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## Chapter 8

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# Protective Obstacles

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Protective obstacles are obstacles that commanders use to protect soldiers, equipment, supplies, and facilities from enemy attacks or other threats. These other threats range from enemy surveillance to the theft of supplies and equipment by noncombatants. In tactical operations, protective obstacles provide friendly forces with close-in protection and help finish the enemy's complete destruction. However, in OOTW, protective obstacles may focus primarily on preventing unauthorized access to facilities and installations by civilians, rather than assisting in the destruction of an enemy force.

### TYPES OF PROTECTIVE OBSTACLES

There are two types of protective obstacles. They are—

- Hasty protective obstacles.
- Deliberate protective obstacles.

#### HASTY PROTECTIVE OBSTACLES

These protective obstacles are temporary in nature. They are obstacles that soldiers can rapidly emplace and recover or destroy. Platoons and company teams employ hasty protective obstacles next to their positions to protect the defending force from the enemy's

final assault. Base cluster and installation commanders may emplace hasty protective obstacles to protect against all levels of threat when they occupy sites temporarily or until they can plan and emplace deliberate protective obstacles.

#### DELIBERATE PROTECTIVE OBSTACLES

These are protective obstacles that are more permanent and require more detailed planning and usually a greater expenditure of resources. Units employ deliberate protective obstacles in strongpoints or at relatively fixed sites. During tactical operations, company teams and platoons may emplace deliberate protective obstacles if they have considerable time available. For example, forces that conduct early entry operations before the onset of hostilities may have time to construct deliberate protective obstacles. During OOTW, units emplace deliberate protective obstacles as part of their force protection plan.

#### EMPLOYMENT GUIDELINES

There are basic guidelines that apply to protective obstacles, some of which apply to

tactical obstacles as well. These guidelines are—

- Obstacles do not stand alone.
- The owning unit is normally the emplacing unit.
- Emplacement authority is not tied to obstacle-control measures.
- Planning occurs at the company-team and base commander level.
- Planning includes resourcing that is separate from tactical obstacles.
- Obstacles are reported, recorded, and tracked.

### INTEGRATING

Protective obstacles do not provide protection by themselves. In tactical operations, leaders integrate protective obstacles with direct and indirect fires and observation. As with tactical obstacles, integration with friendly fires is critical if the obstacle is to be effective and destroy the enemy force.

In OOTW, integrating fires and destroying an enemy force may not be considered if the obstacles are to prevent noncombatants from accessing a facility or installation; however, the obstacles must remain under constant observation. Leaders must also allocate sufficient force to protect the integrity of the obstacle, consistent with the rules of engagement for the operation.

### EMPLACING UNIT

The unit that occupies a position generally emplaces its own protective obstacles. Engineers provide technical expertise and equipment, as required. Commanders focus engineer effort on tactical obstacles, but engineers may be responsible for installing protective obstacles, especially for large installations or compounds or in support of a strongpoint.

### EMPLACING AUTHORITY

Unlike tactical obstacles, the emplacement authority for protective obstacles is not normally tied to obstacle-control measures. Higher commanders authorize subordinates to emplace protective obstacles outside of obstacle zones, belts, or groups with minimal restrictions. Commanders may specify in SOPs that subordinates can emplace protective obstacles except as restricted in subsequent OPORDs.

### PLANNING LEVEL

Planning occurs at the company team and base-cluster commander level. Company team commanders plan protective obstacles to support their defensive positions. The lack of a staff and limited time usually require that the company team commander plan only hasty protective obstacles. Base cluster and installation commanders conduct detailed planning for deliberate protective obstacles around their sites.

### RESOURCING

Units plan resourcing separately for protective and tactical obstacles. They plan for sufficient Class IV and Class V obstacle material to emplace the protective obstacles. They may transport and collocate these materials with those for tactical obstacles; however, the material allocation to subordinate units is planned separately from tactical obstacles. Also, most units carry a basic load of Class IV and Class V materials specifically for protective obstacles. This basic load is only enough for rudimentary hasty protective obstacles. Staffs from corps to TF level plan to push obstacle material to subordinate units so that the materials are available early during preparation of a defense.

## REPORTING, RECORDING, AND TRACKING

Units report, record, and track protective obstacles as described in *Appendix B*. Unlike tactical obstacles, owning units recover protective obstacles, or transfers them to a relieving unit, before leaving an area. Sometimes, units may be forced to abandon protective obstacles. Units report any of these events on a case-by-case basis.

## PROTECTIVE-OBSTACLE PLANNING

Units develop protective-obstacle plans as part of the decision-making process. They make detailed plans for protective obstacles after they have decided on a COA. At company team level, for example, this includes selection of the location and orientation of platoon positions. For base cluster or installation commanders, this might include selecting base locations or fixed installation sites. (For clarity, all subunit positions, locations, or sites are referred to as positions for the remainder of this chapter.) The following paragraphs contain a technique for planning protective obstacles.

### MISSION ANALYSIS

Units determine their authority to emplace protective obstacles from the higher HQ's OPOD. Units also determine if the higher HQ has placed any restrictions on the types or locations of protective obstacles or if the higher HQ's scheme of maneuver implies the need for restrictions on protective obstacles.

Units at every level conduct continuous IPB activities during planning. Following selection of a COA, units conduct detailed terrain analysis of the area adjacent to planned or actual subunit locations. They also analyze the threat to subunits. They figure out threat capabilities, vulnerabilities, and potential COAs, focusing on the enemy's close assault, if applicable. The analysis of the terrain and

enemy is very detailed because it focuses only on the area and threat around subunit locations.

During protective-obstacle planning, units evaluate the area around their positions out to about 500 meters (METT-T dependent). Although they can conduct an initial evaluation by map, the unit must conduct physical reconnaissance of the area. They incorporate threat considerations during this evaluation. Some considerations are—

- The likelihood of an assault against the position.
- The type of enemy forces that can, and are most likely to, operate in the area.
- Mounted and dismounted AAs into or within the position.
- Templated methods and weapon systems the enemy can employ for close assault.
- Dead space and natural lines of drift for an attacker.
- Possible assault positions or other positions favoring the templated attacker.

### Protective-Obstacle Bands

To evaluate the area close to a position for protective obstacles, it is useful to segment the area into bands. *Figure 8-1, page 8-4*, shows a sample area divided into four bands. METT-T drives the number and dimensions of each band.

**Band One.** This band is farthest from the position, normally 300 to 500 meters away. Primary threat considerations are heavy weapons, such as tank or infantry fighting vehicle (IFV) main guns, heavy or medium hand-held AT weapons, and heavy machine guns. Another consideration is the location of possible enemy assault positions.

**Band Two.** This band is from beyond 30 meters to 300 meters away. Primary threat considerations are small arms; light, hand-held AT weapons; grenade

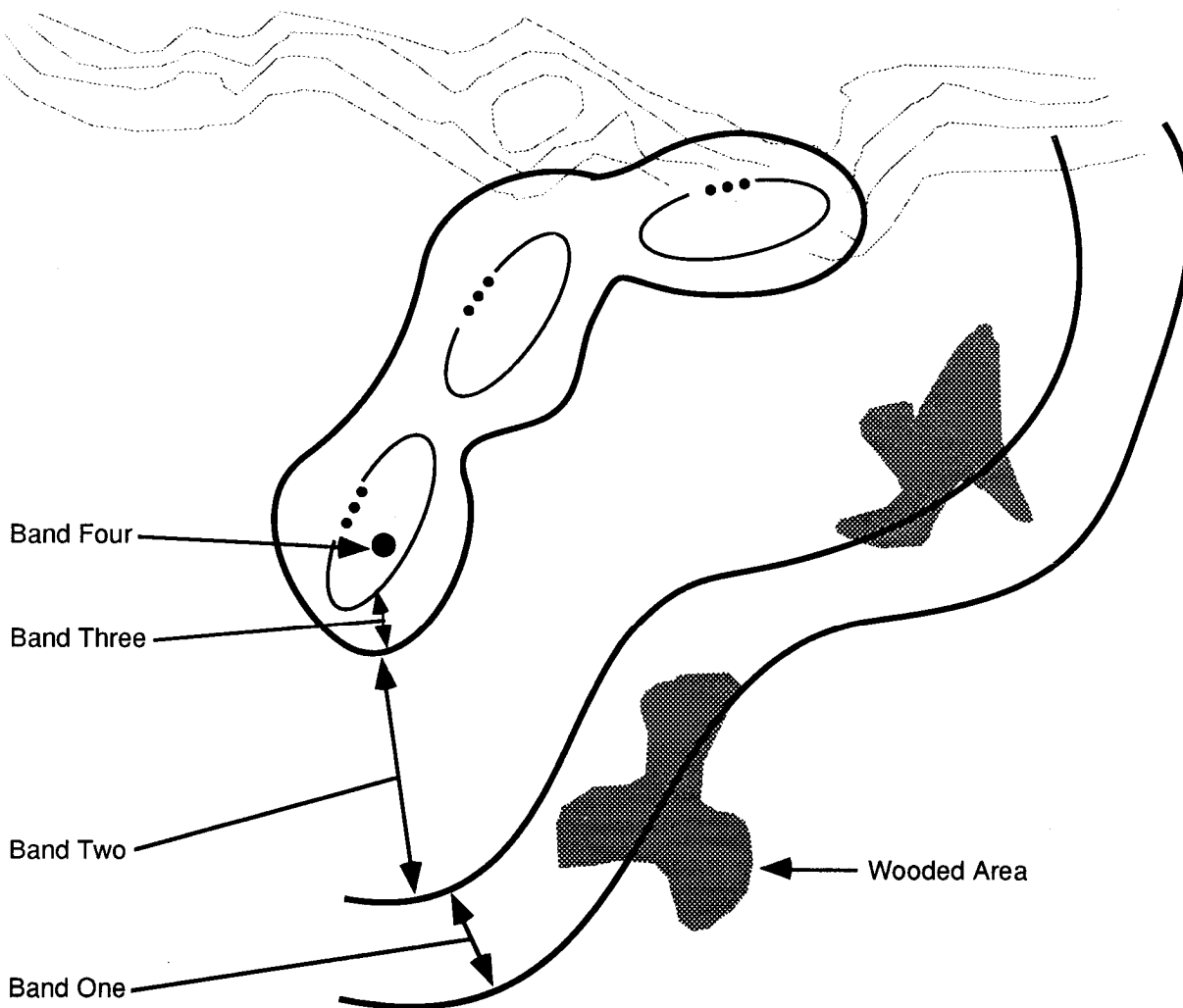


Figure 8-1. Protective obstacle bands.

launchers; and possible assault positions for dismounted infiltrating forces. Other considerations include moving vehicle bombs or moving vehicle assaults.

**Band Three.** This band lays between Band Two and the unit and defines the perimeter of the unit position. It extends from the individual equipment or personnel protective positions out to 30 meters. The primary threat considerations are hand-thrown grenades or other explosive charges and small-arms fire.

**Band Four.** Band Four is the area within the position, and its size depends on the size

of the position. The primary threat is an enemy force that has entered the position.

#### Protective-Obstacle Capabilities

Units must analyze their vulnerabilities and capabilities. Some of the considerations for this analysis include—

- Type, quantity, and importance (to the current or future mission) of friendly subunits and systems.
- Capability of subunits to construct protective obstacles (based on manpower, equipment, materials, or other resources).

- Vulnerability of subunits to the templated enemy's assault.
- Level of protective obstacle effort required for each subunit and system.

### **COURSE-OF-ACTION DEVELOPMENT**

As units develop a COA, they may make note of areas, or subunits, where protective obstacles may be needed; however, they do the actual obstacle planning after deciding on a COA.

### **COURSE-OF-ACTION ANALYSIS**

As units analyze COAs, they may make note of additional requirements for protective obstacles. They may identify likely areas during war gaming.

### **DECISION AND EXECUTION**

After selecting a COA, the unit refines it. Part of that refinement is planning protective obstacles, focusing on the following:

- Fires and observation.
- Obstacle integration.
- Obstacle priorities.
- Mobility requirements.
- Obstacle design and resourcing.
- Obstacle overlay.

### **FIRES AND OBSERVATION**

Units analyze the areas within each band to determine the locations where they can integrate obstacles with fires and observation against an assaulting enemy. Units consider not only direct-fire weapon systems but also indirect-fire systems and the use of command-detonated mines. Units also consider all methods available for maintaining observation, to include remote sensors. Especially in OOTW, this analysis may show that OP

locations must change to ensure constant observation of the obstacles. Identification of locations where they can integrate fires, observation, and obstacles helps units to focus planning for obstacles. The units can sketch these areas on an overlay to aid in further planning.

### **OBSTACLE INTEGRATION**

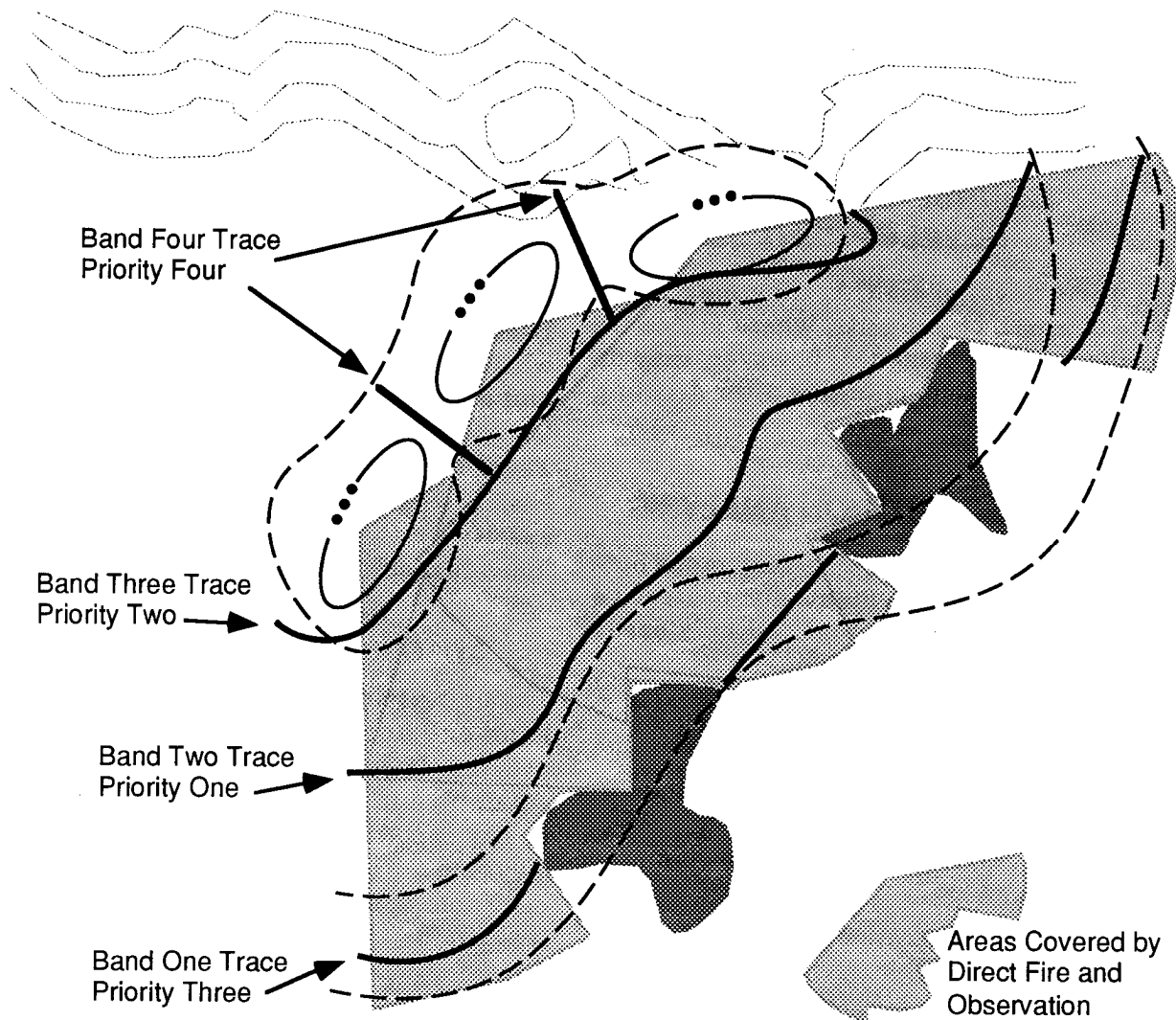
Based on the identification of the locations where obstacles can be integrated with fires and observation, the unit can sketch in a trace of proposed obstacles in each location. These traces represent where the unit may emplace obstacles in each band, without specifying the types or actual location of individual obstacles.

### **OBSTACLE PRIORITIES**

The unit assigns a priority for obstacles by band and annotates this on the planning overlay. It considers the vulnerability of subunits and systems based on the type of enemy expected. For example, a light infantry company team expecting an assault by a mounted enemy force would probably give first priority to protective obstacles in Band Two to help defeat a mounted assault. A unit involved in peacekeeping operations in a position where the primary threat is a semihostile group of unarmed civilians would set a different priority. It would likely choose to construct obstacles in Band Three first to prevent the civilians from making physical contact with the unit. *Figure 8-2, page 8-6*, shows an example of an overlay annotated with the fires and observation analysis, obstacle integration, and obstacle priorities.

### **MOBILITY REQUIREMENTS**

The unit identifies mobility requirements. These requirements generally dictate that



**Figure 8-2. Fires and observation and obstacle integration and priorities.**

the unit leave lanes or gaps in obstacles. It uses these lanes or gaps to allow—

- Patrols to enter and leave the position.
- CATK/reaction forces to move through the position.
- Logistic and support traffic to enter and leave the position.

METT-T will determine if these areas remain open (closed on-order) or closed with the defender able to open the lane. Units change lane and gap locations periodically to

keep the enemy from finding them. They plan and rehearse lane closure. Lanes and gaps are weak points in protective obstacles, so units consider allocating increased direct and indirect fires to cover them.

It is easy to establish lanes or gaps and subsequently close them in restrictive terrain. It is more difficult to establish and then close lanes or gaps on roads or vehicle approaches into a position. Normally, the location of lanes on vehicle routes are fixed, complicating the defender's ability to change

their location. When METT-T permits, units plan multiple vehicle lanes. Units then alternate the lanes that are open at any time. With the alternating opening and closing of these lanes, units can also change the method and material used to close the lane.

When units can establish only one lane, they develop redundant methods for closing the lane. Other obstacles can be built parallel to the lane to contain any vehicles that penetrate at the lane. *Figure 8-3* shows the identified mobility requirements annotated on the planning overlay.

### OBSTACLE DESIGN AND RESOURCING

Units design and resource protective obstacles within each band to accomplish the following:

- Counter the templated threat.
- Enhance direct and indirect fires and observation.
- Support the commander's force protection plan.

Ideally, units construct obstacles in all four bands and tie the obstacles together to

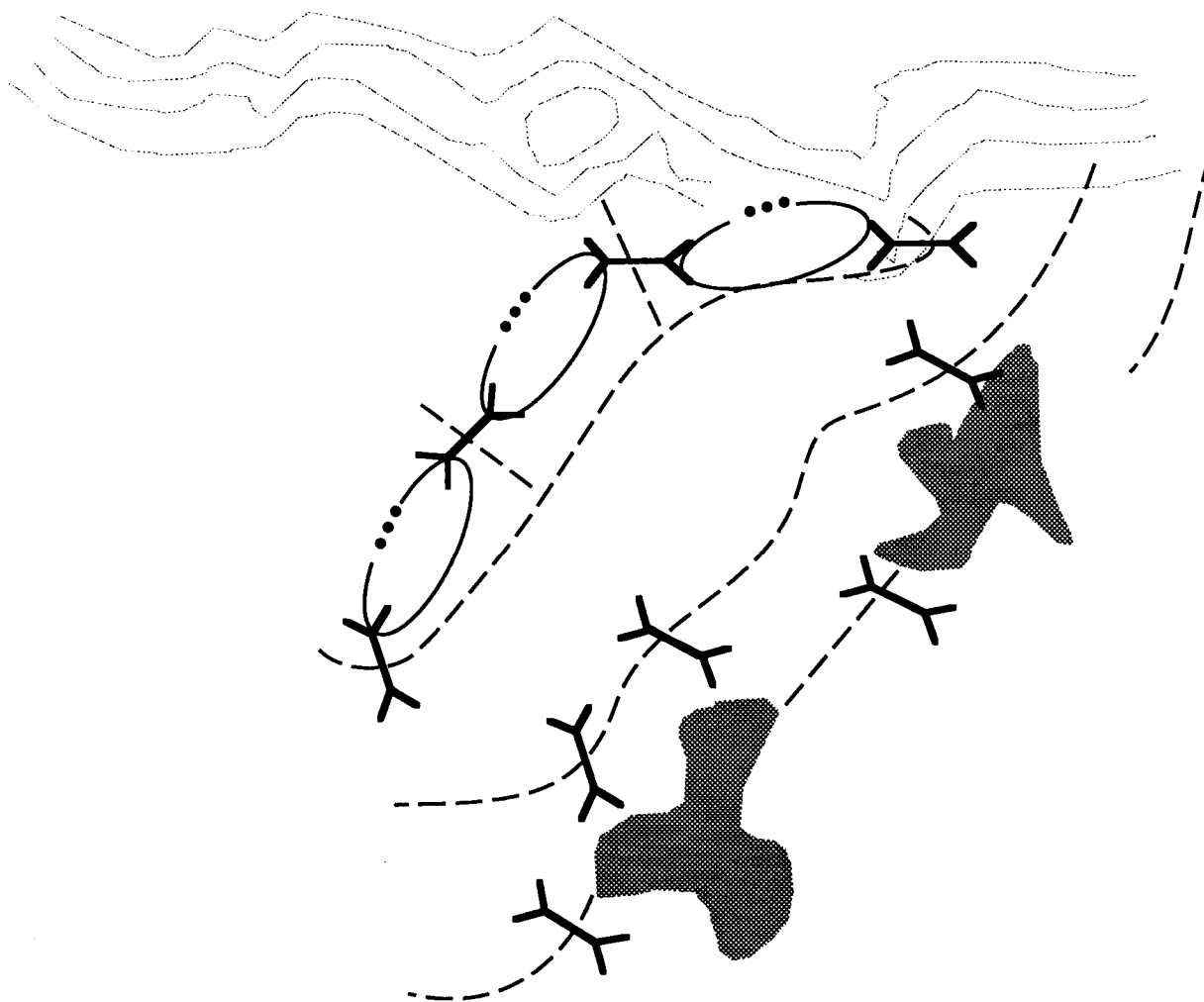


Figure 8-3. Mobility requirements.

ensure that there are no bypasses; realistically, this is usually not possible.

### Band One

Protective obstacles in Band One deny the enemy a position from which it can support assaulting forces by fire. Units design protective obstacles to defeat the expected enemy. If the unit is a light infantry company team, the greatest threat in Band One may be tank and IFV main gun fire. Therefore, the unit designs obstacles that can

help defeat this threat, such as AT minefield in potential attack-by-fire positions. If the unit is a tank company team, the greatest threat in Band One may be dismounted infantry that are armed with medium AT weapons. The unit may design obstacles that include AP mines and wire to defeat this threat.

Tactical obstacles frequently tie into protective obstacles in this band. *Figure 8-4* shows an example of a turn obstacle group into which the unit ties protective obstacles. The protective obstacles at this point also

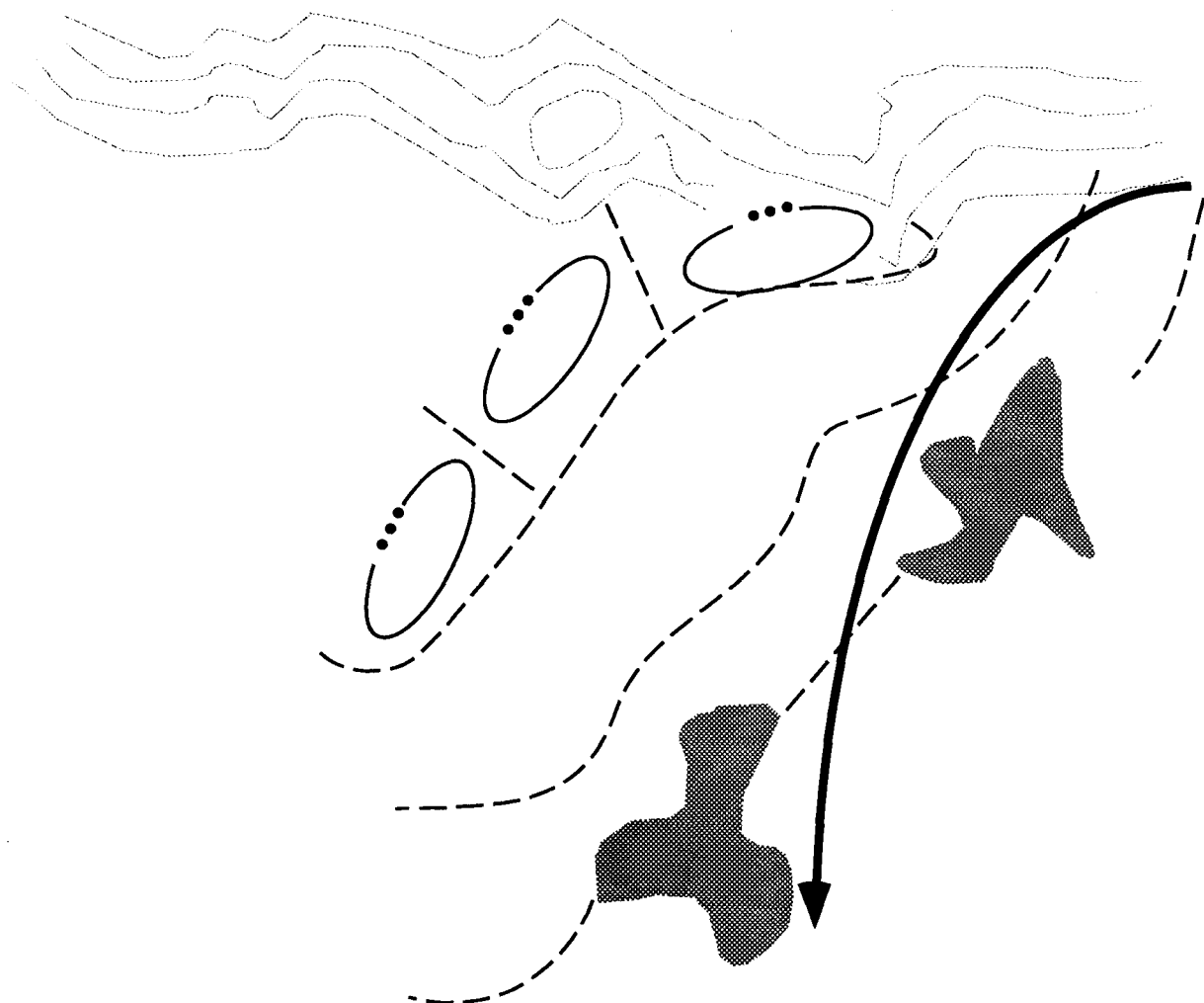


Figure 8-4. Band One and the tactical obstacle link.

strengthen the anchor point of the turn obstacle group. This helps the defender to stop a mounted enemy from rapidly dismounting to breach or conduct an assault of the position.

### Band Two

Band Two's focus is to break up enemy assault formations and to deny any attack-by-fire positions for the enemy's small arms or light AT weapons. Like Band One, Band Two obstacles may be tied into tactical obstacles. This commonly occurs in restrictive terrain where the direct-fire EAs are usually small and the direct-fire engagements are close. Another example is the protective obstacles around a block obstacle group. In this instance, the company team commander ensures that the tactical and protective obstacles support each other.

In Band Two, dismounted units use AT minefield to help defeat mounted assaults in tactical situations. In all situations, they may use wire road blocks or other constructed antivehicular obstacles to defeat moving-vehicle threats, such as terrorist vehicle bombs. Dismounted units may also incorporate AP minefield and wire obstacles to help break up enemy dismounted formations. Mounted units generally design Band Two obstacles to defeat enemy dismounted infiltration forces and, as in Band One, to deny positions for dismounted forces with light AT weapons.

### Band Three

Protective-obstacle considerations within Band Three focus on defeating dismounted threats. Both mounted and dismounted units use wire obstacles and possibly directional and command-detonated AP mines. These obstacles help to prevent enemy forces and other threats from entering the unit's position.

### Band Four

Protective obstacles in Band Four help to break up the actual unit position and prevent the enemy from moving within the position. Units can do this by putting protective obstacles throughout the position, segmenting it into irregular pieces. This causes the attacker to breach repeatedly once he is on the position, enhancing the defender's ability to CATK, to maximize defensive fires, to provide time to reorganize, or to conduct retrograde operations. Obstacles in Band Four usually are wire or other constructed AP and AT obstacles. Units normally do not use mines within their position because of the fratricide risk. *Figure 8-5, page 8-10*, shows an example of a protective obstacle array around a company team.

### Sources for Materials

Units emplacing protective obstacles rely on three sources for protective obstacle materials. They are—

- Unit basic load.
- Push packages.
- Requisitioned material.

**Unit Basic Load.** This source provides units with a very limited capability for hasty protective obstacles.

**Push Packages.** A more important source for hasty protective-obstacle materials is push packages based on subunit capabilities. A technique is to develop packages, based on subunit types, as part of unit SOPs and to push those packages down to the subunits as soon as it is apparent that the unit will require protective obstacles.

**Requisitioned Material.** Materials to support deliberate protective obstacles are usually requisitioned based on actual requirements to complete the protective obstacles that the unit plans.

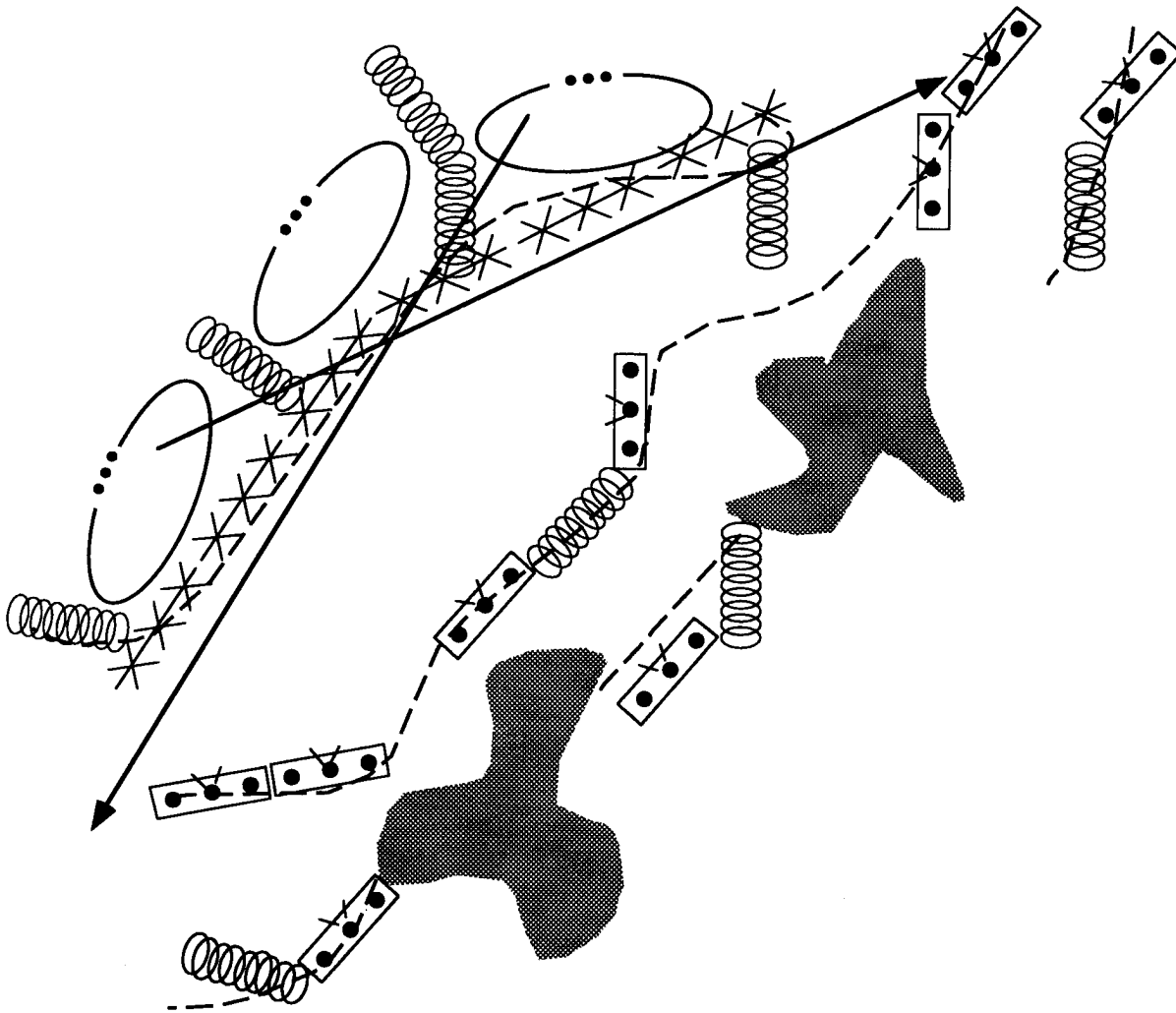


Figure 8-5. Protective obstacle array.

#### Other Design Considerations

Some additional considerations for protective obstacle designs are as follows:

- Employment in depth.
- Obstacle protection.

**Employment in Depth.** Protective obstacles do not seriously inhibit the enemy's assault until they overload or exhaust his breaching capabilities. This requires obstacles employed in depth. It is difficult to construct a continuous array of protective obstacles from Band One through Band Four; however, units can construct

successive bands of obstacles, with each focused at a specific threat. This requires the enemy to continually deploy and regroup in an area of intensive fires until friendly forces can destroy the enemy or force its withdrawal.

**Obstacle Protection.** Obstacle camouflage depends on obstacle siting. Large protective obstacle systems are not easy to conceal by siting alone. However, when units take advantage of the terrain and locate protective obstacles in folds of the terrain, around blind curves in high speed AAs, or on the

reverse slope of a hill, they are less visible to an attacker. To aid in the camouflage of protective obstacles from aerial observation, units avoid regular geometric layouts of protective-obstacle systems. Camouflage and deception can be enhanced with phony obstacles used to confuse the attacker as to the exact location and extent of the protective-obstacle system.

Continuous physical reconnaissance of protective obstacles is extremely critical. Units must keep protective obstacles under continuous observation at all times. In those areas where dead space exists, units use other means of early warning and monitoring, such as flares, remote sensors, and GSRs. These measures ensure that an infiltrating force cannot enter the area undetected.

## **PROTECTIVE-OBSTACLE OVERLAY**

Units execute protective obstacles as they prepare their defensive positions. Normally, the unit commander distributes an overlay to his subordinates that depicts the type and location of each protective obstacle. The commander allows subordinates the flexibility to make minor changes to his plan.

As units complete the obstacles, they report and record the obstacles according to the procedures in *Appendix B* and guidance from their higher HQ. Throughout the operation, units maintain positive control over their protective obstacles to protect them from compromise by enemy forces. More importantly, they assist other friendly units from straying into the protective obstacles, thus preventing fratricide.