Chapter 3

Offensive Operations

The primary purpose of the offense is to destroy the enemy and his ability and will to resist. Offensive operations are designed to defeat the integrity of the enemy's defense system by driving into his rear and destroying artillery, reserves, C2 systems, CPs, and logistics support. Offensive operations may also be conducted to secure key or decisive terrain, deceive or misdirect uncommitted enemy forces, fix or isolate units, gain information, or spoil an enemy's offensive preparation. Divisions are normally tasked to conduct offensive operations as part of corps offensive or defensive operations. However, a division may conduct an offensive operation independently as a contingence force or internally as part of its own offensive or defensive operation.

This chapter provides a doctrinal foundation for division engineer support to offensive operations. It serves as an engineer extension of FM 71-100, Chapter 4. It examines how division engineers, regardless of the type of division, fit into the offensive framework and assist the division in achieving successful offensive operations. Understanding how division engineers fit into the division framework is prerequisite to effective offensive engineer planning. The engineer estimate process remains a useful tool but must be focused to meet the needs of division offensive planning.

While the role of division engineers in the offensive framework and the focus of engineer planning are the same for both armored and light forces, their tactical employment is distinctly different. In short, armored and light divisions fight differently. Each type of division is designed to have specific capabilities on the battlefield; however each also has inherent limitations. As a result, each type of division applies the basic forms of maneuver and conducts the five types of offensive operations to maximize the division's capability and minimize its limitations. These tactics are unique to the type of division and demand a correspondting unique employment of division engineers. Moreover the engineer force structure in armored and light divisions is different, with diversified capabilities and limitations. Therefore, separate sections of this chapter are dedicated to the foundations of engineer employment for armored and light division engineers in support of offensive operations.

OFFENSIVE CHARACTERISTICS

The offensive operation is the division's primary means of gaining and maintaining the initiative. Successful engineer support of the division attack depends on the division engineer's understanding and application of five offensive characteristics: concentration, surprise, speed, flexibility, and audacity.

Concentration is achieved by massing combat power at the point of attack. The division engineer must task organize and develop a scheme of engineer operations that masses the right type of engineer support at the right place and time and supports the massing of maneuver forces. The

engineer task organization must provide the most responsive support at the point of attack.

The division achieves surprise by attacking where the enemy least expects. To give the division the element of surprise, division engineers overcome existing and reinforcing obstacles rapidly and provide the division with mobility over restrictive terrain. Engineer speed and flexibility in support of the division are critical to the attack. Speed and flexibility are required to take advantage of enemy weaknesses, exploit success, and maintain the ability to shift the main effort rapidly. They are achieved by both a responsive engineer C2 system and a responsive decision cycle. Finally, the division engineer facilitates offensive audacity by seeing the battle and anticipating future engineer requirements. He must constantly posture the engineer force so that the division can rapidly take advantage of narrow windows of opportunity.

DIVISION OFFENSIVE FRAMEWORK

The division engineer must understand the division offensive framework to integrate effectively into offensive operations as both engineer planner and unit commander. In planning and conducting the offense, the division concentrates on the offensive battlefield framework–deep, close, rear, security, and reserve. Division engineer planners, commanders, and units each have a role in these five components. Understanding how division engineers support the division offensive framework is imperative to effective integration.

Deep Operations

The purpose of division deep operations is to create the conditions required for successful close operations. Deep operations are conducted to destroy uncommitted forces that could influence the outcome of the close fight. The division deep battle initially focuses on interdicting enemy division reserves, then shifts to enemy forces defending in subsequent objectives (future fights) as the close operation moves forward. The primary means for conducting division deep operations are field artillery (FA), attack helicopters, battlefield air interdiction (BAI), and electronic warfare (EW). However, the division may also use ground-maneuver units or dismounted infantry task organized for air assault operations. The division uses these assets to target enemy artillery, counterattack forces, C2 nodes, air defense artillery (ADA), and sustainment operations.

Division engineers contribute to all facets of deep operations as both planners and units. For example, the division engineer may plan for the use of the Gator or air-delivered Volcano as part of a division joint air attack team (JAAT) against enemy reserves or counterattack forces. When the focus of the deep operation is against enemy sustainment activities, the division engineer works with the G2 to identify and nominate enemy engineer logistic sites as priority targets. Division engineer units are task organized to dismounted infantry or ground-maneuver units committed to division deep attacks to provide the force with the necessary engineer support.

Engineer support to deep operations requires aggressively working the intelligence system and synchronizing current deep operations with the future close battle. The division engineer must continuously assess the engineer needs of division deep operations. He works closely with the G2 cell in identifying information requirements needed to plan, resource, and synchronize engineer support to deep operations. The process is continuous. As the close and deep battles move forward, the engineer

must continue to refine his intelligence-collection requirements. Likewise, the engineer must analyze how the success or failure of deep engineer operations impacts on the future close operation.

Close Operations

In the offense, division close operations focus on penetrating a defending regiment, fixing enemy forces adjacent to the main effort, and committing brigades to exploit success. Supporting the close operation is the focus of division engineer effort. In general, division engineers are task organized to mass mobility assets in the lead brigades of the division main effort. Division engineers are also task organized to provide the necessary mobility and countermobility to supporting attacks that must penetrate and fix adjacent enemy forces. Mobility for the exploiting brigades is provided by both corps and division engineers. Corps engineer units upgrade breach lanes for forward passage of exploiting brigades. Division engineers are task organized to the exploiting brigades to maintain mobility support forward.

Deception operations play an important role in the close operation. The division uses deception to target enemy regimental or division commanders, causing them to divert combat power away from the friendly main attack. The division engineer participates in planning deception operations by identifying engineer requirements needed to support the overall deception plan. He must also identify, up front, the impact that committing engineer resources to the deception has on support to the main effort. For example, the division may use a demonstration to cause the enemy commander to position his reserve away from the friendly main effort. The deception picture may not be complete without a supporting show of engineer force. However, the division engineer must consider the impact that dedicating engineer forces to the demonstration has on the main effort.

Close operations normally consist of main and supporting attacks. The main attack seizes the division's primary objective or destroys the division's assigned enemy force. It is characterized by mass concentrations of fire supported by dedicated CS and CSS to make rapid, bold, decisive advances.

The main effort of division engineers is to provide dedicated engineer support to the division main attack. The engineers supporting the main attack must remain focused until the mission is accomplished. The division engineer maintains this focus of engineers with the main effort by tasking them with mission-essential, division-level tasks only. The division engineer uses uncommitted engineers under division control to accomplish other engineer missions. In close operations, the fight is directed and controlled by the attacking brigades using direct and indirect fires and maneuver to defeat defending enemy battalions. Engineers committed to the main attack are normally attached to maneuver brigades for the duration of the mission to give the brigade commander the most responsive support possible.

The supporting attack exists only to assist the main attack. The mission of the supporting attack is limited in scope. It may be to deceive the enemy, seize critical terrain, fix adjacent enemy forces, or prevent enemy disengagement. Although the supporting attack usually receives fewer resources than the main attack, its success or failure may determine the success of the main attack. Therefore, commanders and their staffs must understand the link between main and supporting attacks.

The division engineer cannot ignore the engineer needs of the supporting attack. Again, he must consider how the supporting attack assists the main effort and identify the critical engineer tasks necessary to render that assistance. While the supporting attack is not normally the main effort of engineer support, certain essential

engineer missions may receive priority resourcing. For example, the division may task its supporting attack to fix an enemy counterattack force in position before it can be committed against the main effort. Engineers committed to the supporting attack, in this case, may be task organized with the bulk of the division's ground Volcano, taking away some flexibility from the main effort.

Flexibility is a key component of successful close operations. The division develops contingency plans that enable it to shift from one type of offensive mission to another. The division also plans contingencies for shifting forces and the main effort between brigades. Therefore, division engineers must be sensitive to the contingency plans of the division and anticipate engineer requirements. The division engineer should plan for the improvement of routes between brigades to facilitate the lateral shifts in combat power. In addition, he must develop their own contingency plans for shifting critical engineer assets between brigades as the main effort or mission changes.

The division also uses follow-and-support forces to accomplish missions that would otherwise divert forces away from the division main effort. A follow-and-support force is not the same as a reserve. It is a committed force with specific missions and is task organized with appropriate combat, CS, and CSS forces. Some potential follow-and-support missions are to widen or secure a penetration, secure key terrain, open LOCs, control refugees or prisoners, destroy bypassed enemy units, and attack counterattacking forces.

The division engineer must understand the division commander's intent for the use of follow-and-support forces. The division engineer analyzes the engineer tasks inherent in the possible missions assigned to the follow-and-support force and task organizes engineer support accordingly. Depending on his mission analysis, he may allocate organic or supporting corps engineer forces to accomplish follow-and-support engineer missions. Again, he must guard against allocating engineer forces to follow- and-support missions at undue expense to the main effort.

Reconnaissance and Security Operations

Reconnaissance and security operations are essential to the success of division offensive operations. Reconnaissance is used to confirm or deny critical assumptions made about the terrain and enemy situation. Aggressive reconnaissance is critical to identifying and guiding attacking forces to an enemy weakness. The information is useless, however, if it is not rapidly evaluated, interpreted, and disseminated to the attacking brigades.

Engineers assist in reconnaissance in multiple roles. The division engineer must work closely with the division staff to integrate engineer information requirements into the total intelligence-collection effort. While engineer unit participation in combined arms reconnaissance is primarily at the task force level, their efforts are largely focused by the information requirements (IR) and PIR coordinated at division and brigade. The division engineer assists the G2 cell in interpreting and analyzing intelligence. He assists the division commander and his staff in analyzing the impact engineer intelligence has on current and future operations. Engineers must make maximum use of engineer channels to forward combat intelligence to higher headquarters and pass analysis to subordinates.

The purpose of division offensive security operations is to guard against unexpected interference by enemy forces. The division secures its flanks and rear by screen and guard forces. The division engineer assists the G2 in identifying likely mobility corridors and avenues of approach that threaten the division's flanks and rear.He analyzes the threat and makes recommendations on the use of situational obstacles to assist guard and screening forces in its security mission.

Reserve Operations

The division creates a reserve force to maintain the momentum of the attack by exploiting success, defeating counterattacks, providing security, or weighting the main effort. The division reserve is not a committed force; it has multiple be prepared missions which are executed on the decision of the division commander. The plan does not depend on the commitment of the reserve to accomplish the mission. The size and composition of the reserve are completely METT-T dependent.

The division engineer must understand all of the be prepared missions of the division reserve and analyze the engineer tasks involved. In the offense, engineers with the reserves are essential. To exploit success and maintain the tempo of the attack, the division commander must be able to commit his reserve with all CS and CSS intact. The commitment of the reserve must not be delayed by changes in engineer task organization necessary to accomplish its mission. The engineer tasks involved in reserve operations missions are essentially the same as the attacking brigades.

Rear Operations

Engineers also play an important role in rear operations. The purpose of division rear operations is to retain the division's freedom of maneuver and continuity of operations. Rear operations involve synchronizing and protecting division sustainment operations to support the attacking brigades. Engineers support rear operations by constructing, maintaining, or improving LOCs necessary to sustain the force. In the offense, LOCs may become extended and require rapid changes based on the fluid nature of the attack.

The division engineer, aided by the division rear CP engineer, assists the ADC-S in developing engineer requirements and controlling the engineer units committed to rear operations. The division rear CP engineer, in coordination with the ADE and the division TAC CP engineer, anticipates mission requirements for engineer Class IV/V supplies to be pushed forward to the attacking brigades. Finally, engineers may assist in the development of base camp and base cluster defenses to protect sustainment units from rear area threats. Division engineers are not equipped to handle the diverse, equipment-intensive tasks involved in rear operations. Therefore, corps assets under the division's control are normally tasked with rear area missions.

DIVISION OFFENSIVE FORMS OF MANEUVER

Divisions use three basic forms of maneuver in conducting offensive operations: envelopment, penetration, and frontal attack. The division commander determines which form of maneuver to use based on his METT-T analysis. He uses the form of maneuver as an expression of intent and overall concept of the operation that gives focus to division planning. It is imperative that the division engineer understand each form of maneuver and its implications in developing the scheme of engineer operations and task organization. Two other forms of offensive maneuver are the double envelopment and the turning movement. These forms of maneuver normally require forces beyond the scope of the division and are more applicable to corps operations.

Envelopment

In the envelopment, the division uses a supporting attack to hold the enemy in position while the main effort passes around the

main defense and attacks a flank (Figure 3-1). The objective of the main attack can be either force or terrain oriented. The main attack may be used to attack and roll up enemy forces in the main defensive belt, second-echelon defense, or reserves. When the objective is terrain oriented, the main attack is nor really focused on securing key terrain which cuts the enemy's LOCs or escape routes.

The mission and nature of supporting and enveloping forces provide the division engineer with some unique challenges in developing a scheme of engineer operations. The engineer main effort must be initially directed to the mobility of the enveloping force and protection of its extended flanks. The brigades and task forces that make up the enveloping force nor really organize for in- stride breaching operations because once committed, they must have the capability to breach unforeseen obstacles quickly with minimal delay and maneuver. The division engineer must develop an engineer task organization that facilitates organization for task force in-stride breaches. Engineer task organization must provide for both flexibility and redundancy; the main effort cannot afford to wait for low-density equipment to be brought forward or replaced.

Another important aspect of providing mobility to the main effort is maintaining the enveloping force's LOCs. In the envelopment, the LOC for the main effort can quickly become extended, shifted in response to the attack, or threatened by bypassed units. A division envelopment may require an engineer force dedicated to constructing,

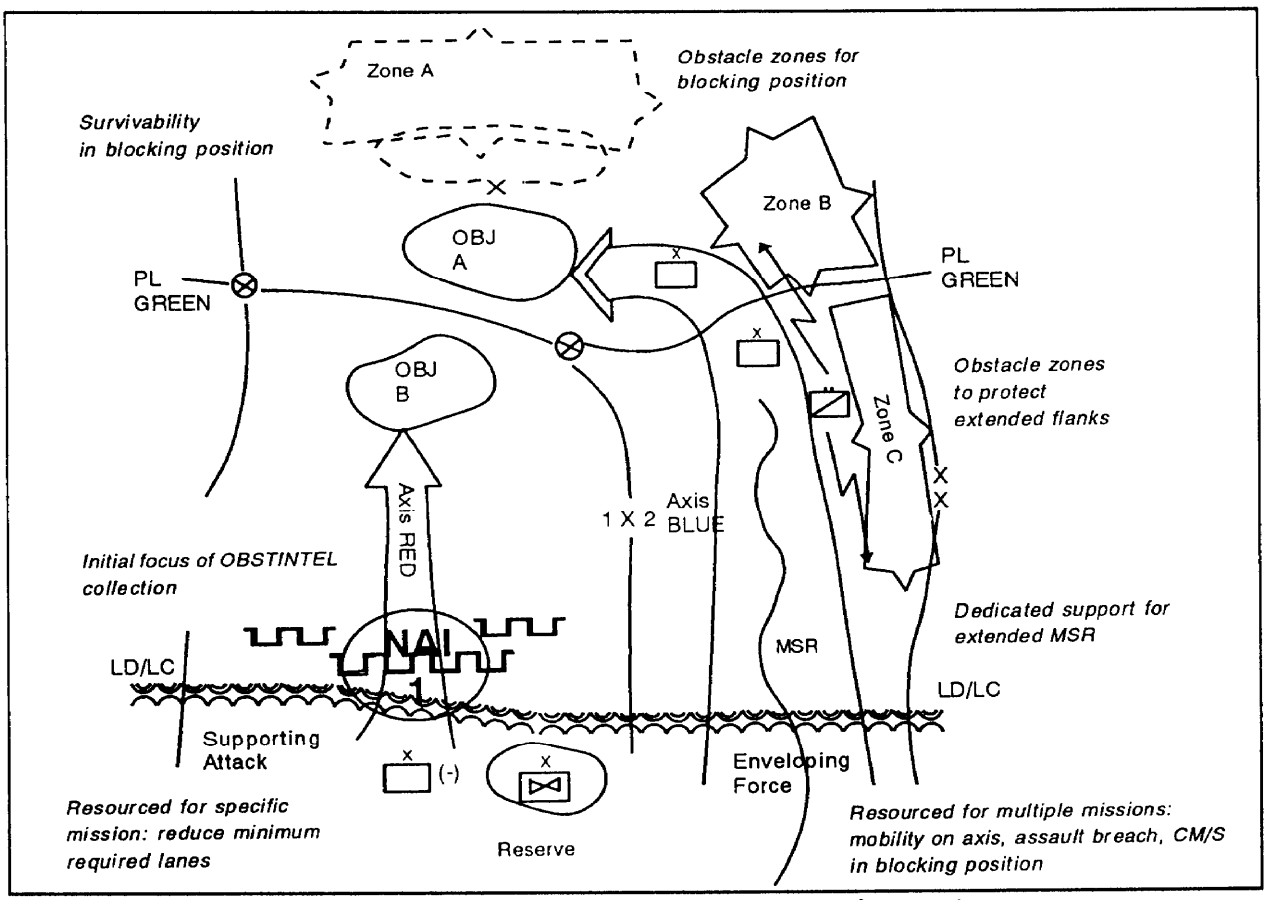

Figure 3-1. Engineer support to an envelopment

maintaining, or improving LOCs. Establishing LOCs for the enveloping force is a division responsibility. Therefore, engineers supporting the LOC effort are normally under DIVEN organization control and made up of corps assets. The focus of division engineers with enveloping forces cannot be diverted by LOC operations.

To provide engineer support to actions on the objective, the division engineer must have a thorough understanding of the enveloping force mission. As stated earlier, the mission of the enveloping force may be to attack and roll up a defending enemy force or reserve. The main effort of engineer support remains mobility. The task organization must provide attacking battalions with assault-breach capability. However, the mission may be to secure key terrain which cuts enemy LOCs. The enveloping force may establish blocking positions. Therefore, engineer support to actions on the objective may also require counter mobility and survivability operations. In these cases, the division engineer must ensure that the enveloping force has the assets to both maintain its mobility during the attack and establish effective blocking positions.

While the main effort of engineer support and concentration of engineer force is with the enveloping force, the supporting attack is too important to discount its engineer requirements. The supporting attack is likely to be the only force required to breach extensive obstacles to accomplish its mission. More importantly, the success of the main effort may depend on the ability of the supporting attack to penetrate the obstacles and cause the enemy to fight in two directions. Engineer support to the supporting attack must be limited in scope. The division engineer must carefully analyze the requirements of the supporting attack. This may require focusing on the maneuver plan two levels down through close coordination with breaching task force commanders. The division engineer will often have to accept a degree of risk and allocate the minimum force necessary to accomplish the mobility requirements. However, he can reduce the risk by initially focusing obstacle intelligence (OBSTINTEL) collection to confirm or deny assumptions made about the enemy situation facing the supporting attack.

Penetration

The division commander uses penetration to attack through the enemy's principal defensive positions, break the integrity of the defense, and defeat the enemy in detail. Penetration is conducted when the enemy force is overextended, a weakness is detected, or an assailable flank is not available. The division conducts penetration in three phases: rupture the enemy's defensive positions, widen the gap, and secure objectives that destroy the continuity of the defense. Once the division achieves penetration, it exploits by attacking deep into the enemy's rear areas (Figure 3-2, page 3-8). The division uses its main attack to rupture the enemy's defense. Supporting attacks protect the flank of the main effort and widen the gap by defeating adjacent enemy forces. Follow-and-support forces are used to clear the zone, widen the penetration, or secure the lodgment from counterattack. The division reserve is positioned to assist the main attack and exploit success.

The scheme of engineer operations to support a division penetration must provide the lead brigades in the main effort with overwhelming mobility to decisively rupture the enemy's obstacles. This remains the engineer main effort until penetration is achieved. It requires the division engineer to mass obstacle reduction assets into the engineer battalions supporting the attacking brigades. Penetration requires the rapid projection of combat power to maintain the momentum of the attack and quickly divide the enemy force. To do so requires reducing more lanes along a more narrow front than normally associated with breaching

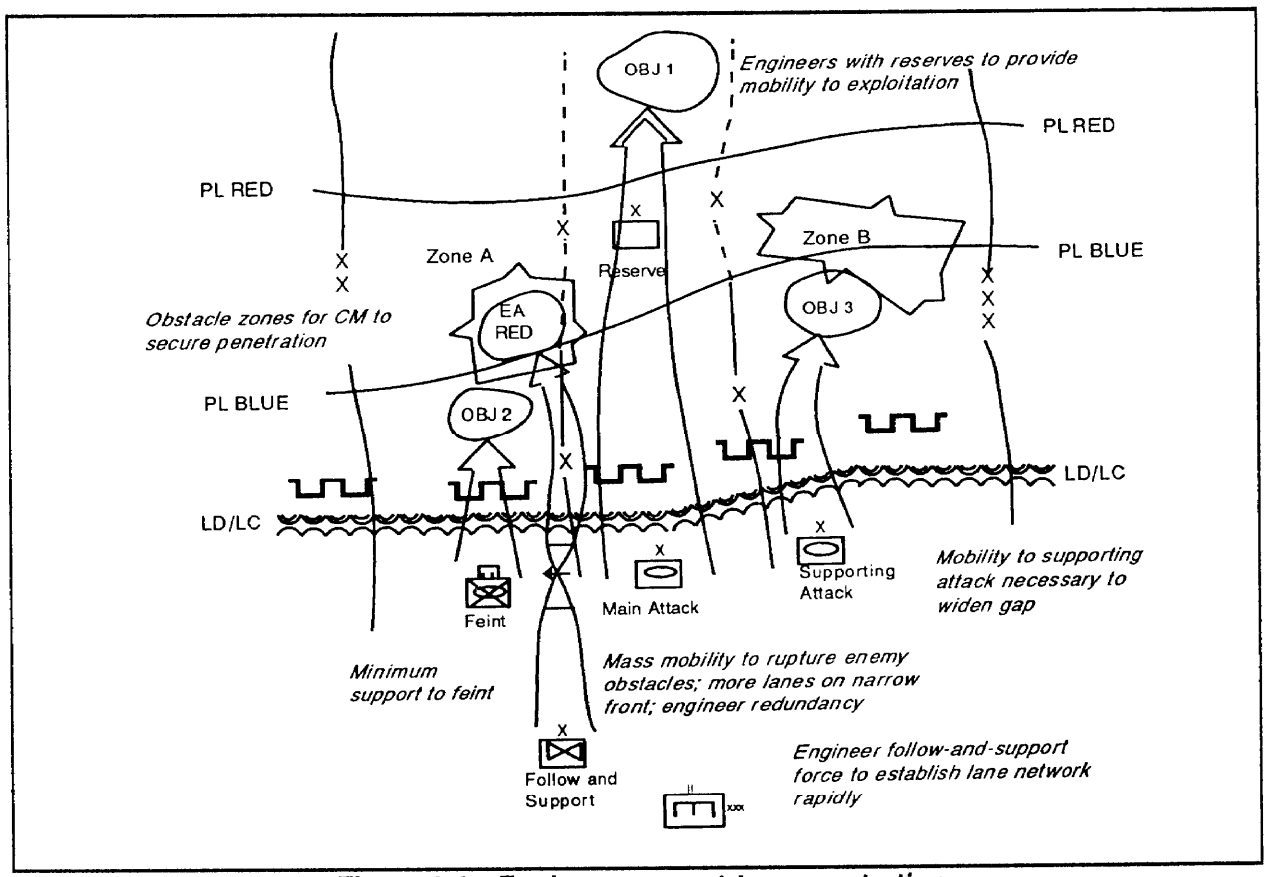

Figure 3-2. Engineer support to a penetration

operations. Therefore, mass and redundancy drive engineer support to the main attack.

As penetration is achieved, the engineer main effort shifts to providing mobility to forces widening the gap. The division may use supporting attacks or follow-and-support forces to widen the penetration. The division engineer must understand the division commander's intent for widening the penetration to ensure forces have the appropriate engineer support. When a follow-and-support force is employed to simultaneously clear the zone and widen the gap, the engineer task organization must support decentralized mobility operations. If the supporting attack is the primary mechanism for widening the gap, it may require a smaller, more centralized organization.

Depending on the enemy situation, countermobility may quickly become the main effort to help defeat counterattacks against the lodgment. The division normally uses follow-and-support forces to secure the lodgment and defeat any counterattacks. Therefore, the division engineer anticipates the size of counterattack force, analyzes likely avenues of approach, and allocates the countermobility assets needed to disrupt or fix counterattack forces. He must plan obstacle zones that permit the use of tactical and situational obstacles. These obstacle zones are normally developed and passed to the brigades for planning but are only active on the order of the division. Forces securing the lodgment require flexible and responsive obstacle capability such as artillery-delivered scatterable mines and air and ground Volcanos.

Once the lodgment is secured, the engineer priority shifts to assisting the division in

exploiting its success by ensuring the mobility of the exploiting brigades. The division engineer uses two mechanisms to support the exploitation. First, the scheme of engineer operations must allow for the rapid development of a lane network within the penetration. The lane network must support both the uninterrupted forward passage of the division reserve to subsequent objectives and the flow of sustainment to forces in the penetration. The division engineer constitutes an engineer follow-and-support force, made of corps assets, to establish, improve, and maintain the lane network. Chapter 5 discusses engineer considerations for large-scale breaching operations in more detail. Second, the division engineer must ensure that the reserve has the engineer task organization necessary to maintain its own mobility as it attacks deep in the enemy's rear area.

Frontal Attack

The division uses a frontal attack to overrun, destroy, or capture a weaker enemy force in position. A division may employ a frontal attack as part of the supporting attack of a corps envelopment. It is the least desirable form of maneuver because it does not easily facilitate massing overwhelming combat power against an enemy weakness or assailable flank. In the frontal attack, the division strikes along the enemy's entire front with two or more brigades abreast attacking in the zone (Figure 3-3, page 3-10). It is only favored when the enemy is weak or disorganized, the situation is not fully developed, the situation requires immediate reaction to enemy action, or the division mission is to fix the enemy in position.

The challenge to the division engineer in supporting the frontal attack is to provide adequate mobility support across a wide front on multiple axes. The nature of the mission may prevent massing overwhelming mobility support from the division perspective. However, the division engineer must ensure that the engineer task organization allows attacking brigades and task forces to mass engineers as required at their level. Quickly attacking a weak or disorganized enemy with the situation relatively unclear demands in-stride breaching capability at the brigade and possibly task force levels. Therefore, the division engineer balances organic and supporting engineers in each attacking brigade instead of in any one brigade.

The division engineer again uses corps assets as an engineer follow-and-support force. The mission of the engineer follow-and-support force is to upgrade breaching lanes and construct or improve MSRs. The decentralized nature of the frontal attack also requires a follow-and-support force capable of decentralized operations. Division engineers with the brigades reduce the lanes necessary to seize brigade objectives. Therefore, corps engineer efforts to upgrade lanes in each brigade zone of attack focuses on passing sustainment traffic rather than combat power. MSR requirements are also decentralized to sustain multiple axes. A corps CSE company, for example, may allocate one of its three CSE platoons to each brigade MSR.

Finally, the division engineer must consider the needs of each brigade to establish a hasty defense on its objective. Again, with brigades attacking in zones, each will normally consolidate on separate objectives and establish distinct hasty defensive positions. The division engineer must be sensitive to the decentralized nature of the division hasty defense. He must ensure that each brigade has the assets necessary for immediate and responsive obstacle and survivability support. If the division plan is to establish a deliberate defense immediately upon consolidation, the division engineer must consider task organizing corps assets to each brigade from the outset of the attack. Additionally, he plans for and coordinates with the Assistant Chief of Staff, G4 (Logistics) (G4) to pre-position and push necessary Class IV/V (mines) supplies to the brigades.

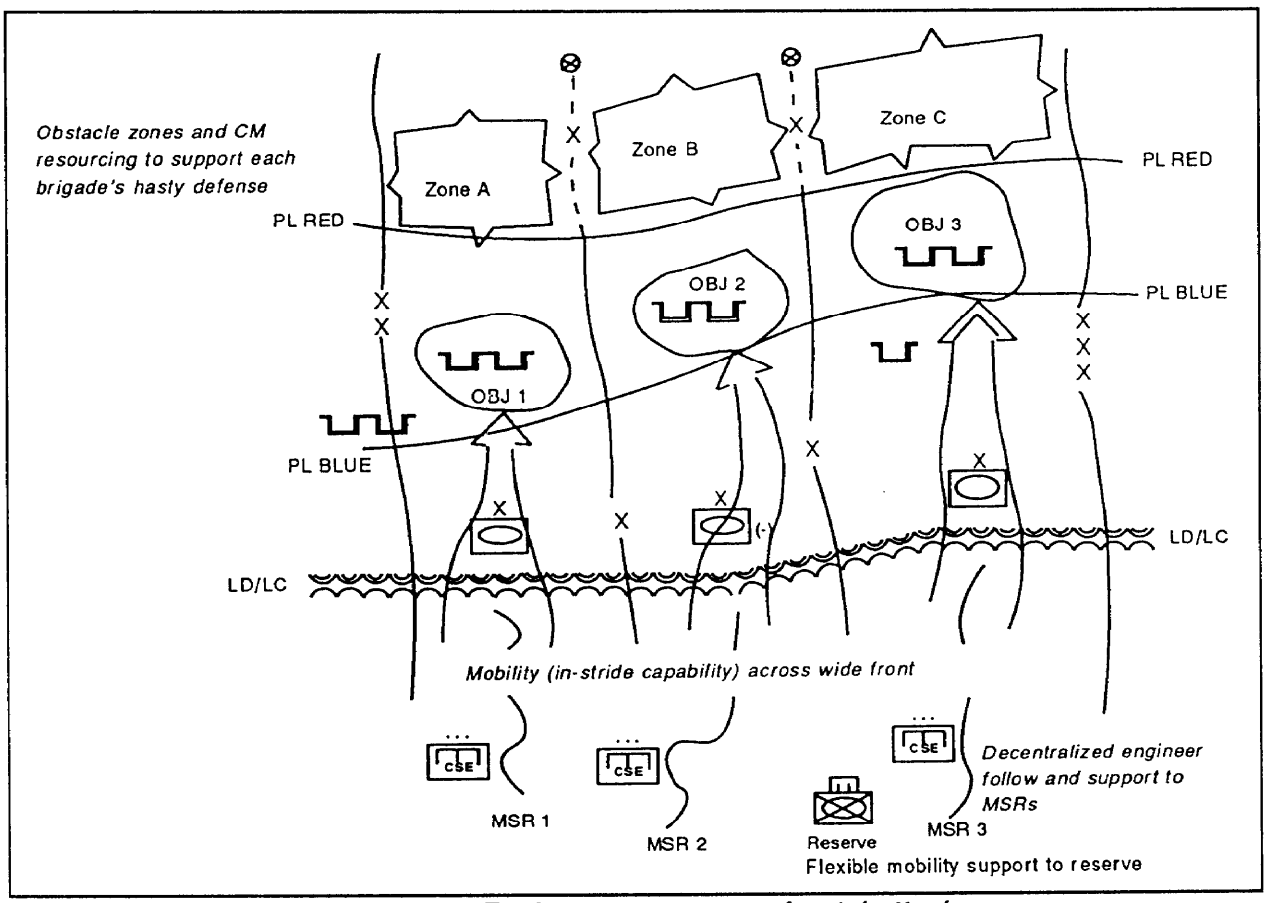

Figure 3-3. Engineer support to a frontal attack

ENGINEER OFFENSIVE PLANNING

This section focuses on planning engineer support for offensive missions. The engineer estimate provides the planning framework for the division engineer to integrate into the division's command estimate process. It provides a systematic procedure for developing the engineer task organization and scheme of engineer operations to support the division in offensive operations. The basic estimate process is found in Appendix A.

The engineer estimate and offensive planning process begins with the division engineer receiving his mission. This mission is extracted from the corps OPORD, the engineer annex, graphics, and the division's WARNORD. Based on the identified mission, the division engineer supports the division mission analysis process in the development of facts and assumptions. Working simultaneously with the G2 and G3, he conducts the EBA. The EBA consists of analyzing the terrain and assessing the enemy and friendly engineer capability.

The terrain analysis is conducted in conjunction with the G2, using the observation and fields of fire, cover and concealment, obstacles, key terrain, avenues of approach (OCOKA) framework. The terrain analysis is then used to develop the enemy situation template and the corresponding friendly scheme of maneuver. For the offense, the terrain analysis focuses on identifying where the enemy will defend, where the division

can move while conducting its offensive operation, and where the division is vulnerable to flank attack and enemy counterattack.

The division engineer works with the G2 in identifying the engineer capability of both the enemy maneuver and engineer forces. Based on the knowledge of how the enemy engineers support defensive operations and the specific enemy capability to conduct engineer operations, the division engineer plots enemy obstacles and the estimated survivability status on the situation template. Based on the situation template, he develops specific enemy engineer intelligence requirements and nominates NAI to incorporate into the division's reconnaissance plan.

Working with the G3, the division engineer analyzes the friendly engineer capability based on the current organic and corps assets available in both the engineer and maneuver organizations. To do this, he accounts for all available and mission-capable engineer assets that will support the division. Additionally, he accounts for other division mobility assets, such as mine plows and rollers.

The division engineer continues the mission analysis by conducting a complete review of the higher command's OPLAN or OPORD, including operational graphics. The division engineer focuses on the identification of specified and implied tasks, additional engineer assets available in the task organization, the specified acceptable risk, and the time available to conduct the mission. Based on this analysis, the division engineer determines what engineer tasks are essential to the mission and provides this information to the G3 for inclusion in the restated mission.

Following the development and approval of the restated mission, the division commander issues his guidance and intent. The division engineer must identify the form of maneuver and the type of attack the division will employ from the division commander's guidance and intent. Based on this, the division engineer confirms specified, implied, and essential engineer tasks and prepares to support course-of-action development.

Based on each course of action, the division engineer looks two levels down at maneuver task forces and develops a scheme of engineer operations, focusing on essential engineer tasks. He focuses on mobility support first. Using the division commander's intent, the terrain analysis, and the situation template, the division engineer identifies the required mobility tasks and the engineer assets needed to perform them. Next, he looks at countermobility tasks, including those required to provide flank and rear security during movement and those required to support hasty defenses on the objective. He identifies the assets required to accomplish those missions and he conducts the same analysis for survivability and sustainment engineering missions.

Having identified the tasks and assets required for a course of action, the division engineer establishes where the engineer main effort must be. He then reviews the engineer and maneuver assets available, allocates engineer assets and recommends the allocation of maneuver assets to accomplish the tasks, and identifies shortfalls in assets. If shortfalls exist, he reviews the allocation of resources to confirm the shortfall. Upon verification of the shortfall, he requests additional assets from corps through the G3. If additional assets are not available, the division engineer focuses on main effort tasks and reallocates assets to compensate for the shortfall. Critical to this process is identifying the risk associated with the shortage of engineer forces and addressing the risk during war gaming and course-of-action comparison.

Having allocated assets to accomplish engineer tasks, the division engineer focuses on C2. Using the habitual relationship C2 structure, he ensures that the assets assigned to each headquarters do not exceed

their span-of-control capability. If a shortfall exists, he analyzes all available C2 headquarters and upgrades the C2 structure, if feasible, or identifies, analyzes, and communicates the risk of not increasing the C2 during war gaming and course-of-action comparison. For offensive missions, he weighs the specific engineer mission requirements and communications of organic and corps engineer C2 headquarters.

Once courses of action have been wargamed, compared, and recommended, the division commander decides how the offensive mission will be conducted and gives his intent and concept of the operation. Based on this, the division engineer refines the division's engineer missions and develops a scheme of engineer operations for inclusion in the execution paragraph of the division's basic OPLAN or OPORD, focusing on total integration into the division's scheme of maneuver. To accomplish these tasks, the division engineer finalizes the engineer task organization and command/support relationships, assigns engineer tasks to the division's subordinate units in subunit and coordinating instructions, provides engineer-specific input into the service-and-support paragraph, and develops the engineer annex. He then briefs the division's engineer plan to the brigade commanders at the division OPORD.

Simultaneously, the DIVEN engineer staff develops the engineer OPLAN and OPORD. It ensures complete dissemination to all engineer units working for the division. Chapter 2 deals more specifically with this process. Finally, the division engineer closely monitors the preparation and execution of the mission, refining the plan as necessary based on the situation. He must maintain continuous liaison with other command and staff organizations to ensure the synchronization of engineer actions within the scope of the division plan.

OFFENSIVE OPERATIONS: ARMORED DIVISION

Armored divisions conduct five types of offensive operations. They are–

1. Movement to contact (MTC).

2. Hasty attack (HATK).

3. Deliberate attack (DATK).

4. Exploitation.

5. Pursuit.

FM 71-100 contains a description of each type of offensive operation. Understanding the principles and organization of each operation is key to the division engineer providing appropriate planning and engineer force allocation to support offensive operations.

Movement to Contact

The division conducts a MTC to gain or regain contact with the enemy, limiting the risk to the smallest possible part of the force. The primary consideration in preparing for a MTC is anticipating actions during movement and requirements for maneuver and fire support when contact is made. An armored division MTC is normally organized with a covering force, an advance guard, a main body, and flank and rear security elements.

An MTC has several possible outcomes. First, a division may not make contact with the enemy and reach its objective unopposed. This action could result in continuing the MTC to a subsequent objective or establishing a hasty defense oriented around key

terrain. Second, a meeting engagement may occur where the division meets an unexpected moving or stationary force.

A meeting engagement will result in a rapid decision to conduct a HATK, hasty defense, or a combination of both. Another possibility is to bypass the enemy force altogether. When the division has a clear picture of the disposition of a moving enemy, the division may exercise a third option. The division may gain the advantage by moving to advantageous terrain and preparing for a hasty defense, HATK, or a combination that destroys the enemy force. This third option differs in that the division chooses the ground to fight on and sets the conditions for battle while not in contact. Due to the variety of actions that may occur, the engineer force must be configured to accomplish mobility, countermobility, and to a limited degree, survivability operations to support a MTC.

The division engineer must understand the objective of the MTC and all contingencies to the plan. Planning begins by identifying engineer tasks and allocating forces. Figure 3-4, page 3-14, shows the basic engineer tasks germane to an armored division MTC.

When identifying engineer tasks and allocating forces, the division engineer must consider each component of the MTC and the inherent engineer missions they must perform. Following the identification of the engineer tasks for the covering force, advance guard, flank and rear guard, and main body, the division engineer allocates the necessary forces and assets to accomplish those tasks. The division engineer then task organizes units based on his force allocation and C2 requirements.

The covering force in a MTC develops the situation and prevents unnecessary delay of the main body. Its missions include destroying enemy resistance, securing key terrain, or containing enemy forces. The covering force, if the division is not part of a larger forces movement, is normally the division CAV squadron or a task force from the advance guard brigade. The engineer mission requirements to support covering force operations are primarily reconnaissance to gain intelligence and mobility operations to sustain the freedom of maneuver of the covering force.

Although it has no dedicated engineer support, the division CAV squadron will require engineer support to accomplish its engineer tasks. A division or corps engineer company will normally be attached. If the covering force is a task force from the advance guard brigade, the habitually related division engineer company provides support for engineer missions.

Engineer support to covering force operations is characterized by early linkup, detailed combined arms planning and rehearsals, and thorough integration into the combined arms team. This is even more important when a CAV squadron is the covering force, since the CAV squadron and the engineer company are not habitually associated and probably have not conducted appreciable combined arms training. For this reason, the division engineer should incorporate as many division engineer companies as possible into the training plan of the division CAV squadron as often as possible.

The advance guard in a MTC is normally formed from and controlled by the lead element of the main body. The advance guard maintains contact with the covering force and is task organized to support the uninterrupted movement of the main body. The primary mission of the engineer force supporting the advance guard is to maintain the advance guard's freedom to maneuver. The advance guard may also require counter mobility support, especially if the intent is to fix the enemy and allow the main body to maneuver and attack a flank. Situational obstacle planning and execution, in close coordination with intelligence provided by the covering force, must be considered. Engineer support for this operation comes

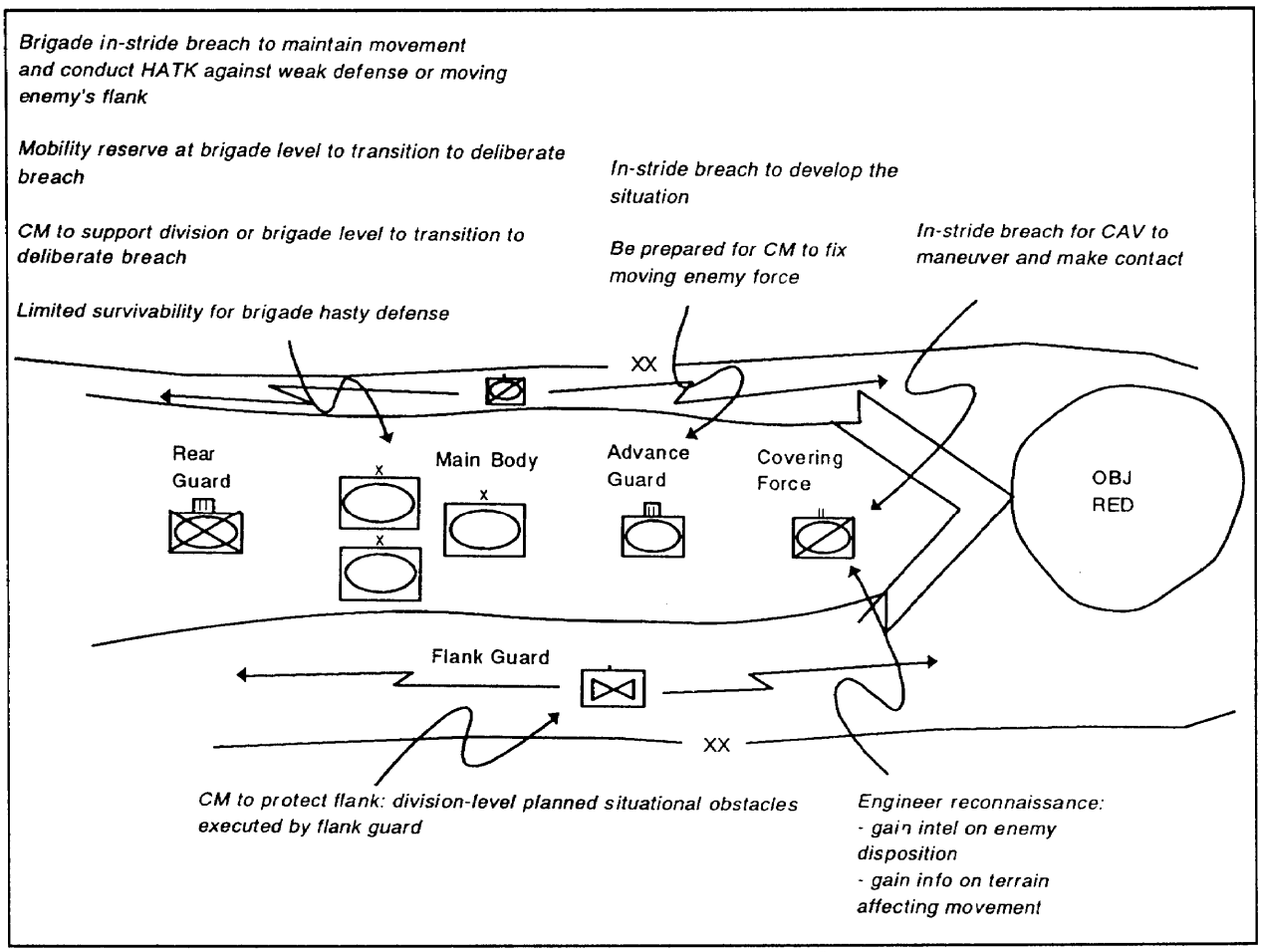

Figure 3-4. Engineer support to a MTC: armored

from the habitually associated division engineer battalion that supports the brigade that controls the advance guard.

Flank and rear guards protect the main body from ground observation and surprise attack. Units conducting flank and rear guard missions may be designated by the division, or the division may direct subordinate units to conduct their own guard operations.

While there is not necessarily a dedicated engineer force with the flank or rear guard, countermobility operations are an inherent task. In this case, the division engineer has the responsibility to plan obstacle zones and coordinate situational obstacles to assist in repelling attacks from the flanks or rear. If the situational obstacle is one that uses engineer assets such as ground Volcano or a rapid obstacle team, engineers will be task organized to the unit conducting the flank or rear guard. Linkup, incorporation into the orders process, rehearsals, and CSS are vital to the operation's success. The execution of situational obstacles must be controlled by the flank or rear guard commander.

The division engineer must conduct close coordination with the division staff and the commanders of the flank and rear guards. This coordination must determine the type and effect of the obstacle, the NAI/decision point (DP), the targeted area of interest (TAI), the execution criteria, and the maneuver

and fire-support forces that will cover the obstacle to gain the combat multiplying effect.

The main body in a MTC is organized and deployed with the capability to conduct HATKs, hasty defenses, or both. Engineers supporting the main body focus primarily on mobility and countermobility operations. Limited survivability support may be required. Mobility missions include in-stride breaching operations at the brigade or battalion level. The brigades and battalions must also have the capability to transition to a deliberate breach. Therefore, brigades and battalions must have the forces necessary to create a strong mobility reserve at task force and brigade level.

Countermobility operations support to the main body centers around supporting a hasty defense. The hasty defense may be conducted on the objective, as a contingency based on mission analysis, or as a reaction to the tactical situation during the MTC. The division engineer must plan to support all of these possibilities. Understanding all contingencies is essential. Engineer forces are task organized within the main body to give each brigade the flexibility to conduct hasty defenses, to fix enemy forces, or to protect flanks.

Limited survivability requirements are directed or identified through the mission-analysis process. These requirements include providing protective positions for C2 nodes, ADA, or critical fighting positions. Time normally prohibits these operations.

The division engineer plans to support hasty defense operations on the objective by planning obstacle zones and resourcing them based on envisioning the obstacle belts they contain. He ensures that the coordination necessary to deliver the obstacle material is conducted with the DISCOM. Other details, such as emplacement time, lanes, and duration of scatterable mines, must be considered to facilitate future operations. Activation of the obstacle zones and belts is held as an on order mission, pending the decision of what and when the next mission for the division will be.

Contingency hasty defensive operations are developed based on the terrain and the size and location of both the friendly and enemy forces. A commander may elect to execute a hasty defense on favorable terrain, based on the action of the enemy and clearly defined PIR and execution criteria. The division engineer plans to support contingency hasty defensive missions like a planned hasty defense on the objective.

The division, or a portion of it, may receive FRAGOs to conduct hasty defensive operations based on the tactical situation. As a response to the FRAGO, the division engineer and division engineer battalion planners immediately designate obstacle zones and belts to support the hasty defense. Time will normally be limited in this type of operation, and countermobility support will normally be in the form of scatterable mines. The division engineer and division engineer battalion planners must identify the countermobility resources available, allocate the resources, coordinate the delivery and emplacement of mission-required push packages, and monitor the emplacement status. Figure 3-5, page 3-16, shows a possible engineer force laydown to support the engineer missions of the component forces in a MTC.

Hasty Attack

A HATK is an offensive operation for which the unit has not made extensive preparations. A division conducts a HATK with the resources immediately available in order to maintain momentum or to take advantage of the enemy situation. A HATK may be conducted in a number of situations. These include conducting the HATK as a planned contingency during a MTC or as an unforeseen contingency during hasty or deliberate defenses and DATKs.

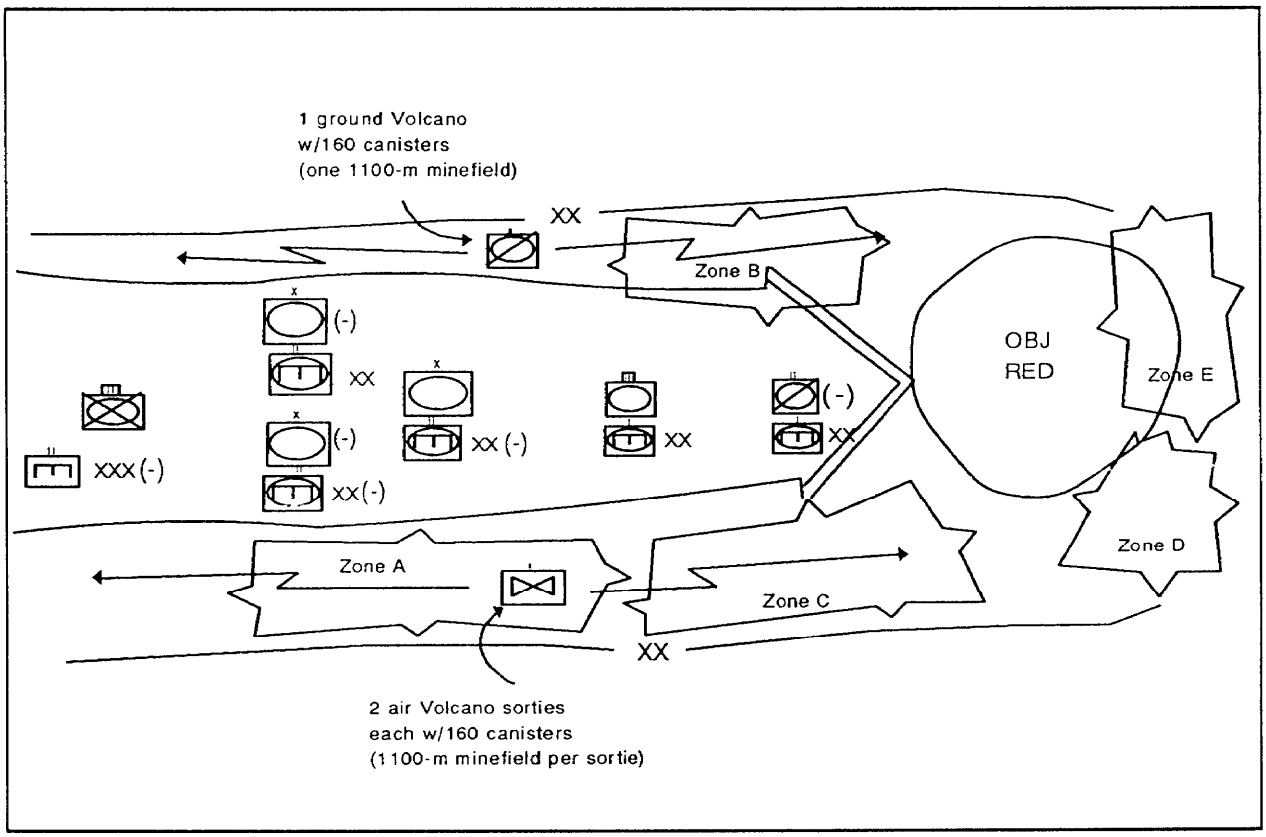

Figure 3-5. Engineer force laydown for a MTC: armored

Mobility support to the HATK is the division engineer's initial concern. He focuses on maintaining the attacking force's freedom of maneuver. Countermobility support is also planned; the focus is on isolating the battlefield and protecting flanks during the attack. Countermobility and survivability support becomes priority when the objective is seized to assist the division in securing the objective and repelling enemy counterattacks. The division engineer plans to support HATKs by identifying engineer tasks during the mission-analysis process and allocating forces to accomplish those tasks.

The division engineer must also consider the sustainment engineering tasks necessary to exploit the success of the HATK. While these missions are not necessarily part of the HATK, they may become critical to exploiting success. For example, a HATK against a disorganized enemy may quickly evolve into a pursuit. Maintaining the momentum of the attack may quickly become a function of the division's ability to sustain the force. An engineer priority at this point is improvement and maintenance of MSRs. Therefore, the division engineer considers sustainment tasks that may evolve as a result of the HATK and pre-position the forces and resources necessary.

HATKs are always a planned contingency in an MTC. Figure 3-6 shows a division conducting an HATK on a moving force from a MTC and the inherent engineer tasks. The division engineer plans to support this mission by developing a decentralized and flexible engineer task organization to support the division's subordinate units. The nature of an MTC requires each maneuver brigade to be task organized with engineer units and have the capability to conduct engineer operations. Since there is no time

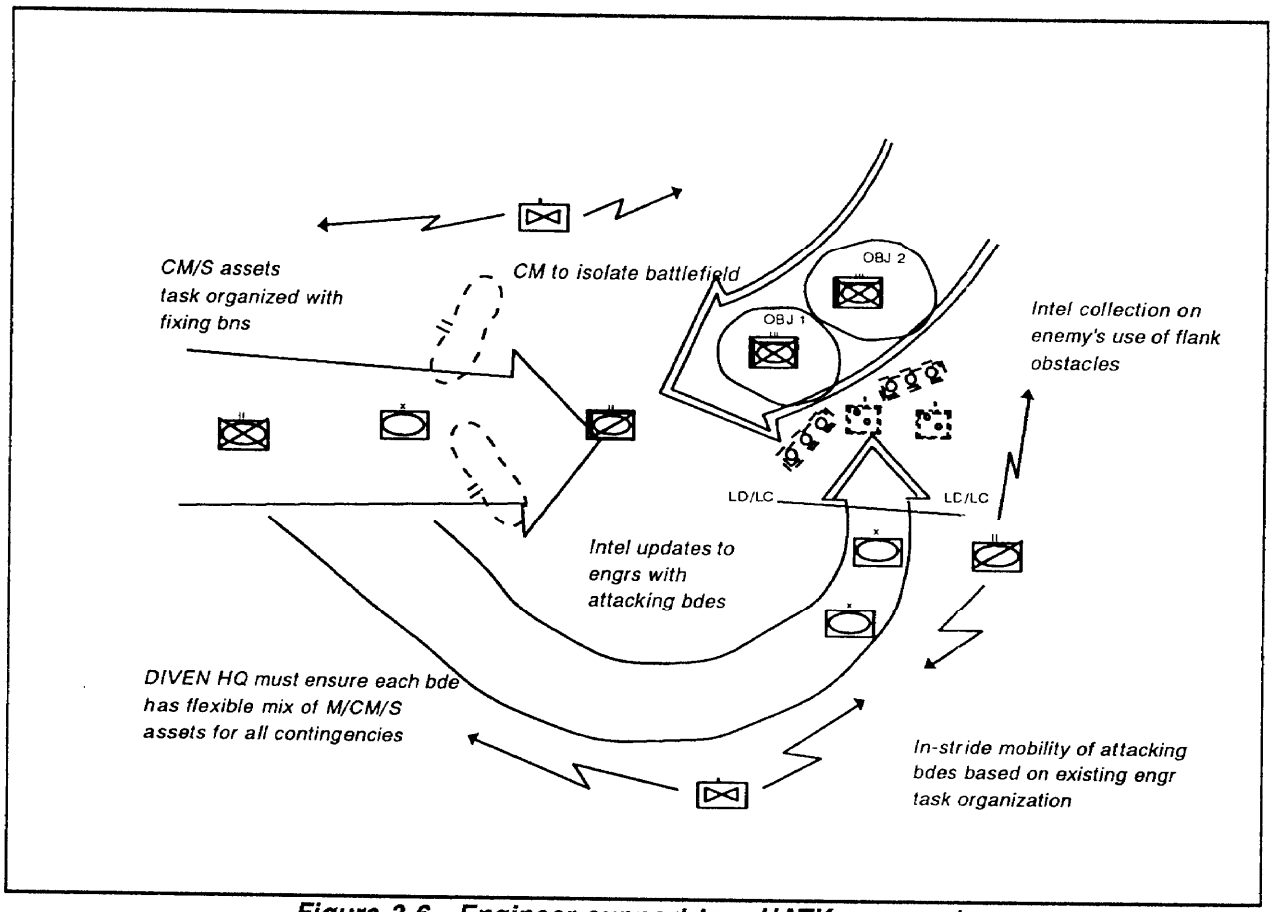

Figure 3-6. Engineer support to a HATK: armored

to shift assets, engineer support to the HATK is based on the existing task organization. Figure 3-7, page 3-18, shows a division conducting a HATK on a moving force from a MTC and the engineer task organization that supports the division's engineer tasks.

During the execution of the MTC, the division engineer closely monitors the battlefield. The disposition and activities of both friendly and enemy forces are of primary concern when transitioning to a HATK, and critical information is forwarded directly to subordinate engineer units. The division engineer also focuses on coordinating engineer operations between adjacent units during the HATK.

HATKs, in conjunction with a hasty or deliberate defense or a DATK, are normally driven by unforeseen battlefield circumstances and are executed as unplanned contingencies. They occur to defeat unexpectedly encountered enemy forces, as spoiling attacks against unexpected enemy offensive operations, or to counter enemy penetrations. These situations have several common threads. First, the HATK will probably be executed by the reserve force. Second, they occur very rapidly, with little or no planning and preparation time. Third, the division engineer has little impact during the execution of the HATK. His responsibility to supporting these missions revolves around planning and tailoring a flexible engineer task organization before the battle to support the reserve force. Additionally, he monitors the battlefield and directly passes essential intelligence to subordinate engineer units and coordinates the activities of engineers between adjacent units.

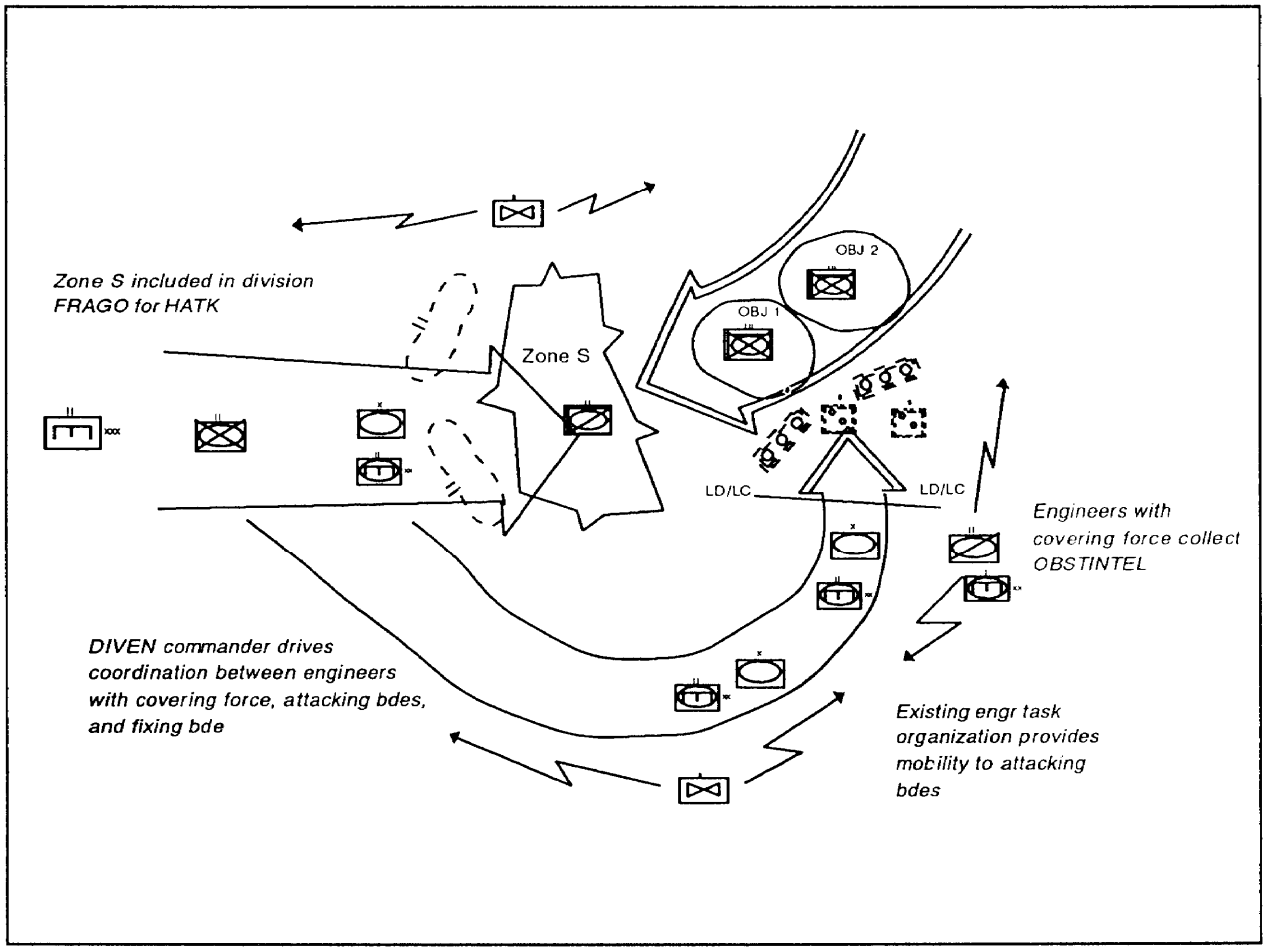

Figure 3-7. Engineer force laydown for a HATK: armored

Deliberate Attack

A DATK is an attack that is planned and carefully coordinated with all concerned elements. A DATK is based on thorough reconnaissance, evaluation of all intelligence and relative force ratios, analysis of various courses of action, and other factors affecting the situation. A DATK is expensive in terms of manpower, equipment, and supplies. It is generally conducted against a well-organized defense when a HATK is not possible or has been conducted and failed. This type of attack requires massed combat power on a narrow front in an area where there is a high probability of surprise.

The division engineer develops a scheme of engineer operations that focuses on providing mobility support throughout the depth of the division attack. While mobility is initially the main effort, the division engineer also carefully considers counter mobility operations. He must plan for the use of situational obstacles to assist in isolating the point of penetration from reinforcement and counterattack and provide supporting protection for the division flanks during the attack. He also develops countermobility and survivability plans for hasty defensive operations to assist in securing the objective once it is seized. Figure 3-8 shows the engineer missions inherent to a DATK.

Providing the necessary mobility support to the division's maneuver brigades is the division engineer's first priority in offensive planning. The allocation of engineer forces is based on the IPB/EBA and the mission analysis conducted during the command estimate. The division engineer must thoroughly understand the division commander's intent and scheme of maneuver, anticipate how the maneuver brigades will fight, and comprehend the threat situational template in order to properly conduct the engineer-mission analysis. The division engineer then looks at the task force level and identifies the number of lanes required for each of the maneuver brigade's task forces. He then compares the capabilities of the habitually related division engineer companies to the numbers of required lanes. If a shortfall exists, he allocates additional corps mechanized engineer units to the appropriate division engineer battalion. He then ensures that the existing engineer headquarters is sufficient to command and control the allocated forces.

Countermobility and survivability operations are also significant in supporting a DATK. Countermobility operations assist in isolating the battlefield and protecting the attacking force from enemy flank attack and counterattack. Again, the division engineer must understand the division commander's

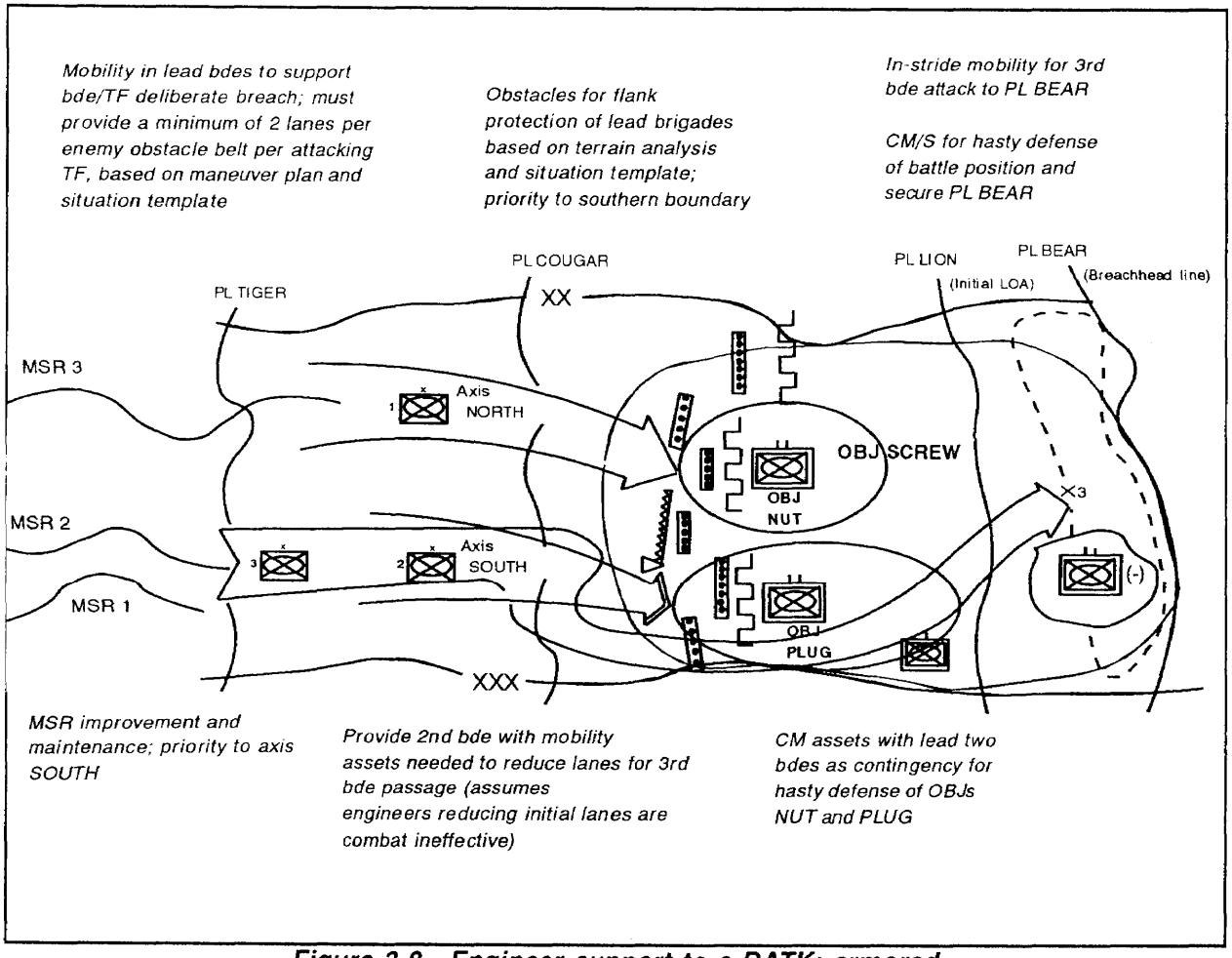

Figure 3-8. Engineer support to a DATK: armored

intent and must thoroughly understand all follow-on missions and contingency plans and allocate engineer forces to support them. This is accomplished through appropriate allocation of engineer assets to provide a flexible engineer force to maneuver brigades.

Using the division's event template, the division engineer estimates the time available to conduct counter mobility operations, including transporting obstacle materials to the designated locations, emplacing obstacles, and coordinating fires needed to obtain synergism. He must also coordinate with the DISCOM to ensure that push packages of mission-required Class IV/V supplies and the transportation assets required to haul them are planned and executed to support a hasty defense on the objective. He can influence countermobility operations during the execution of a DATK by accurately tracking the battle and advising the division commander on the use of scatterable mines and by assisting in deconflicting the division's priorities for their use.

The division engineer supports survivability operations by ensuring that maneuver brigades have sufficient blade assets in their engineer task organization. Survivability missions that support DATKs are based on the maneuver brigade commander's priorities and the survivability available in his task organization. Figure 3-9 shows a division conducting a DATK and the engineer task organization that supports the division's engineer tasks.

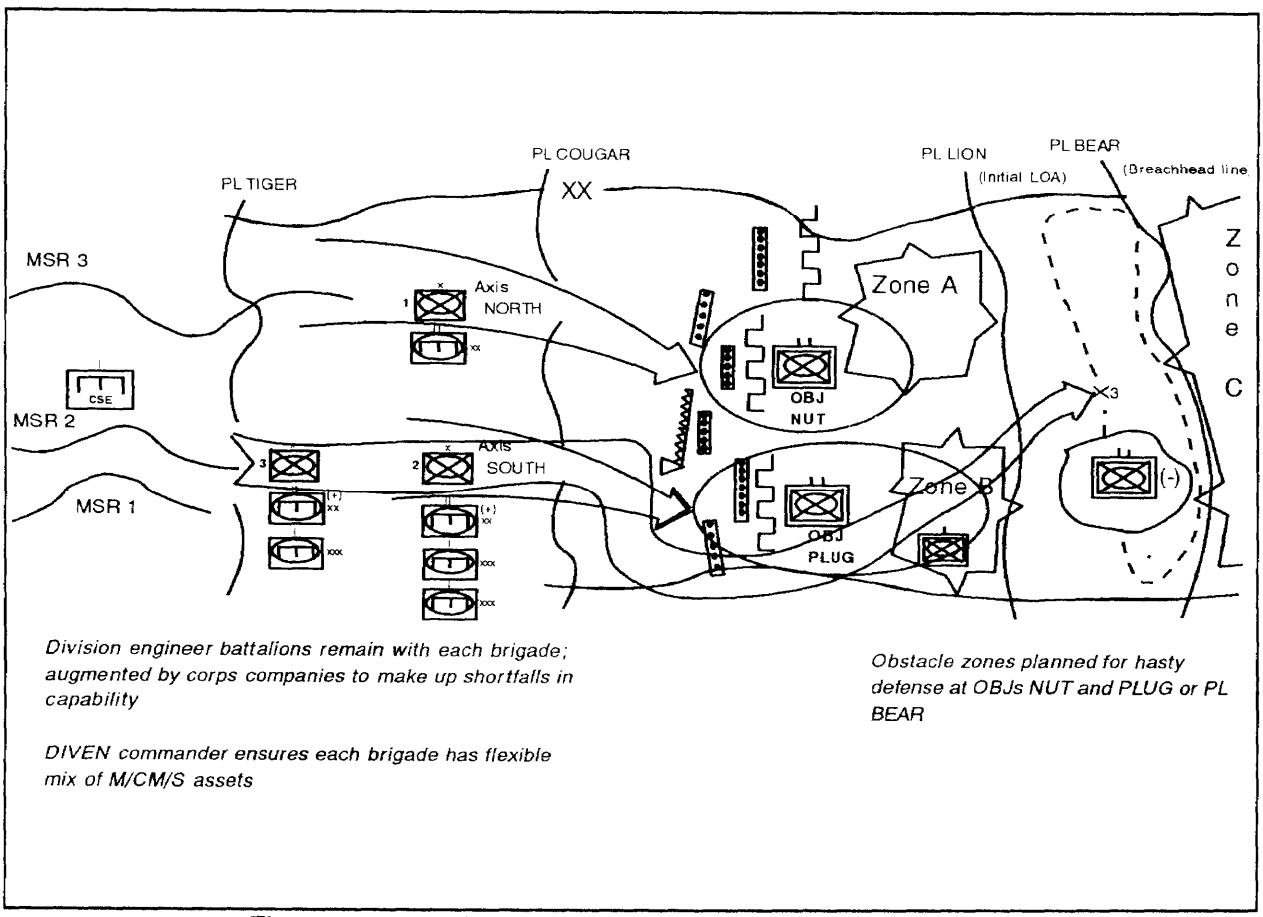

Figure 3-9. Engineer force laydown for a DATK: armored

Exploitation

An exploitation is an offensive maneuver that usually follows a successful HATK or DATK. An exploitation takes advantage of a weakened or collapsed enemy. The purpose of an exploitation is to prevent reconstitution of enemy defenses, prevent enemy withdrawal, and secure deep objectives. An exploitation is normally initiated by already-committed units using available forces to form both an exploiting force and a follow-and-support force. An exploitation is characterized by decentralized execution. The employment of forces is similar to an MTC. The division can either exploit its own success or act as the exploiting or follow-and-support force of a higher unit. Potential missions for the exploiting force are securing objectives deep in the enemy rear, securing LOCs, surrounding and destroying enemy forces, denying escape routes to an encircled force, and destroying enemy reserves.

Based on these missions, the exploiting force requires engineer support. Mobility operations are required to maintain the momentum of the exploiting force so that it can rapidly execute its mission. Countermobility operations are required to secure objectives, block enemy forces, and provide flank protection for the exploiting force. Survivability operations are conducted to protect the force with the mission to secure terrain or deny escape routes.

The follow-and-support force initially prevents the enemy from closing the gap in a penetration and secures key terrain gained during the penetration or envelopment. As the exploiting force advances, the follow-and-support force secures LOCs, mops up or destroys bypassed forces, expands the area of exploitation from the axis of advance of the exploiting force, and blocks the advance of reinforcements into the area. Again, the follow-and-support force requires engineer support to accomplish these missions for the same reasons as the exploiting force. Sustainment engineering missions may also be required to keep LOCs and routes open for exploitation forces and sustainment assets.

The engineer force supports an exploitation in similar fashion to an MTC. The major difference is the very limited time available to plan and prepare for the exploitation. Based on the limited plan and preparation time, the engineer force that supports the exploitation is configured from the engineer assets already task organized with the exploiting force.

The division engineer has several responsibilities when the division conducts an exploitation. First, he plans to support exploitations by providing a flexible engineer task organization to the attacking division. The exploitation mission is likely to be assigned to the division's follow-and-support force or its reserve. The division engineer must not ignore the contingency of exploitation operations. He must ensure that the follow-and-support force and the reserve force have sufficient engineer forces to conduct exploitation operations. Second, as with an MTC, the situation is unclear. The division's G2 will rapidly develop information requirements pertaining to the area of interest for the exploitation. This will be used to develop intelligence requests for intelligence-gathering units. The division engineer supports the G2 in this process by quickly providing information requirements for engineer missions. These include locations and size of obstacles and the location of the enemy force covering them, enemy and friendly use of scatterable mines that will impact the mission, the status of specific bridges key to the operation, and the impact of terrain and weather on mobility operations. Third, the division engineer must be sensitive to the sustainment posture of the engineer force supporting an exploitation and ensure, through constant coordination with the DISCOM, that the sustainment requirements are identified and met.

Pursuit

A pursuit is a natural extension of an exploitation. It differs from the exploitation in that its primary function is to complete the destruction of an enemy force that is in the process of disengagement. While a terrain-oriented objective may be given, the enemy force itself is the primary objective. The pursuit generally consists of forces that apply direct pressure and forces that encircle the enemy.

The direct-pressure force prevents enemy disengagement and subsequent reconstitution of the defense and inflicts maximum casualties. To accomplish this mission, the direct-pressure force attacks constantly on a wide front. The division engineer's priority in supporting the direct-pressure force is mobility operations. The direct-pressure force must have the capability to conduct decentralized, in-stride breaching operations. The direct-pressure force performs its secondary missions of enveloping, cutting off, and destroying enemy forces through the use of maneuver and engineers to support mobility requirements. The countermobility and survivability requirements of the direct-pressure force are minimal, although the capability to conduct them as contingencies must be present in the flexible engineer force.

The encircling force's mission is to get to the enemy's rear rapidly, block its escape and, together with the direct-pressure force, complete the enemy destruction. The division engineer's initial priority is to provide mobility support as the encircling force gets into position, then countermobility and survivability to block the enemy force. Due to the nature of the pursuit and its similarities to the exploitation, the engineer planning considerations and actions are the same as those of an exploitation.

OFFENSIVE OPERATIONS: LIGHT DIVISION

Light divisions conduct five types of offensive operations. They are–

1. MTC.
2. HATK.
3. DATK.
4. Exploitation.
5. Pursuit.

FM 71-100 contains a description of each type of offensive operation. The light division applies the basic forms of maneuver and conducts the five types of offensive operations to maximize the division's capabilities and minimize its limitations. The light division's method of operation is to disperse widely throughout a large area and conduct synchronized but decentralized operations. The division conducts offensive operations exploiting the advantages of restricted terrain and limited visibility.

The division engineer must understand the concept of employment of the light division and the principles and organization of each operation. He applies the engineer offensive planning procedures (discussed earlier in this chapter) to develop an appropriate engineer force allocation and scheme of engineer operations to support light division offensive operations.

Movement to Contact

The division conducts an MTC to gain or regain contact with the enemy, limiting the risk to the smallest possible part of the force. The remaining force is then available to immediately respond when contact is made. Once contact is made, the commander can further develop the situation, maneuver and concentrate forces, and conduct an HATK or hasty defense.

The primary consideration in preparing for an MTC is anticipating actions during the movement and requirements for maneuver and fire support once contact is made. During the advance, the commander continually analyzes the situation based on current reports and intelligence. Unit positioning in the formation is dictated by the mission, particularly the anticipated employment of maneuver units.

A light division MTC is best suited against other light infantry forces. The following five principles evolve from a light division's limited mobility and the reliance on restrictive terrain:

- Lead with the smallest force possible that is mobile, self-contained, and task organized to allow it to locate and fix the enemy.
- Task organize to allow the division to react, deploy, and violently attack in any direction.
- Maintain mutually supporting distances between elements to facilitate a rapid response in any situation.
- Move aggressively.
- Execute decentralized.

Light divisions employ two techniques to conduct an MTC: the approach march and the search and attack.

Approach-March Technique. The approach march is the traditional technique for conducting an MTC. Its goal is to develop the situation early, providing the division with a tactical advantage before decisive engagement. The division is assigned an axis of advance (or zone) with objectives designated to orient movement. Objectives are characterized by terrain that is easily recognizable and at a depth that is sufficient to ensure contact.

The movement formation is normally comprised of a covering force, an advance guard, flank and rear security, and a main body. All elements are mutually supporting during movement, ensuring the commander synchronized action at the decisive point and time.

An approach march has several possible outcomes. First, the division may not make contact with the enemy and reach its objective unopposed. The division may then continue the approach march to a subsequent objective or establish a hasty defense. Second, a meeting engagement may occur where the division meets an unexpected moving or stationary force. A meeting engagement will result in a rapid decision to conduct a HATK, hasty defense, or a combination of both. Another possibility is to bypass the enemy force. When the division has a clear picture of the disposition of the moving enemy, the division may exercise a third option. The division may gain the advantage by moving to advantageouss terrain and prepare for a HATK, hasty defense, or a combination that destroys the enemy force. In this third option, the division chooses the ground to fight on and sets the conditions for battle while not in contact. The engineer force must be configured to accomplish the variety of mobility, countermobility, and survivability operations involved in the approach march.

The division engineer must understand the objective of the approach march and all contingencies to the plan. Planning begins by identifying engineer tasks and allocating forces. Figure 3-10, page 3-24, shows the basic engineer tasks required to support a light division approach march.

The division engineer considers each component of the approach march and inherent engineer missions when identifying tasks and allocation of forces. He allocates the necessary forces and assets to accomplish the engineer tasks for the covering force, advance guard, flank and rear guards, and

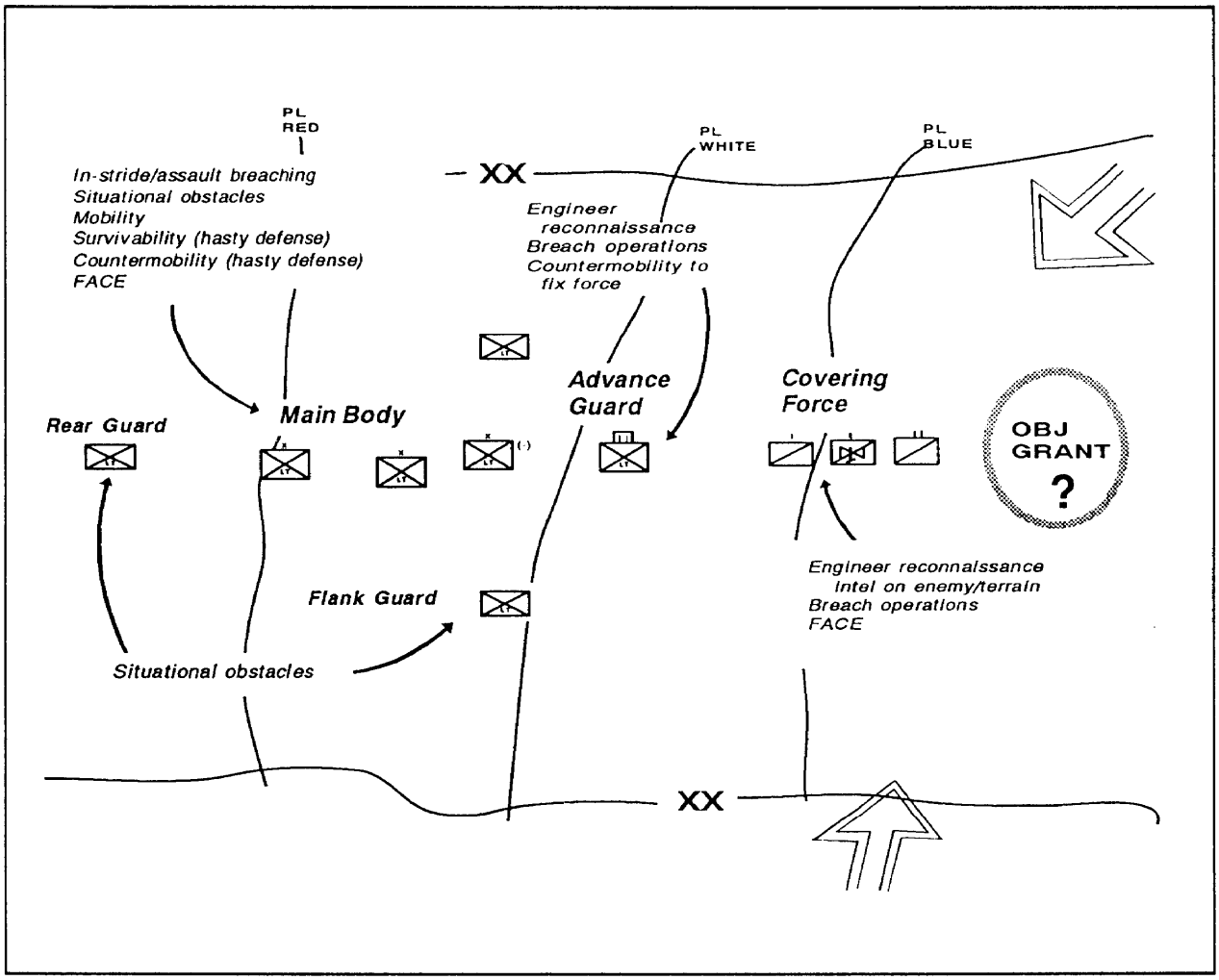

Figure 3-10. Approach march, M/S responsibility

main body. He then task organizes engineer units based on his force allocation, C2 requirements, and minimal changes to the existing task organization.

The covering force develops the situation and prevents unnecessary delay of the main body. In addition, it conducts reconnaissance, destroys enemy reconnaissance elements, secures key terrain, and prevents premature deployment of any elements of the main body. The engineers supporting the covering force assist in reconnaissance to gain intelligence and mobility operations to sustain the freedom of maneuver of the covering force.

Figure 3-10 shows elements of the division CAV squadron as the covering force. Although it has no dedicated engineer support, the division CAV squadron will require engineer support to accomplish its tasks. A division engineer squad or platoon is the appropriate-sized force to allocate to the covering force. If the covering force is a task force from the advance guard brigade, a division engineer platoon provides support for engineer missions.

Engineer support to covering force operations is characterized by early linkup, detailed combined arms planning and rehearsals, and thorough integration into the combined arms team. This is even more important when the CAV squadron is the covering force. The division engineer should incorporate as many division engineer platoons as possible into the training plan of the division CAV squadron, as often as possible.

The advance guard follows the covering force and is normally formed from and controlled by the lead element of the main body. It is organized to fight through small concentrations of enemy resistance, while maintaining the uninterrupted movement of the main body. The continuous flow of accurate and current intelligence from the covering force is key to its success.

Mobility missions in support of the advance guard are obstacle breaching, marking of bypasses, reconnaissance, and limited route-clearance operations. Countermobility support may be required when the advance guard is required to fix the enemy. Terrain and enemy information provided by the covering force to the advance guard ensures a quick response with situational-obstacle execution. Engineer support for mobility and countermobility missions will come from the division engineer company that supports the brigade controling the advance guard.

Flank and rear guards protect the main body from ground observation and surprise attack. They have enough combat power to defeat enemy forces or to delay an enemy attack long enough to allow the main body to deploy. Rear and flank guards move parallel to the main body and within the range of supporting artillery.

Engineers provide countermobility support to flank and rear guards when required. The division engineer has the responsibility to plan obstacle zones and coordinate situational obstacles to protect the division's flanks and rear. Engineer reconnaissance provides recommendations on locations for the optimal employment of air and ground Volcanos. Air and ground Volcanos and rapid-obstacle teams are task organized to execute situational obstacles in support of flank and rear guard forces. Engineer linkup, incorporation into the orders process, rehearsals, and CSS are vital to synchronizing countermobility support.

The division engineer conducts close coordination with the division staff and the commanders of the flank and rear guards. This coordination must determine the type and effect of the obstacle, the NAI/DP, the TAI, the execution criteria, and the maneuver and fire-support forces that will cover the obstacle to gain the combat multiplying effect.

The final element of an approach-march formation is the main body. It contains the bulk of the division's combat power. It is organized to conduct either a HATK or a hasty defense. The march formation of the main body is selected to permit maximum flexibility during movement and upon contact with the enemy. The approach march ends with the occupation of an objective without enemy contact or, when contact is made, in a series of meeting engagements and HATKs. A meeting engagement is the combat action that occurs when the division or elements of the division engage an enemy force, static or in motion, for which it has inadequate intelligence. The action ceases to be a meeting engagement when the enemy's situation is developed and subsequent planned and coordinated operations are undertaken.

Engineers provide mobility, countermobility, and some limited survivability support to the main body during the approach march and subsequent meeting engagement. Mobility operations in support of the main body primarily consist of in-stride breaches with the capability to transition to a deliberate breach. Mobility reserves required for the transition to a deliberate

breach are maintained at maneuver brigade and battalion levels. These are established by weighting the main effort with division engineers or corps engineers.

Survivability support to the main body will normally occur after the main body transitions to a hasty defense as a result of a meeting engagement. Survivability support will be characterized by protection of C2 nodes, fire support, ADA, and possibly critical, crew-served weapons systems. In order to achieve rapid survivability support, the division engineer identifies resource requirements during mission analysis. The division engineer and brigade engineer CPs troubleshoot problems with Class IV supplies and track the critical status of survivability protection levels.

The transition to the hasty defense will require the division engineer to plan for counter mobility support contingencies. Detailed enemy and terrain intelligence will assist in plan development. The hasty defense may be executed after an objective is secured or from the march as a result of or in anticipation of contact with the enemy. Countermobility operations during a hasty defense center around protection of the main body. The division engineer supports hasty defense counter mobility operations through planning, developing resource requirements, and tentative positioning of obstacle zones. Counter mobility priorities and missions are established during mission analysis, ensuring compliance with the commander's intent. Operations are planned for execution either once an objective is secured or from the march. Comprehensive knowledge of the contingency plans (constantly balanced against the developing tactical situation) is imperative, as it drives the allocation of engineer resources to the main body.

The time available to conduct countermobility operations will be limited. Once FRAGOs are received to execute countermobility operations, engineer planners at division level immediately focus their efforts on positioning zones, verifying resource delivery, and monitoring the progress of execution. Synchronization with the combined arms team is key during this time. Guidance from the division commanders and division engineer coordination with fire-support coordinators (FSCOORDs) must be accomplished.

The execution authority for obstacles employed in zones is normally retained at division level. This is done to minimize potential impacts on future operations. Through this process the division engineer ensures the division's flexibility and freedom of maneuver in future operations. He coordinates with the DISCOM for the delivery of obstacle materials in support of these contingency plans.

Figure 3-11 shows an example of engineer force laydown in support of the approach-march technique.

Search-and-Attack Technique. The light division uses the search-and-attack technique to make contact with a dispersed enemy force conducting decentralized operations and to deny the enemy the use of a specific AO. It is most often used in low-intensity conflict (LIC) combat operations. The search and attack will have one of the following purposes:

- Enemy destruction.
- Area denial.
- Force protection.
- Information collection.

In planning and conducting the search-and-attack technique, the division concentrates on the offensive battlefield framework–deep, close, rear, security, and reserve. The principles of attack and corresponding engineer planning considerations are the same as discussed earlier in the chapter (pages 3-2 through 3-5).

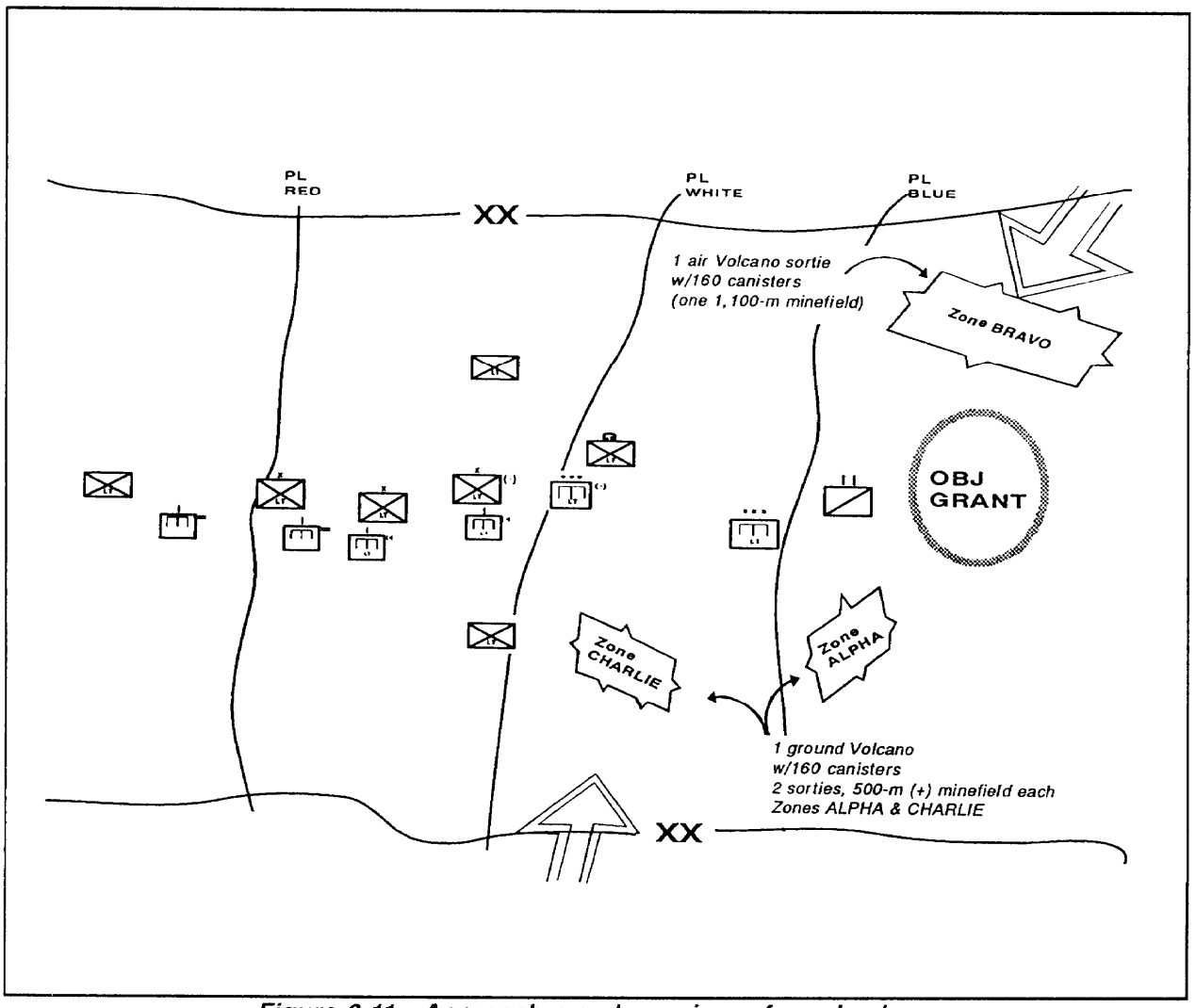

Figure 3-11. Approach march, engineer force laydown

The light division's unique close and rear operational requirements in the search-and-attack technique demand flexible and responsive engineer support. The division engineer must have a thorough understanding of the search-and-attack technique to integrate effectively into close and rear operations as both the engineer planner and unit commander. The division engineer allocates engineers to the brigades primarily to support mobility and survivability requirements in the brigade close fight and rear area operations. Survivability and sustainment engineer support is extensive in the division rear area. The support required often exceeds the capabilities of division engineers, and corps engineer augmentation is essential. Figure 3-12, page 3-28, shows an example of engineer missions in support of a division search and attack.

Division close operations in a search and attack are characterized by small-unit, decentralized combat operations focused on finding and destroying small, dispersed enemy forces. The battalion is the basic operational unit in a search and attack. The brigade assists by ensuring availability of adequate supporting fires; mobile transportation assets; timely, accurate intelligence;

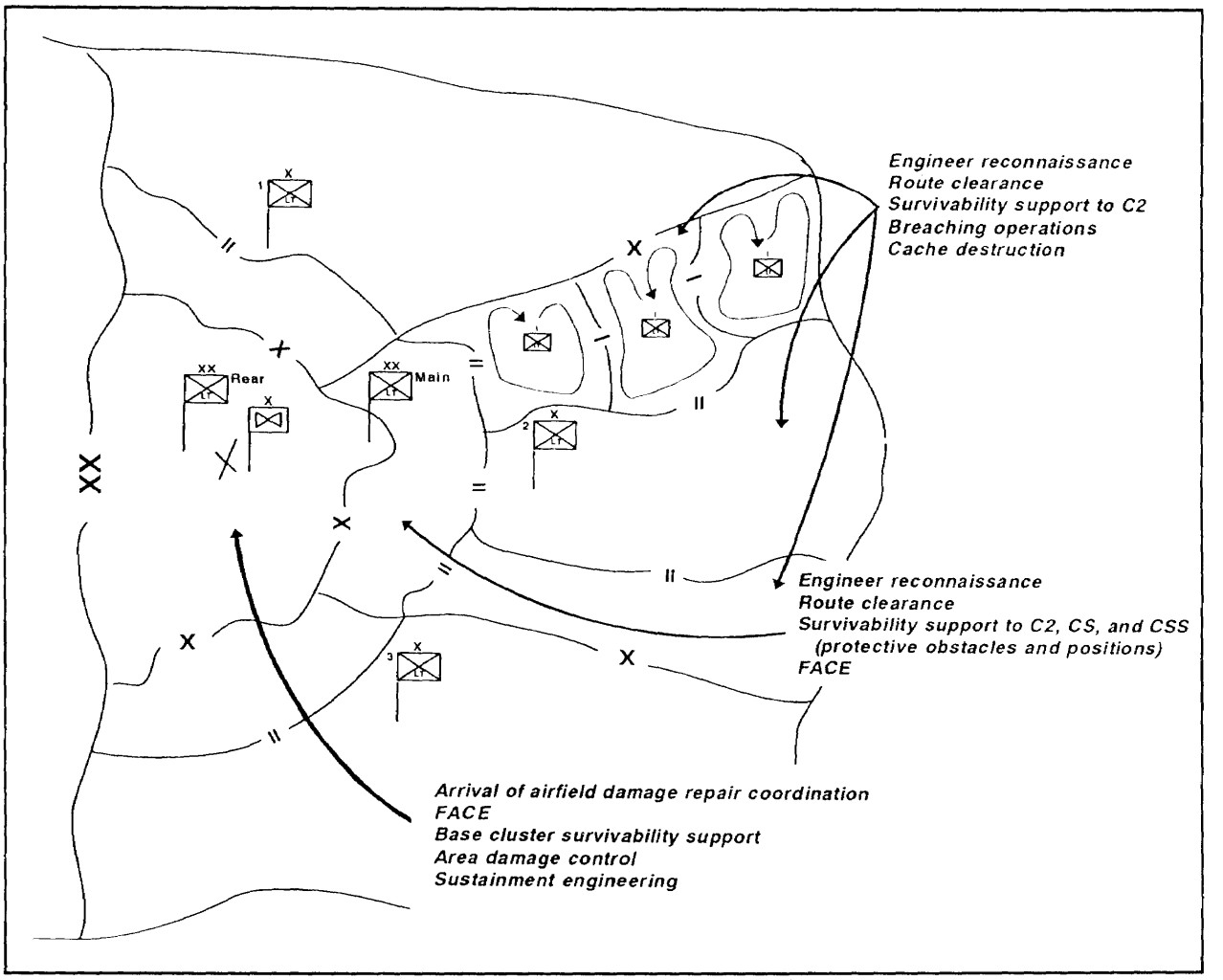

Figure 3-12. Search and attack with M/S missions

and reserve forces. The fighting is done mostly by small units who find the enemy and mass to fix or destroy him. This decentralized technique uses multiple, coordinated patrols to make contact with the enemy. Once contact is made, maneuver and fire support are used to concentrate combat power against the enemy. The enemy is either destroyed, fixed, or kept under surveillance until a larger force arrives.

Engineer force allocation and scheme of engineer operations to support a search and attack are based on the outcome of the engineer estimate and planning process. The division engineer task organizes division engineers to support the light brigades, maintaining the habitual relationships of division engineer companies with their brigades. Division engineer mobility, countermobility, and survivability support to the brigades include–

- Engineer reconnaissance.
- Breaching operations.
- Cache destruction.
- Protective obstacles.
- Survivability in the brigade rear to C2, CS, and CSS.

The brigade task organizes the division engineer company based on engineer mission requirements. The division engineer company may be held under brigade control and provide countermobility and survivability support in the brigade rear. The division engineer company is committed forward when the battalions encounter substantial enemy obstacle systems. Division engineer platoons may be task organized to support the light battalions for use in decentralized. small-scale, mobility missions.

Division rear operations are focused on sustainment of the lodgment area. Enemy forces in LIC combat operations routinely focus their efforts against C2, CS, and CSS assets, avoiding contact with maneuver elements. This situation dictates substantial engineer survivability and sustainment support to protect the force and sustain division lodgment activities. Division engineers are normally task organized to support the brigades conducting search-and-attack operations, and are not equipped to handle the diverse, equipment-intensive tasks involved in rear operations. Therefore, corps assets are required and normally work under the control of the DIVEN commander. The corps assets are tasked with the division rear area missions. The division engineer may allocate corps engineer elements to the brigades to support brigade rear area operations or to reinforce division engineers conducting mobility missions. Figure 3-13 shows an example of engineer force laydown in support of division search-and-attack close and rear operations.

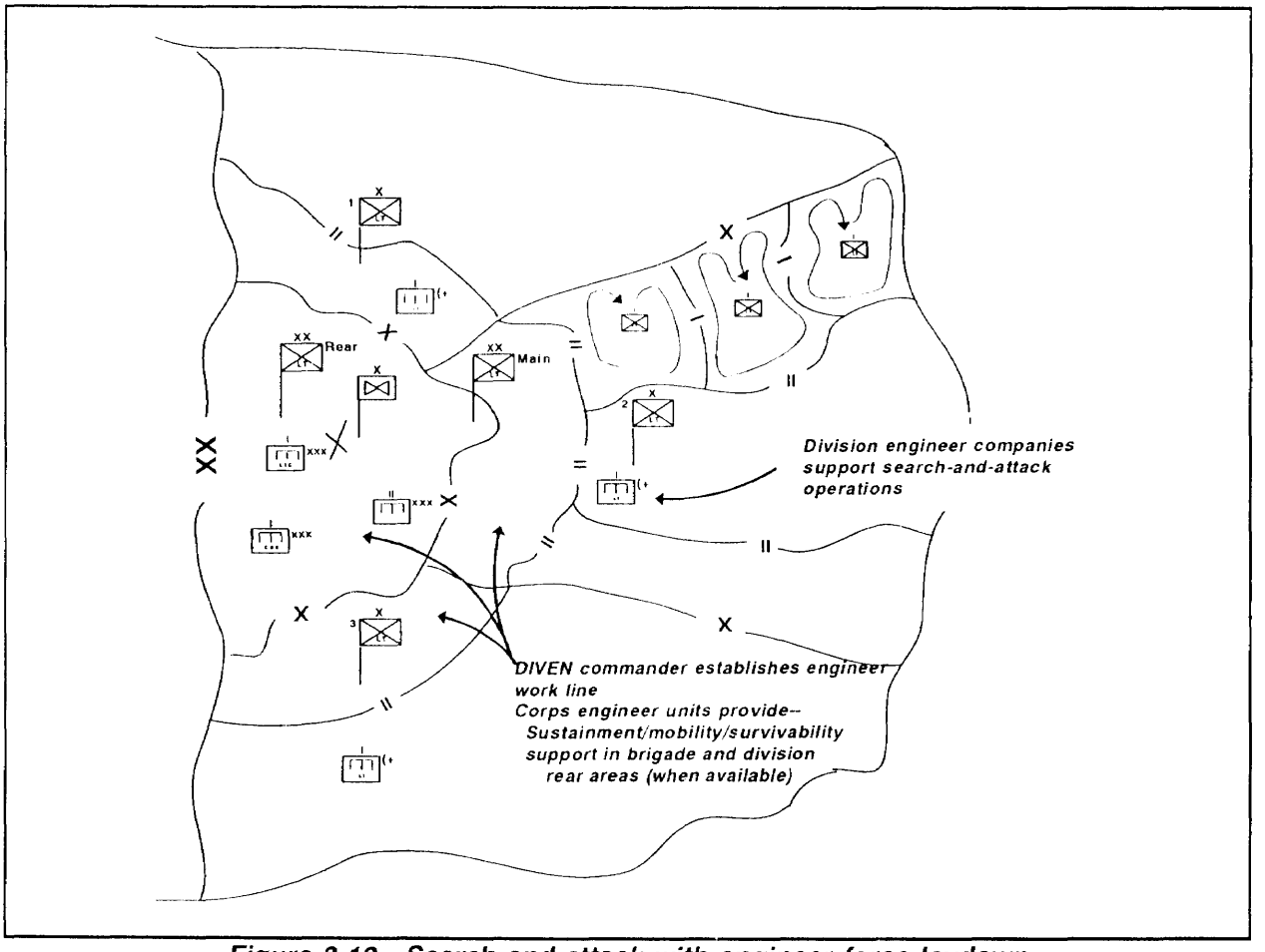

Figure 3-13. Search and attack with engineer force laydown

Engineer missions in the division rear area are–

- Arrival of airfield sustainment, damage repair, and improvement.
- Base cluster protection.
- Area damage control.
- Forward aviation combat engineering (FACE).
- Sustainment engineering (MSR maintenance).

LIC combat operations will routinely require LZs to support the force. Airfield operational concerns center around damage repair, airfield maintenance, and improvement. The division engineer has the responsibility of planning and executing this mission while the airfield is under division control.

Engineer support in the division rear area centers around providing survivability support to protect the force from indirect and direct fires, dismounted attacks, and interdiction operations. Division and corps engineers provide technical expertise to units in this support role, with the supported units often providing the manpower for those missions which do not require equipment support. The division engineer battalion headquarters and headquarters company (HHC) and corps engineers provide the necessary earthmoving assets for this mission.

Sustainment engineering support in the rear areas is essential. MSRs are subject to frequent interdiction by enemy mining and attacks. Corps engineer units such as CSE companies and corps wheeled battalions provide this support. The division rear CP engineer plays a key role in the planning and control of division and corps engineers performing sustainment engineering tasks. Frequent FACE support is also required for the aviation brigade. This engineer support is a critical task, since aviation support is essential to the flexibility of the maneuver commander in achieving mass during a search-and-attack operation.

Hasty Attack

A HATK is normally conducted following either an MTC or a meeting engagement. It can be initiated from a defensive posture or employed as an extension of a DATK. Figure 3-14 depicts a HATK scenario conducted from an MTC. When the division conducts a HATK, it is trading preparation time for speed to exploit the tactical situation. A decisive advantage is achieved by immediately attacking with available resources to maintain the momentum of the attack. The division lead elements may bypass obstacles and small pockets of stubborn resistance, provided they do not threaten the overall success of the attack.

The division engineer recommends the allocation of engineer units required for mobility and counter mobility support to the HATK prior to executing the meeting engagement. He accomplishes several essential tasks parallel to and synchronized with the division plan. He maintains a current and accurate picture of the current close fight; passes timely, engineer-specific information to division planners and brigade engineers; and develops contingency plans and keeps the brigade engineer informed on upcoming tasks. The planning process focuses on potential engineer responses to future operations through the shifting of assets and priorities. A division engineer company normally supports each brigade in a HATK. Each light maneuver battalion requires at least one light engineer platoon for mobility support. This may require a corps light engineer platoon to augment the division light engineer company's two platoons.

The primary engineer mission conducted in support of attacking elements is mobility support. Engineer reconnaissance operations in the lead elements focus on providing specific obstacle locations, bypasses, and types of obstacles. This information is

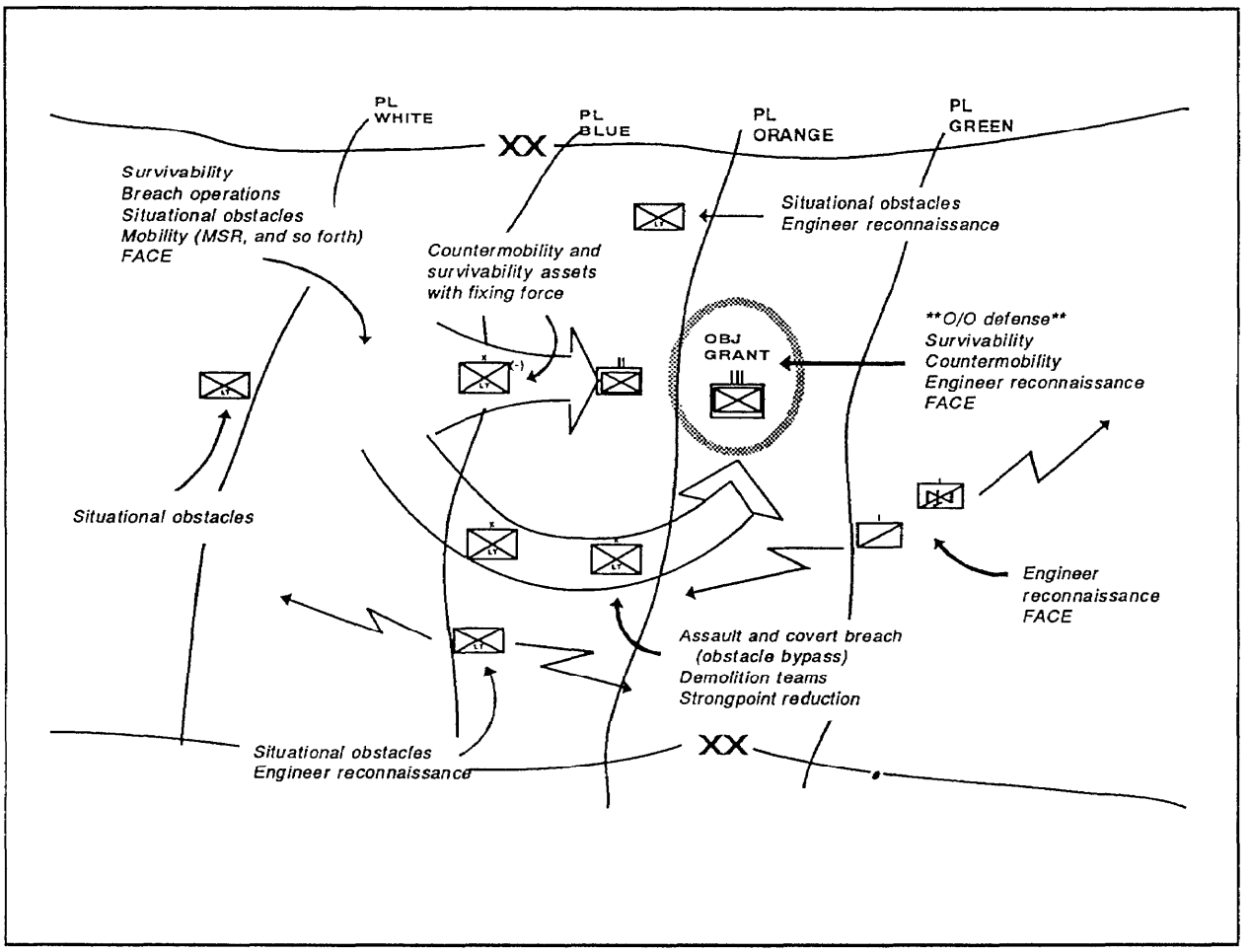

Figure 3-14. HATK, M/S missions

needed by engineers with the main and supporting attacks who must reduce these obstacles. As required, in-stride breaching operations are conducted until the assault takes place. As the attack reaches the objective, mobility operations focus on assault or covert breaching. At the objective, engineers reduce key facilities, structures, and fighting positions as required. Once the objective is secured, engineer support will shift to countermobility operations against counterattacks.

The division engineer plays a key role in recommending obstacle zones that protect the division from counterattack and provide for the continuation of the attack. Countermobility operations will be the focus of security and guard elements. These operations act to isolate the attack from enemy counterattacks, ensuring the maneuver commanders freedom of action and initiative. These operations are characterized by the full spectrum of the family of scatterable mines (FASCAM) system and the employment of select conventional obstacles. These obstacles are positioned at key choke points on enemy ingress and egress routes and can be applied to either a mounted or dismounted force. Fundamental to these operations is an accurate terrain analysis, verified by ground or aerial reconnaissance, and synchronization of all fire-support assets available to the division.

Figure 3-15, page 3-32, shows an example of engineer force laydown in support of a HATK.

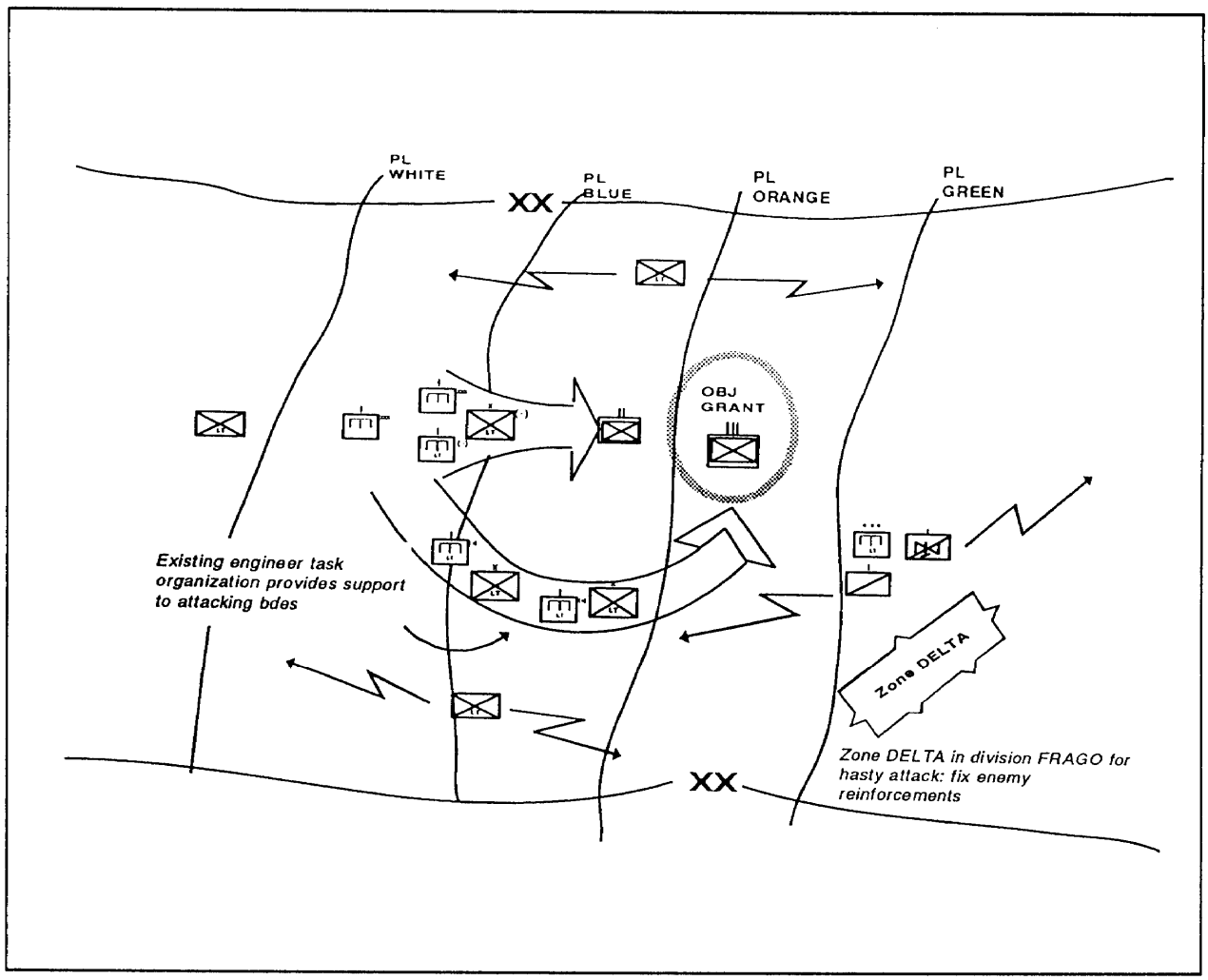

Figure 3-15. HATK, engineer force laydown

Deliberate Attack

The only difference between a HATK and a DATK is the time dedicated to planning, preparation, and coordination prior to execution. The DATK is characterized by thorough, detailed planning; rapid concentration of forces; exploitation of enemy weaknesses; violent execution; early transition to exploitation; and positive, aggressive leadership. It is directed against overcoming a strong enemy in prepared positions that could not be otherwise turned or bypassed. A DATK is only undertaken after a detailed reconnaissance, acquisition and development of targets, and the integrated analysis of all factors affecting the situation.

The DATK normally employs three elements: main effort, supporting effort, and reserve or follow-and-support forces (Figure 3-16). The division is organized in depth to ensure flexibility during execution. Indirect approach methods are commonly used as they serve multiple functions. They protect the force during movement and bypass the enemy's obstacles and concentrated fires.

Engineer responsibilities and mission support to the DATK mirror the HATK, with

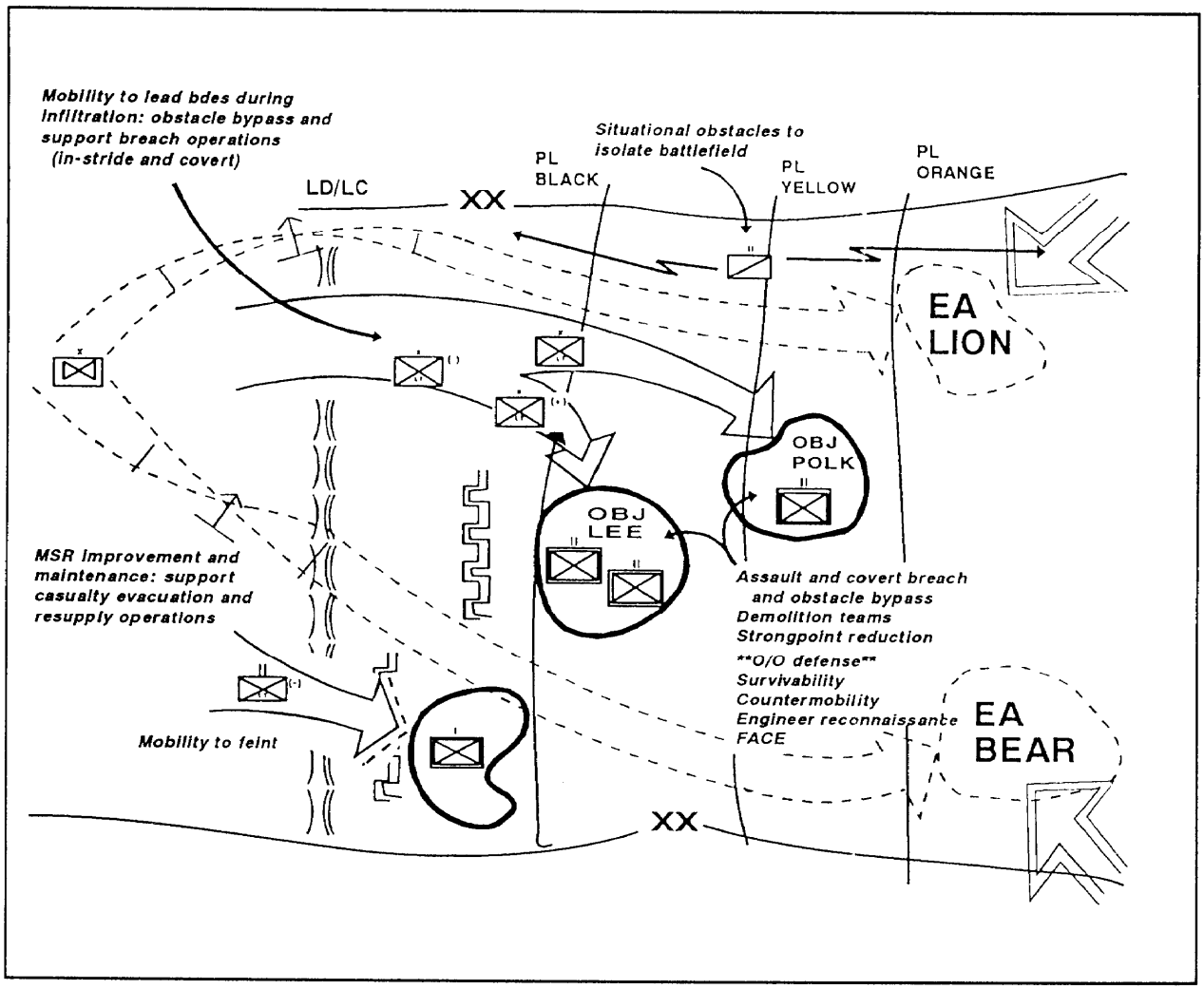

Figure 3-16. DATK, M/S responsibility

more time being available to the division engineer.

Key planning time is dedicated to potential subsequent operations as delineated in the commander's intent and mission statements. Follow-on exploitation, pursuit, defense, HATK, or continued DATKs are war-gamed, planned for, and resourced as required. Similar to the HATK, planning and preparations completed for the DATK will have the biggest impact on subsequent operations. Once the DATK is underway, the division engineer will not have time to significantly influence its continuation.

Figure 3-17, page 3-34, shows an example of engineer force laydown in support of the DATK.

Exploitation and Pursuit

Exploitation is the rapid continuation of a successful attack to maximize success and take advantage of weakened or collapsed enemy defenses. It is planned as an integral part of the attack, with tentative objectives, forces, and zones identified for the exploitation. Its purpose is to prevent the enemy from reconstituting his defenses and forces; deny his withdrawal; and secure and destroy

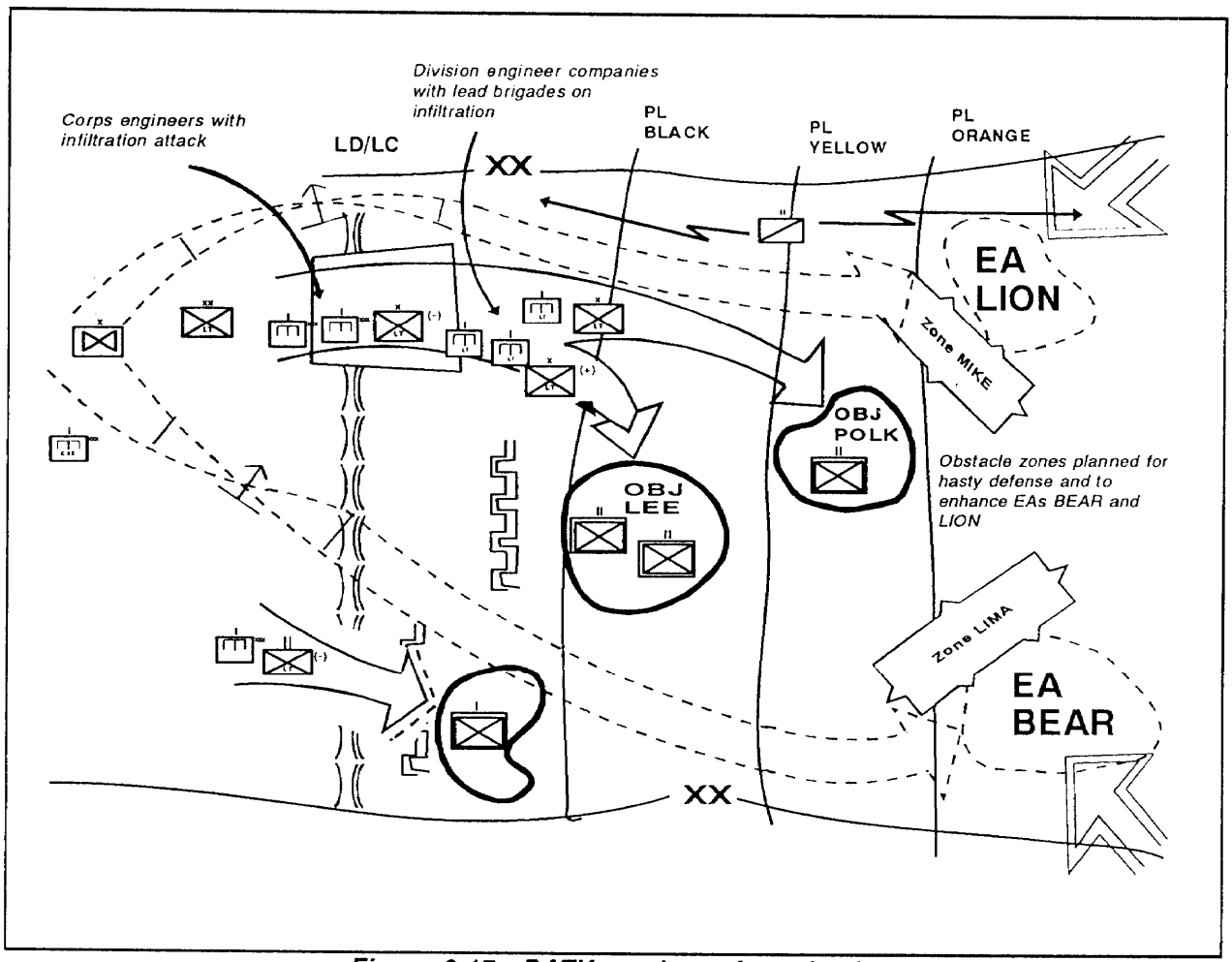

Figure 3-17. DATK, engineer force laydown

deep forces, C2 facilities, and objectives. Minimum control measures are used in the DATK, giving maximum latitude to subordinate commanders. Knowing that C2 will be initiated from the front of the formation rather than from the rear is key to understanding the C2 of an exploitation and the planning and preparation that precede it.

The pursuit is an extension of the exploitation resulting in the relentless destruction or capture of fleeing enemy forces. Light divisions normally conduct pursuits against a similar force, although the division or subordinate elements can be part of a corps pursuit directed against any type of force. In this role, light forces, especially airborne and air assault, are used to envelop enemy rear guards and expedite their destruction. Pursuits are comprised of two forces, the direct pressure and the encircling force.

Engineer responsibilities in support of exploitation and pursuit operations require a decentralized command and a clear intent to be successful. The division engineer best supports these operations through detailed planning subsequent to their execution. Comparable to the HATK, he is limited in his ability to shift engineer assets or change task organizations during their conduct. The previous task organization of the majority, if not all, of his assets to the forward elements will significantly reduce any flexibility to support other missions.

Contingency planning and logistic resourcing is a significant part of the division engineer's influence on these operations. Understanding the division commander's intent as it applies to the attack, subsequent exploitation, and pursuit will focus the division engineer on the engineer responsibilities that must be addressed and resourced. Continual monitoring of the close, current fight of both forces will indicate where resourcing priorities can change and will allow the division engineer to influence immediate future operations. For example, once the pursuit force has completed its encirclement and is in position to transition to a defensive posture, the resourcing of situational obstacles and survivability assets to the force will be developed and executed on order.

Mobility will be the primary mission of engineer assets with direct-pressure forces. These forces must maintain contact with the enemy to deny him the ability to disengage. This force must have the capability to use all available roads, trails, or corridors. Generally, any obstacles encountered will be hasty in nature unless the pursuit follows through a previously prepared defensive area. At every opportunity, direct-pressure forces envelop, cut off, and destroy enemy elements. Enemy objectives and the destruction of equipment and material (if not used by the attacking forces) will be key engineer missions during these operations. This serves to deny any use of these assets by bypassed enemy forces.

To be effective, the encircling force must have greater mobility than the retreating enemy. It must maintain a rapid rate of advance to allow it to get behind the enemy and block his escape so that he can be destroyed. Air assault and airborne forces are particularly effective in this role. The force advances parallel to the enemy's line of retreat to secure defilades, communication centers, bridges, and other key terrain ahead of the enemy main force. Mobility efforts are used only to clear enough zone to allow the force to advance.