Section II. Organization of a MAGTF Antiarmor Defense

4201. MAGTF Air and LAR Operations

Air assets define the furthermost reach of the MAGTF when fighting the *deep battle.* The MAGTF commander may direct fixed-wing and attack helicopter operations forward of the security area against enemy armor. The goal is to attack the enemy either in predetermined or hastily established EAs while the enemy armor is not fully deployed. This presents a better array of targets for air attack. This tactic is also used against enemy second echelon units while the first echelon units are being engaged by friendly ground units. As enemy armor enters the security area, it is engaged by LAR units supported by air and other supporting arms. LAR units may be reinforced with mechanized assets.

LAR battalion is a mobility asset that exemplifies the principle of economy of force. Its principal tasks are *reconnaissance, security,* and *limited offensive or delaying operations.* Control of LAR battalion by the MAGTF commander is normally exercised through the ground combat element (GCE) commander however, based on METT-T, the MAGTF commander may employ LAR battalion in support of the entire MAGTF. For example,a
LAR unit may be combined with aviation combat element (ACE) assets, and Combat Service Support (CSS) assets to form a task force which can be positioned well forward of GCE elements.

4202. Division

The division will normally assign sectors within the MBA to its regiments. The commander may further designate specific battle positions or strongpoint positions that are critical to the overall defensive effort. If the divison is conducting a mobile defense, a division level EA may be designated. This EA would normally accommodate a regimental sized enemy force. Avenues of approach at division level are those that will normally accomodate a minimum of a fully deployed battalion sized force. Likewise, the division commander should visualize his defense in terms of battalion positions when assigning regimental sectors. If the division is conducting a position defense, the designation of EAs are delegated to the regiments.

a. Security Area. Security forces are assigned screening, guard, or covering force missions in the security area. A security force is normally task organized and may include dedicated artillery, air defense, engineers, and attack helicopters in its task-organization. The security area is normally the area where the advancing enemy armor is first engaged by friendly forces.

A *screening* element has the primary task to observe and report information. The *guard* protects the main force from attack, direct fire, and ground observation , by fighting to gain time, while also observing and reporting information. A *covering* force is a force operating apart from the main force for the purpose of intercepting, engaging, delaying, disorganizing, and deceiving the enemy before the enemy can attack the main force. A mission to screen is included in the covering force mission. It differs from a guard force in that it is organized to operate independently, is organized with its own artillery, and may include offensive action characterized by limited counterattacks or spoiling attacks.

A covering force mission against a former Soviet-type mechanized force would normally require a mechanized regiment- or battalion-sized task force reinforced with appropriate CS and CSS units. The covering force operates apart from the main force to engage, delay, disrupt, and deceive the enemy before he can attack the main force.

LAR units and mechanized task forces are well suited for operations in the security area. The division would normally employ the LAR battalion in a screen or guard mission. LAR units have the capability to destroy enemy reconnaissance units and combat recon patrols. The LAR battalion would normally have to be reinforced with mechanized units and/or air assets to perform a guard or covering mission.

Units operating in the security area normally assume another mission following displacement through friendly lines. These missions include but are not limited to the reserve, rear area security, and flank security. (See fig. 4-6.)

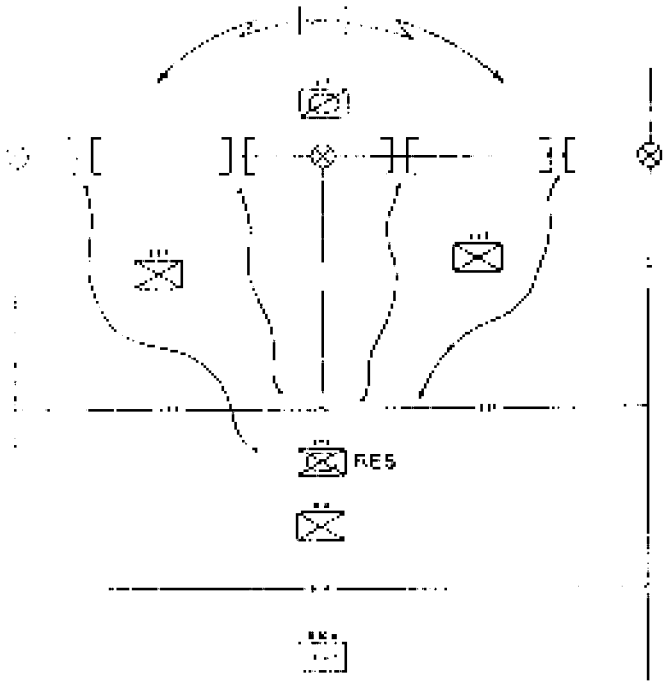

Figure 4-6. Marine Expeditionary Force/Division Screen.

b. Main Battle Area. The division's MBA is normally organized into regimental sectors. (See fig. 4-7.) Battle positions or strongpoints may be designated by the division commander within the regimental sectors. The TOW, Javelin, Dragon, and various LAW weapons are the primary ground antiarmor weapons within the regimental sectors. Normally mechanized units would not be assigned to the FEBA because their mobility and firepower are far better suited for the reserve mission. However, when a mechanized force is assigned to the MBA, the majority of the tank units will be normally be assigned to the reserve.

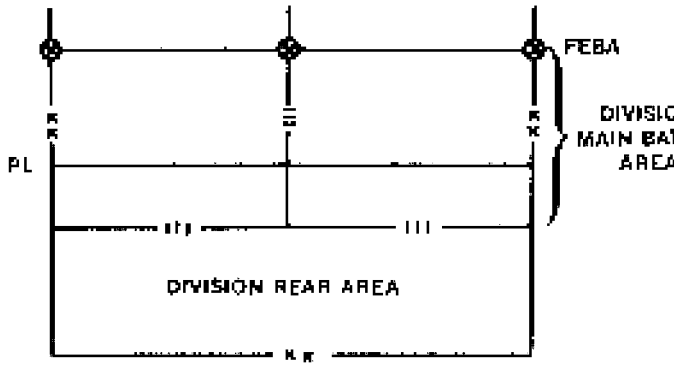

Figure 4-7. Division Main Battle Area.

The Division normally controls movements of its regiments within the MBA by the use of phase lines. However, maximum latitude is normally granted regiments between phase lines. This allows regiments to maneuver their units between positions.

c. Rear Area. In addition to normal security requirements, the rear area may require an antiarmor capability located in its immediate vicinity. This requirement is normally met by incorporating TOW, Javelin, or Dragon assets into the local rear area security. The division reserve is often used to prevent major armored or mechanized attacks into the rear area.

4203. Regiment

A regiment may be required to establish a defense incorporating a security area, MBA, and rear area within a division sector. Regiments may use either a mobile or position defense depending upon availability of assets. In both the position and mobile defense, the overall scheme of maneuver makes the greatest possible use of maneuver and offensive action. A regiment can conduct counterattacks, and spoiling attacks, and conduct attacks by stay behind forces if it possesses sufficient mobility, firepower, and CSS assets.

a. Organization of the Defense. The security area will normally be under task-organized forces designated by and reporting to the division. It may include some forces from the regiment that would revert to regimental control after moving through the HOL. However, the regiment is responsible for the area between the HOL and the FEBA and may desire to position some forces in this area.

The regiment organizes the MBA by assigning to subordinate battalion--sectors, battle positions, strongpoints, or a combination of all three. As a general rule, the regiment will assign mechanized forces to the reserve to maximize their tactical mobility.

(1) Sectors. Sectors are the least restrictive measure assigned by the regiment to the battalions. This method allows more freedom to maneuver and decentralized fire planning. Normally, battalion commanders have total freedom to maneuver within their sector. Like the division, the regiment utilizes phase lines within the sectors to control movement. (See fig. 4-8.)

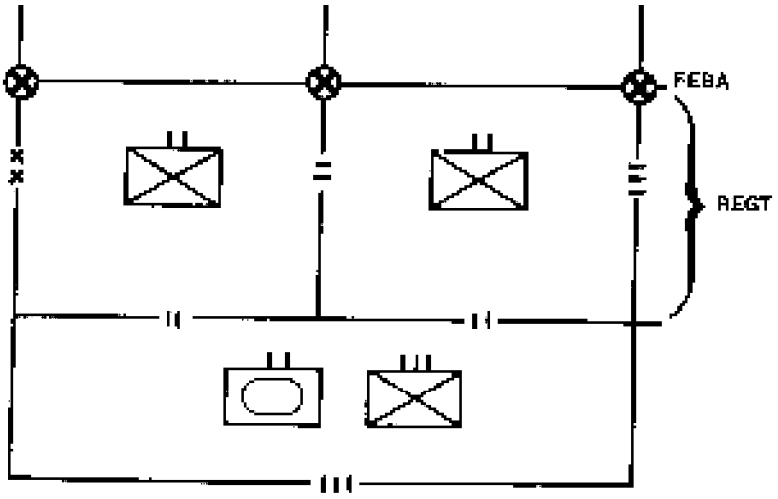

Figure 4-8. Sectors.

(2) Battle Positions. Battle positions (BPs) are used when the regimental commander desires greater control over the maneuvering and positioning of his battalion task forces. If the regimental commander designates the BPs, the battalion moves from it's BP on order or based upon disengagement criteria established by the regimental commander. Figure 4-9 depicts a combination of battle positions and sectors.

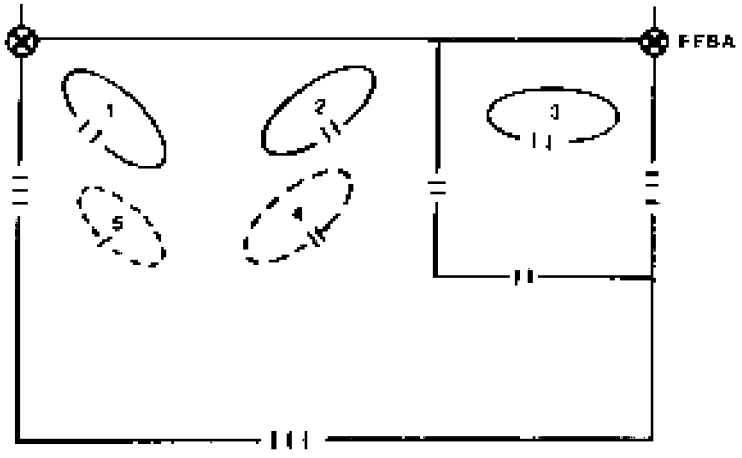

Figure 4-9. Battle Positions/Sectors.

(3) Strongpoint. If the regimental commander determines that certain terrain is critical to the defense, he will normally designate a strongpoint position. (See fig. 4-10.)

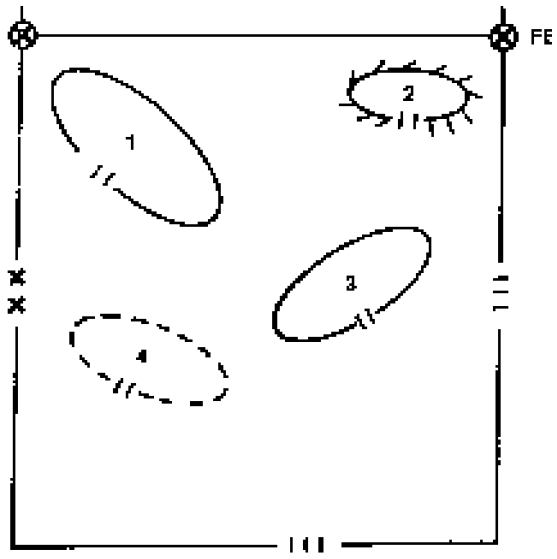

Figure 4-10. Strongpoint/Battle Positions.

b. Reserve Force. A regiment may designate a reserve, or else require the battalions to obtain permission before employing their reserves. When establishing a reserve, the guiding principle is to utilize mechanized forces and attack helicopters when available.

c. Rear Area Operations. A regiment will normally assign TOW sections and Javelin or Dragon squads to support its rear area against any armor penetrations. LAR units may be assigned to the regiment and be utilized in the rear area following completion of their security role in the security area.

4204. Battalion

a. Security Area. In the security area, a battalion-sized mechanized task force may participate as part of th covering force, or it may be assigned a screening or guarding mission. This section will address an infantry battalion defending in the MBA as part of a regiment.

b. Types of Defense. A battalion will normally defend using one or more types of defense: sector, battle position, and strongpoint. A battalion will normally form at least a platoon-sized reserve of antiarmor if available. The following graph summarizes the factors that a commander considers in selecting a battle position or a sector.

FACTOR	BATTLE POSITIONS	SECTOR
Avenues of Approach	Well Defined, Enemy can be canalized	Multiple Avenues
Terrain	Dominates avenues of approach	No dominating terrain
Area of Operations	Narrow	Wide
Mutual Support between Companies	Achievable	Not Achievable
Higher commander's ability to control	Good	Degraded

c. Defend In Sector. Defense in sector is the most common defense mission in antiarmor operations. Company sectors are oriented on battalion avenues of approach (platoons size or larger). Defend in sector is the least restrictive mission. Figure 4-11 depicts a battalion task force with three company teams in sector and a tank company in reserve.

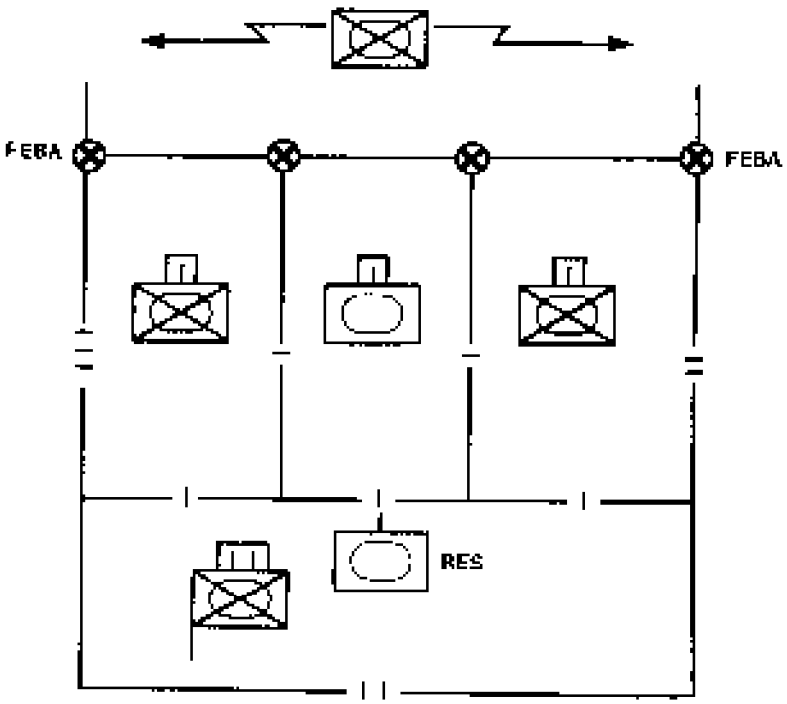

Figure 4-11. Defense in Sector.

The battalion commander may choose to employ companies in battle positions. This technique restricts maneuver and complicates flank coordination by the companies, but it gives greater control of the overall defense to the battalion commander. The use of on-order battle positions provides flexibility and depth to the defensive plan. However, the battalion must have sufficient mobility assets to ensure quick movement between positions. Figure 4-12 illustrates a defense incorporating battle positions, strongpoints, and sectors.

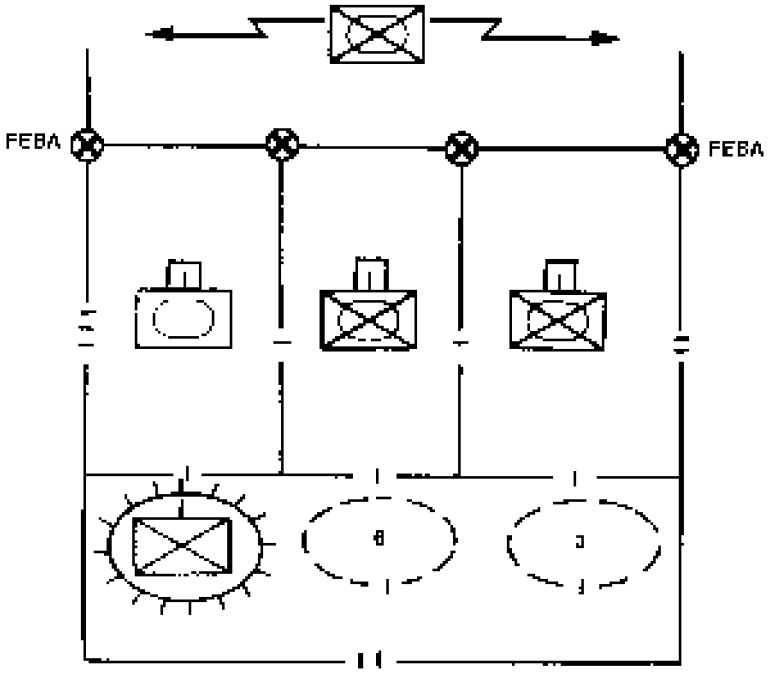

Figure 4-12. Sector/Battle Positions/Strongpoint.

d. Defense of a Battle Position. A battalion assigned a battle position occupies the general area of the position. Security forces may operate well forward to the flanks of battle positions for early detection of the enemy and for all around security. Units can maneuver in and outside of the battle position as necessary to adjust fires or to seize opportunities for offensive action in compliance with the commander's intent. Figure 4-13 illustrates a battalion battle position with company battle positions.

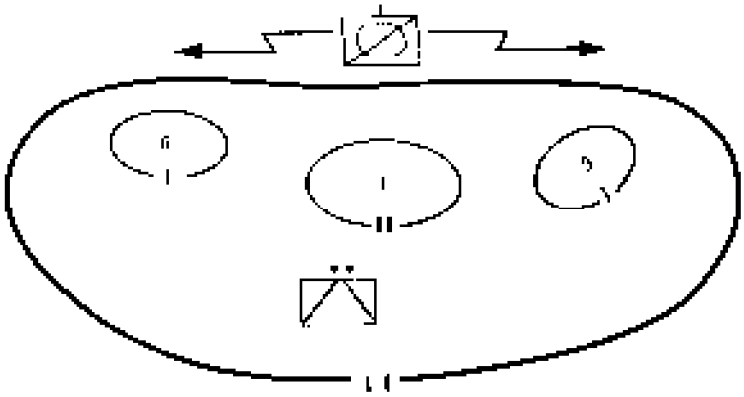

Figure 4-13. Battalion Battle Position.

e. Defense of a Strongpoint. A strongpoint may be battalion size to platoon size. Battalion strongpoints can be established in isolation when tied to restrictive terrain on their flanks or on armor high speed avenues of approach tied to defensive positions of units on the flanks of the strongpoints. Strongpoints may be on the FEBA or in depth in the MBA. Defense in depth is achieved through multiple positions within the strongpoint. All positions within a

strongpoint must be mutually supporting. Mechanized forces are rarely assigned to strongpoints. Infantry with antiarmor assets and engineer support normally defend strongpoint positions. (See fig. 4-14.)

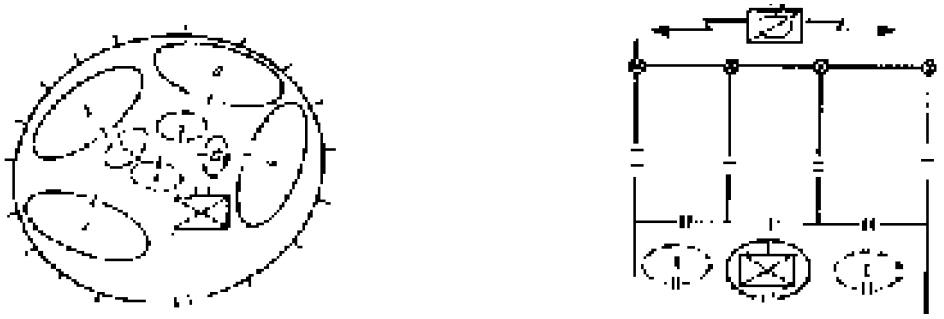

Figure 4-14. Battalion Strongpoint.

f. Reserve Operations. A battalion may operate as a reserve force for a regiment. The reserve possesses mobility and firepower necessary to engage enemy armor. The reserve may be assigned one of the following missions:

- Counterattack.
- Spoiling attack.
- Reinforce.
- Rear operations.

4205. Company

The company may function in the security area, MBA, or rear area. Normally, it fights as part of a larger organization.

a. Main Battle Area. The company should only be assigned a defensive sector when there is a single enemy avenue of approach along a corridor and little ability for the enemy to move laterally cross compartment. Normally the company is assigned a battle position which covers one or more EAs. This enables the task force commander to mass the fires of several company teams or other maneuver units on a single or series of EAs. It also allows the battalion task force cornmander to maneuver a company to other battle positions.

b. Company Reserve. The reserve may be positioned in the MBA area or rear area. It may be assigned a battle position blocking the most likely location for an enemy penetration. Ideally this position cannot be observed by enemy forces and provides covered, concealed, high speed routes to execute planned counterattack and reinforcement missions.

c. Team Battle Positions. The company commander may assign battle positions to his subordinate platoons. Considerations for assignment of subordinate platoons are shown below.

(1) Dismounted Infantry. Dismounted infantry are assigned a battle position which protects tanks, AAVs, and themselves from dismounted assault. This position is normally not collocated with tanks. The position should be well prepared with overhead protection when possible. The position may be part of a strongpoint. Small clusters of

buildings may provide much of the advantage of a strongpoint and should be considered if it supports other elements of the team.

(2) Assault Amphibians (AA) AA platoons supporting the infantry may be collocated with the infantry or placed in overwatching positions to provide direct fire support with heavy machine gun fires from the AAV's upgun weapon station.

(3) Tank Platoons. Tank platoons are positioned to cover EAs with both close and long range fires. Tanks also mutually support mounted and dismounted infantry.

(4) TOW/Dragons/ Javelins. ATGMs attached or collected with a company team should position themselves with infantry nearby for protection against dismounted assault. ATGMs may be positioned to fire short or long range, depending on the method of engagement: HAW-MAW-LAW or Massed Surprise Fires.

d. Reserve Operations. A mechanized or tank company team, or elements of these task organized units may be designated as a reserve for a regimental or battalion-sized force.

e. Rear Area. A company will normally be assigned a sector as part of a battalion operation in the rear area.

4206. Maneuvering and Battle Positions

The battalion commander takes advantage of the mobility and long-range fires of his unit by shifting fires of a given unit to a different EA or by maneuvering his force to alternate or supplementary battle positions. Once a battle position is identified, the enemy can be expected to deliver massed direct fires, suppressive indirect fires, and screening and obscuration fires with smoke to counteract the battalion's ability to both acquire and engage targets within the EA. Second echelon forces may also attack from a different direction to either mass forces or flank the battalion's EA. If the battalion possesses sufficient mobility, the commander should prepare for all of these contingencies by preparing alternate and supplementary battle positions for company teams and TOW sections. Movement to alternate and supplementary company and antiarmor unit positions are normally controlled by the battalion commander in accordance with his scheme of maneuver. Care should be taken not to maneuver several units simultaneously, reducing the direct fire pressure placed on the enemy within the EA.

a. Types of Positions

(1) Alternate Positions for Companies. Alternate positions are normally physically separated from primary positions both laterally in and in depth to counteract the effects of enemy fires. However, alternate positions still cover the same EA. This is the likely minimal distance where the effects of enemy indirect fires can be overcome. Several alternate positions may be planned for each company team. Movement to alternate positions will also disorient attacking enemy forces and help confuse enemy commanders of non committed units as to the strength and location of friendly forces. Movement to alternate positions must be rehearsed.

(2) Supplementary Positions for Companies. Supplementary positions for companies cover different EAs. The supplementary position need not be any specific distance unless the force is under direct attack or suppressive fire.

(3) Alternate and Supplementary Positions Within Company Battle Positions. Alternate and supplementary positions may be planned for platoons. They serve the same functions as stated above. However, the battle position is rarely large enough to allow movements of extended distance.

b. Levels of Preparation. Battalion and company commanders will normally assign a level of preparation for battle positions. The subordinate tactical commander may raise the level of preparation but may not lower it. There are three levels of preparation: *occupy, prepare, reconnoiter.*

(1) Occupy. A unit occupies the position it will initially defend. This position is fully prepared and reconnoitered before the defense is initiated. The unit will have this position completed and occupied and will be ready to fight not later than the time specified in the mission statement.

(2) Prepare. The unit will take all actions necessary to prepare the position for the unit's mission. The troops must generally accomplish the following tasks:

- Position security

· Physically sight each weapon in its fighting positions (primary, supplementary, and alternate).

· Establish fire control measures to include fire plan sketches, position stakes, and possibly TRP markers for tanks and ATGMs.

· Camouflage fighting positions.

· Clear fields of fire.

· Construct fighting positions to improve available cover and concealment.

· Recon and prepare routes between weapon positions.

· Coordinate with higher, adjacent, and supporting units. Coordinate the locations of companies and platoons, boundaries, and fire control measures.

· Conduct rehearsals.

(3) Reconnoiter. A unit instructed to reconnoiter a position will send one or more representatives to conduct a physical reconnaissance of that position. The recon party should determine the following:

· What fighting positions are available in and around the battle position.

· What covered and concealed routes are available to enter and leave the fighting positions from the rear and to allow maneuver between primary, alternate, and supplementary positions.

· What fields of fire are available to each fighting position.

c. Execution Matrix. Various matrixes can be developed for the offense and the defense. CSS, artillery, and communication matrixes are just a few of the examples. This discussion will focus on an execution matrix for the

defense. (See figs. 4-15 and 4-16.) An execution matrix is a simple tool that helps commanders and subordinates in three ways:

· The matrix helps the commander keep track of the plan and visualize various phases of the plan during the planning stage.

· The matrix makes it easier to brief the plan and aids subordinates in understanding the plan.

· The matrix aids in the conduct of the operation. As enemy action forces require adjustment to plans, a matrix is a useful tool to keep track of the situation.

The matrix essentially contains the bulk of the significant information contained in paragraph 3 of the operation order. In a clear and concise manner, it outlines exactly where units are, where the units are expected to go if necessary, and what they are to do after arriving there. Each commander can recopy the matrix on his own map and update as necessary. The matrix graphically portrays the commander's intent.

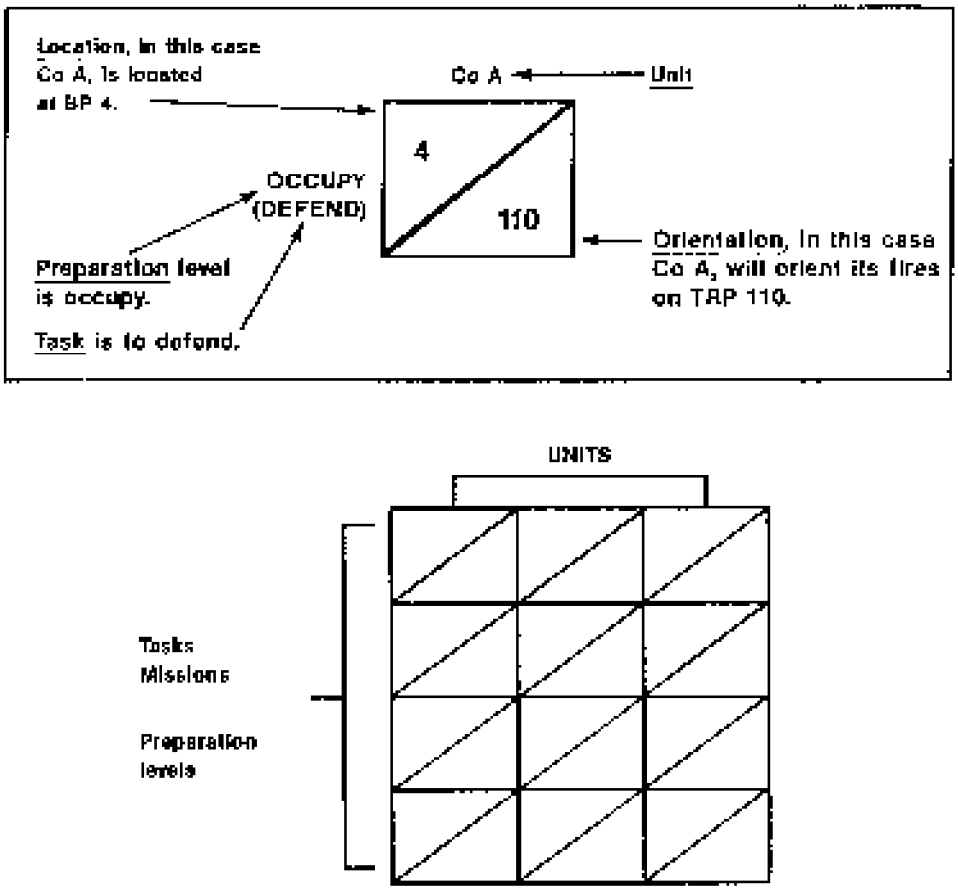

Figure 4-15. Execution Matrix.

	Co A	Co B	Co C	Tank Co	Mortars
OCCUPY (DEFEND) (DELAY)	11 / 114	STRONG POINT 12 / NH FA JIM	13 / EA JOE	17 (DELAY) / 116-119	FIRING POSITION 1 (FP1) / 100-100 PRIORITY TO TANK CO
PREPARE (DELAY)				18 / EA JACK	FP1 / EA JACK PRIORITY TO TANK CO
PREPARE (DEFEND)	14 / NH FA JIM		15 / NH FA JIM	19 / RESERVE	FP2 / EA JIM PRIORITY TO B CO
RECON (DEFEND)	16 / 112				
COUNTER-ATTACK	11 / 114		13 / EA JOE	ROUTE BLUE TO BP 18 / EA JACK	FP1 / EA JACK PRIORITY TO TANK CO

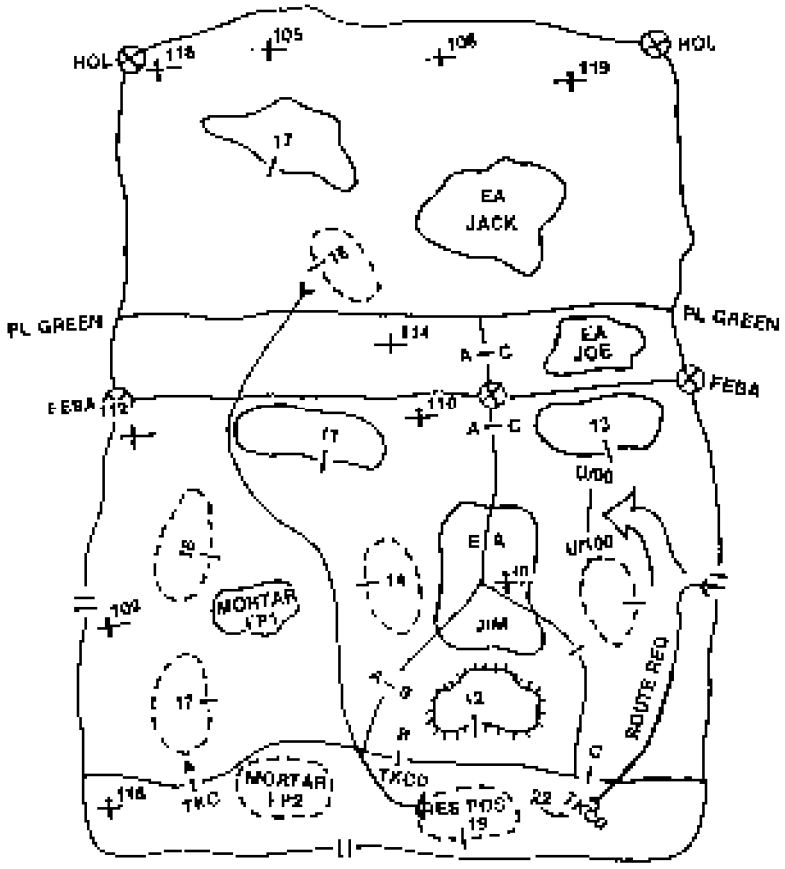

Figure 4-16. Completed Execution Matrix/Overlay.

d. Contents of the Matrix. There is no set formula for the size and shape of the matrix or for exactly what information goes into the matrix. Some general guidelines are provided as follows:

· Tasks/missions and preparation levels for positions are normally placed on the left side of the matrix.

· Maneuver units and supporting units are placed at the top of the matrix.

The number of boxes is dependent upon the number of units and the number of tasks included in the plan.

The individual boxes are divided diagonally. The top left half of the box denotes the battle position or location of the unit, and the bottom right half denotes where the unit is to orient their fires.

4207. Reverse Slope Defense

A reverse slope is any slope which descends away from the enemy. (Joint pub. 1-02.) (See fig. 4-17.)

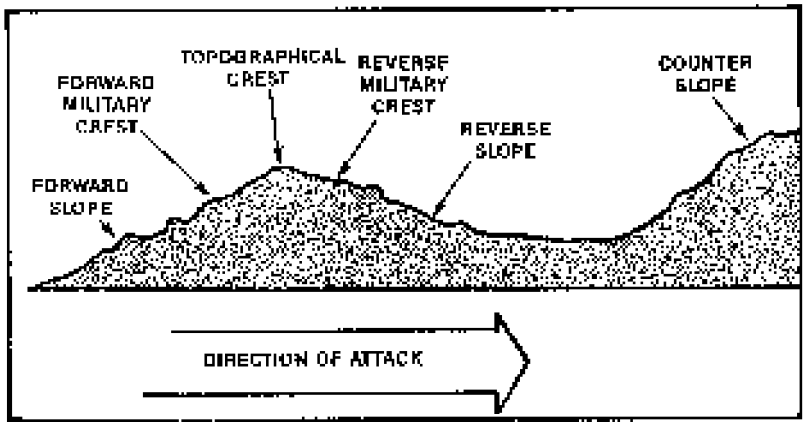

Figure 4-17. Military Topography.

A reverse slope defense is a variation of the position defense. A reverse slope defense is organized so that the main defensive positions are masked from enemy observation and direct fire by a topographical crest. A reverse slope aids the defender in bringing massed surprise fires to bear against an attacking enemy. While the crest is not occupied in strength, control of the crest by fire and employment of obstacles is the key to the success of a reverse slope defense.

The reverse slope defense can be especially effective against mechanized forces. (See fig. 4-18.) The intent is to isolate the enemy's lead units from follow-on forces. It establishes an EA into which the enemy moves directly after reaching the crest of a hill or ridge line. The result is surprise, isolation, and defeat of a manageable portion of the attacker's force. The topographical crest marks the farthest limit of the EA.

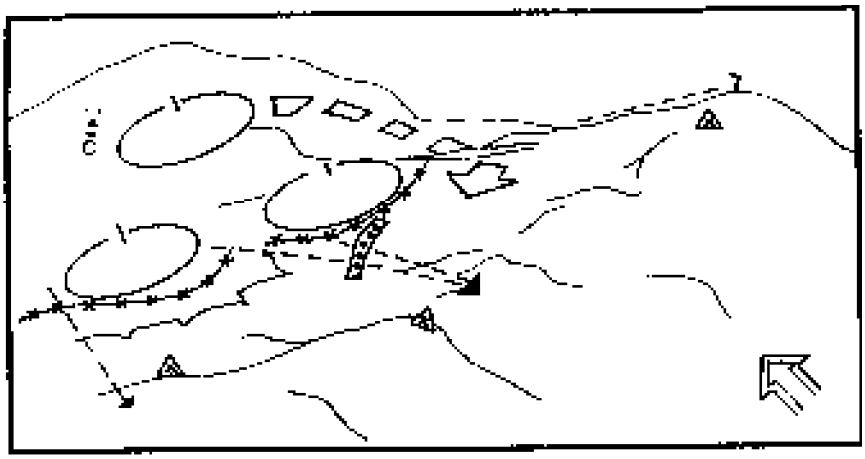

Figure 4-18. Reverse Slope Defense.

A battalion rarely conducts a reverse slope defense along its entire front; however, there may be situations where subordinate units and weapon systems may be employed on the reverse slope.

a. Tactical Considerations. The commander may choose to conduct a reverse slope defense--

· When the forward slope is untenable due to the density or accuracy of enemy fires.
· When the crest and forward slope offer little cover or concealment.
· When the forward slope has been lost or not yet seized.
· When units on the flanks can adequately cover the forward slope.
· When terrain on the reverse slope offers better fields of fire than terrain on the forward slope.
· To avoid an unfavorable salient or reentrant in the forward friendly disposition.
· To vary his tactical pattern, in order to deceive or surprise.
· When forced to assume a hasty defense while in contact with or proximity to the enemy.

b. Advantages. A reverse slope defense has the following advantages:

· A crest forward of the main defensive positions limits enemy observation, reducing the effectiveness of indirect fires and aviation, and degrades his direct fire weapons.

· The defender may be able to bring massed surprise fires to bear on the enemy as he crests the high ground.

· Units on the reverse slope have more freedom of movement until the crest is lost.

· The defense may deceive the enemy as to the true location and organization of the main defensive positions, saving the main positions from artillery preparation fires.

c. Disadvantages. A reverse slope defense has the following disadvantages:

· Once the security elements withdraw, the enemy can advance largely unimpeded until he has crested the high ground in front of the main defensive positions.
· Once cresting the high ground, the enemy has the advantage of attacking downhill.
· Difficulty in maintaining observation of the enemy.

· Obstacles in the forward slope may not be effectively covered by fire.
· The effective range of direct-fire weapons may be limited. Normally, the HAW-MAW-LAW technique cannot be utilized and standoff range of HAWs and MAWs are sacrificed.

d. Weapons Positions. Figure 4-19 depicts a likely array of weapons' positions.

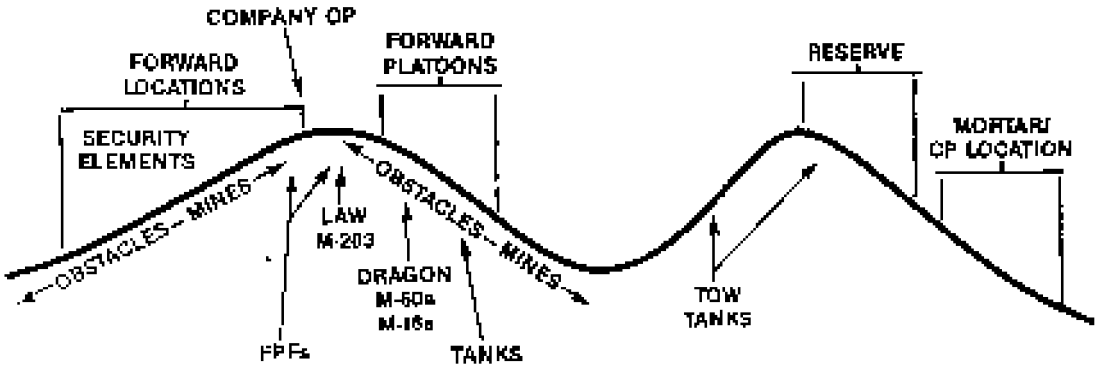

Figure 4-19. Weapons Positions.

Fire support planning should place special emphasis on denying the enemy occupation and use of the topographical crest. While the main defensive positions are located on the reverse slope, the commander should establish security detachments on the forward slope. The plan for the counterattack should include clearing or regaining the crest from the enemy. Once successful, a reverse slope defense may have limited value a second time because the element of surprise is lost.

4208. Perimeter Defense

A perimeter defense is a defense without an exposed flank, consisting of forces deployed along the perimeter of the defended area. (Joint Pub 1-02). It is a position defense in which the defending unit is disposed to meet attacks from all directions simultaneously. The term perimeter defense is usually applied to battalions and smaller units. (See fig. 4-20.) The general form of a perimeter is also used when the battalion task force or company team must prepare and defend from a strongpoint.

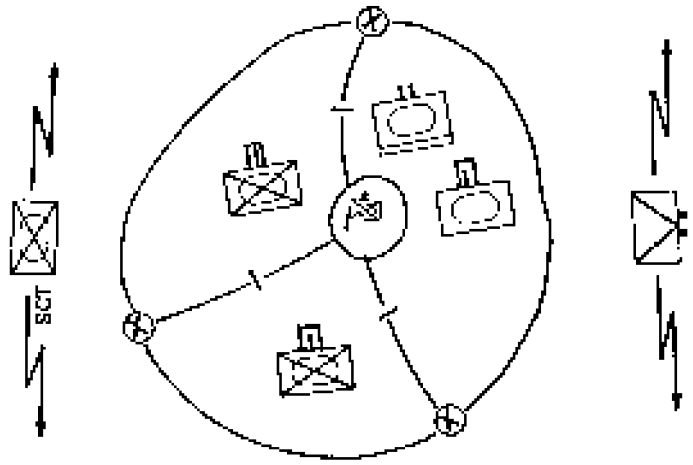

Figure 4-20. Perimeter Defense.

a. Tactical Considerations. The commander may establish a perimeter defense when--

- Operating independently.
- Isolated from friendly units by enemy action.
- Required to hold or protect an area such as a bridge or airfield.

b. Organization. A perimeter defense employs the bulk of combat power on the perimeter while maintaining an adequate reserve. However, a perimeter defense inherently lacks depth and restricts a defending mechanized unit from maneuvering and maximizing its firepower and mobility. This makes a perimeter defense especially vulnerable to an armor attack. The tactical commander minimizes these vulnerabilities by--

- Placing security as far out as possible.
- Orienting antiarmor weapons on EAs.
- Constituting a mechanized reserve.

A battalion normally establishes a perimeter 2 to 4 kilometers in diameter. The perimeter is divided into company sectors with boundaries and coordinating points. Security elements and patrols (mounted and dismounted) are employed outside of the perimeter. The reserve defends a portion of the second line of defense behind the perimeter elements and counterattacks against an enemy penetration to restore the FEBA. Organic or attached CS and CSS elements are normally placed in the center of the perimeter for protection.

4209. Urban Terrain and Antiarmor Operations

Central to any urban pattern is the hub or built-up area. Although it may vary in size from village to major urban complex, the effects of a hub remain constant. (See fig. 4-21.) Urban areas give the defender a great advantage, similar to that of a strongpoint. An attacking mechanized force will normally try to bypass an urban area because fighting within an urban area is primarily a dismounted infantry battle. Threat mechanized units normally lack sufficient troop density and their artillery, and armored firepower and mobility are seriously degraded. Urban operations are slow moving, requiring high expenditures of ammunition, and create high casualty rates. It consists of decentralized actions with inherent difficulties in command, control, and communications.

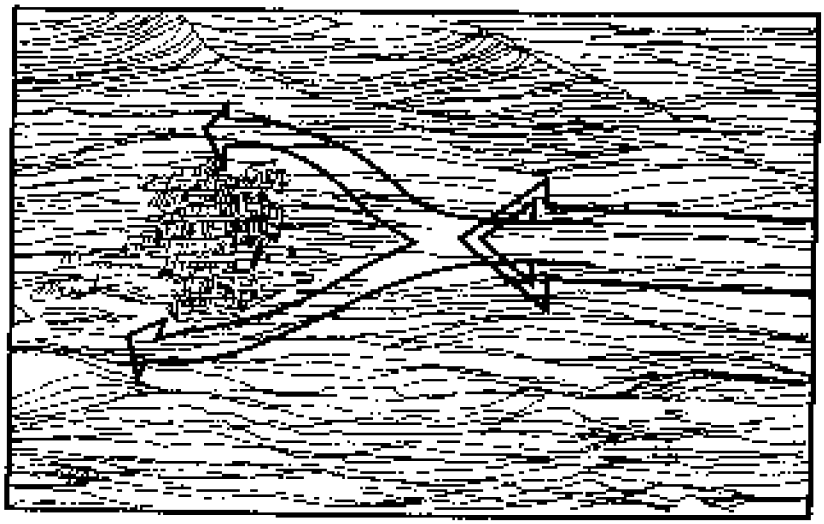

Figure 4-21. HUB Phenomenon.

For the MAGTF, the hub may serve as the pivot or anchor for its defense or as an element of a defense in depth. As shown, the hub is an obstacle which blocks the attacker's advance. Where adjacent natural terrain permits, a hub will normally be bypassed. This requires a change in direction of advance and may reduce offensive momentum and cohesion. As the attacker slides off the leading edge of the hub and begins his bypass operation, his vulnerability to flank attacks and ambushes along the new axis of advance increases.

a. Organization of the Defense. Commanders at each level must decide how best to integrate manmade features into their overall scheme. If the retention of a built-up area is required, the defense may assume the characteristics of a position defense organized in depth and supported by strong mobile forces.

A division would normally employ its mechanized forces outside of the built-up area in reserve or counterattack roles against the enemy's flank. (See fig. 4-22.)

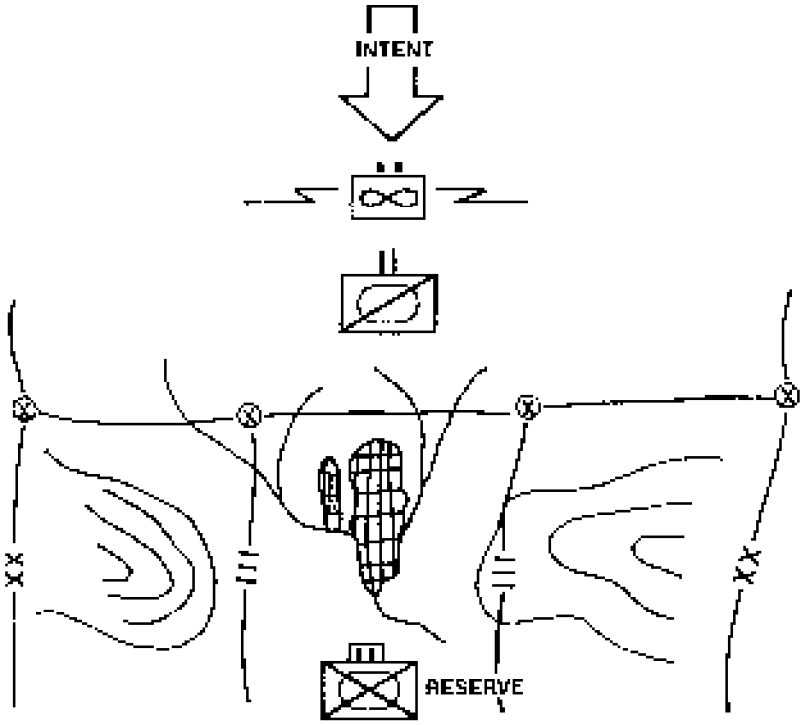

Figure 4-22. Mechanized Force in Built-Up Area.

The security area is established well forward of the built-up area. The MBA may contain the built-up area if it is critical to the defense of the urban area. When this situation occurs, it is important to initiate the defense of the urban area as far forward as possible to facilitate the defense of the built-up area and to avoid protracted fighting in the cities. Accordingly, EAs are established forward, to the flanks, and within (if possible). The division will normally assign the regiments sectors and may designate certain strongpoints. The regiments and battalions may assign subordinate units either sectors, strongpoints, or battle positions or a combination of the three. The functions and organization of the rear area are not significantly changed in an urban environment.

The principles discussed for a division and regiment also apply to a battalion. The battalion may assign its companies sectors, strongpoints, or battle positions or a combination of the three. Figure 4-23 demonstrates a battalion-sized unit integrating the built-up area into its defense. Note, an EA is positioned forward and a smaller EA is established on the flank to take advantage of the *hub phenomenon.*

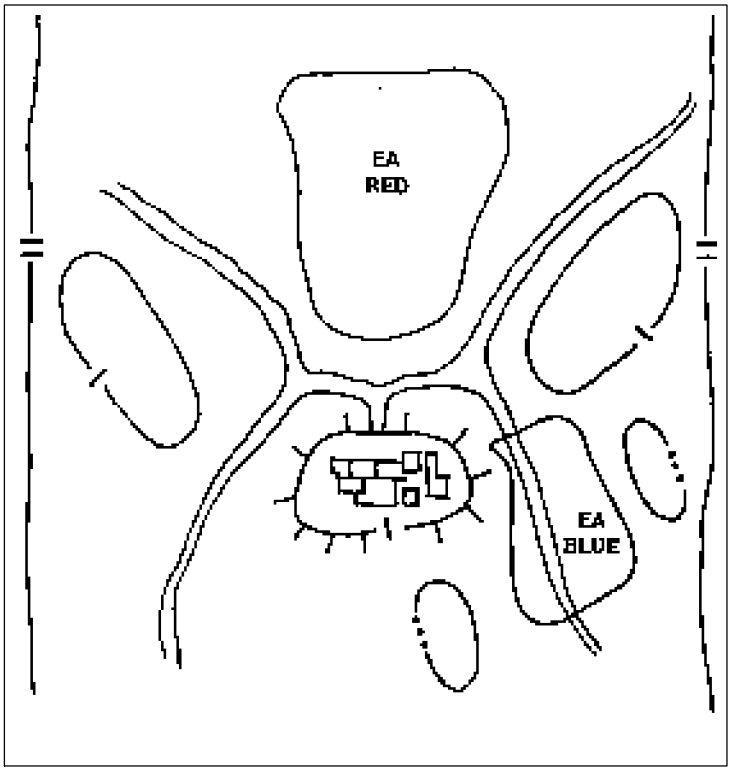

Figure 4-23. Battalion Defense.

Figure 4-24 illustrates a battalion task force in the defense with company sectors and platoon battle positions.

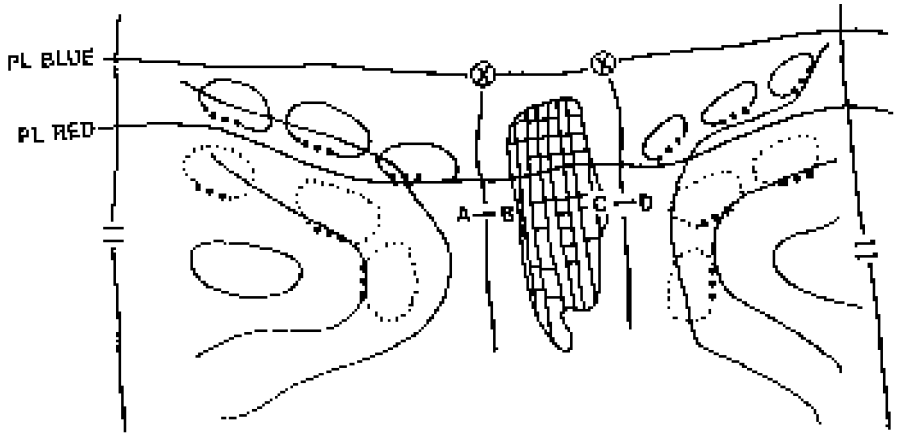

Figure 4-24. Battle Position.

See MCWP 3-35.3, *Military Operations on Urbanized Terrain (MOUT)* for further discussion of the defense within the built-up area.

b. Employment of Tanks. Tanks are best employed defending outside the urban area. When they are used within the built-up area, they are normally employed by section to support strongpoints. When possible, positions should be selected that provide use of their long-range fire. Additional concealment and protection from enemy

antiarmor weapons should be sought by selecting positions behind walls or by driving inside structurally sound buildings. Tanks should always be employed with infantry for close in protection when fighting in a built-up area.

c. Employment of AAVs. AAVs used in the defense of an urban area are normally employed by section and protected by dismounted infantry. They may conduct all of the functions shown in the offense. When they are used for direct fire support, overwatch positions should be selected which provide long-range fires. Like tanks, they should utilize buildings and walls for cover and concealment.

d. Employment of TOWs, Dragons, and Javelins. TOWs, Dragons, and Javelins have more utility in the defense then they do in the offense. There is more time to select and prepare positions to overcome obstacles which may interfere with the flight of the missile. Their fires should be restricted to armored targets. Positions should be selected which provide for long range fires. Both TOWs and Dragons can be fired from enclosed areas providing it is a sturdy, ventilated structure and has a ceiling height of at least 7 feet and floor size of at least 6 by l0 meters for TOWs and 4.5 by 5 meters for Dragons. Due to their soft-launch capability, Javelins can fire within an enclosed area with a reduced danger from backblast and flying debris. Javelins not only have less of a firing signature, but also require less interior volume inside a room to be fired safely than does a Dragon. The Javelin is capable of being fired safely and with no performance degradation from a 10 foot x 12 foot room with an 8 foot ceiling. A 1 meter by 2 meter ventilation area is recommended. The Javelin adds flexibility by increasing the number of usable firing positions in an urban defense.

4210. Combat Service Support

Logistics support must be coordinated during the planning and execution phases of each defensive operation. The combat and field trains are located as far to the rear as possible but close enough to be responsive to maneuver units. All CSS activities must look beyond the defense to support opportunities for maneuver units during the transition to the offense. At each tactical level, the commander and the operations officer must coordinate with the G-4 (S-4) to ensure a given operation is supportable.

4211. Defense Control Measures

There are three types of control measures that are utilized in the defense--indirect fire, direct fire, and maneuver.

a. Indirect Fire Control Measures. See MCWP 3-16, *Tactics, Techniques, and Procedures for Fire Support Coordination*, for review.

- Coordinated fire line.
- Fire support coordination line (FSCL).
- Restrictive fire line.
- Boundaries.
- Airspace coordination area.
- Free fire area.
- No fire area.
- Restrictive fire area.
- Target reference point.

b. Direct Fire Control Measures. See chapter 3 for review.

- Engagement area.
- HAW-MAW-LAW and massed fire methods of engagement.
- Target reference point
- Fire commands
- Fire patterns.
- Priority of engagement

c. Maneuver Control Measures. MCRP 5-2A, *Operational Terms and Graphics*, provides detailed discussion on these control measures.

- Handover line.
- Forward line of own troops.
- Battle position.
- Strongpoints.
- Delay position.
- Blocking position.
- Disengagement criteria.
- Sectors.
- Coordinating points.
- Phase lines.
- Contact points.
- Checkpoints.
- Passage points.
- Passage lanes.
- Routes.
- Main supply routes.
- Assembly area.