual 55-65 gives details relative to water movement.

Movement by air is normally the most responsive means. The characteristics of air movement are speed and flexibility. However, adverse weather, limited landing facilities, and enemy air activity can limit air movements. Also, the aircraft available for an air movement may not be able to ship bulky and heavy items. See FM 55-12 for further discussion.

Moving a typical corps by tactical road march entails the movement of at least 25,000 vehicles, assuming the corps has three divisions, an ACR, and supporting troops. The corps would occupy road space of 2,500 kilometers if it marched at the normal interval of 100 meters between vehicles (10 vehicles per kilometer) even without gaps between march units and serials. Pass time at 25 kilometers per hour would be more than 4 days.

To conduct tactical operations, the corps must march on multiple routes at the greatest possible speed, making the most economical use of road space. Economizing road space requires greater vehicle density on the routes in use, a function of shorter intervals between vehicles and minimal gaps between march units and serials. Increasing the number of routes adds flexibility and speed. Condensing intervals and gaps increases risks.

The corps can shorten its movement time and accelerate its deployment by marching in division columns with four routes for each of two leading divisions and by—

- Moving at a daylight rate of march of 30 kilometers per hour (kph).
- Maintaining a 50-meter (m) interval between vehicles.
- Limiting gaps to 2 minutes between march units and 5 minutes between serials (1,000 m and 2,500 m at 30 kph). On eight routes at that interval and speed, the corps column length and pass time become manageable, and divisions can deploy to fight in a reasonable amount of time.

Under these conditions, the 25,000 vehicles of the corps would occupy about the same total road space of 2,500 kilometers (km) (1,250 km of occupied road space plus 1,300 km for gaps). Distributed over eight routes, the average corps column would be only 320-km long and would pass in 10.5 hours at 30 kph. A reinforced division (6,000 vehicles) marching on four routes would average 155-km per column and would pass in just over 5 hours.

Support for such a move (everything from circulation control to route repair, from fuel resupply to maintenance of vehicles) is an enormous task. In a move across the theater, it is an operational undertaking of great complexity.

In theaters where long-range sensors can expose dispositions at great distance and where self-directing antiarmor munitions and air maneuver can alter circumstances rapidly, fluid movement is crucial, the real essence of "agility." It is supported by well-executed deception operations and effective air and missile defenses. Logistic and route maintenance are also important supports to maneuver and cannot be treated as afterthoughts.

Corps, divisions, and brigades must train, plan, and refine their movement capabilities in peace if they are to fight effectively in the early stages of war. Their staffs should train routinely and repetitively to produce orders on short notice and to adjust road movements in progress.

Neither good staff work nor inventive commanders can be relied on to offset inadequacies in small unit march discipline and training. Standards for tactical marching must be stringent; the ability to march must extend all the way into the companies if a division is to move well. If a single battalion
cannot conform to the march table, its failure can throw off the movement of the brigade and lead to problems for the whole division.

Computer support and good SOPs can simplify march planning. It will only go smoothly if the staff anticipates requirements during planning. Anticipatory reconnaissance of primary and alternate routes and areas, prompt dispatch of competent liaison teams to other headquarters, and standing teams of communicators, traffic controllers, and quartering elements facilitate fast reaction to orders and the best use of available time.

Executing the plan calls for aggressive supervision and deliberate efforts to gain information. Just as commanders observe NAI in other operations, they make deliberate provisions to watch key points or areas during a march. Officers or units specifically detailed to monitor critical points (that is, military police) must report enemy interference, mobility problems on the route, and hitches in movement at critical points.

When it becomes necessary to reroute units, alternate routes must be available and confirmed as suitable by earlier reconnaissance. While rerouting may be unavoidable, it usually affects arrival times in forward areas and can also change the order of march into attack positions or assembly areas. Alteration of the movement plan, then, will be of immediate interest to commanders since they may have to reconsider timing or dispositions.

Guderian’s exploitations, the fire brigade actions of Mannstein’s armies on the Eastern Front, Patton’s thrust across France and the diversion of the III Corps to Bastogne, and the Israelis’ shifting of forces between theaters of operations in their wars are landmarks in the history of large-unit movements. Such short-notice repositioning of large forces to obtain a positional advantage and reactions to emergency situations characterized mobile combat operations of the past and will characterize operations of the future. These decisive and dramatic actions were the work of superb and daring commanders. The basis of all of them was mastery of the tactical march linked to the fastest possible transition into tactical action.

**RECONSTITUTION**

Reconstitution consists of actions to return a unit to an acceptable level of combat power (FM 100-9). The commander determines the level required, based on the unit’s mission and available resources. Reconstitution transcends normal day-to-day sustainment activities and consists of two categories: reorganization and regeneration.

Reorganization is the shifting of internal resources within a degraded unit to increase its overall level of combat effectiveness. It includes cross-leveling equipment and personnel, matching operational weapons systems with crews, or forming composite units (joining two or more attrited units to form a single full-strength or overstrength unit).

The overall objective is to improve the combat capability of a unit until more extensive efforts can take place. Since reorganization is internal, it is the most expedient means of maintaining combat power in the early stages of a conflict and in forward units throughout the duration of the conflict. In addition, it forms a basis on which to design regeneration efforts.

Regeneration involves the rebuilding of a corps’ subordinate unit through replacement of small units (crew to company), including leaders and equipment; large-scale replacement of personnel, equipment, and supplies; reestablishment or replacement of essential C²; and conducting mission-essential training for the newly-rebuilt unit. The intensive nature of regeneration usually requires removing the unit from the battle to a secure area.

The force cannot accomplish regeneration using organic resources. Generally, the headquarters that controls the necessary resources, normally two echelons above the unit being regenerated, is responsible for regeneration.

A corps can regenerate combat units by conducting weapons system replacement operations (WSRO). When a corps commander uses WSRO, a combat commander can expect to receive an individual weapons system or multiple weapons systems, which will include basic issue items, basic ammunition loads, and a trained and qualified crew. Usually a brigade can expect to receive WSRO support from the corps.

Planners estimate the assets to accomplish regeneration based on the projected losses they foresaw.
during the logistic and personnel estimate process and on the levels of combat power the commander desires. Not all units regenerate after a battle; only those critical to the follow-on mission and that require timely return to combat are regenerated.

Leadership is critical to the success of any reconstitution effort. For the corps commander that means anticipating the need for reconstitution and building it into his plan. He must address both the tangible and intangible aspects of the rebuilding process. A unit requiring reconstitution will have serious problems in the intangible areas of morale, unit cohesion, unit pride, and esprit de corps.

An assessment of the unit’s collective perspective of the true reality of the situation must be a part of the prereconstitution assessment. The mental attitude of unit personnel will affect the reconstitution effort. The leadership challenge lies in reestablishing pride, morale, cohesion, and esprit de corps through programs—

- To develop or replace key leaders.
- To assimilate replacements as members of the team.
- To reestablish cohesion and mission performance capability.
- To reestablish or reinforce standardized procedures to facilitate restoration to an effective, cohesive combat unit.

The corps commander’s assessment of the intangible aspects of a subordinate unit’s combat potential is an important factor in determining the unit’s reorganization or regeneration. His personal involvement, and that of other senior leaders in the chain of command, is essential in helping the unit being reconstituted recover its full combat potential.

Planners base the critical planning for reconstitution on loss data in logistics and personnel estimates. Logisticians identify units that expect to suffer heavy losses and units whose follow-on missions require a specified level of readiness. Planners then include the requirements for replacement personnel and equipment in the operation’s CSS requirements.

Planners must also select a reconstitution site where it would be reasonably safe from enemy activity and beyond the range of enemy artillery. The site must be large enough to accommodate the unit as well as corps/division assets involved in the reconstitution operation. The corps includes regeneration in its requirements to the ASCC.

Analysts base the decision to reconstitute a unit on reports and on-site assessments of a unit’s status in regard to personnel, equipment, and cohesion. The condition of the unit determines the exact nature of reconstitution actions needed to restore the unit and allows planners to refine estimates into requirements.

The staff must critically assess the unit while it is still in contact. This assessment provides the information necessary to determine if the unit requires reconstitution and will provide a basis to determine requirements. Final assessment occurs when a unit is removed from combat. The assessment provides complete information on the unit’s requirements for reconstitution.

The type and quantity of supplies and equipment, personnel requirements, and reestablishment of leadership and cohesion are all factors in the time the unit requires for reconstitution. Reconstitution may require several days or several weeks.

The commander must make the decision to reconstitute a unit, and to what readiness level, as early as possible to allow CSS to collect assets and to remove the unit from combat. This may also be the first time when the unit can conduct deliberate decontamination.

Units (brigade or smaller) requiring regeneration support will receive this support from a task-organized element (normally battalion-size). This element’s mission is to provide all CSS (including medical, replacement, and decontamination) that the unit being regenerated requires.

Each EAC will provide backup support, as required. The factors of METT-T determine the actual regeneration site. When conducting regeneration, CSS units are diverted from their primary mission. Therefore, CSS planners must prioritize support, both for DS and GS, including distribution of weapons systems since some units receive little or no support during the regeneration period.
PASSAGE OF LINES AND RELIEF IN PLACE

As with any operation involving hand-off of combat responsibility from one force to another, passage of lines and relief operations are extremely complex and involve a degree of risk. To minimize risk and to ensure synchronization of the operation, successful passage of lines and relief in place operations require detailed, centralized planning and decentralized execution.

A passage of lines is an operation in which a force moves forward or rearward through another force’s combat positions with the intention of moving into or out of contact with the enemy. A related mission involving similar considerations and planning factors is a relief in place. A relief in place is an operation in which an incoming unit replaces all or part of a unit already in an area.

The corps as a whole may participate in a passage of lines or a relief in place mission as the passing, stationary, relieving, or relieved force. In addition, corps offensive and defensive operations often include passage of lines or relief in place operations involving corps subordinate elements.

An example of a forward passage of lines is when a corps, as an operational reserve, conducts a counterattack through friendly forces in contact with the enemy. An example of a rearward passage of lines is when a corps-controlled covering force passes through and transfers combat responsibility to MBA divisions. An example of a relief in place is when a force in contact, having suffered significant combat losses, transfers responsibility for a zone of operations to a relieving force.

When the corps is involved as part of a larger EAC operation, the EAC normally directs the mission through verbal and/or written mission orders and plans. The EAC, in addition to providing the commander’s overall concept of operations and intent, normally provides the following to both corps-level forces involved in the operation:

- The EAC deception plan.
- Priorities for routes; CAS; intelligence collection and dissemination; available EAC-controlled fire support, including AD; and CSS support (if the EAC headquarters is also the land component command (LCC)).
- Control measures, with effective times, including the BHL; the axis of advance and objectives for forward passages; rearward AAs for both forward and rearward passages and reliefs; and airspace control measures.
- Guidance on the passing of control of the zone/sector (for example, TACON or OPCON between involved forces).
- Subsequent mission guidance for both involved forces.
- Additional EAC-controlled forces (for example, engineers, chemical, transportation units, or MPs) to assist in expediting the passage or relief.

The EAC also issues directives to component national and/or service commands detailing priority of CSS for the operation. These commands translate the directives into plans that provide CSS and movement support within the COMMZ. In mature theaters and theaters with a viable HN infrastructure, the ASCC coordinates HN support of the overall operation.

Based on the EAC’s concept of operation, intent, and additional guidance, the corps focuses its planning effort in two general areas: coordination with the other force and guidance to subordinate units conducting the passage. These planning efforts occur simultaneously.

Subordinate units of a corps frequently conduct passage of lines or relief in place operations as part of the corps’ larger scheme of maneuver. This occurs in both offensive and defensive operations. When subordinate units must conduct these operations, the corps assumes its role as the higher headquarters and provides the same planning considerations and guidance as the EAC headquarters required.

Passage of Lines

A passage of lines is an operation in which a force moves through another force’s combat positions with the intent of moving into or out of contact with the enemy. A passage of lines can either be forward or rearward.
Forward Passage of Lines

A forward passage of lines is an operation in which a unit passes through another unit that is in contact with the enemy to continue the attack. The unit in contact remains in place and supports the passing unit until its fires are masked.

After receiving a warning order directing an operation that would require a passage of lines, the passing commander and his staff establish liaison with the unit in contact. Based on METT-T factors, the passing unit normally collocates a command element (TAC or main CP) with the TAC or main CP of the unit in contact. Commanders and staffs of involved units coordinate—

- Exchange of intelligence.
- Exchange of tactical plans, including obstacle plans.
- Exchange of SOPs.
- Plans for reconnaissance by elements of the passing units.
- Security measures during the passage.
- Selection of routes and designation of guides.
- Selection of attack positions.
- Priorities for use of routes and facilities and provisions for movement control.
- When and under what conditions commanders will transfer control of the AO.
- Fire support and other combat support that the unit in contact is to provide.
- What CSS the unit in contact is to provide.
- Exchange of liaison personnel.
- Command relationships between units, including CS and CSS units and facilities and the unit in contact in whose area they may plan to locate.
- Measures to minimize vulnerability to enemy NBC munitions.
- Deception plans.

During the passage, the passing unit augments the traffic control capability of the unit in contact.

Close coordination and understanding between commanders and staff are essential for the smooth transfer of control during forward passage of lines. Before transfer of responsibility, the passing unit may be TACON to the stationary unit in the area affected by the passage.

Both commands should determine a time or identifiable event when responsibility for the area the passage will affect will transfer to the commander of the passing unit. The staff should disseminate this information to the lowest levels of both organizations.

The indirect-fire means of the unit in contact normally support the passing unit. This allows the passing unit’s fire support assets to continue the move to firing positions to support the continuation of the attack. After responsibility for the AO transfers to the passing unit, the commander of the passing unit coordinates all fires.

The unit in contact furnishes the following CS and CSS assistance to the passing unit:

- Evacuation of casualties and EPW.
- Civilian and straggler control.
- Use of areas and facilities (for example, water points, medical).
- Route priority and traffic control.
- Evacuation of disabled vehicles.

Support by the unit in contact terminates when the passing unit’s maneuver elements move out of direct fire support range. However, artillery fires and other area and long-range weapons may remain in support until either higher headquarters redirects them or when the passing unit coordinates movement passage.

Rearward Passage of Lines

A rearward passage of lines is an operation in which a unit effecting a retrograde movement passes through the sector of a unit occupying a rearward defensive position. Planning procedures for a withdrawal through a rearward position are similar to those for a forward passage of lines.
The commanders and staffs of the units involved coordinate the same details as in a forward passage of lines. The passing unit and the unit in position prepare and carefully coordinate a vehicle recognition plan.

Coordination is critical to the successful execution of control and responsibility between stationary and passing commanders. The area affected by the passage, either in the zone of attack or the sector of defense, becomes the responsibility of the stationary force commander.

Coordination is even more critical when the rearward passage is staggered or incremental across the sector or AO. This transfer of control might require that the passing commander relinquish control of certain elements that may remain in contact at the time of the transfer of responsibility.

The unit in position furnishes the passing unit all possible assistance, including combat, CS, and CSS assistance. Fire support by the unit in position is critical to the passing unit, especially when covering the withdrawal of elements left in contact during a delay.

Relief in Place

A relief in place is a combat operation in which one unit replaces all or part of another unit. A relief in place normally occurs when the unit to be relieved is defending.

The relieving unit usually assumes the same responsibilities and generally deploys in the same configuration as the relieved unit. Command and control of a relief in place operation is facilitated by close coordination by all commanders involved through the collocation of unit CPs.

If forward elements are capable of defending the AO, it is preferable to execute the relief in place from rear to front. This facilitates movement and terrain management.

Relief-in-place operations are categorized as hasty or deliberate. Considerations common to both are secrecy, speed, and control.

A relief must be concealed from the enemy for as long as possible. Accordingly, at first warning that a relief operation is required, units to be relieved should initiate a plan for deception and OPSEC.

Once initiated, relief operations are vulnerable to enemy attacks. Any unnecessary delays during execution provide the enemy additional time to acquire, target, and fire mass destruction munitions. Intermingling of forces places increased burdens on C² systems.

Hasty and deliberate relief-in-place operations differ only in the depth and detail of planning. Units conduct all relief operations, once initiated, as quickly as possible.

In a deliberate relief, units exchange plans and liaison personnel; conduct briefings and detailed reconnaissance; and publish written orders with detailed instructions. Units plan and execute a hasty relief from oral or fragmentary orders.

The relieved unit designates liaison personnel from combat, CS, and CSS units. Liaison personnel remain with the relieving unit until obstacle, fire support, and counterattack plans are coordinated.

The relieving unit order includes the time of relief, units to be relieved and the sequence, some discussion on future missions, restrictions for advance parties, security, time and place for the issuance of the order, and routine route priorities. Commanders achieve coordination and synchronization primarily through overlay graphics, event sequences, and movement plans.

For deliberate relief operations, the TAC CP, reinforced with selected coordinating and special staff officers, collocates with the main CP of the unit being relieved. When time is short in a hasty relief a smaller advance party, consisting primarily of TAC CP personnel, quickly moves to the main CP of the relieved unit. They conduct liaison functions for other staff agencies, coordinate the relief, and issue FRAGOs. Meanwhile, subordinate units move to designated AOs.

To maintain security, units must make maximum use of the relieved unit’s radio nets and operators. Units use the command frequency of the relieved units at all levels to effect relief operations. The relieved units’ signal officer remains in charge of communications throughout the relief operation.

For fire support the preferred technique is to relieve artillery last. If possible the relieved units’ artillery remains in place until all units have been relieved. If the relief is for the purpose of continuing the attack, both corps’ artillery remain in support.
Artillery assets are not relieved weapon for weapon unless limited firing positions are available. Until the change of command, all artillery remains under the relieved commander’s control. This requires close coordination with the units to be supported.

The ADA unit has two responsibilities. The first is to support the relief of forward committed forces. The second is to increase ADA coverage over all primary relief routes. Units accomplish these tasks jointly after developing the overall relief plan.

Normally the relieving corps’ CPs collocate with the relieved corps’ CPs and both commanders (or their designated representatives) remain together during the relief operation. Initially, the unit being relieved may have TACON over the relieving unit. Commanders must determine a time or an event when the transfer of responsibility will occur.

All units in place, regardless of their parent organization, come under the TACON of the designated commander. When possible, commanders send a clear, short, and simple message to all units in the sector acknowledging the transfer of responsibility from one command to another.

It may be necessary to exchange certain weapons, supplies, equipment, and occasionally, vehicles between units. The responsibility of EAC is to identify common supply items for exchange and any other specific equipment that warrants exchange.

It is highly probable that any future conflict requiring a relief will involve the replacement, at some point, of an allied force or of sister service units. Therefore, commanders should consider the following additional points when such reliefs become necessary:

- Ammunition and equipment incompatibility may make exchange more difficult.
- Deception plans must be believable and must target the appropriate enemy decision-making level.

**LINKUP OPERATIONS**

The corps might conduct a linkup with another force as part of a larger EAC-directed operation, or it may need to direct a linkup of subordinate units as a phase of a larger corps operation. Normally, linkup operations occur—

- When maneuver forces are attacking on separate but converging axes.
- When an advancing force reaches an objective area previously seized or occupied by airborne, air assault, amphibious, or special operations forces.
- When it is necessary to complete the encirclement of an enemy force (for example, double envelopment) or during the breakout of an encircled friendly force.
- During a counterattack, when the moving force’s axis of advance or objective area will eventually overlay or be close to the FLOT of a stationary friendly force.

The headquarters (the EAC or corps) directing the linkup establishes the command relationships between the converging forces both during and after completing the linkup. At some point during the operation or after the linkup, higher headquarters may elect to combine both forces into a single force under the control of either commander, or both forces can continue to operate separately under the control of the higher commander.

Headquarters also directs maneuver and fire support coordination measures to support the operation, clearly establishing the AO for the converging forces, both during and after the linkup. Normally there is a restricted fire line (RFL) between converging forces and as close to the stationary force (if applicable) as possible to allow maximum maneuver space for the moving force.

Higher headquarters will also establish linkup points for the converging forces if time does not permit their mutual establishment by the com-
manders of the converging forces. Higher headquarters also assigns the converging forces’ subsequent mission after they complete the linkup.

Converging forces will maintain command and staff liaison during the planning phase and throughout the duration of the operation. Command liaison elements must be capable of continuous operations and sufficiently equipped to communicate with their headquarters.

This is especially critical during a joint and/or combined operation when communications equipment may not properly interface because of technical or security reasons. Converging forces will also need to establish any additional communications necessary to support the operation, including the exchange of signal operations instructions (SOI).

The converging forces jointly establish any additional control measures (including linkup points, if not already established) to support the operation. They also coordinate CS or CSS to facilitate the linkup operation and/or the subsequent mission.