CHAPTER 5

OTHER TACTICAL OPERATIONS

The division conducts other tactical operations to support both offensive and defensive operations. In many cases, these operations are an inherent part of an offensive or defensive plan. In all cases, they require special considerations during planning and execution. The division engineer must have a fundamental understanding of these operations and their inherent special engineer considerations. The engineer missions involved in supporting other division operations are essentially the same as those outlined for offensive and defensive missions. Furthermore, the principles of C2 of engineers still apply during planning and execution. The division engineer uses the special considerations below to refine the offensive or defensive engineer mission analysis and force allocation.

RETROGRADE OPERATIONS

A retrograde operation is an organized and orderly movement of forces to the rear of or away from the enemy. A division may be forced to conduct a retrograde operation due to enemy action or when directed by corps. There are three basic types of retrograde operations: delay, withdrawal, and retirement. A delay is an operation in which the division trades space and time to inflict maximum damage on the enemy without decisive engagement. A withdrawal is an operation in which a division in contact withdraws to free itself for a new mission. A retirement is an operation in which a division not in contact moves away from the enemy. A division normally conducts a retrograde by combining a delay, withdrawal, and retirement in simultaneous or sequential action. For example, a portion of the division may conduct a delay to facilitate the division withdrawal and retirement.

There are four major underlying considerations in planning and executing any retrograde operation. They are–

- **Leadership and morale.** Commanders at all levels must maintain the offensive spirit among subordinate leaders and troops during the retrograde operation.

- **Surveillance and reconnaissance.** Tracking the enemy situation must be aggressive and accurate; it becomes critical as forward combat power is reduced.

- **Mobility.** The division must achieve superior mobility advantage over the enemy force by providing for division mobility and degrading that of the enemy force.

- **Battlefield deception.** Deception operations target the enemy force to cause indecision and delay enemy actions and to prevent him from concentrating combat power at friendly weaknesses.

While the division engineer organization contributes to each of these fundamentals, the dominant role of engineers is in achieving superior mobility over the enemy. When still in contact, division retrograde operations require centralized planning and control and decentralized maneuver against the enemy. Delaying and withdrawing brigades and squadrons in contact with the enemy require maximum freedom of action to maneuver and degrade the enemy's maneuver. Therefore, the division engineer assists the division in achieving a mobility differential by allocating the necessary engineer forces and scatterable mine assets to forward units. He recommends an engineer task organization that supports in-stride breaching down to the task force level. Additionally, the division engineer must plan obstacle zones that permit flexible use of scatterable mines with execution released to forward commanders.

The DIVEN organization also contributes to division reconnaissance and surveillance. The division engineer works with the division staff in focusing intelligence-collection efforts on key information requirements that indicate enemy strengths, weaknesses, and intentions. The division engineer assists the division G2 cell in analyzing combat intelligence, particularly enemy engineer activities. For example, a delaying unit may report a concentration of low-density breaching assets indicating the location of the enemy's main effort. The division engineer also assists in developing information requirements that trigger high-value targeting. For example, he may plot the location and employment of enemy assault bridges, recommend their location as a PIR, and recommend their destruction as a HVT.

Engineers contribute the most to the delay and withdrawal phases of a retrograde operation. The focus of engineer missions is again on mobility and countermobility. The division engineer recommends a task organization of the division and supporting corps engineer battalions to provide mobility and countermobility support to the forward units in contact and enhance the mobility of division units not in contact. In order to expedite the rearward movement, corps engineer units construct, improve, and maintain withdrawal routes for combat, CS, and CSS units.

RELIEF IN PLACE

A relief in place is a combat operation in which all or part of a division in a combat area is replaced by another division. It is normally ordered when the relieved unit is in either a hasty or a deliberate defense. The relieving unit usually assumes the same defensive responsibilities and initially deploys the same as the relieved division. Key considerations in planning and executing a relief in place are–

- **Secrecy.** Because of the inherent vulnerabilities created by a relief in place, the operation must be concealed from the enemy for as long as possible; deception and operations security (OPSEC) are all-important from the outset.
- **Speed.** Relief operations are extremely vulnerable to enemy spoiling attack once they begin. Unnecessary delays during execution must be avoided to prevent giving the enemy time to acquire, target, and mass fires on the relief.
- **Control.** Intermingling forces place increased demands on division C2, particularly if enemy contact is made during the relief.

Engineers contribute the most to a relief in place by assisting the division in achieving speed and control. Therefore, these become the focus of the relieving and relieved division engineers during joint planning and execution. As the two division G3s collocate to develop the maneuver plan for the relief in place, the division engineers develop a unified scheme of engineer operations. Both division engineers must fully understand the entire scope of the mission, including the defensive plan and concept for the relief in place. Understanding both the defensive plan and the relief-in-place plan are critical to determining the engineer tasks that must be accomplished to maintain speed and control during the operation. Engineers help achieve this by–

- Providing mobility to both the relieving and relieved units.

- Expediting the turnover of obstacles.

The division engineers of both the relieving and relieved units must recommend engineer task organizations that provide in-stride mobility operations to battalions moving to, through, and from friendly defensive positions. Collocated CPs also facilitate speed through a rapid but thorough turnover of obstacles. Obstacle locations, configuration, and composition are consolidated and provided to the relieving unit. The two division engineers must also develop detailed plans for the turnover of division reserve targets and situational obstacle plans. Actual turnover is effected at the subordinate unit level.

The division engineers assist their respective divisions control of relief-in-place operations by providing detailed mobility planning, developing a detailed obstacle-turnover plan, and providing LNOs to maintain engineer continuity during the relief. When planning for mobility operations, division engineers review the relieved unit's defensive plan overlaid with the relief-in-place concept. The routes for the entering and exiting units must be clearly identified and marked. The division engineers determine mobility tasks that are required on each route. The relieved division has the responsibility to fully prepare the routes through its sector. The relieved division engineer allocates mobility resources to assist in the preparation of these routes. Additionally, both division engineers must ensure that their respective divisions have the capability to conduct in-stride breaching operations in the event a lane is closed during movement.

When developing the obstacle-turnover plan, the relieved division engineer must have detailed and current status on the obstacles in his sector. While initially focused on obstacle control measures, he now focuses on individual obstacles and compiles a complete obstacle list and overlay. He receives updated obstacle reports from all subordinate units and determines the details of how the obstacles are to be exchanged, to include reserve targets and situational obstacles.

The presence of engineer LNOs at every echelon of the relieving unit down to maneuver company or team level is critical to the speed and control of obstacle turnover. Upon linkup, engineer LNOs with the relieving units become thoroughly familiar with the existing obstacles, including the direct- and indirect-fire control measures integrated with the obstacles. The LNO then assists the relieving maneuver commander in integrating existing obstacles into the current maneuver plan. The relieving engineer also advises the maneuver commander on plans for upgrading the defense to allow for any adjustments made to the defensive plan. Rapid, efficient turnover is critical for two reasons. First, it ensures that the maneuver commander is immediately capable of using the existing obstacles as a combat multiplier in defeating the enemy. Second, it expedites shifting engineer effort from obstacle turnover to improving the unit's defensive posture or preparing for the subsequent attack.

PASSAGE OF LINES

A passage of lines is an operation in which one force moves through another. A passage of lines can be conducted either forward or rearward. The engineer considerations for each are similar and depend more on whether the division is *passing or in-place.* Major considerations are–providing the passage of engineer control, the exchange of information, and the mobility of the passing force.

The passage of control between passing and in-place divisions is one of the key considerations in any passage of lines. The commanders of the two divisions must establish a mutually agreed-upon event that triggers the passage of control. Once control is passed, the passing division exercises tactical control (TACON) over the in-place division until all of its forces are beyond the direct-fire range of the in-place division. During a rearward passage of lines, however, control is passed from the rearward-passing unit to the in-place division unit. Forces in the rearward-passing division become TACON to the in-place division once they are committed to the passage routes or corridors.

The division engineers must have a thorough understanding of when engineer functional and unit control is passed and the disposition of engineer forces and missions at the time of passage. When control is passed between the divisions, the corresponding DIVEN commander may assume TACON of all engineer forces of the passing or in-place division. The controlling DIVEN commander can then task engineers of the adjacent division based on immediate requirements during the passage. This is critical in the forward passage of lines, since it affords the passing DIVEN commander with a means of accomplishing unforeseen engineer tasks with minimal impact on engineer support to the subsequent attack.

Close coordination and joint planning between division engineers are critical to the success of the passage of lines. The division engineers of both the passing and the passed divisions collocate during the planning and execution of the passage of lines. They focus initially on exchanging information. This information includes individual obstacle locations and routes through the sector. It also includes the details of reserve target and situational-obstacle execution. The passing division engineer then ensures dissemination of the information to subordinates through coordination with the G3 and instructions in the division's OPORD, engineer annex, and overlays.

Whether conducting a forward or rearward passage, the in-place division has the responsibility to provide mobility for the passing unit along cleared routes or corridors through its sector. The in-place division engineer conducts a complete analysis of the passage-of-lines concept of operations. The in-place division normally tasks subordinate maneuver units to prepare the routes or corridors. The division engineer recommends a task organization of engineer forces to the maneuver brigades, based on the assets needed to clear assigned routes and corridors. Clearing operations must be completed prior to the initiation of the passage. Additionally, the in-place division engineer must plan the closure of lanes through obstacles, if required, once the passage is complete.

The passing division organizes for in-stride breaching operations prior to initiating the passage of lines. This is to ensure rapid support for mobility operations and the continuation of the passage in the event a route is shut down during the mission. Creating lanes through the in-place unit's obstacles requires permission from the division exercising TACON. Authority to reduce friendly obstacles in response to an immediate tactical situation may be given to subordinate units. This authority is included in coordinating instructions. Under all circumstances, this action must be reported to the passed unit so that the obstacle can be repaired. The division engineers must closely monitor the passage during execution to advise the respective division commanders on the impact of such occurrences.

C2 of both the passed and passing unit engineers during the passage of lines also transfers to the division exercising TACON. The division engineer of the division with TACON must facilitate control of the engineer units during planning and execution of the passage by having an accurate status of all engineer assets, activities, and obstacle control measures in the sector. This includes the status of all reserve targets and situational obstacles, including the execution criteria for each.

LARGE-SCALE BREACHING OPERATIONS

A large-scale breaching operation is defined as a breaching operation conducted by brigades and divisions to create a penetration through well-prepared defenses and pass follow-on brigades or divisions. A large-scale breach is not a separate tactical operation but can be an inherent part of a division or corps offensive operation. By its nature, a large-scale breach requires increased division involvement in suppressing, obscuring, securing, and reducing the enemy's obstacles and defensive positions. The phases of a large-scale breach are–

- **Attack to the obstacle:** the buildup of division combat power at the point of penetration.
- **Breach and assault:** initial penetration of the enemy's defenses by the lead brigades.
- **Secure the beachhead:** clearing forces within the beachhead; securing the lodgment against counterattack.
- **Passage of follow-on forces:** forward passage of follow-on forces through the beachhead and battle handover.

The above phases of a large-scale breach are not separate and distinct from those of the maneuver plan. Instead, they are a framework for integrating large-scale breaching operations into the overall plan of attack. Elements of each phase are integrated into the phases of the scheme of maneuver.

The division engineer must understand how the conduct of a large-scale breach impacts on engineer missions, force allocation, and C2. With the increased, more active role of the division comes a corresponding increase in the role of the division engineer in planning and executing division-level engineer missions. Engineer support during the attack to the obstacle and breach and assault phases is the same as discussed in Chapter 3 for a division DATK. Likewise, the considerations to support a forward passage of lines discussed previously apply in planning for the passage of follow-on forces. However, there are also maneuver requirements unique to a large-scale breach that the division engineer must consider in developing a scheme of engineer operations.

The first maneuver requirement that drives special engineer planning is that of projecting large combat formations through a heavily obstacled area. This requires the division to establish a lane network quickly through the enemy's defense. The lane network must make maximum use of the achieved penetration and posture follow-on forces for continuing the attack. Whether the follow-on force is a subordinate brigade or follow-on division, establishing the lane network is a division-level responsibility. In coordination with the G3, the division engineer must anticipate lane requirements, develop a tentative plan for the lane network, and allocate the necessary engineer forces. He bases his recommended force allocation on the number of lanes to be reduced and the number and length of routes to be improved or maintained through the breachhead. He closely monitors the breaching plans of the lead brigades. He must envision the end state of the breach and assault phase to determine how many lanes, in addition to those made by the breaching brigades, must be reduced by engineer follow-and-support forces. The number of lanes in the lane network must support simultaneous forward passage of combat forces as well as the sustainment traffic (two-way passage) for brigades securing the beachhead.

The engineer effort involved in establishing and synchronizing the lane network with the breaching efforts of the forward brigades may require central division-level functional and unit control of engineer forces. In this case, the DIVEN commander may control all engineer units committed to the lane effort on behalf of the division commander. This is a situation that will call for the deployment of the DIVEN TAC to provide the DIVEN commander with forward C2. The DIVEN TAC facilitates synchronization of the large-scale breaching operation by aggressively tracking the brigade fights through the division TAC CP and continuously cross talking with the division main CP and the DIVEN commander.

The second maneuver requirement that merits special engineer consideration is securing the beachhead from counterattack. Once the lead brigades have seized footholds within the enemy's defensive positions, forces committed on the far side of the obstacles become extremely vulnerable to counterattack. Furthermore, the lack of a developed lane network hampers mutual support of forward forces by brigade and division reserves. Therefore, the division engineer must consider the use of obstacles as a combat multiplier to assist in securing the beachhead line as well as the use of obstacle control measures to preserve the mobility of follow-on forces.

The division engineer plans for the use of obstacles by anticipating requirements and establishes obstacle zones that support hasty defenses, if necessary, but keeps passage corridors open for follow-on forces. Normally, obstacles supporting brigade hasty defenses are employed as situational obstacles triggered by enemy counterattack. To foster responsive obstacle support to brigade hasty defenses, the brigades must have the necessary assets and emplacement control. The division engineer uses the enemy situation and event templates to estimate the required resources and assess how responsive emplacement must be. Both are key factors in recommending the allocation of obstacle capability to maneuver brigades.

Obstacle location may be directed by either the division or the brigades. Where the avenues of approach are well-defined and enemy courses of action are limited, the division may decide to direct the location of obstacles executed by the brigades. This technique minimizes risk in executing obstacles that may affect future movement and aids in synchronizing division-level fires to cover the obstacle. However, the norm is to allow the brigades and battalions to decide actual obstacle locations based on their plans for a hasty defense. In this case, the division engineer ensures that the brigade obstacle plans support the division plan and do not conflict with the plans for the passage of follow-on forces or future division operations.

RIVER-CROSSING OPERATIONS

River-crossing operations generally fall into one of three categories: hasty, deliberate, and retrograde. The engineer planning considerations for each are generally the same, although some of the planning steps in a hasty crossing may be eliminated. FM 90-13 establishes the base doctrine, tactics, and techniques for planning, preparing, and conducting river-crossing operations.

A deliberate river crossing is an attack that is planned and carefully coordinated with all concerned elements based on thorough reconnaissance, evaluation of all intelligence and relative force rations, analysis of various courses of action, and other factors affecting the situation. It requires extensive planning, detailed preparation, and centralized control. A deliberate river crossing is expensive in terms of manpower, equipment, and supplies. It is generally conducted against a well-organized defense when a hasty river crossing is not possible or has been conducted and failed. This type of river crossing requires the sudden, violent concentration of combat power on a narrow front, in an area where there is a high probability of surprise.

Deliberate river-crossing operations consist of the following four phases: advance to the river, assault across the river, advance horn the exit bank, and secure the bridgehead line. These four phases are executed by the following three forces: bridgehead, support, and breakout. The division engineer uses the phases of a river crossing as a base framework for analyzing and identifying required engineer tasks and allocating forces. He then uses the forces of a river crossing as a basis for recommending a task organization of engineers within the division. Key division engineer considerations in planning and executing a deliberate river-crossing operation are–

- Establishing effective engineer C2 in the crossing area.
- Task organizing the appropriate mix of engineers for each of the river-crossing forces.

The division engineer recommends which unit should perform the crossing-force headquarters responsibility. The choices are the DIVEN headquarters or a corps engineer group headquarters. The division engineer's recommendation is based upon METT-T.

The division engineer recommends the optimum engineer task organization for engineers supporting the bridgehead, support, and breakout forces. He uses his EBA mission analysis as the basis for recommending engineer force allocation. He must identify any shortfalls and submit requests for additional assets to the G3, who requests them from corps.

Engineers supporting the bridgehead force must be capable of conducting in-stride breaching in order to sustain the momentum of the attack to seize and secure the lodgment, exit-bank, intermediate, and bridgehead objectives. Engineers must be capable of installing situational obstacles to block counterattacks against the bridgehead. Finally, engineers supporting the bridgehead force must be capable of maintaining and upgrading exit-bank routes to facilitate the rapid passage and force buildup of the breakout force.

Engineers task organized to assist the support force must be capable of bridging the river and assisting in traffic control. Corps engineers normally augment the division to do these tasks. Corps combat engineers may reconnoiter and develop crossing sites, operate assault boats, man engineer regulating points, and assist in controlling traffic and marking routes within the crossing area. Corps bridge units build and operate heavy rafts and assault float bridges.

A retrograde crossing is a movement to the rear across a water obstacle while in contact with the enemy. Retrograde crossings are planned in the same detail as deliberate crossings. The division engineer plans to support both the mobility requirements of the portion of the force conducting the river crossing and the mobility, countermobility, and survivability requirements of the portion of the force left in contact with the enemy.

The division engineer ensures that uncommitted engineers are on order to execute mobility tasks to clear scatterable munitions, clear road blockages, or construct bypasses to shift traffic movement from one crossing site to another. He is responsible for all engineer functions within the bridgehead, crossing area, and division rear.