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THE SBCT INFANTRY RIFLE PLATOON AND SQUAD

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CONTENTS

PREFACE

This manual is based on the premise that although the infantry rifle platoon organization, weapons systems, and equipment have changed, squad and platoon maneuver, fire, and movement have not.

This manual describes the doctrinal and tactical employment principles for the infantry carrier vehicle (ICV)-equipped infantry rifle platoon, which is an element within the Stryker brigade combat team (SBCT). It provides doctrine, tactics, and techniques for the infantry rifle squads and platoons of the SBCT. The focus for the manual shifts from the current light and mechanized platoons to the combination of an infantry-centric organization, three full rifle squads, and a weapons squad with an ICV for mobility.

This manual provides the rifle platoon and squad leader with tactics and techniques to exploit infantry capabilities through situational understanding that will reduce vulnerabilities and enable the parent unit to win on the battlefield. Although FM 3-21.9 reemphasizes critical information from other manuals, the user must continue to refer to other manuals for in-depth discussions of particular subjects.

Although this manual does not implement any international agreements, the material presented herein is in accordance with related international agreements.

The proponent of this publication is the US Army Infantry School. Send comments and recommendations directly to Commandant, US Army Infantry School, ATTN: ATSH-ATD, Fort Benning, Georgia 31905-5000 (DSN 835-4704 or 7114; Commercial [706] 545-4704 or 7114); or E-mail: doctrine@benning.army.mil).

Unless this publication states otherwise, masculine nouns and pronouns do not refer exclusively to men.

CHAPTER 1

OVERVIEW OF THE SBCT INFANTRY RIFLE PLATOON AND SQUAD

The Army continues the trend of frequent deployment of forces (often multiple deployments) for small-scale contingencies and peacekeeping enforcement while maintaining the capability to conduct major theater warfare. In some cases, light infantry forces do not have the mobility, lethality, or sustainability to respond to the need for armed intervention against a robust enemy. Heavy forces cannot be deployed rapidly enough to meet the need in a crisis, especially in an underdeveloped theater. Therefore, the Army organized the Stryker brigade combat team (SBCT) in response to the need for a force that can deploy rapidly as an "early responder" to a crisis area anywhere in the world. The SBCT, equipped with an interim armored family of vehicles, is essential to fulfill the Army's strategic requirement for engagement, crisis response, and warfighting dominance. The SBCT, and more significantly the squads and platoons, can conduct operations across the full spectrum of conflict. The core capabilities of the infantry carrier vehicle- (ICV-) equipped platoon are its high mobility and its ability to close with and destroy the enemy through violent dismounted infantry assault.

At the squad and platoon level, the force is tailored to optimize the most effective components of light and mechanized forces. Organic to this organization at platoon level are three full squads complemented by a weapons squad to provide the base of fire element. Organic at company level is the capability for support by indirect fires with mortar systems and immediate direct fire support from the mobile gun systems (MGSs). The ICV-equipped platoon has enhanced mobility, lethality, protection, and decision-making capabilities. These enhancements result from improvements in command, control, and communications (C3).

Section I. CAPABILITIES, LIMITATIONS, ORGANIZATION, AND RESPONSIBILITIES

The mission of the infantry is to close with the enemy by means of fire and movement to defeat him, capture him, or repel his assault by fire, close combat, or counterattack. In accomplishing its assigned missions, the platoon employs combat support (CS) and combat service support (CSS) assets within its capabilities. The platoon is an organization whose effectiveness depends on the synergy of its subordinate elements, including ICVs, rifle squads, weapons squads, and support elements.

1-1. CAPABILITIES

The SBCT infantry platoon equipped with the ICV can--

- Effectively develop the situation with manpower (three infantry squads plus a weapons squad) and equipment.
- Use the mobility of the ICV to transport the infantry squads to a position of advantage under the protection of the vehicle.

- Operate in a mounted or dismounted role.
- Destroy light armor vehicles and personnel using direct fire.
- Employ fires from the vehicle to destroy, suppress, or fix personnel and light infantry fighting vehicles.
- Destroy tanks and fighting vehicles with long-range antitank guided missile (ATGM) fires out to 2,000 meters (Javelin).
- Seize, secure, and retain key terrain.
- Block dismounted avenues of approach.
- Protect obstacles and prevent enemy breaching operations.
- Establish strong points to deny the enemy key terrain or flank positions.
- Conduct assault breaches of obstacles.
- Clear danger areas and prepare positions for mounted elements.
- Assault enemy positions.
- Augment the ICV, MGS, and tank antiarmor fires.
- Move over terrain not trafficable by other wheeled vehicles with the infantry squads.
- Infiltrate enemy positions.
- Conduct mounted or dismounted patrols and operations in support of security operations.
- Conduct air assault operations.

a. **Lethality.** The platoon combines the effects of the infantry squads, the weapons squad, and the direct fires from the ICV. This includes Javelin fire-and-forget antitank missile fires. Additionally, the platoon leader can implement indirect fires and, more specifically, company mortar fires. If necessary, the firepower of the MGS can support the platoon. The organic snipers/marksmen provide additional capability in each squad. The lethality of the platoon is enhanced by the "arms room" concept of weapon systems available and carried on the ICV. The platoon can deploy weapons as needed, dependent upon the factors of mission, enemy, terrain, troops, time available and civil considerations (METT-TC).

b. **Survivability.** This includes the protection afforded by the vehicle and the ability of the vehicle to protect the infantrymen from small-arms fire and fragmentation before dismounting. ICVs cannot survive against antiarmor fires.

c. **Command, Control, and Communications (C3).** The ICVs for both the rifle platoon leader and platoon sergeant are equipped with inter-vehicular information systems (IVISs) that tie those vehicles and leaders to the C2 hierarchy of the company, battalion, and brigade. Features that support C3 are command and control software, navigational software, and digital communications capabilities.

d. **Force XXI Battle Command Brigade and Below (FBCB2).** FBCB2 is a network of computers, global positioning equipment, and communication systems that provide on-the-move, real-time command and control information to tactical combat arms, CS, and CSS soldiers and leaders. FBCB2 is designed for units performing missions at the tactical level (brigade to individual fighting platform). It provides a common database with automated positional friendly information and current tactical battlefield geometry for friendly and known or suspected enemy forces. Collectively, the FBCB2 systems generate the common operational picture (COP). FBCB2 displays

relevant information, showing the user his location, the location of other friendly forces, observed or templated enemy locations, and all known obstacles. The system also provides preformatted, standardized reports, allowing leaders to rapidly disseminate graphic overlays and written fragmentary orders (FRAGOs). The warfighter receives data "pushed" from all other battlefield systems to maintain real-time battle information. The warfighter must organize and interpret the information received via FBCB2 to determine its value in relation to the current situation.

NOTE: A COP is an operational picture tailored to the user's requirements, based on common data and information (friendly and enemy) shared by more than one unit.

(1) ***FBCB2 Architecture (Figure 1-1, page 1-4).*** Each vehicle in the platoon is equipped with the three basic components of the FBCB2 system.

(a) First, the global positioning system (GPS) provides precise location and date/time for reporting real-time friendly locations and for generating laser designated map spots for reporting purposes.

(b) Second, the single-channel ground and airborne radio system (SINCGARS) provides a secure means of transmitting (both voice and digital) between vehicles in the platoon. In addition to the SINCGARS, platoon vehicles also are equipped with the enhanced position location and reporting system (EPLRS). The EPLRS provides a secure digital connection and serves as a router, efficiently sending message traffic internally within the platoon and out to the company and fire support nets. This routing capability ensures that information is passed even if the chain of command is disrupted by physical separation on the battlefield, casualties, or mechanical failures.

(c) Finally, the FBCB2 terminal provides the monitor, keyboard, mouse, and computing functions that allow the crew to access the system. These systems form the lower tactical internet (TI).

(d) The upper TI consists of a variety of tactical computer systems and communications equipment located primarily at the battalion level and higher. The most important of these are the maneuver control system (MCS), the all source analysis system (ASAS), the advanced field artillery tactical data system (AFATDS), and the combat service support control system (CSSCS).

(e) These systems draw upon the reports and positional data passed on from the lower TI to provide the COP at higher command levels. In turn, these systems can push information such as location of adjacent units, known and templated enemy positions, graphics, and operations orders (OPORDs), down to the FBCB2 users.

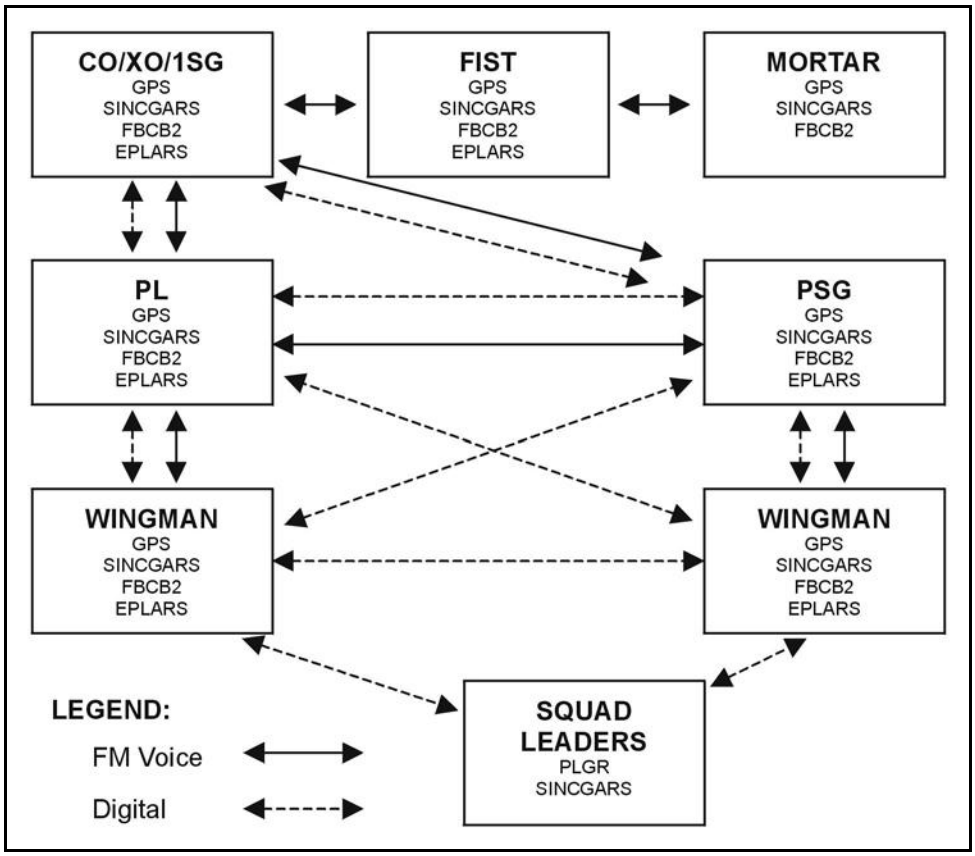


Figure 1-1. FBCB2 architecture.

(2) ***FBCB2 Capabilities.***

(a) *Friendly Information.* The FBCB2 screen displays an icon for each friendly individual vehicle in the company. This provides the vehicle commander (VC) with a clear picture of where he is located in relation to the platoon. It provides the platoon leader with a picture of where he is operating in relation to the company. While the system functions automatically for vehicles equipped to operate on the TI, it does not provide locations to every friendly element on the battlefield. For example, the system does not automatically track dismounted squads operating at extended ranges from their ICVs. In addition, it does not cover non-digitally equipped units or allied and or coalition forces that may be operating adjacent to the platoon. Icons representing these elements may be imported into FBCB2 based on FM radio reports, but they are not updated in real time. As a result, FBCB2 cannot be the sole instrument used to clear fires; it does not substitute for a leader's judgment in preventing fratricide.

(b) *Enemy Information.* FBCB2 creates the COP from both top-down and bottom-up feeds. The battalion S2 inputs enemy icons into the system based on spot reports generated by the reconnaissance, surveillance, and target acquisition (RSTA) squadron and other information-gathering assets outside the battalion. Based on his intelligence preparation of the battlefield (IPB), the S2 augments these actual locations with templated positions in the form of a situational template (SITEMP).

(c) *Enemy Activity and Obstacles.* As the platoon conducts operations, it adds to the COP by sending spot reports of enemy activity and obstacles via FBCB2. When a VC

sends a spot report, he automatically creates an icon representing the enemy on other FBCB2 systems in the platoon. The platoon leader evaluates the validity of the report. Either he or the platoon sergeant forwards it to the company commander or executive officer. At the company level, the report is evaluated to ensure its accuracy, then forwarded to the other platoons in the company and higher to battalion.

(d) *Enemy Location.* To keep the COP current, units must update spot reports concerning enemy locations that are represented by icons on the FBCB2. Updates must be sent whenever the enemy situation changes (enemy element moves or is destroyed). An icon will "fade" and eventually disappear from the FBCB2 screen as the icon's information ages. The unit SOP governs the icon "fade" rate.

(e) *Unreported Enemy.* Members of the platoon must remember that the COP provided by FBCB2 is only as good as the reports that the system receives. It will never give a 100-percent complete or accurate enemy picture. The platoon leader, VCs, and squad leaders must ensure that plans are adequate to detect enemy forces not yet reported by digital means.

e. **Standardized Reporting.** FBCB2 streamlines the reporting process by providing the platoon with the capability to send and receive preformatted, standardized reports (Figure 1-2, page 1-6).

(1) Standardized reports afford several tactical advantages:

- They help to ensure that all required information is included in a particular report or request.
- They reduce the chance of errors in transmission.
- They allow for the storage of messages for retrieval and reference.

FREE TEXT MESSAGE	REDCON ALERT
Check Fire	Situation Report (SITREP)
Call for Fire	Field Orders [2]
Observer Mission Updates[1]	Operations Plan
On-Call Fire Command	Fragmentary Order (FRAGO)
Message to Observer[1]	Warning Order (WARNO)
Fire SPT COORD Measures	Minefield Laying
End of Mission/Surveillance	Overlay
Sequent Adjust	MOPP Alert
Observer Readiness Report	MEDEVAC Report
Airborne Fire Mission	Logistics Report
Spot Report	Personnel Report
Engagement Report	Supply Point Status
Contact Report	Task Management
Land Route Report	LOG Task Order
Obstacle Report	LOG Call for Support
Bridge Report	LOG Task Status
Position Report	LOG Task Sync
NBC 1 Report	Execution Matrix
NBC 4 Report [1]	

[1] Commander's graphic intent (CGI)

[2] Receive Only

Figure 1-2. Preformatted, standardized reports

(2) There is still a requirement for frequency modulated (FM) voice message traffic. For example, platoon leaders must still transmit contact reports to initiate battle drills and to cue VCs to reference their FBCB2 screens for updated information. Additionally, VCs may need to send FM voice descriptions of enemy locations, routes, or obstacles to clarify the situation. This is especially true in urban terrain where the FBCB2 cannot display the terrain in sufficient detail to assist leaders in making effective decisions.

f. **Combat Orders and Graphics.** FBCB2 greatly enhances the speed and precision of the orders process at platoon and company level. The system allows leaders to add or modify operational graphics during the planning process or during execution. This ensures that every element has the most current information to control movement and fires. In addition, platoon leaders can use free text messages to transmit OPORDs, FRAGOs, and situational updates over extended distances without the loss of time and information typical of FM voice communications. Like the standardized reports, orders and graphics can be stored for retrieval and reference.

g. **Sustainability.** The infantry platoon can operate for up to 72 hours on or off the ICV. This is accomplished by prestocking the ICV with Class I and Class V supplies as well as with potable water. The ICV can operate for up to 16 hours daily and travel a minimum of 100 kilometers with Class III resupply. The CSS system in the parent battalion resupplies the ICV as necessary.

h. **Mobility.** The driver's vision enhancer (thermal) and the driver's navigation display unit improve the driver's vision, thus allowing upgraded platoon mobility in total darkness, all weather conditions, and degraded visibility conditions. The ICV precision navigation system (PNS) consists of an inertial navigation unit (INU), a GPS, and precision lightweight global positioning system receiver (PLGR).

(1) The PLGR provides the user with precise position coordinates with time and navigation capability under all conditions except when obstructions exist between the satellite and antenna. Users can enter map coordinates as waypoints. When the user selects a waypoint as a destination, the receiver can provide steering indications and azimuth and range information to the destination. The user can program a desired course to the waypoint and can indicate an offset distance from this course line. The user can also remove the PLGR from the vehicle and operate it in the handheld mode.

(2) The INU is a ring-laser, gyro-based navigation device. It is the primary navigation system and supplies position, velocity, attitude, angular rate, and acceleration (roll, pitch, and azimuth) to the turret processor unit. The GPS supplies the INU with initial position data.

(3) The components of the precision navigation system can operate in a combination of five modes:

- Integrated GPS/INU/vehicle motion sensor (VMS).
- GPS only (INU sensor failure).
- INU/VMS (GPS receiver fails to acquire satellite signal or is damaged).
- GPS/INU (VMS failure).
- INU only (if both the GPS receiver and the VMS are not available).

g. **Night Vision Equipment.** Own-the-night (OTN) equipment advancements improve the infantry platoon's ability to conduct surveillance and acquire targets, and enhances command and control at night. SBCT squads and platoons have infrared illuminators, improved night sights, target acquisition devices, and signaling devices (Table 1-1, page 1-8).

EQUIPMENT	CAPABILITIES
AN/PVS-14	Provides observation out to 300 meters for man-sized target and 500 meters for vehicle-sized targets.
3X Magnifier	Provides observation out to 600 meters for man-sized targets and 1,000 meters for vehicle-sized targets.
Thermal Weapon Sight, Medium (M16, M249, M240)	Maximum range: 1,100 meters.
Ground Commander's Pointer (GCP-1)	Designate target 0 to 8,000 meters (pinpoint mode); illuminate target 800 meters with 10-degree scan (area mode).
AN/PAQ-4B/C	600 meters maximum.
Aim-1	Zeroed out to maximum range of 3,000 meters.
Black Light	12-hour duration; range varies with terrain.
Infrared Trip Flare	20-meter radius; emits minimal visible light.
Phoenix	12-hour duration; range varies with terrain.

Table 1-1. Night vision equipment capabilities.

(1) The rifle squad uses infrared light from infrared parachute flares or infrared handheld flares to illuminate targets without the enemy's knowledge. These advancements allow the squads to see more of the battlefield and aid in direct fire lethality and increased survivability.

(2) The key infrared target designator is the ground commander's pointer (GCP-1). Platoon and squad leaders use the GCP-1 to designate targets in the engagement area so their soldiers can focus fires more effectively and enhance fire control in general.

(3) The squad and platoon are equipped with the infrared laser designators for increased target acquisition.

(4) Individual soldiers are equipped with an AN/PAQ-4B/C laser aiming light that emits a pulsating infrared laser on the desired target at the point of aim. The AN/PAQ-4B/C mounts on the M16, M4, M203, and M249. Soldiers use the laser with night vision goggles (NVGs) to improve the probability of hitting the target during darkness.

(5) The AIM-1 laser aiming light is another target designator used by the ICV squad and platoon. The AIM-1 mounts on the M249 and M240 machine guns and fires an infrared laser aiming light on the target for improved target sighting.

(6) Platoon members also have improved night vision devices. Each soldier is equipped with AN/PVS-14 night vision goggles with 3X magnification, if needed.

1-2. LIMITATIONS

The ICV-equipped infantry platoon has the following limitations:

a. Platoon ICVs are vulnerable to enemy antiarmor fires.

b. Platoon infantry squads are vulnerable to small arms and indirect fires.

c. The pace of dismounted offensive operations is limited to the foot speed of the infantryman.

d. The ICV poses a variety of difficulties in water-crossing operations, including the requirement for either adequate fording sites or a bridge with sufficient weight classification.

e. A soldier's load increases as a result of additional digital equipment and increased battery requirements.

f. Inherent in a situation as an "early responder" is the difficulty in obtaining supplies for ongoing operations, especially with long lines of communication (LOC) and resupply in an underdeveloped area of operation. This situation is compounded because the unit may operate forward of the debarkation point and with threats to the LOCs, the routes may not be secure.

1-3. ORGANIZATION

The infantry platoon has one officer and 43 enlisted personnel in three elements: the platoon headquarters (HQ), the mounted element, and the infantry squad element (including rifle squads and a weapons squad). (Refer to Appendix A for more information on organization and vehicle dismounting.)

a. **Platoon Headquarters.** The platoon headquarters (Figure 1-3) consists of the rifle platoon leader (PL), platoon sergeant (PSG), radiotelephone operator (RATELO), and forward observer (FO). In tactical situations it also includes the platoon medic. The platoon leader is responsible for the employment of the platoon and all the platoon's systems. The platoon sergeant is the most senior noncommissioned officer (NCO) in the platoon. He is second in succession of command and leads the platoon's mounted element when the platoon leader dismounts with the infantry squads. He assists and advises the platoon leader and leads the platoon in the platoon leader's absence.

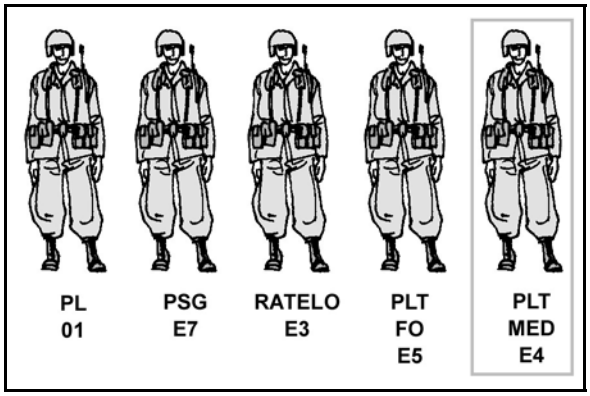


Figure 1-3. Platoon headquarters organization.

b. **Mounted Element.** The infantry platoon is equipped with four ICVs that provide rapid, protected tactical and operational mobility of infantry squads to critical locations on the battlefield. The ICV is a fully mobile system capable of operating in conjunction with infantry and other elements of the combined arms team. Each ICV has a crew of two (commander and driver) that operates the vehicle. These mounted crews (the PSG or a senior squad leader is included in the mounted section as the fourth VC and serves as one of the section leaders [Figure 1-4, page 1-10]) provide critical support to the platoon by operating and maintaining the ICVs and properly employing them on the battlefield to ensure protected delivery of the infantry squads to their dismount point. Once the infantry

squads have dismounted the carriers, the vehicle crew may employ local defensive armament to defeat "thin-skinned" enemy vehicles (trucks or lightly armored vehicles) or dismounted infantry.

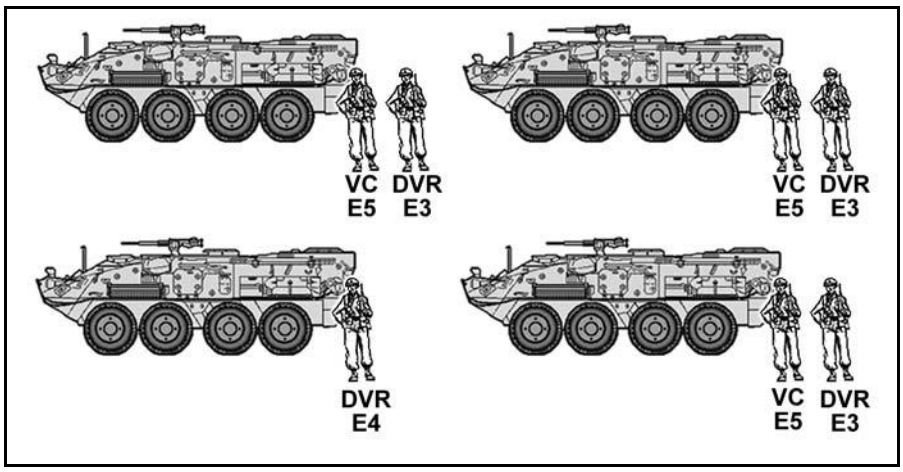


Figure 1-4. Mounted element organization.

(1) The vehicle commander is responsible for the overall employment of the ICV and operates the ICV's defensive armaments. The vehicle driver operates the vehicle during all conditions--day or night. At the VC's direction, the driver negotiates the vehicle through all terrain and obstacles to safely deliver the infantry rifle squad to the point of employment on the battlefield.

(2) As previously stated, the ICV's crew may employ its local defensive armament to augment the base of fire provided by the platoon's weapons squad. These augmenting direct fires can ensure the infantry squad's freedom of maneuver to close with and destroy the enemy. These fires also can provide accurate suppressive fires on enemy personnel, bunkers, or emplacements and destroy enemy infantry in daylight, at night, or during conditions of limited visibility (smoke, haze, and fog).

(3) The platoon's ICVs and infantry soldiers provide mutual protection for each other while performing their assigned missions. Infantry soldiers provide security for the vehicles while halted, and the ICVs provide rapid protected battlefield mobility and an augmenting base of fire platform for the dismounted infantry assault.

(4) While the platoon remains mounted, the platoon leader controls the movement of the platoon's ICVs. When the platoon leader dismounts to conduct the assault or other dismounted infantry operations with the rifle squads, the platoon sergeant assumes command of the mounted element of the platoon. He maneuvers them in support of the infantry squads and as directed by the platoon leader. For example, if the direct fires of the ICVs are needed to facilitate the maneuver of the squads, the platoon leader may decide to have the platoon sergeant direct the fires of the mounted element to facilitate the platoon's maneuver. The platoon sergeant can dismount with the rest of the platoon if required.

(5) The platoon should fight as a team. It must be prepared to maneuver in severely restricted terrain supported by the weapons squad and, when possible, the vehicles. When the platoon conducts dismounted operations, it has three 9-man rifle squads and a 7-man weapons squad. The key advantage here is that, with the added support of the weapons

squad, the infantry no longer has to stay within the supporting range of the ICVs. In this case, the ICVs could overwatch, block another avenue of approach, isolate the objective, or conduct other missions.

c. **Dismounted Element.** The dismounted element (Figure 1-5) consists of the platoon headquarters, three rifle squads, and a weapons squad. The rifle squad is the foundation of infantry forces, which are employed to defeat enemy forces, secure key or decisive terrain, deprive the enemy of resources, gain information, deceive and divert the enemy, hold the enemy in position, or disrupt an enemy attack.

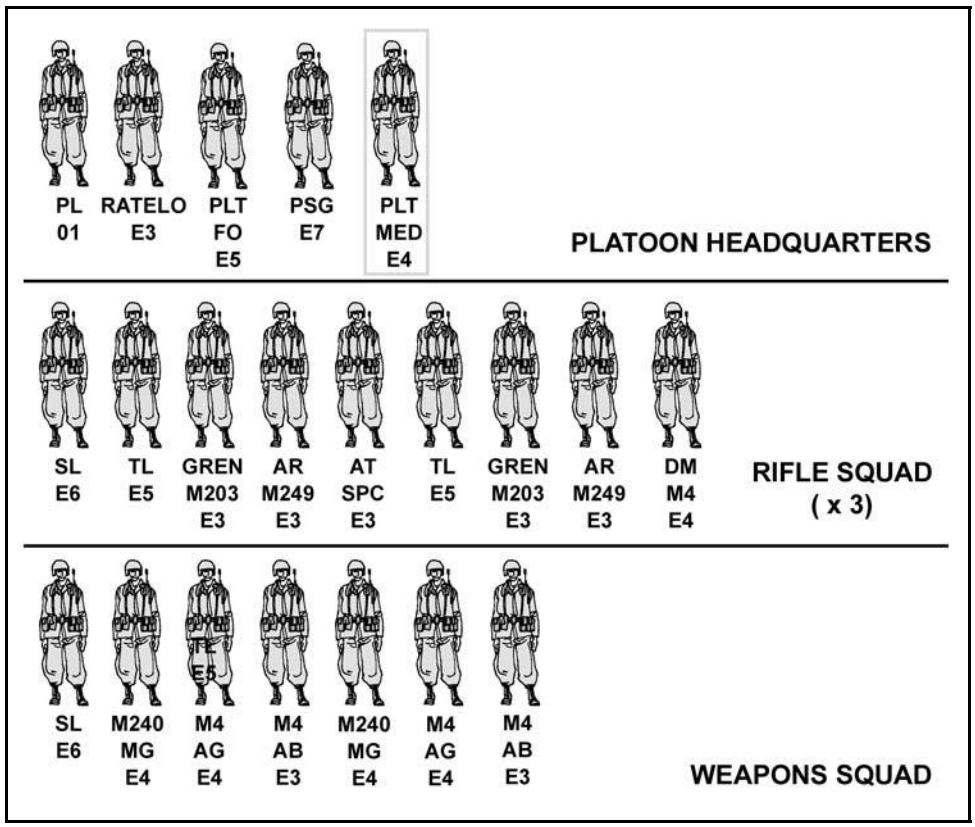


Figure 1-5. Dismounted element organization.

(1) ***Rifle Squads.*** Each of the three rifle squads (Figure 1-6, page 1-12) consists of a rifle squad leader and eight soldiers. The rifle squad leader is the senior tactical leader of the squad and controls the squad's movement and fires. He conducts squad training and maintains the squad's ability to conduct tactical missions successfully.

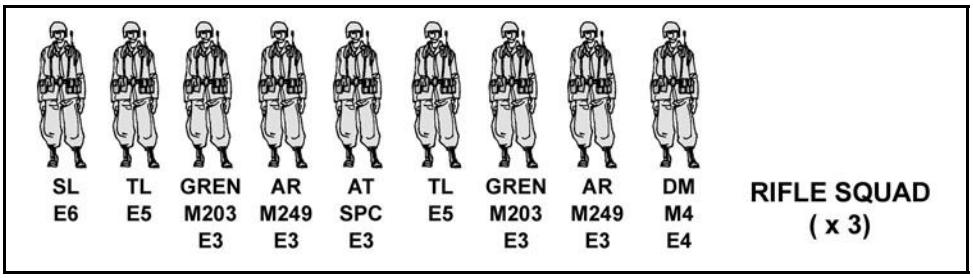


Figure 1-6. Rifle squad organization.

(a) Each infantry squad is further organized into two 4-man fire teams consisting of a team leader, a grenadier, and an automatic rifleman. The fourth member within each fire team is either the squad's antitank specialist or the squad's designated marksman.

(b) The fire team leader is a fighting leader and leads his team by example. He is equipped with an M4 rifle. The fire team leader controls the movement of his team and the placement of fires against enemy soldiers. He assists the squad leader as required.

(2) ***Weapons Squad.*** The seven-man weapons squad (Figure 1-7) consists of a squad leader and two 3-man machine gun teams. The weapons squad provides the primary base of fire for the maneuver of the platoon's rifle squads with highly accurate short- and long-range, direct, and small-arms fires against enemy personnel and equipment. The two machine gun teams consist of the gunner, assistant gunner, and ammunition bearer. Each team is equipped with the M240B 7.62-mm medium machine gun that has an effective range of over 800 meters. (See Appendix B for more information on the employment of the M240B machine gun.)

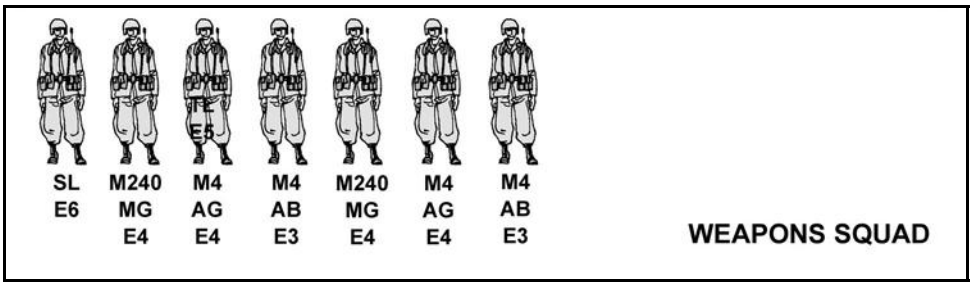


Figure 1-7. Weapons squad organization.

1-4. RESPONSIBILITIES

The increased complexity of the ICV-equipped infantry platoon requires highly trained soldiers and leaders. The increase of equipment in the platoon requires more cross training to ensure soldiers can fill vacancies or shortfalls in critical positions. Increases in the amount and complexity of equipment and the transfer of increased information at every level require platoon members to work closer than ever before.

a. **Platoon Leader.** The platoon leader is responsible for the tactical employment, collective training, administration, personnel management, and logistics of the platoon. He must know his soldiers and how to employ the platoon and its weapons. He is personally responsible for positioning and employing all assigned or attached weapons. The platoon leader--

- Leads the platoon in supporting the company and battalion missions. He bases his actions on the missions the company commander assigns to him and the company and battalion commanders' concepts.
- Informs his commander of his actions when operating without orders.
- Plans operations with the help of the platoon sergeant, squad leaders, and other key personnel.
- Stays abreast of the situation and goes where needed to supervise, issue FRAGOs, and accomplish the mission.
- Requests necessary support from the company commander for his platoon to perform its mission.
- Provides guidance to the platoon sergeant in planning and coordinating the platoon's CSS effort.
- During planning, receives on-hand status reports from the platoon sergeant and squad leaders.
- Reviews platoon requirements based on the tactical plan.
- During execution, supervises the platoon sergeant and squad leaders.
- Develops the fire support plan with the platoon sergeant and squad leaders.
- Coordinates the obstacle plan.
- Analyzes tactical situations, disseminates information, and employs the full capabilities of his platoon's equipment to accomplish the mission.
- Manages the C3 information.
- Ensures subordinates follow database protection procedures to prevent the compromise of digital information.
- Ensures situation reports (SITREPs) are accurate and are forwarded to the company commander as applicable.
- Analyzes and then disseminates pertinent tactical friendly and enemy updates to his subordinates.
- During limited visibility, employs all available OTN assets to designate targets for the direct- and indirect-fire weapons and for situation updates.
- As leader of Section A, keeps his crew and wingman informed.

b. **Platoon Sergeant.** The platoon leader should consider the platoon sergeant a fighter by trade and place him in the tactical plan either dismounted or maneuvering the mounted element. The platoon sergeant is the senior NCO in the platoon and second in command. He assists and advises the platoon leader and leads the platoon in the platoon leader's absence. He supervises the platoon's administration, logistics, and maintenance. The PSG is responsible for individual training. He advises the platoon leader on appointments, promotions and reductions, assignments, and discipline of NCOs and enlisted soldiers in the platoon. He is a tactical expert in platoon operations to include maneuver of the platoon and employment of all weapons. The platoon sergeant--

- When directed, controls the mounted element when the platoon leader dismounts, or dismounts with the platoon when the platoon is conducting ground operations independent of their organic vehicles or when it is necessary to command and control the platoon controls the platoon when necessary (METT-TC dependent).
- Serves as VC and section leader when the platoon is mounted.

- Receives squad leaders' administrative, logistical, and maintenance reports and requests for rations, water, fuel, and ammunition. Coordinates with the company's first sergeant or executive officer (XO) to request resupply.
- Directs the platoon medic and platoon aid and litter teams in moving casualties during mounted or dismounted operations.
- Maintains platoon strength information, consolidates and forwards the platoon's casualty reports, and receives and orients replacements.
- Monitors the morale, discipline, and health of platoon members.
- Takes charge of task-organized elements in the platoon during tactical operations. This can include, but is not limited to, quartering parties, support elements in raids or attacks, and security patrols.
- Ensures ammunition and supplies are properly and evenly distributed after consolidation on the objective and during reorganization.
- Controls digital reports while the platoon is in contact to allow the platoon leader to maneuver the squads.
- Ensures the platoon leader is updated on appropriate reports and forwards those needed by higher headquarters.
- Collects, prepares, and forwards logistical status updates and requests to the company headquarters.
- As the leader of Section B, keeps his crew and wingman informed and directs fire and maneuver of his section.
- Ensures maintenance of all equipment.
- Ensures precombat inspections are conducted.

c. **Rifle Squad Leader.** The rifle squad leader is responsible for all that the squad does or fails to do. He is a tactical leader and leads by example. The rifle squad leader--

- Controls the maneuver of his squad and its rate and distribution of fire. He controls two fire teams in the offense; selects each fighting position in the defense; and gives the proper commands and signals to commence, cease, and shift fires.
- Briefs operations orders to the squad.
- Trains his squad on individual and collective tasks required to sustain combat effectiveness.
- Manages the logistical and administrative needs of his squad. Requests and issues ammunition, water, rations, and special equipment.
- Maintains accountability of soldiers and equipment.
- Completes casualty feeder reports and reviews casualty reports completed by squad members.
- Directs maintenance of squad weapons and equipment.
- Inspects the condition of soldiers' weapons, clothing, and equipment.
- Ensures material and supplies are distributed to the soldiers in the squad.
- Keeps the platoon leader and platoon sergeant informed of squad supply status and squad requirements.
- Ensures supplies and equipment are internally cross-leveled within the squad.
- Assists the VC in maintaining the ICV.

d. **Weapons Squad Leader.** The weapons squad leader--

- Controls the maneuver of his squad and its rate and distribution of fire. He controls the two machine gun teams in the offense; selects each fighting position in the defense; and gives the proper commands and signals to commence, cease, and shift fires.
- Coordinates directly with the platoon leader for base of fire effects and plans accordingly.
- As the senior squad leader, becomes the alternate platoon sergeant on the ground if the platoon sergeant does not dismount.
- Briefs operations orders to the squad.
- Trains his squad on individual and collective tasks required to sustain combat effectiveness.
- Manages the logistical and administrative needs of his squad. Requests and issues ammunition, water, rations, and special equipment.
- Maintains accountability of soldiers and equipment.
- Completes casualty feeder reports and reviews casualty reports completed by squad members.
- Directs maintenance of squad weapons and equipment.
- Inspects the condition of soldiers' weapons, clothing, and equipment.
- Ensures material and supplies are distributed to the soldiers in the squad.
- Keeps the platoon leader and platoon sergeant informed on squad supply status and squad requirements.
- Ensures supplies and equipment are internally cross-leveled within the squad.
- Assists the VC in maintaining the ICV.

e. **Team Leader.** Two fire team leaders are in each squad and are usually associated with a specific ICV. They lead by example and control the movement and fires of the fire team. They assist the squad leader in tactical control of the squad and in training team members on individual and collective tasks and battle drills. Team leaders provide the necessary local security and maintenance support for the ICV and are responsible for the welfare of their teams. The team leader sends digital SITREPs as requested by the squad leader or as his team makes contact. Using OTN equipment, he controls fire and distribution for his team by designating and marking targets.

f. **Vehicle Commander.** The VC remains mounted and is responsible for commanding the vehicle in relation to the section and platoon. He acquires targets, issues fire commands, lays the gun for deflection, and controls vehicle fires. The VC is primarily responsible for the overall maintenance of the ICV weapon systems and the automotive portion of the vehicle. He is responsible for the weapons training and welfare of the crew. He sends digital SITREPs as requested or when the vehicle makes contact. He navigates, assisted by the precision navigation system, and ensures his vehicle maintains position in platoon formations.

g. **Vehicle Driver.** The driver drives the vehicle under the VC's control. He follows terrain-driving procedures and tries to select hull-down positions. He also aids in detecting targets and observing rounds fired. He assists in navigation by monitoring odometer readings and observing terrain. The driver is primarily responsible for operator maintenance of vehicle automotive systems.

h. **Antiarmor Specialist.** Although normally equipped with an M4 within one of the fire teams of a rifle squad, the squad antiarmor specialist is capable of defeating heavy armor in any tactical environment. The squad antiarmor specialist is equipped with the Javelin AT missile system. This system provides the squad, platoon, and company with an extremely lethal, fire-and-forget, man-portable, top-attack antiarmor capability to defeat enemy main battle tanks during day, night, and adverse weather conditions at ranges up to 2,000 meters. The command launch unit (CLU) for the Javelin missile is transported in each squad ICV. If required, the squad antiarmor specialist destroys enemy armor threats that may impede the squad and platoon's progress.

i. **Grenadier.** The grenadier is equipped with an M203 weapon system consisting of an M16 rifle and an attached 40-mm grenade launcher. The M203 allows him to fire high explosive rounds to suppress and destroy enemy infantry and lightly armored vehicles. He also can employ smoke to screen and cover his squad's movement, fire, and maneuver. During night and adverse weather conditions, the grenadier also may employ illumination rounds to increase his squad's visibility and mark enemy or friendly positions. The grenadier provides the fire team with an indirect fire capability out to 350 meters.

j. **Automatic Rifleman.** The automatic rifleman's primary weapon is the M249 squad automatic weapon (SAW). Each infantry squad has two automatic weapons. The M249 provides the squad with a high volume of sustained long-range suppressive and lethal fires far beyond the range of the M16/M4 rifle. The automatic rifleman employs the SAW to suppress enemy infantry and bunkers, destroy enemy automatic rifle and antitank teams, and enable maneuver of other teams and squads. (See Appendix B for more information on the employment of the M249 SAW.)

k. **Designated Marksman.** The designated marksman acts as a member of the squad under the direction of the squad leader or as designated by the platoon leader. Although normally functioning as a rifleman within one of the fire teams in a rifle squad, the designated marksman is armed with a modified M4, 5.56-mm rifle. He is employed at the direction of the squad leader or reorganized with the other squads' designated marksmen into a platoon sniper section. He is trained to eliminate high-payoff enemy personnel targets (such as enemy automatic rifle teams, antitank teams, and snipers) with precision fires.

l. **Trauma Specialist/Platoon Medic.** The rifle platoon trauma specialist/medic is attached from the medical platoon in the infantry battalion's headquarters company. As a member of the company medical team, he ensures that platoon members are physically capable of conducting tactical operations. The platoon medic assists the platoon leader with planning and executing platoon medical training and monitors the health and hygiene of the platoon personnel. During tactical operations, the platoon medic treats platoon casualties and assists with their evacuation. The platoon medic--

- Treats casualties and assists the aid and litter teams in casualty evacuation under the control of the platoon sergeant.
- Advises the platoon leader and platoon sergeant in field hygiene matters and personally checks the health and physical condition of platoon members.
- Requests Class VIII (medical) supplies through the platoon sergeant.
- Provides training and guidance to combat lifesavers.
- Carries out other tasks assigned by the platoon leader and platoon sergeant.

Section II. COMBAT POWER AND CONSIDERATIONS FOR EMPLOYMENT

This section discusses the elements of combat power and the considerations for employing the infantry platoon and squad.

1-5. COMBAT POWER

The doctrine that guides infantry forces is based on the elements of combat power: maneuver, firepower, protection, leadership, and information.

a. **Maneuver.** Maneuver is the employment of forces on the battlefield through movement in combination with fire, or fire potential, to achieve a position of advantage with respect to the enemy in order to accomplish the mission. Infantry forces move to gain a position of advantage over the enemy and to hold that advantage. They maneuver to attack enemy flanks, rear areas, logistics points, and command posts. In the defense, they maneuver to counterattack a flank of the enemy attack. Maneuver, properly supported by fires, allows the infantry to close with and destroy the enemy through massing of the appropriate combat power at the decisive point.

b. **Firepower.** Firepower is the amount of fire a position, unit, or weapons system can deliver. Firepower destroys or suppresses the enemy in his positions, deceives the enemy, and supports maneuver. Without effective supporting fires, the infantry cannot maneuver. Before attempting to maneuver, units must establish a base of fire.

(1) A base of fire is fire placed on an enemy force or position to reduce or eliminate the enemy's ability to interfere with friendly maneuver. A single weapon or group of weapon systems may provide a base of fire, but a base of fire generated by the weapon squad for the desired effect for the length of time necessary is most effective.

(2) Leaders must know how to control, mass, and combine fire with maneuver. They must identify the most critical targets quickly, direct fires onto them, and ensure the volume of fires is sufficient to keep the enemy from returning fire effectively and to keep the platoon from expending ammunition needlessly.

c. **Protection.** Protection is the preservation of the fighting potential of a force so it can be applied with maximum force at the decisive time and place. Platoons must never permit the enemy to acquire an unexpected advantage. Platoons and squads take active and passive measures to protect themselves from surprise, observation, detection, interference, espionage, sabotage, or annoyance. Protection includes two basic considerations: care of the soldier and his equipment and actions to counter enemy combat power.

(1) The first involves sustainment techniques to maintain the platoon and squads as an effective fighting force. It includes keeping soldiers healthy to maintain morale through personal hygiene, physical conditioning, and rest plans. It also includes keeping equipment in good working condition and providing and protecting supplies.

(2) The second involves security, dispersion, cover, camouflage, deception, and suppression of enemy weapons. Infantry units gain protection by digging fighting positions when stationary for any length of time; by skillful use of terrain while moving mounted; by dismounting the infantry to increase protection; and through overwatch, suppressive fires, and obscuration. The infantry always wants to set the time and place of battle. It must protect itself so it can do so with maximum combat power and with the important element of surprise.

d. **Leadership.** Leadership is the most important element of combat power. Military leadership is a process by which a soldier influences others to accomplish a mission. Leaders coordinate the other elements of combat power, and their competent and confident leadership results in effective unit action. The right leadership gives purpose, direction, and motivation in combat. Leaders must know their profession, their soldiers, and the tools of war. Only leaders who embody the warrior ethos can inspire and direct soldiers to do difficult tasks under dangerous and stressful conditions.

e. **Information.** Information enhances leadership and magnifies the effects of maneuver, firepower, and protection at decisive points. Infantry leaders have access to, and an understanding of, the broader tactical situation. This allows leaders to develop plans that better incorporate the elements of combat power during a decisive action. It also allows infantry leaders to make crucial decisions while a mission is ongoing to increase the opportunity for success.

1-6. CONSIDERATIONS FOR EMPLOYMENT

Leaders must consider the following in employing infantry tactics.

a. Squads and platoons fight through enemy contact at the lowest possible level. Upon enemy contact, all soldiers and leaders must take immediate action as well as follow-up actions. Battle drills are standard procedures that assist the platoon in taking immediate action.

b. Squads or platoons in contact must establish effective suppressive fires to gain fire superiority before they can move to the enemy's flank. If the platoon or squad cannot move under its own fires, the leader must request support from higher headquarters. The platoon must gain fire superiority, then move against the flank of the enemy's position. To gain immediate suppression, the vehicles must suppress the enemy, move to a dismount location if caught in the open, dismount squads, then build a base of fire with the weapons squad and rifle squads. The platoon leader determines if the platoon should assault, fix, fix and bypass, or disengage.

c. Squads and platoons fight as organized and trained. The platoon fights by elements, dismounted and mounted. The dismounted element consists of the infantry squads and a weapons squad. The infantry squad fights by fire teams and buddy teams supported by the weapons squad. The mounted element fights by sections (wingman concept). The platoon leader and his wingman are Section A, and the platoon sergeant and his wingman are Section B. Sections, fire teams, squads, and buddy teams retain their integrity whether dismounted or mounted.

CHAPTER 2

COMMAND, CONTROL, AND THE TROOP-LEADING PROCEDURES

The purpose of command and control is to implement the commander's will in pursuit of the unit's objective. Command and control is both a system and a process; the essential component for both is leadership.

This chapter provides techniques and procedures used by infantry platoons, squads, and sections for command and control and communications. It describes troop-leading procedures (TLP), communications in combat, and operation orders. Technical enhancements in an infantry carrier vehicle-equipped platoon provide leaders with several significant improvements in command and control. Even with the technical enhancements, the platoon and squad leaders must use proven techniques of mission tactics and leadership because the vehicles will not always be in close proximity or in a position to assist in communication.

Section I. COMMAND AND CONTROL

Command and control (C2) refers to the process of directing, coordinating, and controlling a unit to accomplish a mission. Command and control implement the commander's will in pursuit of the unit's objective. The two components of command and control are the *commander* and the *command and control system.* At platoon level, the *commander* is the platoon leader; the *command and control system* consists of the personnel, information management, procedures, and equipment the platoon leader uses to carry out the operational process (plan, prepare, execute, and assess) within his platoon.

2-1. LEADERSHIP

Leadership means influencing people by providing purpose, direction, and motivation to accomplish a mission (Figure 2-1, page 2-2). Leadership is the most vital component of command and control.

a. **Purpose.** Purpose gives soldiers a *reason* to accomplish the mission.

b. **Direction.** Direction gives them the *means* to accomplish the mission.

c. **Motivation.** Motivation gives them the *will* to accomplish the mission.

d. **Communications.** To command or control, leaders *must* communicate with their subordinates. Digital radios represent a significant technical improvement over previous systems. Leaders and soldiers at every level must ensure they know digital radio procedures and how to link digital systems. Soldiers quickly lose these skills, so leaders must constantly work to maintain them through sustainment training.

Leadership: Influencing people to accomplish a mission by providing—	**PURPOSE**	The *reason* to accomplish the mission.
	DIRECTION	The *means* to accomplish the mission.
	MOTIVATION	The *will* to accomplish the mission.

Figure 2-1. Elements of leadership.

2-2. MISSION-ORIENTED COMMAND AND CONTROL

The mission-oriented command and control method of directing military operations both encourages and helps subordinates to act within the intent and concept of both the battalion and company commanders. Mission-oriented C2 requires that subordinate elements clearly understand the purpose and commander's intent (two levels up). This allows them the freedom to respond, with disciplined initiative, to the changing situation without further guidance. With mission-oriented C2, the platoon leader must--

a. **Expect Uncertainty.** The platoon leader must understand the impact of and the manner in which capability impacts on the environment of combat. Dynamic battle conditions, an (obviously) uncooperative enemy, and the chaos--the noise and confusion--of battle challenge the platoon leader's ability to know what is happening in his immediate area of operations (AO). Through the collection of data and information, he must try to understand and envision the evolving battle beyond his personal knowledge and senses. Using all of his personal, technical, and tactical resources helps him to develop the situation and reduce the "fog of battle." Information alone cannot develop the entire situation. The situation the leader anticipates during the planning phase many times will change, which requires flexible, dynamic leadership during the execution of current operations.

b. **Reduce Leader Intervention.** Control stifles initiative. When soldiers expect the platoon or squad leader to make every decision or initiate every action, they may become reluctant to act. To counter this tendency, the platoon leader must plan and direct operations in a manner that requires a minimum of intervention. The platoon leader must operate on the principle that trained subordinates with a clear understanding of the mission will accomplish the task.

c. **Optimize Planning Time for Subordinates.** The platoon leader must ensure that the timelines he develops for mission planning and preparation provide adequate troop-leading time for the subordinate elements.

d. **Allow Maximum Freedom of Action for Subordinates.** Given the expected battlefield conditions, leaders at every level must avoid unnecessary limits on their soldiers' freedom of action. The leader at the decisive point must have the knowledge, training, and freedom to make the correct choice in support of both the battalion and company commanders' intent. This concept must be emphasized at every opportunity and at every level of leadership. Soldiers win battles. Their leaders can only place them in a position where they can seize the opportunity to do so.

e. **Encourage Cross Talk.** Squad and team leaders sometimes need no guidance from the platoon leader in order to address a change in the situation. In some instances, because of their position on the battlefield, two or more subordinates working together may have on-site information that enhances the platoon leader's understanding of the situation, thus providing the clearest view of what is happening. This becomes critical to

the platoon leader as he develops the tactical solution. This type of problem solving involving direct coordination between subordinate elements is critical to mission-oriented C2.

f. **Lead Well Forward.** The platoon leader positions himself where he can best employ his platoon and make critical decisions to influence the outcome of the fight. He normally chooses a position with the main effort. This way, he can control his elements and, at the same time, support or draw resources from the main effort as needed. From his far forward position, he can use all of the available technology and personal resources to "see" the battlefield. In addition to visual observation, intelligence resources also include radio reports and, if available, information provided via the FBCB2 system. The platoon sergeant is positioned where he can best accomplish his tasks and be able to assume command of the platoon rapidly, if needed.

g. **Maintain the Common Operational Picture.** The commander structures the battlefield based on his intent and on the factors of METT-TC. How he does this affects the platoon leader's mission planning and his ability to assess the situation and make tactical decisions. The framework of the battlefield can vary from one extreme to the other and with many variations. At one extreme, the battlefield could have obvious front and rear boundaries and closely tied adjacent units. At the other, it could consist of a dispersed, decentralized structure with few secure areas and unit boundaries and no definable front or rear boundary. Maintaining the COP becomes more difficult as the battlefield loses structure. Modern, highly mobile operations involving small forces lend themselves to a less rigid framework. To "see" the battlefield accurately, the platoon leader must know the friendly situation one level higher. Whenever possible, he shares what he knows with the section and squad leaders. The platoon leader also must know the terrain and weather and the enemy situation. He must picture enemy and friendly elements through time as well as picture how the terrain will affect their actions. Analyzing the situation (gaining and understanding the situation)--

- Includes having an understanding of relevant terrain, an understanding of the relationship between friendly and enemy forces, and the ability to correlate battlefield events as they develop.
- Helps leaders form logical conclusions, make decisions that anticipate future events and information, and, if time is short, conduct TLP as fast as possible.
- Provides a basis for platoon leaders, platoon sergeants, section leaders, and squad leaders to make sound, quick, tactical decisions.
- Reduces fratricide.

NOTE: The platoon leader must understand the situation and commander's intent two levels higher than his own. However, he must know the real-time battlefield situation in detail for his immediate higher level (company).

Section II. PLANS AND ORDERS

Plans are the basis for any mission. To develop his plan (concept of the operation), the platoon leader summarizes how best to accomplish his mission within the scope of the commander's intent two levels up. The platoon leader uses TLP to turn the concept into a fully developed plan and to prepare a concise, accurate OPORD. He assigns additional

tasks (and outlines their purpose) for subordinate elements, allocates available resources, and establishes priorities to make the concept work.

The following discussion covers important aspects of orders development and serves as an introduction to the discussion of the troop-leading procedures. This section focuses on the mission statement and the commander's intent, which provide the doctrinal foundation for the OPORD. It also includes a basic discussion of the three types of orders (warning orders [WARNOs], OPORDs, and FRAGOs) used by the platoon leader. The platoon leader and his subordinates must have a thorough understanding of the building blocks for everything else that he does.

2-3. MISSION STATEMENT

The platoon leader uses the mission statement to summarize the upcoming operation. This brief paragraph (sometimes a single sentence) describes the type of operation, the unit's tactical task and purpose, the actions to be taken, and the reasons for these actions. It is written based on the five "Ws:" who (unit), what (tasks), when (date-time group), where (grid location or geographical reference for the area of operations or objective), and why (purpose). The platoon leader must ensure that the mission is thoroughly understood by all leaders and soldiers two echelons down. The following considerations apply in development of the mission statement:

a. **Operations.** Operations are groupings of related activities in four broad categories: offense, defense, stability, and support.

b. **Tasks.** Tactical tasks are specific activities performed by the unit while it is conducting a form of tactical operation or a choice of maneuver. (The title of each task can also be used as an action verb in the unit's mission statement to describe actions during the operation.) Tasks should be definable, attainable, and measurable. Tactical tasks that require specific tactics, techniques, and procedures (TTP) for the platoon are covered in detail throughout this manual. Figure 2-2 gives examples of tactical tasks the platoon and its subordinate elements may be called upon to conduct. Refer to FM 1-02 (FM 101-5-1) for definition of the tactical task listed in Figure 2-2.

Destroy
Disrupt
Fix
Suppress
Block
Support by fire
Attack by fire
Interdict
Canalize
Seize
Secure
Clear
Isolate
Breach
Follow and support
Follow and assume
Retain
Reduce

Figure 2-2. Examples of tactical tasks.

c. **Purpose.** A simple, clearly stated purpose tells subordinates why the platoon is conducting the mission and how the platoon will operate with or provide support for other units.

d. **Placement in OPORD.** The platoon leader has several options as to where in the OPORD he outlines his subordinates' tasks and purpose. His main concern is that placement of the mission statement should assist subordinate leaders in understanding the task and purpose and each of the five "W" elements exactly. Figure 2-3 shows an example of a mission statement the platoon leader might include in his order:

EXAMPLE:

3rd Platoon (Who performs the task?) attacks to seize (What is the task?) the bridge at (NX330159) (Where do they perform the task?) at 040600Z FEB 01 (When do they perform the task) to pass the 1st Platoon (company main effort) on to OBJ BOB (Why must they perform the task?).

Or, broken out into the five W format:

Who	3rd Platoon.
What	Seize.
Where	The bridge at (NX330159).
When	At 040600Z FEB 01.
Why	To pass the 1st Platoon (company main effort) on to OBJ BOB.

Figure 2-3. Example mission statement.

2-4. COMBAT ORDERS

Combat orders are the means by which the platoon leader receives and transmits information from the earliest notification that an operation will occur through the final steps of execution. Warning orders, operations orders, and fragmentary orders are absolutely critical to mission success. In a tactical situation, the platoon leader and subordinate leaders work with combat orders on a daily basis, and they must have precise knowledge of the correct format for each type of order. At the same time, they must ensure that every soldier in the platoon understands how to receive and respond to the various types of orders. The skills associated with orders are highly perishable; therefore, the platoon leader must take every opportunity to train the platoon in the use of combat orders with realistic practice.

a. **Warning Order.** Platoon leaders alert their platoons by using a WARNO during the planning for an operation. Warning orders also initiate the platoon leader's most valuable time management tool--the parallel planning process. The platoon leader may issue a series of warning orders to his subordinate leaders to help them prepare for new missions. The directions and guidelines in the WARNO allow subordinates to begin their own planning and preparation activities.

(1) The content of warning orders is based on two major variables: information available about the upcoming operation and special instructions. The information usually comes from the company commander. The platoon leader wants his subordinates to take appropriate action, so he normally issues his warning orders either as he receives additional orders from the company or as he completes his own analysis of the situation.

(2) In addition to alerting the unit to the upcoming operation, warning orders allow the platoon leader to issue tactical information incrementally and, ultimately, to shorten the length of the actual OPORD. Warning orders do not have a specific format, but one technique to follow is the five-paragraph OPORD format. Table 2-1 shows an example of how the platoon leader might use warning orders to alert the platoon and provide initial planning guidance.

PLATOON LEADER'S ACTION	POSSIBLE CONTENT OF WARNING ORDER	PLATOON LEADER'S PURPOSE
Receive the company warning order	Warning order #1 covers: Security plan. Movement plan. Tentative timeline. Standard drills to be rehearsed.	Prepare squads and vehicles for movement to the tactical assembly area. Obtain map sheets.
Conduct METT-TC analysis	Warning order #2 covers: Friendly situation. Enemy situation. Terrain analysis. Platoon mission.	Initiate squad-level mission analysis. Initiate generic rehearsals (drill- and task-related). Prepare for combat.
Develop a plan	Warning order #3 covers: Concept of the operation. Concept of fires. Subordinate unit tasks and purposes. Updated graphics.	Identify platoon-level reconnaissance requirements. Direct leader's reconnaissance. Prepare for combat.

Table 2-1. Example of multiple warning orders.

b. **Operations Order.** The OPORD is the five-paragraph directive issued by a leader to subordinates for the purpose of effecting the coordinated execution of an operation. When time and information are available, the platoon leader will normally issue a complete OPORD as part of his troop-leading procedures; however, after issuing a series of WARNOs, he does not need to repeat information previously covered. He can simply review previously issued information or brief the changes or earlier omissions. He then will have more time to concentrate on visualizing his concept of the fight for his subordinates. As noted in his warning orders, the platoon leader also may issue an execution matrix either to supplement the OPORD or as a tool to aid in the execution of the mission; however, the matrix order technique does not replace a five-paragraph OPORD.

c. **Fragmentary Order.** A FRAGO is a brief oral or written order. A written FRAGO can follow the five-paragraph OPORD structure; however, it includes only the information required for subordinates to accomplish their mission. To enhance understanding of oral FRAGOs, digitally equipped units can quickly develop hasty graphics and transmit digital overlays. The platoon leader uses a FRAGO to--

- Communicate changes in the enemy or friendly situation.
- Task subordinate elements based on changes in the situation.
- Implement timely changes to existing orders.
- Provide pertinent extracts from more detailed orders.

- Provide interim instructions until he can develop a detailed order.
- Specify instructions for subordinates who do not need a complete order.

Section III. TROOP-LEADING PROCEDURES

The troop-leading procedures begin when the platoon leader receives the first indication of an upcoming mission; they continue throughout the operational process (plan, prepare, execute, and assess). The TLP comprise a sequence of actions (Figure 2-4) that help platoon leaders use available time effectively and efficiently to issue orders and execute tactical operations. TLPs are not a hard and fast set of rules. They are a guide that must be applied consistent with the situation and the experience of the platoon leader and his subordinate leaders. The tasks involved in some actions (such as initiate movement, issue the WARNO, and conduct reconnaissance) may recur several times during the process. The last action (activities associated with supervising and refining the plan) occurs continuously throughout TLP. The following information concerning the TLP assumes that the platoon leader will plan in a time-constrained environment. As such, the suggested techniques are oriented to help a platoon leader quickly develop and issue a combat order.

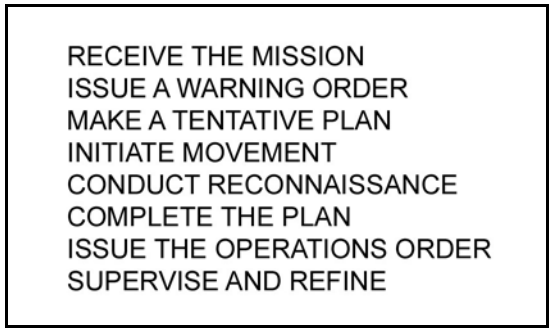


Figure 2-4. Troop-leading procedures.

2-5. RECEIVE THE MISSION

This step begins with the receipt of an initial WARNO from the company. It may begin when the platoon leader receives the commander's OPORD, or it may result from a change in the overall situation. Receipt of mission initiates the planning and preparation process so that the platoon leader can prepare an initial WARNO as quickly as possible. At this stage of the TLP, mission analysis should focus on determining the unit's mission and the amount of available time. For the platoon leader, mission analysis is essentially the analysis of the factors of METT-TC, but he must not become involved in a detailed METT-TC analysis. This will occur after issuing the initial WARNO.

2-6. ISSUE A WARNING ORDER

After the platoon leader determines the platoon's mission and gauges the time available for planning, preparation, and execution, he immediately issues an oral WARNO to his subordinates. In addition to telling his subordinates of the platoon's new mission, the WARNO also gives them the platoon leader's planning timeline. The platoon leader relays all other instructions or information that he thinks will assist the platoon in preparing for the new mission. Such information includes information about the enemy,

the nature of the overall plan, and specific instructions for preparation. Most importantly, by issuing the initial WARNO as quickly as possible, the platoon leader enables his subordinates to begin their own planning and preparation while he begins to develop the platoon operation order. This is called parallel planning.

2-7. MAKE A TENTATIVE PLAN

After receiving the company OPORD (or FRAGO), the platoon leader develops a tentative plan. The process of developing this plan in a time-constrained environment usually has four steps: mission analysis, course of action development, course of action analysis, and course of action selection. The platoon leader relies heavily on the company commander's METT-TC analysis. This allows the platoon leader to save time by focusing his analysis effort on areas that effect his plan. Typically, a platoon leader will develop one course of action (COA). If more time is available, he may develop more than one. If he develops more than one COA, he will need to compare these COAs and select the best one.

a. **Mission Analysis.** This is a continuous process during the course of the operation. It requires the platoon leader to analyze all the factors of METT-TC in as much depth as time and quality of information will allow. The factors of METT-TC are not always analyzed sequentially. How and when the platoon leader analyzes each factor depends on when information is made available to him. One technique for the analysis is based on the sequence of products that the company commander receives and produces: *mission*, *terrain and weather*, *enemy*, *troops*, *time,* and *civil considerations*. The platoon leader can streamline his analysis effort by using his digital capability to access products, produced at the battalion or brigade, to fill in gaps he identifies. As a result of this analysis, the platoon leader must develop significant conclusions about how each element will affect mission accomplishment.

(1) ***Analysis of Mission.*** Leaders at every echelon must have a clear understanding of the mission, intent, and concept of the operation of the commanders one and two levels higher. Without this understanding, it would be difficult to exercise disciplined initiative. One technique to quickly understand the operation is to draw a simple sketch of the battalion and company's concepts of the operation (if not provided by the commander). The platoon leader now can understand how his platoon is nested into the overall plan, and can capture this understanding in his restated mission statement. The platoon leader will write a restated mission statement using his analyses of these areas: the battalion mission, intent, and concept; the company mission, intent, and concept; identification of specified, implied, and essential tasks; identification of risks; and any constraints.

(a) *Battalion Mission, Intent, and Concept.* The platoon leader must understand the battalion commander's concept of the operation. He identifies the battalion's task and purpose, and how his company is contributing to the battalion's fight. The platoon leader also must understand the battalion commander's intent found in the friendly forces paragraph (paragraph 1b) of the company order.

(b) *Company Mission, Intent, and Concept.* The platoon leader must understand the company's concept of the operation. He identifies the company's task and purpose, as well as his contribution to the company's fight. The platoon leader must clearly understand the commander's intent from the order (paragraphs 2 and 3a). Additionally,

the platoon leader identifies the task, purpose, and disposition for all adjacent maneuver elements under company control.

(c) *Platoon Mission.* The platoon leader finds his platoon's mission in the company's concept of the operation paragraph. The purpose of the main effort platoon usually matches the purpose of the company. Similarly, supporting effort platoons' purposes must relate directly to the purpose of the main effort platoon. The platoon leader must understand how his purpose relates to the other platoons in the company. He determines the platoon's essential tactical task to successfully accomplish his given purpose. Finally, he must understand why the commander gave his platoon a particular tactical task and how it fits into the company's concept of the operation.

(d) *Constraints.* Constraints are restrictions placed on the platoon leader by the commander to dictate action or inaction, thus restricting the freedom of action the platoon leader has for planning by stating the things that must or must not be done. The platoon leader identifies all of the constraints the commander places on the unit's ability to execute its mission. The two types of constraints are: requirements for action (for example, maintain a squad in reserve) and prohibitions of action (for example, do not cross PL BULL until authorized).

(e) *Identification of Tasks.* The platoon leader must identify and understand the tasks required to accomplish the mission. There are three types of tasks: specified, implied and essential.

- Specified Tasks. These are tasks specifically assigned to a platoon by the commander. Paragraphs 2 and 3 from the company OPORD state specified tasks. Specified tasks may also be found in annexes and overlays.
- Implied Tasks. These are tasks that must be performed to accomplish a specified task, but which are not stated in the OPORD. Implied tasks are derived from a detailed analysis of the OPORD, the enemy situation, the courses of action, and the terrain. Analysis of the platoon's current location in relation to future areas of operation as well as the doctrinal requirements for each specified task also might provide implied tasks. SOP tasks are not considered implied tasks.
- Essential Tasks. An essential task is one that must be executed to accomplish the mission derived from a review of the specified and implied tasks.

(f) *Identification of Risks.* Risk is the chance of injury or death for individuals and damage to or loss of vehicles and equipment. Risk, or the potential for risk, is always present in every combat and training situation the platoon faces. Risk management must take place at all levels of the chain of command during every operation; it is an integral part of tactical planning. The platoon leader, his NCOs, and all other platoon soldiers must know how to use risk management, coupled with fratricide avoidance measures, to ensure that the mission is executed in the safest possible environment within mission constraints. (Refer to Appendix C for a detailed discussion of risk management and Appendix D for a discussion of fratricide avoidance.)

(g) *Restated Platoon Mission Statement.* The platoon leader restates his mission statement using the five W's: who, what, when, where, and why. The "who" is the platoon. The "what" is the type of operation and the platoon's essential tactical task. The "when" is given in the OPORD. The "where" is the objective or location taken from the

OPORD. The "why" is the purpose for the platoon's essential tactical task taken from the commander's concept of the operations paragraph.

(2) ***Analysis of Terrain and Weather.*** The platoon leader must conduct a detailed analysis of the terrain to determine how it will uniquely affect his unit and the enemy he anticipates fighting. The platoon leader must gain an appreciation of the terrain before attempting to develop either enemy or friendly COA. He must exceed merely making observations (for example, this is high ground, this is an avenue of approach); he must arrive at significant conclusions about how the ground will affect the enemy as well as his unit. Because of limited planning time, the platoon leader normally prioritizes his terrain analysis. For example, in the conduct of an assault, his priority may be the area around the objective followed by the platoon's specific axis leading to the objective.

(a) Terrain mobility is classified in one of three categories.

- Unrestricted. This is terrain free of any movement restrictions; no actions are required to enhance mobility. For mechanized forces, unrestricted terrain is typically flat or moderately sloped, with scattered or widely spaced obstacles such as trees or rocks. Unrestricted terrain generally allows wide maneuver and offers unlimited travel over well-developed road networks. Unrestricted terrain is an advantage in situations requiring rapid movement.
- Restricted. This terrain hinders movement to some degree, and units may need to detour frequently. Restricted terrain may cause difficulty in maintaining optimal speed, moving in some types of combat formations, or transitioning from one formation to another. This terrain typically encompasses moderate to steep slopes or moderate to dense spacing of obstacles such as trees, rocks, or buildings. The terrain may not require additional assets or time to traverse, but it may hinder movement to some degree due to increased security requirements. In instances when security is the paramount concern, both friendly and enemy elements may move in more restricted terrain that may provide more cover and concealment.
- Severely Restricted. This terrain severely hinders or slows movement in combat formations unless some effort is made to enhance mobility. It may require a commitment of engineer forces to improve mobility or a deviation from doctrinal tactics, such as using a column rather than a wedge formation or moving at speeds much slower than otherwise preferred. Severely restricted terrain includes any terrain that requires equipment not organic to the unit to cross (for example, a large body of water and slopes requiring mountaineering equipment).

(b) The military aspects of terrain (OAKOC), Figure 2-5, are used to analyze the ground. The sequence used to analyze the military aspects of terrain can vary. The platoon leader may prefer to determine *Obstacles* first, *Avenues of Approach* second, *Key Terrain* third, *Observation and Fields of Fire* fourth, and *Cover and Concealment* last. For each aspect of terrain, the platoon leader determines its effect on both friendly and enemy forces. These effects translate directly into conclusions that can be applied to either friendly or enemy courses of action.

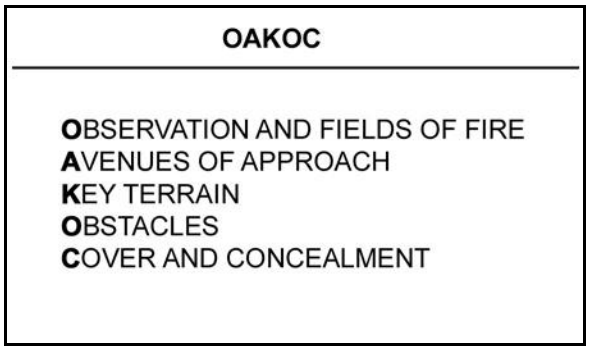


Figure 2-5. Military aspects of terrain.

- Obstacles. The platoon leader first identifies existing and reinforcing obstacles in his AO that limit his mobility with regards to the mission. Existing obstacles are typically natural terrain features present on the battlefield. These may include ravines, gaps or ditches over 3 meters wide, tree stumps and large rocks over 18 inches high, forests with trees 8 inches or greater in diameter and with less than 4 meters between tree, and man-made obstacles such as towns or cities. Reinforcing obstacles are typically man-made obstacles that augment existing obstacles. These may include minefields, antitank ditches, road craters, abatis and log cribs, wire obstacles, and infantry strongpoints. Figure 2-6, page 2-12, lists several offensive and defensive considerations the platoon leader can include in his analysis of obstacles and restricted terrain.

OFFENSIVE CONSIDERATIONS

- How is the enemy using obstacles and restricted terrain features?
- Can I use the ICVs to support dismounted movement?
- What is the composition of the enemy's reinforcing obstacles?
- How will obstacles and terrain affect my movement and or maneuver?
- Where will I need to dismount and lose digital connectivity?
- Where will I need to dismount to avoid enemy direct or indirect fire.
- If necessary, how can the company avoid such features?
- How do we detect and, if desired, bypass the obstacles?
- Where has the enemy positioned weapons to cover the obstacles, and what type of weapons is he using?
- If I must support or execute a breach, where is the expected breach site?

DEFENSIVE CONSIDERATIONS

- Where do I want to kill the enemy? Where do I want him to go?
- How will existing obstacles and restricted terrain affect the enemy?
- How can I use these features to force the enemy into my engagement area, deny him an avenue, or disrupt his movement?

Figure 2-6. Considerations in obstacle and terrain analysis.

- Avenues of Approach. An avenue of approach is an air or ground route of an attacking force leading to its objective or key terrain. For each avenue of approach, the platoon leader determines the type (mounted, dismounted, air, or subterranean), size, and formation and speed of the largest unit that can travel along it; the commander may give him this information. Mounted forces may move on avenues along unrestricted or restricted terrain (or both). Dismounted avenues and avenues used by reconnaissance elements normally include terrain that is restricted and, at times, severely restricted to mounted forces. The terrain analysis also must identify avenues of approach for both friendly and enemy units. Figure 2-7 lists several considerations for avenue of approach analysis.

OFFENSIVE CONSIDERATIONS

- How can I use each avenue of approach to support my movement and or maneuver?
- How will each avenue support movement techniques, formations, and (once we make enemy contact) maneuver?
- Will variations in trafficability or lane width force changes in formations or movement techniques or require defile drills?
- What are the advantages and/or disadvantages of each avenue?
- What are the enemy's likely counterattack routes?
- Do lateral routes exist that we can use to shift to other axes or that the enemy can use to threaten our flanks?

DEFENSIVE CONSIDERATIONS

- What are all likely enemy avenues into my sector?
- How can the enemy use each avenue of approach?
- Do lateral routes exist that the enemy can use to threaten our flanks?
- What avenues would support a friendly counterattack?

Figure 2-7. Considerations in avenue of approach analysis.

- Key Terrain. Key terrain affords a marked advantage to the combatant who seizes, retains, or controls it. The platoon leader identifies key terrain starting at the objective or main battle area and working backwards to his current position. It is a conclusion rather than an observation. The platoon leader must assess what terrain is key to accomplishing his mission. Key terrain may allow the platoon leader to apply direct fire or achieve observation of the objective (or avenue of approach).
  - An example of key terrain for a platoon could be a tree line on a hillside that provides overwatch of a high-speed avenue of approach. Controlling this tree line may be critical in passing follow-on forces (main effort) to their objective. High ground is not necessarily key terrain. A prominent hilltop that overlooks an avenue of approach and offers clear observation and fields of fire, if it is easily bypassed, is not key terrain.
  - Although unlikely, the platoon leader may identify decisive terrain--key terrain that holds such importance that the seizure, retention, and control of it will be **necessary** for mission accomplishment and may decide the outcome of the battle. A technique for evaluating key terrain is to analyze the following two military aspects of terrain (observation and fields of fire, and cover and concealment) to each piece of key terrain. Figure 2-8, page 2-14, depicts operational considerations to use when analyzing key terrain.

OPERATIONAL CONSIDERATIONS

- What terrain is key to the company and to the battalion and why?
- Is the enemy controlling this key terrain?
- What terrain is key to the enemy and why?
- How do I gain or maintain control of key terrain?
- What terrain is key for friendly observation, both for command and control and for calling for fires?

Figure 2-8. Considerations in key terrain analysis.

- Observation and Fields of Fire. The platoon leader analyzes areas surrounding key terrain, objectives, avenues of approach, and obstacles to determine if they provide clear observation and fields of fire for both friendly and enemy forces. He locates inter-visibility (IV) lines (terrain that inhibits observation from one point to another) that have not been identified by the commander and determines where visual contact between the two forces occurs. When analyzing fields of fire, the platoon leader focuses on both friendly and enemy direct fire capabilities. Additionally, he identifies positions that enable artillery observers to call for indirect fires and permit snipers to engage targets. Figure 2-9 provides considerations for analysis of observation and fields of fire. Whenever possible, the platoon leader conducts a ground reconnaissance from both the friendly and enemy perspective.

OFFENSIVE CONSIDERATIONS

- Are clear observation and fields of fire available on or near the objective for enemy observers and weapon systems?
- Where can the enemy concentrate fires?
- Where is he vulnerable?
- Where are possible SBF or ABF positions for friendly forces?
- Where are the natural TRPs?
- Where do I position indirect fire observers?

DEFENSIVE CONSIDERATIONS

- What locations afford clear observation and fields of fire along enemy avenues of approach?
- Where will the enemy set firing lines and or antitank weapons?
- Where will I be unable to mass fires?
- Where is the dead space in my sector? Where am I vulnerable?
- Where are the natural TRPs?
- Where do I position indirect fire observers?

Figure 2-9. Considerations in analysis of observation and fields of fire.

- Cover and Concealment. Cover is protection from the effects of fires. Concealment is protection from observation but not direct fire or indirect fires. Figure 2-10 provides considerations for analysis of cover and concealment. Consideration of these elements leads the platoon leader to identify areas that

can, at best, achieve both facets. The platoon leader looks at the terrain, foliage, structures, and other features on the key terrain, objective, and avenues of approach to identify sites that offer cover and concealment.

OFFENSIVE CONSIDERATIONS

- What axes afford both clear fields of fire and effective cover and concealment?
- Which terrain provides bounding elements with cover and concealment while facilitating lethality?

DEFENSIVE CONSIDERATIONS

- What locations afford effective cover and concealment as well as clear fields of fire?
- How can the enemy use the available cover and concealment?

Figure 2-10. Considerations in analysis of cover and concealment.

(c) There are five military aspects of weather:

- Light data.
- Visibility.
- Temperature
- Precipitation
- Winds.

The platoon leader must go beyond merely making observations; he must arrive at significant conclusions about how the weather will affect his platoon and the enemy. He receives conclusions from the commander and identifies his own critical conclusions about the five military aspects of weather. Most importantly, the platoon leader must apply these conclusions when he develops friendly and enemy COAs.

- Light Data. The platoon leader identifies critical conclusions about beginning morning nautical twilight (BMNT), sunrise (SR), sunset (SS), end of evening nautical twilight (EENT), moonrise (MR), moonset (MS), and percentage of illumination. Some light data considerations are:
  - Will the sun rise behind my attack?
  - How can I take advantage of the limited illumination?
  - How will limited illumination affect friendly and enemy target acquisition?
- Visibility. The platoon leader identifies critical conclusions about visibility factors (such as fog, smog, and humidity) and battlefield obscurants (such as smoke and dust). Some visibility considerations are:
  - Will the current weather favor the use of smoke to obscure during breaching?
  - Will fog affect friendly and enemy target acquisition?
- Temperature. The platoon leader identifies critical conclusions about temperature factors (such as high and low temperatures, and infrared crossover times) and battlefield factors (such as use of smoke or chemicals). Some temperature considerations are:

- — How will temperature (hot or cold) affect the dismounted rate of march for the platoon?
- — How will temperature (hot or cold) affect the soldiers and equipment?
- — Will temperatures favor the use of nonpersistent chemicals?

- Precipitation. The platoon leader identifies critical conclusions about precipitation factors (such as type, amount, and duration). Some precipitation considerations are:
  - — How will precipitation affect mobility?
  - — How can precipitation add to the platoon achieving surprise?
- Winds. The platoon leader identifies critical conclusions about wind factors (such as direction and speed) Some wind considerations are:
  - — Will wind speed cause smoke to dissipate quickly?
  - — Will wind speed and direction favor enemy use of smoke?

(3) ***Analysis of Enemy.*** This step allows the platoon leader to identify the enemy's strength and potential weaknesses or vulnerabilities so that he can exploit them to generate overwhelming combat power in achieving his mission. The platoon leader must understand the assumptions the commander used to portray the enemy's COAs covered in the company's plan. Furthermore, the platoon leader's assumptions about the enemy must be consistent with those of the company commander. To effectively analyze the enemy, the platoon leader must know how the enemy may fight. It is equally important for the platoon leader to understand what is actually known about the enemy as opposed to what is only assumed or templated.

During doctrinal analysis, it is not enough only to know the number and types of vehicles, soldiers, and weapons the enemy has. The platoon leader's analysis must extend down to the individual key weapon system. During stability operations and support operations or small-scale contingency (SSC) operations in an underdeveloped area where little is known about the combatants, it may be difficult to portray or template the enemy doctrinally. In this case, the platoon leader must rely on brigade and battalion analyses funneled through the company commander as well as his own knowledge of recent enemy activities. The platoon leader should consider the following areas as he analyzes the enemy.

(a) *Composition (Order of Battle).* The platoon leader's analysis must determine the number and types of enemy vehicles, soldiers, and equipment that could be used against his platoon. He gets this information from the COP or from paragraph 1a of the company OPORD. His analysis also must examine how the enemy organizes for combat to include the possible use of a reserve.

(b) *Disposition.* From the commander's information, the platoon leader identifies how the enemy that his platoon will fight is arrayed. Much of this information is gained through the COP and a detailed company OPORD.

(c) *Strength.* The platoon leader identifies the strength of the enemy. It is imperative that the platoon leader determines the actual numbers of equipment and personnel that his platoon is expected to fight or that may affect his platoon. Again, much of this information is gained through the COP and a detailed OPORD.

(d) *Capabilities.* Based on the commander's assessment and the enemy's doctrine and current location, the platoon leader must determine what the enemy is capable of doing

against his platoon during the mission. Such an analysis must include the planning ranges for each enemy weapons system that the platoon may encounter.

(e) *Anticipated Enemy Courses of Action.* To identify potential enemy COAs, the platoon leader weighs the result of his initial analysis of terrain and weather against the enemy's composition, capabilities, and doctrinal objectives (through information provided via FBCB2), then develops an enemy SITEMP for his portion of the company plan. The end product is a platoon SITEMP, a visual or graphic depiction of how he believes the enemy will fight under the specific conditions expected on the battlefield. Much of this information will be gained from the commander's analysis and understanding of the current enemy and friendly situation.

- Included in this SITEMP is the range fan of the enemy's weapons and any tactical and protective obstacles, either identified or merely templated. Once the SITEMP has been developed it should be transferred to a large-scale sketch to enable subordinates to see the details of the anticipated enemy COA. After the platoon leader briefs the enemy analysis to his subordinates, he must ensure they understand what is known, what is suspected, and what is merely templated (educated guess). The platoon's SITEMP should depict individual soldier and weapons positions and is a refinement of the commander's SITEMP.
- In conjunction with the SITEMP, the platoon leader considers the factors of METT-TC from the enemy's perspective to develop the details of possible enemy COAs. The following points can assist in this process:
  - Understand the enemy's mission. What will the enemy's likely mission be based on enemy doctrine and knowledge of the situation and the enemy's capabilities? This may be difficult to determine if the enemy has no established order of battle. Enemy analysis must consider situational reports of enemy patterns and COP updates. When does the enemy strike, and where? Where does the enemy get logistical support and fire support? What cultural or religious factors are involved?
  - Why is the enemy conducting this operation?
  - What are the enemy's goals?
  - What are the enemy's capabilities?
  - What are the enemy's objectives? Based on the SITEMP and the projected enemy mission, what are the enemy's march objectives (offense) or the terrain or force he intends to protect (defense)? The commander normally provides this information.
  - Terrain and weather. If the enemy is attacking, which avenues will he use to reach his objectives in executing his COAs and why?
  - How will terrain affect his speed and formations?
  - How will he use key terrain and locations with clear observation and fields of fire?

— Does the weather aid or hinder the enemy in accomplishing his mission or does the weather degrade the enemy's weapons or equipment effectiveness?
— Enemy obstacles. These locations, provided by the company commander or obtained from the COP, give the platoon leader insights into how the enemy is trying to accomplish his mission.

(4) ***Analysis of Troops.*** Perhaps the most critical aspect of mission analysis is determining the combat power potential of one's force. The platoon leader must realistically and unemotionally determine what tasks his soldiers are capable of performing. This analysis includes the troops attached to or in direct support of the platoon. The platoon leader must know the status of his soldiers' experience and training level, and the strengths and weaknesses of his subordinate leaders. His assessment includes knowing the status of his soldiers and their equipment, and it includes understanding the full array of assets that are in support of the platoon such as MGS, snipers, and engineers. For example, how much indirect fire is available and when is it available? For digitally equipped units, this information is gained from the lower TI.

(5) ***Analysis of Time.*** As addressed in the "receive the mission" TLP, time analysis is a critical aspect to planning, preparation, and execution. Not only must the platoon leader appreciate how much time is available, he must be able to appreciate the time-space aspects of preparing, moving, fighting, and sustaining. He must be able to see his own tasks and enemy actions in relation to time.

(a) He must be able to assess the impact of limited visibility conditions on the troop-leading procedures.

(b) He must know how long it takes to conduct certain tasks such as order preparation, rehearsals, back-briefs, and other time-sensitive preparations for subordinate elements.

(c) He must understand how long it takes to deploy a support-by-fire element, probably the weapons squad (may be the mounted element), and determine the amount of ammunition needed to sustain the support for a specific period of time.

(d) He must know how long it takes to assemble a bangalore torpedo and to breach a wire obstacle.

(e) Most importantly, as events occur the platoon leader must adjust his analysis of time available to him and assess the impact on what he wants to accomplish.

(f) Finally, he must update previous timelines for his subordinates listing all events that affect the platoon.

(6) ***Analysis of Civil Considerations.*** The commander will provide the platoon leader with civil considerations that may affect the company and platoon missions. The platoon leader also must identify any civil considerations that may affect only his platoon's mission. These may include refugee movement, humanitarian assistance requirements, or specific requirements related to the rules of engagement (ROE) or rules of interaction (ROI).

(7) ***Summary of Mission Analysis.*** The end result of mission analysis, as done during the formulation of a tentative plan, is a number of insights and conclusions regarding how the factors of METT-TC affect accomplishment of the platoon's mission. From these the platoon leader will develop a COA.

b. **Course of Action Development.** The purpose of COA development is to determine one (or more) way(s) to achieve the mission by applying the overwhelming effects of combat power at the decisive place or time with the least cost in friendly casualties. If time permits, the platoon leader may develop several COAs. The platoon leader makes each COA as detailed as possible to describe clearly how he plans to use his forces to achieve the unit's mission-essential task(s) and purpose consistent with the commander's intent. He focuses on the actions the unit must take at the decisive point and works backward to his start point. A COA should satisfy the criteria listed in Table 2-2.

NOTE: The platoon leader should consider (METT-TC dependent) incorporating his squad leaders in COA development. Incorporating the squad leaders in the process may add time to the initial COA development process, but it will save time by increasing their understanding of the platoon's plan.

Suitable	If the COA were successfully executed, would the unit accomplish the mission consistent with the battalion commander's concept and intent?
Feasible	The platoon must have the technical and tactical skill and resources to successfully accomplish the COA. In short, given the enemy situation and terrain, the unit must have the training, equipment, leadership, and rehearsal time necessary to successfully execute the mission.
Distinguishable	If more than one COA is developed, then each COA must be sufficiently different from the others to justify full development and consideration. At platoon level, this is very difficult to accomplish, particularly if the platoon has limited freedom of action.
Complete	The COA must include the operational factors of who, what, when, where, and how. The COA must address the doctrinal aspects of the operation. For example, in the attack against a defending enemy, the COA must cover movement to, deployment against, assault of, and consolidation upon the objective.

Table 2-2. COA criteria.

(1) ***COA Development Step 1. Analyze Relative Combat Power.*** This step compares combat power strengths and weaknesses of both friendly and enemy forces. At the platoon level this should not be a complex process. However, if the platoon is attacking or defending against a force in a situation where the enemy has no order of battle but has exhibited guerrilla- or terrorist-type tactics, it could be difficult. For the platoon leader, it starts by returning to the conclusions the commander arrived at during mission analysis, specifically the conclusions about the enemy's strength, weakness, and vulnerabilities. In short, the platoon leader is trying to see where, when, and how the effects of the platoon's combat power (maneuver, firepower, protection, leadership, and information) can be superior to the enemy's while achieving the mission. This analysis should lead to techniques, procedures, and a potential decisive point that will focus the COA development. (See FM 101-5-1 for the definition of a decisive point.)

(2) ***COA Development Step 2. Generate Options.*** The platoon leader must first identify the objectives or times at which the unit will mass overwhelming firepower to achieve a specific result (with respect to terrain, enemy, and or time) that will accomplish the platoon's mission. He should take the following action.

(a) *Determine the Doctrinal Requirements.* As the platoon leader begins to develop a COA he should consider, if he has not done so in mission analysis, what doctrine suggests in terms of accomplishing the mission. For example, in an attack of a strongpoint, doctrine outlines several steps: isolate the objective area and the selected breach site, attack to penetrate and seize a foothold in the strongpoint, exploit the penetration, and clear the objective. In this case, doctrine gives the platoon leader a framework to begin developing a way to accomplish the mission.

(b) *Determine the Decisive Point.* The next and most important action is to identify a decisive point in order to progress with COA development. The decisive point may be given to the platoon leader by the company commander or be determined by the platoon leader through his relative combat power analysis.

(c) *Determine the Purpose of Each Element.* Determine the purpose of the subordinate elements starting with the main effort. The main effort's purpose is nested to the platoon's purpose and is achieved at the platoon leader's decisive point. The platoon leader next identifies the purposes of supporting efforts. These purposes are nested to the main effort's purpose by setting the conditions for success of the main effort.

(d) *Determine Tasks of Subordinate Elements.* Starting with the main effort, the platoon leader specifies the essential tactical tasks that will enable the main and supporting efforts to achieve their purpose.

(3) ***COA Development Step 3. Array Initial Forces.*** The platoon leader next must determine the specific number of squads and weapons necessary to accomplish the mission and provide a basis for development of a scheme of maneuver. He will consider the platoon's restated mission statement, the commander's intent, and the enemy's most probable COA. He should allocate resources to the main effort (at the decisive point) and continue with supporting efforts in descending order of importance to accomplish the tasks and purposes he assigned during Step 2. For example, the main effort in an attack of a strong point may require a rifle squad and an engineer squad to secure a foothold, whereas a support-by-fire force may require the entire weapons squad and the fires from the vehicles if not used to isolate the objective.

(4) ***COA Development Step 4. Develop Schemes of Maneuver.*** The scheme of maneuver is a description of how the platoon leader envisions his subordinates will accomplish the mission from the start of the operation until its completion. He does this by determining how the achievement of one task will lead to the execution of the next. He clarifies in his mind the best ways to use the available terrain as well as how best to employ the platoon's strengths against the enemy's weaknesses (gained from his relative combat power analysis). This includes the requirements of indirect fire to support the maneuver. The platoon leader then develops the maneuver control measures necessary to enhance understanding of the scheme of maneuver, ensure fratricide avoidance, and to clarify the task and purpose of the main and supporting efforts. (Refer to Appendix D for a detailed discussion of fratricide avoidance.) He also determines the supply and medical evacuation aspects of the COA.

(5) ***COA Development Step 5. Assign Headquarters.*** The platoon leader assigns specific elements (for example, squads) as the main and supporting efforts. The platoon leader ensures that he has employed every element of the unit and has C2 for each element.

(6) ***COA Development Step 6. Prepare COA Statements and Sketches.*** The platoon leader's ability to prepare COA sketches and statements will depend on the amount of time available and his skill and experience as a platoon leader. Whenever possible, the platoon leader should prepare a sketch showing the COA. The COA statement is based on the scheme of maneuver the commander has already developed and the platoon leader's situational analysis. It focuses on all significant actions from the start of the COA to its finish. The company commander must provide the platoon and squad leaders his analysis because they have the least amount of time and experience to conduct COA development.

c. **Analysis of COA.** After developing a COA, the platoon leader analyzes it to determine its advantages and disadvantages, to visualize the flow of the battle, and to identify requirements to synchronize actual execution. Typically this is done mentally or during a discussion with the squad leaders, platoon sergeant, or other key personnel. This technique is not complicated, and it facilitates a total understanding of the plan. This is not a rehearsal.

d. **COA Comparison and Selection.** If the platoon leader develops more than one COA, he must compare them by weighing the specific advantages, disadvantages, strengths, and weaknesses of each. These attributes may pertain to the accomplishment of the platoon purpose, the use of terrain, the destruction of the enemy, or any other aspect of the operation that the platoon leader believes is important. The platoon leader uses these factors as his frame of reference in tentatively selecting the best COA. He makes the final selection of a COA based on his own analysis.

2-8. INITIATE MOVEMENT

The platoon leader initiates any movement that is necessary to continue preparations or to posture the unit for the operation. This may include movement to an assembly area, battle position, perimeter defense, or attack position; movement of reconnaissance elements; or movement to compute time-distance factors for the unit's mission.

NOTE: The following discussion on reconnaissance and the amount or type of reconnaissance conducted must be evaluated by the amount of information needed, the risk to leaders conducting the reconnaissance, and time available, and it must be a coordinated effort with higher command.

2-9. CONDUCT RECONNAISSANCE

Even if the platoon leader has made a leader's reconnaissance with the company commander at some point during TLP, he should still conduct a reconnaissance after he has developed his plan. The focus of the reconnaissance is to confirm the priority intelligence requirements (PIR) that support the tentative plan.

a. These PIR are assumptions or critical facts concerning the enemy's location (templated positions) and strength. The PIR also include assumptions about the terrain (to

verify, for example, that a tentative support-by-fire position actually will allow for suppression of the enemy, or to verify the utility of an avenue of approach).

b. The platoon leader may include his subordinate leaders in this reconnaissance (or he may instruct a squad to conduct a reconnaissance patrol with specific objectives). This allows them to see as much of the terrain and enemy as possible. It also helps each leader visualize the plan more clearly.

c. At the platoon level, the leader's reconnaissance may include movement to or beyond a line of departure (LD) or from the forward edge of battle (FEBA) back to and through the engagement area along likely enemy routes. If possible, the platoon leader should select a vantage point that provides the group with the best possible view of the decisive point.

d. In addition to the information available to a digitally-equipped platoon via FBCB2, the platoon leader may also conduct a leader's reconnaissance. Examples of this type of reconnaissance include surveillance of an area by subordinate elements, patrols by infantry squads to determine where the enemy is (and is not) located, and establishment of OPs to gain additional information. If available, the leaders also may conduct the reconnaissance using the tactical unmanned aerial vehicle or video footage provided from helicopter gun cameras. The nature of the reconnaissance, including what it covers and how long it lasts, depends on the tactical situation and the time available. The platoon leader should use the results from the COA development process to identify information and security requirements for the platoon's reconnaissance operations.

2-10. COMPLETE THE PLAN

Completion of the plan includes several actions that transform the commander's intent and concept and the platoon concept into a fully developed platoon OPORD. These actions include preparing overlays, refining the indirect fire list, completing CSS and C2 requirements, as well as updating the tentative plan as a result of the reconnaissance or COP updates. It also allows the platoon leader to prepare the briefing site, briefing medium, and briefing material he will need to present the OPORD to his subordinates. Completing the plan allows the platoon leader to make final coordination with other units or the commander before issuing the OPORD to his subordinates.

2-11. ISSUE THE OPERATIONS ORDER

The OPORD precisely and concisely explains the platoon leader's intent and concept of how he wants the squads and mounted element to accomplish the mission. The OPORD must not contain unnecessary information that could obscure what is essential and important. The platoon leader must ensure his squads and sections know exactly what must be done, when it must be done, and how the platoon must work together to accomplish the mission and stay consistent with the intentions of the commander.

a. Whenever possible, the platoon leader issues the order in person, looking into the eyes of all his soldiers to ensure each leader and soldier understands the mission and what his element must achieve. The platoon leader also uses visual aids, such as sand tables and concept sketches, to depict actions on the objective or movement. (FM 7-8, Chapter 2, discusses techniques for sand-table construction and use.)

b. In digitally-equipped units, the platoon leader may issue the platoon OPORD via FBCB2. Although this method allows for quick dissemination of information and

graphics, it lacks the human contact that allows the platoon leader to feel comfortable that his subordinates clearly understand the plan. Some combination of personal interaction and the FBCB2 is the best solution.

c. The format of the five-paragraph OPORD helps the platoon leader paint a complete picture of all aspects of the operation: terrain, enemy, higher and adjacent friendly units, platoon mission, execution, support, and command. The format also helps him address all relevant details of the operation. Finally, it provides subordinates with a predictable, smooth flow of information from beginning to end.

2-12. SUPERVISE AND REFINE

The platoon leader supervises the unit's preparation for combat by conducting confirmation briefs, rehearsals, and inspections.

a. Platoon leaders should conduct a confirmation brief after issuing the oral OPORD to ensure subordinates know the mission, the commander's intent, the concept of the operation, and their assigned tasks. Confirmation briefs can be conducted face to face, by radio, or by FBCB2 (if so equipped), depending on the situation. Face to face is the desired method, because all section and squad leaders are together to resolve questions, and it ensures that each leader knows what the adjacent squad or vehicle is doing.

b. If time permits, the platoon conducts full rehearsals. During the rehearsals, leaders practice sending tactical reports in accordance with the unit's SOP. Reporting before, during, and after contact with the enemy is rehearsed in detail starting with actions on the objective. Rehearsals are not intended to analyze a COA.

(1) The platoon leader uses well-planned, efficiently run rehearsals to accomplish the following:

- Reinforce training and increase proficiency in critical tasks.
- Reveal weaknesses or problems in the plan.
- Integrate the actions of attached elements.
- Confirm coordination requirements between the platoon and adjacent units.
- Improve each soldier's understanding of the concept of the operation, the direct fire plan, anticipated contingencies, and possible actions and reactions for various situations that may arise during the operation.

(2) Rehearsal techniques include:

(a) *Map Rehearsal.* A map rehearsal is usually conducted as part of a confirmation brief involving subordinate leaders or portions of their elements. The leader uses the map and overlay to guide participants as they brief their role in the operation. If necessary, he can use a sketch map. A sketch map provides the same information as a terrain model and can be used at any time.

(b) *Sand Table or Terrain Model.* This reduced-force or full-force technique employs a small-scale sand table or model that depicts graphic control measures and important terrain features for reference and orientation. Participants walk or move "micro" armor around the sand table or model to practice the actions of their own elements or vehicles in relation to other members of the platoon.

(c) *Radio and or Tactical Internet (Digital) Rehearsal.* This is a reduced-force or full-force rehearsal conducted when the situation does not allow the platoon to gather at one location. Subordinate elements check their communications systems and rehearse key elements of the platoon plan.

(d) *Reduced-Force Rehearsal.* In this rehearsal, leaders discuss the mission while moving over key terrain or similar terrain either in vehicles or dismounted.

(e) *Full-Force Mounted and Dismounted Rehearsal.* This technique is used during a full-force rehearsal. Rehearsals begin in good visibility over open terrain and become increasingly realistic until conditions approximate those expected in the area of operations.

NOTE: Time permitting, the platoon should conduct a full-force mounted and dismounted rehearsal of the plan. Digitally-equipped units would also rehearse the radio or digital reports required during execution.

CHAPTER 3
TACTICAL MOVEMENT

The purpose of tactical movement is to move units on the battlefield either to initiate contact with the enemy or to reach a destination when contact with the enemy is likely. Movement is not maneuver. Maneuver happens once a unit has made contact with the enemy.

This chapter focuses on the movement techniques and formations that combine to provide the platoon leader with options for moving his unit. The various techniques and formations have unique advantages and disadvantages. Some are secure but slow, while others are faster but less secure. Some formations work well in certain types of terrain or tactical situations but are less effective in others. The command and control, position navigation, and night vision equipment available to the SBCT infantry platoon significantly enhances the platoon's ability to conduct effective tactical movement, both day and night.

Many times the platoon must plan, rehearse, and execute a combination of mounted and dismounted movement. The platoon operates with and without vehicle support, so section and platoon leaders must understand how to move and maneuver in either tactical situation. Movement during dismounted operations is similar to mounted movement but requires more command and control due to the decentralized nature of the task. Compared to mounted operations, dismounted movement techniques and formations require as much--or more--detail during the planning phase.

3-1. MOVEMENT FORMATIONS

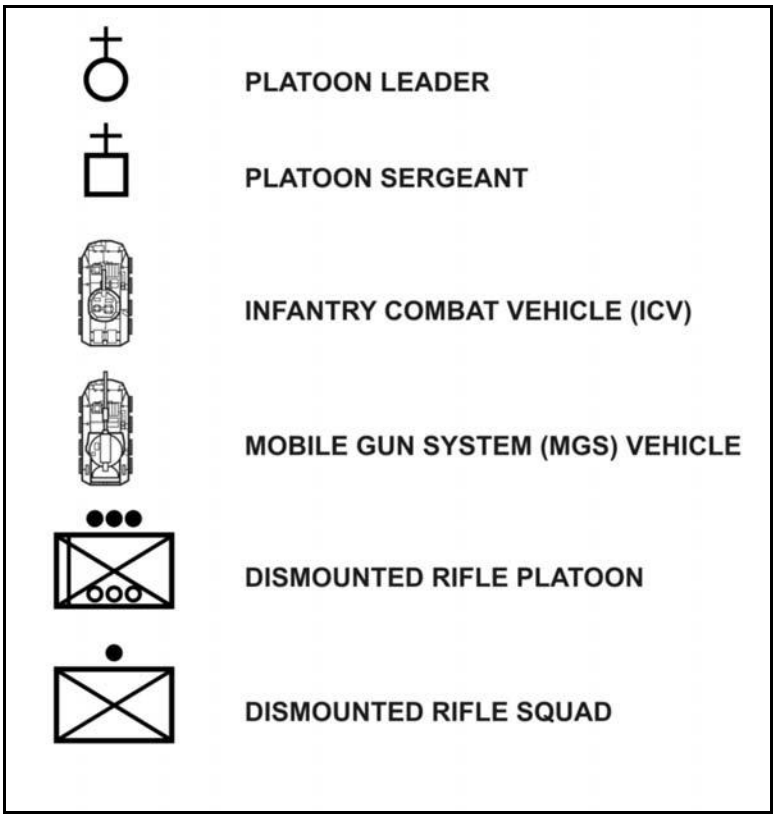
The platoon leader uses formations for several purposes: to relate one vehicle or squad to another on the ground, to position firepower to support the direct-fire plan, to establish responsibilities for sector security among vehicles or squads, or to aid in the execution of battle drills and directed COAs. Just as they do with movement techniques, platoon leaders plan formations based on where they expect enemy contact and on the higher commander's plans to react to contact. The platoon leader evaluates the situation and decides which formation best suits the mission and situation.

a. **Choices.** It is not necessary for the platoon formation to be the same as the company formation unless directed by the company commander. However, the platoon leader must coordinate his formation with other elements moving in the main body team's formation.

b. **Factors.** Sometimes platoon and company formations differ due to METT-TC factors. For example, the platoons could move in wedge formations within a company vee.

(1) In planning and executing movement, leaders must consider the fluidity of formations. Spacing requirements, as well as other METT-TC considerations, require the platoon to adapt basic formations. Leaders must stay ready to adjust the distance of individual vehicles based on terrain, visibility, and mission requirements.

(2) The platoon usually moves in formation when using traveling or traveling overwatch. When it uses bounding overwatch, the bounding element makes the best use of the terrain rather than adopting a precise formation. Only in this way can it move effectively while maintaining adequate security. See Figure 3-1 for a legend of symbols for company personnel and elements.



DRAFT Figure 3-1. Legend of platoon symbols.

NOTE: The formations shown in the illustrations in this chapter are examples only. They generally are depicted without METT-TC considerations, which are always the most crucial element in the selection and execution of a formation. Leaders must be prepared to adapt their choice of formation to the specific situation.

3-2. DISMOUNTED MOVEMENT FORMATIONS

a. **Platoon Formations.** Platoon formations include the platoon column, the platoon line (squads on line or in column), the platoon vee, the platoon wedge, and the platoon file. The leader should weigh these carefully to select the best formation based on his mission and on METT-TC analysis.

(1) ***Platoon Column Formation.*** This formation is the platoon's primary movement formation (Figure 3-2). It provides good dispersion both laterally and in depth and simplifies control. The lead squad is the base squad. The column formation has the following characteristics, advantages, and limitations:

- It provides excellent control and fires to the flanks.
- It permits only limited fires to the front and rear.
- It is easy to control.
- It provides extremely limited overall security.
- It normally is used for traveling only.

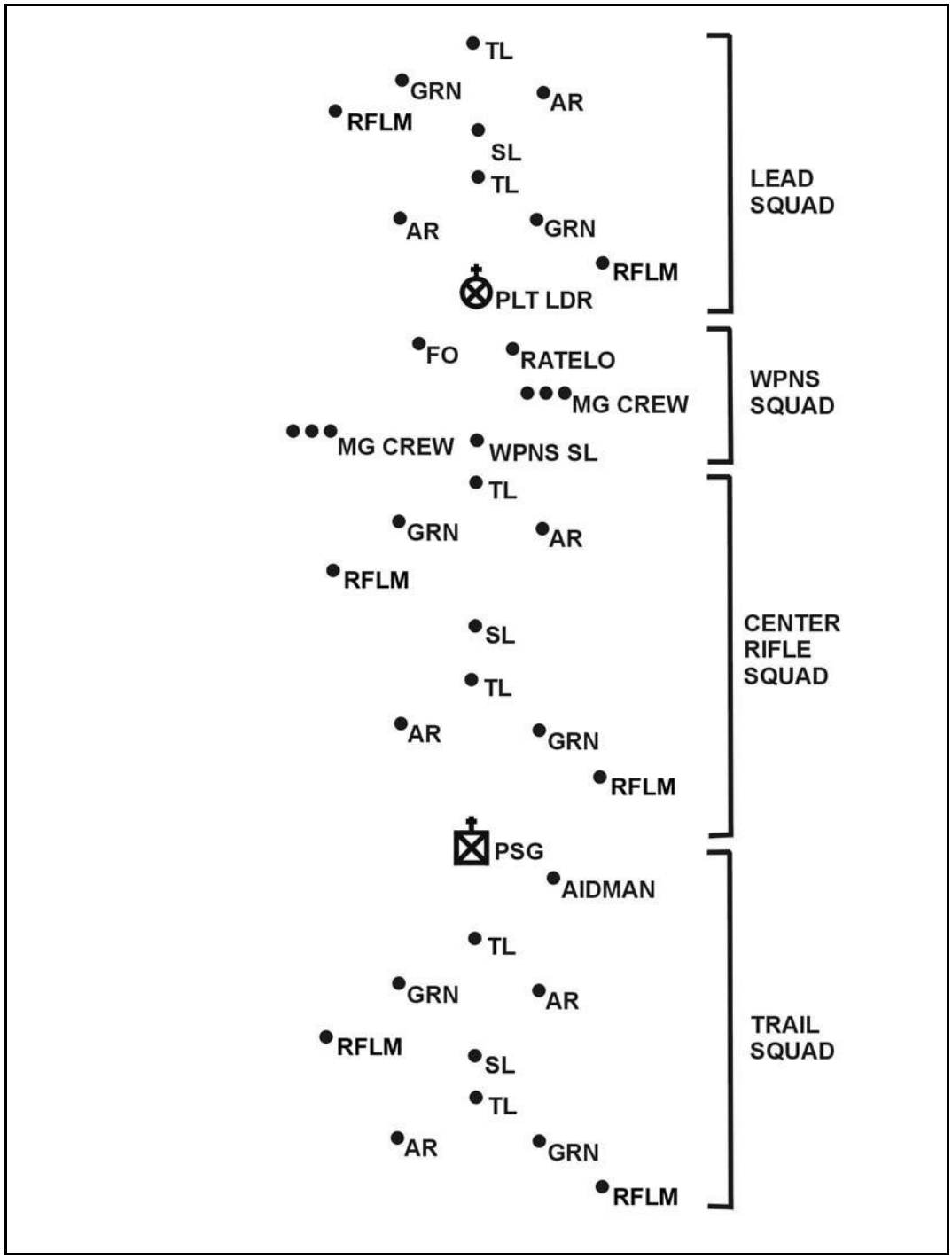


Figure 3-2. Platoon column.

NOTE: METT-TC considerations will determine where the weapons squad or machine gun teams locate in the formation. They normally move with the platoon leader or platoon sergeant so he can establish a base of fire quickly.

(2) ***Platoon-Line, Squads-on-Line Formation.*** This formation allows the delivery of maximum fire to the front but little fire to the flanks (Figure 3-3). This formation is hard to control, and it does not lend itself well to rapid movement. When two or more platoons are attacking, the company commander chooses one of them as the base platoon. The base platoon's center squad is its base squad. When the platoon is not acting as the base platoon, its base squad is its flank squad nearest the base platoon. The weapons squad may move with the platoon, or it can support by fire. This is the basic platoon assault formation. The platoon line with squads-on-line formation has the following characteristics, advantages, and limitations:

- It permits maximum fires to the front or rear, but minimum fires to the flanks.
- It is difficult to control.
- It is less secure than other formations because of the lack of depth.
- It is the most difficult formation from which to make the transition to other formations.
- It may be used in the assault to maximize the firepower and shock effect of the platoon. This normally is done when there is no more intervening terrain between the unit and the enemy, when antitank systems are suppressed, or when the unit is exposed to artillery fire and must move rapidly.
- It affords excellent security for the higher formation in the direction of the echelon.

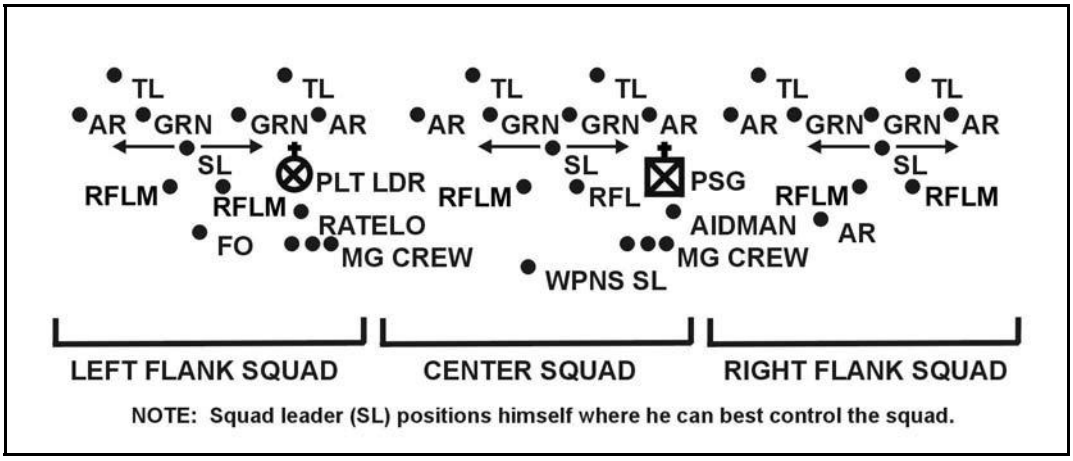


Figure 3-3. Platoon on line, squads on line.

(3) ***Platoon-Line, Squads-in-Column Formation.*** The platoon leader can use this formation when he does not want to deploy all personnel on line and when he wants the squads to react to unexpected contact (Figure 3-4). This formation is easier to control, and it lends itself better to rapid movement than the platoon-line or squads-on-line formation; however, it is harder to control than platoon column and does not facilitate rapid movement as well as a platoon column. When two or more platoons are moving,

the company commander chooses one of them as the base platoon. The base platoon's center squad is its base squad. When the platoon is not the base platoon, its base squad is its flank squad nearest the base platoon. The platoon line with squads-in-column formation has the following characteristics, advantages, and limitations:

- It permits maximum fires to the front or rear, but minimum fires to the flanks.
- It is easier to control than platoon line and squads-on-line.
- It facilitates rapid movement better than platoon line, squads-on-line.
- It is difficult to transition to other formations.

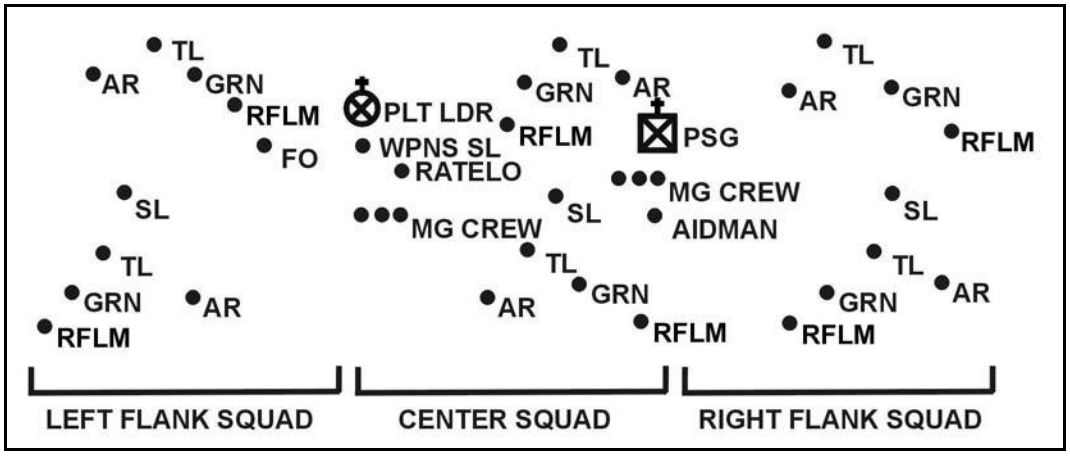


Figure 3-4. Platoon-Line, squads-in-column.

(4) ***Platoon Vee Formation.*** This formation has two squads up front to provide a heavy volume of fire on contact (Figure 3-5, page 3-6). It also has one squad in the rear that can either overwatch or trail the other squads. The platoon leader designates one of the front squads to be the platoon's base squad. The platoon vee formation has the following characteristics, advantages, and limitations:

- It permits immediate maximum fires to the front or flanks, but minimum fires to the rear.
- It is difficult to control.
- Movement is slow.
- It provides excellent flexibility that allows rapid fire and movement upon contact from the flank.

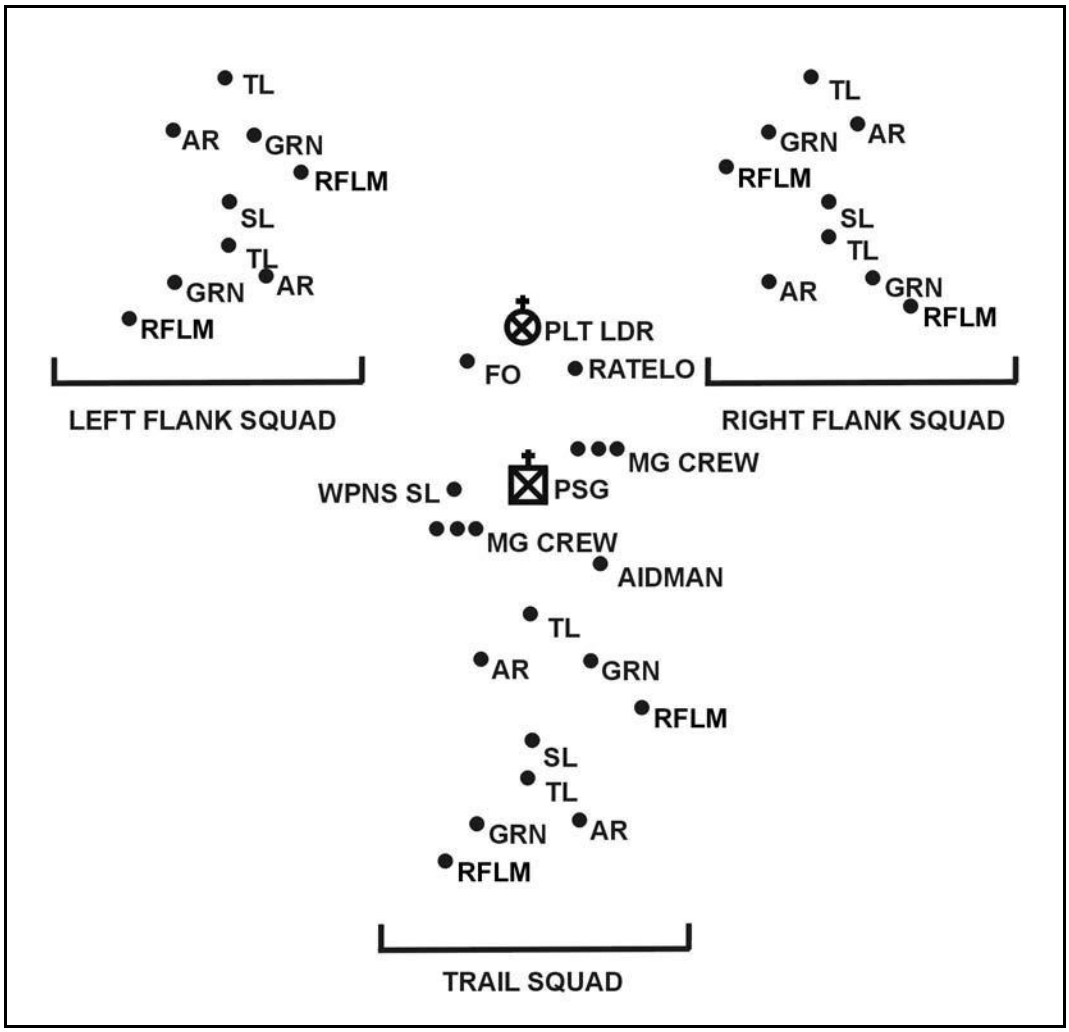


Figure 3-5. Platoon vee.

(5) ***Platoon Wedge Formation.*** This formation has two squads in the rear that can overwatch or trail the lead squad (Figure 3-6). It provides a large volume of fire to the front or flanks. It allows the platoon leader to make contact with a squad and still have one or two squads to maneuver. The lead squad is the base squad. The wedge formation has the following characteristics, advantages, and limitations:

- It permits excellent fires to the front and good fires to the flanks.
- It is easy to control.
- It provides good security to the flanks.
- It can be used with the traveling and traveling overwatch techniques.
- It allows rapid transition to bounding overwatch.

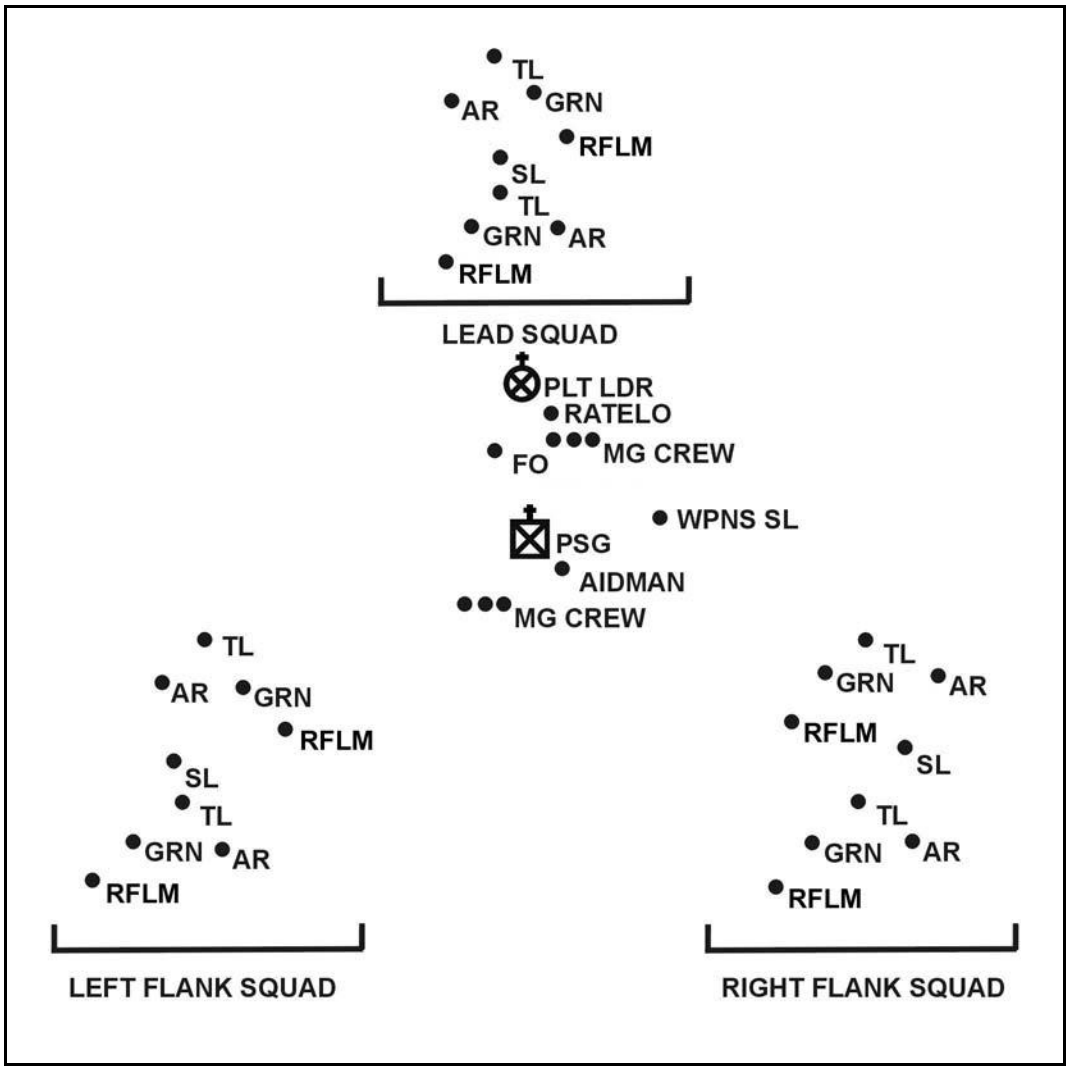


Figure 3-6. Platoon wedge.

(6) ***Platoon File Formation.*** This formation may be set up in several methods. One method is to have three-squad files follow one another using one of the movement techniques. Another method is to have a single platoon file with a front security element (point) and flank security elements. This formation is used when visibility is poor due to terrain, vegetation, or light conditions (Figure 3-7, page 3-8). The distance between soldiers is less than normal to allow communication by passing messages up and down the file. The platoon file has the same characteristics as the fire team and squad files. The platoon file formation has the following characteristics, advantages, and limitations:

- It provides excellent control and fires to the flanks.
- It permits only limited fires to the front and rear.
- It is easy to control.
- It provides extremely limited overall security.
- It normally is used for traveling only.
- It is the fastest formation for dismounted movement.

Infantry squads normally move mounted until the situation requires them to dismount or until they reach the dismount point or assault position. The squad moves alone or as part of the platoon's dismounted element. The rifle squads then use a variety of formations to complete their mission.

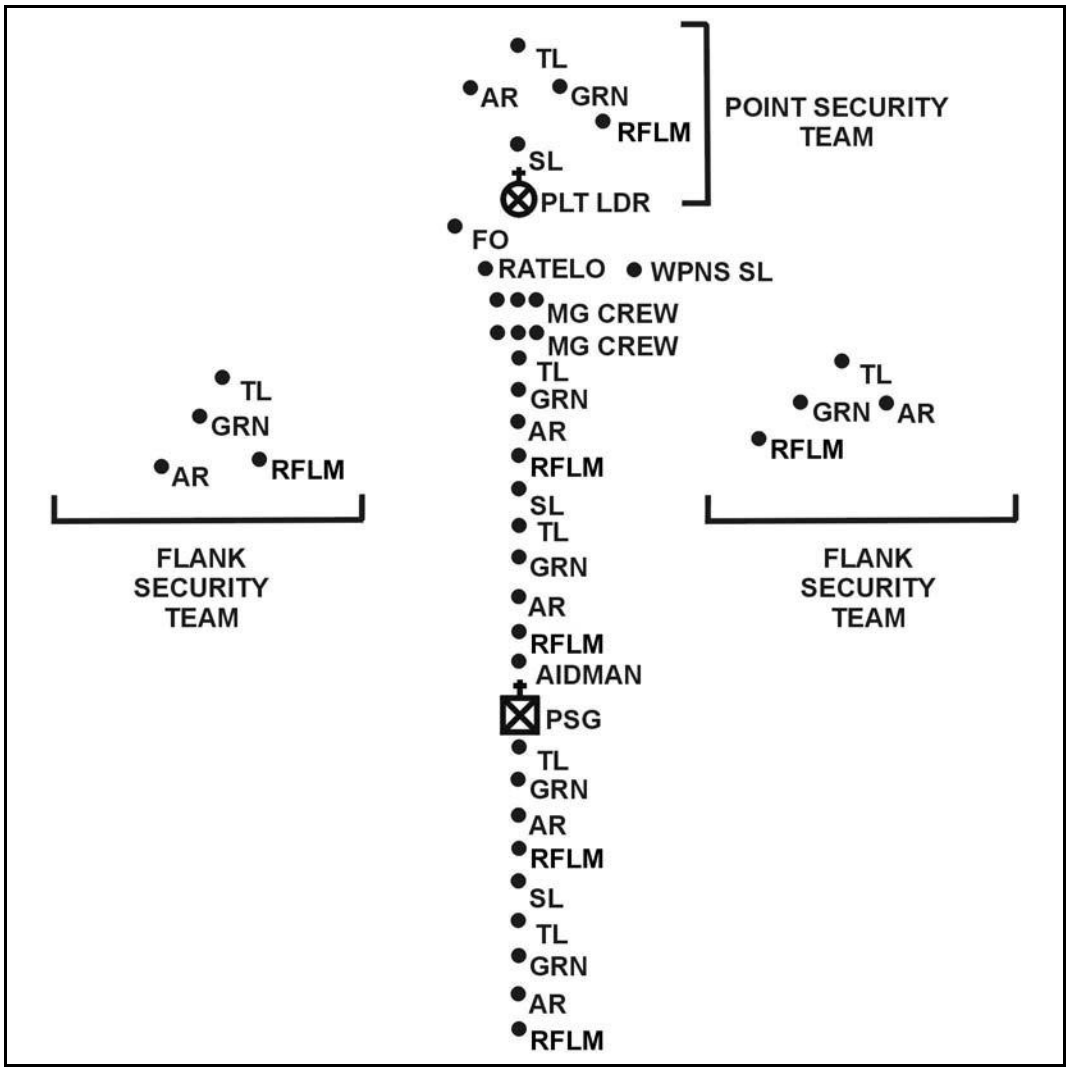


Figure 3-7. Platoon file.

b. **Fire Team Formations.** The term "fire team formation" refers to the soldiers' relative positions within the fire team (Table 3-1). Each type of formation has advantages and disadvantages. The leader weighs these against his METT-TC analysis.

MOVEMENT FORMATION	WHEN MOST OFTEN USED	CHARACTERISTICS			
		CONTROL	FLEXIBILITY	FIRE CAPABILITIES AND RESTRICTIONS	SECURITY
FIRE TEAM WEDGE	Basic fire team formation	Easy	Good	Allows immediate fires in all directions	All-round
FIRE TEAM FILE	Close terrain, dense vegetation, limited visibility conditions	Easiest	Less flexible than wedge	Allows immediate fires to the flanks, masks most fires to the rear	Least

Table 3-1. Comparison of fire team formations.

(1) ***Wedge Formation***. The wedge (Figure 3-8) is the basic formation for the fire team. The interval between soldiers in the wedge formation is normally 10 meters. The wedge expands and contracts depending on the terrain. Fire teams modify the wedge when rough terrain, poor visibility, or other factors make control of the wedge difficult, The normal interval is reduced so that all team members can still see their team leader and the team leaders can still see their squad leader. The sides of the wedge can contract to the point where the wedge resembles a single file. Soldiers expand or resume their original positions when moving in less rugged terrain where control is easier.

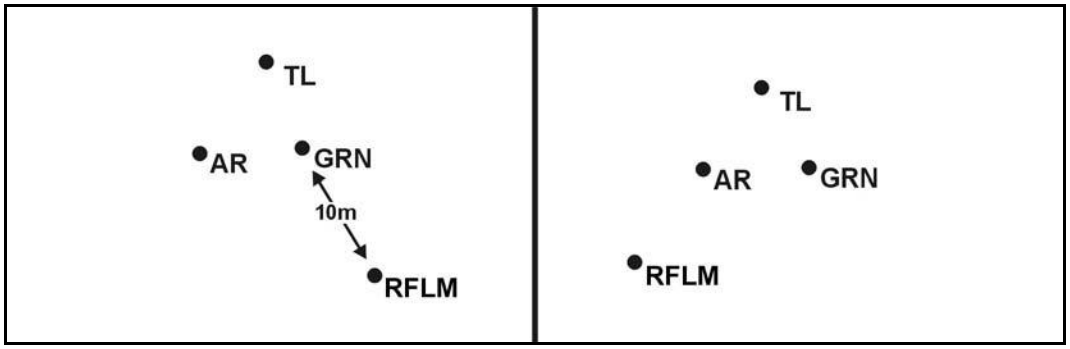


Figure 3-8. Fire team wedge.

(2) ***File Formation***. When the terrain precludes use of the wedge, fire teams use the file formation (Figure 3-9).

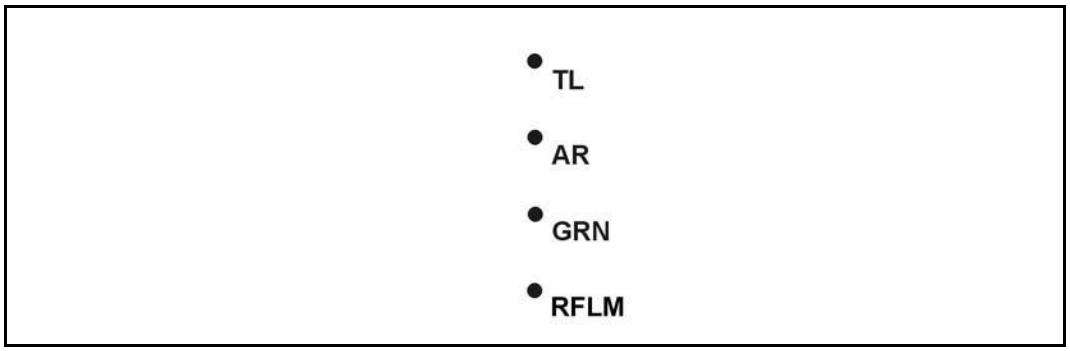


Figure 3-9. Fire team file.

c. **Squad Formations.** The term "squad formation" refers to the relative locations of the fire teams. Squad formations include the squad column, the squad line, and the squad file. Table 3-2 compares squad formations.

MOVEMENT FORMATION	WHEN MOST OFTEN USED	CHARACTERISTICS			
		CONTROL	FLEXIBILITY	FIRE CAPABILITIES AND RESTRICTIONS	SECURITY
SQUAD COLUMN	The main squad formation	Good	Aids maneuver; good dispersion laterally and in depth	Allows large volume of fire to the flanks but only limited volume to the front	All-round
SQUAD LINE	For maximum firepower to the front	Not as good as squad column	Limited maneuver capability (both fire teams committed)	Allows maximum immediate fire to the front	Good to the front, little to the flank and rear
SQUAD FILE	Close terrain, dense vegetation, limited visibility conditions	Easiest	Most difficult formation to maneuver from	Allows immediate fire to the flanks, masks most fire to the front and rear	Least

Table 3-2. Comparison of squad formations.

(1) ***Squad Column Formation***. The squad column is the squad's main formation (Figure 3-10). It provides good dispersion both laterally and in depth without sacrificing control, and it facilitates maneuver. The lead fire team is the base fire team. Squads can move in either a column wedge or a modified column wedge. Rough terrain, poor visibility, or other factors can require the squad to modify the wedge into a file for control purposes. As the terrain becomes less rugged and control becomes easier, the soldiers assume their original positions. (In Figure 3-10, RFLM indicates the rifleman or designated marksman.)

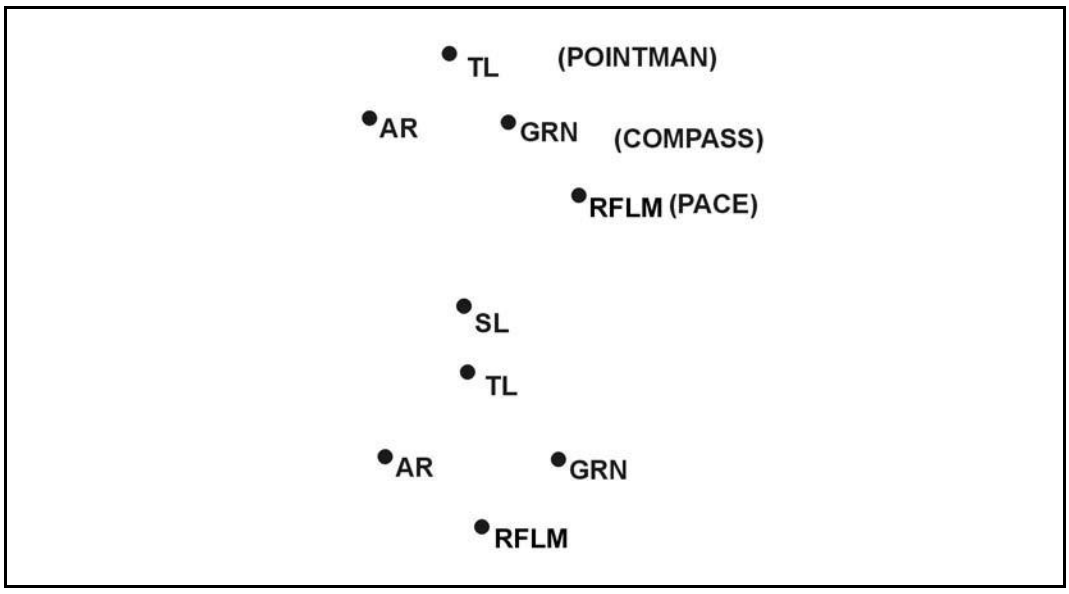


Figure 3-10. Squad column, fire teams in wedge.

(2) ***Squad Line Formation***. The squad line (Figure 3-11) provides maximum firepower to the front. When a squad is acting as the base squad, the fire team on the right is the base fire team.

Figure 3-11. Squad line.

(3) ***Squad File Formation***. When not traveling in a column or line, squads travel in file (Figure 3-12). The squad file has the same characteristics as the fire team file. If the squad leader wishes to increase his control over the formation, to exert greater morale presence by leading from the front, or to be immediately available to make key decisions, he moves forward to the first or second position. Moving a team leader to the last position can provide additional control over the rear of the formation.

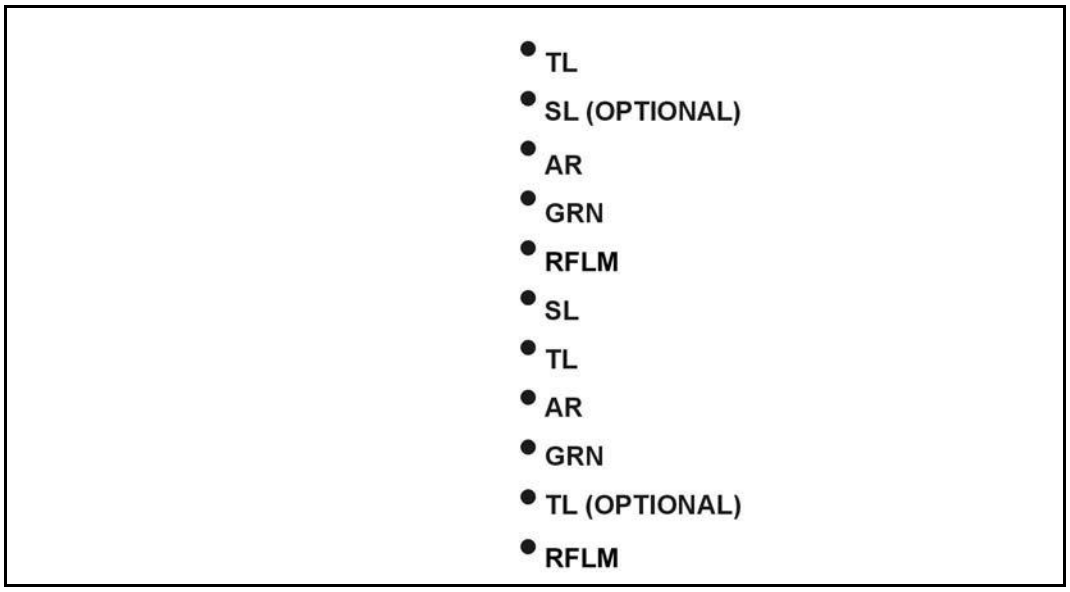


Figure 3-12. Squad file.

c. **SBCT Infantry Platoon Digital Enhancements.** The position navigation system, night vision systems, and the commanders tactical display (CTD) assist the platoon leader, VCs, and squad leaders in tracking their location in relation to other squads and platoons. This is not the sole means for controlling the platoon's formations. Position updates do not give the exact location of every element at every moment; instead, positions are given at regular intervals. When moving at normal dispersion intervals, the leader relies on digital voice communications and visual contact to control movement.

3-3. MOUNTED FORMATIONS.

The platoon uses the column, wedge, line, echelon, coil, and herringbone formations when it is mounted (based on METT-TC factors).

a. **Column Formation.** The column is used when speed is critical, when the platoon is moving through restricted terrain on a specific route, or when enemy contact is not likely. Each vehicle normally follows directly behind the vehicle in front of it. If the situation dictates, however, vehicles can disperse laterally to enhance security (Figure 3-13). The column formation has the following characteristics, advantages, and limitations:

- It provides excellent control and fires to the flanks.
- It permits only limited fires to the front and rear.
- It is easy to control.
- It provides extremely limited overall security.
- It normally is used for traveling only.

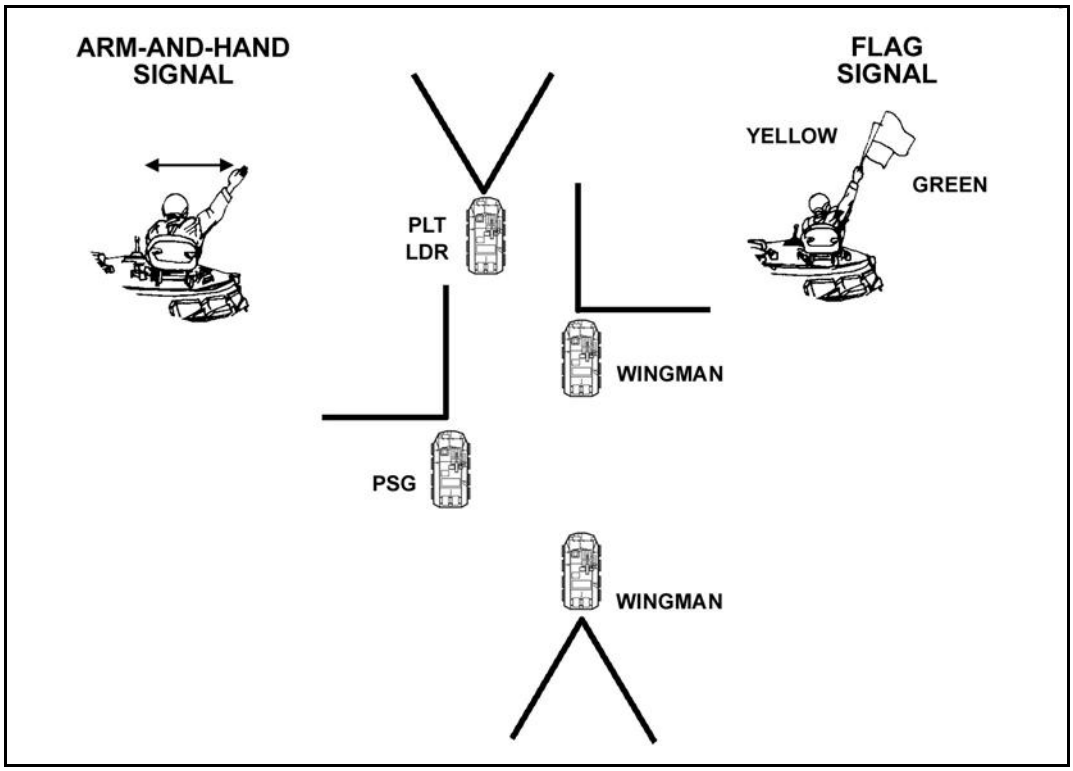


Figure 3-13. Column formation with dispersal for added security.

b. **Wedge Formation.** The wedge formation (Figure 3-14) is often used when contact is possible or the enemy situation is unclear. In the platoon wedge, the platoon leader and the platoon sergeant are in the center of the formation, with their wingmen located to the rear of and outside of them. This is not true in all tactical situations. If the weapons squad is on the platoon leader or platoon sergeant's vehicle, it would not be an advantage to have the weapons squad in the lead. The wedge has the following characteristics, advantages, and limitations:

- It permits excellent fires to the front and good fires to the flanks.
- It is easy to control.
- It provides good security to the flanks.
- It can be used with the traveling and traveling overwatch techniques.
- It allows rapid transition to bounding overwatch.

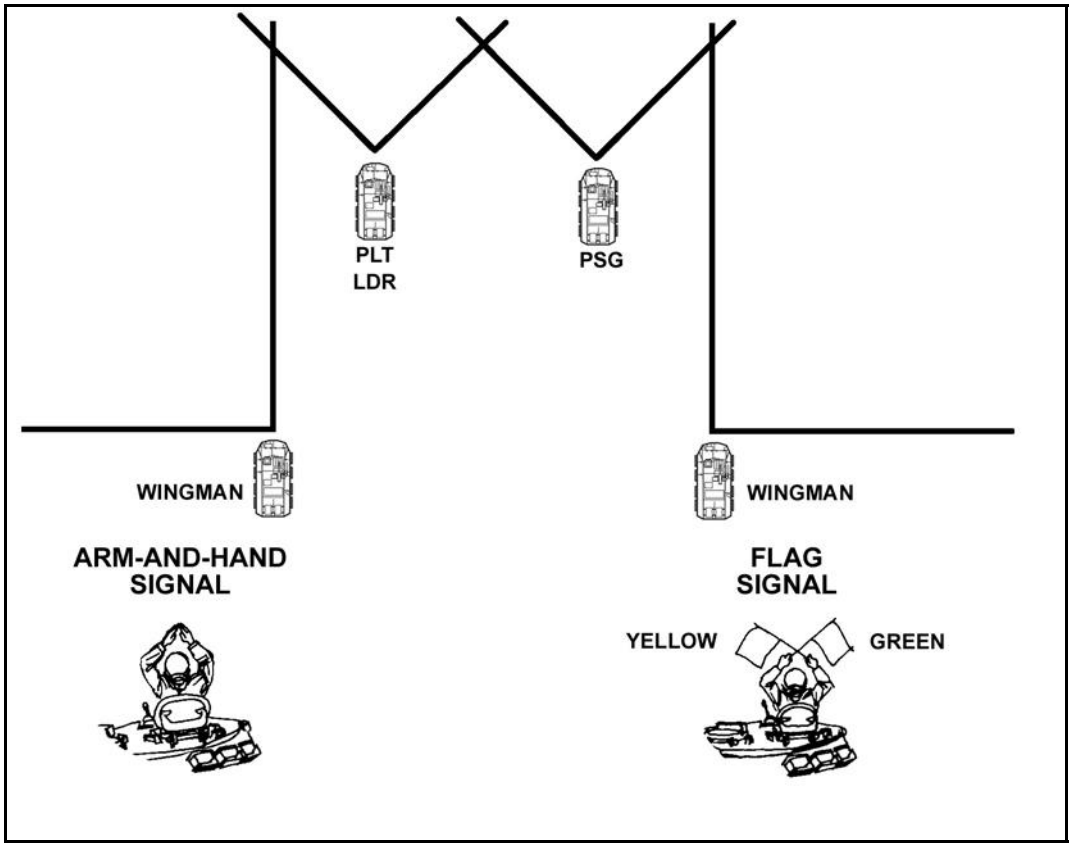


Figure 3-14. Wedge formation.

c. **Line Formation.** The line formation (Figure 3-15, page 3-14) is primarily used when assaulting a weakly defended objective, crossing open areas, or in a support-by-fire position. The line formation has the following characteristics, advantages, and limitations:

- It permits maximum fires to the front or rear, but minimum fires to the flanks.
- It is difficult to control.
- It is less secure than other formations because of the lack of depth.
- It is the most difficult formation from which to make the transition to other formations.
- It may be used in the assault to maximize the firepower and shock effect of the platoon. This is normally done when there is no more intervening terrain between the unit and the enemy, when antitank systems are suppressed, or when the unit is exposed to artillery fire and must move rapidly.

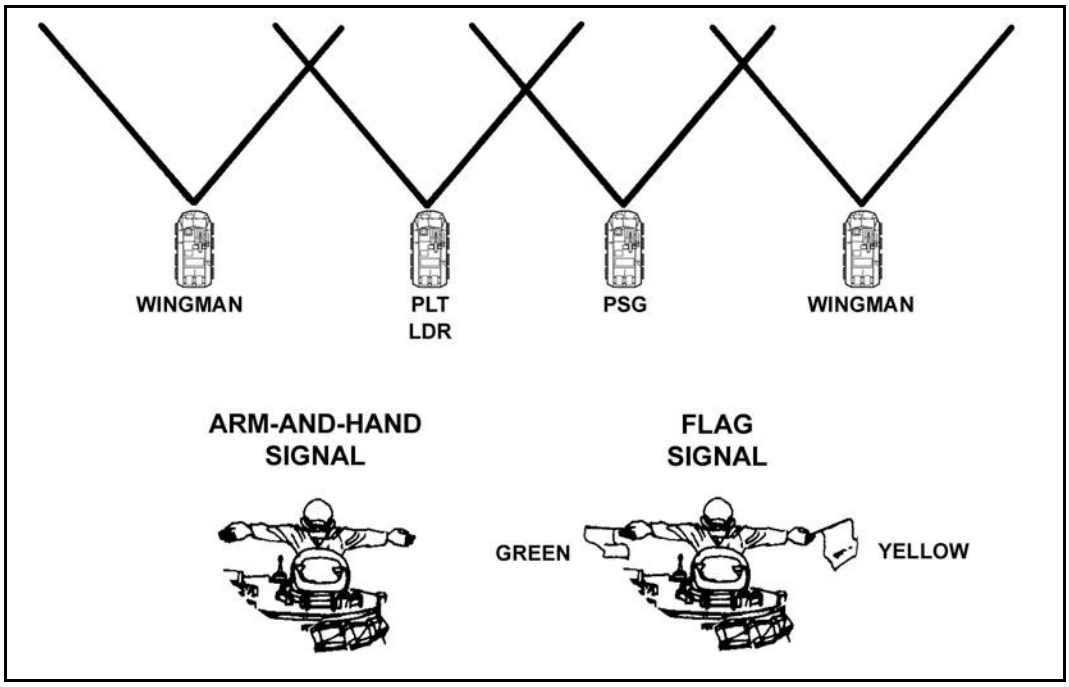


Figure 3-15. Line formation.

d. **Echelon Formation.** The echelon formation (Figure 3-16) is used when the company wants to maintain security and or observation of one flank and enemy contact is not likely. It normally is used when a platoon is to cover an exposed flank of a larger force. The echelon formation has the following characteristics, advantages, and limitations:

- It is difficult to control.
- It affords excellent security for the higher formation in the direction of the echelon.
- It facilitates deployment to the echelon flank.

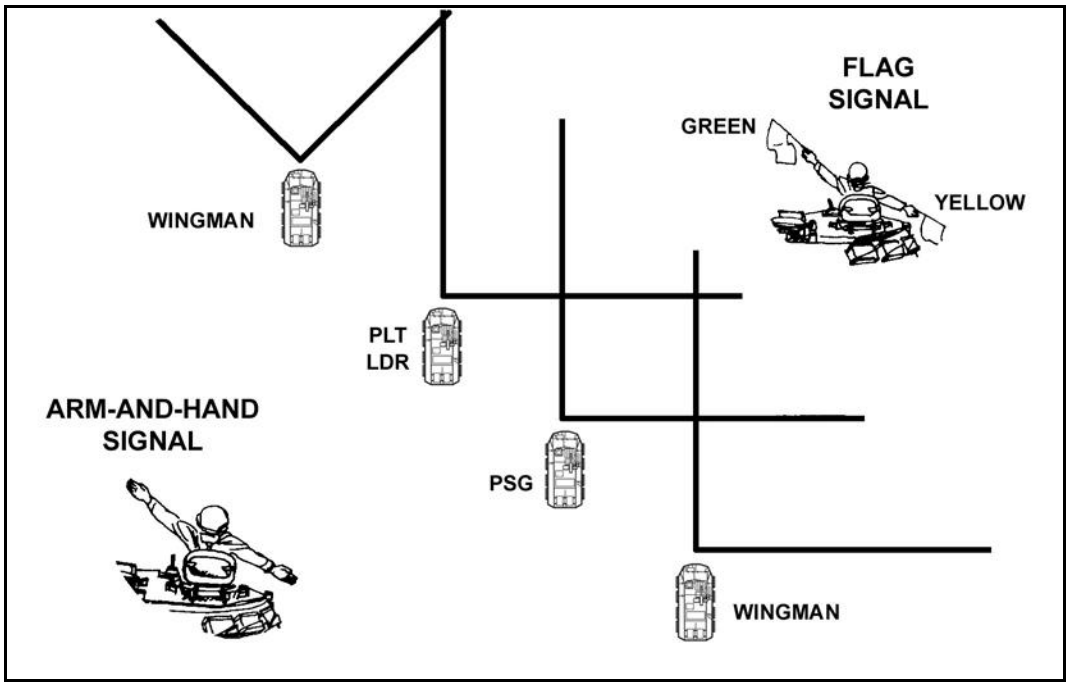


Figure 3-16. Echelon formation.

e. **Coil and Herringbone Formation.** The coil and herringbone are platoon-level formations, employed when elements of the company are stationary and must maintain 360-degree security.

(1) ***Coil.*** The coil (Figure 3-17, page 3-16) is used to provide all-round security and observation when the platoon is stationary. It is also useful for tactical refueling, resupply, and issuing platoon orders. Security is posted to include air guards and dismounted fire teams.

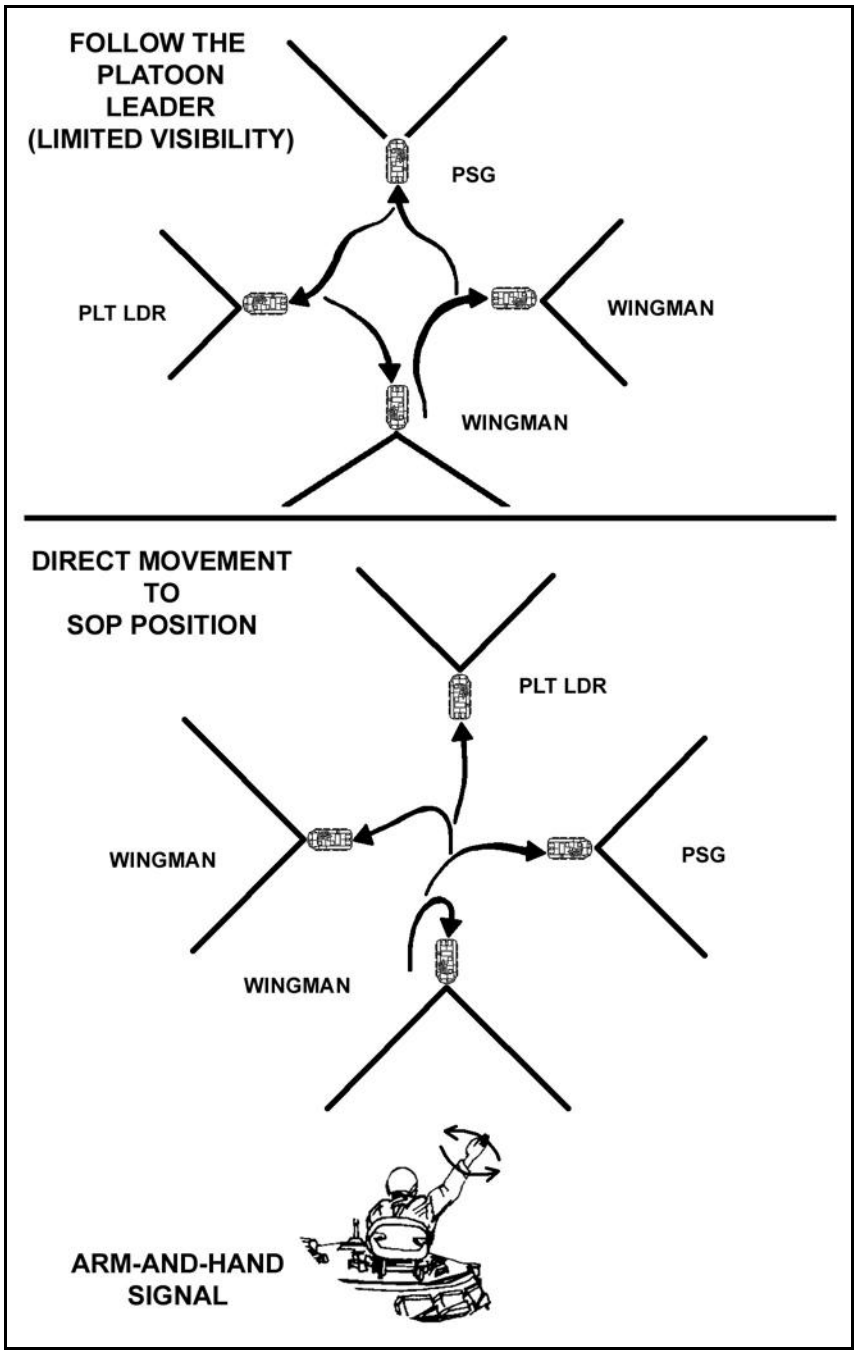


Figure 3-17. Coil formation.

(2) ***Herringbone.*** The herringbone (Figure 3-18) is used to disperse the platoon when traveling in column formation. It may be used during air attacks or when the platoon must stop during movement. It lets the platoon move to covered and concealed positions off a road or from an open area and establish all-round security without detailed instructions being issued. The vehicles are repositioned as necessary to take advantage of the best cover, concealment, and fields of fire. Fire team members dismount and establish security.

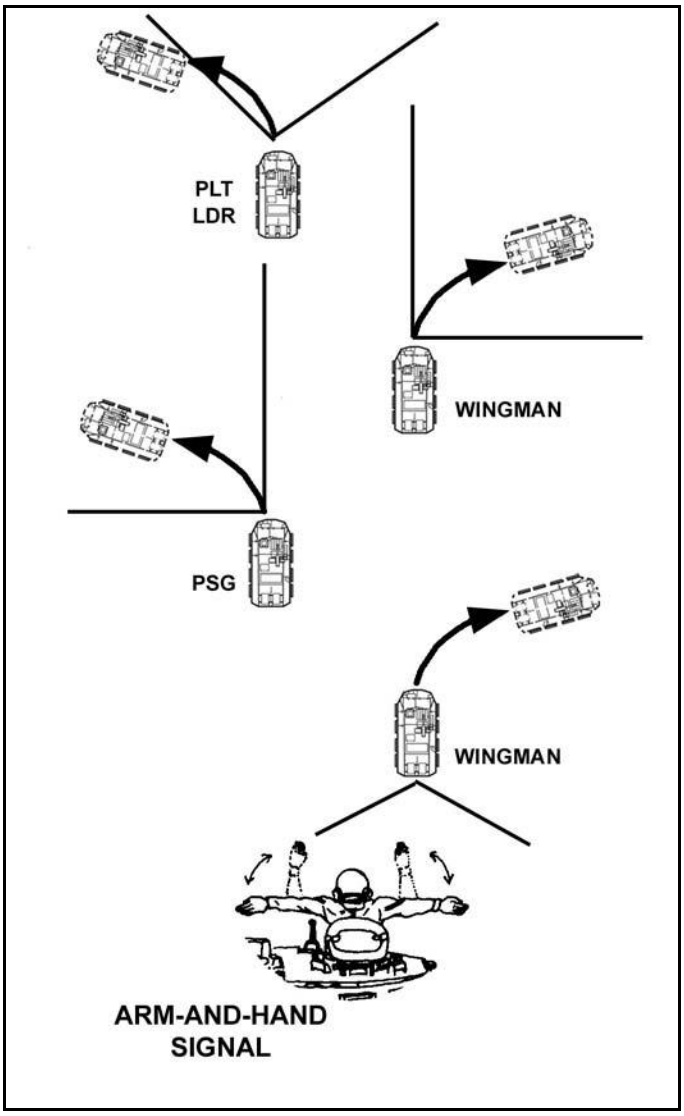


Figure 3-18. Herringbone formation.

3-4. MOVEMENT TECHNIQUES

Movement techniques are not fixed formations. They refer to the distances between soldiers, teams, and squads that vary based on mission, enemy, terrain, visibility, and other factors affecting control. As the probability of enemy contact increases, the platoon leader adjusts the movement technique to provide greater security. Digitized and limited-visibility equipment provide the leader with a clearer, more real-time update of the situation. Based on the most recent update, the leader executes either the traveling, traveling overwatch, or bounding movement technique. For example, if the platoon leader receives an enemy update from higher headquarters showing the enemy much closer to the platoon than originally anticipated, he immediately switches from the traveling to the bounding technique.

a. **Traveling Mounted.** Traveling mounted is used when contact with the enemy is not likely and speed is required (Figure 3-19, page 3-18). The leader analyzes the latest enemy spot reports on his CTD and determines if contact with the enemy is unlikely.

Because units generally move faster when traveling, mounted leaders must be aware of the increased potential for breaks in contact.

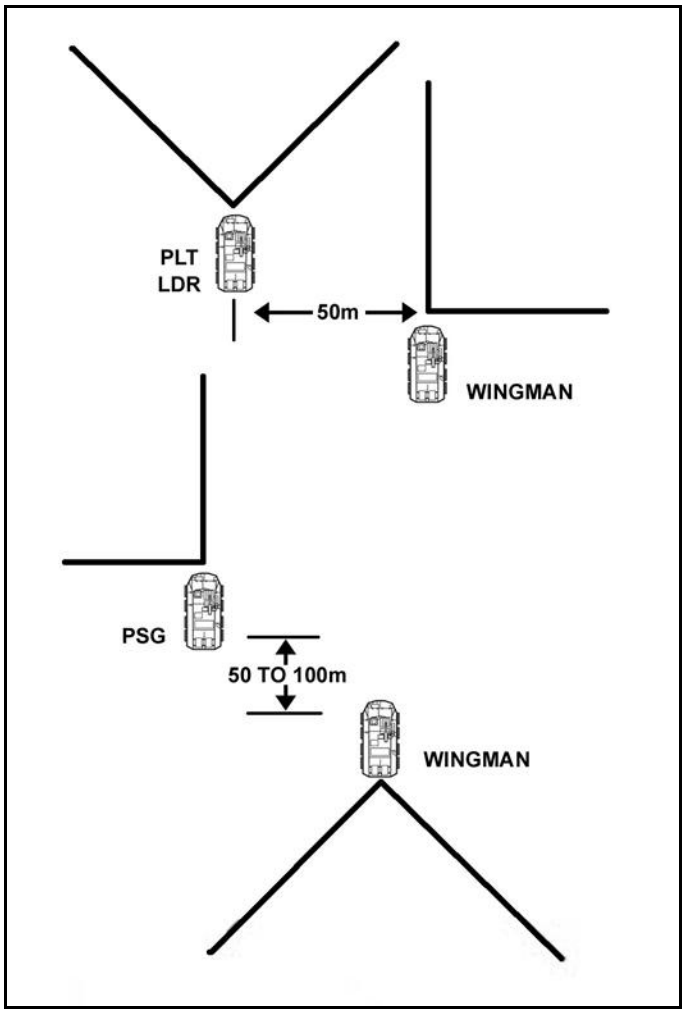


Figure 3-19. Traveling, platoon mounted.

b. **Traveling Overwatch Mounted.** Traveling overwatch mounted (Figure 3-20) is used when contact is possible. The leader designates one of his subordinate elements to provide security forward of the main body. In some cases, the security element may increase its distances from the main body as a result of improved enemy and friendly situational information or decrease their distance from the main body due to terrain or visibility restrictions. Leaders track the movement of their forward security elements and use position updates to ensure the forward security element is on azimuth and does not exceed the range of supporting direct fires. Likewise, the security element leader confirms his location and direction using position navigation (POSNAV) information. This means more to the nondigitized platoon than it does to the digitized platoon. Should a break in contact occur:

(1) The leader or detached element uses GPS aids to reestablish contact with the main body.

(2) The platoon's main body can use an infrared or thermal source to regain visual contact with the element and link it back to the main body.

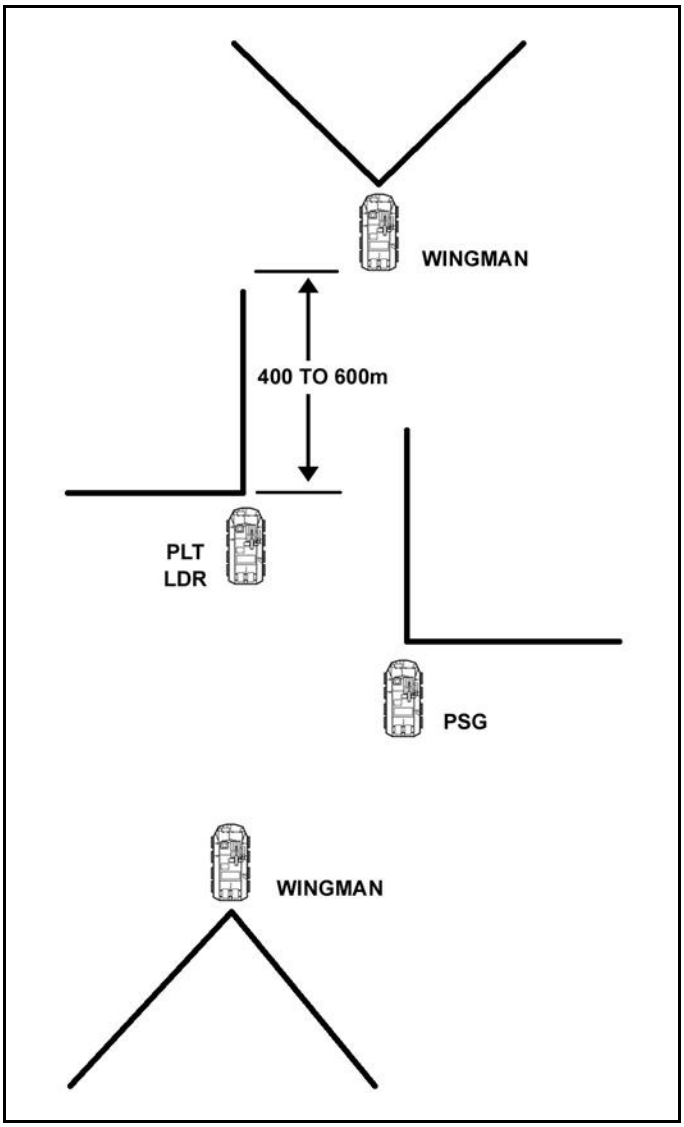


Figure 3-20. Traveling overwatch mounted.

c. **Bounding Overwatch Mounted.** Bounding overwatch mounted (Figure 3-21, page 3-20) is used when enemy contact is imminent. The leader initiates bounding overwatch based on planning information received earlier from the enemy situation and SITREPs received during movement. The leader bounds his elements using successive or alternate bounds.

(1) Before bounding, the leader shows his bounding element the location of the next overwatch position. Ideally, the overwatch element maintains visual contact with the bounding element. The leader of the overwatch element can use his computer to track the location of the bounding element without maintaining visual contact. This provides the bounding element more freedom in selecting covered and concealed routes to its next location.

(2) Once the bounding element reaches its overwatch position, it signals it is ready to overwatch using voice communications or a visual signal. The bounding element also may use an infrared visual signal, such as a GCP-1 or Phoenix flashing light. The platoon leader must not allow the bounding element to exceed the weapons range of the element even though the infrared and digital technology allows the leader to control movement beyond the range of his organic direct-fire weapons.

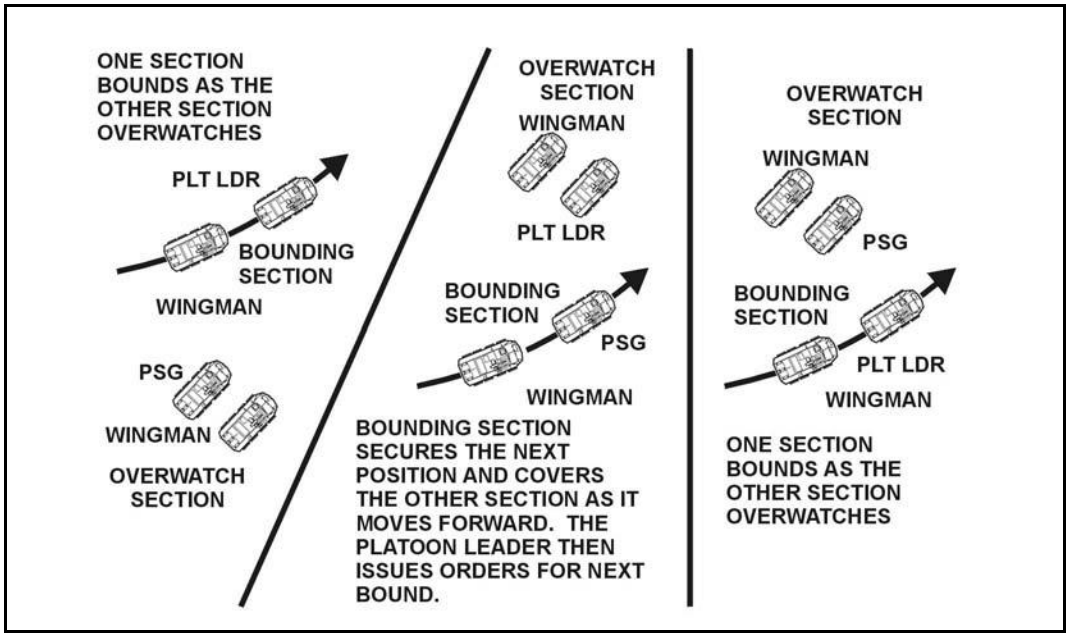


Figure 3-21. Bounding overwatch mounted.

d. **Traveling Dismounted.** Traveling dismounted is not used often when contact is unlikely because the platoon normally remains mounted unless it has situational intelligence updates from higher. The platoon will frequently have missions that require the rifle squads to operate independent of the vehicles. The traveling dismounted technique (Figure 3-22) is normal for the trailing rifle squad in a company formation. The element's formation is adjusted to fit the situation. The rifleman at the rear of the formation is the designated marksman and may be placed anywhere in the formation, threat dependent.

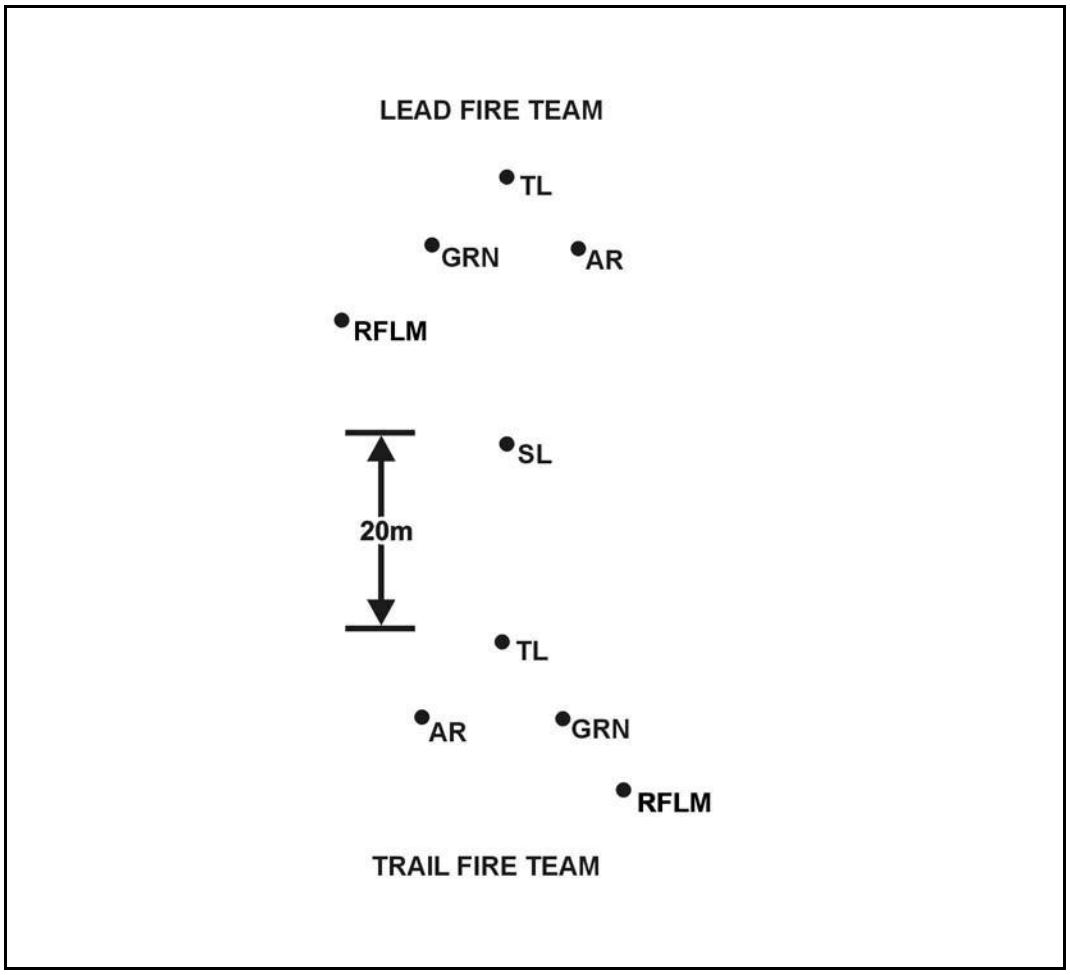


Figure 3-22. Traveling, squad dismounted.

e. **Traveling Overwatch (Dismounted).** Rifle squads normally move in column or wedge formation (Figure 3-23, page 3-22). Ideally, the lead team moves at least 50 meters in front of the rest of the element.

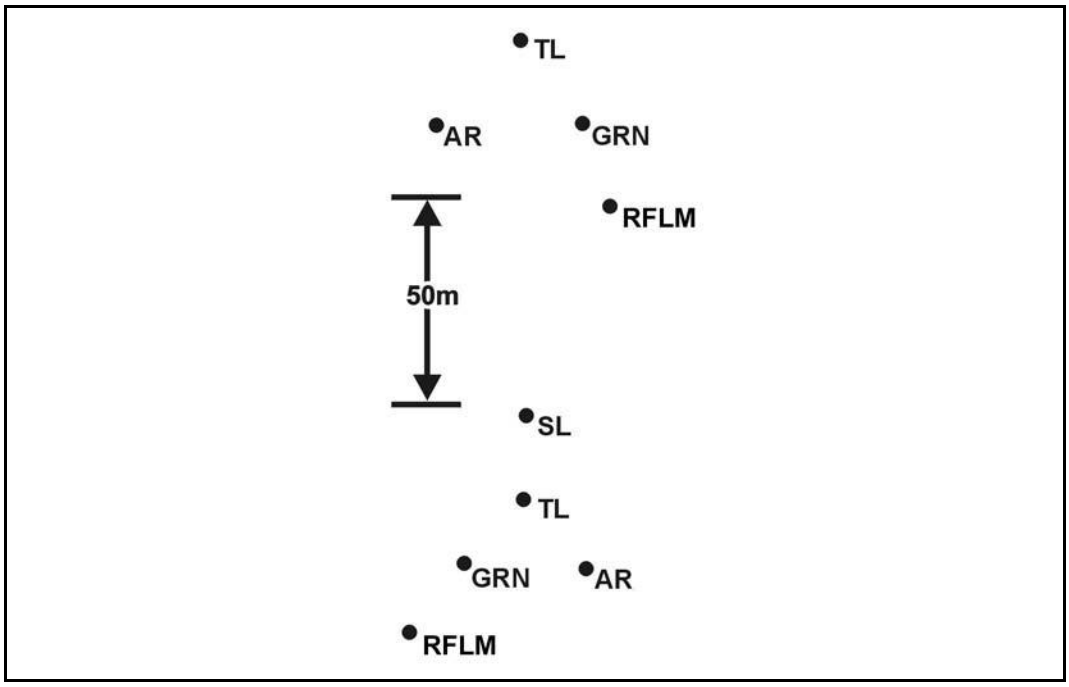


Figure 3-23. Traveling overwatch, squads dismounted.

f. **Bounding Overwatch Dismounted.** When the platoon leader expects contact and the terrain prohibits mounted movement, or when the rifle squads move separated from the vehicles, the platoon (-) bounds with the squads deployed.

3-5. ACTIONS AT DANGER AREAS

When analyzing the terrain during the troop-leading procedures (during his METT-TC analysis), the platoon leader may identify "danger areas." When planning the route, the platoon leader marks the danger areas on his digital concept sketch and overlay. The term "danger area" refers to any area on the route where the terrain would expose the platoon to enemy observation, fire, or both. Examples include large open areas, roads and trails, and bridges or crossing sites over water obstacles. If possible, the platoon leader plans to avoid danger areas, but sometimes he cannot. Navigational aids help, but when using them, the platoon and squads should always know their own location. Naturally, when the unit must cross a danger area, it does so as quickly and as carefully as possible. During planning, the leader designates near side and far side rally points. If the platoon encounters an unexpected danger area, it uses the en route rally points closest to the danger area as far side and near side rally points.

a. **Crossing Large Open Areas (Mounted).** If time and terrain permit, the platoon should dismount infantry to reconnoiter the movement route and secure the far side of the open area. However, the distances between covered and concealed positions may make the use of dismounted infantry impractical. If time constraints prevent the platoon from bypassing a large open area, then the platoon uses a combination of traveling overwatch and bounding overwatch to cross the open area. When the platoon has to move across large open areas with limited cover and concealment, the platoon leader should consider the factors of METT-TC before firing indirect or direct fire while the platoon moves.

Also, indirect-fire weapons can provide concealment by firing smoke alone or mixed with suppressive fires.

(1) ***Traveling Overwatch.*** The lead element moves continuously along the covered and concealed routes that give it the best available protection from possible enemy observation and direct fire (Figure 3-24). The trail element moves at variable speeds, providing continuous overwatch, keeping contact with the lead element, and stopping periodically to get a better look. The trail element stays close enough to provide immediate suppressive fire and to maneuver for support. However, it must stay far enough to the rear to retain freedom of maneuver in case an enemy force engages the lead element.

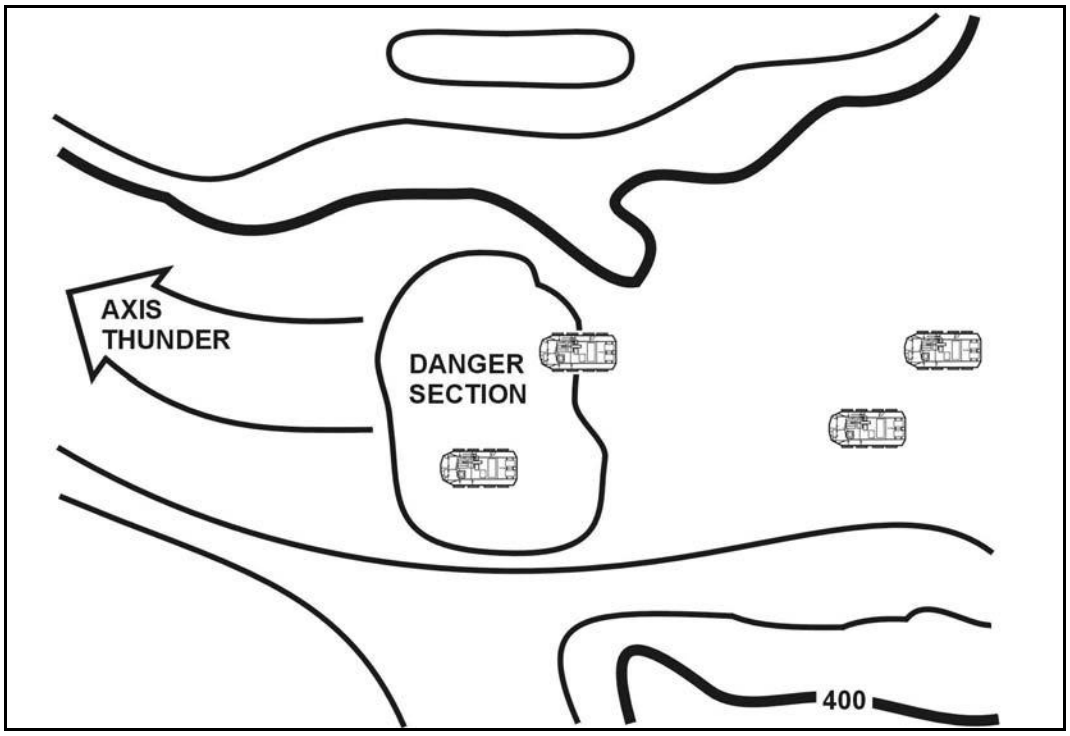


Figure 3-24. Crossing large open areas mounted (traveling overwatch).

(2) ***Bounding Overwatch***. When expecting contact, the platoon should use the slowest, most secure movement technique (Figure 3-25, page 3-24). If any enemy force engages the bounding element with direct fire, the platoon can suppress it at once with its own direct fire. With bounding overwatch, one element is always stopped to provide overwatching fire. First, the trail element occupies a covered and concealed position where it can overwatch the lead element. As soon as the lead element completes its bound (movement), it occupies a similar position and becomes the overwatch element. It overwatches while the new trail element (formerly the overwatch element) bounds forward to the next overwatch position. The platoon uses the folds in the earth and any other concealment to mask its movement. The platoon can execute a bounding overwatch using one of the methods discussed earlier in this chapter.

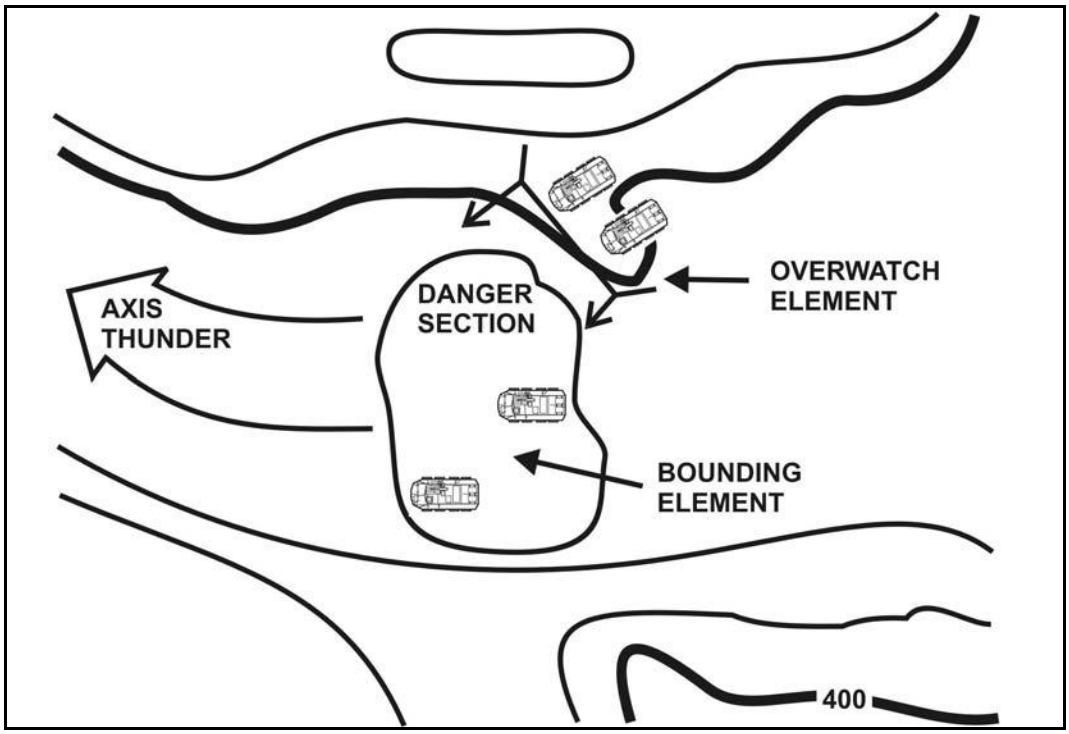


Figure 3-25. Crossing large open areas mounted (bounding overwatch).

b. **Crossing Large Open Areas (Dismounted).** When the platoon lacks the time to bypass a large open area, it uses a combination of traveling overwatch and bounding overwatch (Figure 3-26). It uses traveling overwatch when it needs to save time. Wherever the platoon expects possible contact, or after the squad or platoon moves within small-arms range of the far side (within about 250 meters of it), the platoon uses bounding overwatch. Once past the open area, the squad or platoon reforms and continues the mission.

(1) ***Far-Side Rally Point.*** The squad bounds by fire teams into the wood line and clears an area large enough for the entire squad. The squad begins bounding overwatch when it is within effective small-arms range (about 250 meters).

(2) ***Near-Side Rally Point.*** The platoon should use the traveling overwatch formation. The platoon should not clear the rally point like a separate linear danger area. Teams and individuals increase the interval between them.

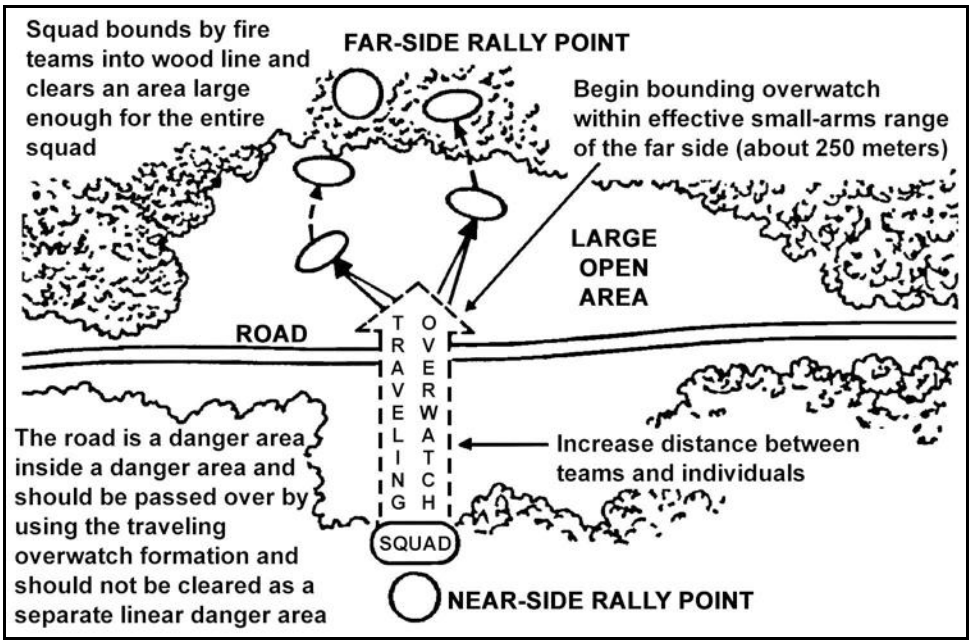


Figure 3-26. Crossing large open area.

c. **Crossing Small Open Areas (Dismounted).** When crossing an open area small enough to bypass in the time allowed for the mission, the platoon uses one of two techniques (Figure 3-27, page 3-26).

(1) ***Detour Bypass Method.*** The squad or platoon turns 90 degrees to the right or left around the open area and continues to move until it reaches the far side. It then continues the mission. The distance of the planned route does not include the pace count of the offset and return legs.

(2) ***Contouring Around the Open Area***. Using the movement azimuth, the leader designates a rally point on the far side, decides which side of the open area to contour around (after considering the distance, terrain, and cover and concealment), and moves around the open area. He uses the wood line and vegetation for cover and concealment. When the squad or platoon arrives at the rally point on the far side, the leader aligns himself with the azimuth to the objective area, then continues the mission.

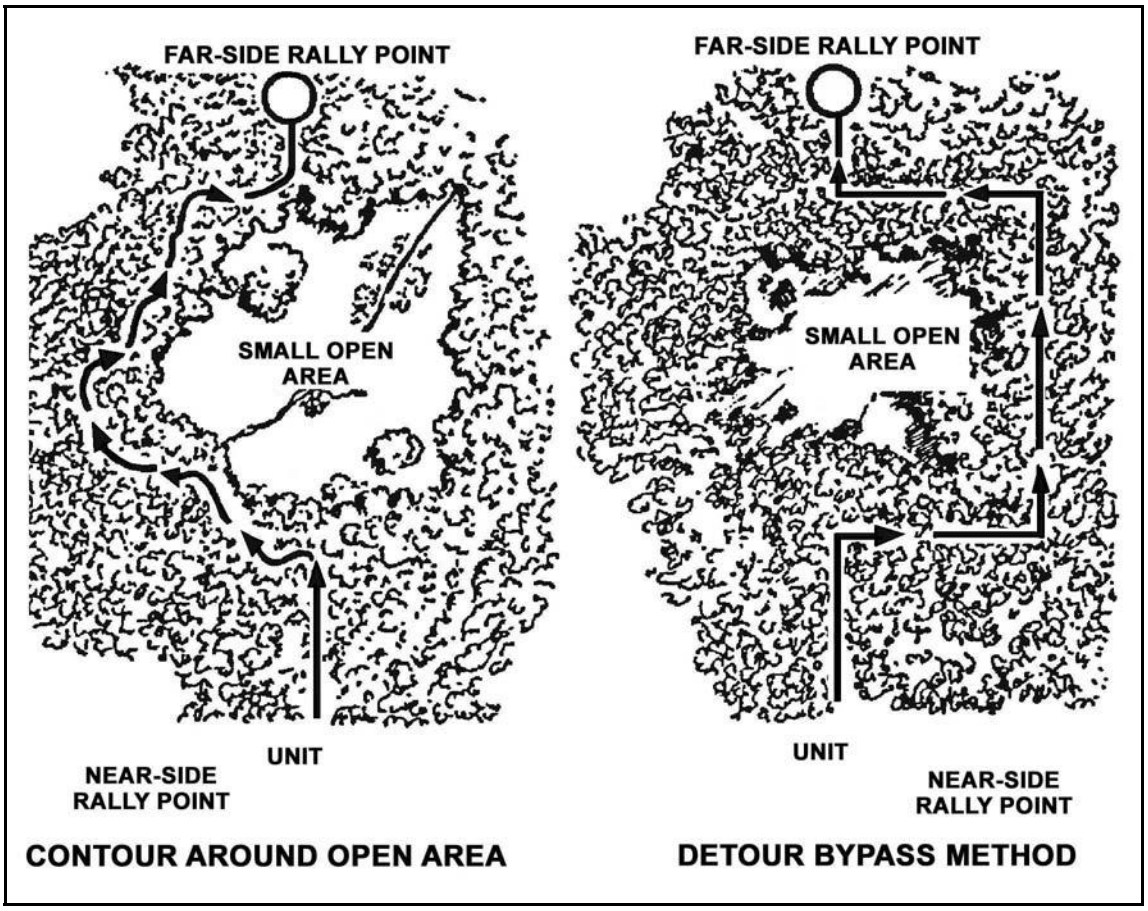


Figure 3-27. Crossing a small open area.

d. **Crossing Linear Danger Area (Dismounted).** The platoon crosses a linear danger area in the formation and location specified by the platoon leader (Figure 3-28). When the lead team signals "danger area" (relayed throughout the platoon), the platoon halts. The platoon leader quickly moves forward, confirms the danger area, and determines what technique the platoon will use to cross. The platoon sergeant (or designated NCO, if the platoon sergeant remains with the ICVs) also moves forward to the platoon leader.

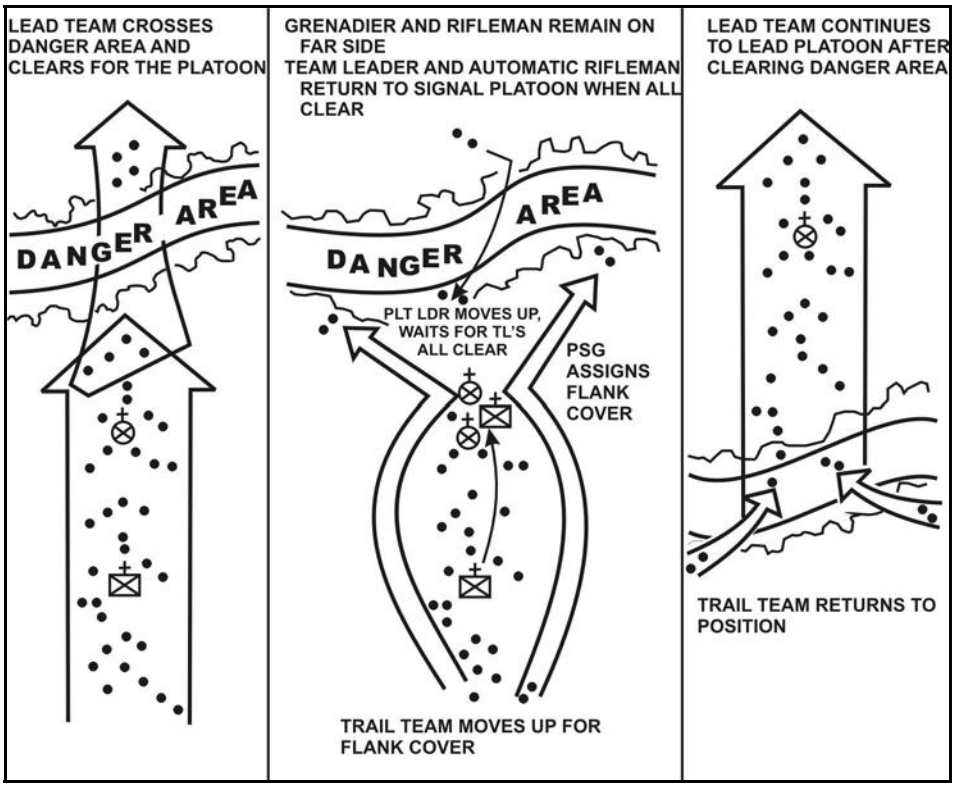


Figure 3-28. Crossing a linear danger area.

(1) The platoon leader informs all of the squad leaders of the situation and identifies the near-side and far-side rally points. He reconnoiters the danger area and selects the crossing point that provides the best available cover and concealment.

(2) The platoon sergeant directs positioning of the near-side security (usually conducted by the trail rifle squad). The near-side security element observes the flanks and overwatches the crossing. When the near-side security element is in position, the platoon leader directs the far-side security element (a fire team from the lead squad) to cross the danger area.

(3) The far-side security element clears the far side. The far-side security element leader establishes an observation post (OP) forward of the cleared area. The cleared area must be large enough to allow full deployment of the remainder of the platoon. The team leader signals his squad leader that the far side is clear. The squad leader relays this message to the platoon leader

(4) The platoon leader selects the method for the remainder of the platoon to use to cross the linear danger area. Once the platoon crosses the linear danger area, the main body begins moving slowly on the designated azimuth. The near-side security, controlled by the platoon sergeant, crosses the linear danger area where the platoon crossed. The platoon sergeant ensures that everyone in the platoon has crossed and sends a report to the platoon leader.

(5) The platoon leader ensures accountability and resumes movement at normal speed.

e. **Making Enemy Contact at Danger Areas.** An increased awareness of the situation helps the platoon leader control the platoon when it makes contact with the

enemy. If the platoon makes contact in or near the danger area, it moves to the designated rally points. Based on the direction of enemy contact, the leader still designates the far- or near-side rally point. During limited visibility, he can also use his AN/PAQ-4B/C or AN/PEQ-2A to point out the rally points at a distance. If the platoon has a hard time linking up at the rally point, the first element to arrive should mark the rally point with an infrared light source. This will help direct the rest of the platoon to the location. In an M2A3-equipped unit, the platoon leader uses the rally point graphic control measure in the CTD and then sends the data to his VCs and squad leaders. During movement to the rally point, position updates allow separated elements to identify each other's locations. These updates help them link up at the rally point by identifying friends and foes.

3-6. SECURITY DURING MOVEMENT

Security during movement includes whatever the platoon, vehicle crews, or squads do to secure the unit or the larger force. Information about his location, the tactical situation, and the enemy is available to the leader via the FBCB2 (CTD) or land warrior system (LWS). However, nothing replaces personal observation (head out of the vehicle, scanning the terrain, and looking for the enemy).

a. **Terrain.** When planning movements, the leader must consider how terrain affects security. The company commander should receive a copy of the modified combined obstacle overlay (MCOO) of the AO from battalion. The platoon leader may ask the company commander for a copy of the MCOO for his AO. Once he receives this, he uses it and the commander's results of terrain analysis to analyze the terrain to find the best covered and concealed route for his mission. At the same time, he considers the other factors of METT-TC.

b. **Formations and Movement Techniques.** When choosing a movement formation or technique, the leader considers the most recent situational update and the level of C2 needed for the mission. He chooses the option that will provide the greatest security, and the one that will most likely result in mission accomplishment. During individual platoon movement, the platoon leader places a small element forward to allow the platoon to make contact with the smallest element possible. This gives the rest of the platoon freedom to maneuver.

c. **Light Discipline.** If soldiers need more illumination than an image intensifier can provide in infrared mode during dismounted movement, they should also use other infrared light sources. The combination should provide the light needed with the least risk of enemy detection. When using infrared light, leaders must consider the enemy's night vision and infrared capabilities. For instance, an enemy with night vision capability can send infrared light signals, and he can concentrate direct and indirect fire on a platoon that is using infrared light.

3-7. MANEUVER

Maneuver provides the foundation for battlefield employment. At the platoon level, maneuver is the use of movement in combination with fire (or fire potential) employed to achieve a position of advantage with respect to the enemy and to facilitate accomplishment of the mission. Maneuver forms the heart of every tactical operation and task. The platoon leader maneuvers his mounted element and rifle squads to close with, gain positional advantage over, and ultimately destroy the enemy. One of the key

strengths of the SBCT platoon is its ability to move out of direct contact to a position of advantage over the enemy. The platoon leader then can choose to make contact at the time of his choosing.

a. **Base-of-Fire Element.** Combining fire and movement requires a base of fire. Some platoon elements remain stationary to provide protection for bounding elements by suppressing or destroying enemy elements.

(1) When possible, the base-of-fire element occupies positions that afford good cover and concealment, a clear view, and clear fields of fire. Once in position, the base-of-fire element suppresses known, likely, or suspected enemy elements and at the same time aggressively scans its assigned sectors. It also identifies previously unknown elements and then suppresses them with direct and indirect fires. The base-of-fire element allows the bounding unit to keep maneuvering so it can retain the initiative, even when the enemy can see and fire on it.

(2) Because maneuver is decentralized in nature, the platoon leader determines from his terrain analysis where and when he wants to establish a base of fire. During actions on contact, he adjusts maneuver plans as needed. Making maneuver decisions normally falls to the leader on a specific part of the battlefield--the one who knows what enemy elements can engage the maneuvering element and what friendly forces can provide the base of fire. Within a platoon, a section would provide a base of fire. Within a section, an individual vehicle or squad would do so.

b. **Bounding Element.** Maneuver is inherently dangerous. Enemy weapons, unknown terrain, and other operational factors all increase the danger. When maneuvering, the platoon leader considers the following.

(1) The bounding element must take full advantage of whatever cover and concealment the terrain offers. By enforcing and applying the principles of terrain driving, leaders and drivers, respectively, can enhance security. For example, they should always use intervening terrain and avoid “skylining.”

(2) All crews involved in the maneuver must maintain all-round security at all times. Crewmen in the bounding element must continuously scan their assigned sectors of observation.

(3) Factors of METT-TC dictate the length of the bounds. However, the bounding element should never move beyond the range at which the base-of-fire element can effectively suppress known, likely, or suspected enemy positions (two-thirds of the effective range of the weapon system). Taking this precaution lessens the bounding element’s exposure to enemy fires.

(4) In severely restricted terrain, the bounding element makes shorter bounds than it would in more open areas.

(5) To clear intervening gaps or dead spaces, the bounding element may have to dismount infantry squads or teams. Although doing so usually forces the element to make a tactical pause, it will slow the operation less than losing a vehicle and crew to a hidden enemy element.

(6) The bounding element must focus on its ultimate goal--gaining a positional advantage. Once achieved, the element uses this advantage to destroy the enemy with direct fires and dismounted infantry assault.

c. **Relationship of Tactical Movement and Actions on Contact.** The purpose of tactical movement is to move units on the battlefield to prepare them for contact with the

enemy. The process they use to evolve from tactical movement to maneuver is “actions on contact.” Refer to Chapter 4, Section IV, for a discussion of Actions on Contact.

CHAPTER 4
OFFENSIVE OPERATIONS

Offensive operations in restrictive terrain were the driving forces behind the creation of the SBCT infantry platoon. This chapter explains the platoon's conduct of those offensive techniques and procedures. The SBCT infantry platoon has great flexibility due to its organic mobility and robust infantry organization. Success for the SBCT infantry platoon depends on its ability to maximize this organic flexibility to mass combat power at key times and places. The increased mobility used in conjunction with its light infantry ethos allows the SBCT infantry platoon to move faster and farther and react quickly to changes in the tactical situation. Thus, this unit is not constrained by the time-space problem that has historically faced the light infantry.

Section I. FUNDAMENTALS OF OFFENSIVE OPERATIONS

The outcome of decisive combat derives from offensive operations. Only through offensive operations can a platoon close with the enemy by means of fire and maneuver to destroy or capture him or to repel his assault by fire, close combat, and counterattack. While tactical considerations may call for the platoon to execute defensive operations for a period of time, defeat of the enemy requires a shift to offensive operations. To ensure the success of the attack, the platoon leader must understand the following fundamentals of offensive operations and apply the troop-leading procedures during the operations process. (For a discussion on the operations process, refer to Chapter 2.) A sound doctrinal foundation during offensive planning assists the platoon leader in capitalizing on the tactical flexibility of the SBCT infantry platoon.

4-1. CHARACTERISTICS OF OFFENSIVE OPERATIONS

Surprise, concentration, tempo, and audacity characterize all offensive operations. To maximize the value of these characteristics, platoon leaders must apply the following considerations.

a. **Surprise.** Platoons achieve surprise by attacking the enemy at a time or place he does not expect, or in a manner for which he is unprepared. Unpredictability and boldness, within the scope of the commander's intent, help the platoon to gain surprise. Total surprise is rarely essential; simply delaying or disrupting the enemy's reaction is usually effective. Surprise delays the enemy's reactions, stresses his command and control, and induces psychological shock in his soldiers and leaders. The platoon's ability to attack during limited visibility, to operate as a small unit, and to infiltrate are often key to achieving surprise. The platoon must exploit the effect of surprise on the enemy before he can recover.

b. **Concentration.** Platoons achieve concentration by massing overwhelming effects of their weapons systems and rifle squads, without necessarily massing platoon vehicles and squads at a single location, to achieve a single purpose. Because the attacker moves across terrain the enemy has prepared, he may expose himself to the enemy's fires. By concentrating overwhelming combat power, the attacker can reduce the effectiveness of enemy fires and the amount of time he is exposed to those fires. Modern navigation tools

(such as GPS) allow the platoon leader to disperse his vehicles while retaining the ability to quickly mass the effects of the platoon's weapons systems whenever necessary.

c. **Tempo.** Tempo is the rate of speed of military action. Controlling or altering that rate is essential for maintaining the initiative. While a fast tempo is preferred, the platoon leader must remember that synchronization sets the stage for successful accomplishment of the platoon's mission. To support the commander's intent, the platoon leader must ensure that his platoon's movement is synchronized with the company's movement and with that of the other platoons. If the platoon is forced to slow down because of terrain or enemy resistance, the commander can alter the tempo of company movement to maintain synchronization. The tempo may change many times during an offensive operation. The platoon leader must remember that it is more important to move using covered and concealed routes to positions from which the platoon can mass the effects of direct fires on the enemy than it is to maintain precise formations and predetermined speeds.

d. **Audacity.** Audacity is a simple plan of action, boldly executed. It is the willingness to risk bold action to achieve positive results. Knowledge of the commander's intent two levels up allows the platoon leader to take advantage of battlefield opportunities whenever they present themselves, enhancing the effectiveness of the platoon's support for the entire offensive operation. Audacity, marked by disciplined initiative, inspires soldiers to overcome adversity and danger.

4-2. TYPES OF OFFENSIVE OPERATIONS

The four types of offensive operations, described in FM 3-90, are *movement to contact*, *attack*, *exploitation*, and *pursuit*. Companies can execute movements to contact and attacks. Platoons generally conduct these forms of the offense as part of a company. Companies and platoons participate in a higher unit's exploitation or pursuit. The nature of these operations depends largely on the amount of time and enemy information available during the planning and preparing for the operation phases. Companies and platoons participate in an exploitation or pursuit as part of a larger force.

a. **Movement to Contact.** The movement to contact (MTC) is a type of offensive operation designed to develop the situation and establish or regain contact. The platoon will likely conduct an MTC as part of a company when the enemy situation is vague or not specific enough to conduct an attack. (For a detailed discussion of MTC refer to Section V.)

b. **Attack.** An attack is an offensive operation that destroys enemy forces or seizes or secures terrain. Movement, supported by fires, characterizes the conduct of an attack. The platoon will likely participate in a synchronized company attack. However a platoon may conduct a special purpose attack as part of, or separate from, a company offensive or defensive operation. Special purpose attacks consist of ambush, spoiling attack, counterattack, raid, feint, and demonstration. (For a detailed discussion of attack and special purpose attacks refer to Section VI.)

c. **Exploitation.** Exploitations are conducted at the battalion level and higher. The objective of exploitation is to complete the destruction of the enemy following a successful attack. Companies and platoons may conduct movements to contact or attacks as part of a higher unit's exploitation.

d. **Pursuit.** Pursuits are conducted at the company level and higher. A pursuit typically follows a successful exploitation. The pursuit is designed to prevent a fleeing

enemy from escape and to destroy him. Companies and platoons may conduct attacks as part of a higher unit's exploitation.

4-3. FORMS OF MANEUVER

Given the typical sequence for offensive operations (refer to Section II), the platoon maneuvers against the enemy in an area of operation. Maneuver places the enemy at a disadvantage through the application of friendly fires and movement. The five forms of maneuver are:

- Envelopment.
- Turning movement.
- Infiltration.
- Penetration.
- Frontal attack.

a. **Envelopment.** Envelopment (Figure 4-1, page 4-4) is a form of maneuver in which an attacking force seeks to avoid the principal enemy defenses by seizing objectives to the enemy rear or flank in order to destroy him in his current positions. "Flank attacks" are a variant of envelopment in which access to the enemy's flank and rear results in enemy movement. A successful envelopment requires discovery or creation of an assailable flank. The envelopment is the preferred form of maneuver because the attacking force tends to suffer fewer casualties while having the most opportunities to destroy the enemy. A platoon may conduct the envelopment by itself or as part of the company's attack. Envelopments focus on:

- Seizing terrain.
- Destroying specific enemy forces.
- Interdicting enemy withdrawal routes.

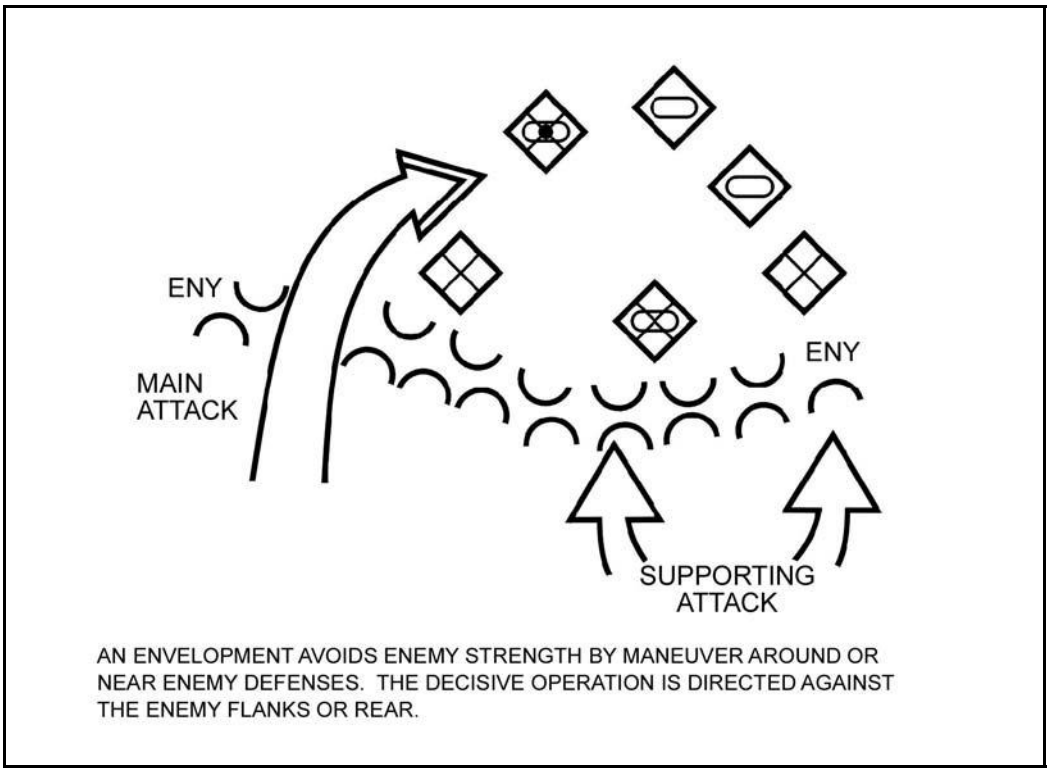


Figure 4-1. Envelopment.

b. **Turning Movement.** Turning movement (Figure 4-2) is a form of maneuver in which the attacking force seeks to avoid the enemy's principal defensive positions by seizing objectives to the enemy's rear and causing the enemy to move out of his current positions or to divert major forces to meet the threat. For a turning movement to be successful, the unit trying to turn the enemy must attack something that the enemy will fight to save. This may be a supply route, artillery emplacement, or a headquarters. In addition to attacking a target that the enemy will fight to save, the attacking unit should be strong enough to pose a real threat to the enemy. A platoon likely will conduct a turning movement as part of a company supporting a battalion attack.

NOTE: The turning movement is different from envelopment because the force conducting the turning movement seeks to make the enemy displace from his current location whereas an enveloping force seeks to engage the enemy in his current location from an unexpected direction.

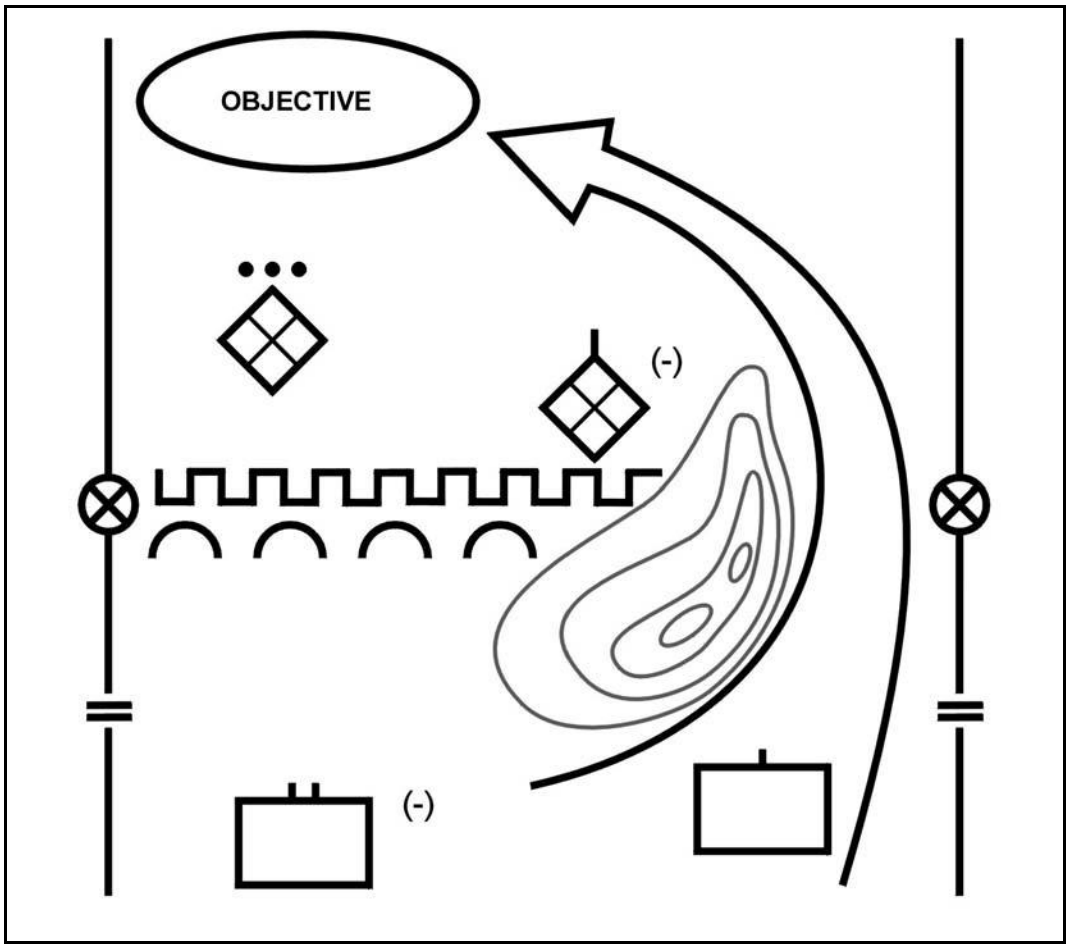


Figure 4-2. Turning movement.

c. **Infiltration.** Infiltration (Figure 4-3, page 4-6) is a form of maneuver in which an attacking force conducts undetected movement through or into an area occupied by enemy forces to occupy a position of advantage in the enemy rear while exposing only small elements to enemy defensive fires. Moving and assembling forces covertly through enemy positions takes a considerable amount of time. A successful infiltration reaches the enemy's rear without fighting through prepared positions. An infiltration normally is used in conjunction with and in support of another form of maneuver. A platoon may conduct an infiltration (dismounted or mounted) as part of a larger unit's attack with the company employing another form of maneuver. The platoon leader also may employ infiltration to maneuver his squads to a location to support the attack of the mounted element. A platoon may conduct an infiltration in order to:

- Attack enemy-held positions from an unexpected direction.
- Occupy a support-by-fire position to support an attack.
- Secure key terrain.
- Conduct ambushes and raids.
- Conduct a covert breach of an obstacle.

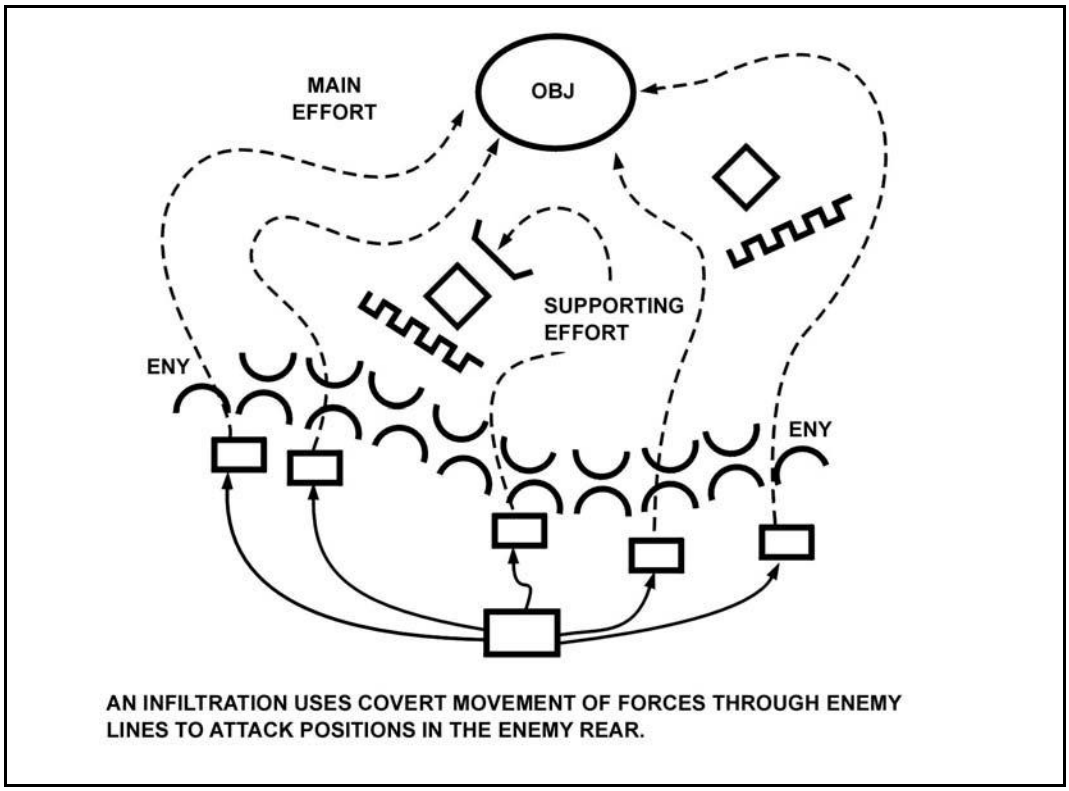


Figure 4-3. Infiltration.

d. **Penetration.** Penetration (Figure 4-4) is a form of maneuver in which an attacking force seeks to rupture enemy defenses on a narrow front to create both assailable flanks and access to the enemy's rear. Penetration is used when enemy flanks are not assailable, when enemy defenses are overextended, when weak spots in the enemy defense are identified, and when time does not permit some other form of maneuver. A penetration normally consists of three steps:

- Breach the enemy's main defense positions.
- Widen the gap created to secure flanks by enveloping one or both of the newly exposed flanks.
- Seize the objective.

As part of a larger force penetration, the platoon will normally isolate, suppress, fix, or destroy enemy forces, breach tactical or protective obstacles in the enemy's main defense, secure the shoulders of the penetration, or seize key terrain. A company also may use the penetration to secure a foothold within a built-up area.

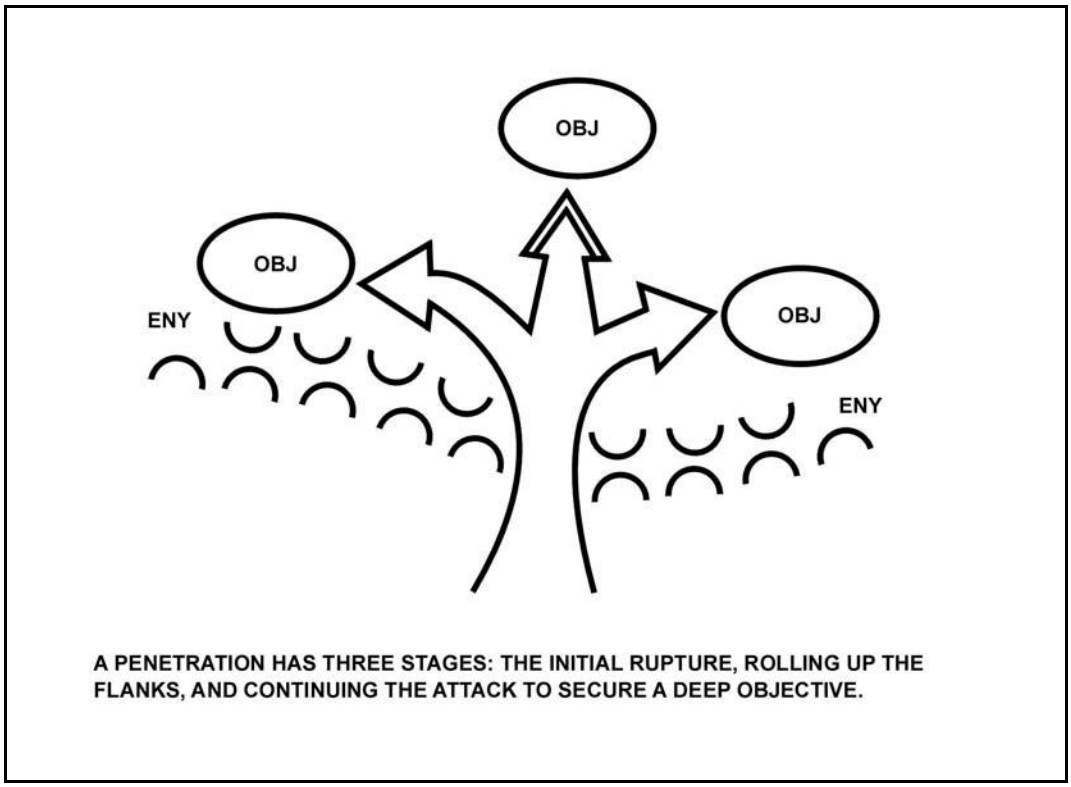


Figure 4-4. Penetration.

e. **Frontal Attack.** Frontal attack is a form of maneuver in which an attacking force seeks to destroy a weaker enemy force or fix a larger enemy force along a broad front. It is the least desirable form of maneuver because it exposes the attacker to the concentrated fire of the defender and limits the effectiveness of the attacker's own fires. However, the frontal attack is often the best form of maneuver for an attack in which speed and simplicity are key; it is useful in overwhelming weak defenses, security outposts, or disorganized enemy forces.

Section II. SEQUENCE OF OFFENSIVE OPERATION

As the platoon leader plans for an offensive mission, he generally considers the following sequence of events that applies to many, but not all, offensive operation.

- Assembly area.
- Reconnaissance.
- Movement to the line of departure.
- Maneuver.
- Deployment.
- Assault
- Consolidation and reorganization.

4-4. ASSEMBLY AREA

The platoon leader plans for the upcoming mission, and directs and supervises mission preparations in the assembly area (AA) to prepare the platoon for the upcoming battle. Preparation time in the assembly area allows the platoon to conduct precombat checks

and inspections, rehearsals, and CSS activities. Typically, the platoon will conduct these preparations within a company AA. Rarely will the platoon occupy its own assembly area.

4-5. RECONNAISSANCE

All leaders should aggressively seek information about the terrain and the enemy. The enemy situation and available planning time may limit a unit's reconnaissance. In this circumstance, the platoon likely will conduct reconnaissance to answer the company commander's PIR. An example may be to reconnoiter and time routes from the AA to the LD. The platoon may also augment the efforts of the battalion reconnaissance platoon to answer the commander's PIR.

4-6. MOVEMENT TO THE LINE OF DEPARTURE

The platoon will typically move from the AA to the LD as part of the company movement plan. This movement plan may direct the platoon to move to an attack position (ATK PSN) to await orders to cross the LD. If so, the platoon leader must reconnoiter, time, and rehearse the route to the ATK PSN and reconnoiter the actual position. Section and squad leaders must know where they are to locate within the assigned ATK PSN. The ATK PSN is the last position an attacking force occupies or passes through before crossing the LD. The company commander may order all of the platoons to move within a company formation from the AA directly to the point of departure (PD) at the LD. The PD is the point where the unit crosses the LD and begins moving along a direction of attack or axis of advance. If one PD is used, it is important that the lead platoon, as well as the trail platoons, reconnoiters, times, and rehearses the route to the PD. This allows the company commander to maintain synchronization. The company commander may also designate a PD along the LD for each platoon in order to maintain synchronization and flexibility.

4-7. MANEUVER

The company commander will plan the approach of all platoons to the objective to ensure synchronization, security, speed, and flexibility. He will select the routes, movement techniques and formations and the methods of movement (mounted or dismounted) of the platoons that best support his intent for actions on the objective. The platoon leader must recognize this portion of the battle as a fight, not as a movement. He must be prepared to make contact with the enemy. (For a detailed discussion of actions on contact refer to Section IV.) He must plan accordingly to reinforce the commander's needs for synchronization, security, speed, and flexibility. During execution, he may display disciplined initiative and alter his platoon's formation, technique, or speed to maintain synchronization with the other platoons and flexibility for the company commander.

4-8. DEPLOYMENT

As the platoon deploys and moves toward the assault position (ASLT PSN), it begins the final positioning of the squads or ICVs, as directed by the company commander, to minimize delay and confusion. An ASLT PSN is a covered and concealed position short of the objective from which final preparations are made to assault the objective. This tactical positioning allows the platoon to move in the best tactical posture through the

ASLT PSN into the attack. Movement should be as rapid as the terrain, unit mobility, and the enemy situation permit. The probable line of deployment (PLD) is usually the next control measure following the ASLT PSN; however, the PLD may be located within the ASLT PSN. The PLD is a phase line that the company commander designates as the location where he intends to completely deploy his unit into the assault formation before beginning the assault.

4-9. ASSAULT

During an offensive operation, the platoon's objective may be terrain-oriented or force-oriented. Terrain-oriented objectives may require the platoon to seize or retain a designated area and often require fighting through enemy forces. If the objective is force-oriented, an AO may be assigned for orientation, but the platoon's efforts are focused on the enemy's actual location. Actions on the objective begin when the company or platoon begins placing direct and indirect fires on the objective. This may actually occur while the platoon is still moving toward the objective from the ASLT PSN or PLD.

4-10. CONSOLIDATION AND REORGANIZATION

The platoon consolidates and reorganizes as required by the situation and mission. Consolidation is the process of organizing and strengthening a newly captured position so that it can be defended. Reorganization is the actions taken to shift internal resources within a degraded unit to increase its level of combat effectiveness. The platoon executes follow-on missions as directed by the company commander. A likely mission may be to continue the attack against the enemy within the AO. Regardless of the situation, the platoon must posture itself and prepare for continued offensive operations.

Section III. BATTLEFIELD OPERATING SYSTEMS PLANNING CONSIDERATIONS

The battlefield operating systems (BOS) are a listing of critical tactical activities that provides a means of reviewing preparation and execution. Synchronization and coordination among the BOS are critical for success. Selected BOS are addressed in this section. For a detailed discussion of command and control and intelligence, refer to Chapter 2.

4-11. MANEUVER

The purpose of maneuver is to close with and destroy the defending enemy. Maneuver requires a base-of-fire element to suppress and or destroy enemy forces with accurate direct fires and bounding elements to gain positional advantage over the enemy. When effectively executed, maneuver leaves enemy elements vulnerable by forcing them to fight in two directions, robbing the enemy of the initiative, and ultimately limiting his tactical options.

4-12. FIRE SUPPORT

The platoon may be able to employ indirect fires from field artillery or company and or battalion mortars to isolate a small part of the enemy defense or to suppress the enemy on the objective. The platoon leader must always keep in mind the potential danger to friendly elements created by indirect fires used in support of the assault. He must ensure

that the indirect fire assets always know the position and direction of movement of the assault force.

4-13. MOBILITY, COUNTERMOBILITY, AND SURVIVABILITY

The platoon will likely focus on "mobility" during offensive operations. The platoon may be required to breach obstacles as part of an offensive operation. These may be protective obstacles that the platoon is expected to breach without additional assets, or these may be tactical obstacles that require engineer assets in order to breach. Refer to FM 3-34.2 for a detailed discussion of breaching.

4-14. AIR DEFENSE

Avengers or Linebackers may operate in the platoon's AO. Although these assets do not necessarily work for or with the platoon, the platoon may have a specified (or implied) task to secure these air defense assets. The platoon leader must take this into consideration during planning. The platoon leader should also address how to react to enemy air assets if no external assets are available or operating within his AO. Unit standing operating procedures (SOPs) should dictate internal air security measures and active air defense measures. Refer to Chapter 8 for a detailed discussion of air defense capabilities and procedures.

4-15. COMBAT SERVICE SUPPORT

The primary purpose of CSS in the offense is to assist the platoon and company in maintaining momentum during the attack. Key CSS planning considerations for the platoon leader during the offense include--

- Increased consumption of Class III supplies.
- High expenditure of ammunition for selected tactical tasks.
- High casualty rate and how to evacuate the casualties.
- Vehicle maintenance and recovery requirements.

Section IV. ACTIONS ON CONTACT

The four-step process for actions on contact is not a rigid, lockstep response to enemy contact; rather, it provides an orderly framework to help the platoon survive the initial contact. Leaders can follow up with sound decisions and act promptly to complete the operation. The platoon must react instinctively and instantly to the contact. The platoon leader's initial consideration should be, "Did the enemy see us before we deployed to cover?" The platoon leader decides what to do--he can have the platoon execute a planned battle drill or plan, or he can recommend to the company commander that the platoon execute an alternate drill or action. (See Appendix E for battle drills and crew drills.) At times, the platoon leader and his platoon must execute more than one of these steps at the same time. This is why the platoon must prepare thoroughly for contact situations. To ensure the platoon works well as a team and reacts correctly, yet instinctively, the platoon leader must rehearse battle drills and established unit SOPs. He must also conduct comprehensive training. The four-step process gives the platoon leader a logical, well-organized decision-making process for executing actions on contact. The four steps are:

- Deploy and report.
- Evaluate and develop the situation.
- Choose a course of action.
- Recommend and execute a course of action.

4-16. DEPLOY AND REPORT

The platoon leader deploys the platoon when he recognizes one of the general categories of initial contact or receives a report of enemy contact.

a. Contact situations include (but are not limited to) the following:
   - Visual contact (friendly elements may or may not be observed by the enemy).
   - Physical contact with a superior, inferior, or unknown enemy.
   - Indirect fire contact.
   - Contact with obstacles of enemy or unknown origin.
   - Contact with enemy or unknown aircraft.
   - Situations involving NBC conditions.
   - Situations involving electronic warfare tactics such as jamming, interference, and imitative deception.

b. When the platoon makes contact with the enemy, the platoon leader responds according to the circumstances of the situation. The squad or vehicle that makes initial contact must react as appropriate. The platoon leader has several choices in deploying the platoon. In many cases, he will initiate one of the battle drills for the platoon (Appendix E). He also can order his sections or squads to immediately seek the best available covered and concealed position. (If mounted, the platoon leader determines whether or not to dismount the rifle squads.) The position should afford unobstructed observation and fields of fire and allow the platoon to maintain flank security. ICV crews also will seek cover and concealment in the absence of a deployment order from the platoon leader. This step concludes with the platoon leader or platoon sergeant sending a contact report to the company commander followed as soon as possible by a spot report (SPOTREP).

4-17. EVALUATE AND DEVELOP THE SITUATION

While the platoon deploys by executing a battle drill or occupying a covered and concealed position, the platoon leader must begin to evaluate the situation and, as necessary, develop it. His primary focus is on determining or confirming the *size* (inferior or superior), *composition* (available weapon systems), *activity*, and *orientation* of the enemy force. He analyzes how obstacles and terrain in the AO will affect enemy and friendly capabilities and possible courses of action. The platoon leader uses reports from his section and squad leaders, other platoon leaders, the executive officer, and the company commander to make his evaluation.

a. Because the platoon usually operates as part of a company, battalion reconnaissance elements or other assets may be available to assist the commander and platoon leader in evaluating and developing the situation.

b. There are no established rules for determining the level of superiority of an enemy in relation to the platoon; the result is dependent on the situation. The general criteria are as follows:

(1) ***Inferior Force.*** An inferior force is defined as an enemy element that the platoon can destroy while remaining postured to conduct further operations.

(2) ***Superior Force.*** A superior force is one that can be destroyed only through a combined effort of company- or battalion-level combat and CS assets.

c. The platoon leader evaluates the enemy's capabilities, especially the number of lethal weapon systems that he knows the enemy has. He also considers the enemy's recent activities.

d. The enemy's lethality options vary. The enemy might use rapid-fire antitank weaponry, slow-firing wire-guided systems, or dismounted soldiers with automatic weapons. He can entrench forces in prepared fighting positions, or he can conduct a refueling operation with little security.

e. After making contact and evaluating the situation, the platoon leader may discover that he does not have enough information to determine the superiority or inferiority of the enemy force. To make this determination, he can further develop the situation using a combination of techniques including fire and maneuver, indirect fire, reconnaissance by fire, and surveillance. In such a situation, however, the platoon leader must exercise caution, ensuring that his actions support the commander's intent.

f. The platoon leader's most crucial considerations include mission accomplishment and the survivability of the platoon. Once the platoon leader determines what the platoon is up against, he or the platoon sergeant sends an updated SPOTREP to the company commander. Once the platoon leader develops the situation and determines that he has enough information to make a decision, he selects a COA that accomplishes the mission, meets the requirements of the commander's intent, and is within the platoon's capabilities. He has several options in determining the COA:

- Direct the platoon to execute the original plan. The platoon leader selects the COA specified by the commander in the OPORD.
- Based on the situation, issue FRAGOs to refine the plan, ensuring it supports the company commander's intent.
- Report the situation and recommend to the company commander an alternative course of action based on known information in response to an unforeseen enemy or battlefield situation.
- Direct the platoon to execute tactical movement (employing bounding overwatch and support by fire within the platoon) and reconnaissance by fire to further develop the situation and gain the information he needs to clarify a vague battlefield picture.

4-18. CHOOSE A COURSE OF ACTION

The platoon leader will have little time for analysis at this point, but he should already have developed a clear understanding of the available COAs. He considers the commander's intent and guidance to help him determine his choice of a COA.

a. In most cases, the commander will have identified the criteria for anticipated actions on contact in terms of the enemy's capabilities (that is, whether the enemy is a superior or inferior force). He will have specified criteria for destroying, fixing, and bypassing the enemy as well as the applicable disengagement criteria. He evaluates various reactions to possible enemy actions during planning, in the company rehearsal,

during his informal war-gaming, and during platoon rehearsals. He also should plan for the employment of indirect fires to support his COA.

b. Refinements to the original plan or development of a new COA may change the scheme of maneuver. In most situations, the intent of maneuver is to gain positions of advantage over the enemy, forcing him to fight in an unintended direction. One element moves to the position of advantage while another element overwatches and supports. Control of indirect fires is shifted to the observer who can best call for and adjust fire on the enemy. If necessary, the platoon leader issues a revised set of graphic control measures as part of the FRAGO.

4-19. RECOMMEND AND EXECUTE A COURSE OF ACTION

Once he has chosen a COA, the platoon leader continues his evaluation of the situation by determining whether or not his COA aligns with the commander's intent and guidance from the order or rehearsal. If so, he orders the platoon to execute it, and he reports his intentions to the company commander.

a. If, however, the situation dictates a change from the original plan, the platoon leader must recommend a new COA to the commander. He then directs the platoon to execute the COA selected by the commander. The platoon leader communicates with other platoon leaders as necessary to obtain support in accordance with (IAW) the commander's intent.

b. More information will become available as the platoon executes its COA. The platoon leader or platoon sergeant keeps the company commander abreast of the situation with SPOTREPs and SITREPs. Accuracy of these reports is critical because the battalion commander and S2 eventually use them to confirm or deny the enemy situational template.

c. Key information the commander needs includes the size, activity, location, unit, time observed, equipment (SALUTE) of any enemy elements that the platoon has observed, engaged, destroyed, or bypassed. The platoon leader also informs the commander of the platoon's current location or destination and of any changes in the platoon's combat power or logistical status.

d. Based on details of the enemy situation, the platoon leader may have to alter his plan during execution. For example, as the platoon maneuvers to destroy what appears to be a lone enemy vehicle, it might discover six more in prepared fighting positions (a superior force). In this case, the platoon leader informs the commander and recommends an alternate COA, such as the platoon occupying a support-by-fire position while the remainder of the company destroys the enemy vehicles. The platoon continues to execute the selected or refined COA until it accomplishes the original mission, receives a FRAGO from the company commander changing the mission or COA, or receives a new order to consolidate and reorganize on the objective.

EXAMPLE: As the platoon maneuvers to destroy what appears to be a combat security outpost with one BMP-3 and an infantry squad, it discovers that the outpost is actually manned by a reinforced motorized rifle platoon (MRP) (three BMP-3s and one T-80U). The platoon leader must analyze and develop the new situation. He reports to the company commander that the enemy is more than the platoon can handle and recommends an alternate course of

action, such as establishing a support-by-fire position to suppress the enemy while the remainder of the company bounds forward to destroy the reinforced MRP.

Section V. PLATOON OFFENSIVE OPERATIONS

Platoons and squads conduct an attack as part of the SBCT infantry rifle company. An attack requires detailed planning, synchronization and rehearsals to be successful. The company commander designates platoon objectives with a task and purpose for his assault, support, and breach elements. To ensure synchronization, all leaders must know the location of their subordinates and adjacent units during the attack. In addition to having different forms based on their purposes (refer to Section VII), attacks are characterized as hasty or deliberate. The primary difference between them is the extent of planning and preparation conducted by the attacking force, but there is no clear distinction between hasty and deliberate attacks. Attacks may take the form of one of the following:

- Force-oriented attacks against a stationary enemy force.
- Force-oriented attacks against a moving enemy force.
- Terrain-oriented attacks.

4-20. DELIBERATE ATTACK

Most often, the platoon conducts either a hasty attack or a deliberate attack with the only difference being the level of detailed planning and preparation. Platoons and squads conduct deliberate attacks as part of a larger force. The commander may designate separate platoon objectives for his assault, support, and breach elements, resulting in decentralized execution at all levels. SBCT forces can conduct deliberate attacks dismounted throughout the operation or can use the ICVs to conduct movement to the assault position. This decision is situation dependent. The phases of the deliberate attack are reconnaissance, movement to the objective, isolate the objective, seize a foothold, and exploit.

a. **Reconnaissance.** Before a deliberate attack, the platoon and company should gain enemy and friendly information from the reconnaissance conducted by the RSTA squadron or the battalion reconnaissance platoon. However, this may not always occur. The platoon and company should be prepared to conduct a reconnaissance of the objective to confirm, modify, or deny their tentative plan.

(1) Platoons should not conduct reconnaissance unless specifically tasked to do so in a consolidated reconnaissance plan. If possible, the company should determine the enemy's size, location, disposition, most vulnerable point, and most probable course of action. At this point, and with permission from battalion, the company should direct the platoon to conduct a reconnaissance patrol. This element conducts a reconnaissance of the terrain along the axis of advance and on the objective. It determines where the enemy is most vulnerable to attack and where the support element can best place fires on the objective.

(2) The tentative plan may change as a result of the reconnaissance if the platoon or squad discovers that terrain or enemy dispositions are different than determined earlier in the troop-leading procedures. The platoon or squad leader may modify graphic control measures based on the results of the reconnaissance and must send these adjustments as

soon as possible. For example, the platoon may discover that the ICVs and the weapons squad cannot suppress the enemy from the north side of the objective as originally planned because of terrain limitations. Therefore, the platoon leader moves the support-by-fire positions to the south side of the objective, adjusts the tentative plan's graphics, and sends the modified graphics to his commander for approval. The graphics are subsequently disseminated throughout the company and to adjacent units as needed.

b. **Movement to the Objective.** The attacking force advances to within assault distance of the enemy position under supporting fires using a combination of traveling, traveling overwatch, and or bounding overwatch. Platoons advance to successive positions using available cover and concealment. The company commander may designate support-by-fire positions to protect friendly forces with suppressive direct fires. As the company maneuvers in zone, it employs fires to suppress, neutralize, and obscure the enemy positions. The platoon conducts mounted movement to covered and concealed positions and then dismounts. If the platoon is dismounted and moving separately from the ICVs, the platoon concentrates direct and indirect fires, establishes a base of fire, and maneuvers to regain the initiative.

(1) ***Assembly Area to the Line of Departure***. The LD is normally a phase line (or checkpoint) where elements of the attacking force transition to secure movement techniques in preparation for contact with the enemy. Platoons may maneuver from the LD to designated support-by-fire positions, assault positions, or breach or bypass sites. Before leaving the assembly area, the platoon leader should receive a COP update (digital) showing the location of forward and adjacent friendly elements. He should also receive updated enemy locations. The platoon leader then disseminates these reports and digital overlays to each squad leader and VC. The platoon moves forward from the assembly area to the line of departure, usually as part of a company formation, along a planned route. The platoon leader should have reconnoitered the route to the LD and specifically to the crossing point. During the planning stage, he plots a waypoint on the line of departure at the point he intends to cross. The platoon navigates to the waypoint during movement. The move from the assembly area is timed during the reconnaissance so the lead section crosses the LD at the time of attack without halting in the attack position. If the platoon must halt in the attack position, it uses a coil or herringbone formation, dismounts infantry, and takes care of last minute coordination.

(2) ***Line of Departure to Assault Position***. The platoon's assault element moves from the LD to the assault position. The platoon leader plots waypoints to coincide with checkpoints along the route. During movement, he ensures the platoon navigates from checkpoint to checkpoint or phase line by using basic land navigation skills supplemented by precision navigation. The platoon leader verifies his vehicles are in the correct formation for movement.

(a) By relying on the CTD's position updates at night, the platoon leader does not have to restrict his platoon's dispersion as much, which increases his overall security posture. During movement, the platoon communicates primarily by FM radio and signals (embedded digital reports) because these are faster for the receiving station to understand and faster for the sending station to prepare.

(b) The platoon dismounts the squads at the dismount point. The vehicles move to a support position. The platoon dismounts in an area providing cover and concealment from enemy observation and direct fire as it assembles and orients itself.

(3) ***Assault Position to the Objective.*** The assault position is the last covered and concealed position before reaching the objective. Ideally, the platoon's assault element occupies the assault position without the enemy detecting any of the platoon's elements. Preparations in the assault position may include preparing bangalores, other breaching equipment, or demolitions; fixing bayonets; lifting or shifting fires; or preparing smoke pots. The platoon must halt in the assault position to ensure synchronization of friendly forces. Once the assault element moves forward of the assault position, the assault must continue. If stopped or turned back, the assault element could sustain excessive casualties.

(a) Supporting fire from the weapons squad must continue to suppress the enemy and must be closely controlled to prevent fratricide. At times, the assault element may mark each soldier or just the team on the flank nearest the support element. The assaulting soldiers and the support element sustain a high rate of fire to suppress the enemy.

(b) When the assault element moves to the breach point, the base-of-fire leader verifies the assault element is at the right location. The base-of-fire leader is responsible for tracking the assault element as it assaults the objective. The company commander shifts or lifts indirect fire when it endangers the advancing soldiers and coordinates this with the platoons' assaults. As the fire of the platoons' support is masked, the platoon leader shifts or lifts it or displaces the weapons squad and ICVs to a position where continuous fire can be maintained.

c. **Isolate the Objective.** The goals of isolation are to prevent the enemy from reinforcing the objective and to prevent enemy forces on the objective from leaving. Infantry platoons will likely be an isolating force within a company. The platoon leader may use the mounted element to accomplish isolation if the platoon must isolate its own objective. The mounted element by its nature is agile, has significant firepower, has protection from small arms fire, and is led by the platoon sergeant. Using the mounted element for this purpose allows the dismounted element (three infantry squads and a weapons squad) to conduct actions on the objective.

d. **Seize a Foothold and Exploit the Penetration (Actions on the Objective).** The platoon leader often designates assault, support, and breach elements within his platoon to conduct a deliberate attack. One technique is to designate the ICVs as one support element, the seven-man weapons squad as another support element, a nine-man infantry squad as the breach element, and the platoon (-) as the assault element.

(1) The supporting elements support the breach element's initial breach of the objective by placing suppressive fires on the most dangerous enemy positions. The platoon augments the signals it uses to lift or shift fire and to mark the left and right limits of the assault element with their OTN equipment. As the breach is being established, the weapons squad (or mounted element) should shift fires of M240Bs (or local self-defense weapons) to allow the breach element to penetrate the objective without committing fratricide. Visual observation, as well as information provided via the COP, is vital to maintain suppressive fires just forward of the breach and assault elements.

(2) The supporting elements monitor the forward progress of the assault element and keep shifting suppressive fire at a safe distance in front of them. The weapons squad positions itself to provide continual close-in suppressive fire to aid the actions of the assault element as it moves across the objective. The mounted element most likely ceases direct fires.

(3) Once the breach element has seized the initial foothold on the objective, the assault element may then move through the breach lane to assault the objective. As this occurs, the platoon sergeant closely observes the progress of the breach and assault elements to ensure there is no loss in momentum and that assault and breach elements do not cross in front of the supporting elements.

(4) All communication from the mounted support element to the breach, assault, and weapons squads is by FM radio or signals. If the platoon sergeant or weapons squad leader observe problems, they radio the platoon leader. The platoon leader uses this information, the COP, and what he personally sees on the objective to control the assault.

e. **Consolidation and Reorganization.** Once enemy resistance on the objective has ceased, the platoon quickly consolidates to defend against a possible counterattack and prepares for follow-on missions.

(1) Consolidation consists of actions taken to secure the objective and defend against an enemy counterattack. The platoon leader must use the troop-leading procedures to plan and prepare. He ensures the platoon is ready to--

- Eliminate enemy resistance on the objective.
- Establish security beyond the objective by securing areas that may be the source of enemy direct fires or enemy artillery observation.
- Establish additional security measures such as OPs and patrols.
- Prepare for and assist the passage of follow-on forces (if required).
- Continue to improve security by conducting other necessary defensive actions. (These steps, which are outlined in Chapter 5 of this manual, include engagement area development, direct fire planning, and battle position preparation).
- Adjust final protective fire (FPF).
- Secure enemy prisoners of war (EPWs).

(2) Reorganization, normally conducted concurrently with consolidation, consists of actions taken to prepare for follow-on operations. As with consolidation, the platoon leader must plan and prepare for reorganization as he conducts his troop-leading procedures. He ensures the platoon is prepared to--

- Provide essential medical treatment and evacuate casualties as necessary.
- Cross-level personnel and adjust task organization as required.
- Conduct resupply operations, including rearming and refueling.
- Redistribute ammunition.
- Conduct required maintenance.
- Reestablish chain of command.

21. HASTY ATTACK.

The platoon normally participates in a hasty attack as part of a larger unit, during movement to contact, as part of a defense, or whenever the commander determines that the enemy is in a vulnerable position and can be quickly defeated by immediate offensive action. A hasty attack is used to--

- Exploit a tactical opportunity.
- Maintain the momentum.
- Regain the initiative.

- Prevent the enemy from regaining organization or balance.
- Gain a favorable position that may be lost with time.

Because its primary purpose is to maintain momentum or take advantage of the enemy situation, the hasty attack is normally conducted with only the resources that are immediately available. Maintaining unrelenting pressure through hasty attacks keeps the enemy off balance and makes it difficult for him to react effectively. Rapidly attacking before the enemy can act often results in success even when the combat power ratio is not as favorable as desired. With its emphasis on agility and surprise, however, this type of attack may cause the attacking force to lose a degree of synchronization. To minimize this risk, the commander should maximize use of standard formations; well-rehearsed, thoroughly understood battle drills and SOPs; and digital tools that facilitate rapid planning and preparation. By maintaining an awareness of the enemy and friendly situation, and assigning on-order and be-prepared missions to subordinate companies as the situation warrants, the platoon is better able to transition into hasty attacks. The hasty attack is often the preferred option during continuous operations. It allows the commander to maintain the momentum of friendly operations while denying the enemy the time needed to prepare his defenses and to recover from losses suffered during previous action. Hasty attacks normally result from a movement to contact, successful defense, or continuation of a previous attack.

a. **Task Organization.** The hasty attack is conducted using the principles of fire and movement. The controlling headquarters normally designates a base of fire force and a maneuver force.

b. **Conduct of the Hasty Attack.** The platoon must first conduct actions on contact, allowing the commander to gather the information he needs to make an informed decision. The term "hasty" refers to limits on planning and preparation time, not to any acceleration in the conduct of actions on contact. Because the intelligence picture is vague, the commander normally needs more time, rather than less, during this process to gain adequate information about the enemy force.

(1) Execution begins with establishment of a base of fire, which then suppresses the enemy force. The maneuver force uses a combination of techniques to maintain its security as it advances in contact to a position of advantage. These techniques include, but are not limited to, the following:

- Use of internal base of fire and bounding elements.
- Use of covered and concealed routes.
- Use of indirect fires to suppress or obscure the enemy or to screen friendly movement.
- Execution of bold maneuver that initially takes the maneuver force out of enemy direct fire range.

(2) Once the maneuver force has gained the positional advantage, it can execute a tactical task such as assault to destroy the remaining enemy.

Section VI. OTHER OFFENSIVE OPERATIONS

This section focuses on offensive operations that the platoon normally conducts as part of an SBCT infantry company or larger element: movement to contact, exploitation, and pursuit.

4-22. MOVEMENT TO CONTACT

Platoons and squads participate in a movement to contact as part of a company using movement formations and techniques explained in Chapter 3. A company generally conducts a movement to contact when it must gain or maintain contact with the enemy or when it lacks sufficient time to gain intelligence or make extensive plans to defeat the enemy. Infantry units prefer not to conduct movement to contact. In the SBCT, the RSTA squadron and the battalion reconnaissance platoon should find the enemy through reconnaissance and surveillance, but this is not always possible. Battalions may task or allow companies to gather intelligence through reconnaissance and surveillance if the company commander needs to develop further the intelligence picture. In this case, the company tasks a platoon or squad to conduct reconnaissance, surveillance, or both. If the company or platoon is operating independently, then it must conduct needed reconnaissance.

4-23. PLANNING CONSIDERATIONS

The company commander will not have a complete visualization of the situation. The leader's role is to gain as much first hand information as possible. That combined with information on the enemy and the terrain provides the knowledge and understanding necessary to respond to the enemy. However, if the enemy situation remains vague, the platoon must be prepared to act in any situation. This is accomplished through proper planning, appropriate movement formations and techniques, fire control measures, platoon SOPs, engagement criteria, and studying the terrain before and during movement to anticipate likely enemy locations. While moving, all leaders study the terrain and anticipate enemy contact. The platoon leader may not know when or where he will make contact with the enemy and should avoid mounted movement on terrain restricting maneuver (such as draws, ravines, narrow trails, or steep slopes). If restrictive terrain is unavoidable, the platoon leader dismounts the rifle squads to enhance security in restrictive areas.

a. **Techniques.** Infantry platoons will participate in two techniques for conducting a movement to contact: approach march or search and attack. The approach march technique is used when the enemy is expected to deploy using relatively fixed offensive or defensive formations but the situation remains vague. The search and attack technique is used when the enemy is dispersed, when he is expected to avoid contact or quickly disengage and withdraw, or when the higher unit needs to deny him movement in an AO.

b. **Command and Control.** The company commander will dictate a number of command and control techniques for the unit to employ. The platoon leader, within the scope of the commander's intent and guidance and the factors of METT-TC, may modify these techniques in order to control better his sections and squads. Some examples of command and control techniques are discussed below:

(1) ***Line of Departure, Phase Lines, and Checkpoints.*** The company commander will normally assign lines of departure, phase lines, and checkpoints to control the forward movement of the platoon. The platoon does not stop at a phase line unless told to do so. If necessary, the platoon leader designates additional phase lines or checkpoints for use within the platoon to reduce the number and length of radio transmissions used to control movement.

(2) ***Fire Control and Distribution.*** The platoon uses boundaries, direct fire plans, pyrotechnics, signals, and FRAGOs for direct fire control and distribution. (For a detailed discussion of direct fire control and distribution refer to Appendix F.) The variety of weapons in the infantry platoon makes it critical for all squads and sections to understand the observation plan and the designated sectors of fire during an MTC. This takes on importance because of the scarcity of information about the enemy.

(3) ***Indirect Fire Plan.*** The platoon leader must have a good indirect fire plan for his route to cover anticipated places of contact. These targets are a product of the platoon leader's analysis of the factors of METT-TC and must be incorporated into the company indirect fire plan. The platoon leader, platoon sergeant, section leaders, or squad leaders may initiate the calls for fire.

c. **Developing the situation.** Once the platoon makes contact with the enemy, it maintains contact until the commander orders otherwise. The platoon leader develops the situation based on the effectiveness of enemy fire, friendly casualties, size of enemy force, and freedom to maneuver. He gathers and reports critical information about the enemy and recommends a course of action. The platoon can bypass the enemy with permission from the commander, conduct an attack, fix the enemy so another platoon can conduct the assault, conduct a defense, establish an ambush, or break contact. The following guidelines apply for the platoon to develop the situation after making contact.

(1) Light resistance is resistance from an enemy element, squad-sized or smaller, that is not inflicting friendly casualties; is not equipped with an armored vehicle, machineguns, or antiarmor assets; and is occupying hasty fighting positions with no tactical obstacles.

(a) Light resistance may be bypassed IAW the order or when directed by the company commander. Once the platoon reacts to contact and the leader makes the decision to bypass, the following actions occur:

- ICVs suppress the enemy and continue to move.
- Rifle squads remain mounted.
- Platoon leader calls for and adjusts indirect fire and smoke to screen his movement past the enemy position.
- Platoon leader reports the size, activity, and location of the enemy to the company commander, and the platoon continues the mission.

(b) When the platoon reacts to contact and decides to conduct an attack against light resistance, the actions are:

- Squads dismount in covered and concealed locations.
- Weapons squad and or ICVs provide long-range supporting fires from a covered position.
- Platoon leader calls for and adjusts indirect fire to suppress the enemy.
- Rifle squads maneuver, supported by the fires of the weapons squad and or ICVs, to destroy the enemy.
- Platoon conducts consolidation and reorganization, if required.
- Platoon leader reports the status and continues the mission.

(2) Medium resistance is resistance from an enemy squad- to platoon-sized element that is inflicting friendly casualties. The enemy defense is organized around the best defensible terrain with integrated combined arms assets. The platoon reacts to medium resistance using the following actions:

- ICVs move to a covered and concealed position to dismount the squads.
- Platoon leader calls for and adjusts indirect fires to suppress the enemy and obscure movement with smoke.
- Weapons squad, rifle squads, and ICVs, or a combination of these, immediately suppress the enemy from a covered position and continue to suppress while the assault element moves to the objective. The support element keeps fires in front of the assault element as they conduct the assault.
- The rifle squads conduct the assault using fire and movement. One squad supports by fire while the other two squads move. The platoon leader moves with the squads conducting the assault to control the movement and adjust or control all supporting fires.
- Once the assault element seizes the objective (or destroys the enemy) and begins consolidation, the platoon leader calls the ICVs forward.
- The platoon conducts consolidation and reorganization.

(3) Heavy resistance is resistance from an enemy platoon-sized element or larger that is inflicting heavy friendly casualties. The enemy is defending a strongpoint with combined arms assets. If a bypass or attack is not possible, the company commander may instruct the platoon to fix the enemy. Fixing the enemy involves establishing a base-of-fire to prevent the enemy from repositioning any part of his force for use elsewhere. When enemy resistance is too heavy for the platoon to assault or an attack has failed, the actions of the platoon are as follow:

- The platoon suppresses from support-by-fire positions to support the company (-) maneuver.
- The platoon leader calls for and adjusts indirect fires to suppress the enemy.
- The platoon prepares to lift or shift fires as other platoons conduct the assault.
- Depending on the company formation and order of movement, platoons must be prepared to provide support by fire for another platoon while it conducts the assault, or to conduct the assault while other platoons support by fire.
- If more than one platoon is involved, the commander issues instructions for direct fire control and distribution to the platoon leader. The platoon leader then controls the platoon fires.

d. **Defensive Considerations.** In some situations, a platoon conducting a MTC makes contact with a much larger and more powerful enemy force. If the platoon encounters a larger enemy force where the terrain gives the platoon an advantage, it should attempt to fix the enemy force. This allows the rest of the company to maneuver against the force. If the platoon cannot fix the enemy, it may have to assume a defensive posture (refer to Chapter 5) or break contact. Because the defense may surrender the initiative to the enemy and means the enemy has fixed the platoon in place, the platoon should use it only if it is in danger of being overwhelmed. Exposed rifle squads are vulnerable to enemy indirect fires. If the platoon receives indirect fire during movement, it should use the protection of the ICVs and attempt to move out of the area or find a covered position for the rifle squads to dismount. Once the indirect fires cease, the platoon prepares for an enemy assault. In the defense, the platoon leader--

- Keeps the company commander informed and continues to report on enemy strength, dispositions, and activities.
- Dismounts the squads to cover dismounted avenues of approach in preparation for the enemy's attack.
- Places ICVs in hull-down positions (if available) or positions that provide the best cover and concealment.
- Orients Javelins along mounted avenues of approach.
- Establishes direct fire control and distribution measures.
- Calls for and adjusts indirect fires.

4-24. APPROACH MARCH TECHNIQUE

The approach march is one of the methods of troop movement (*administrative movement*, *tactical road march*, and *approach march*). The approach march is the advance of a combat unit when direct contact with the enemy is intended. The concept behind the approach march as a technique for MTC is to make contact with the smallest element, allowing the commander the flexibility of maneuvering or bypassing the enemy force. During an approach march, the company commander will organize his unit into two elements (advance guard and main body). As part of a company using the approach march technique, platoons may act as the advance guard, the flank or rear guard, or they also may receive on-order missions as part of the main body.

a. **Advance Guard.** The advance guard operates forward of the main body to ensure its uninterrupted advance. It protects the main body from surprise attack and fixes the enemy to protect the deployment of the main body. As the advance guard, the platoon finds the enemy and locates gaps, flanks, and weaknesses in his defense. The advance guard attempts to make contact on ground of its own choosing, to gain the advantage of surprise, and to develop the situation (either fight through or support the assault of all or part of the main body). The advance guard operates within the range of indirect fire support weapons. The platoon uses appropriate formations and movement techniques based on the factors of METT-TC.

b. **Flank or Rear Guard.** The platoon will have the responsibilities of flank or rear guard when moving within the company main body; however, the platoon may act as the flank or rear guard for a battalion conducting a movement to contact using approach march technique. In either situation, the platoon:

- Moves using the appropriate formation and movement technique. (It must maintain the same momentum as the main body.)
- Provides early warning.
- Destroys enemy reconnaissance units.
- Prevents direct fires or observation of the main body.

c. **Main Body.** When moving as part of the main body, platoons may be tasked to assault, bypass, or fix an enemy force or to seize, secure, or clear an assigned area. The platoon also may be detailed to provide sections as flank or rear guards, stay-behind ambushes, or additional security to the front. Platoons, squads and sections use appropriate formations and movement, assault, and ambush techniques.

4-25. SEARCH AND ATTACK TECHNIQUE

The search and attack is a technique conducted when the enemy is operating as small, dispersed elements, or when the task is to deny the enemy the ability to move within a given AO. The platoon will participate as part of company or battalion search and attack. A unit conducts a search and attack for one or more of the following reasons:

- Render the enemy in the AO combat-ineffective.
- Prevent the enemy from operating unhindered in a given AO.
- Prevent the enemy from massing to disrupt or destroy friendly military or civilian operations, equipment, or facilities.
- Gain information about the enemy and the terrain.

a. **Organization of Forces.** The higher commander will task organize the subordinate units into reconnaissance, fixing, and finishing forces. He will assign specific tasks and purposes to his search and attack forces. Planning considerations for organizing include:

- The factors of METT-TC.
- The requirement for decentralized execution.
- The requirement for mutual support. (The platoon leader must be able to respond to contact with his rifle squads or his mounted sections not in contact, or to mutually support another platoon within the company.)
- Mounted or dismounted.
- The soldier's load.
- Resupply and casualty evacuation (CASEVAC).
- The employment of key weapons.
- The requirement for patrol bases.

(1) ***Reconnaissance Force.*** The size and composition of the reconnaissance force is based on the available information on the size and activity of the enemy operating in the designate AO. The reconnaissance force typically consists of the battalion reconnaissance platoon. However, an infantry platoon also may comprise all or part of the reconnaissance force. The platoon will reconnoiter identified named areas of interest. The platoon leader may also identify fixing and finishing elements within the platoon.

(2) ***Fixing Force.*** The fixing force must have sufficient combat power to isolate the enemy and develop the situation once the reconnaissance force finds him. When developing the situation, the fixing force either continues to maintain visual contact with the enemy until the finishing force arrives or conducts an attack to physically fix the enemy until the finishing force arrives. The platoon leader also may identify a finishing element within the platoon.

(a) The platoon maintains visual contact to allow the reconnaissance force to continue to other named areas of interest, and it isolates the immediate area. The fixing force makes physical contact only if the enemy attempts to leave the area or other enemy elements enter the area.

(b) The platoon attacks the enemy if that action meets the commander's intent and if he has sufficient combat power to destroy the enemy.

(3) ***Finishing Force.*** The finishing force must have sufficient combat power to destroy enemy forces located within the AO. The finishing force must be mobile and responsive enough to engage the enemy before he can break contact with the

reconnaissance or fixing forces. A platoon, as the finishing force, may be tasked to conduct the following:

- Destroy the enemy with an attack.
- Block enemy escape routes while another company conducts the attack.
- Destroy the enemy with an ambush while the reconnaissance or fixing forces drive the enemy toward the ambush location.

b. **Control Measures.** The higher commander will establish control measures that allow for decentralized execution and platoon leader initiative to the greatest extent possible. The minimum control measures for a search and attack are:

- Areas of operation.
- Target reference points.
- Objectives.
- Checkpoints.
- Contact points.

An AO defines the location in which the subordinate units will conduct their searches. A target reference point (TRP) facilitates the responsiveness of the fixing and finishing forces once the reconnaissance force detects the enemy. A TRP also assists in avoiding fratricide in what may be a confusing, noncontiguous environment. Objectives and checkpoints guide the movement of subordinates and help leaders control their organizations. Contact points aid coordination among the units operating within the same AO. The advance guard operates forward of the main body to ensure its uninterrupted advance. It protects the main body from surprise attack and fixes the enemy to protect the deployment of the main body. As the advance guard, the platoon finds the enemy and locates gaps, flanks, and weaknesses in his defense. The advance guard attempts to make contact on ground of its own choosing, to gain the advantage of surprise, and to develop the situation (either fight through or support the assault of all or part of the main body). The advance guard operates within the range of indirect fire support weapons. The platoon uses appropriate formations and movement techniques based on the factors of METT-TC.

4-26. EXPLOITATION

A platoon normally takes part in exploitations as part of a larger force; however, the platoon should exploit tactical success at the local level within the higher commanders' concept of the operation.

4-27. PURSUIT

The objective of the pursuit phase of an operation is the total destruction of the enemy force. The SBCT infantry platoon may take part in a pursuit as part of a larger force or, because of its organic transportation, may participate as part of a task-organized company acting as a pursuit force that can close with and destroy the remnants of the enemy force.

4-28. ATTACKS DURING LIMITED VISIBILITY

Effective use of digitized and OTN equipment during limited visibility attacks enhances squad and platoon ability to achieve surprise and cause panic in a lesser-equipped enemy. OTN enhancements allow the infantry soldier to see farther and with greater clarity. The

OTN enhancements and increased friendly and enemy information afford a marked advantage over the enemy.

a. Leaders have an increased ability to control fires during limited visibility. The platoon has three types of enhancements for use in fire control--target designators consisting of the GCP-1 and AIM-1; aiming lights consisting of the AIM-1 and AN/PAQ-4B/C; and target illuminators consisting of infrared parachute flares, infrared trip flares, infrared 40-mm rounds, infrared mortar rounds, infrared bike lights, and remote black lights. These assets greatly aid in target acquisition and fire control.

b. Soldiers with OTN enhancements have greater accuracy of fires during limited visibility. Each soldier in the SBCT platoon is equipped with an AN/PAQ-4B/C aiming light for his individual weapon. The AN/PAQ-4B/C enables the rifleman to put infrared light on the target at the point of aim.

(1) Leaders can designate targets with greater precision using the GCP-1 and AIM-1. The GCP-1 and AIM-1 are infrared laser pointers that place an infrared light to designate targets and sectors of fire and concentrate fire. The leader lases a target and directs his soldiers to place their fires on the target. The soldiers then use the aiming lights on their AN/PAQ-4B/Cs to engage the target.

(2) Leaders also can designate larger targets using target illuminators. Target illuminators are essentially infrared light sources that light the target, making it easier to acquire effectively. Target illuminators consist of infrared illumination rounds, infrared M203 40-mm rounds, infrared trip flares, and infrared parachute flares. Leaders and soldiers use the infrared devices to identify enemy or friendly personnel and then engage targets using their aiming lights.

c. The platoon leader, squad leaders, and VCs must develop SOPs and sound courses of action to synchronize the employment of infrared illumination devices, target designators, and aiming lights during their assault on the objective.

(1) Leaders use luminous tape or chemical lights to mark assault personnel to prevent fratricide. The enemy must not be able to see the marking. Two techniques are to place tape on the back of the helmet or to use small infrared chemical lights (if the enemy has no night vision devices [NVDs]). The supporting elements must know where the lead assault element is.

(2) To reduce the risk to the assault element, the platoon leader may assign weapons control restrictions. For example, the squad on the right in the assault might be given “weapons free” to the right flank because no friendly soldiers are there. However, “weapons tight” or “weapons hold” on the left means that another friendly unit is located there.

(3) The platoon leader may use the following techniques to increase control during the assault:

- Using no flares, grenades, or smoke on the objective.
- Only certain personnel with NVDs to engage targets on the objective.
- A magnetic azimuth for maintaining direction.
- Mortar or artillery rounds to orient attacking units.
- A base squad or fire team to pace and guide others.
- Reduced intervals between soldiers and squads.

d. Mortar, artillery, and antiarmor fires are planned as in a daylight attack. However, they are not fired unless the platoon is detected or is ready to assault. Some weapons may

fire before the attack and maintain a pattern to deceive the enemy or to help cover noise made by the platoon's movement. This is not done if it will disclose the attack.

(1) Indirect fire is hard to adjust when visibility is poor. If the exact location of friendly units is not clearly known, indirect fire is directed first at enemy positions beyond the objective and then moved onto the objective.

(2) Illuminating rounds that are fired to burn on the ground can be used to mark objectives. This helps the platoon orient on the objective but also may adversely affect NVDs.

e. Smoke is planned to further reduce the enemy's visibility, particularly if he has NVDs. The smoke is laid close to or on enemy positions so it does not restrict friendly movement or hinder the breaching of obstacles. Employing smoke on the objective during the assault may make it hard for assaulting soldiers to find enemy fighting positions. If enough thermal sights are available, smoke on the objective may provide a decisive advantage for a well-trained platoon.

f. Illumination is always planned for limited visibility attacks, giving the leader the option of calling for it. Battalion commanders normally control the use of conventional illumination but may authorize the company commander to do so. If the commander decides to use conventional illumination, he should not call for it until the assault is initiated or the attack is detected. It should be placed on several locations over a wide area to confuse the enemy as to the exact place of the attack. Also, it should be placed beyond the objective to help assaulting soldiers see and fire at withdrawing or counterattacking enemy soldiers

NOTE: If the enemy is equipped with NVDs, leaders must evaluate the risk of using each technique and ensure the mission is not compromised because the enemy can detect infrared light sources.

Section VII. SPECIAL PURPOSE ATTACKS

The platoon will conduct a special attack at the direction of the company commander. The commander will base his decision on the factors of METT-TC. Special purpose attacks are subordinate forms of an attack and they include--

- Ambush.
- Raid.
- Counterattack.
- Spoiling attack.
- Feint.
- Demonstration.

As forms of the attack, they share many of the same planning, preparation, and execution considerations of the offense. Feints and demonstrations are also associated with military deception operations.

4-29. AMBUSH

An ambush is a form of attack by fire or other destructive means from concealed positions on a moving or temporarily halted enemy. It may take the form of an assault to close with and destroy the enemy, or it may be an attack-by-fire only, executed from concealed positions. An ambush does not require that ground be seized or held.

Ambushes are generally executed to reduce the enemy force's overall combat effectiveness. Destruction is the primary reason for conducting an ambush. Other reasons to conduct ambushes are to harass the enemy, capture the enemy, destroy or capture enemy equipment, and to gain information about the enemy. Ambushes are classified by *category* (deliberate or hasty), *formation* (linear or L-shaped), and *type* (point, area, or antiarmor). The platoon leader uses a combination of category, type, and formation for developing his ambush plan.

a. **Operational Considerations.** The execution of an ambush is offensive in nature; however, the platoon may be directed to conduct an ambush during offensive or defensive operations. The platoon leader considers both mounted and dismounted options for conducting the ambush. The platoon must take all necessary precautions to ensure that it is not detected during movement to or preparation of the ambush site. The platoon also must have a secure route of withdrawal following the ambush. An ambush normally consists of the following actions:

- Mounted (or dismounted) tactical movement to the objective rally point (ORP).
- Reconnaissance of the ambush site.
- Establishment of the ambush security site.
- Preparation of the ambush site.
- Execution of the ambush.
- Withdrawal.

b. **Task Organization.** The platoon is normally task-organized into assault, support, and security forces for execution of the ambush.

(1) ***Assault Force.*** The assault force executes the ambush. It may employ an attack by fire, an assault, or a combination of those techniques to destroy the ambushed enemy force. The assault force generally will consist of a rifle squad. The platoon leader normally will be located with the assault force.

(2) ***Support Force.*** The support force fixes the enemy force to prevent it from moving out of the kill zone, allowing the assault force to conduct the ambush. The support force generally uses direct fires in this role, but it may be responsible for calling indirect fires to further fix the ambushed enemy force. The support force generally will consist of the weapons squad. The platoon sergeant normally will be located with the support force.

(3) ***Security Force.*** The security force provides protection and early warning to the assault and support forces and secures the ORP. It isolates the ambush site both to prevent the ambushed enemy force from moving out of the ambush site and to prevent enemy rescue elements from reaching the ambush site. The security force also may be responsible for securing the platoon's withdrawal route. The security force will generally consist of a rifle squad and the mounted sections. However, the factors of METT-TC may determine that ICVs be employed in the assault or support forces.

c. **Planning.** The platoon leader's key planning considerations for any ambush include:

- Cover the entire kill zone (engagement area) by fire.
- Use existing terrain features (rocks or fallen trees, for example) or reinforcing obstacles (Claymores or other mines) orienting into the kill zone to keep the enemy in the kill zone.

- Determine how to emplace reinforcing obstacles on the far side of the kill zone.
- Protect the assault and support forces with mines, Claymores, or explosives.
- Use the security force to isolate the kill zone.
- Establish rear security behind the assault force.
- Assault into the kill zone to search dead and wounded, assemble prisoners, and collect equipment. (The assault force must be able to move quickly on its own through protective obstacles.)
- Time the actions of all elements of the platoon to preclude the loss of surprise.
- Determine the role of the ICVs as dictated by the factors of METT-TC.

NOTE: When manning an ambush for long periods of time, the platoon leader may use only one squad to conduct the entire ambush, rotating squads over time. The platoon leader must consider the factors of METT-TC, especially the company commander's intent and guidance.

d. **Category.** The leader determines the category of ambush through an analysis of the factors of METT-TC. Typically, the two most important factors are time and enemy.

(1) ***Deliberate.*** A deliberate ambush is a planned offensive action conducted against a specific target for a specific purpose at a predetermined location. The leader requires detailed information on the following when planning a deliberate ambush:

- Size and composition of the targeted enemy unit.
- Weapons and equipment available to the enemy.
- The enemy's route and direction of movement.
- Times that the targeted enemy unit will reach or pass specified points along the route.

(2) ***Hasty.*** The platoon (or squad) conducts a hasty ambush when it makes visual contact with an enemy force and has time to establish an ambush without being detected. The conduct of the hasty ambush should represent the execution of disciplined initiative within the parameters of the commander's intent. The actions for a hasty ambush should be established in a unit SOP and rehearsed so that soldiers know what to do on the leader's signal.

e. **Formations.** The platoon leader considers the factors of METT-TC to determine the required formation.

(1) ***Linear.*** In an ambush using a linear formation, the assault and support forces deploy parallel to the enemy's route (Figure 4-5). This positions both forces on the long axis of the kill zone and subjects the enemy to flanking fire. This formation can be used in close terrain that restricts the enemy's ability to maneuver against the platoon or in open terrain provided a means of keeping the enemy in the kill zone can be effected.

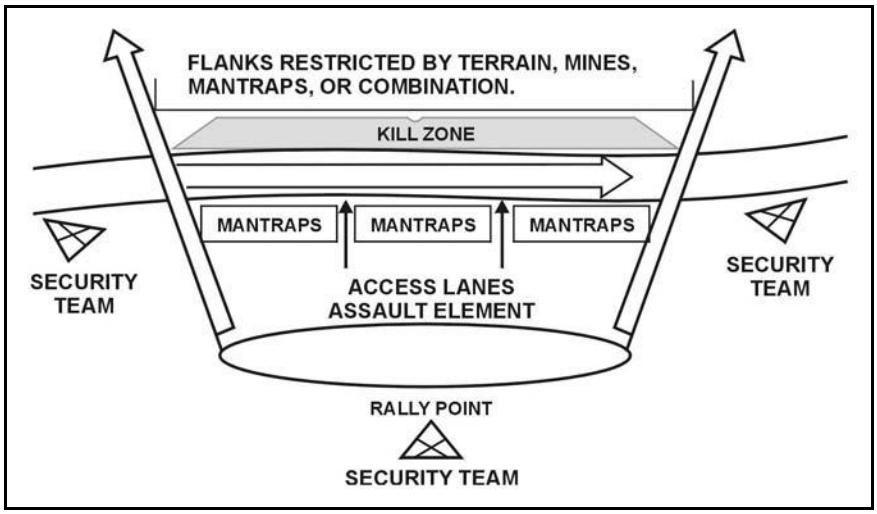


Figure 4-5. Linear ambush formation.

(2) ***L-shaped.*** In an L-shaped ambush (Figure 4-6), the assault force forms the long leg parallel to the enemy's direction of movement along the kill zone. The support force forms the short leg at one end of and at right angles to the assault force. This provides both flanking (long leg) and enfilading fires (short leg) against the enemy. The L-shaped ambush can be used at a sharp bend in a road, trail, or stream. It should not be used where the short leg would have to cross a straight road or trail. The platoon leader must consider the other factors of METT-TC before opting for the L-shaped formation.

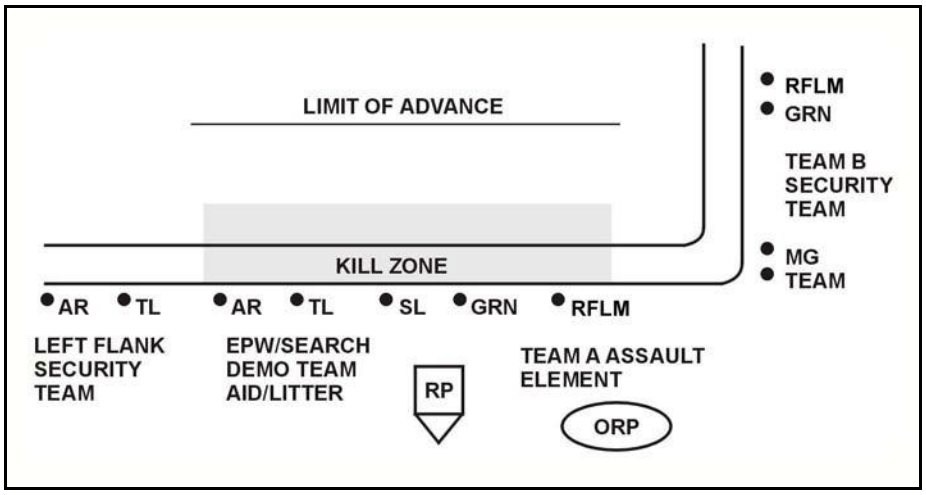


Figure 4-6. L-shaped ambush formation.

f. **Type.** The company commander, following an analysis of the factors of METT-TC, will determine the type of ambush that the platoon will employ.

(1) ***Point.*** In a point ambush, soldiers deploy to attack an enemy in a single kill zone. The platoon leader should consider the following sequence of actions when planning a point ambush.

(a) The security or surveillance team(s) should be positioned first. The support force should be in position before the assault force moves forward. The support force must overwatch the movement of the assault force into position.

(b) The platoon leader is the leader of the assault force. He must check each soldier once he emplaces. The platoon leader signals the surveillance team to rejoin the assault force if it is positioned away from the assault location. If the platoon leader does not employ the ICVs as part of the security force, the platoon sergeant likely will locate with the platoon leader in the assault force, leaving the mounted sections under the control of the platoon master gunner (Section A leader). The actions of the assault force, support force, and security force are shown in Table 4-1.

ASSAULT FORCE	SUPPORT FORCE	SECURITY FORCE
• Identify individual sectors of fire assigned by the platoon leader; emplace aiming stakes. • Emplace Claymores and other protective obstacles. • Emplace Claymores, mines, or other explosives in dead space within the kill zone. • Camouflage positions. • Take weapons off SAFE, when directed by the platoon leader.	• Identify sectors of fire for all weapons, especially machine guns • Emplace limiting stakes to prevent friendly fires from hitting the assault force in an L-shaped ambush. • Emplace Claymores and other protective obstacles. • Camouflage positions.	• Identify sectors of fire for all weapons; emplace aiming stakes. • Emplace Claymores and other protective obstacles. • Camouflage positions. • Secure the ORP. • Secure route to ORP, as required.

Table 4-1. Actions by ambush forces.

(c) The platoon leader instructs the security force (or teams) to notify him of the enemy's approach into the kill zone using the SALUTE reporting format. The security force also must keep the platoon leader informed if any enemy forces are following the lead enemy force, allowing the platoon leader to know if the enemy force meets the engagement criteria directed by the company commander. The platoon leader must be prepared to let enemy forces pass that are too large or that do not meet the engagement criteria. He must report to the company commander any enemy forces that pass through the ambush unengaged.

(d) The platoon leader initiates the ambush with the greatest casualty-producing weapon, typically a command-detonated Claymore. He also must plan a back-up method to initiate the ambush should the primary means fail, typically an M240B machine gun. All soldiers in the ambush must know the primary and back-up methods. The platoon should rehearse with both methods to avoid confusion and the loss of surprise during execution of the ambush.

(e) The platoon leader must include a plan for engaging the enemy during limited visibility. Based on the company commander's guidance, the platoon leader should consider the use and mix of tracers and the employment of illumination (hand held or indirect fire systems using infrared [IR]). As little light as possible is preferred. For

example, if Javelins are not used during the ambush, the platoon leader may still employ the CLU with its thermal sights in the security or support force to observe enemy forces.

(f) The platoon leader also may include the employment of indirect fire support in his plan. Based on the company commander's guidance, the platoon leader may employ indirect fires to cover flanks of the kill zone to isolate an enemy force or assist the platoon to disengage if the ambush is compromised or the platoon must depart the ambush site under pressure.

(g) The platoon leader must have a good plan (day and night) to signal the advance of the assault force into the kill zone to begin its search and collection activities. He should take into consideration the existing environmental factors. For example, smoke may not be visible to the support force because of limited visibility or the lay of the terrain. All soldiers must know and practice relaying the signal during rehearsals.

(h) The assault force must be prepared to move across the kill zone using individual movement techniques if there is any return fire once they begin to search. Otherwise, the assault force moves across by bounding fire teams.

(i) The assault force collects and secures all EPWs and moves them out of the kill zone to an established location before searching bodies. The EPW collection point should provide cover, but should not be easily found by enemy forces following the ambush. The assault force searches from far side of the kill zone to the near side, marking bodies that have been searched to ensure thoroughness and speed.

(j) Search teams (two-man teams) approach a dead enemy soldier. One man will guard while the other searches. First, the search man will kick the enemy weapon away. Second, he rolls the body over (if on the stomach) by lying on top and when given the go ahead by the guard (who is positioned at the enemy's head, perpendicular to the search man), the search man rolls the body over on him. This is done for protection in case the enemy soldier has a grenade with the pin pulled or other demolition device underneath him. Third, the search man conducts a systematic search of the dead enemy soldier from head to toe, removing all papers and anything of intelligence value (different type of rank, shoulder board, different unit insignia, pistol, weapon, or other special equipment). The guard annotates all of this information. Once the body has been thoroughly searched, the search team continues in this manner until all enemy personnel in and near the kill zone have been searched. Enemy bodies should be marked (for example, folded arms over the chest and legs crossed) to avoid duplication of effort.

(k) The platoon identifies and collects equipment to be carried back and prepares it for transport. Weapons are put on safe. The platoon also identifies and collects at a central point the enemy equipment to be destroyed. The demolition team prepares the fuse and awaits the signal to initiate. This is normally the last action performed before departing the ambush site. The flank security force returns to the ORP after the demolition team completes its task. The platoon will treat friendly wounded first and then enemy wounded (time permitting).

(l) The flank security teams may also emplace antiarmor mines after the ambush has been initiated if the enemy is known to have armored vehicles that can quickly reinforce the ambushed enemy force. If a flank security team makes contact, it fights as long as possible without becoming decisively engaged. It uses prearranged signals to inform the platoon leader it is breaking contact. The platoon leader may direct a portion of the support force to assist the security force to break contact.

(m) The platoon leader must plan the withdrawal of the platoon from the ambush site. He considers the following:

- Elements normally withdraw in the reverse order that they established their positions.
- Elements may return to the release point, then to the ORP, depending on the distance between the elements.
- The security force at the ORP must be alert to assist the platoon's return. It maintains security for the ORP while the remainder of the platoon prepares to depart.

(n) Actions back at the ORP include, but are not limited to, accounting for personnel and equipment, stowing captured equipment, first aid (as necessary), and re-mounting the ICVs.

(2) ***Area.*** In an area ambush, soldiers deploy in two or more related point ambushes. The platoon may conduct an area ambush as part of a company offensive or defensive plan, or it may conduct a point ambush as part of a company area ambush. The platoon leader should consider the following sequence of actions when planning an area ambush.

(a) The platoon is the smallest level to conduct an area ambush (Figure 4-7). Platoons conduct area ambushes where enemy movement is largely restricted to trails or streams.

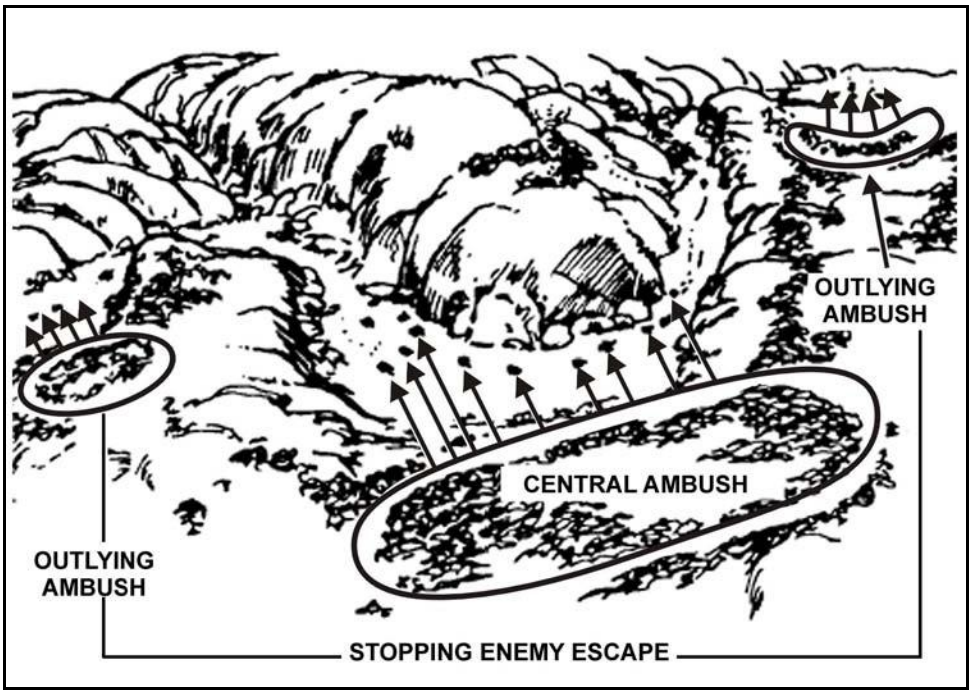


Figure 4-7. Area ambush.

(b) The platoon leader (or company commander) selects one principal ambush site around which he organizes outlying ambushes. These secondary sites are located along the enemy's most likely avenue of approach to and escape from the principal ambush site. Squads are normally responsible for each ambush site.

(c) The platoon leader considers the factors of METT-TC to determine the best employment of the weapons squad, ICVs, and Javelins. He will normally locate the M240Bs with the support force in the principal ambush site.

(d) Squads (or sections) responsible for outlying ambushes do not initiate their ambushes until the principal one has been initiated. They then engage to prevent enemy forces from escaping the principal ambush or reinforcing the ambushed force.

(3) ***Antiarmor.*** Platoons and squads conduct antiarmor ambushes (Figure 4-8) to destroy one or two armored vehicles. The ambush may be part of an area ambush. The antiarmor ambush consists of the assault force (armor-killer force) and the support-security force. The leader considers the following when planning an antiarmor ambush.

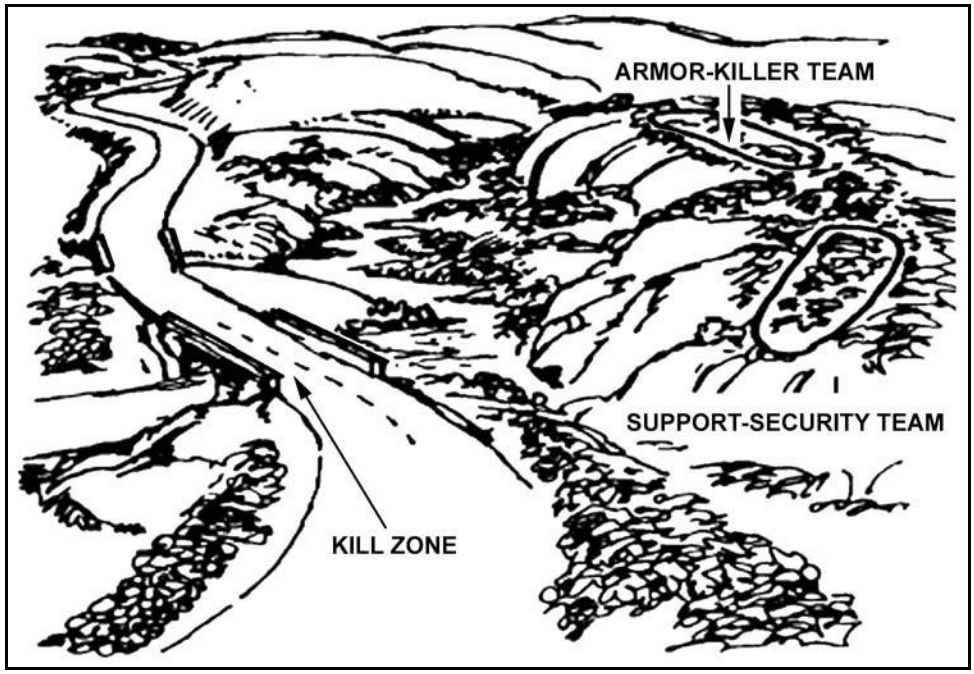


Figure 4-8. Antiarmor ambush.

(a) The armor-killer force is built around the Javelin.(Refer to Appendix G for information about employment of the Javelin.) The leader should consider additional weapons available to supplement the fires. These may include the ICV (MK19) or AT4. The leader considers the factors of METT-TC to position all antiarmor weapons to ensure the best engagement (rear, flank, or top). The remainder of the platoon must function as support and security forces in the same manner as the other types of ambushes.

(b) In a platoon antiarmor ambush, the company commander selects the general site for the ambush. The platoon leader must find a site that restricts the movement of armored vehicles out of the kill zone. The leader should emplace his weapons so that an obstacle is between them and the kill zone. In a squad antiarmor ambush, the platoon leader selects the general site for the ambush. The squad leader then must find a site that restricts the movement of armored vehicles out of the kill zone.

(c) The support-security forces are emplaced to cover dismounted avenues of approach into the ambush site.

(d) The leader should consider the method for initiating the antiarmor ambush. The preferred method is to use a command-detonated antitank (AT) mine placed in the kill zone. The Javelin can be used to initiate the ambush, but even with its limited signature, it may be less desirable than an AT mine.

(e) The armor-killer team destroys the first and last vehicle in the enemy formation, if possible. All other weapons begin firing once the ambush has been initiated.

(f) The leader must determine how the presence of dismounted enemy soldiers with armored vehicles will affect the success of the ambush. The leader's choices include:

- Initiate the ambush as planned.
- Withdraw without initiating the ambush.
- Initiate the ambush with machine guns without firing antiarmor weapons.

(g) Because of the speed with which enemy armored forces can reinforce the ambushed enemy, the leader should plan to keep the engagement short and have a quick withdrawal planned. The platoon, based on the factors of METT-TC, may not clear the kill zone as in the other types of ambushes.

4-30. RAID

A raid is a limited-objective form of an attack, usually small-scale, entailing swift penetration of hostile territory to secure information, confuse the enemy, or destroy installations. A raid always ends with a planned withdrawal to a friendly location upon completion of the mission. The platoon can conduct an independent raid (mounted or dismounted) in support of the battalion or higher headquarters operation or it can participate as part of the company in a series of raids. Rifle squads do not execute raids; rather, they participate in a platoon raid.

a. **Operational Considerations.** The platoon may conduct a raid to accomplish a number of missions, including the following:

- Capture prisoners.
- Capture or destroy specific command and control locations.
- Destroy logistical areas.
- Obtain information concerning enemy locations, dispositions, strengths, intentions, or methods of operation.
- Confuse the enemy or disrupt his plans.

b. **Task Organization.** The task organization of the raiding force is determined by the purpose of the operation. However, the raiding force normally consists of the following elements:

- Support force (with the task of support by fire).
- Assault force (with the task of destroy).
- Breach force (if required).

c. **Conduct of the Raid.** The main differences between a raid and other special purpose attacks are the limited objectives of the raid and the associated withdrawal following completion. However, the sequence of platoon actions for a raid is very similar to those for an ambush. Additionally, the assault element of the platoon may have to conduct a breach of a protective obstacle (if a breach force has not been designated). Raids may be conducted in daylight or darkness, within or beyond the supporting distances of the parent unit. When the location to be raided is beyond supporting distances of friendly lines, the raiding party operates as a separate force. An objective,

usually very specific in nature, is assigned to orient the raiding unit (Figure 4-9). During the withdrawal, the attacking force should use a route different from that used to conduct the raid itself.

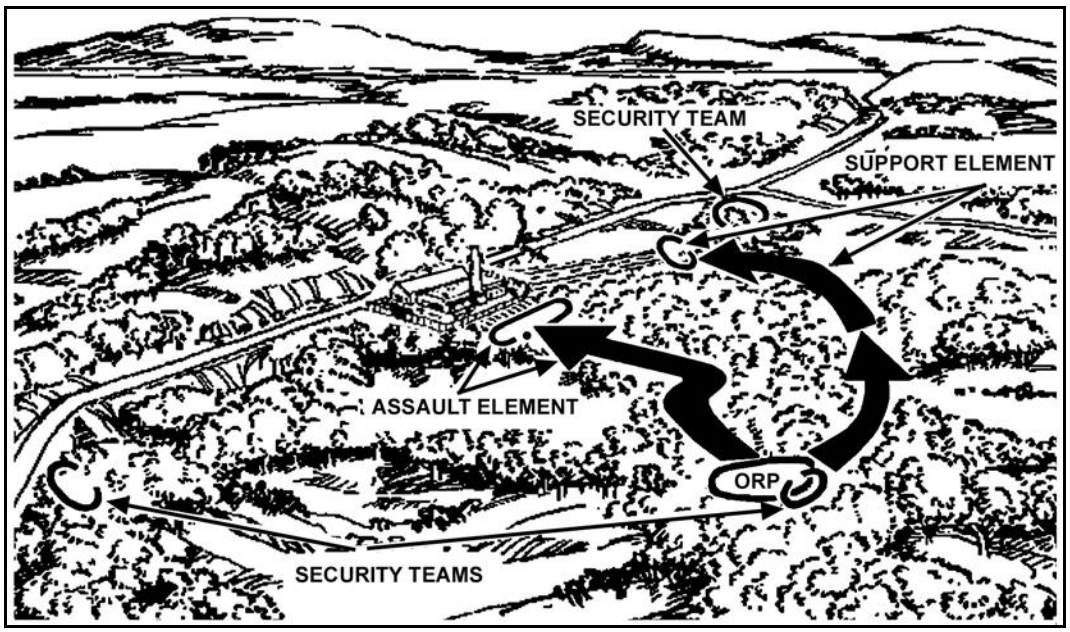


Figure 4-9. Platoon raid.

4-31. COUNTERATTACK

The counterattack is a form of attack by part or all of a defending force against an enemy attacking force, with the general objective of denying the enemy his goal of attacking. This attack by defensive forces regains the initiative or denies the enemy success with his attack. The platoon may conduct a counterattack as a lightly committed force within a company or as the battalion reserve. The platoon counterattacks after the enemy begins his attack, reveals his main effort, or creates an assailable flank. As part of a higher headquarters, the platoon conducts the counterattack much like other attacks. However, the platoon leader must synchronize the execution of his counterattack within the overall defensive effort. Counterattacks afford the defender the opportunity to create favorable conditions for the commitment of combat power. The platoon should rehearse the counterattack and prepare the ground to be traversed. Counterattacks are more useful to the higher headquarters when the platoon anticipates employment, plans and prepares for employment, and executes with the other defending, delaying, or attacking forces in conjunction with the higher commander's plan.

4-32. SPOILING ATTACK

A spoiling attack is a form of attack that preempts or seriously impairs an enemy attack while the enemy is in the process of planning or preparing to attack. The purpose of a spoiling attack is to disrupt the enemy's offensive capabilities and timelines while destroying his personnel and equipment. The purpose is not to secure terrain or other physical objectives. A commander (company or battalion) may direct a platoon to conduct a spoiling attack during friendly defensive preparations to strike the enemy while

he is in assembly areas or attack positions, preparing for his own offensive operation. The platoon leader plans for a spoiling attack as he does for other attacks. The reasons for conducting a spoiling attack include:

- Disrupt the enemy's offensive preparations.
- Destroy assets that the enemy requires to attack (fire support systems, logistic resupply points, or engineering equipment).
- Gain additional time for the defending force to prepare positions.

4-33. FEINT

A feint is a form of attack used to deceive the enemy as to the location and time of the actual operation. Feints attempt to deceive the enemy and induce him to move reserves and shift his fire support to locations where they cannot immediately impact the actual operation. When directed to conduct a feint, the platoon seeks direct fire (or physical) contact with the enemy, but avoids decisive engagement. The commander (company or battalion) will assign the platoon an objective limited in size or scope. The planning, preparation, and execution considerations are the same as for the other forms of attack. The enemy must be convinced that the feint is the actual attack.

4-34. DEMONSTRATION

A demonstration is a form of attack designed to deceive the enemy as to the location or time of the actual operation by a display of force. Demonstrations attempt to deceive the enemy and induce him to move reserves and shift his fire support to locations where they cannot immediately impact the actual operation. When directed to conduct a demonstration, the platoon does not seek physical contact with the enemy. The planning, preparation, and execution considerations are the same as for the other forms of attack. It must appear to be an actual impending attack.

Section VIII. OFFENSIVE TACTICAL TASKS

Tactical tasks are specific activities performed by units as they conduct tactical operations or maneuver. At the platoon level, these tasks are the warfighting actions the platoon may be called on to perform in battle. This section provides discussion and examples of actions and tasks the platoon may be called upon to perform during a movement to contact, a hasty attack, or a deliberate attack.

NOTE: The situations used in this section to describe the platoon leader's role in the conduct of tactical tasks are examples only. They are not applicable in every tactical operation, nor are they intended to prescribe any specific method or technique the platoon must use in achieving the purpose of the operation. Ultimately, it is up to the commander or leader on the ground to apply the principles discussed here, along with his knowledge of the situation (including his unit's capabilities, the enemy he is fighting, and the ground on which the battle is taking place), in developing a successful tactical solution.

4-35. SEIZE

Seizing an objective is complex and entails closure with the enemy, under fire of his weapons, to the point that the assaulting force gains positional advantage over or destroys the enemy.

a. A platoon may seize prepared or unprepared enemy positions from either an offensive or defensive posture. Examples include:

- A platoon seizes the far side of an obstacle as part of a company breach.
- A platoon seizes a portion of an enemy defense as part of a company deliberate attack.
- A platoon seizes key terrain to prevent its use by the enemy.

b. There are many inherent dangers in seizing an objective: deadly enemy fires; a rapidly changing operational environment; the requirement to execute a dismounted assault; and the possibility of fratricide when friendly forces converge. Taken together, these factors dictate that the platoon leader and subordinate leaders understand the following planning considerations.

(1) Developing a clear and current picture of the enemy situation is very important. The platoon may seize an objective in a variety of situations, and the platoon leader will often face unique challenges in collecting and disseminating information on the situation. For example, if the platoon is the seizing force during a company deliberate attack, the platoon leader may be able to develop an accurate picture of the enemy situation during the planning and preparation for the operation. He can concentrate on developing thorough FRAGOs to issue new information to the platoon as needed.

(2) In another instance, the platoon leader may have to develop his picture of the enemy situation during execution. He must rely more heavily on reports from units in contact and on his own development of the situation. In this type of situation, such as when the platoon is seizing an enemy combat security outpost during a movement to contact, the platoon leader must plan on relaying information as it develops. He uses clear, concise FRAGOs to explain the enemy situation and give directives to subordinates. He must know how to develop and issue these orders quickly under the pressures of the battlefield environment.

(3) In either type situation, the platoon leader and his subordinate leaders must be adaptive and make necessary adjustments to the scheme of maneuver based on the available information. This will help to ensure they overcome the enemy they will actually face on the ground and not merely a templated enemy force.

(4) Seizing an objective entails closure with the enemy to gain positional advantage over him, controlling the terrain, and the removal of all enemy forces or the elimination of organized resistance. The platoon may have to use both mounted and dismounted maneuver to gain the advantage and seize the objective. Factors influencing the platoon leader's decision to combine mounted and dismounted elements to seize the objective include the following.

(a) *Mission Analysis.* The company commander's intent and concept likely will dictate how the platoon maneuvers to the objective.

(b) Enemy Antitank Capabilities. The presence of antitank assets on or around the objective will put the ICVs at risk. The preferred COA is to destroy or suppress the enemy's antitank assets and allow the ICVs to support the assault.

c. The platoon leader must plan for and implement indirect fire support in his plan.

(1) The company or platoon uses smoke to isolate the targeted enemy force and to hinder the enemy as he attempts to reposition or reinforce his forces.

(2) The company or platoon uses suppressive indirect fires to prevent adjacent or reserve enemy elements from engaging the assaulting force.

(3) To protect the approaching assault force, the company or platoon uses indirect fires to suppress or destroy the enemy on the objective area.

d. While serving as the assault force in a company deliberate attack, the platoon may have to conduct an assault breach of the enemy's protective obstacles to gain access to the objective area. Protective obstacles normally are integrated with existing obstacles and restricted terrain.

e. In most circumstances, the company sets the conditions for the platoon to seize the objective. The purpose of this effort is to achieve an acceptable superior force ratio for the assaulting platoon. If the platoon is seizing an objective as part of a company attack, other platoons in the company normally will be responsible for suppressing the enemy on the objective area from designated support-by-fire positions. These platoons may be the same support forces that protected the breach force. Terrain factors may require them to reposition to provide effective support for the assault force. If the platoon is seizing an objective that is not part of a company deliberate attack it may have to establish its own support-by-fire positions to suppress the enemy and protect its assault force. Regardless of who provides support by fire (another platoon or internal elements), the platoon must always integrate the principles of fire and movement (maneuver) when executing the assault.

f. The platoon normally uses an ASLT PSN, the last covered and concealed position short of the objective, when the platoon is the assault force in a company deliberate attack. It can use an ASLT PSN along with a PLD, or it may use a PLD in lieu of an assault position. Actions at the assault position or the PLD could include these critical functions:

- Verify current friendly and enemy situations using tactical reports from platoon or company support-by-fire forces.
- Issue FRAGOs and disseminate information to the lowest level.
- Confirm TRPs and direct-fire responsibilities.
- Position field artillery observers.
- Conduct final prepare-to-fire checks.
- Reorganize to compensate for combat losses.

4-36. CLEAR

The platoon may be tasked with clearing an objective area during an attack to facilitate the movement of the remainder of the company, or the platoon may be assigned clearance of a specific part of a larger objective area. Infantry platoons normally are best suited to conduct clearance operations, which in many cases will involve working in restricted terrain. Situations in which the platoon may conduct the clearance tactical task include the following (refer to FM 90-10 and FM 3-06.11 [FM 90-10-1] for a detailed discussion of urban combat):

- Clearing a defile, including choke points in the defile and high ground surrounding it.
- Clearing a heavily wooded area.

- Clearing a built-up or strip area.
- Clearing a road, trail, or other narrow corridor, which may include obstacles or other obstructions on the actual roadway as well as in the surrounding wooded and built-up areas.

a. **General Terrain Considerations.** The platoon leader must consider several important terrain factors in planning and executing the clearance task.

(1) Observation and fields of fire may favor the enemy. To be successful, the attacking force must neutralize this advantage by identifying dead spaces where the enemy cannot see or engage friendly forces. It should also identify multiple support-by-fire positions that are necessary to support a complex scheme of maneuver covering the platoon's approach, the actual clearance task, and maneuver beyond the restricted terrain.

(2) Cover and concealment normally are abundant for infantry elements, but are scarce for trail-bound vehicles. Lack of cover leaves vehicles vulnerable to ATGM fires.

(3) Obstacles influence the maneuver of any vehicle entering the objective area. The narrow corridors, trails, or roads associated with restricted terrain can be easily obstructed with wire, mines, and log cribs.

(4) Key terrain may include areas dominating the objective area, approaches, or exits, as well as any terrain dominating the area inside the defile, wooded area, or built-up area.

(5) Avenues of approach will be limited. The platoon must consider the impact of canalization and estimate how much time will be required to clear the objective area.

b. **Restricted Terrain Considerations.** Conducting clearance in restricted terrain is both time consuming and resource intensive. During the planning process, the platoon leader evaluates the tactical requirements, resources, and other considerations for each operation.

(1) During the approach, the platoon leader focuses on moving combat power into the restricted terrain and posturing it to start clearing the terrain. The approach ends when the rifle squads complete their preparations to conduct an attack.

(a) The platoon leader establishes support-by-fire positions.

(b) He destroys or suppresses any known enemy positions to allow forces to approach the restricted terrain.

(c) He provides more security by incorporating suppressive indirect fires and obscuring or screening smoke.

(d) The platoon leader provides support by fire for the rifle squads. He prepares to support the rifle squads from their dismount points to where they enter the restricted terrain using--

- High ground on either side of a defile.
- Wooded areas on either side of a trail or road.
- Buildings on either side of a road in a built-up area.
- Movement of rifle squads along axes to provide cover and concealment.

(2) Clearance begins as the rifle squads begin their attack in and around the restricted terrain. Examples of where this maneuver may take place include:

- Both sides of a defile, either along the ridgelines or high along the walls of the defile.
- Along the wood lines parallel to a road or trail.
- Around and between buildings on either side of the roadway in a built-up area.

(3) The following apply during clearance:

(a) The squads provide a base of fire to allow the weapons squad to bound to a new support-by-fire position. This cycle continues until the entire area is cleared.

(b) Direct-fire plans should cover responsibility for both horizontal and vertical observation and direct fire.

(c) Squads should clear a defile from the top down and should be oriented on objectives on the far side of the defile.

(d) Dismounted engineers with manual breaching capability should move with the rifle squads. Engineers also should move with the overwatching element to reduce obstacles.

(4) The platoon must secure the far side of the defile, built-up area, or wooded area until the company moves forward to pick up the fight beyond the restricted terrain. If the restricted area is large, the platoon may be directed to assist the passage of another element forward to continue the clearance operation. The platoon must be prepared to--

- Destroy enemy forces.
- Secure the far side of the restricted terrain.
- Maneuver mounted elements to establish support-by-fire positions on the far side of the restricted terrain.
- Support by fire to protect the deployment of the follow-on force assuming the fight.
- Suppress any enemy elements that threaten the company while it exits the restricted terrain.
- Disrupt enemy counterattacks.
- Protect the obstacle reduction effort.
- Maintain observation beyond the restricted terrain.
- Integrate indirect fires as necessary.

c. **Enemy Analysis.** Careful analysis of the enemy situation is necessary to ensure the success of clearing. The enemy evaluation should include the following:

- Enemy vehicle location, key weapons, and infantry elements in the area of operations.
- Type and locations of enemy reserve forces.
- Type and locations of enemy OPs
- The impact of the enemy's NBC and or artillery capabilities.

d. **Belowground Operations.** Belowground operations entail clearing enemy trenches, tunnels, basements, and bunker complexes. The platoon's base-of-fire element and the maneuvering squads must maintain close coordination. The weapons squad focuses on protecting the squads as they clear the trench line or maneuver to destroy individual or vehicle positions. The base-of-fire element normally concentrates on destroying key surface structures (especially command posts and crew-served weapons bunkers) and the suppression and destruction of enemy vehicles. As noted previously, the direct-fire plan (refer to Appendix F) must be thoroughly developed and rehearsed to ensure it will facilitate effective mutual support while preventing fratricide.

(1) The platoon must establish a base of fire to allow the rifle squads to dismount and then maneuver or enter the trench line, tunnel, basement, or bunker. The direct-fire plan must be thoroughly developed and rehearsed to ensure it will facilitate effective protection for the infantry while preventing fratricide.

(2) The platoon leader also must consider specific hazards associated with the platoon or supporting weapon systems. An example is the downrange hazard for the dismounted rifle squads created by the Javelins or MGS.

(2) The platoon should consider using restrictive fire measures to protect converging forces and other direct-fire control measures, such as visual signals, to trigger the requirement to lift, shift, or cease direct fires. Techniques for controlling direct fires during trench, tunnel, basement, and bunker clearance may include attaching a flag to a pole carried by the soldier who follows immediately behind the lead clearing team; using panels to mark cleared bunkers, tunnels and basements; and using visual signals to indicate when to lift or shift fires.

(3) Once the rifle squads enter the belowground area, the combined effects of the platoon's assets place the enemy in a dilemma. Every action the enemy takes to avoid direct fire from the support-by-fire element, such as maintaining defiled positions or abandoning bunker complexes, leaves him vulnerable to attack from the rifle squads maneuvering down the trench. Conversely, when enemy vehicles move to avoid the attacking squads or when the enemy's infantry elements stay in bunkers or command posts, they expose themselves to support fires.

(4) Consolidation consists of actions taken to secure the objective and defend against an enemy counterattack. The platoon leader must plan and prepare for consolidation. He ensures the platoon is ready to--

- Eliminate enemy resistance on the objective.
- Establish security beyond the objective by securing areas that may be the source of enemy direct fires or enemy artillery observation.
- Establish additional security measures such as OPs and patrols.
- Prepare for and assist the passage of follow-on forces (if required).
- Continue to improve security by conducting other necessary defensive actions. (These steps, which are outlined in Chapter 5 of this manual, include engagement area development, direct-fire planning, and battle position (BP) preparation.)
- Adjust the established FPF (if required).
- Protect the obstacle reduction effort.
- Secure EPWs.

(5) Reorganization, normally conducted concurrently with consolidation, consists of actions taken to prepare for follow-on operations. As with consolidation, the platoon leader must plan and prepare for reorganization as he conducts his TLP. He ensures the platoon is prepared to--

- Provide essential medical treatment and evacuate casualties as necessary.
- Cross-level personnel and adjust task organization as required.
- Conduct resupply operations, including rearming and refueling.
- Redistribute ammunition.
- Conduct required maintenance.

4-37. SUPPRESS

The platoon maneuvers to a position on the battlefield from which it can observe the enemy and engage him with direct and indirect fires. The purpose of suppressing is to prevent the enemy from effectively engaging friendly forces with direct fires or observed

indirect fires. To accomplish this, the platoon must maintain orientation both on the enemy force and on the friendly maneuver force it is supporting. During planning and preparation, the platoon leader should consider doing the following:

- Conduct a line-of-sight analysis during his terrain analysis to identify the most advantageous positions from which to suppress the enemy.
- Plan and integrate direct and indirect fires.
- Determine control measures (triggers) for lifting, shifting or ceasing direct fires (refer to Appendix F).
- Determine control measures for shifting or ceasing indirect fires.
- Plan and rehearse actions on contact.
- Plan for large Class V expenditures. (The company commander and the platoon leader must consider a number of factors in assessing Class V requirements including the desired effects of the platoon direct fires; the composition, disposition, and strength of the enemy force; and the time required to suppress the enemy.)
- Determine when and how the platoon will reload ammunition during the fight while still maintaining suppression for the assaulting force.
- Determine how many, if any, of the rifle squads will dismount the ICVs.

4-38. SUPPORT BY FIRE

The platoon maneuvers to a position on the battlefield from which it can observe the enemy and engage him with direct and indirect fires. The purpose of support by fire is to prevent the enemy from engaging friendly forces.

a. To accomplish this task, the platoon must maintain orientation both on the enemy force and on the friendly maneuver force it is supporting. The platoon leader should plan and prepare by:

- Conducting line-of-sight analysis to identify the most advantageous support-by-fire positions.
- Conducting planning and integration for direct and indirect fires.
- Determining triggers for lifting, shifting, or ceasing direct and indirect fires.
- Planning and rehearsing actions on contact.
- Planning for large Class V expenditures, especially for the weapons squad and support elements since they must calculate rounds per minute. (The platoon leader and weapons squad leader must consider a number of factors in assessing Class V requirements, to include the desired effects of platoon fires; the time required for suppressing the enemy; and the composition, disposition, and strength of the enemy force.)

b. A comprehensive understanding of the battlefield and enemy and friendly disposition is a crucial factor in all support-by-fire operations. The platoon leader uses all available intelligence and information resources to stay abreast of events on the battlefield. Additional considerations may apply. The platoon may have to execute an attack to secure the terrain from which it will conduct the support by fire. The initial support-by-fire position may not afford adequate security or may not allow the platoon to achieve its intended purpose. This could force the platoon to reposition to maintain the desired weapons effects on the enemy. The platoon leader must ensure the platoon adheres to these guidelines:

- Maintain communications with the moving force.
- Be prepared to support the moving force with both direct and indirect fires.
- Be ready to lift, shift, or cease fires when masked by the moving force.
- Scan the area of operations and prepare to acquire and destroy any enemy element that threatens the moving force.
- Maintain 360-degree security.
- Use ICVs and Javelins to destroy any exposed enemy vehicles.
- Employ squads to lay a base of sustained fire to keep the enemy fixed or suppressed in his fighting positions.
- Prevent the enemy from employing accurate direct fires against the protected force.

4-39. ATTACK BY FIRE

The platoon maneuvers to a position on the battlefield from which it can observe the enemy and engage him with direct and indirect fires at a distance to destroy or weaken a maneuvering enemy force. The platoon destroys the enemy or prevents him from repositioning. The platoon employs long-range fires from dominating terrain, uses flanking fires, or can take advantage of the standoff range of the unit's weapons systems. The company commander may designate an attack-by-fire (ABF) position from which the platoon will fix the enemy. An ABF position is most commonly employed when the mission or tactical situation neither dictates nor supports occupation of the objective; rather, it focuses on destruction or preventing enemy movement. In the offense, it is usually executed by supporting elements. During defensive operations, it is often a counterattack option for the reserve force.

a. When the platoon is assigned an ABF position, the platoon leader obtains the most current intelligence update on the enemy and applies his analysis to the information. During planning and preparation, the platoon leader should consider the following:

- Conduct a line-of-sight analysis during terrain analysis to identify the most favorable locations to destroy or fix the enemy.
- Conduct direct and indirect fire planning and integration.
- Determine control measures (triggers) for lifting, shifting, or ceasing direct fires.
- Determine control measures for shifting or ceasing indirect fires.
- Plan and rehearse actions on contact.

b. Several other considerations may affect the successful execution of an attack by fire. The platoon may be required to conduct an attack against enemy security forces to seize the ground from which it will establish the ABF position. The initial ABF position may afford inadequate security or may not allow the platoon to achieve its task or purpose. This could force the platoon to reposition to maintain the desired weapons effects on the enemy force. In addition, because an attack by fire may be conducted well beyond the direct fire range of other platoons, it may not allow the platoon to destroy the targeted enemy force from its initial positions. The platoon may begin to fix the enemy at extended ranges. Additional maneuver then would be required to close with the enemy force and complete its destruction. Throughout an attack by fire, the platoon should reposition or maneuver to maintain flexibility, increase survivability, and maintain desired weapons effects on the enemy. It should also employ rifle squads whenever

possible to assist mounted sections. Rifle squad support functions may include the following:

- Seize ABF position before occupation by mounted sections.
- Provide local security for the ABF position.
- Execute timely, decisive actions on contact.
- Use maneuver to move to and occupy ABF positions.
- Destroy enemy security elements protecting the targeted force.
- Employ effective direct and indirect fires to disrupt, fix, or destroy the enemy force.

CHAPTER 5
DEFENSIVE OPERATIONS

Military forces conduct defensive operations only until they gain sufficient strength to attack. Though the outcome of decisive combat derives from offensive actions, leaders often find it is necessary, even advisable, to defend. Once they make this choice, they must set the conditions of the defense for friendly forces to destroy or fix the enemy while they prepare to seize the initiative and return to the offense. A thorough understanding of the commander's intent is especially critical in defensive operations. These operations demand precise integration of combat support and combat service support elements with combat elements, even at the platoon level. The immediate purpose of all defensive operations is to defeat an enemy attack and gain the initiative for offensive operations. The platoon may also conduct the defense to gain time, retain key terrain, facilitate other operations, preoccupy the enemy in one area while friendly forces attack him in another, erode enemy forces at a rapid rate while reinforcing friendly operations, and set the conditions for follow-on forces or follow-on operations.

Section I. CHARACTERISTICS OF THE DEFENSE

The characteristics of the defense (preparation, security, disruption, mass and concentration, and flexibility) are the planning fundamentals for the SBCT infantry platoon. To ensure the success of the defense, the platoon leader must understand the characteristics of the defense and apply troop-leading procedures during planning and preparation of the operation.

5-1. PREPARATION

The defender arrives in the battle area before the attacker. As the defender, the platoon must take advantage of this by making the most of preparations for combat in the available time. By thoroughly analyzing the factors of METT-TC, the platoon leader gains an understanding of the tactical situation and identifies potential friendly and enemy weaknesses.

5-2. SECURITY

The goals of the platoon's security efforts are normally tied to the company efforts. These efforts include providing early warning, destroying enemy reconnaissance units, and impeding and harassing elements of the enemy main body. The platoon will typically continue its security mission until directed to displace.

5-3. DISRUPTION

Defensive plans vary with the circumstances, but all defensive concepts of the operation aim at disrupting the attacker's synchronization. Counterattacks, indirect fires, obstacles, and the retention of key terrain prevent the enemy from concentrating his strength against selected portions of the platoon's defense. Destroying enemy command and control vehicles disrupts the enemy synchronization and flexibility.

5-4. MASSING EFFECTS

The platoon must concentrate combat power at the decisive place and time if it is to succeed. It must obtain a local advantage at points of decision. Offensive action may be a means of gaining this advantage. The platoon leader must remember that this concentration refers to combat power and its effects, not just numbers of soldiers and weapon systems.

5-5. FLEXIBILITY

Flexibility is derived from sound preparation and effective command and control. The platoon must be agile enough to counter or avoid the attacker's blows and then strike back effectively. Flexibility results from a detailed analysis of the factors of METT-TC, an understanding of the unit's purpose, and aggressive reconnaissance and surveillance. Supplementary positions on a secondary avenue of approach may provide additional flexibility to the platoon.

Section II. SEQUENCE OF THE DEFENSE

As part of a larger element, the platoon conducts defensive operations in a sequence of integrated and overlapping steps. This section focuses on the following steps within the sequence of the defense:

- Reconnaissance, security operations, and enemy preparatory fires.
- Occupation.
- Approach of the enemy main attack.
- Enemy assault.
- Counterattack.
- Consolidation and reorganization.

5-6. RECONNAISSANCE, SECURITY OPERATIONS, AND ENEMY PREPARATORY FIRES

Security forces must protect friendly forces in the main battle area (MBA) and allow them to prepare for the defense. The goals of a security force include providing early warning, destroying enemy reconnaissance elements (within its capability), and possibly disrupting enemy forward detachments or advance guard elements. During this step, the platoon may be attached to a larger element or remain with the parent company to conduct counter-reconnaissance. Additionally, the platoon conducts security operations as part of the company defensive plan by conducting patrols or manning OPs to observe named areas of interest (NAI).

a. During this step, the platoon may be required to provide guides to the passing security force and may be tasked to close the passage lanes. The platoon, as part of a larger force, also may play a role in shaping the battlefield. The battalion or brigade commander may position the company to deny likely enemy attack corridors, thus enhancing flexibility and forcing enemy elements into friendly engagement areas.

b. When not conducting security or preparation tasks, the company, and in turn the platoon, normally will occupy hide positions to avoid possible enemy artillery preparatory fires.

5-7. OCCUPATION

The platoon plans, reconnoiters, and occupies the defensive position. This step includes moving from one location to the defensive location. A quartering party that clears the defensive position and prepares it for occupation normally leads this movement. The battalion establishes security forces, and the remaining forces prepare the defense. To facilitate maximum time for planning, occupying, and preparing the defense, leaders and soldiers at all levels must understand their duties and responsibilities to include priorities of work (usually covered in the WARNO or by a unit SOP).

a. Occupation and preparation of the defense site (see Section V of this chapter) is conducted concurrently with the TLP and the development of the engagement area (if required). The platoon occupies defensive positions in accordance with the company commander's plan and the results of the reconnaissance. To ensure an effective and efficient occupation, the reconnaissance element marks the friendly positions, and these tentative positions are entered on the operational graphics. Each ICV and squad moves to their marker, or a guide leads them in. Once in position, each squad leader and VC checks his position location. As the platoon occupies its positions, the platoon leader manages the positioning of each squad and vehicle to ensure they locate IAW the tentative plan. If the platoon leader notes discrepancies between actual positioning of the squads or vehicles and his plan, he makes the corrections. The platoon leader must personally walk the positions to ensure that everyone understands the plan and that the following are in accordance with the plan:

- Weapons orientation.
- Vehicle positions.
- Weapons squads' positions.
- Rifle squads' positions.

Each squad leader ensures he knows the location of the platoon leader and platoon sergeant for command and control purposes.

b. When the occupation is complete, subordinate leaders can begin to develop their sector sketches (Appendix H) based on the basic fire plan developed during the leader's reconnaissance. Positions are improved when the direct fire plan is finalized and proofed. In addition to establishing the platoon's primary positions, the platoon leader and subordinate leaders normally plan for preparation and occupation of alternate, supplementary, and subsequent positions in accordance with the company order. The following are tactical considerations for these positions.

(1) The following characteristics and considerations apply to an alternate position:

- Covers the same avenue of approach or sector of fire as the primary position.
- Is located slightly to the front, flank, or rear of the primary position.
- Is positioned forward of the primary defensive positions during limited visibility operations.
- Normally is employed to supplement or support positions with weapons of limited range, such as dismounted infantry positions.

(2) The following characteristics and considerations apply to a supplementary position:

- Covers an avenue of approach or sector of fire different from those covered by the primary position.
- Occupied based on specific enemy actions.

(3) The following characteristics and considerations apply to a successive position:

- Covers the same avenue of approach and or sector of fire as the primary position.
- Is located in depth through the defensive sector.
- Is occupied based on specific enemy actions or conducted as part of the higher headquarters scheme of maneuver.

5-8. APPROACH OF THE ENEMY MAIN ATTACK

As this step begins, the brigade engages the enemy at long range using indirect fires, electronic warfare, and close air support (CAS). The goal is to use these assets and disrupting obstacles to shape the battlefield and or to slow the enemy's advance and disrupt his formations, leaving him more susceptible to the effects of CS weapons. As the enemy's main body echelon approaches the battalion engagement area, the battalion may initiate indirect fires and CAS to weaken the enemy through attrition. At the same time, the brigade's effort shifts to second-echelon forces, depending on the commander's intent. Platoons cease security patrolling and usually bring OPs back into the defense. Friendly forces will occupy their actual defensive positions before the enemy reaches direct fire range. Positions may be shifted in response to enemy actions or other tactical factors.

5-9. ENEMY ASSAULT

During this step, enemy forces attempt to fix friendly forces and complete their assault. During execution of the defense, friendly forces attempt to mass effects of fires to destroy the assaulting enemy. The platoon leader determines if the platoon can destroy the enemy from its assigned positions.

a. If the answer is YES, the platoon continues to fight the defense.

(1) The platoon leader continues to call for indirect fires as the enemy approaches. The platoon begins to engage the enemy at maximum effective range and attempts to mass fires and initiate them simultaneously to achieve maximum weapons effects. Indirect fires and obstacles integrated with direct fires should disrupt the enemy's formations, channel him toward engagement areas, prevent or severely limit his ability to observe the location of friendly positions, and destroy him as he attempts to breach tactical obstacles.

(2) Leaders control fires using standard commands, pyrotechnics, and other prearranged signals (Appendix F). The platoon increases the intensity of fires as the enemy closes within range of additional weapons. Squad leaders work to achieve a sustained rate of fire from their positions by having buddy teams engage the enemy so that both soldiers are not reloading their weapons at the same time. In controlling and distributing fires, the platoon and squad leaders consider--

- Range to the enemy.
- Priority targets (at what to fire, when to fire, and why).
- Most dangerous or closest targets.
- Shifting to concentrate direct fires either independently or as directed by higher headquarters.

- Ability of the platoon to engage dismounted enemy with enfilading, grazing fires.
- Ability of the antiarmor weapons to achieve flank shots against enemy vehicles.

(3) The enemy closes on the platoon's protective wire. Machine guns and squad automatic weapons fire along interlocking principal directions of fire or final protective lines as previously planned and designated. These may include ICV weapon systems or the platoon's M240Bs. Other weapons fire at their designated principal direction of fire (PDF). Grenadiers engage the enemy with M203 grenade launchers in dead space or as the enemy attempts to breach protective wire. The platoon leader requests final protective fires, if assigned in support of his positions.

(4) The platoon continues to defend until it repels the enemy or is ordered to disengage.

b. If the answer is NO, the platoon leader reports the situation to the company commander and continues to engage the enemy. He repositions the platoon (or squads of the platoon) when directed by the commander to--

- Continue fires into the platoon sector (engagement area).
- Occupy supplementary positions.
- Reinforce other parts of the company.
- Counterattack locally to retake lost fighting positions.
- Withdraw from an untenable position using fire and movement to break contact.

NOTE: The platoon leader does not move his platoon out of position if it will destroy the integrity of the company defense. All movements and actions to reposition squads and the platoon must be thoroughly rehearsed.

5-10. COUNTERATTACK

As the enemy's momentum is slowed or stopped, friendly forces may counterattack. The counterattack may be launched purely for offensive purposes to seize the initiative from the enemy. In some cases, the purpose of the counterattack will be mainly defensive, for example to reestablish the FEBA or to restore control of the sector. The company or platoon may participate in the counterattack as a base-of-fire element or as the counterattack force. This counterattack could be planned or conducted during the battle when opportunities to seize the initiative present themselves through situational understanding. The platoon must secure its sector by repositioning forces, destroying remaining enemy elements, processing EPWs, and reestablishing obstacles. The company conducts all necessary CSS functions as it prepares to continue the defense.

5-11. CONSOLIDATION AND REORGANIZATION

The platoon secures its sector and reestablishes the defense by repositioning forces, destroying enemy elements, processing EPWs, and reestablishing obstacles. The platoon conducts all necessary CSS functions as it prepares to continue defending. Squad and team leaders provide ammunition, casualty, and equipment (ACE) reports to the platoon leader. The platoon leader reestablishes the platoon chain of command. He consolidates squad ACE reports and provides the platoon report to the commander. The platoon

sergeant coordinates for resupply and supervises the execution of the casualty and EPW evacuation plan. The platoon continues to improve positions, quickly reestablishes OPs, and resumes security patrolling as directed.

a. Consolidation includes organizing and strengthening a position so that it can continue to be used against the enemy. Some platoon consolidation requirements are--

- Adjust other positions to maintain mutual support.
- Reoccupy and repair positions and prepare for renewed enemy attack.
- Relocate selected weapons to alternate positions if leaders believe that the enemy may have pinpointed them during the attack.
- Repair damaged obstacles and replace mines (Claymore) and booby traps.
- Reestablish security and communications.

b. Reorganization includes shifting internal resources within a degraded unit to increase its level of combat effectiveness. Some platoon consolidation requirements are--

- Man key weapons, as necessary
- Provide first aid and prepare wounded soldiers for CASEVAC.
- Redistribute ammunition and supplies.
- Process and evacuate EPWs

Section III. BATTLE OPERATING SYSTEMS PLANNING CONSIDERATIONS

Battlefield operating systems are a listing of critical tactical activities that provides a means of reviewing preparation and execution. Synchronization and coordination among the BOS are critical for success.

5-12. MANEUVER

Effective weapons positioning enables the platoon to mass fires at critical points on the battlefield and to enhance survivability. The platoon leader must maximize the strengths of the platoon's weapons systems while minimizing its exposure to enemy observation and fires.

a. **Depth and Dispersion.** Dispersing positions laterally and in depth helps protect the force from enemy observation and fires. Platoon positions are established in depth, allowing sufficient maneuver space within each position for in-depth placement of vehicle weapon systems and dismounted infantry elements. Vehicle and infantry fighting positions are positioned to allow massing of direct fires at critical points on the battlefield. Although the factors of METT-TC ultimately determine the placement of weapons systems and unit positions, the following also apply:

- ICVs are best employed from flank positions and in positions from which they can engage dismounted infantry, support and resupply vehicles, or fix or severely limit the movement of reserves, usually at a range of 1,100 meters or less.
- Infantry squads should be positioned on reverse slopes or in restricted terrain where they cannot be engaged before they take the enemy under fire.
- Infantry squads can conduct antiarmor fires with Javelin missiles, which have a maximum range of 2,000 meters.

- Infantry squads can retain or deny key terrain if employed in strongpoints or well-covered positions.
- Infantry squads can protect obstacles or flank positions that are tied into severely restricted terrain.

b. **Flank Positions.** Flank positions enable a defending force to bring direct fires to bear on an attacking force. An effective flank position provides the defender a larger, more vulnerable target while leaving the attacker unsure of the location of the defender. Major considerations for successful employment of a flank position are the defender's ability to secure the flank and his ability to achieve surprise by remaining undetected. Effective direct fire control (Appendix F) and fratricide avoidance measures (Appendix D) are critical considerations when employing flank positions.

c. **Displacement and Disengagement Planning.** Displacement and disengagement are key control measures that allow the platoon to retain its operational flexibility and tactical agility. The ultimate goals of displacement and disengagement are to enable the platoon to maintain standoff range and to avoid being fixed or decisively engaged by the enemy.

(1) ***Considerations.*** While displacement and disengagement are valuable tactical tools, they can be extremely difficult to execute in the face of a rapidly moving enemy force. In fact, displacement in contact poses great problems, and the platoon leader must plan for it thoroughly before the operation. Even then, he must carefully evaluate the situation whenever displacement in contact becomes necessary to ensure that it is feasible and that it will not result in unacceptable personnel or equipment losses. The platoon leader must consider several important factors in displacement planning:

- The enemy situation (for example, an enemy attack with battalion size element may prevent the platoon from disengaging).
- Higher headquarters disengagement criteria.
- Availability of direct fire to facilitate disengagement by suppressing or disrupting the enemy.
- Availability of cover and concealment, indirect fires, and smoke to assist disengagement.
- Obstacle integration, including situational obstacles.
- Positioning of forces on terrain (such as reverse slopes or natural obstacles) that provides an advantage to the disengaging elements.
- Identification of displacement routes and times that disengagement and or displacement will take place.
- The size of the friendly force available to engage the enemy in support of the displacing unit.
- Location of remount points, the times remount operations will take place, and maneuver considerations for conduct of a remount in contact.

(2) ***Disengagement Criteria.*** Disengagement criteria dictate to subordinate elements the circumstances under which they will displace to alternate, supplementary, or successive defensive positions. The criteria are tied to an enemy action (such as one MRP advancing past PL DELTA) and are linked to the friendly situation (for example, they may depend on whether an overwatch element or artillery unit can engage the enemy). Disengagement criteria are developed during the planning process based on the unique conditions of a specific situation. They should not be part of the unit's SOP.

(3) ***Direct Fire Suppression.*** The attacking enemy force must not be allowed to bring effective fires to bear on a disengaging force. Direct fires from the base-of-fire element, employed to suppress or disrupt the enemy, are the most effective way to facilitate disengagement. The platoon also may receive base-of-fire support from another element in the company, but in most cases the platoon will establish its own base of fire. Employing an internal base-of-fire requires the platoon leader to carefully sequence the displacement of his elements.

(4) ***Cover and Concealment.*** Ideally, the platoon and subordinate elements should use covered and or concealed routes when moving to alternate, supplementary, or successive defensive positions. Regardless of the degree of protection the route itself affords, the platoon should rehearse the movement. By rehearsing, the platoon can increase the speed at which it moves and provide an added measure of security. The platoon leader must make a concerted effort whenever time is available to rehearse movement in limited visibility and degraded conditions.

(5) ***Indirect Fires and Smoke.*** Artillery or mortar fires can be employed to assist the platoon during disengagement. Suppressive fires, placed on an enemy force as it is closing inside the defender's standoff range, will disrupt his formations, slow his progress and, if the enemy is a mechanized force, cause him to button up. The defending force engages the enemy with long-range direct fires, then disengages and moves to new positions. Smoke may be employed to obscure the enemy's vision, slow his progress, or screen the defender's movement out of the defensive positions or along his displacement route.

(6) ***Obstacle Integration.*** Obstacles should be integrated with direct and indirect fires to assist disengagement. By slowing and disrupting enemy movement, obstacles provide the defender the time necessary for displacement and allow friendly forces to employ direct and indirect fires against the enemy. The modular pack mine system (MOPMS) can be employed in support of the disengagement, either to block a key displacement route once the displacing unit has passed through it or to close a lane through a tactical obstacle. The location of obstacle emplacement depends in large measure on METT-TC factors. An obstacle should be positioned far enough away from the defender that he can effectively engage enemy elements on the far side of the obstacle while remaining out of range of the enemy's massed direct fires.

5-13. FIRE SUPPORT

For the indirect fire plan to be effective in the defense, the unit must plan and execute indirect fires in a manner that achieves the intended task and purpose of each target. Indirect fires serve a variety of purposes in the defense, including--

- Slowing and disrupting enemy movement.
- Preventing the enemy from executing breaching operations at turning or blocking obstacles.
- Destroying or delaying enemy forces at obstacles using massed indirect fires or precision munitions (such as Copperhead rounds).
- Defeating attacks along dismounted avenues of approach with the use of FPF.
- Disrupting the enemy to allow friendly elements to disengage or conduct counterattacks.

- Obscuring enemy observation or screening friendly movement during disengagement and counterattacks.
- Delivering scatterable mines to close lanes and gaps in obstacles, disrupting or preventing enemy breaching operations, disrupting enemy movement at choke points, or separating or isolating enemy echelons.

5-14. MOBILITY, COUNTERMOBILITY, AND SURVIVABILITY

Mobility focuses on the ability to reposition forces, including unit displacement and the commitment of reserve forces. The company commander's priorities may specify that some routes be improved to support such operations. Countermobility limits the maneuver of enemy forces and enhances the effectiveness of direct and indirect fires. Survivability focuses on protecting friendly forces from the effect of enemy weapon systems.

a. **Mobility.** During defensive preparations, mobility focuses initially on the ability to resupply, reposition, and conduct rearward and forward passage of forces, supplies, and equipment. Once defensive preparations are complete, the mobility focus shifts to routes from hide positions and to alternate, supplementary, or subsequent positions. The company commander will establish the priority of mobility effort within the company. Normally, all or most of the engineer assets will be allocated to the survivability and or countermobility effort during the defense. (Refer to Chapter 8 for a discussion of engineer assets that may be available to the company.)

b. **Countermobility.** To be successful in the defense, the platoon leader must integrate obstacles into both the direct and indirect fire plans. (Refer to FM 90-7 for additional information on obstacle planning, siting, and turnover.) The platoon is responsible for constructing protective obstacles.

(1) ***Tactical Obstacles.*** A tactical obstacle is designed or employed to disrupt, fix, turn, or block the movement of the enemy. Platoons typically construct tactical obstacles when directed by the company commander.

(a) *Disrupting Effects.* Disrupting effects focus a combination of fires and obstacles to impede the enemy's attack in several ways to include breaking up his formations, interrupting his tempo, and causing early commitment of breaching assets. These effects are often the product of situational obstacles, such as scatterable mines, and normally are used forward within engagement areas or in support of forward positions within a defensive sector. Normally, only indirect fires and long-range direct fires are planned in support of disrupting obstacles.

(b) *Fixing Effects.* Fixing effects use the combination of fires and obstacles to slow or temporarily stop an attacker within a specified area, normally an engagement area. The defending unit then can focus on defeating the enemy by using indirect fires to fix him in the engagement area while direct fires inflict maximum casualties and damage. If necessary, the defender can reposition his forces using the additional time gained as a result of fixing the enemy. To achieve fully the fixing effect, direct and or indirect fires must be integrated with the obstacles. The company commander must clearly specify the size of the enemy unit to be fixed.

(c) *Turning Effects.* Turning effects use the combination of direct and indirect fires and obstacles to support the company commander's scheme of maneuver in several ways, including the following:

- Diverting the enemy into an engagement area and exposing his flanks when he makes the turn.
- Diverting an enemy formation from one avenue of approach to another.
- Denying the enemy the ability to mass his forces on a flank of the friendly force.

(d) *Blocking Effects.* Blocking effects use the combination of direct and indirect fires and obstacles to stop an attacker along a specific avenue of approach. Fires employed to achieve blocking effects are primarily oriented on preventing the enemy from maneuvering. Because they require the most extensive engineer effort of any type of obstacle, blocking effects are employed only at critical choke points on the battlefield. Blocking obstacles must be anchored on both sides by existing obstacles (severely restricted terrain). Direct and or indirect fires must cover the obstacles to achieve the full blocking effect. The company commander must clearly specify the size of enemy force that he intends to block.

(2) ***Protective Obstacles.*** Platoons are responsible for coordinating and employing their own protective obstacles to protect their defensive positions. To be most effective, these obstacles should be tied into existing obstacles and FPFs. The platoon may use mines and wire from its basic load or pick up additional assets (including MOPMS, if available) from the engineer Class IV or V supply point. The platoon, through the company, also may be responsible for any other required coordination (such as that needed in a relief in place), for recovery of the obstacle, or for its destruction (as in the case of MOPMS).

(a) In planning for protective obstacles, the platoon leader must evaluate the potential threat to the platoon position and employ the appropriate asset. For example, MOPMS is predominately an antitank system best used on mounted avenues of approach, but it does have some antipersonnel applications. Wire obstacles may be most effective when employed on dismounted avenues of approach. FM 90-7 provides detailed planning guidance for the emplacement of protective obstacles.

(b) Protective obstacles usually are located beyond hand grenade range (40 to 100 meters) from a soldier's fighting position, and may extend out 300 to 500 meters to tie into tactical obstacles and existing restricted or severely restricted terrain. The platoon leader should plan protective obstacles in depth and attempt to maximize the effective range of his weapons.

(c) When planning protective obstacles, the platoon leader should consider the amount of time required to prepare them, the resources available after constructing necessary tactical obstacles, and the priorities of work for the soldiers in the platoon.

(3) ***Wire Obstacles.*** There are three types of wire obstacles (Figure 5-1): protective wire, tactical wire, and supplementary wire.

(a) Protective wire may be a complex obstacle providing all-round protection of a platoon perimeter, or it may be a simple wire obstacle on the likely dismounted avenue of approach toward a squad position. Command-detonated M18 Claymore mines may be integrated into the protective wire or used separately.

(b) Tactical wire is positioned to increase the effectiveness of the platoon's direct fires. It usually is positioned along the friendly side of a machine gun final protective line (FPL). Tactical minefields also may be integrated into these wire obstacles or be employed separately.

(c) Supplementary wire obstacles are employed to break up the line of tactical wire to prevent the enemy from locating platoon weapons (particularly ICV, M2, MK19, Javelin, and M240B) by following the tactical wire.

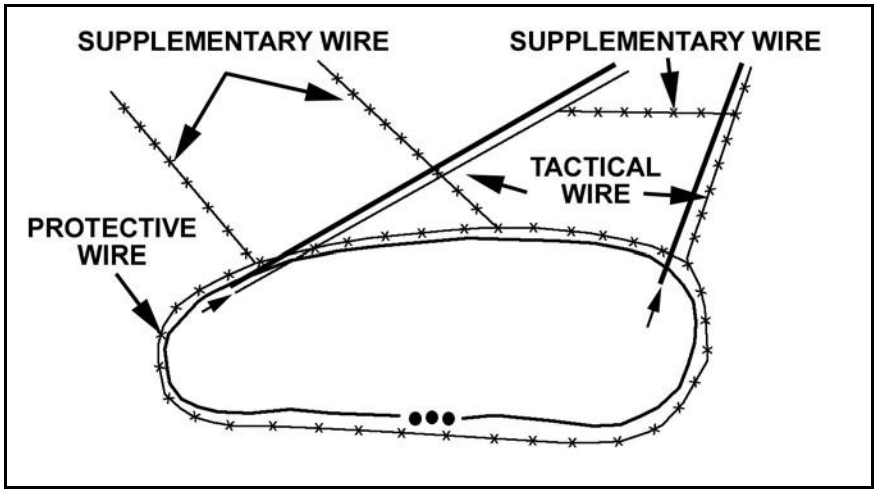


Figure 5-1. Wire obstacles.

(4) ***Obstacle Lanes.*** The platoon may be responsible for actions related to lanes through obstacles. These duties may include overwatching lanes in the obstacle, marking lanes in an obstacle, reporting the locations of the entry and exit points of each lane, manning contact points, providing guides for elements passing through the obstacle, and closing lanes when directed.

c. **Survivability.** Survivability positions are prepared in defensive positions or strongpoints to protect vehicles, weapon systems, and the rifle squads. Positions can be dug in and reinforced with overhead cover to provide rifle squads and crew-served weapons with protection against shrapnel from air bursts. Vehicle fighting positions are constructed with both hull-defilade firing positions and remote weapons system observation positions. The company may dig in ammunition prestocks at platoon alternate, supplementary, or subsequent defensive positions or in individual vehicle fighting positions. The process of digging in a battalion requires many hours of engineer effort. Engineer assets are limited, so the platoon leader must develop a plan for digging in the platoon. He prepares the platoon area for the arrival of engineer assets by marking positions and designating guides. The platoon leader must prioritize the survivability effort within the platoon. He may have time only to dig in positions that have the least amount of natural cover and concealment. Soil composition also should be a consideration in the selection of defensive positions; sites to be avoided include those where the soil is overly soft, hard, wet, or rocky.

5-15. AIR DEFENSE

The focus of an air defense plan is on likely air avenues of approach for enemy fixed-wing, helicopters, and unmanned aerial vehicles, which may or may not correspond with the enemy's ground (mounted and dismounted) avenues of approach. A platoon leader likely will not emplace air defense assets; however, he must be aware that higher

headquarters may employ air defense assets near his defensive position. (For a detailed discussion of air defense, see Chapter 8, Section III.)

5-16. COMBAT SERVICE SUPPORT

In addition to the CSS function required for all operations (refer to Chapter 9), the platoon leader should consider pre-stocking (otherwise known as pre-positioning or caches). The platoon leader's mission analysis (or guidance from the company commander) may reveal that the platoon's ammunition needs during an operation may exceed its basic load. This requires the platoon to establish ammunition caches. The caches, which may be positioned at an alternate or subsequent position, should be dug in and security provided by active or passive means (such as guarded or observed) or passive measures employed to indicate when and if the cache is tampered with.

Section IV. ENGAGEMENT AREA DEVELOPMENT

The engagement area (EA) is the place where the platoon leader intends to destroy an enemy force using the massed fires of all available weapons. The success of any engagement depends on how effectively the platoon leader can integrate the obstacle and indirect fire plans with his direct fire plan in the EA to achieve the platoon's purpose. At the platoon level, EA development remains a complex function that requires parallel planning and preparation if the platoon is to accomplish the tasks for which it is responsible. Despite this complexity, EA development resembles a drill. The platoon leader and his subordinate leaders use a standardized set of procedures. Beginning with an evaluation of the factors of METT-TC, the development process covers these steps:

- Identify likely enemy avenues of approach.
- Identify the enemy scheme of maneuver.
- Determine where to kill the enemy.
- Emplace weapon systems.
- Plan and integrate obstacles.
- Plan and integrate indirect fires.
- Conduct an engagement area rehearsal.

5-17. IDENTIFY LIKELY ENEMY AVENUES OF APPROACH

The platoon leader conducts an initial reconnaissance from the enemy's perspective along each avenue of approach into the sector or engagement area. During his reconnaissance, he confirms key and or decisive terrain identified by the company commander, including locations that afford positional advantage over the enemy as well as natural obstacles and or choke points that restrict forward movement. The PL also determines which avenues will afford cover and concealment for the enemy while allowing him to maintain his tempo, and he evaluates lateral mobility corridors (routes) that adjoin each avenue of approach.

5-18. IDENTIFY THE ENEMY SCHEME OF MANEUVER

The platoon leader greatly enhances this step by gaining information early. He receives answers to the following questions from the company commander:

- Where does the enemy want to go?
- Where will the enemy go based on terrain?

- What is the enemy's mission (or anticipated mission)?
- What are the enemy's objectives?
- How will the enemy structure his attack?
- How will the enemy employ his reconnaissance assets?
- What are the enemy's expected rates of movement?
- How will the enemy respond to friendly actions?

5-19. DETERMINE WHERE TO KILL THE ENEMY

As part of his TLP, the platoon leader must determine where he will mass combat power on the enemy to accomplish his purpose. This decision is tied to his assessment of how the enemy will fight into the platoon's engagement area. Normally this entry point is marked by a prominent TRP that all platoon elements can engage with their direct fire weapons. This allows the commander to identify where it will engage enemy forces through the depth of the company engagement area. In addition, the leader--

- Identifies TRPs that match the enemy's scheme of maneuver, allowing the platoon (or company) to identify where it will engage the enemy through the depth of the engagement area.
- Identifies and records the exact location of each TRP.
- Determines how many weapon systems can focus fires on each TRP to achieve the desired purpose.
- Determines which squad(s) can mass fires on each TRP.
- Begins development of a direct fire plan that focuses at each TRP.

NOTE: In marking TRPs, use thermal sights to ensure visibility at the appropriate range under varying conditions, including daylight and limited visibility.

5-20. EMPLACE WEAPON SYSTEMS

To position weapons effectively, leaders must know the characteristics, capabilities, and limitations of the weapons as well as the effects of terrain and the tactics used by the enemy. Platoon leaders should position weapons where they have protection, where they can avoid detection, and where they can surprise the enemy with accurate, lethal fires. In order to position the weapons, the platoon leader must know where he wants to destroy the enemy and what effect he wants the weapon to achieve. He also should consider doing the following:

- Select tentative squad defensive positions.
- Conduct a leader's reconnaissance of the tentative defensive positions.
- Walk or drive the engagement area to confirm that the selected positions are tactically advantageous.
- Confirm and mark the selected defensive positions.
- Develop a direct fire plan that accomplishes the platoon's purpose.
- Ensure the defensive positions do not conflict with those of adjacent units and is effectively tied in with adjacent positions.
- Select primary, alternate, and supplementary fighting positions to achieve the desired effect for each TRP.

- Ensure the squad leaders position weapons systems so the required numbers of weapons, ICVs, and or squads effectively cover each TRP.
- Stake vehicle positions in accordance with unit SOP so engineers can dig in the positions while ICV crews perform other tasks.
- Inspect all positions.

NOTE: When possible, select fighting and crew served weapon positions while moving in the engagement area. Using the enemy's perspective enables the platoon leader to assess survivability of the positions.

5-21. PLAN AND INTEGRATE OBSTACLES

To be successful in the defense, the platoon leader must integrate tactical obstacles with the direct fire plan, taking into account the intent of each obstacle. At the company level, obstacle intent consists of the target of the obstacle, the desired effect on the target, and the relative location of the group. A platoon must have a clear task and purpose in order to properly emplace a tactical obstacle. Normally, the company or battalion will designate the purpose of the tactical obstacle. The purpose will influence many aspects of the operation, from selection and design of obstacle sites to actual conduct of the defense. Once the tactical obstacle has been emplaced, the platoon leader must report its location and the gaps in the obstacle to the company commander. This ensures that the company commander can integrate obstacles with his direct and indirect fire plans, refining his EA development.

5-22. PLAN AND INTEGRATE INDIRECT FIRES

In planning and integrating indirect fires, the platoon leader must accomplish the following:

- Determine the purpose of fires, if the company commander has not already done so.
- Determine where that purpose will best be achieved if the company commander has not done so.
- Establish the observation plan with redundancy for each target. Observers will include the platoon leader as well as members of subordinate elements (such as team leaders) with fire support responsibilities.
- Establish triggers based on enemy movement rates.
- Obtain accurate target locations using survey and or navigational equipment.
- Refine target locations to ensure coverage of obstacles.
- Adjust artillery and mortar targets.
- Plan FPF.

5-23. CONDUCT AN ENGAGEMENT AREA REHEARSAL

The purpose of rehearsal is to ensure that every leader and every soldier understands the plan (Figure 5-2) and is prepared to cover their assigned areas with direct and indirect fires.

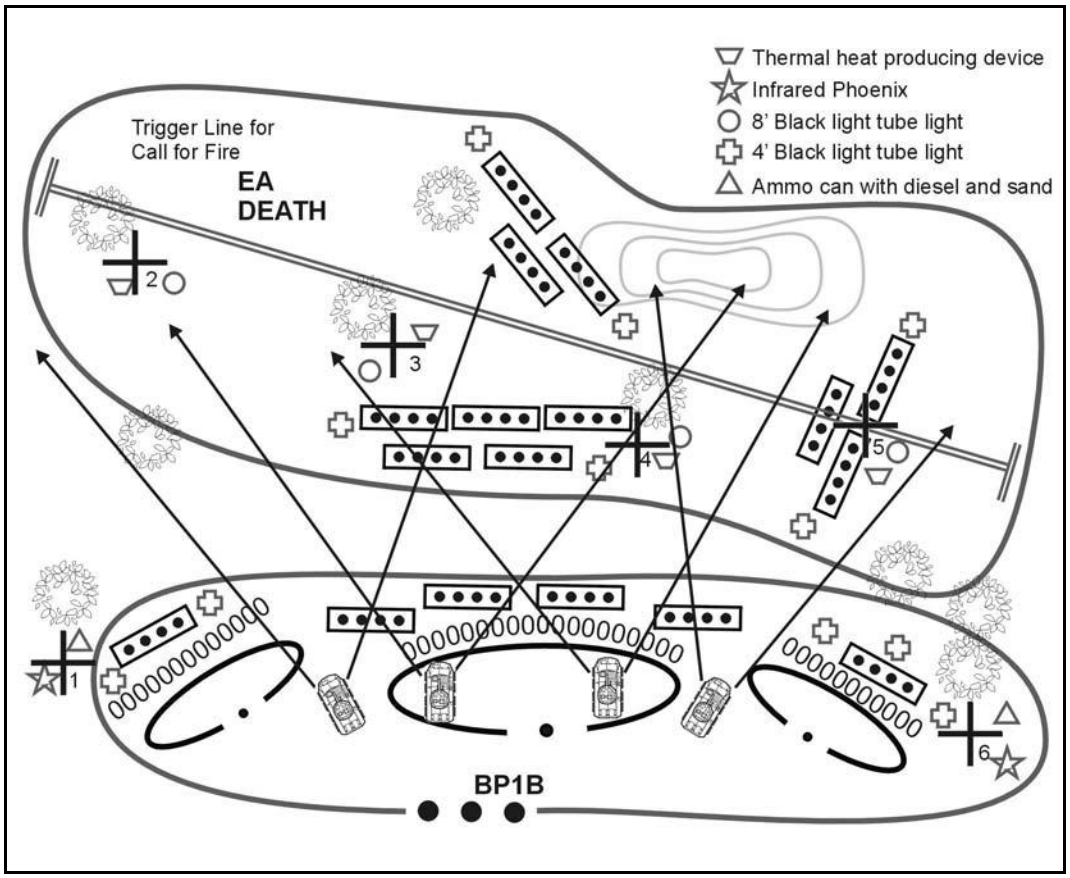


Figure 5-2. Integrated engagement area plan.

The platoon will likely participate in a company level engagement area rehearsal. The company commander has several options for conducting a rehearsal, but the combined arms rehearsal produces the most detailed understanding of the plan. One technique the platoon leader may use for his rehearsal is the full dress rehearsal. In the defense the platoon leader may have the platoon sergeant and elements of the squads conduct a movement, mounted or dismounted, through the engagement area to depict the attacking enemy force while the platoon leader and squad leaders rehearse the battle from the platoon defensive positions. The rehearsal should cover--

- Rearward passage of security forces (as required).
- Closure of lanes (as required).
- Movement from the hide position to the defensive positions.
- Use of fire commands, triggers, and or maximum engagement lines (MELs) to initiate direct and indirect fires.
- Shifting of fires to refocus and redistribute fire effects.
- Disengagement criteria.
- Identification of displacement routes and times.
- Location of remount points, the times remount operations will take place, and movement considerations for conduct of a remount in contact.
- Preparation and transmission of critical reports using FM and digital systems (as applicable).

- Assessment of the effects of enemy weapon systems.
- Displacement to alternate, supplementary, or subsequent defensive positions.
- Cross leveling or resupply of Class V items.
- Evacuation of casualties.

NOTE: When conducting his rehearsal, the platoon leader should coordinate the platoon rehearsal with the company to ensure other units' rehearsals are not planned for the same time and or location. Coordination will lead to more efficient use of planning and preparation time for all company units. It also will eliminate the danger of misidentification of friendly forces in the rehearsal area.

Section V. OCCUPATION AND PREPARATION OF DEFENSIVE POSITIONS

Occupation and preparation of defensive positions is conducted concurrently with the TLP and EA development. The process is not sequential. The potential problem associated with this process is the lack of adequate preparation time if the platoon has several other defensive positions (alternate, supplementary, and subsequent) and EAs to develop.

5-24. OCCUPATION OF THE DEFENSE

The platoon occupies defensive positions in accordance with the platoon leader's plan and the results of the reconnaissance.

a. To ensure an effective and efficient occupation, each ICV and rifle squad moves to the location marked by the reconnaissance element as a friendly position. These positions also are on the operational graphics. Once in position, each squad leader and VC checks his location on the map to ensure he is complying with the platoon leader's graphics. As the platoon occupies its positions, the platoon leader ensures that each squad and vehicle locate in accordance with his plan. If the platoon leader notes discrepancies between actual positioning of the squads or vehicles and his plan, he corrects it immediately.

b. Once each rifle squad and ICV has occupied its position, the platoon leader must walk the positions to ensure weapons orientation, positioning of the rifle squads and vehicles, and understanding of the plan are in accordance with the pre-established plan. The platoon leader should not rely on updates from his subordinates. He should always walk his defensive perimeter. For command and control purposes, each squad leader and VC must know the location of the PL and the PSG.

c. OTN equipment enhances the occupation process under limited visibility conditions. For instance, the platoon leader can mark his position with an infrared light source and the squad leaders and VCs can move to pre-marked positions with infrared light sources showing them where to locate. Additionally, the squad leaders can use AN/PAQ-4B/Cs or AN/PEQ-2As to point out sectors of fire and TRPs to their soldiers, using infrared light sources to keep the occupation clandestine.

d. The platoon may conduct a hasty occupation in the defense during a counterattack or after disengagement and movement to alternate, supplementary, or subsequent defensive positions.

(1) The platoon leader issues a FRAGO covering the following minimum information:

- Changes in the enemy and or friendly situation
- The platoon task and purpose (what the platoon must accomplish and why).
- The task and purpose for each subordinate element.
- The scheme of fires.
- Coordinating instructions.

(2) At a minimum the following actions must be taken:

- The platoon approaches the defensive positions from the rear or flank.
- The platoon establishes direct fire control measures or, if these are preplanned, reviews the plan.
- The platoon leader reports "OCCUPIED" to the company commander.

e. The platoon conducts deliberate occupation of defensive positions when time is available, when enemy contact is not expected, and when friendly elements are positioned forward in the sector to provide security for forces in the MBA. Actually establishing defensive positions is accomplished concurrently with the development of the EA. The platoon leader directs the initial reconnaissance from the EA and then tentatively emplaces vehicle and weapon system positions.

f. Once the defensive positions are established, subordinate leaders can begin to develop their sector sketches and fire plans based on the basic fire plan developed during the leader's reconnaissance. Fighting positions are improved while the direct fire plan is finalized and proofed. Depending on factors of METT-TC, the platoon may occupy hide positions when preparations are completed, then occupy the defensive positions just before initiating the defensive operation. The platoon leader, with guidance from the company commander, designates the level of preparation for each defensive position based on the time available and other tactical considerations for the mission. The three levels of defensive position preparation are listed here in descending order of thoroughness and time required:

(1) ***Occupy***. Complete the preparation of the position from which the platoon will initially defend. The position is fully reconnoitered, prepared, and occupied prior to the "defend not later than (NLT)" time specified in the company order. The platoon must rehearse the occupation, and the platoon leader must establish a trigger for occupation of the position.

(2) ***Prepare.*** The position and the corresponding EA will be fully reconnoitered. Squad and ICV positions in the defensive positions should be marked, along with direct fire control measures in the EA. Survivability positions may be dug, ammunition caches pre-positioned, and protective obstacles emplaced.

(3) ***Reconnoiter.*** Both the EA and defensive positions will be fully reconnoitered. Tentative weapon positions should be planned in the defensive positions, and limited direct fire control measures should be established in the engagement area.

g. In addition to establishing the platoon's primary defensive positions, the platoon leader and subordinate leaders normally plan for preparation and occupation of alternate, supplementary, and subsequent defensive positions in accordance with the company order.

(1) The following characteristics and considerations apply for an alternate defensive position:

- Covers the same avenue of approach and or sector of fire as the primary defensive positions; located slightly to the front, flank, or rear of the primary defensive positions.
- Positioned forward of the primary defensive positions during limited visibility operations.
- Normally employed to supplement or support positions with weapons of limited range, such as dismounted infantry positions.

(2) The following characteristics and considerations apply to a supplementary defensive position:

- Covers an avenue of approach and or sector of fire different from those covered by the primary defensive positions.
- Occupied based on specific enemy actions.

(3) The following characteristics and considerations apply for a subsequent defensive position:

- Covers the same avenue of approach and or sector of fire as the primary defensive position; located in depth through the defensive sector.
- Occupied based on specific enemy actions or conducted as part of the higher headquarters scheme of maneuver.

5-25. PRIORITY OF WORK

Leaders must ensure that soldiers prepare for the defense quickly and efficiently. Work must be done in order of priority to accomplish the most in the least amount of time while maintaining security and the ability to respond to enemy action. Below are basic considerations for priorities of work.

- Emplace local security (leaders).
- Position and assign sectors of fire for each squad and vehicle (platoon leader).
- Position and assign sectors of fire for Javelin, MK 19, and M2 teams (platoon leader).
- Position and assign sectors of fire for SAW and M240B gunners, grenadiers, and then riflemen (squad leaders).
- Clear fields of fire and prepare range cards.
- Prepare sector sketches (leaders).
- Dig fighting positions (stage 1).
- Establish communications with the company and adjacent units.
- Coordinate with adjacent units; review sector sketches.
- Emplace antitank and Claymore mines, then wire and other obstacles.
- Improve primary fighting positions and add overhead cover (stage 2).
- Prepare supplementary and then alternate positions (same procedure as the primary position).
- Distribute and stockpile ammunition, food, and water.

Unit priorities of work normally are found in SOPs; however, the commander will dictate the priorities of work for the company based on the factors of METT-TC. Several actions may be accomplished at the same time. Leaders must constantly supervise the preparation of fighting positions, both for tactical usefulness and proper construction.

5-26. SECURITY IN THE DEFENSE

Security in the defense includes all active and passive measures taken to avoid detection by the enemy, deceive the enemy, and deny enemy reconnaissance elements accurate information on friendly positions. The two primary tools available to the platoon leader are observation posts and patrols. In planning (refer to Chapter 2, Section III) for the security in the defense, the platoon leader considers the terrain in terms of OCOKA. He uses his map to identify terrain that will protect the platoon from enemy observation and fires while providing observation and fires into the EA. Additionally, he uses intelligence updates to increase his situational understanding, reducing the possibility of the enemy striking at a time or in a place for which the platoon is unprepared.

a. **Observation Posts.** An OP gives the platoon its first echelon of security in the defense. The OP provides early warning of impending enemy contact by reporting direction, distance, and size. It detects the enemy early and sends accurate reports to the platoon. The platoon leader establishes OPs along the most likely enemy avenues of approach into the position or into the area of operation. Leaders ensure that OPs (mounted or dismounted) have communication with the platoon.

(1) Early detection reduces the risk of the enemy overrunning the OP. OPs also may be equipped with a Javelin CLU to increase the ability to detect the enemy. They may receive infrared trip flares, infrared parachute flares, infrared M203 rounds, and even infrared mortar round support to illuminate the enemy. The platoon leader weighs the advantages and disadvantages of using infrared illumination when the enemy is known to have night vision devices that detect infrared light. Although infrared and thermal equipment within the platoon enables the platoon to see the OP at a greater distance, the OP should not be positioned outside the range of the platoon's small-arms weapons.

(2) To further reduce the risk of fratricide, OPs use GPS, if available, to navigate to the exit and entry point in the platoon's position. The platoon leader submits OP locations to the company commander to ensure a no fire area (NFA) is established around each OP position. The commander sends his operational overlay with OP positions to the battalion and to adjacent units, and he receives the same type overlay from adjacent units to assist in better command and control and fratricide avoidance (Appendix D). The platoon leader confirms that the company fire support element (FSE) has forwarded these locations to the battalion fire support officer (FSO) and has received the appropriate NFAs on the fire support graphics.

b. **Patrols.** Platoons actively patrol in the defense. Patrols enhance the platoon's ability to fill gaps in security between OPs (refer to Chapter 10). The platoon leader forwards his tentative patrol route to the commander to ensure they do not conflict with other elements within the company. The commander forwards the entire company's patrol routes to the battalion. This allows the battalion S3 and S2 to ensure all routes are coordinated for fratricide prevention and to ensure the company and platoons are conforming to the battalion intelligence, surveillance, and reconnaissance (ISR) plan. The patrol leader may use a GPS to enhance his basic land navigational skills as he tracks his patrol's location on a map, compass, and pace count or odometer reading.

5-27. ESTABLISHMENT OF DEFENSIVE POSITIONS

Platoons establish defensive positions in accordance with the platoon leader and commander's plan. They mark EAs using marking techniques prescribed by unit SOP.

The platoon physically marks obstacles, TRPs, targets, and trigger lines in the EA. During limited visibility the platoon can use infrared light sources to mark TRPs for the rifle squads. The mounted force must have heated (thermal signature) TRPs in addition to the infrared devices to orient their weapons. When possible, platoons should mark TRPs with both a thermal and infrared source so both the rifle squads and ICVs can use the TRP.

a. **Range Card.** A range card is a sketch of a sector that a direct fire weapons system is assigned to cover. A range card aids in planning and controlling fires and aids the crew in acquiring targets during limited visibility. It also is an aid for replacement personnel or platoons or squads to move into the position and to orient on their sector. During good visibility, the gunner should have no problems maintaining orientation in his sector. During poor visibility, he may not be able to detect lateral limits. If the gunner becomes disoriented and cannot find or locate reference points or sector limit markers, he can use the range card to locate the limits. The gunner should make the range card so that he becomes more familiar with the terrain in his sector. He should continually assess the sector and, if necessary, update his range card. (For a detailed discussion on range cards refer to Appendix H.)

b. **Vehicle Firing Position.** When the ICV is integrated into the defensive position and after a range card has been completed, its position should be marked with ground stakes. This enables the ICV or a replacement ICV to reoccupy the position and be able to use the range card data.

(1) ***Stake the Position.*** Before the vehicle is moved, the position should be staked. Three stakes are required to effectively mark the position.

(a) One stake is placed in front of the vehicle, centered on the driver's station, and just touching the hull. The stake should be long enough for the driver to see it when in position. The other two stakes are placed parallel to the left side and lined up with the hub on the front and rear wheels. The stakes should be placed close to the vehicle with only enough clearance to move the vehicle into position.

(b) The stakes should be driven firmly into the ground. Engineer tape or luminous tape can be placed on the friendly side of the stakes so that the driver can see them. A rock is placed at each of the front two corners of the vehicle to assist in reoccupation if the stakes are lost.

(2) ***Move into Position.*** If the situation permits, a ground guide can be used to assist the driver. If a ground guide cannot be used, the driver moves the ICV in, parallel to the side stakes, with the front stake centered on the driver's station. Once the ICV is in position, the gunner should index the range and azimuth for one of the TRPs on the range card. If the sight is aligned on the TRP, the vehicle is correctly positioned. If the sight is not aligned on the TRP, the gunner should tell the driver which way to move the vehicle to align the sight on the target. Only minor adjustments should be necessary. If the stakes are lost and the position is not otherwise marked, the vehicle is moved to the approximate location. The VC or gunner can use a compass to find the left and right limits. The vehicle should be moved, if time allows, until it is within 6 to 8 inches of exact position.

c. **Sector Sketches.** Detailed sketches aid in the planning, distribution, and control of the platoon fires. Gunners prepare the range cards. Squad leaders prepare squad sector sketches, section leaders prepare section sketches, and the platoon leader prepares the platoon sketch. (For a detailed discussion of sector sketches refer to Appendix H)

5-28. WEAPONS PLACEMENT

To position weapons effectively, leaders must know the characteristics, capabilities and limitations of the weapons, the effects of terrain, and the tactics used by the enemy. Additionally, the platoon leader must consider whether his primary threat will be vehicles or infantry. His plan should address both mounted and dismounted threats.

a. **ICV Employment.** The ICV's primary role is to transport the infantry squads and provide limited protection from indirect fire and self-defense fires from their organic weapon systems (M2 and MK19). However, the platoon may integrate the ICV into the defense and capitalize on the increased fire power of the M2 and the antiarmor capabilities of the MK 19. Leaders should consider the following when employing ICVs in the defense:

- Use a hide position when possible and stay in it until the enemy is in the area where the platoon will destroy him. A prone or dug-in observer forward gives a much smaller signature than an ICV.
- Have a backdrop and avoid anything that may catch the enemy's eye.
- Position to the flank of an enemy mounted approach and behind frontal cover. It is easier for the attacker to acquire and destroy a target to his front than one to his flank or rear.
- Use covered routes into and out of firing positions.
- Use a guideline of 75m or more between primary and alternate ICV positions. This decreases the enemy's ability to acquire the ICV following an engagement.
- Do not construct berms. To be effective, a berm needs more than 20 feet of dirt, and this makes it easier for the attacker to spot the position. Dig one- and two-step fighting positions instead.

Avoid positions that expose weapons to large numbers of enemy systems. It is best to hide weapons from major portions of the enemy formation. The weapon should be able to engage one or two of the enemy vehicles at the same time. It must be able to shift from its assigned sector of fire to engage other portions of the enemy formation (Figure 5-3, page 5-22). When engagement ranges are reduced, flanking fires, use of obstacles, mutual support with the rifle squads, and covered and concealed positions increase in importance. Because of battlefield obscuration, weapons should be positioned to fight during limited visibility and be able to quickly move to alternate positions.

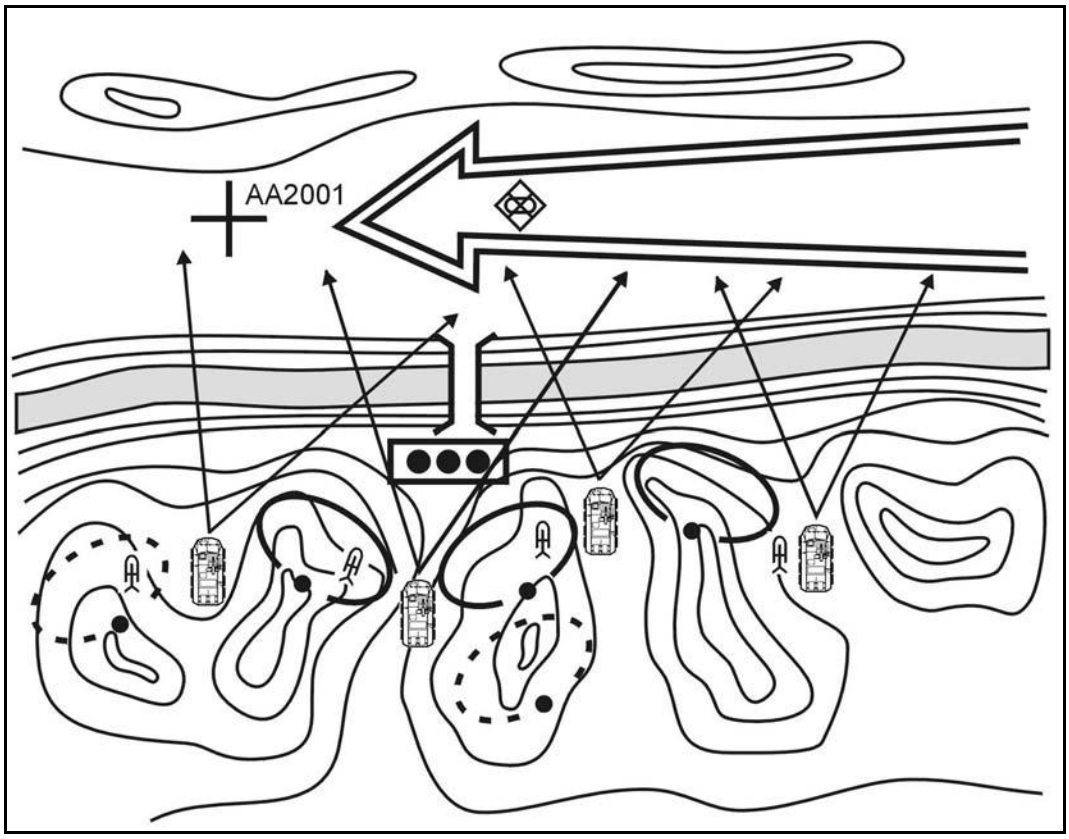


Figure 5-3. Hidden position with smaller fields of fire.

b. **Javelin Employment.** The Javelin's primary role is to destroy enemy armored vehicles. When there is no armored vehicle enemy, the Javelin can be employed in a secondary role of providing fire support against point targets such as bunkers and crew-served weapons positions. In addition, the Javelin's CLU can be used alone as an aided vision device for reconnaissance, security operations, and surveillance. Reduced or limited visibility will not degrade the effectiveness of the Javelin. This fact allows the antiarmor specialist to continue to cover his sector without having to reposition closer to the avenue of approach. The platoon leader's assessment of the factors of METT-TC will determine the employment of Javelins. (For a detailed discussion on the employment of the Javelin, refer to Appendix G.) Based on the situation, the platoon leader may employ all or some of the Javelins. He has two options:

- *Centralized Control*. The platoon leader controls the fires of his Javelin gunners, either physically locating the weapons in his vicinity and personally directing their fires, or by grouping them together under the control of the platoon sergeant or another designated leader.
- *Decentralized Control*. Javelin gunners operate with, and are controlled by, their squad leaders. The squad leader may need to employ one fire team with a Javelin. The platoon leader normally gives the command to fire.

c. **M240B and M249 Employment.** These are the platoon's primary dismounted weapons and are positioned first if the enemy is a dismounted force. (For a detailed discussion on the employment of the M240B and the M249, refer to Appendix B.) Once these guns are sited, the leader positions riflemen to protect them. The guns are

positioned to place direct fire on locations where the platoon leader wants to concentrate combat power to destroy the enemy.

d. **M2 Machine Gun and MK 19 Grenade Launcher Employment.** The platoon is equipped with the M2 .50 cal machine gun and the MK 19 grenade launcher. Both systems are organic to the ICV and can be used in the mounted or dismounted role. These weapons provide the platoon leader with additional firepower for use in the defense. The M2 has a maximum effective range of 1800m. The MK19 has a maximum effective range of 1830m for area fire and 1500m for point targets. The MK19 has a high explosive (HE) round and a high explosive dual purpose (HEDP) round, and both are effective against lightly armored vehicles.

d. **M203 Employment.** The M203 is the squad leader's indirect fire weapon. He positions it to cover dead space in the squad's sector, especially the dead space for the M240B and M249. The grenadier is also assigned a sector of fire overlapping the riflemen's sectors of fire. The HEDP round is effective against lightly armored vehicles such as the BMP-1 and the BTR (an eight-wheeled armored personnel carrier).

e. **Employment of Riflemen.** The platoon and squad leaders assign positions and sectors of fire to each rifleman in the platoon. Normally, they position the riflemen to support and protect the machine guns, squad automatic weapons, and antiarmor weapons. Riflemen also are positioned to cover obstacles, provide security, cover gaps between platoons and companies, or provide observation.

5-29. COORDINATION

Coordination is important in every operation. In the defense, coordination ensures that units provide mutual support and interlocking fires. In most circumstances, the platoon leader conducts face-to-face coordination to facilitate understanding and to resolve issues effectively, but when time is extremely limited, digital coordination may be the only means of sending and receiving this information. The platoon leader should send and receive the following information prior to conducting face-to-face coordination:

- Location of leaders.
- Location of fighting positions.
- Location of OPs and withdrawal routes.
- Location and types of obstacles.
- Location, activities, and passage plan for scouts and other units forward of the platoon's position.
- Platoon's digital sector sketch.
- Location of all soldiers and or units operating in and around the platoon's area of operations.

NOTE: Current techniques for coordination hold true for units that are digitally equipped. If a digitized and a non-digitized unit are conducting adjacent unit coordination, face-to-face is the preferred method. The leader of the digitized unit has the option to enter pertinent information about the non-digitized unit into FBCB2 for later reference. The platoon leader should show the adjacent unit leader his digital sector sketch. If face-to-face coordination is not possible, leaders share pertinent information by radio.

Section VI. DEFENSIVE TECHNIQUES

The company commander's analysis will determine the most effective manner in which to defend. He will direct the platoons what defensive techniques to employ. The platoon normally will defend using one of these basic techniques.

- Defend in sector.
- Defend a battle position.
- Defend a strongpoint.
- Defend a perimeter.
- Defend a reverse slope.

5-30. DEFEND IN SECTOR

Defending in sector allows a unit to maintain flank contact and security and ensures unity of effort in the scheme of maneuver. Sectors afford depth in the platoon defense. They allow the platoon to achieve the platoon leader's desired end state while facilitating clearance of fires at the appropriate level of responsibility. The company commander normally orders a platoon to defend in sector (Figure 5-4) when flexibility is desired, when retention of specific terrain features is not necessary, or when the unit cannot concentrate fires because of any of the following factors:

- Extended frontages.
- Intervening, or cross-compartmented, terrain features.
- Multiple avenues of approach.

The platoon is assigned a defend-in-sector mission to prevent a specific amount of enemy forces from penetrating the rear boundary of the sector. To maintain the integrity of the sector defense, the platoon must remain tied to adjacent units on the flanks. The company commander may direct the platoon to conduct the defense in one of two ways:

a. He may specify a series of subsequent defensive positions within the sector from which the platoon will defend to ensure that the fires of two platoons can be massed.

b. He may assign a sector to the platoon. The platoon leader assumes responsibility for most tactical decisions and controlling maneuvers of his subordinate elements by assigning them a series of subsequent defensive positions IAW guidance from the company commander in the form of intent, specified tasks, and the concept of the operation. The company commander normally will assign a sector to a platoon only when it is fighting in isolation

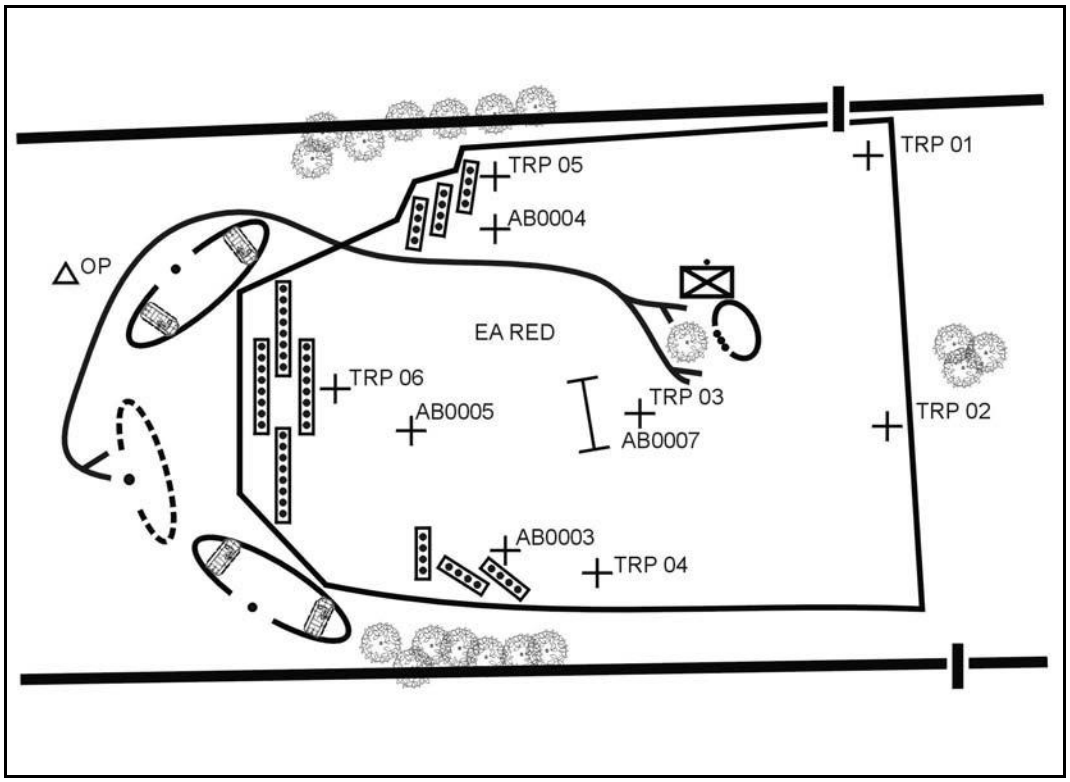


Figure 5-4. Concept of the operation for a defense in sector.

5-31. DEFEND A BATTLE POSITION

The company commander assigns this defensive technique to his platoons when he wants to mass the fires of two or more platoons in a company EA or to position a platoon to execute a counterattack. A unit defends from a BP to:

- Destroy an enemy force in the EA.
- Block an enemy avenue of approach.
- Control key or decisive terrain.
- Fix the enemy force to allow another unit to maneuver.

The company commander assigns platoon BPs to allow each platoon to concentrate its fires or to place it in an advantageous position for the counterattack. The size of the platoon BP can vary, but it should provide enough depth and maneuver space for subordinate elements to maneuver into alternate or supplementary positions and to counterattack. The BP is a general position on the ground. The platoon leader places his ICVs on the most favorable terrain in the BP based on the higher unit mission and commander's intent. The platoon then fights to retain the position unless ordered by the company commander to counterattack or displace. The following are basic methods of employing a platoon in a BP:

- Same BP, same avenue of approach.
- Same BP, different avenues of approach.
- Different BPs, same avenue of approach.
- Different BPs, different avenues of approach.

a. **Same Battle Position, Same Avenue of Approach.** Rifle squads and ICVs are on the same battle position covering the same avenue of approach (Figure 5-5, page 5-26).

The platoon can defend against mounted and dismounted attacks and move rapidly to another position.

(1) ICVs remain on the same battle position as the squads when the terrain provides good observation, fields of fire, and cover and concealment to both the squads and ICVs.

(2) Employing both elements of the ICV platoon on the same battle position covering the same avenue of approach is the most conservative use of the ICV platoon. Its primary advantages are that it facilitates command and control functions because of the proximity of both the vehicle and squad elements on the same approach, facilitates remounting of vehicles, and provides increased security.

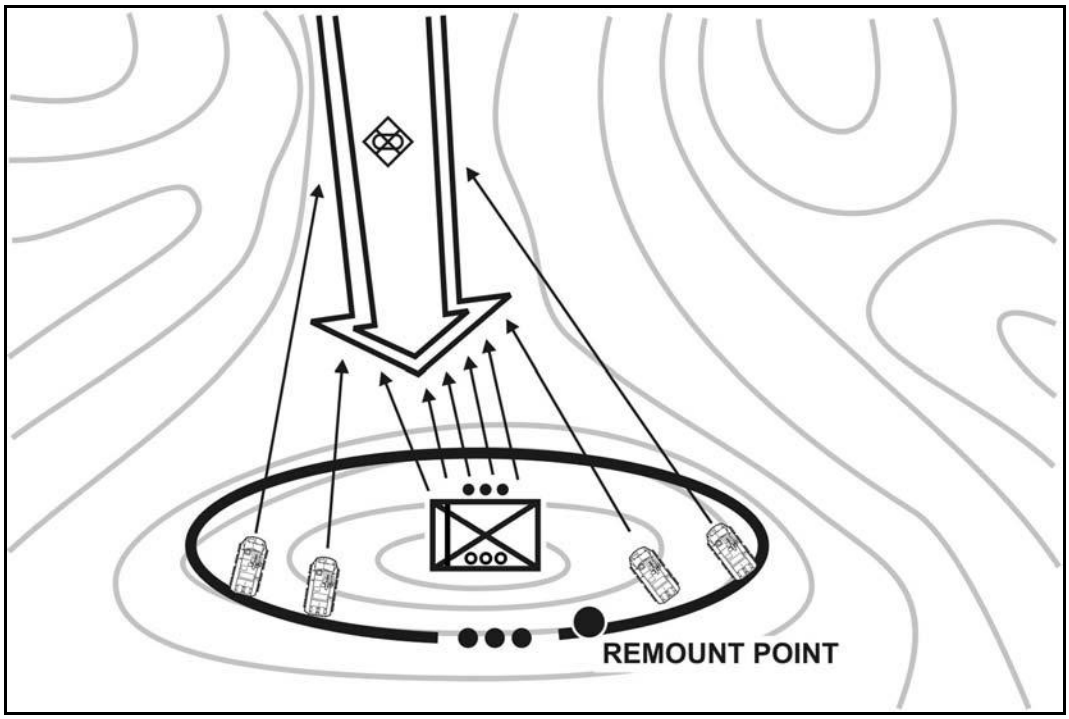


Figure 5-5. Same battle position, same avenue of approach.

b. **Same Battle Position, Different Avenues of Approach.** Rifle squads and ICVs are on the same battle position covering different avenues of approach (Figure 5-6).

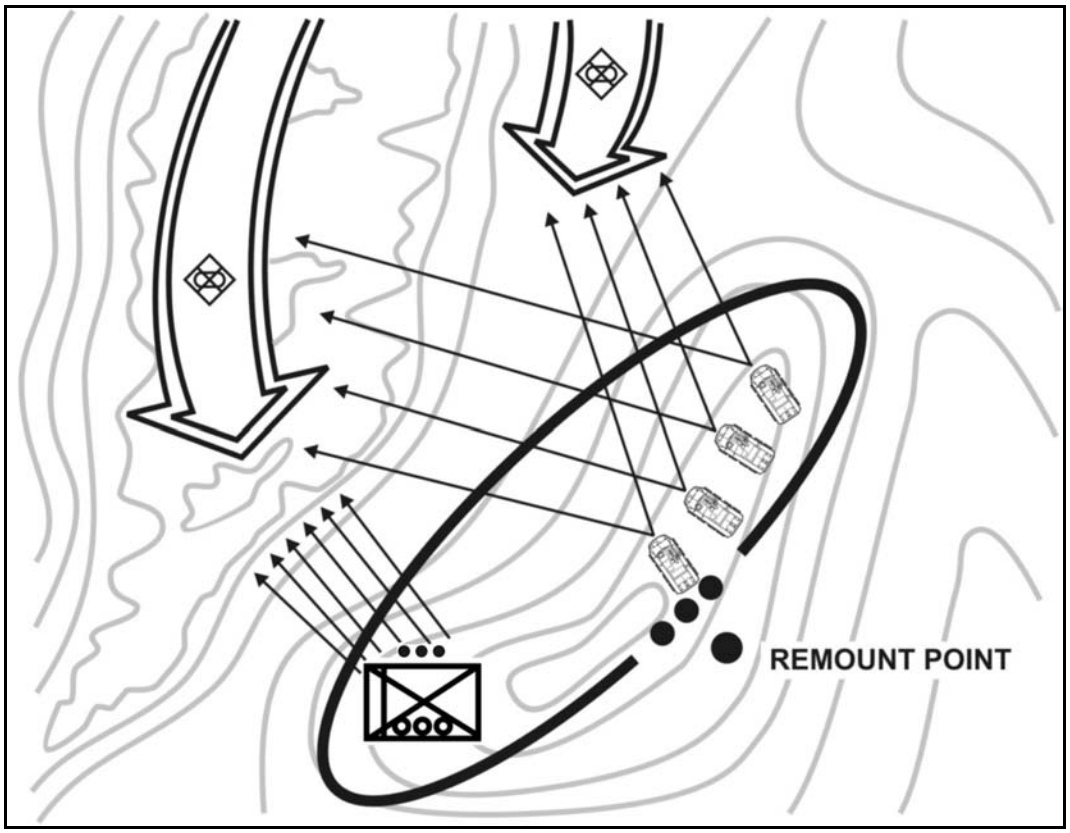


Figure 5-6. Same battle position, different avenues of approach.

c. **Different Battle Positions, Same Avenue of Approach.** Rifle squads and ICVs are on different battle positions covering the same avenue of approach (Figure 5-7, page 5-28). If positioned on separate battle positions, ICVs and rifle squads must fight in relation to each other when covering the same avenues of approach. ICVs can provide the rifle squads supporting fires from their primary, alternate, or supplementary positions. Both elements are positioned to engage enemy forces on the same avenue of approach, but at different ranges.

(1) Rifle squads must be able to conduct operations without the support of the ICVs. The quantity and type of weapons, ammunition, mines, equipment, and supplies for the rifle squads must be considered.

(2) ICVs may be employed well forward to perform a specific task such as a screen or guard. A section with a squad can also conduct security operations. Normally, this is done under the direction and control of the company commander.

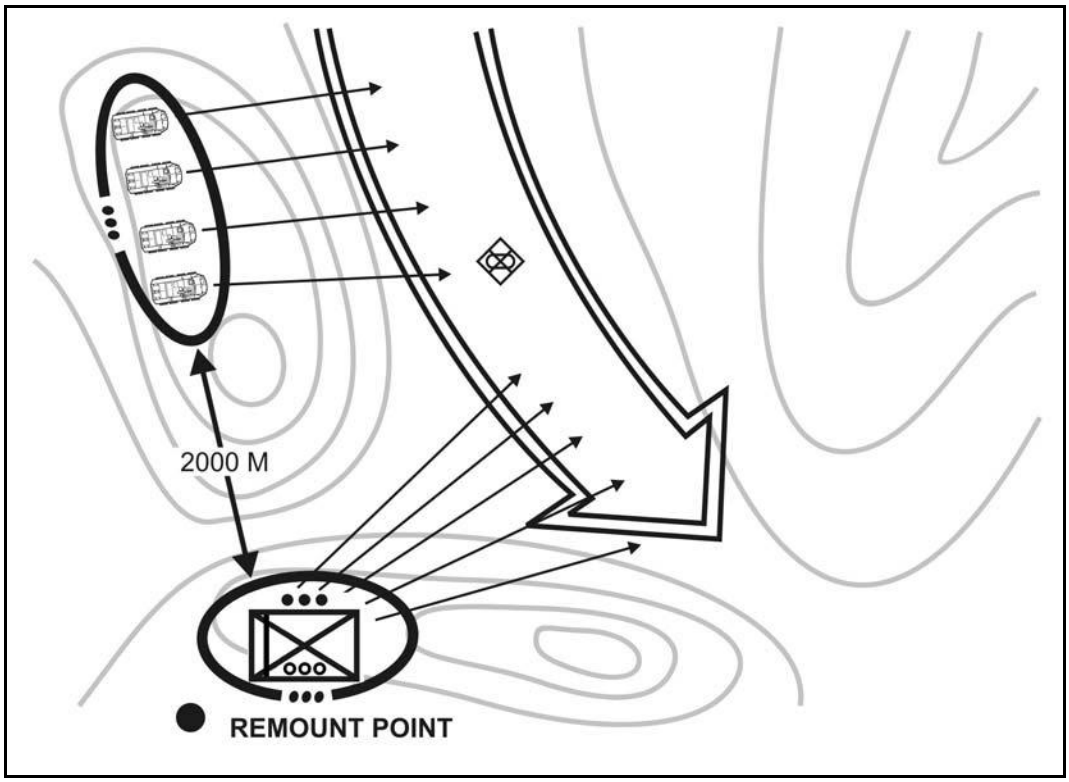


Figure 5-7. Different battle positions, same avenue of approach.

d. **Different Battle Positions, Different Avenue of Approach.** ICVs and infantry may be employed on different battle positions, different avenues of approach.

5-32. DEFEND A STRONGPOINT

Defending a strongpoint is not a common mission for the SBCT infantry platoon. A strongpoint defense requires extensive engineer support (in terms of expertise, materials, and equipment) and takes a long time to complete. When the platoon is directed to defend a strongpoint, it must retain the position until ordered to withdraw. The success of the strong-point defense depends on how well the position is tied into the existing terrain. This defense is most effective when it is employed in terrain that provides cover and concealment to both the strongpoint and its supporting obstacles. Mountainous, forested, or urban terrain can be adapted easily to a strong-point defense. Strongpoints placed in more open terrain require the use of reverse slopes or of extensive camouflage and deception efforts. This defensive mission may require the platoon to--

- Hold key or decisive terrain critical to the company or battalion scheme of maneuver.
- Provide a pivot to maneuver friendly forces.
- Block an avenue of approach.
- Canalize the enemy into one or more engagement areas.

a. **Characteristics of the Strongpoint Defense.** The prime characteristic of an effective strongpoint is that it cannot be easily overrun or bypassed. It must be positioned and constructed so that the enemy knows he can reduce it only at the risk of heavy casualties and significant loss of materiel. He must be forced to employ massive artillery

concentrations and dismounted infantry assaults in his attack, so the strongpoint must be tied in with existing obstacles and positioned to afford 360-degree security in observation and fighting positions.

b. **Techniques and Considerations.** A variety of techniques and considerations are involved in establishing and executing the strongpoint defense, including considerations for displacement and withdrawal from the strongpoint.

(1) The platoon leader begins by determining the projected size of the strongpoint and by assessing the number of vehicles, weapons systems, and individual soldiers available to conduct the assigned mission as well as the terrain on which the platoon will fight. He must remember that although a strongpoint is usually tied into a company defense and flanked by other defensive positions, it must afford 360-degree observation and firing capability.

(2) The platoon leader must ensure that the layout and organization of the strongpoint maximizes the capabilities of the platoon's personnel strength and weapons systems without sacrificing the security of the position. Siting options range from positioning all the vehicles outside the strongpoint (with the rifle squads occupying fighting positions inside it) to placing all assets within the position. From the standpoint of planning and terrain management, placing everything in the strongpoint is the most difficult option and potentially the most dangerous because of the danger of enemy encirclement (Figure 5-8, page 5-30).

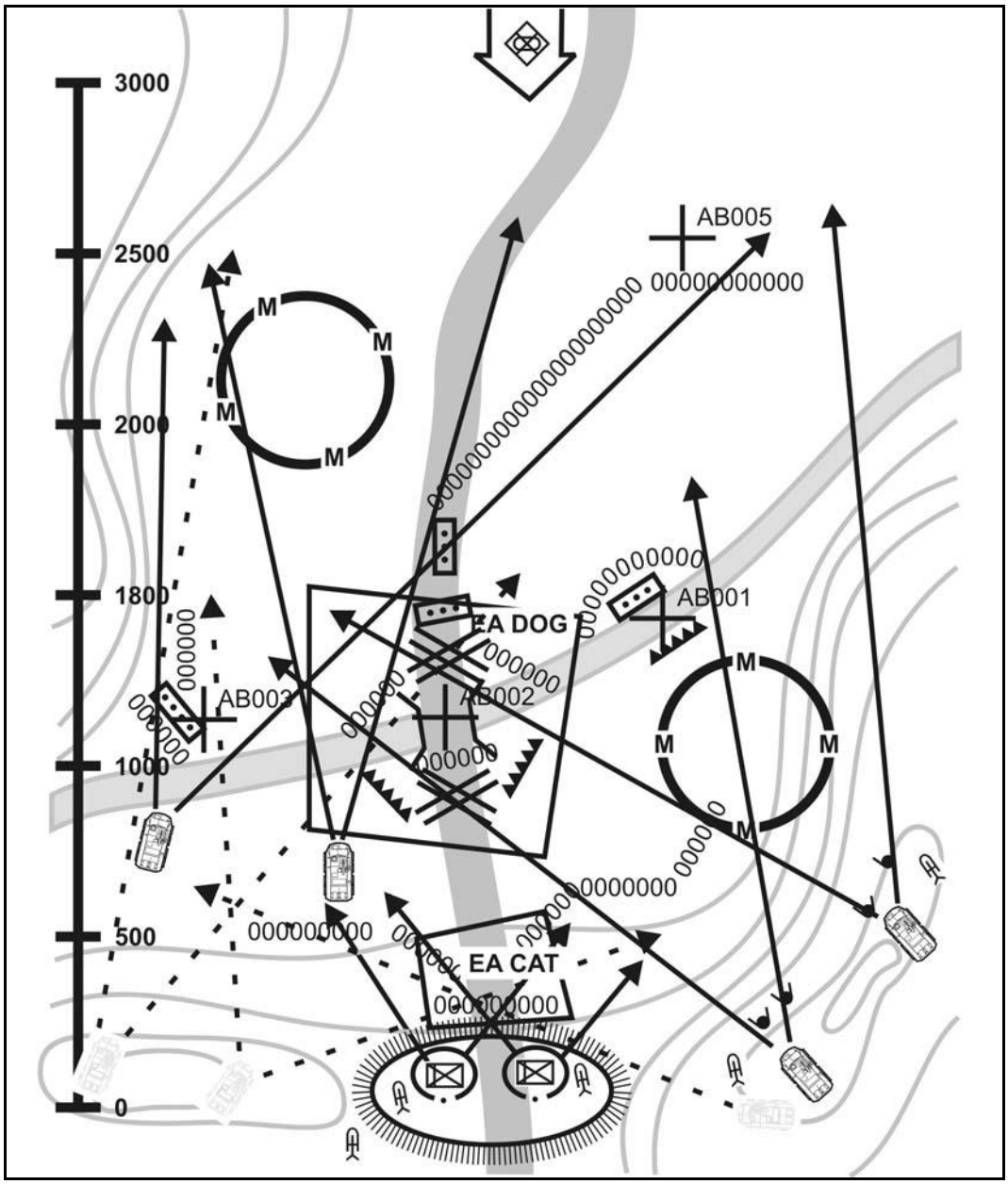


Figure 5-8. Defending a strongpoint.

(3) In laying out the strongpoint, the platoon leader designates weapon positions that support the company defensive plan. Once these primary positions have been identified, he continues around the strongpoint, siting weapons on other possible enemy avenues of approach and EAs until he has the ability to orient effectively in any direction. The fighting positions facing the company EA may be along one line of defense or staggered in depth along multiple lines of defense (if the terrain supports positions in depth). Vehicle positions may be located abreast of the two-man fighting positions or, for greater depth, behind them. The platoon leader can create a broader strongpoint frontage by interspersing vehicle and rifle squad positions.

(4) The platoon's reserve may be comprised of a mounted or dismounted fire team or squad, or a combination of the two. The platoon leader must know how to influence the strongpoint battle by employing his reserve. He has several employment options including reinforcing a portion of the defensive line or counterattacking along a portion of the perimeter against an identified enemy main effort.

(5) The platoon leader should identify routes or axes that will allow the reserve to move to any area of the strongpoint. He should then designate positions the reserve can occupy once they arrive. These routes and positions should afford sufficient cover to allow the reserve to reach its destination without enemy interdiction. The platoon leader should give special consideration to developing a direct fire plan for each contingency involving the reserve. The key area of focus may be a plan for isolating an enemy penetration of the perimeter. Rehearsals cover actions the platoon takes if it has to fall back to a second defensive perimeter and include the direct fire control measures necessary to accomplish the maneuver. FPF may be employed to assist in the displacement.

c. Engineers support strongpoint defense by reinforcing the existing obstacles. Priorities of work will vary depending on the factors of METT-TC, especially the enemy situation and time available. For example, the first 12 hours of the strongpoint construction effort may be critical for emplacing countermobility and survivability positions as well as command and control bunkers. On the other hand, if the focus of engineer support is to make the terrain approaching the strongpoint impassable, the battalion engineer effort must be adjusted accordingly.

(1) The battalion obstacle plan provides the foundation for the company strongpoint obstacle plan. The commander or platoon leader determines how he can integrate protective obstacles (designed to defeat dismounted infantry assaults) into the overall countermobility plan. If adequate time and resources are available, he should plan to reinforce existing obstacles using field expedient demolitions.

(2) Once the enemy has identified the strongpoint, he will mass all the fires he can spare against the position. To safeguard his rifle squads, the platoon leader must arrange for construction of overhead cover for individual fighting positions. If the strongpoint is in a more open position, such as on a reverse slope, he also may plan for interconnecting trench lines that will allow soldiers to move between positions without exposure to direct and indirect fires. Time permitting, these crawl trenches can be improved to fighting trenches or standard trenches.

5-33. DEFEND A PERIMETER

A perimeter defense allows the defending force to orient in all directions. In terms of weapons emplacement, direct and indirect fire integration, and reserve employment, a platoon leader conducting a perimeter defense should consider the same factors as a strongpoint operation.

a. The perimeter defense is a relatively uncommon mission for an SBCT infantry platoon because it allows only limited maneuver and limited depth. Nonetheless, the platoon may be called on to execute a perimeter defense under a variety of conditions to include--

- Holding critical terrain in areas where the defense is not tied in with adjacent units.
- Defending in place when it has been bypassed and isolated by the enemy.
- Conducting occupation of an independent assembly area or reserve position.
- Preparing a strongpoint.
- Concentrating fires in two or more adjacent avenues of approach.
- Defending CS or CSS assets.
- Occupying a patrol base when dismounted.

b. The major advantage of the perimeter defense (Figure 5-9) is the platoon's ability to defend against an enemy avenue of approach. A perimeter defense differs from other defenses in that--

- The trace of the platoon is circular or triangular rather than linear.
- Unoccupied areas between squads are smaller.
- Flanks of squads are bent back to conform to the plan.
- The bulk of combat power is on the perimeter.
- The reserve is centrally located.

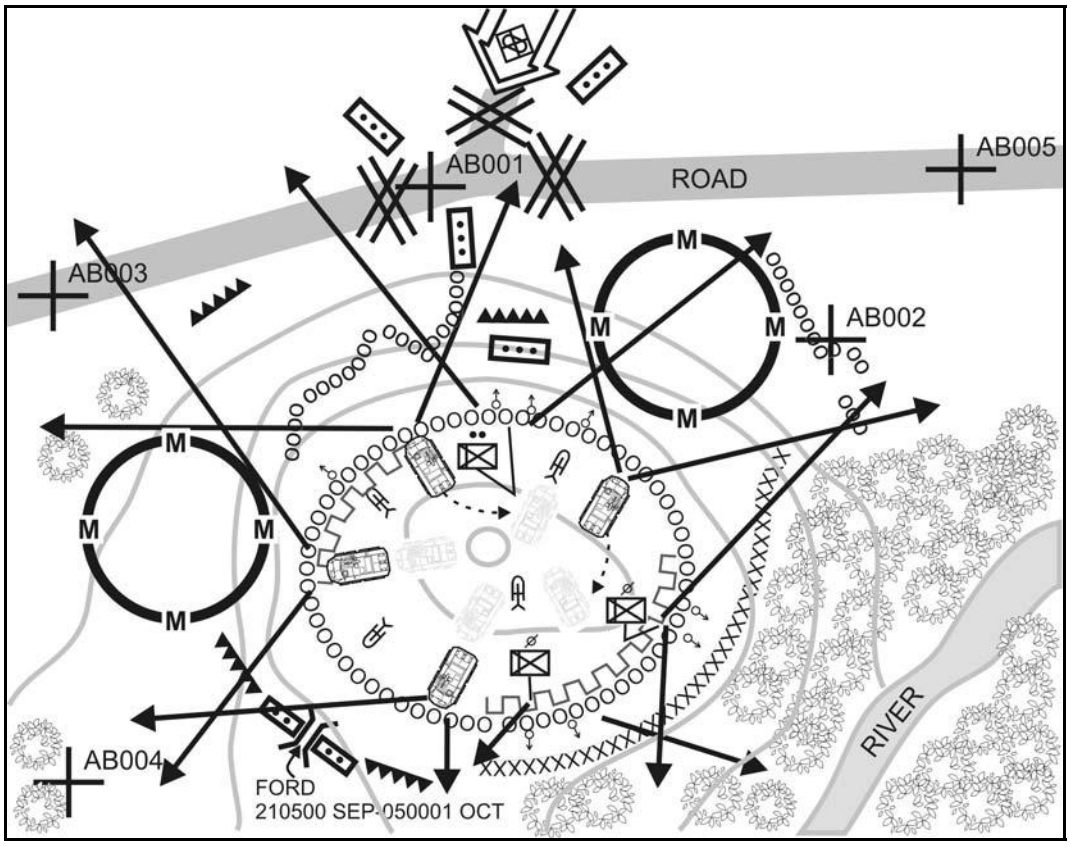


Figure 5-9. Perimeter defense with rifle team in reserve.

NOTE: A variant of the perimeter defense is the use of the shaped defense, which allows two of the company's platoons to orient at any particular time on any of three engagement areas.

5-34. REVERSE SLOPE

The platoon leader's analysis of the factors of METT-TC often leads him to employ his forces on the reverse slope (Figure 5-10). If the rifle squads are on a mounted avenue of approach, they must be concealed from enemy direct-fire systems. This means rifle squads should be protected from enemy tanks and observed artillery fire.

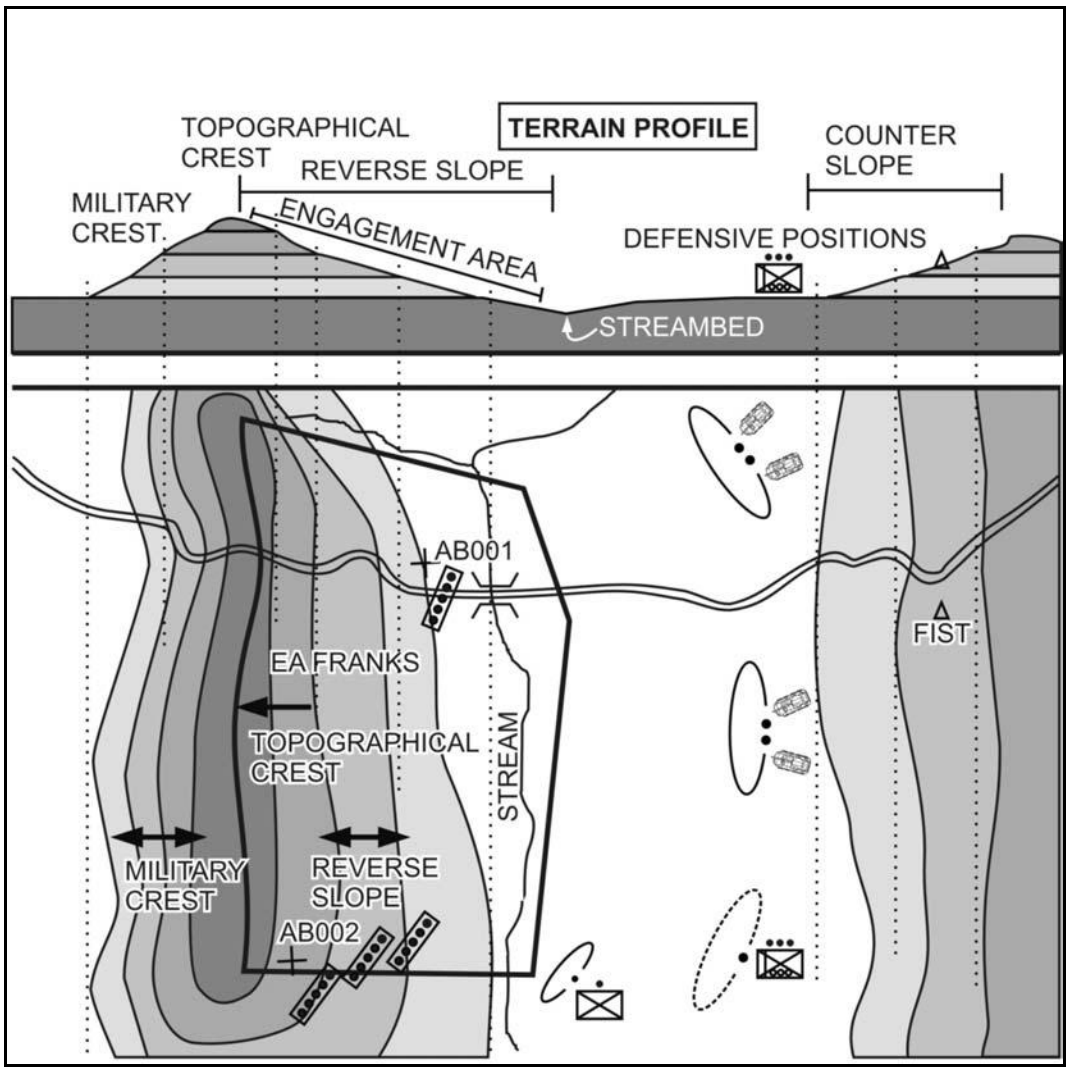


Figure 5-10. Reverse-slope defense options.

a. The majority of a rifle squad's weapons are not effective beyond 600 meters. To reduce or preclude destruction from enemy direct and indirect fires beyond that range, a reverse-slope defense should be considered. Using this defense conflicts to some extent with the need for maximum observation forward to adjust fire on the enemy and the need for long-range fields of fire for M2s, MK19, Javelins, and MGS. In some cases it may be necessary for these weapons systems to be deployed forward while the rifle squads remain on the reverse slope. The weapons systems and crews withdraw from their forward positions as the battle closes. Their new positions should be selected to take

advantage of the long-range fires of the M2, MK19, Javelin, and MGS to get enfilade shots from the depth and the flanks of the reverse slope.

b. The nature of the enemy may change at night, and the rifle squads may occupy the forward slope or crest to deny it to the enemy. In those circumstances, it is feasible for a rifle squad to have an alternate night position forward. The area forward of the topographical crest must be controlled by friendly forces through aggressive patrolling and both active and passive reconnaissance measures. The platoon should use all of its night vision devices to deny the enemy undetected entry into the platoon's defensive area. The Javelin and ICV are key parts of the platoon's surveillance plan and should be positioned to take advantage of their thermal sights. The enemy must not be allowed to take advantage of reduced visibility to advance to a position of advantage without being taken under fire.

c. The company commander normally makes the decision to position platoons on a reverse slope. He positions platoons on a reverse slope when--

- He wishes to surprise or deceive the enemy about the location of his defensive position.
- A forward slope might be made untenable by direct enemy fire.
- Occupation of the forward slope is not essential to achieve depth and mutual support.
- Fields of fire on the reverse slope are better or at least sufficient to accomplish the mission.
- Forward slope positions are likely to be the target of concentrated enemy artillery fires.

d. The following are advantages of a reverse-slope defense:

- Enemy observation of the position, including the use of surveillance devices and radar, is masked.
- Enemy cannot engage the position with direct fire without coming within range of the defender's weapons.
- Enemy indirect fire will be less effective because of the lack of observation.
- Enemy may be deceived about the strength and location of positions.
- Defenders have more freedom of movement out of sight of the enemy.

e. Disadvantages of a reverse-slope defense include the following:

- Observation to the front is limited.
- Fields of fire to the front are reduced.
- Enemy can begin his attack from a closer range.

f. ICVs offer the platoon additional opportunities with regard to positioning. They can begin positioned forward to take advantage of their protection from artillery and their ability to engage the enemy at longer ranges. After an initial engagement, ICVs may move over or around the crest line and through the rifle squads on the reverse slope to a position either on the flanks or farther in depth to the rear.

g. Obstacles are necessary in a reverse-slope defense. Since the enemy will be engaged at close range, obstacles should prevent the enemy from closing too quickly and overrunning the positions, and they should facilitate the platoon's disengagement.

Section VII. FIGHTING AND SURVIVABILITY POSITIONS

The defensive plan normally will require building fighting positions. Fighting positions protect soldiers by providing cover from direct and indirect fires and by providing concealment through positioning and proper camouflage.

5-35. PRINCIPLES

Leaders follow three basic principles to effectively and efficiently prepare fighting positions:

- Site positions to best engage the enemy.
- Prepare positions by stages.
- Inspect all positions.

a. **Site Positions to Best Engage the Enemy.** The most important aspect of a fighting position is that it must be tactically well positioned. Leaders must be able to look at the terrain and quickly identify the best location for fighting positions.

- Soldiers must be able to engage the intended enemy element within their assigned sectors of fire.
- Soldiers should be able to fire out to the maximum effective range of their weapons with maximum grazing fire and minimal dead space.
- Grenadiers should be placed in positions to cover dead space.

Leaders must ensure fighting positions provide mutually supporting, interlocking fires. This allows them to cover the platoon's sector from multiple positions. When possible, they site positions behind natural cover and in easily camouflaged locations. The enemy must not be able to identify the position until it is too late and he has been effectively engaged.

b. **Prepare Positions by Stages.** Leaders must ensure their soldiers understand when and how to prepare fighting positions based on the situation. Soldiers prepare hasty fighting positions every time the platoon makes an extended halt. Half of the platoon digs in while the other half maintains security. Soldiers prepare positions in stages and a leader inspects the position at each stage before the soldiers move to the next stage. (See the following example.)

STAGE 1: The platoon leader checks fields of fire from the prone position. For a stage 1 position (Figure 5-11, page 5-36), the soldiers--

- Emplace sector stakes.
- Stake the primary sector.
- Position grazing fire log or sandbag between the sector stakes.
- Place the aiming stake(s), if required, to allow limited visibility engagement of a specific target.
- Scoop out elbow holes.
- Trace the outline of the position on the ground.
- Clear the fields of fire for both the primary and secondary sectors of fire.

The leader inspects the position before the soldiers move to Stage 2.

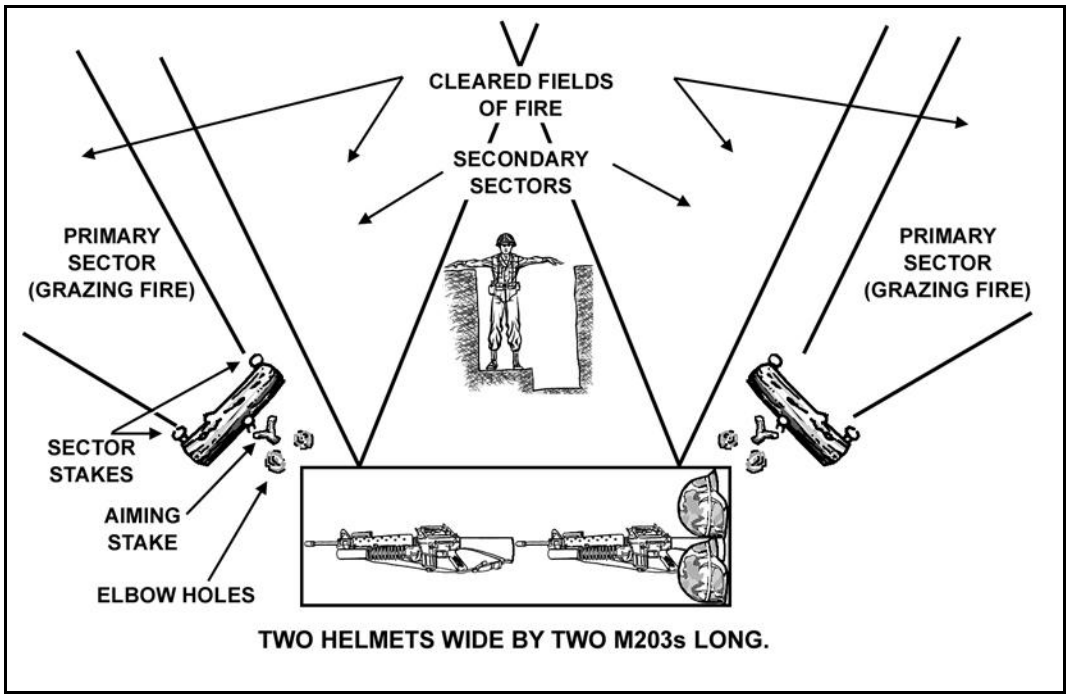


Figure 5-11. Stage 1, Preparation of a fighting position.

STAGE 2: Soldiers prepare retaining walls (Figure 5-12) for the parapets. They ensure that--

- There is a minimum distance (equal to the width of one helmet) from the edge of the hole to the beginning of the front, flank, and rear cover.
- The cover to the front consists of sandbags (or logs), two to three high and, for a two-soldier position, about the length of two M302 rifles (about 7 feet).
- The cover to the flanks is the same height, but only one M203 rifle length (about 3.5 feet).
- The cover to the rear is one sandbag high and one M203 long (about 3.5 feet).
- If logs are used, they must be held firmly in place with strong stakes.

The leader inspects the retaining wall before the soldiers begin Stage 3.

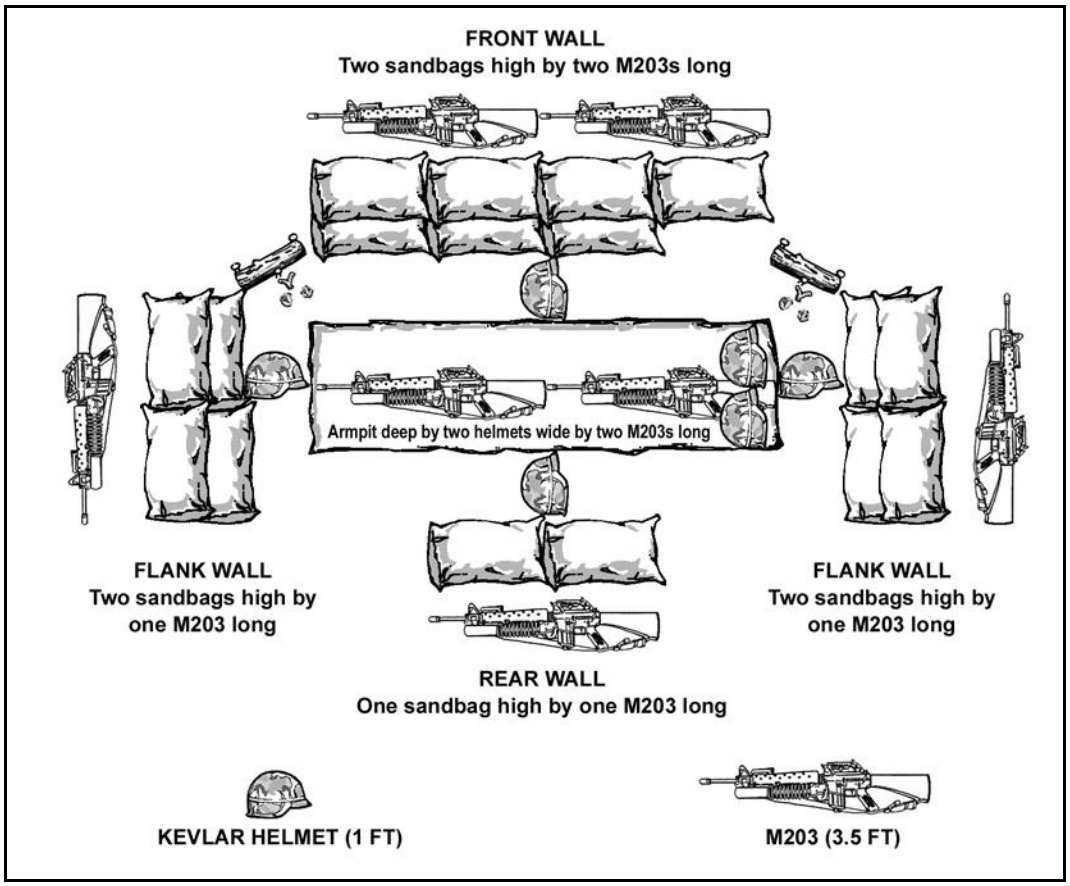


Figure 5-12. Stage 2, Preparations of a fighting position.

STAGE 3: Soldiers dig the position and throw dirt forward of the parapet retaining walls and pack it down hard (Figure 5-13, page 5-38). They--

- Dig the position armpit deep (tallest soldier).
- Fill the parapets in order of front, flanks, and rear.
- Camouflage the parapets and the entire position.
- Dig grenade sumps and slope the floor toward them.
- Dig storage areas for two rucksacks into the rear wall if needed.
- Ensure the leader inspects the work.

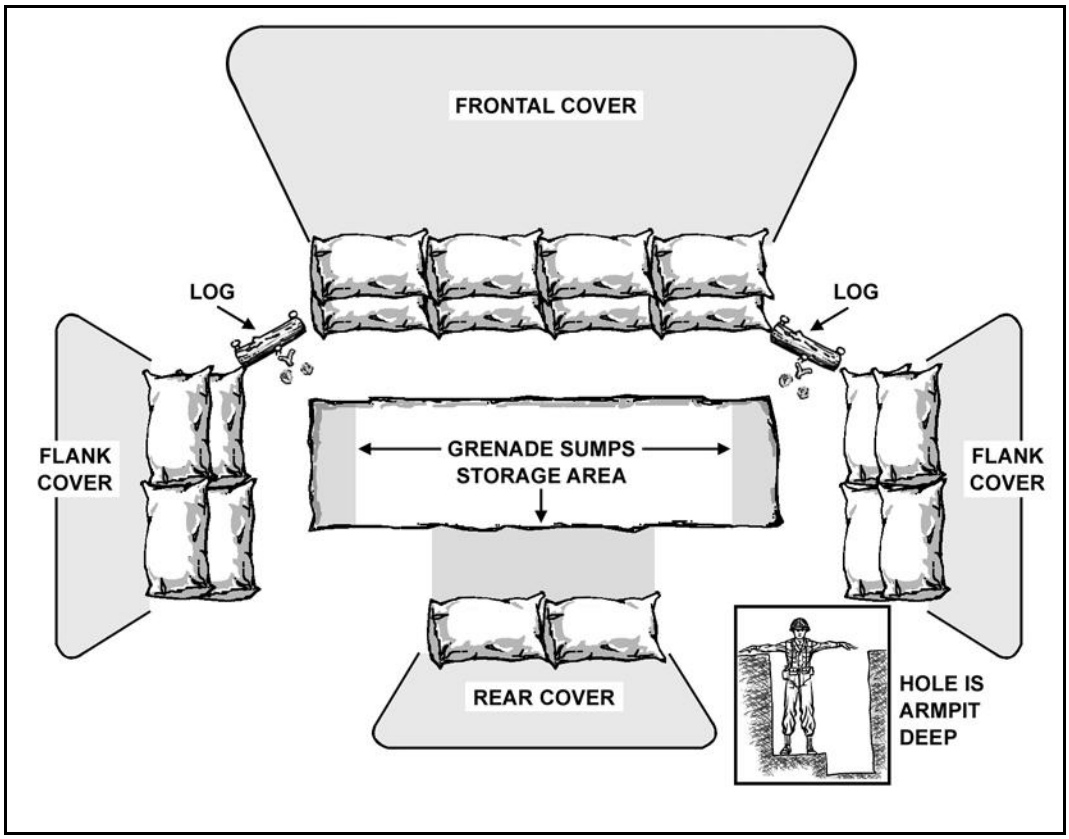


Figure 5-13. Stage 3, Preparations of a fighting position.

STAGE 4: Soldiers prepare the overhead cover (Figure 5-14). They--

- Always provide solid support for overhead cover. Build the support using 4- to 6-inch logs on top of each other running the full length of the front and rear cover.
- Place five or six logs 4 to 6 inches in diameter and two M203s long (about 7 feet) over the center of the position, resting them on the overhead cover support, not the sandbags.
- Place waterproofing (plastic bags, ponchos) on top of these logs.
- Put a minimum of 18 inches of packed dirt or sandbags on top of the logs.
- Camouflage the overhead cover and the bottom of the position.
- Ensure the leader inspects the position.

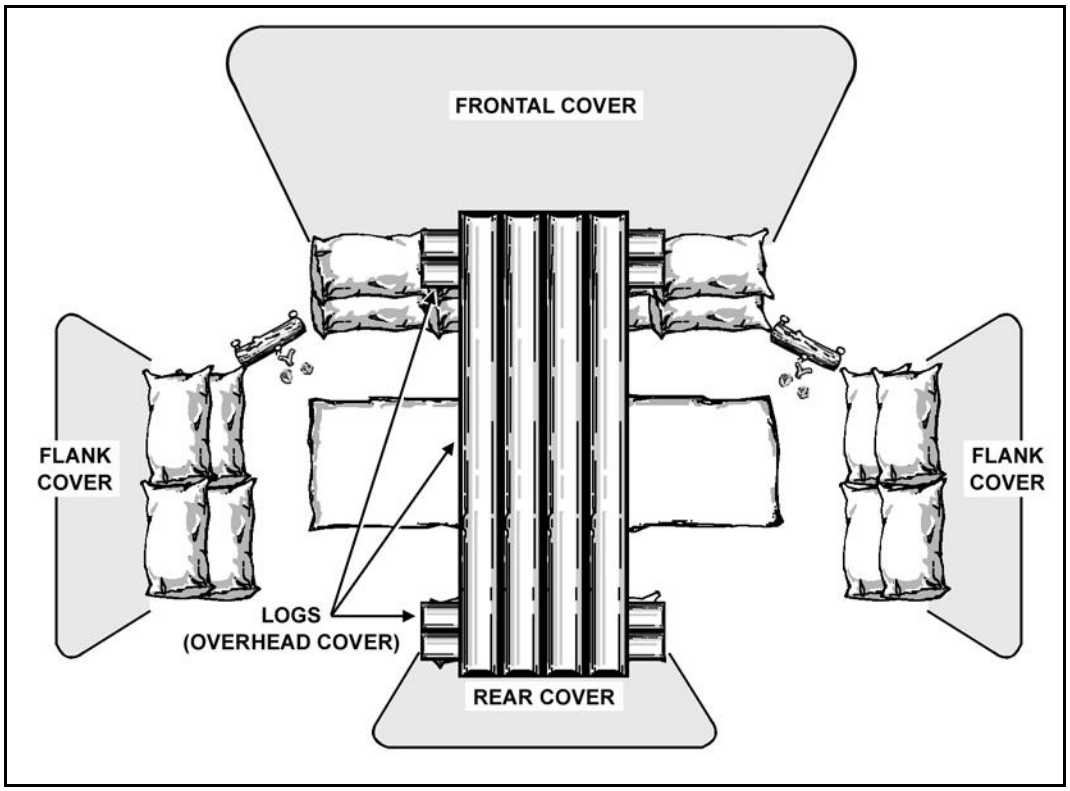


Figure 5-14. Stage 4, Preparations of a fighting position.

c. **Inspect All Positions.** Leaders must ensure their soldiers build fighting positions that are both effective and safe. An improperly sited position cannot be used and an improperly constructed position is a danger to its occupants. Leaders should inspect the progress of the fighting position at each stage in its preparation.

5-36. STANDARD DESIGNS

When expecting an immediate enemy attack, infantrymen dig hasty fighting positions. As time becomes available, these are improved, enlarged, and strengthened, a process that continues as long as the unit occupies a defensive position. Because the battlefield conditions confronting infantrymen are never standard, there is no single standard fighting position design that fits all tactical situations.

a. Sometimes soldiers must construct fighting positions using only the basic tools and materials they can carry or find in the local area, such as entrenching tools, sandbags, and locally cut timber. At other times, significant amounts of Class IV construction materials and heavier digging tools may be available.

b. At times, the terrain will accommodate the construction of a position with overhead cover that protects soldiers from indirect fire fragmentation while allowing them to return fire. Sometimes, especially on open terrain, this is not possible, and the entire position must be built below ground level. Although this type position offers excellent protection and concealment to soldiers, it limits their ability to return fire from within a protected area.

c. Infantry fighting positions normally are constructed to hold one, two, or three soldiers. There are special designs adapted for use by machine gun (M240B) and

antiarmor (Javelin) teams. Fighting vehicles in hull- and turret-defilade positions should be integrated into the platoon's defense, although not necessarily adjacent to infantry positions

NOTE: Regardless of the position design, the type of construction materials, the tools available, or the terrain, all fighting positions must incorporate sound engineering construction principles. Unless it is constructed properly, a fighting position can easily collapse and crush or bury the soldiers within. FM 5-103 and FM 5-34 provide excellent information on these principles. Additionally, GTA 05-08-001 and GTA 7-6-1 contain detailed information in easy to use formats.

d. When constructing fighting positions, soldiers should:
- Dig the positions no deeper than armpit deep.
- Fill sandbags no more than 75 percent full.
- Use revetments to support excavations in sandy soil.
- Check stabilization of wall bases.
- Inspect and test the position daily, after heavy rain, and after receiving fire.
- Maintain, repair, and improve positions constantly.
- Keep all vehicles at least five meters away from the position.

5-37. TYPES OF FIGHTING POSITIONS

There are many different types of fighting positions. The number of occupants; types of weapons; tools, materials, and time available; and terrain dictate the type of position.

a. **Hasty Fighting Position.** Soldiers prepare hasty fighting positions when there is little or no time before contact with the enemy is expected (Figure 5-15). They locate them behind whatever cover is available and where they can engage the enemy. The position should give frontal protection from direct fire while allowing fire to the front and oblique. Occupying a hasty position does not mean there is no digging. Soldiers can dig hasty positions in only a few minutes. A hasty fighting position just 18 inches deep will provide a significant amount of protection from direct fire and even fragmentation. Hasty positions may be the first step in the construction of more elaborate positions.

Figure 5-15. Hasty fighting position.

b. **One-Soldier Fighting Position.** Positions that contain only a single soldier are the least desirable, but they are useful in some situations. One-soldier positions may be required to cover exceptionally wide frontages. They should never be positioned out of sight of adjacent positions. The one-soldier fighting position (Figure 5-16) should allow the soldier to fire to the front or to the oblique from behind frontal cover. Advantages and disadvantages to consider when choosing a one-soldier fighting position include:

- The one-solder position allows choices in the use of cover.
- The hole only needs to be large enough for one soldier and his gear.
- It does not have the security of a two-soldier position.

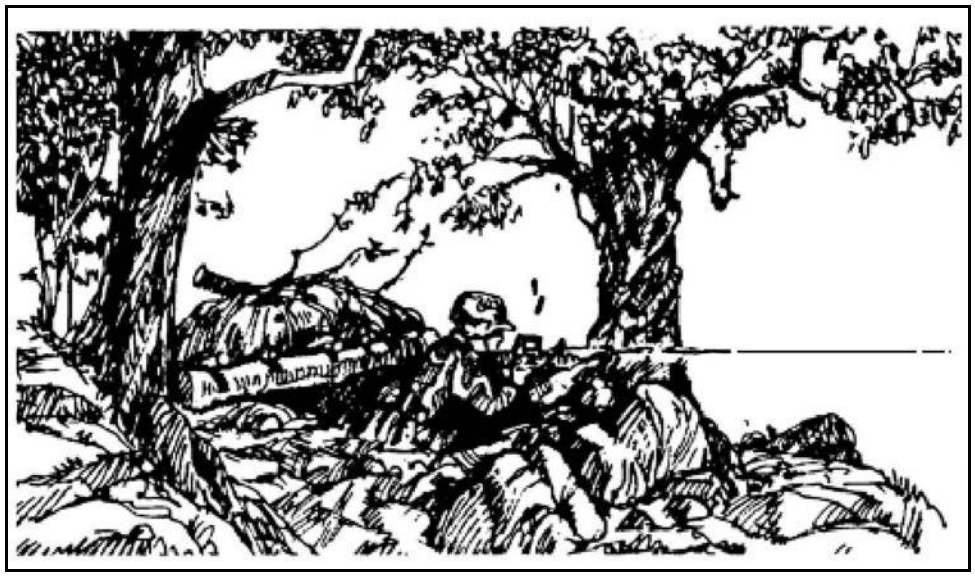


Figure 5-16. One-soldier fighting position.

c. **Two-Soldier Fighting Position.** A two-soldier fighting position (Figure 5-17) is normally more effective than a one-soldier fighting position. It can be used to provide mutual support to adjacent positions on both flanks as well as cover dead space immediately in front of the position. One or both ends of the hole may extend around the sides of the frontal cover. Modifying a position in this way allows both soldiers to have better observation and to have greater fields of fire to the front. Also, during rest or eating periods, one soldier can watch the entire sector while the other sleeps or eats. If they receive fire from their front, they can move back to gain the protection of the frontal cover. By moving about one meter, the soldiers can continue to find and hit targets to the front during lulls in enemy fire. This type of position:

- Requires more digging.
- Is more difficult to camouflage.
- Provides a better target for enemy hand grenades.

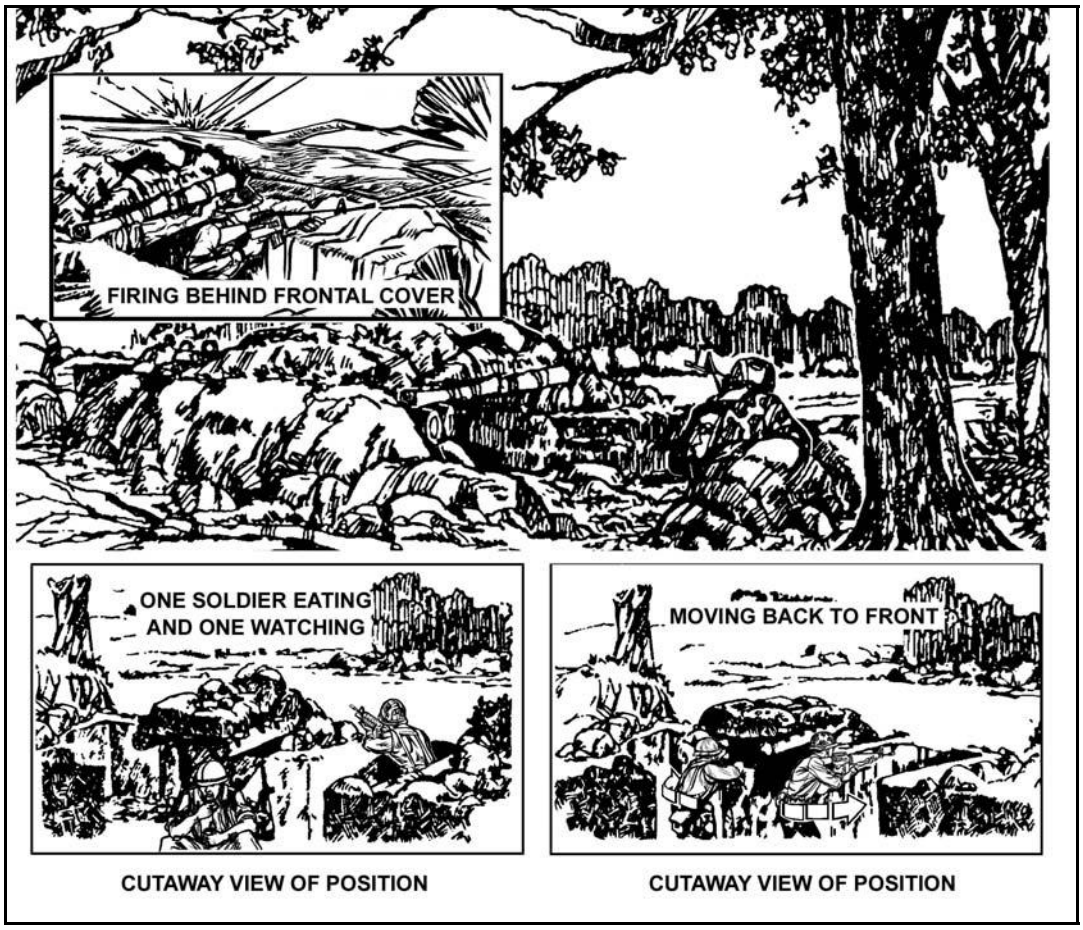


Figure 5-17. Two-soldier fighting position.

d. **Three-Soldier Fighting Position.** A three-soldier position has several advantages. A leader can be in each position, making command and control easier. It supports continuous security operations better than other positions. One soldier can provide security; one can do priority work; and one can rest, eat, or perform maintenance. This allows the priority of work to be completed more quickly than in a one- or two-

soldier position. This position allows the platoon to maintain combat power and security without shifting personnel or leaving positions unmanned. It provides 360-degree observation and fire, and it is more difficult for the enemy to destroy because he must kill or suppress three soldiers.

(1) When using three-soldier positions, the leader must consider several things. Either the distance between positions must be increased or the size of the squad's sector must be reduced. The choice depends mainly on visibility and fields of fire. Because the squad leader is in a fighting position that will most likely be engaged during the battle, he cannot exert personal control over the other two positions. The squad leader controls the battle by--

- Clearly communicating his plans and intent to his squad, to include control measures and fire plans.
- Using prearranged signals like flares, whistles, or tracers.
- Positioning key weapons in his fighting position.
- Placing his fighting position so it covers key or decisive terrain.
- Placing his fighting position where his team might be able to act as a reserve.

(2) The three-soldier emplacement is a T-position. This basic design can be changed by adding or deleting berms, changing the orientation of the T, or shifting the position of the third soldier to form an L instead of a T (Figure 5-18). The layout of the position can be oriented to fire on expected enemy avenues of approach from any direction. Berms must not block observation or fire into assigned primary or alternate sectors. Care must be taken to properly support the overhead cover.

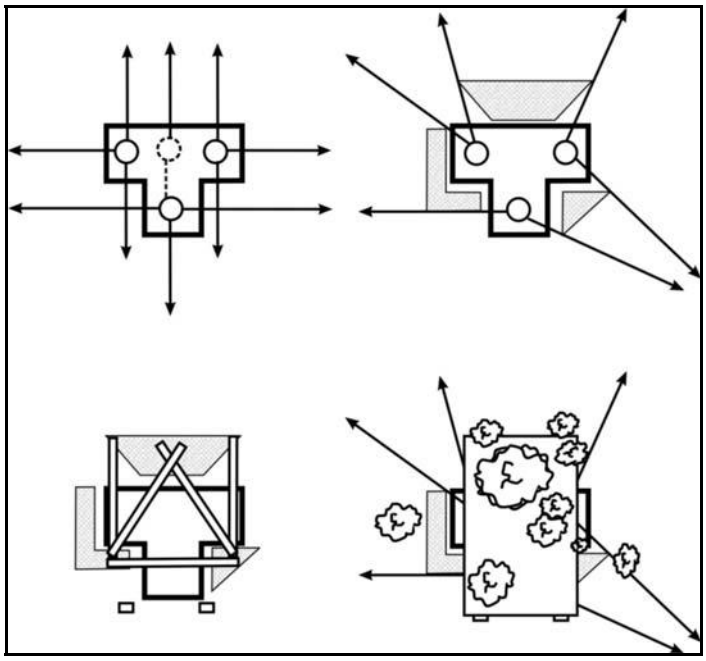


Figure 5-18. Three-soldier T-position.

e. **Machine Gun Position.** The primary sector of fire is usually to the oblique so a machine gun can fire across the platoon's front. The tripod is used on the side covering the primary sector of fire. The bipod legs are used on the side covering the secondary

sector of fire. When changing from primary to secondary sectors, the gunner moves only the machine gun. Occasionally a sector of fire that allows firing directly to the front is assigned, but this can reduce the frontal cover for the crew when firing to the oblique (Figure 5-19). (For a detailed discussion on the employment of the M240B, refer to Appendix B.)

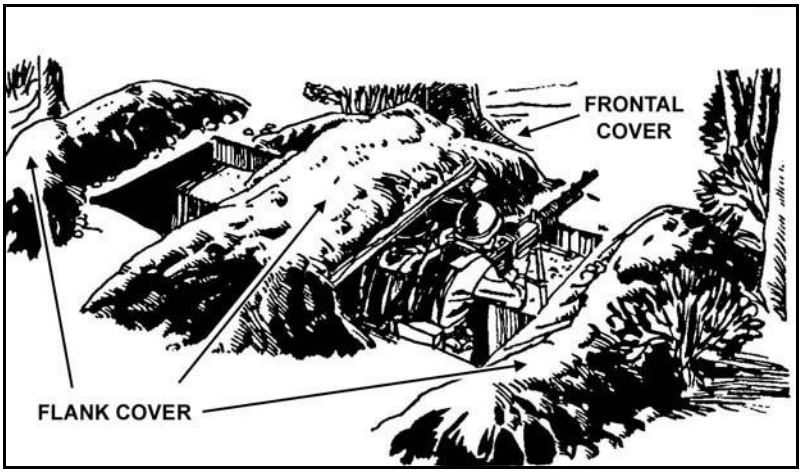


Figure 5-19. Machine gun position.

(1) After the platoon leader positions the machine gun, he marks the position of the tripod legs and the limits of the sectors of fire. The crew then traces the outline of the hole and the frontal cover (if it must be improved).

(2) The crew digs firing platforms first to lessen their exposure in case they must fire before they complete the position. The platforms must not be so low that the gun cannot be traversed across its entire sector of fire, reducing the profile of the gunner when firing and reducing the frontal cover height.

(3) After digging the firing platforms, the crew digs the hole. They first place the dirt where frontal cover is needed, digging the hole deep enough to protect them and still allow the gunner to fire with comfort (usually about armpit deep). When the frontal cover is high enough and thick enough, the crew uses the rest of the dirt to build flank and rear cover. Trench-shaped grenade sumps are dug at various points so either soldier can kick a grenade into one if needed. Overhead cover for a machine gun position is constructed following the steps of Stage 4, Preparation of a fighting position (paragraph 5-35).

NOTE: In some positions, a machine gun might not have a secondary sector of fire. In this case, dig only half the position.

(4) When there is a three-soldier crew for a machine gun, the ammunition bearer digs a one-soldier fighting position to the flank that is connected to the gun position by a crawl trench. From this position, the ammunition bearer can see and fire to the front and to the oblique. Usually, the ammunition bearer is on the same side as the FPL or PDF. This allows him to see and fire his rifle into the machine gun's secondary sector and to see the gunner and assistant gunner.

f. **Javelin Position.** The Javelin can be employed from hasty or completed positions (Figure 5-20). However, some changes are required. (For a detailed discussion on the employment of the Javelin refer to Appendix G.)

Figure 5-20. Javelin position.

(1) The gunner must keep the weapon at least 6 inches above the ground to allow room for the stabilizing fins to unfold. The hole is only waist deep to allow the gunner to move while tracking a target. Because the Javelin gunner must be above ground level, the frontal cover should be high enough to hide his head and, if possible, the backblast of the Javelin. A hole is dug in front of the position for the bipod legs.

(2) When the Javelin can be fired in one direction only, the position is adjusted to have cover and concealment from all other directions, and it should be fired to the oblique. This protects the position from frontal fire and allows engagement of the target from the flank. Both ends of the launcher must extend out over the edges of the hole.

(3) Overhead cover must be built on the flanks. Cover must be large enough for the gunner, the tracker, and the missiles. Overhead cover that allows fire from underneath can be built if the backblast area is clear. Overhead cover must be well camouflaged.

(4) The Javelin is an important weapon and is easy to detect, therefore selection and preparation of alternate positions have a high priority. When preparing an alternate position, the gunner should select and improve a covered route to it so he can move to the position under fire.

g. ***AT4.*** The AT4 can be fired from infantry fighting positions. If the AT4 is to be fired from a two-soldier position, the gunner must ensure the other soldier is not in the backblast area. Assume the basic standing position, but instead of stepping forward, lean against the back wall of the fighting position. Ensure that the venturi or rear of the weapon extends beyond the rear of the fighting position.

NOTE: Leaders must ensure that light antiarmor weapons are positioned so that the backblast misses other fighting positions.

5-38. VEHICLE POSITIONS

Vehicles use natural cover and concealment in hide positions initially to increase survivability. As time, assets, and situation permit, positions are prepared using organic excavation equipment or engineer support. Priority is given to those vehicles containing

essential equipment or supplies. Crews use these fighting positions for individual protection as well.

a. Parapets positioned at the front of or around major weapon systems provide improved protection from direct fire and from blast and fragments of indirect fire, artillery, mortar, and rocket shells. At its base, the parapet should be at least 8 feet thick. The parapet functions as a standoff barrier for impact-detonating direct-fire high explosive anti-tank (HEAT) and ATGM projectiles. The parapet should cause the fuzes to activate, thereby increasing survivability for the protected vehicles. If the enemy uses kinetic energy, direct fire armor-piercing, or hypervelocity projectiles, it is impractical to construct parapets thick enough for protection. To protect against these projectiles, deep-cut, hull defilade, or turret defilade positions are prepared. Fighting and protective positions for essential vehicles should be constructed no larger than needed.

b. Battlefield success requires maneuver among fighting positions between main gun firings. Maximum use of terrain is required to conceal fighting vehicles maneuvering among fighting positions. After a major weapon system fires its main gun, the vehicle should move concealed to another position before firing again. If the major weapon system immediately reappears in the old position, the enemy knows where to fire his next round.

(1) Hasty fighting positions for combat vehicles, including armored personnel carriers (APCs) and mortar carriers, take advantage of natural terrain features. These positions are prepared with a minimum of construction effort. A frontal parapet, as high as practical without interfering with the vehicle's weapon systems, shields the position from frontal attack and provides limited concealment if properly camouflaged. Protection is improved if the position is made deeper and the parapet extended around the vehicle's sides. Parapets provide a false sense of security against kinetic energy and hypervelocity projectiles; therefore, hasty vehicle fighting positions with parapets are not recommended for MGS and ICVs. Hasty fighting positions offer protection from HEAT projectiles and provide limited concealment if properly camouflaged. As the tactical situation permits, hasty positions are improved to deliberate positions.

(2) Deliberate fighting positions are required to protect a vehicle from kinetic energy and hypervelocity projectiles. The position is constructed in four parts: hull defilade, concealed access ramp or route, hide location, and weapon system defilade (Figure 5-21).

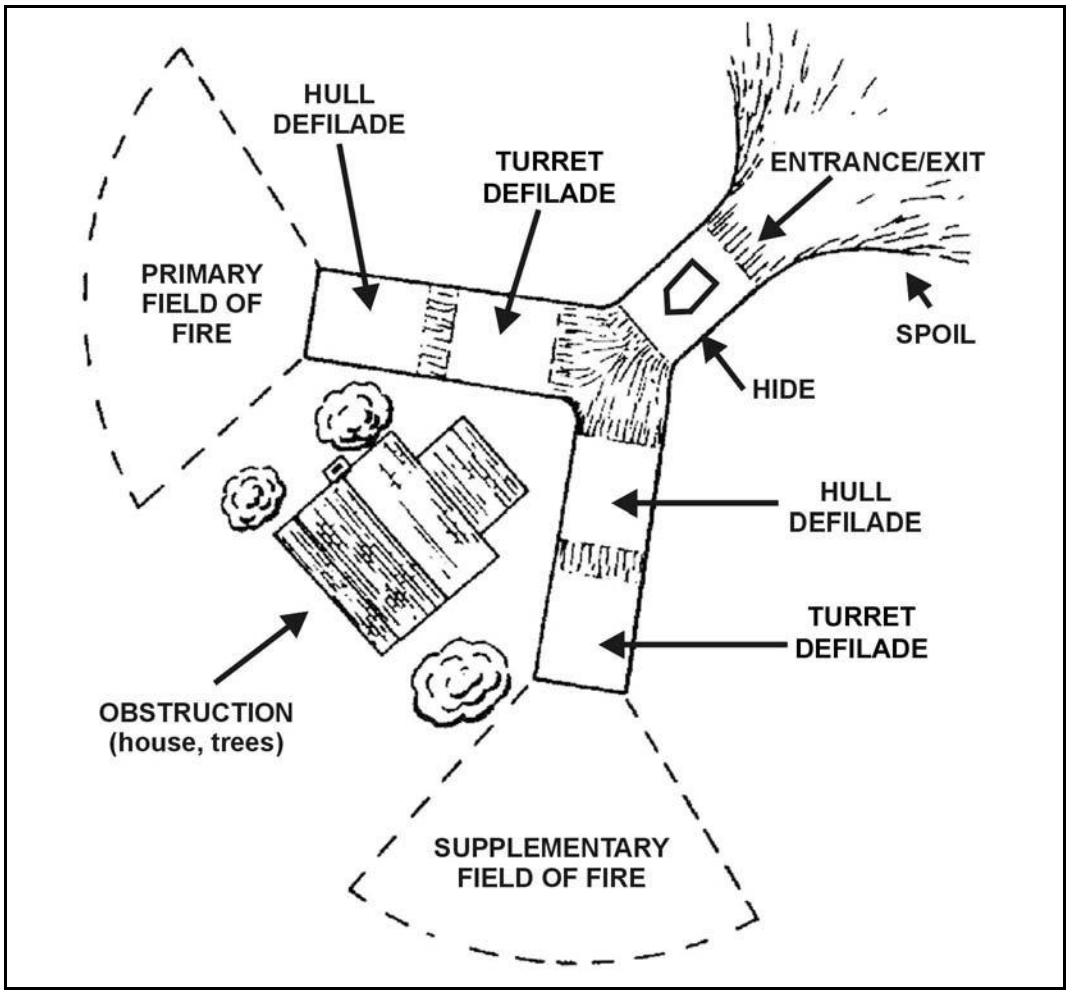


Figure 5-21. Top view of Y-shaped fighting position.

c. Positions formed by natural terrain are best because they are easy to modify. If preparation is necessary, extensive engineer support is required. Each position is camouflaged with either natural vegetation or a camouflage net, and the spoil is flattened out or hauled away. All fighting positions for fighting vehicles (MGS, ICV) are planned as deliberate positions. Since the lack of time usually does not allow full construction of a deliberate position, only some parts of the position are prepared. For example, the complete fighting position for an ICV requires the construction of a hull defilade, turret defilade, concealed access ramp or route, and hide location all within the same position. The maneuver commander uses organic and engineer earthmoving assets and usually constructs part of the fighting position.

d. Digging hide locations and concealed routes between fighting positions normally is not practical due to the lack of engineer assets and time. Engineer assets are used to dig the hull and turret defilade positions. The ramps and concealed routes require only partial clearing and leveling with engineer equipment because natural concealed routes and hide locations are used. If time permits, the commander expands the fighting position to all four parts, including a hide and turret defilade location. The access ramp from the hide location to the hull defilade position usually provides turret defilade for a vehicle at some

point on the ramp. This location can be marked with engineer tape and a chemical light so the driver knows when to stop.

5-39. TRENCHES

When there is time and help available, trenches should be dug to connect fighting positions so soldiers can move by covered routes. The depth of a trench depends on the type of help and equipment available. Without engineer help, platoons dig crawl trenches (about 3 feet deep by 2 feet wide) With engineer help, they dig standard trenches. The trench should zigzag so the enemy cannot fire down a long section. Platoons normally dig crawl trenches because engineer assets usually are limited. Platoons use crawl trenches to conceal their movement into and within positions to provide minimum protection. Spoil is placed on parapets, normally on each side of the trench. If the trench runs across a forward slope, all the spoil is placed on the enemy side to make the forward parapet higher. All spoil needs careful concealment from enemy direct observation (Figure 5-22).

Figure 5-22. Crawl trenches.

CHAPTER 6
URBAN OPERATIONS

Throughout history military planners have viewed cities as centers of gravity and sources of national strength. Cities are population centers; transportation and communication hubs; key sites of industrial, financial, and information systems; seats of government; and repositories of wealth. Because the US has worldwide interests that directly relate to global security, deployments into urban environments are likely to become more frequent. The SBCT infantry platoon and squad are uniquely equipped and manned to deal with the wide range of tactical situations that are normally found in the conduct of urban operations. The primary role of the SBCT platoon and squad within these urban operations is to close with and destroy enemy forces through the use of overwhelming fire and precision movement. This chapter describes techniques, procedures, and special considerations that platoons and squads will use throughout the planning and execution of operations in an urban environment.

Section I. GENERAL PLANNING CONSIDERATIONS

This section highlights the basic urban operations planning considerations for infantry platoon leaders.

6-1. EMPLOYMENT CONSIDERATIONS FOR SBCT PLATOONS

Because of the decentralized nature of urban combat and the need for a high number of troops to conduct operations in dense, complex terrain, infantrymen always will represent the bulk of forces. At the small-unit tactical level, however, infantry forces have disadvantages that can be overcome by mechanized infantry or armor units. Conversely, vehicles face problems in the confines of urban areas, which place them at a severe disadvantage when operating alone unsupported by infantry. Only by working together can these forces accomplish their missions with minimal casualties while avoiding unnecessary collateral damage.

a. **Infantry.** Infantry forces have the following strengths and limitations in an urban environment:

(1) ***Strengths.***

(a) Infantry small-arms fire within a building can eliminate resistance without seriously damaging the structure.

(b) Infantrymen can move stealthily into position without alerting the enemy. Infantrymen can move over or around most urban terrain, regardless of the amount of damage to buildings.

(c) Infantrymen have excellent all-round vision and can engage targets with small-arms fire under almost all conditions.

(2) ***Limitations.***

(a) They lack heavy supporting firepower, protection, and long-range mobility.

(b) Exposed infantry forces are subject to taking a high number of casualties.

(c) Infantry forces are more subject to fratricide-related casualties from friendly direct and indirect fire.

b. **Mobile Gun System.** The MGS has the following strengths and limitations in an urban environment:

(1) ***Strengths.***

(a) The thermal sights on the MGS vehicle can detect enemy activity through darkness and smoke, conditions that may limit even the best equipped infantry.

(b) The MGS vehicle can deliver devastating fires; is fully protected against antipersonnel mines, fragments, and small arms; and has excellent mobility along unblocked routes.

(c) The MGS vehicle projects a psychological presence, an aura of invulnerability, that aids the friendly forces in deterring violence. Mounted patrols by MGS vehicles can monitor large areas of a city while making their presence known to the entire populace, both friendly and unfriendly.

(d) The mobile, protected firepower of MGS vehicles can add security to resupply convoys. The MGS vehicle's smoke-generation capability can aid in extracting wounded personnel and other small-unit actions.

(2) ***Limitations.***

(a) Crewmen in MGS vehicles have poor all-round vision through their vision blocks; they are easily blinded by smoke or dust.

(b) If isolated or unsupported by infantry, MGS vehicles are vulnerable to enemy teams firing light and medium antiarmor weapons.

(c) MGS vehicle gunners cannot easily identify enemy targets unless the commander exposes himself to fire by opening his hatch or other infantrymen direct the gunner to the target.

(d) Improvised barricades, narrow streets and alleyways, or large amounts of rubble can block armored vehicles.

(e) Due to the length of the main gun, the turret will not rotate if a solid object such as a wall or post is in its path.

(f) Heavy fires from MGS vehicles cause unwanted collateral damage and can destabilize basic structures.

c. **Infantry Carrier Vehicle Limitations.** The ICV has the following strengths and limitations in an urban environment:

(1) ***Stengths.***

(a) The ICV can provide protection to the infantry by negating the effects of enemy small-arms weapons, either by driving soldiers up to a building or by acting as a shield while the infantry moves behind it along a street.

(b) ICVs can resupply units quickly and with more ammunition than by foot.

(c) Because of their armor protection, ICVs can be used to conduct CASEVAC under fire.

(2) ***Limitations.***

(1) If buttoned up, crewmen in ICVs have poor all-round vision through their vision blocks; they are easily blinded by smoke or dust.

(2) The ICV has only a local defense weapon system mounted. Once the infantry has dismounted and is not supporting the vehicle, its firepower is diminished.

(3) The ICV is vulnerable to most weapons systems other than small arms and is particularly vulnerable to antitank (AT) weapons.

6-2. EMPLOYMENT OF INFANTRY AND MGS VEHICLES

An effective use of armored combat vehicles in most tactical situations is en masse. Armored units operating in platoon, company, and battalion strength combine mobility, protection, and firepower to seize the initiative from the enemy and greatly aid friendly success. However, urban combat is often so decentralized, and avenues of approach for vehicles so canalized, that massed armored vehicles cannot be effectively employed. Thus, the urban situation may call for fewer armored vehicles employed over broader areas. The decision to disperse rather than mass armored vehicles should be made only after a careful consideration of the factors of METT-TC, the situation, and the anticipated operations in the near future. Decentralized armor support greatly increases a small infantry unit's combat power, but dispersed vehicles cannot be easily and quickly concentrated. If not well planned, the sudden removal of armor from throughout the combat area will necessitate a tactical pause for reorganization and a change of tactical tempo, which could disrupt the ongoing combat operation at a critical time.

a. **Employment.** The MGS can support infantry during urban combat operations (Figure 6-1) by--

- Providing shock action and firepower.
- Isolating objectives with direct fire to prevent enemy withdrawal, reinforcement, or counterattack.
- Neutralizing or suppressing enemy positions with smoke, HE, and automatic weapons fire as infantry closes with and destroys the enemy.
- Assisting opposed entry of infantry into buildings when enemy fire, debris, or obstacles block doorways.
- Smashing through street barricades or reducing barricades by fire.
- Obscuring enemy observation using on-board smoke generators.
- Holding cleared portions of the objective by covering avenues of approach.
- Attacking by fire any targets designated by the infantry.
- Establishing roadblocks or checkpoints.
- Suppressing identified sniper positions.

Figure 6-1. MGS in direct fire, supported by infantry.

b. **Task Organization at Company Level.** The SBCT infantry company has an organic MGS platoon. There are three basic techniques of task-organizing the MGS platoon for urban combat.

(1) ***MGS Platoon Retained under Company Control.*** In this technique (Figure 6-2), the MGS platoon leader is responsible for maneuvering the MGS vehicles IAW the company commander's intent.

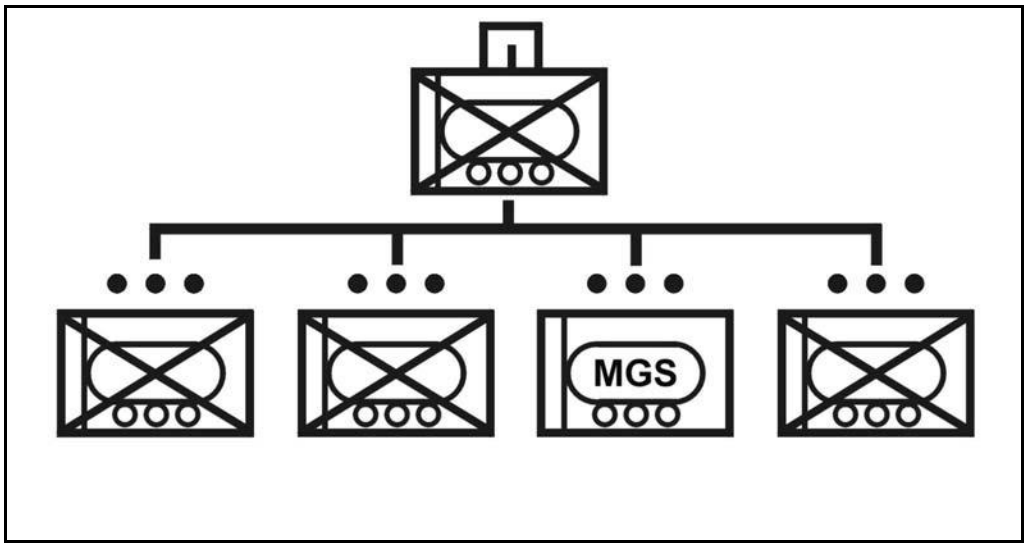


Figure 6-2. MGS platoon under company control.

(2) ***MGS Platoon(-) under Company Control and an MGS Vehicle under Infantry Platoon Control.*** The MGS platoon detaches one vehicle to infantry platoon control. With this technique (Figure 6-3), the selected maneuver infantry platoon has an MGS vehicle available to support the close fight, and the company commander has an MGS platoon (-) to deploy at the critical place and time of his choosing.

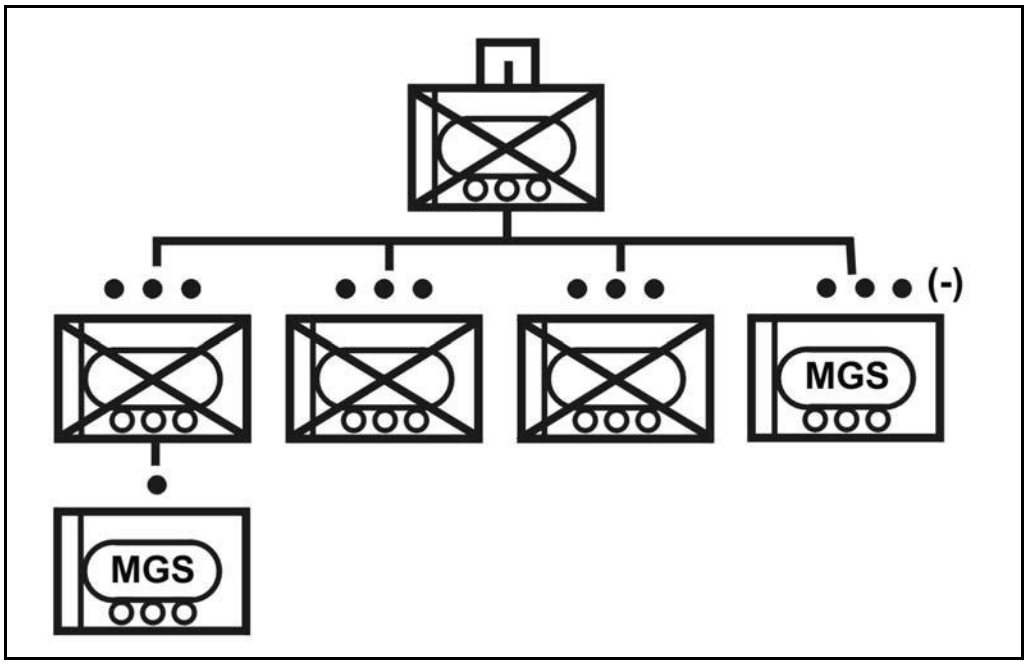


Figure 6-3. MGS platoon(-) under company control and an MGS vehicle under infantry platoon control.

(3) ***Individual MGS Vehicles under Infantry Platoon Control.*** In this technique (Figure 6-4), each one of the MGS vehicles is task-organized to an infantry platoon. The purpose of this type of task organization is to provide all the infantry platoons with increased direct fire for suppression and breaching, specifically in an urban area.

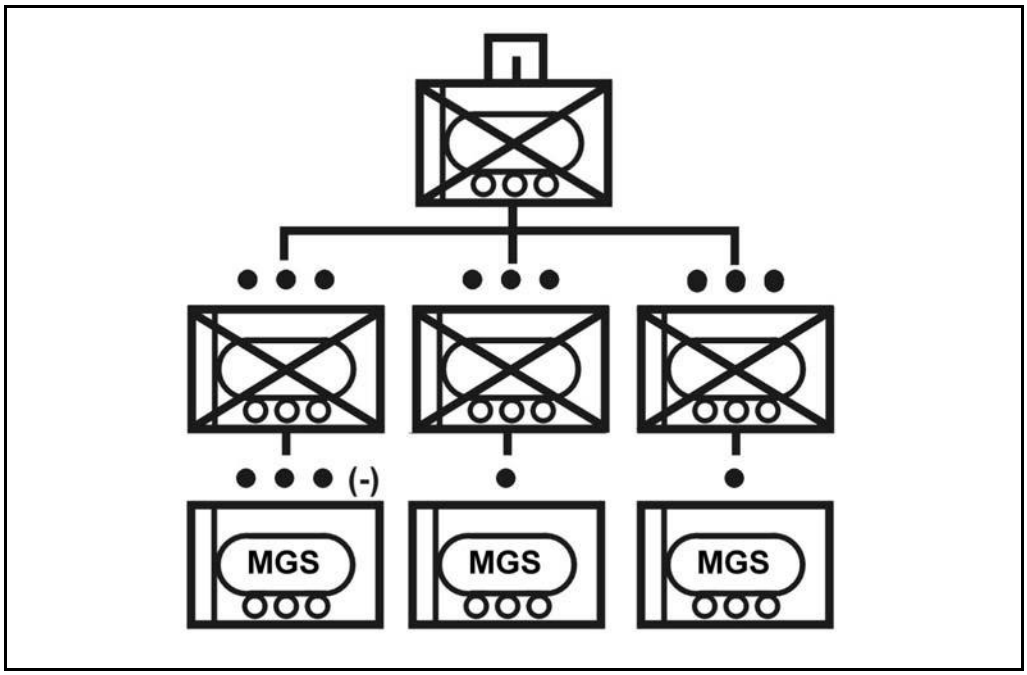


Figure 6-4. Individual MGS vehicles under infantry platoon control.

(4) ***Selection of a Technique.*** None of the techniques described above is inherently better than the others. The task organization has to be tailored to accomplish the mission. Regardless of the technique selected, the following guidelines apply:

- Single MGSs may operate in support of infantry; however, it is preferable for MGSs to support each other.
- If using MGS vehicles or ICVs to shield squads and teams moving from building to building as part of the maneuver plan, the leader of the forward element needs to control the MGS vehicles.
- If the company commander controls the MGS, he needs to move forward to a position where he can effectively maneuver the MGS in support of the infantry.
- The task organization should support the span of control. If the company commander controls the MGS platoon, then he does not task-organize them to the infantry platoons.
- MGSs need infantry support when the two elements are working together. Do not leave vehicles (ICVs or MGSs) alone; they are not prepared to provide local security during the operation. MGS vehicles are extremely vulnerable to dismounted attack when operating in an urban environment.

c. **Mutual Support.** Infantry ICVs and MGS teams work together to bring the maximum combat power to bear on the enemy. The infantry provides the eyes and ears of the team, locating and identifying targets for the MGSs or ICVs to engage. Infantry and ICVs move along covered and concealed routes to assault enemy elements fixed or suppressed by MGS fire. Squads provide protection for the MGS against attack by enemy infantry. Meanwhile, an MGS provides heavy, continuous supporting fires against enemy strongpoints.

d. **Movement.** The dismounted infantry normally leads during movement through built-up areas. The MGS vehicles and ICVs follow and provide close overwatch. If the infantry discovers an enemy position or encounters resistance, the MGS responds immediately with supporting fire to fix the enemy in place or suppress him and allow the infantry to develop the situation. After sufficient time to develop the situation or conduct short-range reconnaissance, the infantry squad leader directs the MGS to move, if necessary, and identifies specific targets for the MGS to engage.

e. **Coordination.** Coordination between MGSs and infantry leaders must be close and continuous. The MGS vehicle commander may need to dismount and move, accompanied by the infantry squad leader, to a position where he can see the route or target better. Everyone must understand the signals for initiating, shifting, or lifting fires. One of the greatest barriers to coordination and command and control in urban combat is the intense noise. Simple, nonverbal signals should back up verbal commands.

f. **Communications.** The MGS platoon leader and platoon sergeant must maintain communications with the element in direct control or the element they are supporting. Individual MGS vehicles and infantrymen communicate with one another using one or more of the following techniques:

(1) ***Visual Signals.*** Visual signals, either prescribed by SOP or coordinated during linkup, can facilitate some simple communications.

(2) ***External Phone.*** All MGS vehicles have external phones that aid in the communication between the MGS crew and the squads.

(3) ***FM Radios.*** FM radios provide a reliable means of communications between infantry and supporting vehicle commanders. These radios allow the infantry to use terrain more effectively in providing close-in protection for the MGS; infantrymen can watch for enemy elements while limiting exposure to enemy fires directed against the MGS. Signal operating instruction (SOI) information can be used between the MGS platoons and the company headquarters or infantry platoons. This is a fast and reliable method of communications that does not require additional assets.

g. **Smoke.** The MGS vehicle's on-board smoke generation system and its smoke grenade projectors may be used both to protect the MGS from enemy observation and to provide concealment for the infantry forces as they move across open areas or recover wounded personnel. The use of smoke must be carefully coordinated. Although the MGS vehicles' sights can see through most smoke, infantrymen are at a significant disadvantage when enveloped in dense smoke clouds. The smoke grenade launchers on the MGS provide excellent, rapidly developed local smoke clouds, but the grenades produce burning fragments that are hazardous to infantrymen near the MGS and can ignite dangerous fires in urban areas.

h. **Heavy Direct Fire Support.** MGS vehicles are valuable tools for helping assaulting forces isolate the objective area and seize a foothold. As the infantry then moves to clear the position and expand the foothold, the MGSs remain in their initial support-by-fire positions. When possible, MGSs should move to subsequent positions where their fires can prevent enemy reinforcement and engage enemy forces withdrawing from the objective. At this time the MGS crew must be very alert. Because of the nonlinear nature of urban battles, enemy forces may move to the rear or flanks of the now-isolated MGS vehicles and destroy them. If a small element of infantry cannot be spared to support the MGS, then vehicles should move to positions of cover and mutual support. Crews should be alert, especially for enemy infantry approaching from above, from the rear, or from the flanks.

i. **Other Considerations.** The following considerations also apply when operating in an urban environment:

(1) In planning, pay close attention to available terrain that will support MGS and ICV cross-country movement. While the pace may be slower, cross-country movement can significantly enhance security.

(2) Involve the MGS platoon leader and PSG in the mission analysis. Their expertise hastens the understanding of what MGS vehicles can and cannot do and aids the platoon leader in making the best MGS employment decision.

(3) MGSs and ICVs can carry ammunition, water, and other supplies to support the urban fight.

(4) The platoon leader must specifically allocate time in the planning process for precombat inspections (PCIs) for the vehicles.

(5) Try to replicate conditions for mission execution during rehearsals, such as day, limited visibility, civilians on the battlefield, host nation support, and ROE. Include the following:

- Graphic and fire control measures.
- Direct fire plans.
- Communications.

- Breach drills.
- Techniques for using vehicles as infantry shields.

(6) The following measures minimize casualties when moving outside or between buildings:

(a) Cover all possible enemy locations with either observation or fire.

(b) For those areas not possible to cover with observation or fire, use smoke to set a screen to block enemy observation of friendly movement.

(c) Move MGS vehicles forward to support infantry movement. Position the MGS before the infantry begins moving, whether the MGSs are supporting by fire, being used as shields, or both.

(d) Preplan positions if possible, but devise a marking system and communication signals to designate situation-dependent positions to help maintain momentum. (For example, "The VS-17 panel from Building 2 means move to support by fire 3.")

(e) When using vehicles as a shield for infantry, move the vehicles as close to the start point as possible to allow the infantry freedom of movement when exiting the building.

(f) Vehicles need to move at the infantry's rate of movement.

(g) When the distance between buildings is short, vehicles can position themselves to protect the infantry from enemy small-arms fire.

(7) Use simple, clearly understood graphic control measures. The following are particularly useful for operations in urban combat (Figure 6-5):

- Phase lines.
- Number and lettering systems for buildings.
- Tentative support-by-fire positions.
- No-fire areas.

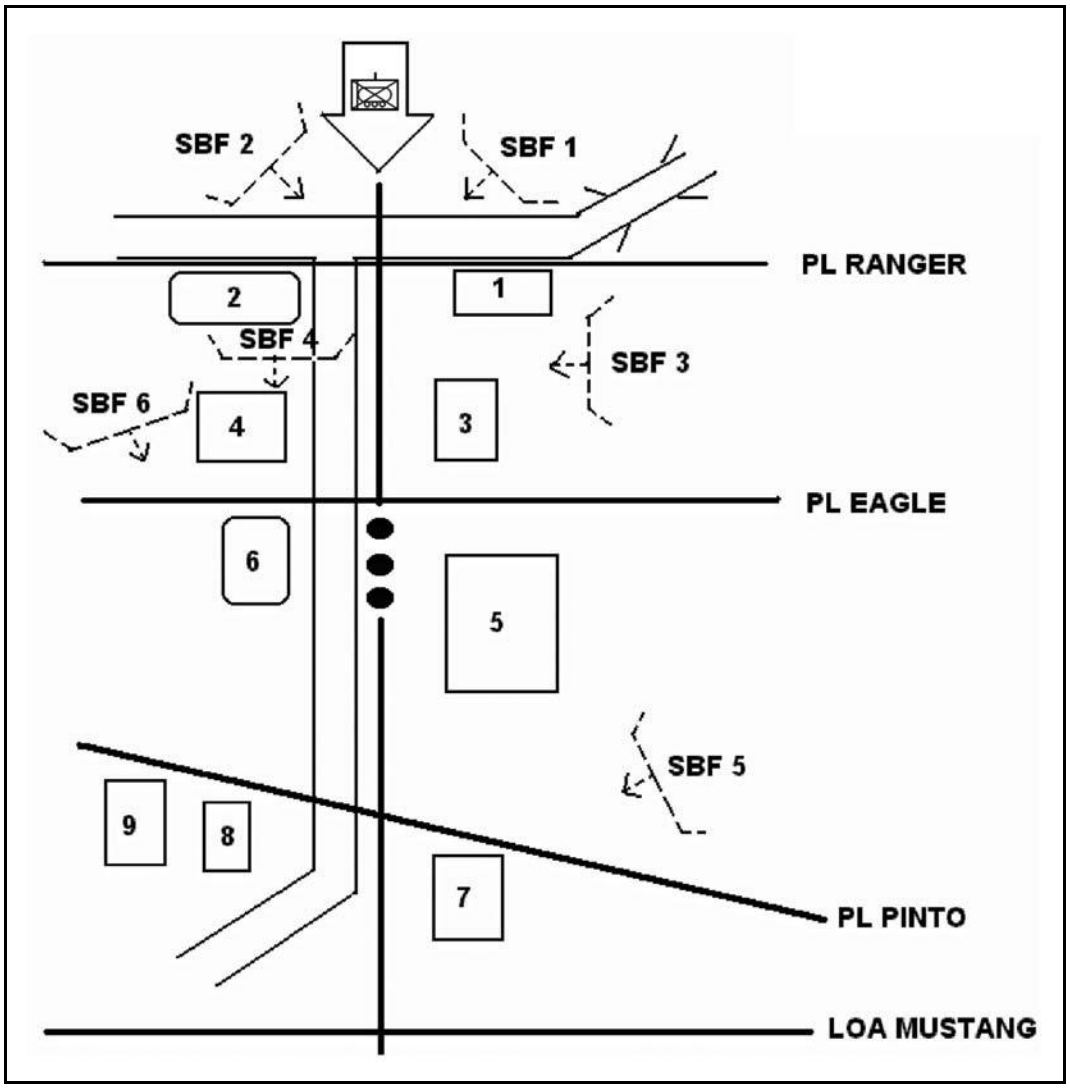


Figure 6-5. Graphic control measures.

6-3. METT-TC FACTORS

The platoon leader's analysis of the factors of mission, enemy, terrain and weather, troops and support available, time available, and civil considerations is critical for successful planning and execution during urban operations (UO).

a. **Mission.** The platoon leader must receive, analyze, and understand the mission before he begins planning. He and his soldiers must clearly understand the conditions of the operation--either precision or high intensity--and the ROE.

(1) ***Common Missions.*** The platoon leader should expect to receive the same types of offensive missions in urban terrain that he receives in other terrain. The following are common platoon missions in urban combat:

(a) *Isolation of an Urban Objective.* The platoon leader normally conducts this mission as part of a company. The platoon leader deploys his platoon to secure the area around or near a building, block, or village in order to kill or capture any withdrawing enemy forces and prevent reinforcement of or a counterattack against the objective. Engineers or other CS and CSS assets may reinforce the platoon based on the ROE and

factors of METT-TC. In view of the fact that many casualties may be inflicted on friendly units moving between buildings or down streets, this mission takes on significant importance.

(b) *Assault of a Building.* The platoon normally conducts this mission as part of a company operation when the building is too large for a squad to assault and clear and the size of the enemy defending the building requires a force larger than a squad. The platoon must enter the building, gain a foothold, and clear the building. The company commander normally directs another platoon or platoons to isolate the building. Engineers or other CS and CSS assets usually reinforce the platoon consistent with the ROE and the factors of METT-TC.

(c) *Movement to Contact.* The platoon may move through urban terrain in order to gain and maintain contact with the enemy. Because the urban environment makes movement very challenging and the buildings reduce the capabilities of FBCB2, the platoon must make extra efforts to gain and maintain situational understanding (SU). This mission typically includes movement (often rapid) through an urban area to develop the situation by seizing or clearing blocks and buildings.

(d) *Seizure of Key Urban Terrain.* The platoon may seize key terrain in order to provide an advantage to friendly forces. Key terrain may be overpasses, building complexes, traffic circles, surrounding natural terrain or bridges, and so forth. The platoon usually conducts this mission independently to facilitate movement or other operations.

(e) *Raids.* The platoon may perform raids on urban terrain, which they plan similar to raids on other terrain. Objectives may be located in built-up areas, and the platoon may have to move through urban and other terrain in order to arrive at the objective. The platoon normally conducts this mission independently, but it also may conduct a raid in support of a company area raid (see Chapter 4).

(2) ***Analysis of Mission.*** When conducting his analysis, the platoon leader must consider his company commander's intent and the end state of the operation. For example, the platoon leader must determine if clearance means every room, floor by floor (systematic clearance), or if the seizure of key terrain requires clearing only along the axis of advance (selective clearance). The platoon leader must also consider how and where the platoon must be postured in order to conduct follow-on missions and to facilitate the company and battalion missions. This analysis influences the missions he gives to his squad and attached element leaders. The battle can transition quickly from precision to high intensity conditions, a transition that may be caused by enemy actions. Indications of an enemy-forced change of ROE (and a change from precision conditions to high intensity) include--

- The requirement to breach multiple obstacles.
- The use of booby-traps by the enemy.
- The requirement to use repetitive explosive breaching to enter a building.
- Rooms that are so well prepared or barricaded that normal movement and clearing techniques cannot be employed.

(3) ***Movement.*** Moving from building to building or between buildings presents a problem to squads. Historical examples, recent operations in Somalia, and the Russian experience in Grozny, have shown that many casualties occur during movement from building to building and down streets. Therefore, platoon leaders should plan operations

in a manner that allows subordinate elements to take maximum advantage of covered and concealed routes within the urban area. Additionally, platoon leaders must carefully analyze which buildings must be isolated, suppressed, and obscured, consistent with the ROE. They may use the MGS, ICVs and, if attached to mechanized units, any available tanks and BFVs as shields for maneuvering platoons.

(4) ***Coordination of Fire Support.*** Most fire support coordination occurs at battalion level to take into account the ROE. Prior coordination determines the techniques and procedures to use for communicating, identifying targets, and shifting fires. The platoon FO should be extensively involved in this portion of the planning process. The platoon must plan fires consistent with the ROE, giving extra consideration to civilians, houses of worship, medical centers, schools, public services, and historical monuments. (See Chapter 12, FM 3-06.11, for further details about combat support assets.)

b. **Enemy.** Key factors that affect the platoon leader's analysis are the type of enemy force that is expected in the urban area, their probable courses of action, and the ROE. The type of threat is one factor used to determine how the platoon should be organized and how combat power should be massed to accomplish the mission.

(1) ***Conventional Forces.*** Many countries have adopted techniques of urban combat from either the United States or the Commonwealth of Independent States. Therefore, a future enemy may consider the motorized or mechanized rifle battalion the most effective unit for urban combat because of its inherent mobility, armor protection, and ability to adapt buildings and other structures for defense quickly.

(a) In countries that have forces equipped and trained as in the former Warsaw Pact, there are standard urban defenses:

- Enemy defenses are organized into two echelons to provide greater depth and reserves.
- Company strongpoints are prepared and form the basis for the battalion defensive position.
- The reserve is located in a separate strongpoint.
- Ambush locations are established in the gaps of the strongpoints, and dummy strongpoints are constructed to deceive the attacker.
- Positions for securing and defending the entrances to and exits from underground structures and routes are established.
- Security positions are prepared forward of first echelon defensive positions.
- A motorized or mechanized rifle company may defend several buildings or a single large building with mutually supporting fires.
- Each platoon defends one or two buildings, or one or two floors of a single building.

(b) In many countries, the forces are predominantly light with some outdated armored vehicles. Some countries may not have actual armed forces but have some form of armed militia(s). These forces normally do not fight a defense in the former Warsaw Pact style, but rather offer uncoordinated resistance, often extremely intense, as experienced in Somalia.

(2) ***Unconventional (Asymmetric) Forces.*** Analysis of unconventional enemy forces is similar to that for low intensity conflict during urban counterinsurgency, counterguerrilla, and counterterrorist operations. However, the actions of these forces are

much harder to predict. Platoon leaders and squad leaders must be alert for patterns of enemy activity based on cultural, regional, and demographic considerations.

c. **Terrain.** Offensive operations must be tailored to the urban environment based on a detailed analysis of each urban terrain setting, its types of built-up areas, and existing structural forms. Leaders must incorporate the following special planning considerations for an urban environment when conducting an offensive operation: (Refer to Chapter 2, FM 3-06.11, for detailed discussion of urban terrain analysis).

- Military maps that may not provide enough detail for urban terrain analysis nor reflect the underground sewer system, subways, underground water system, mass transit routes, and utility facilities. (When available, the commander should utilize building or city plans, engineering prints, aerial photographs, tourist maps, or other aids that may assist him in his analysis of the terrain.)
- Natural terrain surrounding the built-up area.
- Key and decisive terrain (stadiums, parks, sports fields, school playgrounds, public buildings, media facilities, and industrial facilities).
- Construction and structural composition of buildings.
- Confined spaces that limit observation, fields of fire, and maneuver and prevent the concentration of fires at critical points.
- Covered and concealed routes to and within the built-up area.
- Limited ability to employ maximum combat power due to the need to minimize damage and rubbling effects (based on ROE).
- Problems with conducting effective reconnaissance during conventional operations. Reconnaissance by force is the most effective reconnaissance means, ROE permitting. This method involves probing a defense with successively larger units until enemy positions are disclosed and can be successfully attacked. During unconventional (asymmetric) operations or operations under restrictive ROE, the opposite is true. Reconnaissance and security are more easily accomplished by both sides and are more difficult to prevent.
- ROE that limit the use of firepower.
- Significant numbers of civilians who may have to be evacuated, some forcibly. Civilians may hinder operations either merely by their presence or on purpose.

d. **Troops Available.** The platoon normally participates in an attack as part of an attacking company. In this case, the platoon may have to isolate the objective or seize a foothold. If the objective is a smaller built-up area, a platoon may be required to accomplish the entire mission independently, assigning required tasks to its squads or sections. The company mortar section normally supports the assault by providing indirect fire support. If available, towed 155-mm howitzers can use direct fire to destroy bunkers, heavy fortifications, or enemy positions in reinforced concrete buildings (Figure 6-6). The towed 155-mm howitzer may also clear or create avenues of approach. Whenever artillery is used in the direct fire role, it must be close to the infantry providing security against enemy ground attack. Prior coordination is necessary so the bulk of the field artillery unit's shells are HE. (See Chapter 10, FM 3-21.11 [FM 7-12], for a detailed discussion of assets the company commander may have available.)

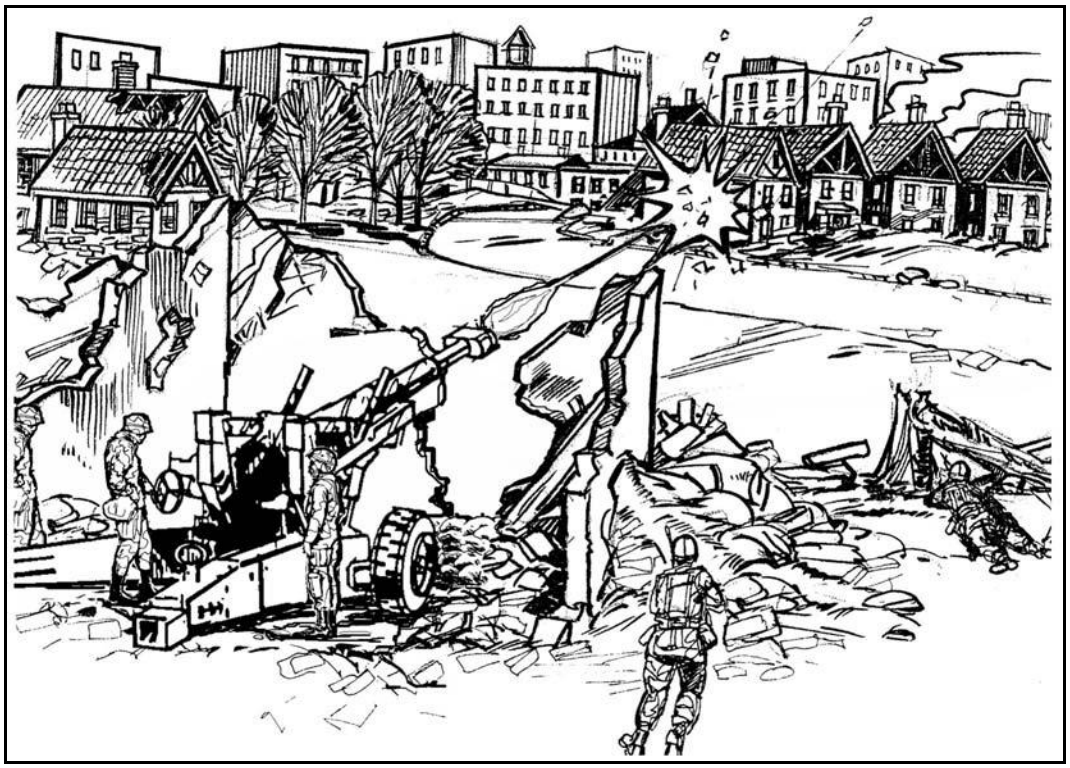


Figure 6-6. Artillery in direct fire role.

e. **Time.** Offensive operations in built-up areas have a slower pace and operational tempo. Consider the following issues when analyzing time available for an attack in urban terrain:

(1) Clearing buildings, blocks, or axes of advance in the dense environment of urban terrain requires more time than for operations in more open terrain.

(2) Troops tire more quickly because of stress and the additional physical exertion related to clearing urban terrain. Plan additional time to recover from fatigue.

(3) Allow additional time for thorough reconnaissance and rehearsals in order to prevent excessive casualties and fratricide.

f. **Civil Considerations.** The presence of large concentrations of civilians can greatly impede tactical operations.

(1) ***Refugees***. Fleeing civilians, attempting to escape over roads, can block military movement. Leaders should plan routes to be used by civilians and should seek the assistance of civil police in traffic control.

(2) ***Firepower.*** The presence of civilians may restrict the use of indirect fires and area fire weapons. Areas may be designated no-fire areas to prevent civilian casualties. Other areas may be limited to small arms and grenades only. Positive identification of all targets may be required for all direct or indirect fire and will impact on the responsiveness of the fire missions. Detailed guidance on the use of firepower will normally be provided in the form of ROE. Leaders must ensure all soldiers receive and understand the application of firepower detailed in the ROE.

(3) ***Security.*** Civilians on the battlefield will further complicate the platoon's security requirements. Special attention will be required to preclude civilians wandering around defensive positions and to guard against pilferage of equipment and sabotage. The

platoon must be aware of enemy forces or agents using civilians as cover for movements or hostile action.

(4) ***Mobility.*** The presence of local civilians and movement of refugees will influence the location and types of obstacles employed. Additionally, the platoon may be required to secure a passage lane through minefields along designated refugee route.

Section II. OFFENSE

While operating in urban areas, the major offensive collective tasks at platoon and squad level are attacking and clearing buildings. This involves isolating the objective, suppressing the enemy, advancing the assault element, assaulting the building, clearing the building, and consolidating and reorganizing the force. Regardless of the type of urban area or its structural characteristics, there are six interrelated requirements for attacking a defended building:

- Task organization.
- Tactical movement.
- Isolate the objective.
- Assault the building.
- Consolidation and reorganization.
- Continuation of assault mission.

6-4. PLANNING CONSIDERATIONS.

Leaders should consider the following when initiating their planning for offensive missions.

a. Proper application and integration of the six requirements listed above reduces casualties and hastens accomplishment of the mission. The type of building to be assaulted, the ROE, and the nature of the surrounding urban area will determine the method of execution. For example, medium-size towns have numerous open spaces, and larger cities have high-rise apartments and industrial and transportation areas that are separated by parking areas or parks. Increased fire support is required to suppress and obscure enemy observation and fires that may be covering the open terrain and spaces between buildings. Conversely, the centers of small- and medium-sized towns, with twisting alleys and narrow roads or adjoining buildings, provide numerous covered routes that can decrease fire support requirements.

b. Platoon and squad leaders must consider the assigned task, its purpose, and the method they will use to achieve the desired results. The leader may not need to commit soldiers into a structure or close with the enemy in order to seize or gain control of a building, a group of buildings, or an area. For example, if the enemy personnel have low morale or are poorly trained, under equipped, or lack leadership, they may be convinced to surrender or depart from the premises simply by a show of force and the use of a skilled psychological operations (PSYOP) team. At the other end of the spectrum is the well-trained enemy that is prepared to defend and has the means to resist. In this case the leader may decide (ROE permitting) to concentrate his direct and indirect fire weapons and other combat support systems onto the objective area in order to neutralize the enemy without movement of the squads to conduct an assault.

6-5. TASK ORGANIZATION (PLATOON ATTACK OF A BUILDING)

Platoons seldom perform independent operations in urban areas, but they may become separated or isolated during combat operations. This paragraph discusses the methods a platoon uses when required to conduct independent offensive urban operations. When conducting offensive urban operations, the company commander normally organizes the company into two elements: an assault element and a support element (Figure 6-7, page 6-16). If engineers are available, they will be task-organized into the assault element. The support element or an adjacent company, if part of a battalion effort, isolates the objective area (security). Depending on the situation, the platoon leader may designate a breaching element from within the assault element, the support element, or it may be a separate element. If engineers are not available, the platoon leader may designate a breaching team from within either the assault or the support element or, depending on the situation, he may task organize a separate breach element. The platoon leader determines the size and composition of these elements based on the mission, the number of troops available, the type and size of the objective building, whether the adjacent terrain provides open or covered approaches, and the organization and strength of the enemy defenses.

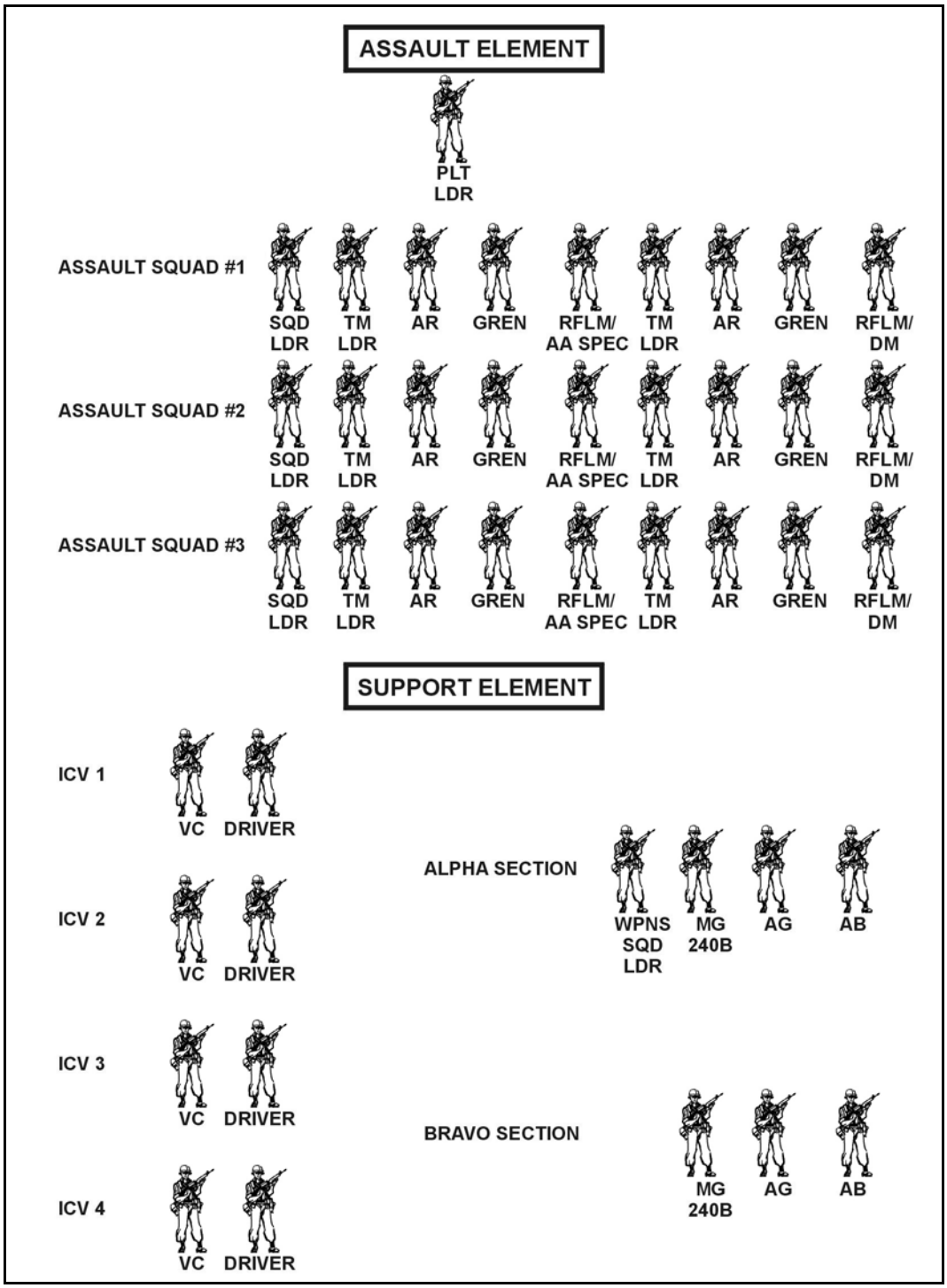


Figure 6-7. Platoon organization.

a. **Assault Element.** The purpose of the assault element is to kill, capture, or force the withdrawal of the enemy from any urban objective and to seize key terrain. The assault element of a platoon may consist of one, two, or three squads. Squad leaders normally organize their two fire teams into two clearing teams or, in special circumstances, the squad may be kept as a single assault squad. The assault force could

be divided into two clearing teams with a breaching element designated from within one or both teams. As the breaching element and one clearing team move into position at the initial entry point, the remaining clearing team provides additional fire support. Once the lead clearing team has gained a foothold in the building, the remaining clearing team enters and secures the foothold.

NOTE: Clearing techniques are designed to be executed by the standard four-man fire team. This does not mean that all four members must enter a room in order to clear it. Because of the confined spaces typical of building and or room clearing operations, units larger than squads quickly become awkward and unmanageable. When shortages of personnel demand it, two- and three-man teams can conduct room-clearing operations, but four-man teams are best suited to this task. Using fewer personnel adds to the combat strain and greatly increases the risk to the team. For clearing large open buildings, such as hangars or warehouses, it may be necessary to use two squads simultaneously, employing bounding overwatch, to effectively clear the entire structure and to provide force protection.

b. **Support Element.** The support element provides the support required by the assault element. Its purpose is to provide immediate suppressive fire support to enable the assault element to close with the enemy and to assist in the isolation of the building. The support element at platoon level may consist of the weapons squad and any personnel not designated as part of the assault element. This assistance includes, but is not limited to, the following:

- Suppressing enemy weapons systems and obscuring the enemy's observation within the objective building(s) and adjacent structures.
- Isolating the objective building(s) with direct fires to prevent enemy withdrawal, reinforcement, or counterattack.
- Obscuring enemy observation of obstacles en route to and at the entry point to the objective during breaching operations.
- Destroying or suppressing enemy positions with direct fire weapons.
- Engaging enemy armor with antitank weapons.
- Securing cleared portions of the objective.
- Providing replacements for the assault element.
- Providing the resupply of ammunition and pyrotechnics.
- Bringing up specific equipment that the assault element could not carry in the initial assault.
- Evacuating casualties, prisoners, and civilians.

NOTE: The PSG must be prepared to rapidly evacuate the wounded from the objective area to the company casualty collection point (CCP). The use of ground ambulances may be impeded by rubble in the streets, barricades, and demolition of roads; therefore, litter teams could be used extensively. Additionally, snipers can affect medical evacuation from forward positions.

c. **Breach Team.** The purpose of the breach team is to clear and mark lanes through obstacles during movement and to provide the assault element with access to an urban objective. The platoon leader organizes the force to ensure that breaching teams are identified. One technique is to assign one fire team from the assault element as the breaching team. The breach can also be conducted using an attached engineer or any member of the platoon who has had additional training in breaching techniques.

6-6. TACTICAL MOVEMENT

When moving in an urban area, squads and platoons use modified variations of the traveling, traveling overwatch, and bounding overwatch movement techniques. Often squads and fire teams will use the modified wedge (file or column) to move. Leaders must be aware of the three-dimensional aspect of urban terrain such as streets, buildings, subsurface, and airspace (Figure 6-8). Squads and platoons are extremely vulnerable to sniper fire; therefore, to prevent excess casualties, countersniper techniques must be well rehearsed and implemented. Platoon section and squad leaders must move their elements in a manner that prevents the entire force from becoming decisively engaged at one time. This may require the use of several mobility corridors along the avenue of approach but should not preclude continual mutual support between teams and squads. (See FM 3-06.11 for more information concerning countersniper techniques.)

NOTE: Squad leaders should use the designated marksman to assist in overwatching the movement of his fire teams. The designated marksman can cover the flanks and rear of the squad as it moves along the designated avenue of approach.

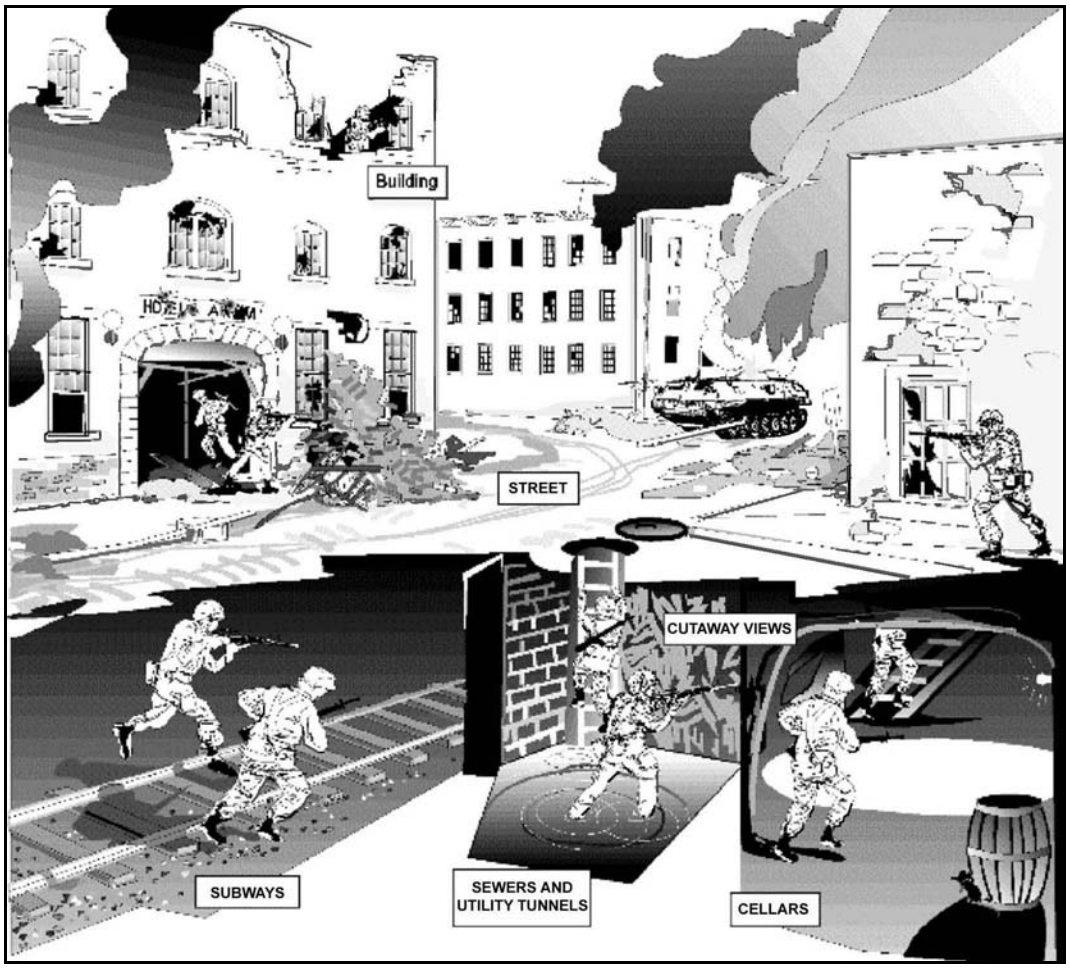


Figure 6-8. Three-dimensional urban terrain.

a. In house-to-house and street fighting, the MGS and ICVs move along streets protected by the infantry, which clears the area of enemy antitank weapons. The MGS and ICVs can support the infantry with their 105mm, .50 cal, and MK19 fire (Figure 6-9, page 6-20). The MGS and ICVs also can provide smoke obscuration with the M6 smoke grenade launcher. The L8A1/A3 red phosphorus smoke grenade will last for 1 to 3 minutes, while the M76 infrared screening grenade provides obscuration for 30 to 60 seconds.

b. The assault force minimizes the effects of the enemy's defensive fires during movement by:

- Using covered and concealed routes.
- Moving only after enemy fires have been suppressed or enemy observation obscured.
- Moving at night or during periods of reduced visibility.
- Selecting routes that will not mask friendly suppressive fires.
- Cross open areas quickly under the concealment of smoke and suppression provided by the support element.
- Moving on rooftops not covered by enemy fires.

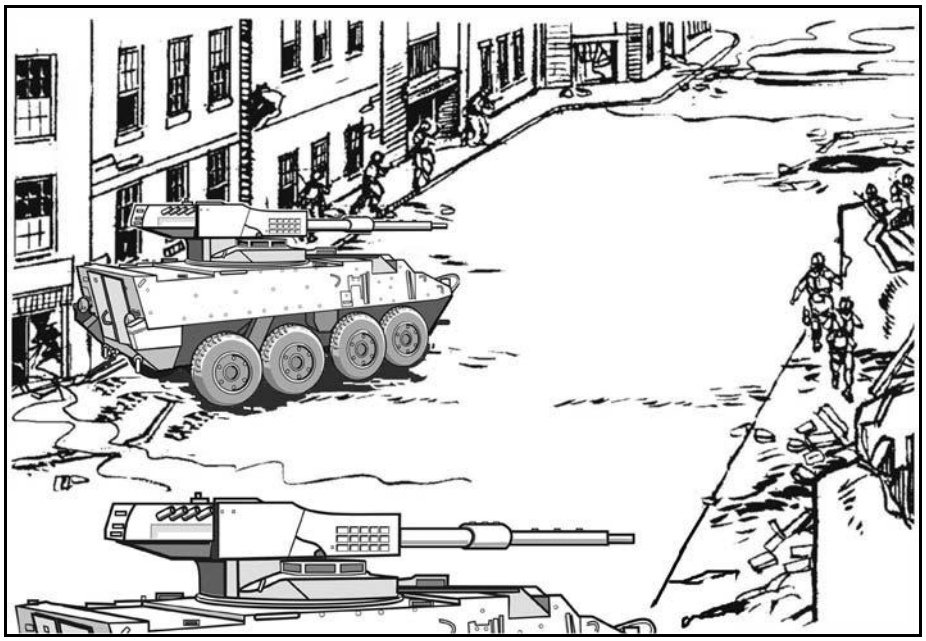


Figure 6-9. ICVs provide cover for rifle squads.

c. In lightly defended areas, the type of operation may dictate moving along streets and alleys without clearing all the buildings.

d. To avoid exposure on the street or to provide mutual support, the infantry squads should move through the buildings, if possible.

e. The platoon moves along streets and alleys with two squads leading, one on either side of the street, supported by MGS or ICVs in the overwatch. The squads should move using bounding overwatch to quickly locate, identify, engage, and eliminate all enemy antiarmor weapon systems.

NOTE: When employing armored vehicles along side the infantry assault, leaders must be aware of the explosive effects and fragmentation fallout, as well as the blast-over pressure, and how these will affect the infantry on the ground. (For more specific information on the effects of weapons see FM 3-06.11.)

6-7. ISOLATE THE OBJECTIVE OR BUILDING

The platoon must isolate urban objectives in order to prevent reinforcement of or counterattack against the objective and to kill or capture any withdrawing enemy forces. When planning the isolation, leaders must consider three-dimensional and in-depth isolation of the objective (front, flanks, rear, upper stories, and rooftops). They should employ all available direct and indirect fire weapons, to include attack helicopters and CAS, consistent with the ROE. Isolating the objective is a key factor in facilitating the assault and preventing casualties. The platoon may perform this mission as the support element for a company operation, or it may assign the task to its own internal support element for a platoon attack. In certain situations, the platoon may isolate an objective or an area for special operations forces. When possible, the platoon should isolate the objective using stealth and rapid movement in order to surprise the enemy. Depending on

the tactical situation, infantry platoons may use infiltration in order to isolate the objective.

a. **Sniper or Designated Marksman.** In certain situations that require precise fire, snipers or designated marksmen can provide an excellent method of isolating key areas. Skillful application of snipers can provide lethal fire while simultaneously minimizing collateral damage and noncombatant casualties.

b. **Seizure of Terrain.** Isolating the objective also involves seizing terrain that dominates the area so that the enemy cannot supply, reinforce, or withdraw its defenders. It also includes selecting terrain that provides the ability to place suppressive fire on the objective. (This step may be taken at the same time as securing a foothold.) If isolating the objective is the first step, speed is necessary so that the defender has no time to react.

6-8. ASSAULTING A BUILDING

The assault element, regardless of size, must quickly and violently execute the assault and subsequent clearing operations. Once momentum has been gained, it is maintained to deny the enemy time to organize a more determined resistance on other floors or in other rooms. The small unit leaders are responsible for maintaining the momentum of the assault yet not allowing the operation to become disorganized. Obstacles may slow or stop forward movement. Leaders must maintain the momentum by rapidly creating a breach in the obstacle or by redirecting the flow of the assault over or around the obstacles.

a. **Approaches**. All routes to the breach and or entry point are planned in advance. The best route is confirmed and selected during the leaders' reconnaissance. The route should allow the assault element to approach the breach (entry) point from the blind side, if possible.

b. **Order of March.** The assault team's order of march to the breach point is determined by the method of breach and its intended actions at the breach (entry) point. This preparation must be completed prior to or in the last covered and concealed location before reaching the breach (entry) point. Establishing an order of march aids the team leader with C2 and minimizes exposure time in open areas and at the entry point. One order of march technique is to number the assault team one, two, three, and four. The number-one man always should be responsible for frontal and or door security. If the breach has been conducted prior to its arrival, the assault team quickly moves through the breach (entry) point. If a breach has not been made prior to its arrival at the breach (entry) point, and depending on the type of breach to be made, the team leader conducts the breach himself or signals forward the breach man or element. One option is to designate the squad leader as the breach man. If the breach man is part of the assault team, he will normally be the last of the four men to enter the building or room. This allows him to transition from his breaching task to his combat role. (See FM 3-06.11 for more information concerning movement and breaching methods.)

c. **Conduct of the Breach.** Soldiers may be fighting just to get to the breach point; therefore, proper fire and movement will be required all the way to the breach (entry) point. To start the violence of action needed to enter the building, consider firing into windows and doors or throwing fragmentation grenades, concussion grenades, or stun grenades into the room to be cleared, if the ROE allows. (While fragmentation and concussion grenades are effective casualty-producing weapons, the stun grenade may be

used as a distraction device to provide the clearing team an extra second or two to achieve domination when entering the breach.) The rest of the squad or platoon will provide support to secure (left, right, up, and down) the assault element. Remember that the fight is three-dimensional and in 360 degrees. While it is preferable to avoid entering the room to be cleared through windows and doors, since they are usually covered by direct fire or are booby-trapped, the ROE may require using them in order to gain entry. If doors and windows are not used for the entry, the assault element must remain oriented on these danger areas as it approaches the breach location. It may need to augment or create obscuration with hand-held smoke, but must remember not to mask the fires of the support element or obscure the breach (entry) point from friendly observation and fires. If possible, the breach is conducted in such a manner as to allow the assault element to continue movement without having to wait at the breach (entry) point. Deception should be used to confuse the enemy as to the location of the primary entry point. This can be achieved by using fragmentation grenades, concussion grenades, or stun grenades in an area other than the actual breach or entry point.

d. **Breaching Methods.** The three breaching methods discussed here are explosive, ballistic, and mechanical.

(1) ***Explosive Breach***. This method of breaching requires the use of an explosive composition, such as C4 or TNT or a manufactured shape charge, directed against the target.

(a) ***Exterior Walls***. One of the most difficult breaching operations for the assault team is breaching masonry and reinforced concrete walls. Composition C4 normally is used for explosive breaching because it is safe, easy to use, and readily available. Engineers usually are attached to the platoon if explosive breaching operations are expected. The attached engineers will conduct the breach themselves or provide technical assistance to the infantrymen involved. The typical thickness of exterior walls is 15 inches or less. Assuming that all outer walls are constructed of reinforced concrete, a rule of thumb for breaching is to place 10 pounds of C4 against the target between waist and chest height. When detonated, this charge normally blows a hole large enough for a man to go through. On substandard buildings, however, a charge of this size could rubble the building. When explosives are used to breach windows or doors, the blast should eliminate any booby traps in the vicinity of the window or doorframe. (See FM 3-06.11 for information concerning demolitions.)

(b) ***Charge Placement***. Place the charges (other than shape charges) directly against the surface that is to be breached. When enemy fire prevents an approach to the wall, a technique may be to attach the breaching charge, untamped, to a pole and slide it into position for detonation at the base of the wall. Small-arms fire will not detonate C4 or TNT. Take cover before detonating the charge.

(c) ***Tamping.*** Whenever possible, explosives should be tamped or surrounded with material to focus the blast to increase effectiveness. Tamping materials could be sandbags, rubble, desks, chairs, and even IV bags. For many exterior walls, tamping may be impossible due to enemy fire. An untamped charge requires approximately twice the explosive charge of a tamped charge to produce the same effect.

(d) ***Second Charges***. Breaching charges will not cut metal reinforcing rods inside concrete targets. If the ROE permits, hand grenades should be thrown into the opening to

clear the area of enemy. Once the area has been cleared of enemy, the reinforcing rods can be removed using special steel cutting explosive charges or mechanical means.

(2) ***Ballistic Breach***. This method requires the use of a weapon firing a projectile at the breach point.

(a) For exterior walls, the use of a BFV or artillery piece in the direct fire role is ideal if the structure will support it and if the ROE will allow it. The BFV's 25-mm cannon is an effective breaching weapon when using HE rounds and firing a spiral firing pattern (Figure 6-10, page 6-24). The main gun of an M1A1/A2 tank is very effective when using the HEAT round; however, the armor-piercing discarding-sabot (APDS) round rarely produces the desired effect because of its penetrating power. The 12-gauge shotgun breaching round is effective on doorknobs and hinges, while standard small arms (5.62-mm and 7.62-mm) have proven to be virtually ineffective for breaching. These should not be used except as a last resort because of their ricochet potential and shoot-through capability. Ballistic breaching of walls by shotgun fire is normally an alternate means of gaining entry. Ballistic breaching is not a positive means of gaining entry and should not be considered the primary method for gaining initial entry into a structure. It may not supply the surprise, speed, and violence of action necessary to minimize friendly losses on initial entry. In certain situations, it may become necessary to use ballistic breaching as a back-up entry method. A misfire of an explosive charge or the compromise of the assault element during its approach to the target may necessitate the use of ballistic breaching as a means of initial entry into the structure. Ballistic breaching may have to be followed up with a fragmentation, concussion, or stun grenade before entry.

WARNING

The fragmentation and ricochet effects of standard small arms (5.56-mm and 7.62-mm) as breaching rounds is unpredictable and considered extremely dangerous. Do not attempt in training.

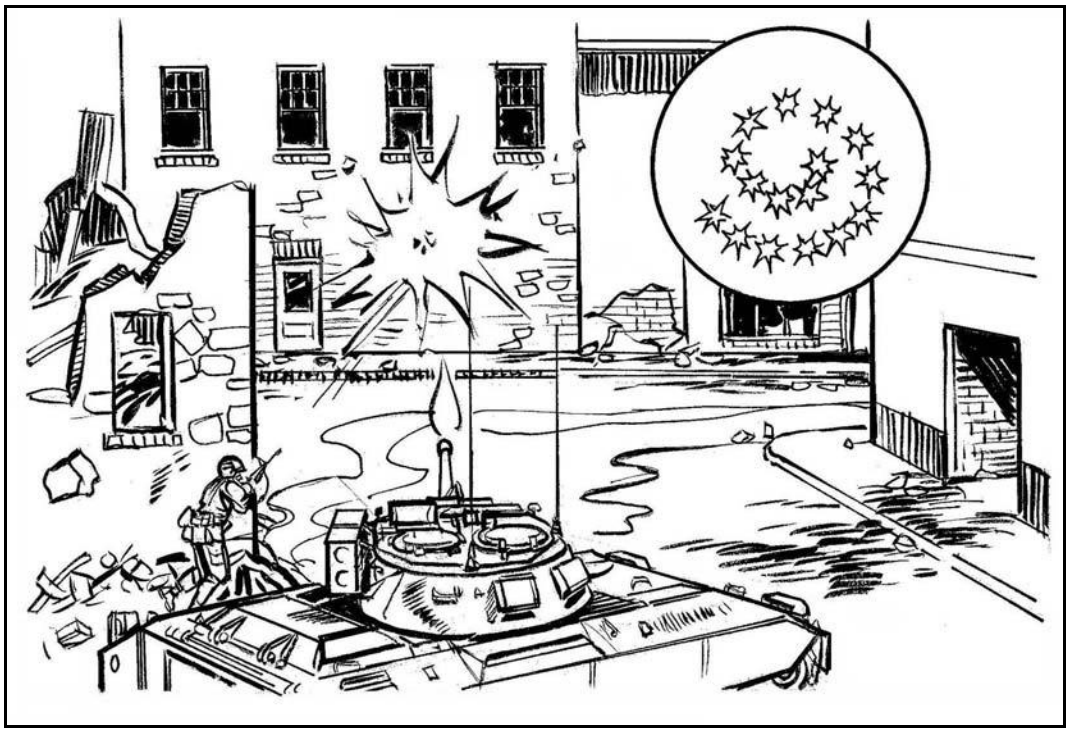


Figure 6-10. Spiral firing pattern.

(b) Once initial entry is gained, shotgun ballistic breaching may become the primary method for gaining access to subsequent rooms within the structure. Surprise is lost upon initial entry, and other breaching methods are often too slow and tend to slow the momentum of the assault team. If a door must be used for entry, several techniques can be used to open the door. Doors should be considered a fatal funnel because they are usually covered by fire, or they may be booby-trapped. (See FM 3-06.11 for more information concerning weapon employment and effects.)

(c) Rifle-launched entry munitions (RLEM) (Figure 6-11) allow a remote ballistic breach of an exterior door or window without having the assault or breaching element physically present at the breach (entry) point. This allows the assault element to assume a posture for entry in the last covered and concealed position before the breach. The RLEM firer is not normally part of the assault element but rather a part of the breaching or support element. This allows the RLEM to be fired from one position while the assault element waits in another position. In the event that the first round does not effect the breach, the firer should prepare a second round for the breach or a second firer should be prepared to engage the target.

Figure 6-11. Rifle-launched entry munitions (RLEM).

WARNING
Firer must be a minimum of 10 meters from target to safely employ a 150-gram round.

NOTE: Exact minimum safe distances for firers and assault elements have not been established for the 150-gram round.

(3) ***Mechanical Breach***. This method requires increased physical exertion by one or more soldiers using hand tools such as axes, saws, crowbars, hooligan's tools, or sledgehammers. The mechanical breach is not the preferred primary breaching method because it may be time consuming and defeat the element of surprise. However, the ROE and the situation may require the use of these tools, so soldiers should be proficient in their use. (See FM 3-06.11 for additional information concerning mechanical breaching.)

b. **Breach Locations.** The success of the assault element often depends on the speed with which they gain access into the building. It is important that the breach location provide the assault element with covered or concealed access, fluid entry, and the ability to be overwatched by the support element.

(1) ***Creating Mouseholes.*** Mouseholes provide a safe means of moving between rooms and floors. C4 plastic explosive can be used to create mouseholes when lesser means of mechanical breaching fail. Because C4 comes packaged with an adhesive backing, or can be emplaced using pressure-sensitive tape, it is ideal for this purpose. When using C4 to blow a mousehole in a lath and plaster wall, one block or a strip of blocks should be placed on the wall from neck-to-knee height. Charges should be primed with detonating cord or modernized demolition initiator (MDI) to obtain simultaneous detonation which will blow a hole large enough for a man to fit through.

(2) ***Expedient Breaching Methods.*** Because the internal walls of most buildings function as partitions rather than load-bearing members, smaller explosive charges can be used to breach them. When C4 or other military explosives are not available, one or more fragmentation grenades or a Claymore mine can be used to breach some internal walls. These field-expedient breaching devices should be tamped to increase their effectiveness and to reduce the amount of explosive force directed to the rear. Extreme care must be taken when attempting to perform this type of breach since fragments may penetrate walls and cause friendly casualties. If walls are made of plaster (dry wall), mechanical breaching may be more effective.

(3) ***Door Breaching Charges.*** The general-purpose charge and the flexible linear charge are field-expedient charges that can be used to breach interior and exterior doors. These charges give the breach element an advantage because they can be made ahead of time and are simple, compact, lightweight, and easy to emplace. (See FM 3-06.11 for more information concerning door breaching charges.)

(4) ***Windows and Restrictive Entrances.*** Regardless of the technique used to gain entry, if the breach location restricts fundamental movement into the room or building, local or immediate support must be used until the assault team can support itself. For example, as a soldier moves through a window and into the room, he may not be in a position to engage an enemy; therefore, another window that has access to the same room may be used to overwatch the lead team's movement into the room. The overwatching

element can come from the initial clearing team or from the team designated to enter the breach location second.

c. **Security**. Because of the three-dimensional enemy associated with urban terrain, the assault element must maintain 360-degree security during movement to the breach (entry) point. If the assault element is to stop in the vicinity of the breach (entry) point to wait for the breach element to complete its task, the support element must maintain suppressive fire to protect the assault element.

d. **Assault Locations.** The assault may begin from the top or bottom of the building.

(1) ***Top Entry*.** Entering at the top and fighting downward is the preferred method of clearing a building. This method is only feasible, however, when the platoon can gain access to an upper floor or rooftop by ladder or from the windows or roofs of adjoining, secured buildings, or by helicopter if enemy air defense weapons can be suppressed. Rooftops are danger areas when surrounding buildings are higher and forces can be exposed to fire from those buildings. Helicopters should land only on those buildings that have special heliports on the roofs or on parking garages, but soldiers can rappel or fast rope onto the roof or dismount as the helicopter hovers a few feet above the roof. Soldiers then can breach the roof or common walls. They may use ropes or other means to enter the lower floors through the holes created. The use of ladders to assault an upper level should be a last resort.

(2) ***Bottom Entry*.** Entry at the bottom is common and may be the only option available. When entering from the bottom, breaching a wall is the preferred method because doors and windows may be booby-trapped and covered by fire from inside the structure. If the assault element must enter through a door or window, it should enter from a rear or flank position.

e. **Suppressive Fires During the Assault.** The support force provides suppressive fire while the assault force systematically clears the building. It also provides suppressive fire on adjacent buildings to prevent enemy reinforcements or withdrawal. Suppressive fire may consist of firing at known and suspected enemy locations or, depending on the ROE, may include only firing at identified targets or returning fire when fired upon. The support force destroys or captures any enemy personnel trying to exit the building. The support force also must deal with civilians displaced by the assault.

f. **Clearing Rooms.** The platoon leader must ensure that the clearing squads carry enough room marking equipment and plainly mark cleared rooms from the friendly side IAW unit SOP (Figure 6-12). Markings must be visible to friendly units even if the operation occurs during limited visibility. The support force must understand which markings will be used and ensure that suppressive fires do not engage cleared rooms and floors. Maintaining awareness of where the assault teams are and which rooms and floors have been cleared is imperative and a key command and control function for the platoon leader.

NOTE: Soldiers should consider the use of devices and other techniques that allow them upper level access without using interior stairways. Those devices and techniques include, but are not limited to, adjacent rooftops, fire escapes, portable ladders, and various soldier-assisted lifts. (See FM 3-06.11.)

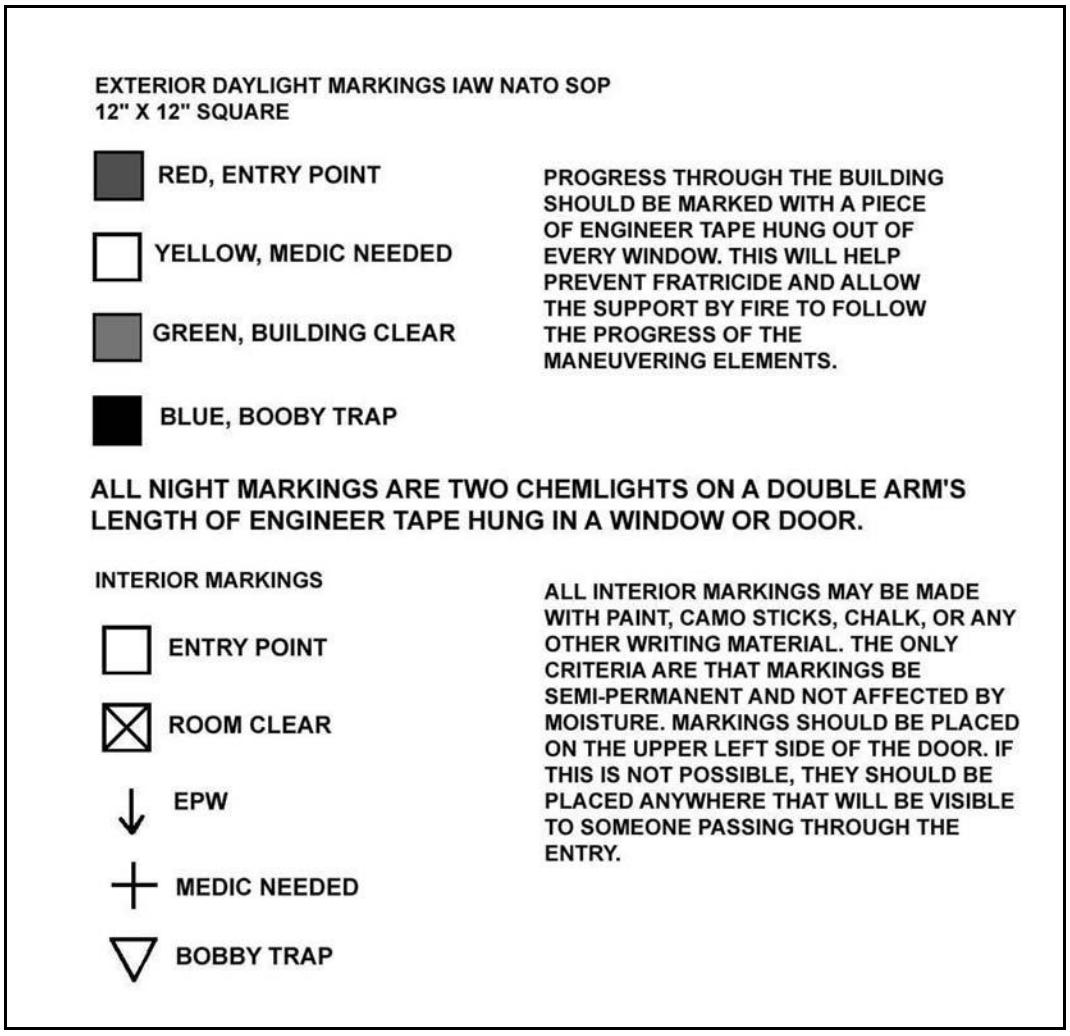


Figure 6-12. Sample marking SOP.

e. **Support Element.** The support element isolates the building with direct and indirect fires to support the assault element's move to the breach point. The support element covers mounted avenues of approach with antiarmor weapons and covers dismounted avenues of approach with automatic weapons. It suppresses enemy fires and neutralizes enemy positions within the objective building and adjacent buildings as the breach team and assault element move into position. The support element eliminates any enemy trying to exit the building. The location of adjacent units must be considered in the emplacement of supporting fires.

(1) The support element uses smoke to obscure the movement of the breach and assault element to the building. If possible, the smoke obscuration is maintained until the assault element has entered the building.

(2) Depending upon the ROE, just before the maneuver of the assault element, the support element increases suppressive fires on the objective and continues until masked by the advancing assault element. (See Figure 6-13, page 6-28, for fire control technique.) Once masked, the support element shifts fires to upper or lower windows and

continues until the assault element has entered the building. At that time, it shifts fires to adjacent buildings to prevent enemy withdrawal or reinforcement.

(3) If the ROE are very restrictive, the use of supporting fires may be restricted to known enemy locations that have engaged the unit.

(4) The support element also must deal with civilians displaced by the assault, EPWs, and casualties.

f. **Direction of Assault Technique of Direct Fire Planning and Control.** In this technique, building numbers are assigned in a consistent pattern in relation to the direction of assault. In the example shown in Figure 6-13, the buildings are numbered consecutively, in a counterclockwise manner. Further, the sides of the buildings are color-coded consistently throughout the objective area (WHITE--direction of assault side; GREEN--right side; BLACK--rear side; RED--left side; BLUE--roof). An odd-shaped building is also shown. Note that a "four-sided" concept was retained to minimize confusion. Further designations of WHITE 1, WHITE 2, WHITE 3, and so on from left to right can be added to specify which wall will be engaged. Apertures on the buildings are also labeled consecutively using rows and columns, as shown. In the example, "OBJ 4, WHITE, window A1" is the lower left-hand window on the direction of assault side of OBJ 4. All designations are labeled in relation to the direction of assault. (See FM 34-130 for additional information on building shapes and structural labeling.)

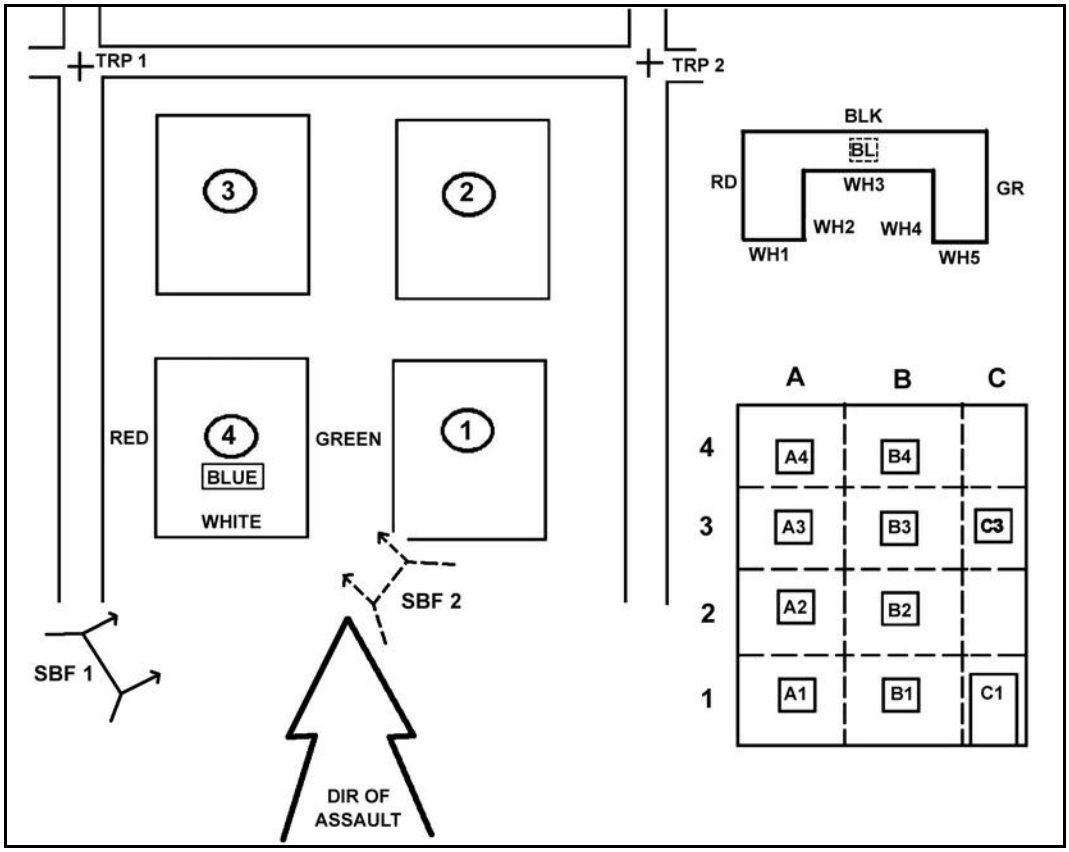


Figure 6-13. Direction of assault technique of fire control.

6-9. ENTER AND CLEAR A BUILDING

A large portion of combat in urban areas takes place at very close ranges, often between small groups of combatants within the confines of a single room. Success or failure is often determined by actions taken instinctively by individual soldiers and fire teams as they encounter complex situations. One of the complexities often encountered is the intermixing of combatants with noncombatants in the same building and often in the same rooms.

a. **Principles.** The principles of precision combat are surprise, speed, and controlled violence of action. These principles do not change regardless of ROE. The three principles of precision combat are each relative to one another: successful surprise allows increased speed; controlled violence coupled with speed increases surprise.

(1) ***Surprise***. Surprise is one of the elements necessary for a successful assault at close range. The assault team achieves surprise by attacking at a time and location unexpected by the defender. Hand grenades, concussion grenades, or stun grenades are used to achieve surprise. These techniques are most effective against a nonalert, poorly trained enemy. An explosive or ballistic breach also will provide the element of surprise by stunning the occupants of a room.

(2) ***Speed.*** Speed provides a measure of security to the clearing unit. Speed allows soldiers to use the first few seconds provided by surprise to their advantage. In urban combat, speed does not mean incautious haste. It can best be described as a "careful hurry."

(3) ***Controlled Violence of Action***. Controlled violence of action eliminates or neutralizes the enemy and decreases his chances of inflicting friendly casualties. Controlled violence of action is not limited to the application of firepower. It also involves a highly motivated soldier and his ability to dominate and control the combat situation.

b. **Fundamentals of Clearing Operations.** The fundamentals of clearing operations are the actions soldiers take while moving along confined corridors to the room to be cleared, while preparing to enter the room, during room entry and target engagement, and after contact. Team members must--

- Move tactically while securing the corridors to the room to be cleared. To prevent fatigue, noise, and interference while moving, the assault team members should minimize the equipment they carry.
- If possible, arrive undetected at the entry to the room and in the correct order of entrance, prepared to enter on a single command or signal.
- Ensure security is maintained outside the room to protect the assault team inside the room.
- Enter quickly and dominate the room. Move immediately to positions that allow complete control of the room and provide unobstructed fields of fire.
- Eliminate all enemy within the room with quick, accurate, and discriminating fires.
- Gain and maintain immediate control of the situation and all personnel in the room.
- Confirm whether enemy casualties are wounded or dead. Search all enemy casualties, disarming them and segregating the wounded.

NOTE: Soldiers can carry and use small plastic flex cuffs to control civilian detainees or captured military personnel.

- Immediately perform a cursory search of the room and determine if a detailed search is required.
- Evacuate all wounded as quickly as possible. Friendly wounded should be evacuated as soon as they are out of direct small arms fire.
- Evacuate any friendly dead.
- Mark the room as cleared in accordance with unit tactical SOP (TSOP) using simple, clearly identifiable markings (Figure 6-12, page 6-27). Some common markings can include spray paint, a reflective physical training strap, chalk, engineer tape, chemical lights, and NATO marking panels. Markings may be placed on the outside of cleared floors on multistory buildings to show friendly forces the progress of the clearing operation if this will not give intelligence to enemy forces.
- Provide a SITREP in accordance with the unit TSOP when the room is cleared.
- Maintain security at all times and be prepared to react to more enemy contact at any moment. Priority must be given to the direction of attack, but rear security should not be neglected.
- Rotate clearing teams to maintain the momentum of the attack.

c. **Clearing Techniques.** Methods of movement, firing techniques, weapon positioning, and reflexive shooting are fundamentals used in urban combat. Employing these techniques provides an effective means of achieving success, minimizing noncombatant casualties, and conserving ammunition. Each member of the unit must understand the principles of precision combat and his part in their successful execution.

(1) Special clearing techniques may be required when highly restrictive ROE are in effect. The enemy situation may require that the units clear only a few selected buildings methodically to accomplish their mission rather than using firepower to suppress and neutralize buildings in the objective area. Reasons for a highly restrictive ROE include the following:

- Use of heavy supporting fires and demolitions would cause unacceptable collateral damage.
- Enemy combatants are so intermixed with noncombatants that the ROE prevents US forces from using all of their available supporting fires and room-by-room clearing may be necessary.
- The likelihood of fratricide requires restrictive ROE.

(2) In a situation where the ROE favor overwhelming firepower, units should employ direct and indirect fires, demolitions, and fragmentation or concussion grenades as necessary to assist in clearing an objective defended by an alert and determined force without noncombatants. (See FM 3-06.11 for more information concerning entering buildings and room clearance techniques.)

NOTE: To prevent the possibility of fratricide or injury to friendly inhabitants, leaders should consider the use of stun grenades rather than the fragmentation or concussion grenade.

6-10. CONSOLIDATION AND REORGANIZATION

The squad and platoon will conduct consolidation and reorganization immediately after each action where soldiers are engaged and ammunition is expended. Consolidation is the action taken by the squad or platoon to ensure its security, to prepare for a counterattack by the enemy, and to prepare to continue the mission. Consolidation in an urban environment must be quick in order to repel enemy counterattacks and to prevent the enemy from infiltrating back into cleared buildings or floors. After securing a floor (bottom, middle, or top), selected members of the platoon are assigned to cover potential enemy counterattack routes to the building. Priority must be given initially to securing the direction of attack. Security elements alert the unit and place a heavy volume of fire on enemy forces approaching the unit. Reorganization occurs after consolidation. These actions prepare the unit to continue the mission by ensuring key leadership positions are filled and important weapons systems are manned. Many reorganization actions occur simultaneously during the consolidation of the objective.

a. **Consolidation Actions.** Squads assume hasty defensive positions to gain security immediately after the objective has been seized or cleared. Squads that performed missions as assault elements should be prepared to assume an overwatch mission and to support another assault element. Units must guard all avenues of approach leading into their area. These may include:

- Enemy mouseholes between adjacent buildings.
- Covered routes to the building.
- Underground routes into the basement.
- Approaches over adjoining roofs.

b. **Reorganization Actions.** After consolidation, leaders ensure the following actions are taken:

- Resupply and redistribute ammunition.
- Mark buildings to indicate to friendly forces that they have been cleared.
- Treat and evacuate wounded personnel. Once the objective area is secure, begin evacuating noncombatants then enemy wounded.
- Treat and process EPWs.
- Segregate and safeguard noncombatants.
- Reestablish the chain of command.

6-11. CONTINUATION OF THE ASSAULT MISSION

If the unit is going to continue with its original mission, its "be prepared/on order" mission, or receives a new mission, it must accomplish the following tasks:

- The momentum must be maintained. This is a critical factor in clearing operations. The enemy cannot be allowed to move to its next set of prepared positions or to prepare new positions.
- The support element pushes replacements, ammunition, and supplies forward to the assault element.
- Security for cleared areas must be established IAW the OPORD or TSOP.
- The support element must displace forward to ensure that it is in place to provide support to the assault element such as isolation of the new objective.

Section III. DEFENSE

In urban areas, buildings provide cover and concealment, limit fields of observation and fire, and block movement of troops, especially mechanized troops. This section covers the key planning considerations, weapons selection, preparations, and the construction of a platoon defensive position on urbanized terrain.

6-12. PLANNING THE DEFENSE

Planning the defense begins when the leader receives a mission or determines a requirement to defend, such as during consolidation and reorganization after an assault. The leader must use terrain wisely and designate a point of main effort. He chooses defensive positions that force the enemy to make costly attacks or conduct time-consuming maneuvers to avoid them. A position that the enemy can readily avoid has no defensive value unless the enemy can be induced to attack it. The defense, no less than the offense, should achieve surprise. As platoon leaders conduct their troop-leading procedures, they must consider civilians, ROE, limited collateral damage, and coordination with adjacent units to eliminate the probability of fratricide. Maneuver, methods, and courses of action in establishing defensive positions in and around urbanized terrain are METT-TC intensive.

a. The squad and platoon's focus for defending in an urban area is the retention of terrain. As with most defensive scenarios, the squad and platoon will defend as part of the company. The platoon will be given either a sector to defend or a battle position to occupy, and the platoon leader must construct his defense within the constraints given to him. In an urban area, the defender must take advantage of the abundant cover and concealment. He must also consider restrictions to the attacker's ability to maneuver and observe. By using the terrain and fighting from well prepared and mutually supporting positions, a defending force can delay, block, fix, or inflict heavy losses on a much larger attacking force.

b. One of the most common defensive tasks a platoon will be given during urban operations is to conduct a strongpoint defense of a building, part of a building, or a group of small buildings (Figure 6-14). The platoon's defense normally is integrated into the company's mission. The platoon leader organizes the strongpoint defense by positioning personnel and their weapons systems to maximize their capabilities. Supporting fires are incorporated into the overall defensive plan to provide depth to the engagement area

(1) The platoon leader organizes the defense into a series of individual, team, and squad fighting positions located to cover avenues of approach and obstacles and to provide mutual support in order to repel the enemy advance. Snipers should be positioned to support the commander's intent and to allow for the opportunity to engage the enemy's C2 and key targets.

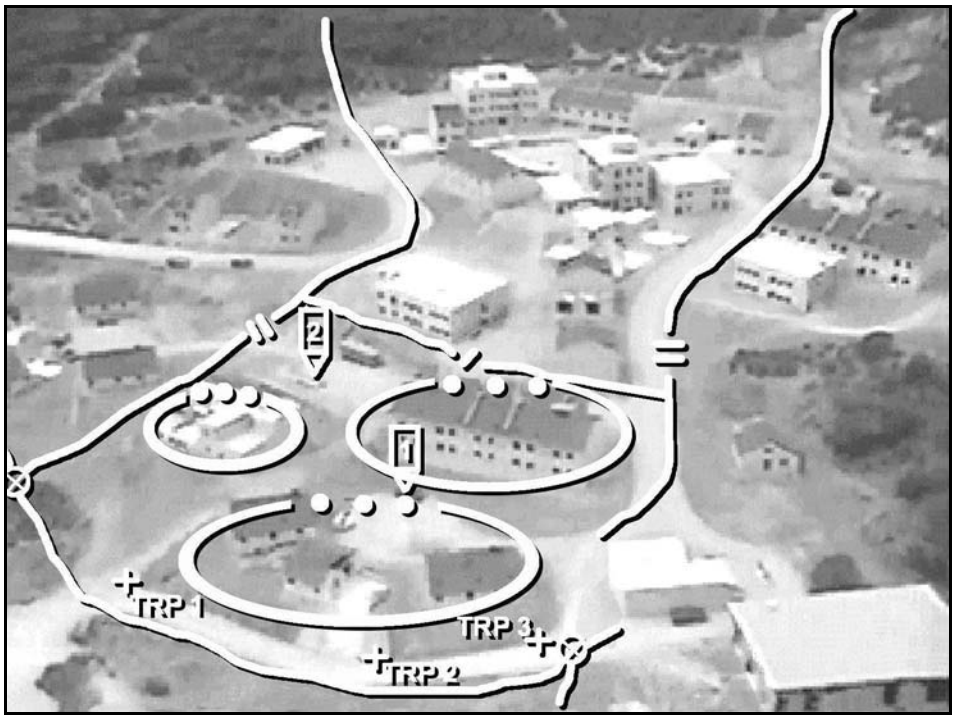


Figure 6-14. Defensive strongpoint.

(2) Position ICVs and MGS in covered or concealed locations where they can observe and fire into the engagement area or use a hide position that they can stay in until the enemy is in the engagement area, then rapidly move into position and kill them.

(3) Depending on the length of the mission, the platoon should stockpile munitions, food and water, medical supplies, and fire fighting equipment.

6-13. HASTY DEFENSE

While operating in an urban area, it is highly possible that the infantry platoon will be called upon to conduct a hasty defensive mission. Unlike the deliberate defense, the hasty defense is characterized by the lack of information about enemy forces and the lack of time to prepare the defense. All of the troop-leading procedures are the same, and many of the priorities of work of the deliberate defense will be the same but may take place concurrently. Units are deployed; MGSs, ICVs, and key weapons emplaced; and fighting positions prepared in accordance with the amount of time available to the unit.

a. **Occupation and Preparation of Positions.** The extent of preparation the platoon is able to accomplish will depend on the amount of time available. Normally, when occupying hasty defensive positions, the platoon takes advantage of the cover and concealment already present. Given time and materials, the platoon will continue to make improvements to the positions.

(1) In a hasty defense, the platoon first establishes security and positions crew-served weapons. The priorities of improvements may be directed by the priority of work contained in the unit TSOP. As a minimum, these improvements should include fields of fire, overhead cover, additional direct fire protection, and camouflaging of individual positions. Fighting positions in buildings are constructed away from windows and other openings in the shadows of the room using appliances, furniture, and other convenient

items and materials. Some of the more common hasty fighting positions in an urban area are corners of buildings, behind walls, windows, unprepared loopholes, and the peak of a roof (Figure 6-15).

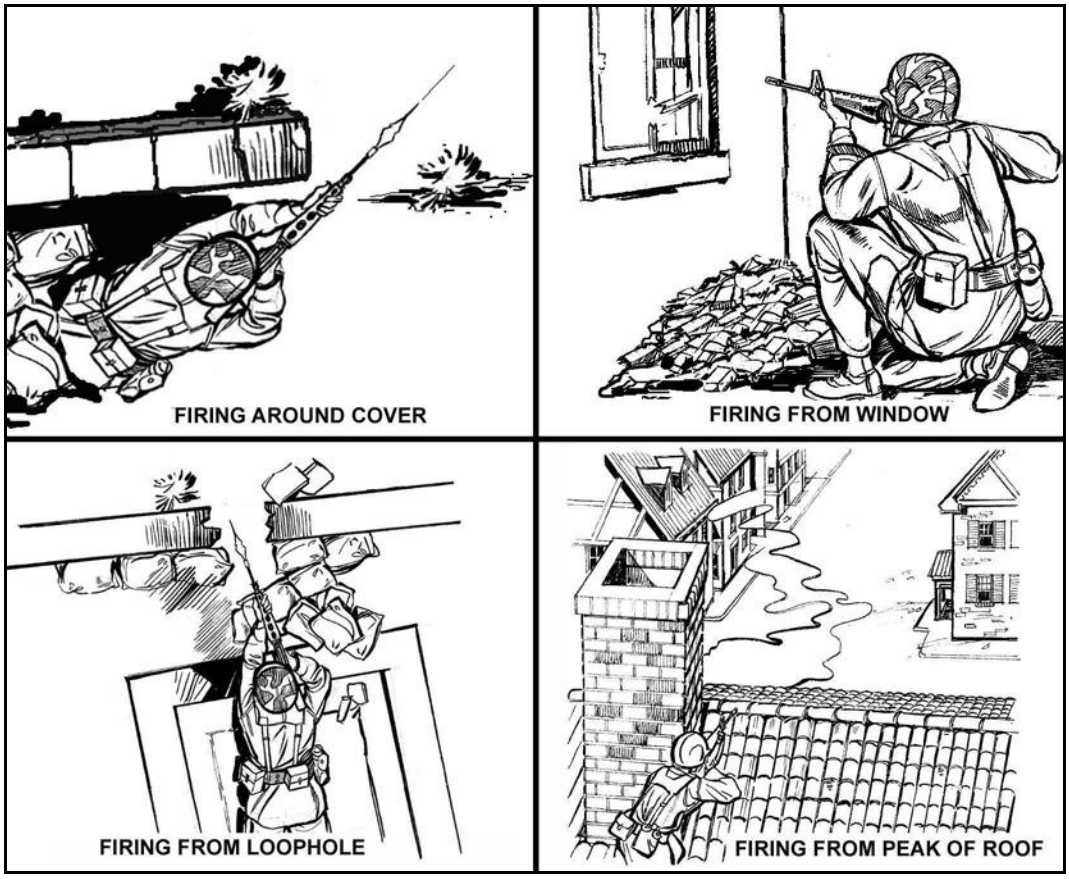


Figure 6-15. Hasty firing positions.

(2) In the urban area, hasty fighting positions for the ICVs and MGS can be anything from occupying a position in the shadow of a building to a well-covered and concealed position inside a solid structure (Figure 6-16). When positioning the ICV or MGS in urban areas, leaders must consider enemy avenues of approach, both mounted and dismounted; key terrain; observation and fields of fire; cover and concealment; fire and explosion hazards; communication restrictions; and withdrawal routes.

Figure 6-16. Positions in shadows, building, and in the open.

(3) Throughout the defense, the platoon continues to improve its hasty defensive positions. Over time, the hasty defense can become a deliberate defense. The platoon leader and his squad leaders make continuous adjustments to the defense to reduce weaknesses that could result in the failure of the overall defense. The priority of work will serve as the guide for improving the defense, and the leaders will supervise the accomplishment of the following tasks:

- Position MGS, ICVs, and key weapons.
- Construct barriers and emplace obstacles.
- Prepare individual, alternate, and supplementary fighting positions.
- Rehearse the counterattack force, engagement sequences, and repositioning.
- Enhance mobility.

b. **Improving the Defense.** As time permits, the leaders ensure the following improvements are accomplished:

- Cover and concealment of MGS, ICVs, and key weapons.
- Barrier and obstacle improvement.
- Improvement of primary and alternate positions.
- Preparation of supplementary positions.
- Additional movement enhancement efforts.
- Initiation of patrols.
- Improvement of camouflage.
- Continued rehearsals for counterattack and withdrawal.
- Sleep plan.

6-14. PRIORITIES OF WORK AND DEFENSIVE CONSIDERATIONS

General defensive considerations in urban terrain are similar to any other defensive operations. Fighting positions in urban areas are usually constructed inside buildings and are selected based on an analysis of the area in which the building is located, the individual characteristics of the building, and the characteristics of the weapons system.

a. **Priorities of Work.** The general priorities of work in the urban environment should include special attention to the following:

(1) Select key weapons and MGS and ICV positions to cover likely mounted and dismounted avenues of approach. To cover armored avenues of approach, position the MGS and ICVs where flank engagements will occur and position anti-armor weapons inside buildings with adequate space and ventilation for back-blast (on upper floors, if possible, for long-range shots). Position MGs and or SAWs to cover dismounted avenues of approach. Place them near ground level to increase grazing fires. If ground rubble obstructs grazing fires, place MGs and or SAWs in the upper stories of the building. Ensure that weapons are mutually supporting and are tied-in with adjacent units.

(2) Ensure the position is free of noncombatants. Remove them from the area of operations before occupation of the position.

(3) Clear fields of fire. Prepare loopholes, aiming stakes, sector stakes, and TRP markings. Construct positions with overhead cover and camouflage (inside and outside).

(4) Identify and secure subterranean avenues of approach (sewers, basements) as well as stairwells and rooftops.

(5) Stockpile ammunition, food, fire-fighting equipment, and drinking water.

(6) Construct barriers and emplace obstacles to deny the enemy access to streets (Figure 6-17), underground passages, and buildings, and to slow his movement. Integrate barriers and or obstacles with key weapons. Cover all barriers and obstacles by fire (both direct and indirect) and or observation. Conceal the obstacles from enemy observation as much as possible. Erect the obstacles in an irregular pattern to hinder enemy movement. Employ the obstacles in depth (if possible). Tie the obstacles in with existing obstacles.

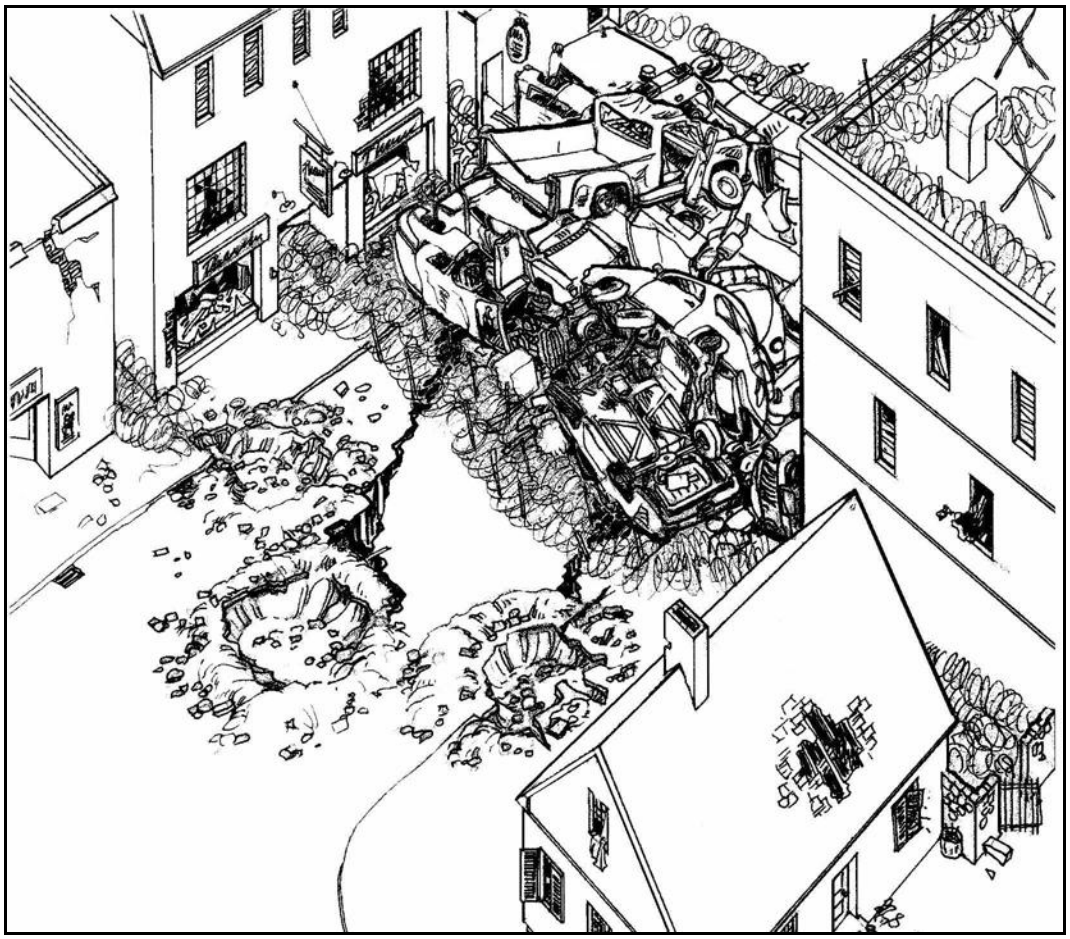


Figure 6-17. Obstacles blocking street.

(7) Improve and mark movement routes between positions as well as to alternate and supplementary positions. Improve routes by digging trenches, using sewers and tunnels, creating mouseholes, and emplacing ropes for climbing and rappelling and ladders for ascent and descent.

b. **Considerations.** The following must be considered when establishing a defensive position.

(1) ***Security***. The first priority is to establish all-round security. Each position should have at least one soldier provide security during all preparations.

(2) ***Protection.*** Select buildings or sites that provide protection from direct and indirect fires. Reinforced concrete buildings with three or more floors provide suitable protection while buildings constructed of wood, paneling, or other light material must be reinforced to provide sufficient protection. One- and two-story buildings without a strongly constructed cellar are vulnerable to indirect fires and require construction of overhead protection for each fighting position. If possible, use materials gathered from the immediate area to build the overhead cover.

(3) ***Dispersion***. A platoon position should not be established in a single building when it is possible to occupy two or more buildings that permit mutually supporting fires. A position in one building without mutual support is vulnerable to bypass, isolation, and subsequent destruction from any direction.

(4) ***Concealment***. Do not select buildings that are obvious defensive positions (easily targeted by the enemy). If the requirements for security and fields of fire dictate the occupation of exposed buildings, the platoon will be required to add reinforcement materials to the buildings to provide suitable protection to the troops inside.

(5) ***Fields of Fire.*** To prevent isolation, individual and crew-served weapons positions should be mutually supporting and have fields of fire in all directions. When clearing fields of fire, try to maintain the natural appearance of the surrounding area if possible. It may be necessary to remove objects that interfere with the gunner's field of vision.

(6) ***Covered Routes.*** Defensive positions should have at least one covered and concealed route for dismounted infantry that allows resupply, medical evacuation, reinforcement, or withdrawal from the building without being detected. At a minimum it should provide protection from direct fire weapons. The route can be established using underground systems, communications trenches, or walls and buildings that allow covered movement.

(7) ***Observation***. Positions in buildings should permit observation of enemy avenues of approach and adjacent defensive sectors. Upper stories offer the best observation but also attract enemy fire.

(8) ***Fire Hazard***. If possible, avoid selecting positions in buildings that are obvious fire hazards. If these flammable structures must be occupied, reduce the danger of fire by wetting down the immediate area, laying an inch of sand on the floors, and providing fire extinguishers and fire fighting equipment. Ensure that each defender is familiar with the withdrawal routes and has the opportunity to rehearse withdrawal using these planned routes in the event of fire.

(9) ***Time.*** Time is the one element in METT-TC that the platoon and its leaders have no control over. The most important factor to consider when planning the use of time is to provide subordinate leaders with two-thirds of all available time. The unit TSOP provides the leaders with their priorities when time does not allow for detailed planning. The platoon will complete defensive preparation IAW the TSOP and the commander's operational priorities.

c. **Preparation.** Preparation of the platoon's individual fighting positions will be conducted inside the buildings the platoon has been assigned to defend. As with all defensive positions, the leader's first task is to establish security. This normally will be in the form of an observation post located within the protection of the platoon's direct fire weapons. The OP should be manned with at least two personnel. Leaders then assign individual or two-man positions to adequately cover the sector. The squad leader will position himself to best control his squad. The platoon leader designates the level of security to be maintained. The remaining personnel continue to work preparing the defense. The leaders will continue to make improvements to the defense as time permits. (The preparation of fighting positions is discussed in detail in FM 3-06.11.)

d. **Other Typical Tasks.** Additional defensive preparation tasks may be required in basements, on ground floors, and on upper floors.

(1) ***Basements and Ground Floors***. Basements require preparation similar to that of the ground floor. Any underground system not used by the defender that could provide enemy access to the position must be blocked.

(a) *Doors.* Unused doors should be locked or nailed shut as well as blocked and reinforced with furniture, sandbags, or other field expedients.

(b) *Hallways.* If not required for the defender's movement, hallways should be blocked with furniture and tactical wire.

(c) *Stairs.* Unused stairs should be blocked with furniture and tactical wire (Figure 6-18) or removed. If possible, all stairs should be blocked, and ladders should be used to move from floor to floor and then removed.

(d) *Windows.* Remove all glass. Block unused windows with boards or sandbags to prevent observation and access.

(e) *Floors.* Make fighting positions in the floors. If there is no basement, fighting positions can give additional protection from heavy direct-fire weapons.

(f) *Ceilings.* Erect support for ceilings that cannot withstand the weight of rubble from upper floors.

(g) *Unoccupied Rooms.* Block rooms not required for defense with tactical wire.

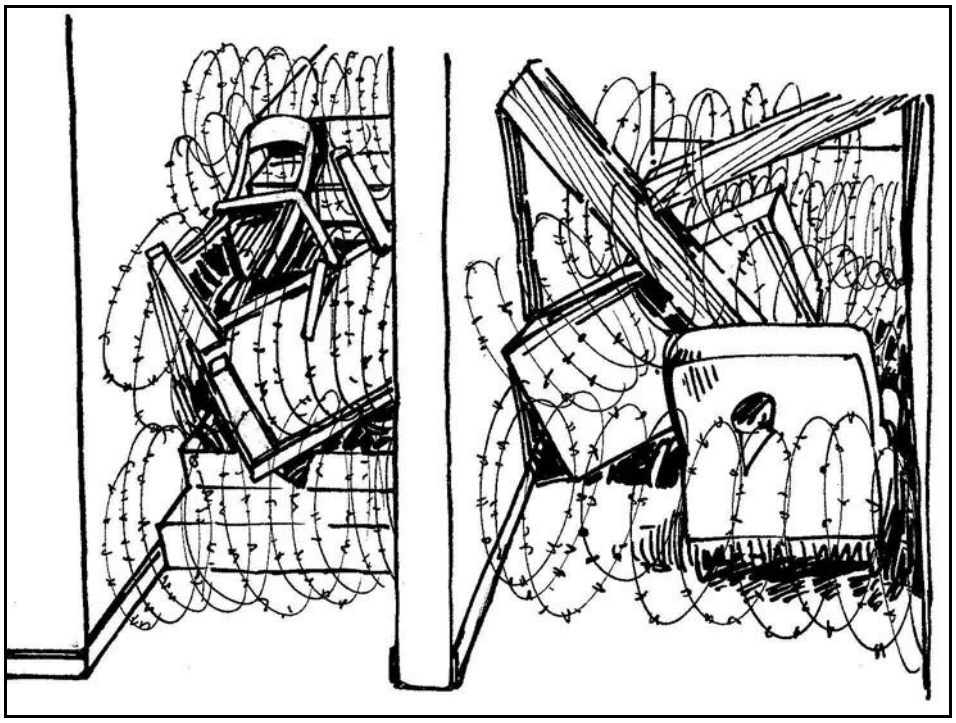


Figure 6-18. Blocking stairs and doorways.

(2) ***Upper Floors***. Upper floors require the same preparation as ground floors. Windows need not be blocked, but should be covered with wire mesh, canvas, ponchos, or other heavy material to prevent grenades from being thrown in from the outside. The covering should be loose at the bottom to permit the defender to drop grenades.

(3) ***Interior Routes***. Routes are required that permit defending forces to move within the building to engage enemy forces from any direction. Plan and construct escape routes to permit rapid evacuation of a room or a building. Mouseholes should be made through interior walls to permit movement between rooms. Such holes should be marked to enable defenders to easily locate them during both day and night conditions. Brief all

personnel as to where the various routes are located and conduct rehearsals so that everyone becomes familiar with the routes.

(4) ***Fire Prevention***. Buildings that have wooden floors and rafter ceilings require extensive fire prevention measures. Cover the attic floor and other wooden floors with about one to two inches of sand or dirt and position buckets of water for immediate use. Place fire-fighting materials (dirt, sand, fire extinguishers, and blankets) on each floor for immediate use. Fill water basins and bathtubs as a reserve for fire fighting. Turn off all electricity and gas. If available, use any existing fire extinguishers found in buildings.

(5) ***Communications.*** Urban operations require centralized planning and decentralized execution, and communications plays an important part in this process.

(a) Structures and a high concentration of electrical power lines may degrade radio communication in built-up areas and affect a platoon's ability to send and receive digital messages and COP updates. Many buildings are constructed in such a manner that radio waves will not pass through them.

(b) Visual signals may be used but often are not effective because of the screening effects of buildings and walls. Signals must be planned, widely disseminated, and understood by all assigned and attached units.

(c) Increased noise makes the effective use of sound signals difficult. Verbal signals may communicate the unit's location and intent to the enemy.

(d) Messengers and wire can be used as other means of communication. Wire should be considered an alternate means of communication if assets are available.

(6) ***Rubbling***. Rubbling parts of the building may provide additional cover and concealment for weapons emplacements or serve as an obstacle against the enemy. Because of the inherent danger associated with rubbling a building, engineers should perform this task. Units should limit rubbling so as not to impede their own movement within the urban area. If not designated by higher, the platoon must receive permission from higher before rubbling a building within its sector.

(7) ***Rooftops***. Platoons must position obstacles on the roofs of flat-topped buildings to prevent helicopters from landing and to deny troops from gaining access to the building from the roof. Cover rooftops that are accessible from adjacent structures with tactical wire or other expedients and guard them. Block entrances to buildings from rooftops if compatible with the overall defensive plan. Remove or block any structure on the outside of a building that could aid the attacker in scaling the building to gain access to upper floors or to the rooftop.

(8) ***Obstacles***. Position obstacles adjacent to buildings to stop or delay vehicles and infantry. To save time and resources in preparing the defense, platoon leaders must allow the use of all available materials, such as automobiles, railcars, and rubble, to create obstacles. Vehicles can be tied together by running poles through their windows. Leaders must supervise the construction of obstacles to ensure they are tied to buildings and rubble areas to increase effectiveness and to canalize the enemy into engagement areas selected by the leader. Direct support engineers can provide advice and resources as to the employment of obstacles and mines.

(a) The principles for employing mines and obstacles do not change in the defense of an urban area; techniques, however, do change. For example, burying and concealing mines in streets is difficult due to concrete and asphalt. Mines may be placed in sandbags as a technique of camouflage.

(b) Civilian construction equipment and materials must be located and inventoried. This equipment can be used with engineer assets or in place of damaged equipment. In host nation countries, coordination must be made with proper civilian officials before use.

(9) ***Fields of Fire***. The field of fire is the area a weapon or group of weapons may cover effectively with fire from a given position. After the defensive positions are selected and the individuals have occupied their assigned positions, they will determine what clearance is necessary to maximize their field of fire. Leaders and individuals must view fields of fire from the fighting position and from the view of the enemy. Only selective clearing will be done to improve the field of fire. If necessary, the position will be relocated to attain the desired field of fire. Within the field of fire, leaders will designate a primary and an alternate sector of fire for each weapons system. Each weapons system has unique requirements for its field of fire, and the platoon and squad leaders must ensure these requirements are met. Each position is checked to ensure that the fields of fire provide the maximum opportunity for target engagement and to determine any dead space within the sector of fire.

e. **Antitank Weapons Positions.** Employ antitank weapons in areas that maximize their capabilities. Position AT weapons in upper stories and in support of the MGS when possible (Figure 6-19). The need for protective positioning may require the weapon to be fired from inside of a building, from behind the cover of a building, or from behind the cover of protective terrain. Leaders should make every effort to employ antitank weapons in pairs so that the same target can be engaged from different positions Security for the crew and system is another consideration that is necessary to allow the gunner to concentrate on locating and engaging enemy armor.

Figure 6-19. Javelin position supporting MGS.

f. **Sniper Positions.** Snipers give the platoon a force multiplier by providing an overwatch capability and by engaging enemy C2 targets. Snipers normally operate in

two-man teams which provides the shooter with security and another set of eyes for observation and to locate and identify targets. Leaders should allow the snipers to select their own positions for supporting the defense. Snipers deploy in positions where they are not easily detected (Figure 6-20) and where they can provide the most benefit. (See FM 23-10 and FM 3-06.11 for more information on the employment of snipers.)

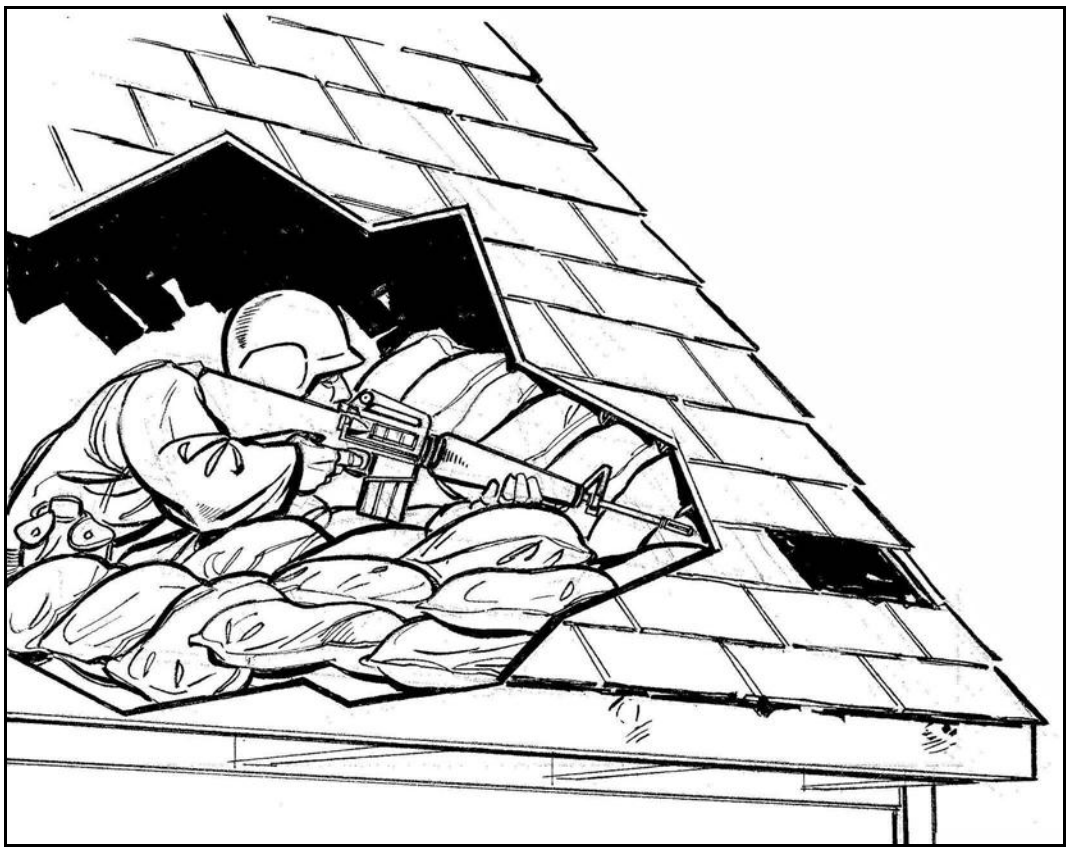


Figure 6-20. Sniper position (cut away).

6-15. CONDUCT OF THE DEFENSE

The conduct of the defense in an urban area is similar to the conduct of the defense in any other area. The current standard sequence of actions is listed in Chapter 5 of this manual.

6-16. CONSOLIDATION AND REORGANIZATION

The process of consolidation and reorganization in an urban area is similar to the process in any other area. The current standard sequence of actions is listed in Chapter 4 of this manual.

6-17. COUNTERATTACK

A platoon may be given the mission to counterattack in order to retake a defensive position or key point, to destroy or eject an enemy foothold, or to stop an enemy attack by hitting his flank and forcing him to stop his movement and establish a hasty defense.

a. A platoon counterattack is planned at company level to meet each probable enemy penetration. It must be well coordinated and violently executed. Counterattacks should be directed at the enemy's flank and supported with direct and indirect fires.

b. If tank support is available, it should be used in conjunction with the ICVs and MGS to spearhead the counterattack. Tanks have the mobility, firepower, and survivability to quickly execute the counterattack mission. They are ideally suited for destroying enemy armor, heavy weapons, and fortifications with their main gun and engaging enemy infantry with their coaxial machine gun. This capability will assist the infantry in executing its part of the mission.

c. The counterattack mission is planned and coordinated as part of the defensive operation.

(1) Considerations for counterattack planning may include, but are not limited to, the following:

- Location of friendly units.
- Location of noncombatants.
- Critical location in the defense that, if threatened, could collapse.
- Where in the defense do we want the enemy to think he is successful?
- Size and type of force required to defeat and eject the enemy.
- Who determines and initiates the execution of the counterattack?

(2) Control measures needed for the conduct of the counterattack include:

- Assembly area or blocking position.
- Start point, route, and release point, if necessary.
- Attack position.
- Line of departure or line of contact.
- Zone of action, direction of attack and or axis of advance.
- Objective.
- Limit of advance.

Section IV. COMBAT MULTIPLIERS

An important lesson learned from recent urban operations is the need for a fully integrated combined arms team. The nature of urban operations makes it infantry-centric. However, the urban battle should never be exclusively an infantry fight. A powerful combined-arms team properly employed in an urban area will enhance mission accomplishment. Although the infantry soldier is required in order to clear and secure an urban area, the integration of armor and engineers is needed for increased lethality. Fully integrated aviation, field artillery, communications, and logistical elements must provide support for these teams. This section discusses the more common combat multipliers available to the infantry platoon during the execution of UO.

6-18. ARMORED VEHICLES

Based on the considerations of the METT-TC analysis and the operational ROE, a situation may arise that requires the attachment of tanks in direct support of the mechanized infantry mission. This paragraph discusses tactics and techniques used by infantry units when working with armored vehicles.

a. **Task Organization for Tank/Mechanized Operations.**

(1) ***Maneuver***. Leaders must understand the principles of employing infantry and armor forces to maximize their capabilities and ensure mutual support. Maneuver by the infantry is enhanced by support from the armored vehicles.

(a) The infantry assists the heavy forces by infiltrating to clear obstacles or key enemy positions and to disrupt the enemy defense. It provides security for the armored vehicles by detecting and suppressing or destroying enemy antitank weapons. It designates targets and spots the impact of fires for tanks and BFVs.

(b) Heavy forces support the infantry by moving with it along an axis of advance and providing a protected, fast moving assault weapons system. They suppress and destroy enemy weapons, bunkers, and tanks by fire and maneuver (Figure 6-21). They also provide transport when the enemy situation permits.

(c) Armored vehicles should never be maneuvered individually. The smallest maneuver level for armor is a section (two vehicles).

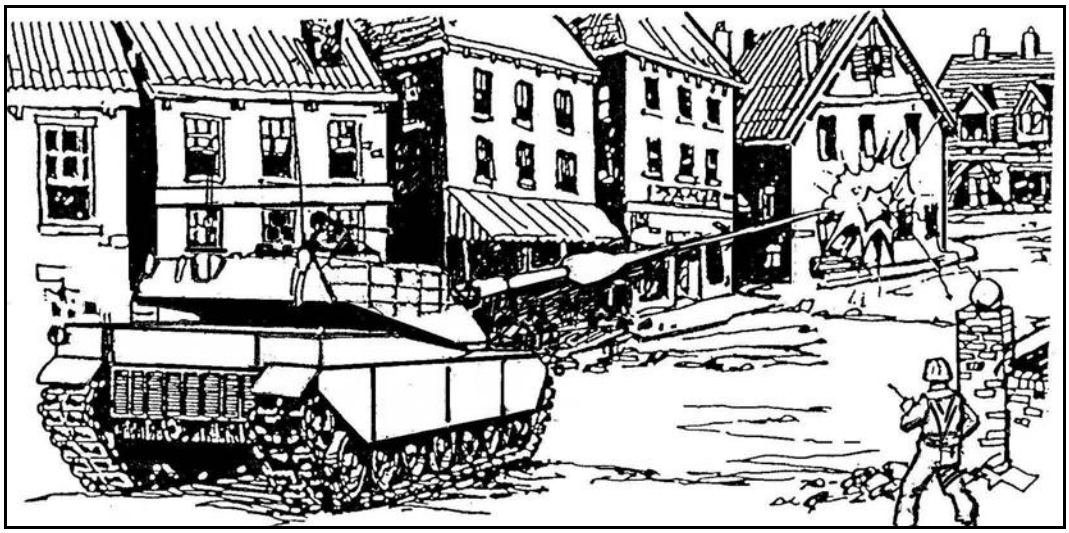


Figure 6-21. Tank in direct support of infantry.

(2) ***Command and Control***. The infantry platoon may have combat elements in direct support. The platoon leader is responsible for incorporating these elements into his C2 functions. Because most support elements have a habitual relationship with the combat unit they support, the platoon leader may only need to give them an update to recent changes to guarantee that C2 remains a high priority.

(a) Tanks and mechanized infantry must work closely at platoon level. In most operations where they work together, infantrymen must establish direct communication with individual vehicles to ensure quick and accurate response to directions given.

(b) Infantrymen and vehicle crews must know how to communicate by radio, telephone, and visual signals. Prior to the start of an operation, infantry and tank leaders must coordinate the methods of communication and the types of signals that will be used. For immediate, direct communication with the M1A1/A2, the crew can run communication wire from the AM-1780 through the loader's hatch or vision block and be connected to a field phone attached to the outside of the tank.

(c) During the planning phase of an operation, infantry and armor leaders must allocate sufficient time for the conduct of detailed brief-backs and rehearsals. The purpose of these activities is to verify that long- and short-range communications are effective, and that what is expected from each organization is understood.

NOTE: For further discussion concerning the strengths, limitations, and employment considerations of armor with the infantry, see FM 3-06.11.

b. **Weapon System Considerations.** While operating in concert with armored forces, the infantry leader must be knowledgeable of the capabilities, limitations, and effects of the armor weapon systems. He must understand the dangers these systems pose to his soldiers when operating together and ensure that his soldiers are briefed about these dangers. Figure 6-22, page 6-46, shows the difference in the capabilities of the BFV and the M1A1/A2 tank with regard to fields of fire on urban terrain. Note that the BFV can engage a target 9 to 10 stories high at 20 meters, whereas an M1A1/A2 tank requires 90 meters.

(1) ***Bradley Fighting Vehicles.***

(a) The primary role of the BFV in an urban environment is to provide suppressive fires and to breach exterior walls. The vehicle's armor-piercing rounds can be very useful in urban terrain. They can penetrate concrete up to 16 inches thick and can easily penetrate brick structures. They are highly effective against earthen- and sandbag-reinforced structures.

(b) The BFV can elevate its 25-mm gun to about +60 degrees and depress the gun to about –10 degrees.

(c) The crew has limited visibility to the sides and rear and no visibility to the top when buttoned up.

(d) The BFV can be outfitted with an external phone hookup for communications with accompanying infantry.

(e) The 25-mm gun, firing AP, HE, and even target practice-tracer (TP-T) rounds, can be used effectively against enemy-occupied buildings and fortifications.

(2) ***M1-Series Tanks***.

(a) Normally, the primary ammunition for the main gun in the urban environment is the HEAT round. It is the most effective round against masonry and will penetrate all but the thickest reinforced concrete. A HEAT round will create a hole in masonry or concrete large enough for a man to fit through but will not cut the reinforcing steel bars. HEAT is also effective against earthen- and sandbag-reinforced strong points. A 120-mm HEAT round does not become armed until it is about 36 feet from the end of the gun tube.

(b) Multipurpose antitank (MPAT) rounds will penetrate masonry and concrete but are less effective than HEAT rounds against heavier structures.

(c) Sabot ammunition has limited use against nonvehicular targets, and its discarding petals endanger accompanying infantry. Sabot petals create a hazard area extending 70 meters on either side of the gun target line for a distance of one kilometer.

(d) The external M2 HB (cal. 50) machine gun can elevate to +36 degrees; however, to fire the cal. 50 on the M1A2 Abrams, the tank commander must be exposed to enemy fire.

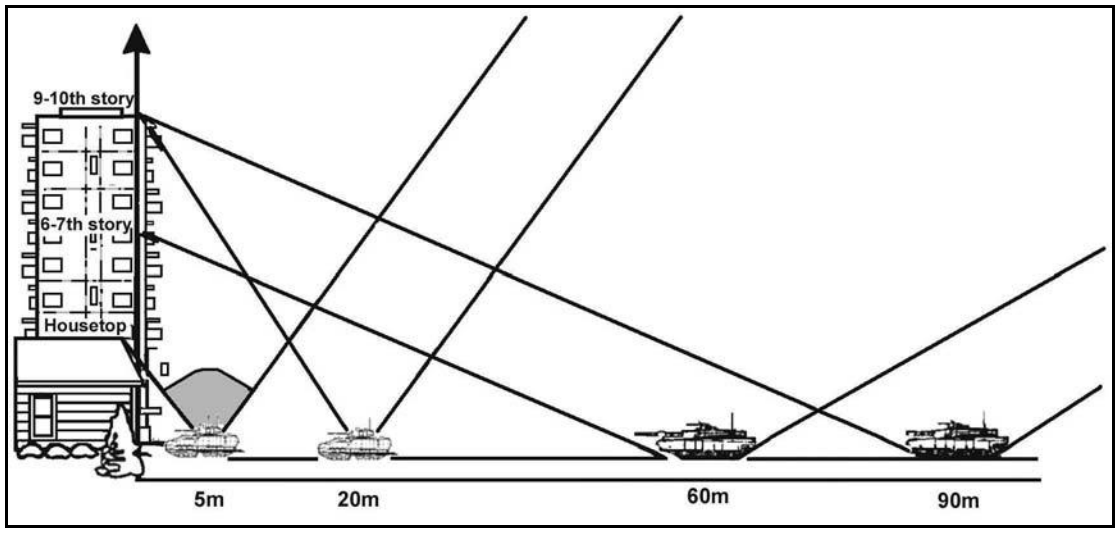


Figure 6-22. Fields of fire on urban terrain.

NOTE: When employing these weapon systems to support the infantry assault, leaders must be aware of the explosive effects and fragmentation fallout, as well as the blast-over pressure, and how these will affect the infantry on the ground. (For more specific information on the effects of weapons, see FM 3-06.11.)

6-19. ENGINEERS

Normally an engineer squad will be attached to an infantry company. Most engineer manual-labor tasks (for example, preparing fighting positions) will have to be completed by infantry units with reinforcing engineer heavy-equipment support and technical supervision. (For further discussion on the employment of engineers with the infantry, see FM 3-06.11.)

a. **Offensive Missions.** During offensive operations, an engineer sapper team may be attached to the infantry platoon that is designated as the primary assault element. They may be required to conduct the following tasks in support of the infantry platoon:

- Use explosives to destroy fortifications and strong points that cannot be reduced with the maneuver unit's organic assets.
- Locate and remove mines that may hamper the unit's movement.
- Conduct breaching operations.

b. **Defensive Missions.** Engineers may perform the following tasks in support of the platoon during the defense of an urban area:

- Construct complex obstacle systems.
- Assist in the preparation of defensive positions and strong points.

NOTE: When employing demolitions along side the infantry assault, leaders must be aware of the explosive effects and fragmentation fallout, as well as the blast-over pressure, and how these will affect the infantry on the ground. (For more specific information on the effects of weapons, see FM 3-06.11.)

6-20. MORTARS

Mortars are the most responsive indirect fires available to infantry commanders and leaders. Their mission is to provide close and immediate fire support to the maneuver units. Mortars are well suited for combat in urban areas because of their high rate of fire, steep angle of fall, and short minimum range. Platoon leaders and FOs must plan mortar support with the FSE as part of the total fire support system. (See FM 7-90 for detailed information on the tactical employment of mortars.)

a. **Role of Mortar Units.** The role of mortar units is to deliver suppressive fires to support maneuver, especially against dismounted infantry. Mortars can be used to obscure, neutralize, suppress, or illuminate during urban combat. Mortar fires inhibit enemy fires and movement, allowing friendly forces to maneuver to a position of advantage. The most common and valuable use for mortars is often harassment and interdiction fires. One of their greatest contributions is interdicting supplies, evacuation efforts, and reinforcement in the enemy rear just behind his forward defensive positions. During World War II and the recent Middle East conflicts, light mortar HE fires have been used extensively during urban combat to deny the use of streets, parks, and plazas to enemy personnel. Finally, mortars can be used, with some limitations, against light armor and structures. Effectively integrating mortar fires with dismounted maneuver is key to successful combat in an urban area.

b. **Position Selection.** The selection of mortar positions depends on the size of buildings, the size of the urban area, and the mission. Rubble can be used to construct a parapet for firing positions. Positions also are selected to lessen counterbattery fire

(1) ***Existing Structures and Masking.*** The use of existing structures (for example, garages, office buildings, or highway overpasses) for positions is recommended to afford the best protection and lessen the camouflage effort. Proper masking enhances survivability. If the mortar is fired in excess of 885 mils to clear a frontal mask, the enemy counterbattery threat is reduced. These principles are used in both the offense and the defense.

(2) ***Use of Sandbags.*** Do not mount mortars directly on concrete but use sandbags as a buffer. Sandbags should consist of two or three layers; butt the sandbags against a curb or wall and extend out at least one sandbag width beyond the baseplate.

(3) ***Placement.*** Mortars usually are not placed on top of buildings because lack of cover and mask makes them vulnerable. They should not be placed inside buildings with damaged roofs unless the structure's stability has been checked. Overpressure can injure personnel, and the shock on the floor can weaken or collapse the structure.

c. **Communications.** Initially, radio is the primary means of communication during urban combat, but an increased use of wire, messenger, and visual signals will be required. However, wire usually is the primary means of communication between the forward observers, fire support team, fire direction center, and mortars since these elements are close to each other. Also, FM radio transmissions in urban areas are likely to be erratic. Structures reduce radio ranges; however, remoting the antennas to upper floors or roofs may improve communications and enhance operator survivability The use of radio retransmissions is another technique that may apply. A practical solution is to use existing civilian systems to supplement the unit's capability, understanding that this is an unsecure method of communication.

d. **Magnetic Interference.** In an urban environment, all magnetic instruments are affected by surrounding structural steel, electrical cables, and automobiles. Minimum distance guidelines for the use of the M2 aiming circle (FM 23-90) are difficult to apply. To overcome this problem, an azimuth is obtained to a distant aiming point. From this azimuth, the back azimuth of the direction of fire is subtracted. The difference is indexed on the red scale and the gun manipulated until the vertical cross hair of the sight is on the aiming point. Features such as the direction of a street may be used instead of a distant aiming point.

e. **High-Explosive Ammunition.** During urban combat, mortar HE fires are used more than any other type of indirect fire weapon. Although mortar fires often are targeted against roads and other open areas, the natural dispersion of indirect fires will result in many hits on buildings. Leaders must use care when planning mortar fires during urban operations to minimize collateral damage.

(1) HE ammunition, especially the 120-mm projectile, gives good results when used against lightly built structures within cities. However, it does not perform well against reinforced concrete found in larger urban areas.

(2) When using HE ammunition in urban fighting, only point-detonating fuzes should be used. The use of proximity fuzes normally should be avoided because the nature of urban areas causes proximity fuzes to function prematurely. Proximity fuzes, however, are useful in attacking some targets such as OPs on tops of buildings.

f. **Illumination.** In the offense, illuminating rounds are planned to burst above the objective. If the illumination were behind the objective, the enemy troops would be in the shadows rather than in the light. In the defense, illumination is planned to burst behind friendly troops to put them in the shadows and place the enemy troops in the light. Buildings reduce the effectiveness of the illumination by creating shadows. Continuous illumination requires close coordination between the FO and FDC to produce the proper effect by bringing the illumination over the defensive positions as the enemy troops approach the buildings (Figure 6-23).

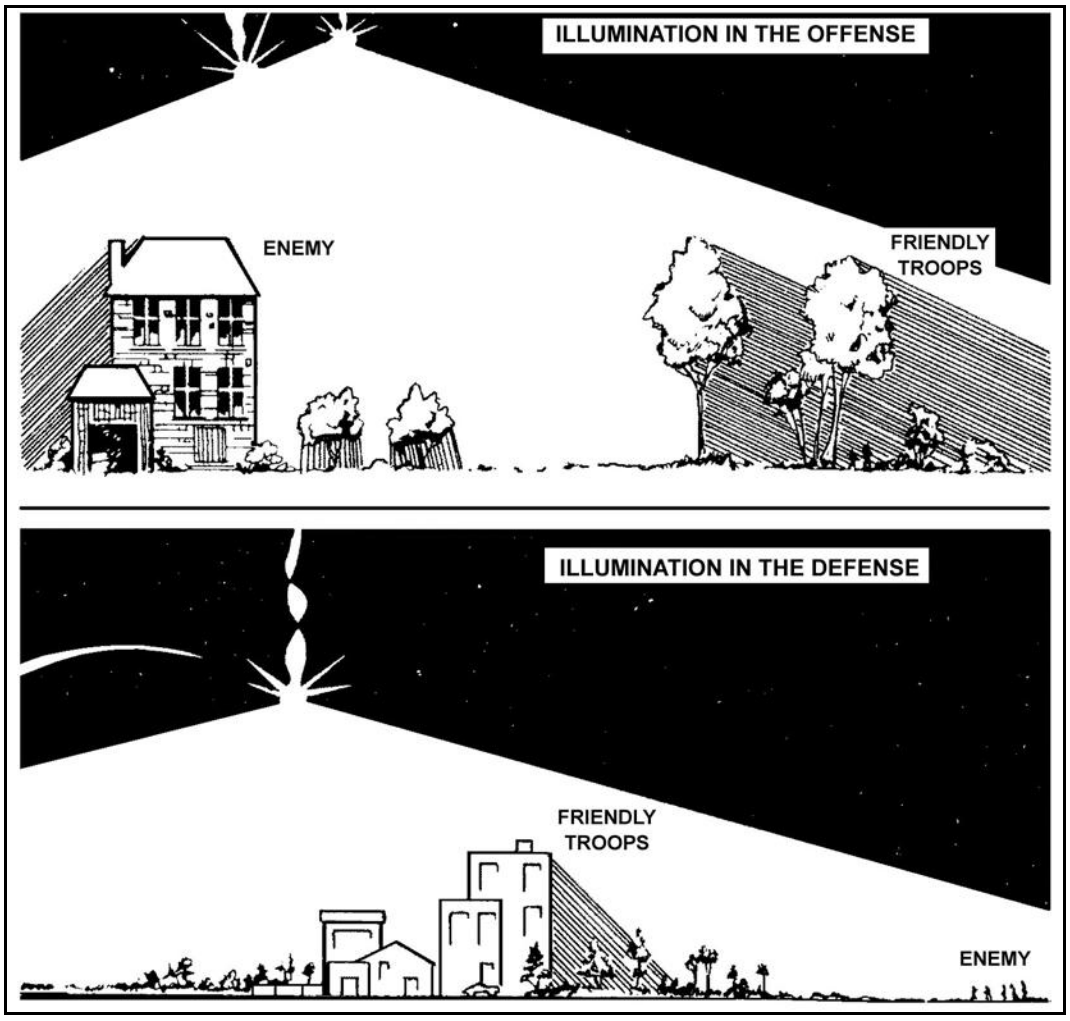


Figure 6-23. Illumination during urban operations.

g. **Special Considerations.** When planning the use of mortars, commanders must consider the following:

(1) FOs should be positioned where they can get the maximum observation so target acquisition and adjustments in fire can be best accomplished. This is not necessarily on tops of buildings

(2) Commanders must understand ammunition effects to correctly estimate the number of volleys needed for the specific target coverage. Also, the effects of using white phosphorus may create unwanted smoke screens or limited visibility conditions that could interfere with the tactical plan.

(3) FOs must be able to determine dead space in urban terrain. Dead space is the area in which indirect fires cannot reach the street level because of buildings. This area is a safe haven for the enemy. For mortars, the dead space is about one-half the height of the building.

6-21. FIELD ARTILLERY

During urban combat, field artillery (FA) provides direct support, general support, and general support reinforcing to infantry units. This paragraph provides considerations for

the use of field artillery in the direct-fire mode. (For further discussion on the employment of field artillery in urban terrain, see FM 3-06.11.)

a. When FA supports fighting in urban areas, fire support coordination measures necessary to provide adequate yet safe support must be considered carefully due to the close proximity of friendly forces to the enemy. When planning for fire support, leaders should consider the following:

- The increased cover and concealment afforded by the terrain.
- Ground observation is limited in urban areas.
- Adjusting fires is difficult since buildings block the view of adjusting rounds.
- Acquiring targets is difficult in urban terrain because the enemy has many covered and concealed positions and movement lanes.
- Forward observers must be able to determine where and how large the dead spaces are.
- The use of air burst fires is an effective means of clearing snipers from rooftops.

b. Employing artillery in the direct-fire mode to destroy fortifications should be considered, especially when assaulting well-prepared enemy positions. Also, restrictive fire support coordination measures, such as a restrictive fire area or no-fire area, may be imposed to protect civilians and critical installations.

(1) The 155-mm self-propelled howitzer is extremely effective in neutralizing concrete targets with direct fire.

(2) Concrete-piercing 155-mm rounds can penetrate 36 inches of concrete at ranges up to 2,200 meters.

(3) When employing artillery in the direct-fire mode and maneuvering the self-propelled howitzers within the urban area, it is important that the infantry secure them because they do not have any significant protection for their crews.

NOTE: When employing these weapon systems to support the infantry assault, leaders must be aware of the explosive effects and fragmentation fallout, as well as the blast-over pressure, and how these will affect the infantry on the ground. (For more specific information on the effects of weapons, see FM 3-06.11.)

6-22. ATTACK HELICOPTERS

Infantry units may receive support by a variety of attack helicopters, including (but not limited to) the AH-64A, AH-64D, OH-58D, and MH-6. Attack helicopters can provide area fire to suppress targets and precision fire to destroy specific targets or breach structures. Attack helicopters provide real-time reconnaissance information through direct viewing of the area of operations. This facilitates the platoon leader's ability to effectively coordinate and integrate all aspects of the mission. Attack helicopters can also assist with ISR and CAS integration and communications using their advanced suite of sensors and radios. Other supporting helicopters, such as the UH-60, CH-47, and MH-47 may also have weapons systems (7.62-mm machine gun, cal. 50 machine gun, 7.62-mm mini-gun) that aid in the suppression of enemy forces when operating in urban terrain. Operational control of attack helicopter units will remain at the level of battalion or higher; however, attack helicopters may conduct direct air-to-ground coordination with

companies and platoons during combat operations. (For further discussion on the supporting role of the attack helicopter, see FM 1-114 and FM 3-06.11.)

6-23. ANTIARMOR WEAPONS

The tactical use of antiarmor weapons does not change in the urban environment but how they are employed does change. Some employment limitations are: stand-off, displacement after engagements, the ability to fire in-depth engagements, more obstacles, increased danger zones, and all-round security. (For further discussion on the employment of antiarmor weapons in the urban environment, see FM 3-06.11.)

a. Although antiarmor weapons are primarily designed to destroy armored vehicles, they also can be used to damage or destroy fortifications. Additionally, they can be used for ballistic breaching of doorways and the walls of lightly constructed buildings to create entry points. They also may be used for creating deceptions just before the assault element enters the actual initial breach (entry) point. The larger systems (TOW and Javelin) that have highly magnified day and thermal sights can be used to detect snipers and to disrupt or kill them with long-range missiles.

b. Engaging targets from an enclosure creates unique hazards. Before positioning soldiers in enclosures (combat only), leaders must consider several factors that affect safety. Only in combat, and when no other tactical option exists, should antiarmor weapons be fired from an enclosure. If antiarmor weapons must be employed this way, the enclosure must meet the following minimum requirements.

- Construction of wood or stucco buildings must be sturdy to reduce the damage that will occur.
- All objects and debris must be removed from the rear of the weapon because the backblast will cause loose objects to fly around the enclosure, possibly injuring someone.

NOTE: When employing these weapon systems to support the infantry assault, leaders must be aware of the explosive effects and fragmentation fallout, as well as the blast-over pressure, and how these will affect the infantry on the ground. (For more specific information on the effects of weapons, see FM 3-06.11.)

6-24. SNIPER EMPLOYMENT CONSIDERATIONS

The characteristics of urban areas and the nature of urban warfare impact on both the effectiveness of the sniper weapons system and how the system may be employed. The sniper must consider the location of the target in relation to his position and whether he or the target is inside or outside the building. The sniper also must consider the structural configuration of the buildings in his area of operation. The basic classes of structures encountered in an urban area are concrete, masonry, and wood. However, any one building may include a combination of these materials. All buildings offer the sniper concealment, though the degree of protection varies with the materials used.

a. **Selecting Positions and Targets.** Leaders will provide the sniper with the general area of operation (building or group of buildings) in which to position, but the sniper selects the best position for his specific engagements. Sniper positions should cover:

- Obstacles.
- Roofs.

- Friendly routes.
- Likely avenues of approach.
- Gaps in the final protective fires.
- Dead space.
- Other areas that may provide the enemy an advantage.

The sniper also selects numerous alternate and supplementary positions to cover his areas of responsibility. The sniper should think three-dimensionally. Because the urban environment poses a three-dimensional battle space, the sniper should anticipate the threat from any direction at any time.

b. **Offensive Missions.** Offensive operations carry the fight to the enemy to destroy his capability and will to fight. The sniper can prove to be a key combat multiplier by neutralizing enemy targets that threaten the success of the attack. During offensive operations snipers--

- Conduct countersniper operations.
- Overwatch movement of friendly forces and suppress enemy targets that threaten the moving forces.
- Place precision fire on enemy crew-served weapons teams and into exposed apertures of bunkers.
- Place precision fire on enemy leaders, armored vehicle drivers or commanders, FOs, RATELOS, or other designated personnel.
- Place precision fire on small, isolated, bypassed elements.
- Place precision fire on enemy forces that are withdrawing or threatening a counterattack.
- Assist in screening a flank using supplemental fires.
- Dominate key terrain by controlling access with fires.

(1) To increase security and surprise, snipers must move covertly into position in an objective area long before the main attack forces arrive. Once the assault begins, snipers may need to reposition due to masking of fires by friendly forces. A detailed evaluation must be made when determining where and how the snipers would be most beneficial to the mission.

(2) Upon consolidation of forces on the objective area, the snipers may be displaced forward to new positions for security. These positions may not necessarily be on the objective. From these positions the snipers conduct observation and provide early warning to the friendly unit. They also will provide precision fire against bypassed enemy positions, enemy counterattacks, or other enemy positions that could impede the unit's ability to exploit the success of the mission.

c. **Defensive Operations.** When employed properly, snipers can effectively enhance a commander's defensive fire plan. After analyzing the terrain, snipers should provide the commander with recommendations for their employment. Snipers are capable of performing the following tasks during defensive operations:

- Cover obstacles, minefields, roadblocks, and pre-positioned demolitions.
- Perform counter-reconnaissance (terminate enemy reconnaissance efforts).
- Engage enemy OPs, exposed armored vehicle commanders, and AT weapons teams.
- Engage enemy vehicles' optics to degrade vision and disrupt movement.

- Engage enemy crew-served weapons.
- Disrupt follow-on units with long-range precision fire.

(1) Snipers should be positioned to cover one or more avenues of approach into the defensive position. They can be used to enhance security, allowing the platoon leader to concentrate his combat power against the most likely enemy avenue of approach. Snipers, with their optics for target- acquisition and their long-range engagement capability, will compliment the unit's machine guns. Snipers also may be used in an economy-of-force role to cover a dismounted enemy avenue of approach into positions the unit cannot cover.

(2) Multiple sniper teams can be positioned for surveillance and mutual support. If possible, they should establish positions in depth for continuous support during the fight. The sniper's rate of fire neither increases nor decreases as the enemy approaches. Specific targets are systematically and deliberately engaged; accuracy never is sacrificed for speed.

(3) When supporting a strongpoint defense, the sniper teams should be positioned outside the defensive position to allow for freedom of movement. Their primary mission is to conduct observation tasks or independent harassing engagements against enemy reconnaissance elements or induce the enemy to move into a predetermined engagement area.

CHAPTER 7
TACTICAL ENABLING OPERATIONS

This chapter covers tasks the platoon may conduct to complement or support its primary mission. Enabling operations include reconnaissance, retrograde (withdrawal, delay, and retirement), special purpose operations (linkup, stay-behind, relief in place, and passage of lines), and security. Squads and platoons conduct these operations on their own or as part of a larger force to set conditions for future operations or support the current operations of their higher headquarters. The planning, preparation, and execution for these operations are just as important and require the same level of detail as conducting defensive or offensive operations. These operations are conducted mounted, dismounted, or a combination of both.

7-1. RECONNAISSANCE

Reconnaissance is any mission undertaken, using visual observation or other methods, to seek out and obtain information regarding the activities and resources of enemy forces or the physical characteristics of a particular area. Successful reconnaissance is a focused collection effort aimed at gathering timely, accurate information about the enemy and the terrain in the area of operations. With the assets available to the SBCT, reconnaissance should result in near real-time situational updates. A focused collection effort by the RSTA squadron, the battalion reconnaissance platoon, and the companies should provide the squad and platoons with the critical information needed to conduct operations. Every leader is responsible for conducting reconnaissance to gain the information needed, and they should ensure the effort is synchronized as part of the higher headquarters effort. The platoon may conduct other reconnaissance operations to gather information for higher headquarters. (For a more detailed discussion of reconnaissance operations, refer to FM 3-21.94 (draft), FM 7-92, FM 17-95, and FM 3-90.)

a. **Reconnaissance Planning.** Before an operation, the company commander determines what he must know about the enemy. The commander must first request the information needed from the next higher headquarters. If they cannot provide or gather the information needed, they will authorize the commander to send a reconnaissance element forward (METT-TC dependent). For example, the commander may send an element to reconnoiter a choke point the night before the attack. At this point, the commander's intent for reconnaissance is now integrated into the battalion reconnaissance plan, which is critical to the operation. This ensures that each portion of the focused effort is aware of the other parts, thereby reducing possible duplication of effort or fratricide.

b. **Reconnaissance.** The platoon may conduct reconnaissance before or after an operation in the following situations:

- Reconnaissance by a quartering party of an assembly area and the associated route to it.
- Reconnaissance (leader's reconnaissance) from the assembly area to and in the vicinity of the LD before an offensive operation.

- Reconnaissance by rifle squads to probe enemy positions for gaps open to attack or to infiltration.
- Reconnaissance by rifle squads to observe forward positions and to guide elements to key positions on the battlefield such as support or assault positions.
- Reconnaissance by rifle squads to locate bypasses around obstacle belts or to determine the best locations and methods for breaching operations.
- Reconnaissance by rifle squads of choke points or other danger areas in advance of the remainder of the company.
- Reconnaissance (leader's reconnaissance) of defensive positions or engagement areas for conducting the defense.
- Reconnaissance by mounted or dismounted rifle squads as part of security operations to secure friendly obstacles, to clear possible enemy OPs, or to cover areas not observable by stationary OPs.

NOTE: Chapter 10 further discusses reconnaissance as part of patrolling.

7-2. LINKUP OPERATIONS

Linkup entails the meeting of friendly ground forces (or their leaders or designated representatives). It may occur in, but is not limited to, the following situations:

- Advancing forces reaching an objective area previously secured by friendly forces.
- Units conducting coordination for a relief in place.
- Cross-attached units moving to join their new organization.
- A unit moving forward during a follow and support mission with a fixing force.
- A unit moving to assist an encircled force.
- Units converging on the same objective during the attack.
- Units conducting a passage of lines.
- Units conducting reconnaissance forward of the main body.

Digital and OTN equipment enhance execution of linkup operations and reduce the likelihood of fratricide by use of night vision devices and the battlefield combat identification system (BCIS).

a. **Steps of the Linkup Operation.** The platoon conducts linkup activities independently or as part of a larger force. The platoon may lead the linkup force. The linkup consists of three steps:

(1) ***Step 1. Far Recognition Signal***. The units or elements involved in the linkup establish communications before they reach direct fire range. The lead element of each linkup force monitors the radio frequency of the other friendly force. FBCB2-equipped units also may achieve far recognition through displayed icons and digital messages.

(2) ***Step 2. Coordination***. Before initiating movement to the linkup point, the forces must coordinate necessary tactical information including the following:

- The known enemy situation.
- Type and number of friendly vehicles.
- Disposition of stationary forces (if either unit is stationary).

- Routes to the linkup point and rally point (if used).
- Fire control measures.
- Near recognition signal(s).
- Communications information.
- CS coverage.
- CSS responsibilities and procedures.
- Finalized location of the linkup point and rally point (if used).
- Any special coordination such as covering maneuver instructions or requests for medical support.
- Visual linkup signals or alternate locations for linkup due to contact.

(3) ***Step 3. Movement to the Linkup Point and Linkup***. All units or elements involved in the linkup must enforce strict fire control measures to help prevent fratricide. Linkup points and restrictive fire lines (RFL) must be recognizable by moving or converging forces. Linkup elements take these actions:

- Conduct far recognition digitally or by FM radio.
- Conduct short-range (near) recognition using the designated signal.
- Complete movement to the linkup point.
- Establish local security at the linkup point.
- Conduct additional coordination and linkup activities as necessary.

b. **Planning Considerations.** When planning a linkup, the platoon leader follows standard troop-leading procedures. During the planning process the units use digitization to transfer information and ensure the use of common graphics between the two units conducting the linkup. Both units exchange digital graphics before the actual linkup.

(1) The ICV's equipment allows for constant position or location updating between elements conducting the linkup operation to aid in navigation and to prevent fratricide. For example, the moving squad or vehicle can monitor the location of the stationary unit and linkup site using the position updates and digital graphics displayed on the CTD or LWS. Likewise, the stationary unit can monitor the moving unit's location as it moves along the prescribed route to the linkup point. As the moving force closes on the linkup site the stationary force is aware of its location, reducing the possibility of fratricide. The moving unit does the same type of monitoring to reduce fratricide potential.

(2) Once the moving unit arrives close to the linkup location, the stationary unit should challenge it. For example, the stationary unit can give the moving unit a series of flashes using an infrared source during limited visibility. The moving force responds with a pre-coordinated number of flashes.

(3) The challenge and password may also be accomplished digitally or with audible sounds.

(4) OTN equipment enhances linkups conducted during limited visibility. Infrared lights are used to aid in the linkup and as recognition signals. For example, the unit manning the linkup point can string a Phoenix infrared codable light, flashing infrared bike light, or black light tube lights high in a tree or on a piece of distinguishable terrain to help guide the moving unit to the linkup site. This is particularly advantageous when the moving unit has difficulty finding the linkup site due to bad weather or restrictive terrain. Both units must know the capabilities of the enemy, and they must exercise caution when using infrared devices against an enemy with night vision capability.

(5) Aviation units are helpful in linkup operations, possibly reducing most fratricide concerns. Observation helicopters can assist in the initial coordination between the forces to be linked up. Attack or observation helicopters can assist in route reconnaissance and provide early warning of enemy locations. Aviation also can extend the range of communications.

7-3. PASSAGE OF LINES

A passage of lines entails movement of one or more units through another unit. This operation becomes necessary when the moving unit(s) cannot bypass the stationary unit and must pass through it. The primary purpose of the passage is to maintain the momentum of the moving elements. A passage of lines may be designated as either forward or rearward.

The controlling company is responsible for planning and coordinating a passage of lines involving the platoon. In some situations, as when the platoon is using multiple passage routes (such as a separate route for each squad or section), the platoon leader must take responsibility for planning and coordinating each phase of the operation.

a. **Planning Considerations.** In planning passage of lines, the platoon leader must consider the following tactical factors and procedures:

(1) The passage should facilitate transition to follow-on missions through the use of multiple lanes or lanes wide enough to support doctrinal formations for the passing units.

(2) Deception techniques, such as the use of smoke, may be employed to enhance security during the passage.

(3) The controlling commander must clearly define the battle handover criteria and procedures to be used during the passage. His order should cover the roles of both the passing unit and the stationary unit and the use of direct and indirect fires. If necessary, he also specifies the location of the battle handover line (BHL) as part of the unit's graphics control measures. For a forward passage, the BHL is normally the LD for the passing force. In a rearward passage, it is normally a location in direct fire range of the stationary force. In general, a defensive handover is complete when the passing unit is clear and the stationary unit is ready to engage the enemy. Offensive handover is complete when the passing unit has deployed and crossed the BHL.

(4) The passing and stationary units coordinate obstacle information including the location of enemy and friendly obstacles, existing lanes and bypasses, and guides for the passage.

(5) Air defense coverage is imperative during the high-risk passage operation. Normally, the stationary unit will be responsible for providing air defense, thus allowing the passing unit's air defense assets to move with it.

(6) Responsibility for CSS actions, such as vehicle recovery or casualty evacuation in the passage lane, must be clearly defined for both passing and stationary units.

(7) To enhance command and control during the passage, the platoon will collocate a command and control element, normally the platoon leader or platoon sergeant, with a similar element from the stationary or moving unit.

b. **Reconnaissance and Coordination.** Detailed reconnaissance and coordination are critical in a passage of lines, both in dealing with the planning factors outlined previously and in ensuring the passage is conducted quickly and smoothly. The platoon leader normally conducts all necessary reconnaissance and coordination for the passage.

At times, he may designate the platoon sergeant or squad leader to conduct liaison duties for reconnaissance and coordination. The following items of information are coordinated:

- Unit designation and composition including type and number of passing vehicles and soldiers.
- Passing unit arrival time(s).
- Location of attack positions or assembly areas (should be confirmed by reconnaissance).
- Current enemy situation.
- Obstacles.
- Stationary unit's mission and plan (to include OP, patrol, and obstacle locations).
- Location of movement routes, contact points, passage points, and passage lanes.

NOTE: The use of GPS or POSNAV waypoints will simplify this process and speed the passage.

- Guide requirements.
- Order of march.
- Anticipated actions on enemy contact.
- Requirements for supporting direct and indirect fires, including the location.
- Nuclear, biological, and chemical (NBC) conditions.
- Available CS and CSS assets and their locations.
- Communications information (to include frequencies, digital data, and near and far recognition signals).
- Criteria for battle handover and location of the BHL.

c. **Forward Passage of Lines.** In a forward passage, the passing unit first moves to an assembly area or an attack position behind the stationary unit. Designated liaison personnel move forward to link up with guides and confirm coordination information with the stationary unit. Guides lead the passing elements through the passage lane.

(1) The platoon conducts a forward passage by employing tactical movement. It moves quickly, uses appropriate dispersal and formations whenever possible, and keeps radio traffic to a minimum.

(2) The platoon holds its fire until it passes the BHL or designated fire control measure unless the commander has coordinated fire control with the stationary unit. Once clear of passage lane restrictions, the unit consolidates at a rally point or attack position and conducts tactical movement in accordance with its orders.

d. **Rearward Passage of Lines.** Because of the increased risk of fratricide during a rearward passage, coordination of recognition signals and fire restrictions is critical.

(1) The passing unit contacts the stationary unit while it is still beyond direct fire range and conducts coordination as discussed previously. Near recognition signals and location of the BHL are emphasized. Additional fire control measures, such as RFLs, may be employed to further minimize the risk of fratricide.

(2) Following coordination, the passing unit continues tactical movement toward the passage lane. Gun tubes are oriented on the enemy, and the passing unit is responsible for

its security until it passes the BHL. If the stationary unit provides guides, the passing unit may conduct a short halt to link up and coordinate with them.

(3) The passing unit moves quickly through the passage lane to a designated location behind the stationary unit.

7-4. RELIEF IN PLACE

A relief in place occurs when one unit is replaced by another unit to preserve the combat effectiveness of committed units during offensive or defensive operations. In a relief involving the platoon, the company commander directs when and how the operation will be conducted.

a. **Planning Considerations.** In planning a relief in place, the platoon leader--

- Issues a FRAGO.
- Uses an advance party composed of key leaders to conduct detailed reconnaissance and coordination.
- Adopts the outgoing unit's normal pattern of activity as much as possible.
- Determines when the platoon will assume responsibility for the outgoing unit's position.
- Collocates platoon headquarters with the relieved unit's headquarters.
- Maximizes operations security (OPSEC) to prevent the enemy from detecting the relief operation.
- Plans to transfer excess ammunition; wire; petroleum, oil, and lubricants (POL); and other material of tactical value to the incoming unit.
- Controls movement by reconnoitering, designating, and marking routes and providing guides.

NOTE: Whenever possible, conduct the relief during daylight hours if not under enemy observation but if in contact, conduct under limited visibility.

b. **Coordination.** The incoming and outgoing leaders must meet to exchange tactical information, conduct a joint reconnaissance of the area, and complete other required coordination for the relief. The two leaders must address passage of command and jointly develop contingency actions for enemy contact during the relief. This process will normally include coordination of--

- Location of vehicle and individual fighting positions (to include hide, alternate, and supplementary positions).
- Enemy situation.
- The outgoing unit's tactical plan, to include graphics, platoon and squad fire plans, and individual vehicles' sector sketches.
- Fire support coordination, including indirect fire plans and the time of relief for supporting artillery and mortar units.
- Types of weapon systems being replaced.
- Time, sequence, and method of relief.
- Location and disposition of obstacles and the time responsibility will be transferred.
- Supplies and equipment to be transferred.

- Movement control, route priority, and placement of guides.
- Command and signal information
- Maintenance, logistical support, and evacuation, if necessary, for disabled vehicles.
- Limited visibility considerations.

NOTE: The relief will be conducted on the communications nets of the outgoing unit.

(1) During this coordination, units exchange graphics digitally to reduce time and increase accuracy; they also exchange sector sketches at this time. Transferring digital information does not relieve the leader of physically coordinating between units.

(2) Since a relief in place is often conducted during hours of limited visibility, the use of OTN equipment may speed the operation. Units follow prescribed SOPs to mark positions and routes with infrared lights to facilitate the occupation of or withdrawal from the position. For example, the platoon can mark routes and positions with the Phoenix, four- and eight-foot black light tube lights, infrared chemical lights, the remote black light, or black light post lights. These marking signals should be incorporated into the platoon leader's SOP. Additionally, digitally equipped units also may use the CTD and precision navigation system to move to and away from the position as explained in linkup operations discussed previously.

c. **Conduct of the Relief.** The outgoing leader retains responsibility for the area of operations and the mission. He exercises operational control over all subordinate elements of the incoming unit while they complete their portion of the relief. Responsibility can pass to the incoming commander when all elements of the outgoing unit are relieved and adequate communications are established. Relief of individual elements can be conducted in one of two ways--

- By alternate element position. The relieving element occupies a position separate from the relieved element.
- By alternate vehicle or individual position. The relieving element occupies vehicle or individual fighting positions in the same BP as the relieved element.

There are two methods of relief: sequential (elements relieved one at a time) and simultaneous (all elements relieved at one time).

(1) ***Sequential***. This is the most time-consuming method. The relieving unit moves to an assembly area to the rear of the unit to be relieved. Subordinate elements are relieved one at a time, in any order, with the relief generally following this sequence:

(a) The outgoing and incoming units collocate their headquarters and trains elements to facilitate command and control and transfer of equipment, ammunition, fuel, water, and medical supplies.

(b) The first element being relieved (such as a squad) moves to its alternate fighting positions or BP while the relieving element moves into the outgoing element's primary position. The incoming element occupies individual fighting positions.

(c) Incoming and outgoing elements complete the transfer of equipment and supplies.

(d) The relieved element moves to the designated assembly area behind the position.

(e) Once each outgoing element clears the release point (RP) en route to its assembly area, the next relieving element moves forward.

(2) ***Simultaneous***. This is the fastest, but least secure, method. All outgoing elements are relieved at once, with the incoming unit normally occupying existing positions, including BPs and vehicle and individual fighting positions. The relief takes place in this general sequence:

(a) Outgoing elements move to their alternate BPs or vehicle and individual positions.

(b) Incoming elements move along designated routes to the outgoing elements' primary positions.

(c) Units complete the transfer of equipment and supplies.

(d) Relieved elements move to the designated unit assembly area

7-5. WITHDRAWALS

A withdrawal occurs when an element disengages from enemy contact to reposition itself for another mission. A platoon usually conducts a withdrawal as part of a larger force. As part of a company, a platoon may fall back with the main element (under pressure) or may be used as the detachment left in contact (DLIC) in a withdrawal not under pressure. This information applies whether or not the platoon is under pressure from the enemy. Regardless of employment, the platoon leader conducts his withdrawal in accordance with his higher commander's guidance. On receipt of the order to conduct a withdrawal, the platoon leader begins preparing his order based on his higher unit's FRAGO. He identifies possible key terrain and routes based on the higher unit's graphics and his map. He formulates and briefs his FRAGO to his squad leaders and VCs. When the withdrawal is executed, squad leaders and VCs ensure they are moving in accordance with the platoon leader's plan by monitoring position location updates in conjunction with their digital graphics.

a. **Withdrawal Not Under Pressure.** In this type of withdrawal, platoons normally serve as the DLIC or as part of the DLIC. A DLIC is used to deceive the enemy into thinking that the entire force is still in position. As the DLIC, the platoon--

- Repositions ICV sections, squads, and weapons to cover the company's withdrawal.
- Repositions a squad and an ICV in each of the other platoon positions to cover the most dangerous avenue of approach into the position.
- Continues the normal operating patterns of the company and simulates company radio traffic.
- Covers the company withdrawal with planned direct and indirect fires if the company is attacked during withdrawal.
- Withdraws by echelon once the company is at its next position. The ICV is specially suited for this purpose because of its protection, mobility, and organic weapon systems.

b. **Withdrawal Under Pressure.** If the platoon cannot prepare and position the security force, it conducts a fighting withdrawal. The platoon disengages from the enemy by maneuvering to the rear. Soldiers, squads, or ICV sections not in contact are withdrawn first to provide suppressive fire and to allow soldier, squad, or ICV sections in contact to withdraw.

c. **Disengagement.** Based on orders from the battalion commander, the company commander decides how long to retain defensive positions. The company may be

required to remain and fight as long as possible, or it may be required to disengage and displace to subsequent positions. A platoon, as part of a company, may disengage to defend from another battle position, to prepare for a counterattack, to delay, to withdraw, or to prepare for another mission.

(1) Fire and movement to the rear is the basic tactic for disengaging. All available fires are used to slow the enemy and allow platoons to move away. The company commander may move his platoons and mass fires to stop or slow the enemy advance before beginning the movement away from the enemy.

(a) A base of fire is formed to cover platoons or squads moving away from the enemy. One platoon or squad acts as the base of fire, delaying the enemy with fire or retaining terrain blocking his advance, while other platoons or squads disengage.

(b) Moving platoons or squads get to their next position and provide a base of fire to cover the rearward movement of forward platoons and squads.

(c) Fire and movement is repeated until contact with the enemy is broken, the platoons pass through a higher level base-of-fire force, or the platoons are in position to resume their defense.

(d) Tactics used by the platoon to disengage from the enemy differ according to how the platoon is deployed, the company commander's plan for disengagement, and other factors. The following actions apply in all cases:

- Maximum use is made of the terrain to cover rearward movement. ICVs or squads back out of position and move, keeping a terrain feature between the vehicle and the enemy.
- Rapid movement and effective base of fire enhance the mobility of the ICV and are key to a successful disengagement.

(2) Plans for disengagement may be part of any defensive plan. When squads are deployed, a plan for rapid remounting must be made.

(a) When the platoon employs the ICVs and rifle squads on separate positions, platoon remount points and routes to the remount points must be chosen and rehearsed. The platoon remount point can be near the rifle squad's position, near the ICV position, or between the two (Figure 7-1, page 7-10.)

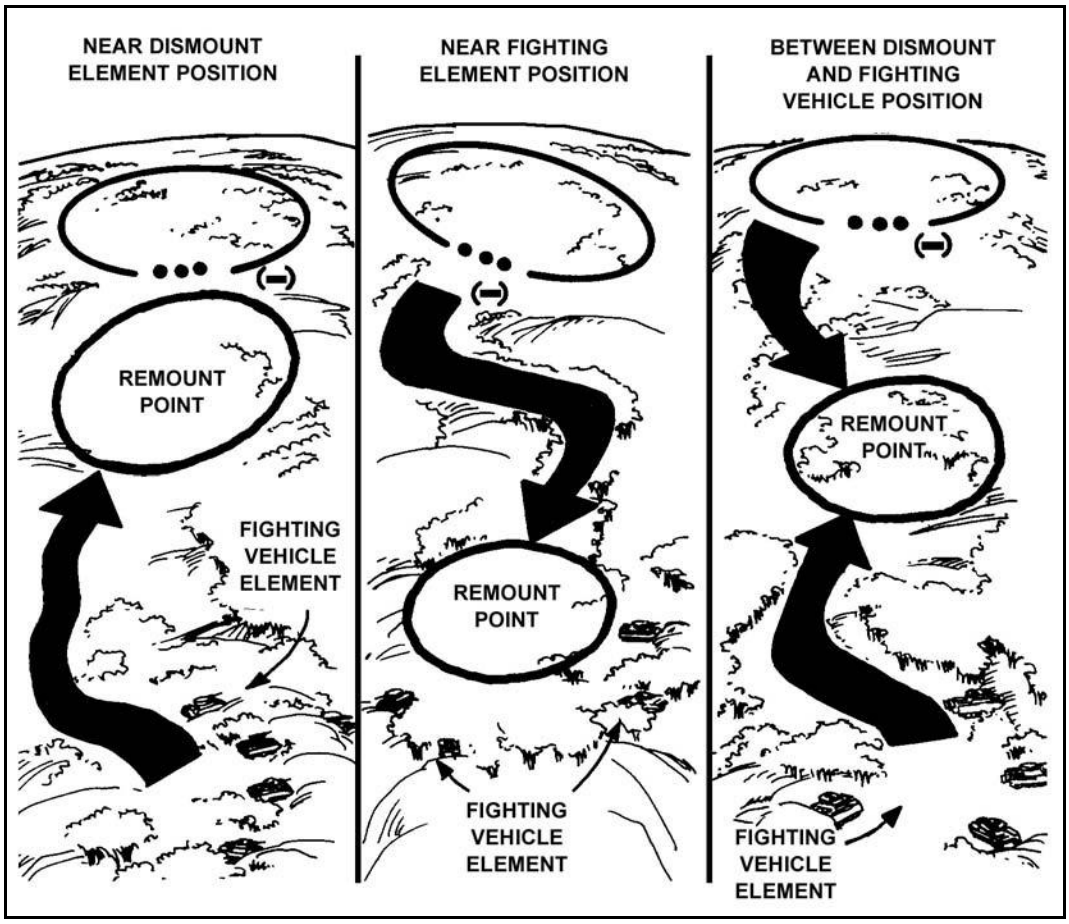


Figure 7-1. Platoon remount points.

(b) Covered positions for vehicles and rifle squads should be chosen to allow for easy remounting even during limited visibility in the remount point. Squad leaders must ensure their men know where the remount point is, where the vehicle is, and routes to the point. Routes to the remount point should be covered and should allow for speedy movement of both elements.

(3) When the squads and vehicle elements are separated, there are three ways the squads can disengage. Simultaneous disengagement (moving all teams at the same time) can be used if the element is covered by another force. When the squads must cover their own movement, they disengage by teams or by thinning the lines.

(a) When the squads simultaneously disengage, they assemble and move as one element to the remount point using proper movement techniques.

- Simultaneous disengagement is favored when rapid movement is critical, when the disengaging element is adequately covered by overwatching fires, when the enemy has not closed on the rifle squad or cannot fire effectively at it, or when there are obstacles to delay the enemy.
- Simultaneous disengagement can be used when the rifle squads can move before the enemy can close on the position because of an obstacle or the distance between the rifle squads and the enemy, or when other platoons of the company or battalion are adequately covering the disengagement.

(b) When the rifle squads must cover their own movement, two squads stay in position as a base of fire. The third squad and the weapons squad move to the rear. The squads left in position must fire into the entire element's sector to cover the movement of the other squad. Sectors of fire are adjusted for better coverage of the element's sector. The moving squad may displace by fire teams or as squads since there are two squads covering their movement. The squads left in position sequentially disengage. Movement to the rear by alternating squads continues until contact is broken. Once contact is broken, disengagement is complete and the rifle squads move to the remount point using proper movement techniques.

(c) When disengaging by thinning the lines, selected soldiers from each fire team (often one soldier from each fighting position) disengage and move to the rear (Figure 7-2). The soldiers still in position become the base of fire to cover the movement.

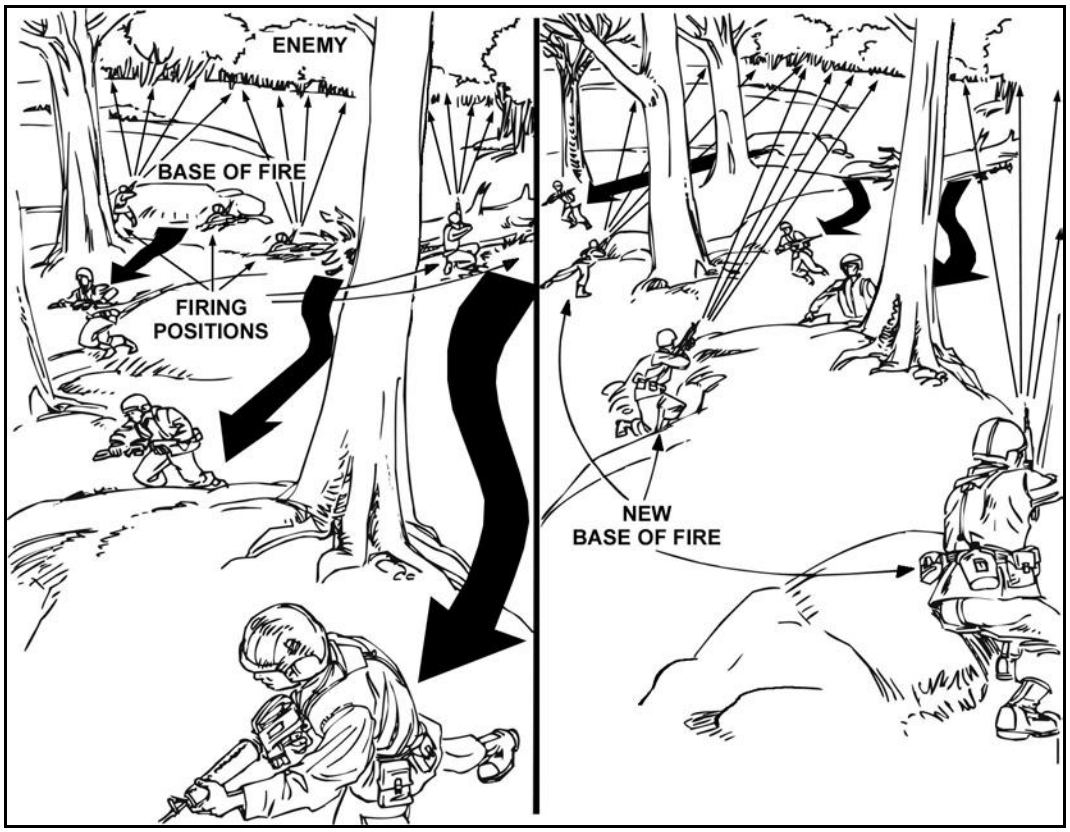


Figure 7-2. Disengagement by thinning the lines.

(d) When ICVs and squads are employed on the same position, the squads normally move to the remount point while the ICVs provide suppressive fire. The ICVs then quickly move to the remount point, link up with the infantry, load them, and move out. Squads use the disengagement techniques discussed previously. The method selected is dictated by the enemy situation, terrain, and the vehicle crew's ability to serve as a base of fire.

(4) Because of the ICV's speed and protection against small-arms fire and artillery shell fragments, it is usually best for the squads (when deployed) to disengage while covered by the ICVs. If the ICVs are not in a position to support the squads by fire or if

the squads are heavily engaged, the vehicle element may disengage first and move to a position to assist the squads in disengagement. Whichever method is used, there are two basic ways the vehicle element can disengage. If ICVs are covered by another force, simultaneous disengagement may be used. If ICVs must cover their own movement, they disengage by section. These methods are similar to those used by the squads.

(a) *Simultaneous Disengagement.* When ICVs disengage simultaneously, they move as a platoon as quickly as possible. This method normally is used when ICVs are covered by another force and speed is the most critical factor. If the squads are already mounted, the entire platoon moves, using movement techniques, to a position designated by the commander. If squads are deployed, ICVs move to the remount point to pick them up, or they may attack the enemy by fire from a new position to allow the fire teams to disengage.

(b) *Disengagement by Vehicle or Section.* When ICVs must cover their own disengagement, as many as three vehicles can be left in position as a base of fire while the remaining vehicles move to the rear. ICVs left in position must cover the entire sector until moving vehicles reach positions they can use to provide a base of fire.

7-6. DELAY

In a delay, the platoon forces the enemy to slow its movement by forcing him to repeatedly deploy for the attack. Before the enemy assault, the delaying force withdraws to new positions. The squads or sections and platoons disengage from the enemy as described in a withdrawal under pressure. Once disengaged, a platoon moves directly to its next position and defends again. The squads and platoons slow the advance of the enemy by causing casualties and equipment losses by employing--

- Ambushes.
- Snipers.
- Obstacles.
- Minefields (to include phony minefields).
- Artillery and mortar fire.

7-7. STAY-BEHIND OPERATIONS

Stay-behind operations can be used as a part of defensive or delay missions. In the defense, once the enemy's combat units have passed, his weakest point (CS and CSS units) can be attacked.

a. **Types.** The two types of stay-behind operations are unplanned and deliberate.

(1) ***Unplanned.*** An unplanned stay-behind operation is one in which a unit finds itself cut off from other friendly elements for an indefinite time without specific planning or targets and must rely on its organic assets.

(2) ***Deliberate.*** A deliberate stay-behind operation is one in which a unit plans to operate in an enemy-controlled area as a separate and cohesive element for a certain amount of time or until a specified event occurs. A deliberate stay-behind operation requires extensive planning. Squads and sections and platoons conduct this type of operation as part of larger units.

b. **Planning.** The troop-leading procedure applies to stay-behind operations. Planners must pay strict attention to the following.

(1) ***Task Organization.*** The stay-behind unit includes only the soldiers and equipment needed for the mission. It needs minimal logistics support and can provide its own security. It must be able to hide easily and move through restrictive terrain. ICVs may or may not be a part of the stay-behind forces.

(2) ***Reconnaissance.*** This is most important in a stay-behind operation. Reporting tasks and information requirements can include suitable sites for patrol bases, hide positions, OPs, caches, water sources, dismounted and mounted avenues of approach, kill zones, engagement areas, and covered and concealed approach routes.

(3) ***Combat Service Support.*** Because the stay-behind unit will not be in physical contact with its supporting unit, supplies of rations, ammunition, radio batteries, water, and medical supplies are cached. Provisions for casualty and EPW evacuation depend on the company and battalion plans. Although ICVs in the stay-behind forces have some advantages, they do cause some CSS planning problems.

7-8. AIR ASSAULT OPERATIONS

NOTE: Separating the infantry from their ICVs during air assault operations may limit their inter-networked communications and their knowledge of the changing situation.

SBCT infantry platoons may be required to participate in air assault operations as part of the tactical plan. The platoon has the ability to be air lifted as part of a larger operation. The battalion is the lowest level with sufficient personnel to plan, coordinate, and control an air assault operation. When company-size or lower operations are conducted, the planning takes place at battalion or higher headquarters. Successful air assault execution is based on a careful analysis of METT-TC factors and detailed, precise reverse planning. The basic plans that comprise the reverse planning sequence are developed for each air assault operation and include ground tactical plan, landing plan, air movement plan, loading plan, and staging plan. These plans normally are coordinated and developed by the battalion staff to make the best use of available time. If time is limited, planning steps may be compressed or conducted concurrently; detailed plans and orders may be SOPs or lessons learned in training. (Refer to FM 90-4 for more information.) Although not the highest priority training in an infantry battalion, air assault operations and mission tasks should be included in platoon training.

a. **Ground Tactical Plan.** The foundation of a successful air assault operation is the commander's ground tactical plan, around which subsequent planning is based. The ground tactical plan specifies actions in the objective area to accomplish the mission and addresses subsequent operations. The ground tactical plan contains essentially the same elements as any other infantry attack plan but capitalizes on speed and mobility to achieve surprise.

b. **Landing Plan.** The landing plan must support the ground tactical plan. This plan sequences elements into the area of operations to ensure that platoons arrive at designated locations and times prepared to execute the ground tactical plan.

c. **Air Movement Plan.** The air movement plan is based on the ground tactical and landing plans. It specifies the schedule and provides the instructions for air movement of soldiers, equipment, and supplies from pickup zones and landing zones.

d. **Loading Plan.** The loading plan is based on the movement plan. It ensures soldiers, equipment, and supplies are loaded on the correct aircraft. Platoon integrity is maintained when aircraft loads are planned. Cross loading of essential personnel and equipment is imperative to ensure survivability of command and control assets and to ensure that the mix of personnel and weapons arriving at the landing zone (LZ) is ready to fight. The platoon leader or squad leader should always ensure the aircraft is loaded so that dismounting soldiers react promptly and contribute to mission accomplishment. The platoon leader must have a bump plan. A bump plan ensures essential soldiers and equipment are loaded ahead of less critical loads in case of aircraft breakdown or other problems.

e. **Staging Plan.** The staging plan is based on the loading plan and prescribes the arrival time of ground units (soldiers, equipment, and supplies) at the pick up zone (PZ) in the order of movement. The staging plan includes the disposition of the vehicles left in the staging area and the platoon's linkup plan on return from the air assault mission.

(1) ***Disposition of Vehicles.*** The platoon leader must develop a security plan for the vehicles that remain in the staging area until the platoon returns to the LZ after the air assault mission is completed. This security plan can be as simple as a coil or herringbone formation for the platoon, or the platoon may be part of a company modified perimeter defense. Instructions for link up of the platoon with its vehicles will also be included.

(2) ***Linkup of Vehicles.*** The platoon leader's linkup plan must be just as detailed as the staging and loading plans. To simplify the linkup, the platoon leader must ensure that platoon integrity is maintained. The platoon leader or company commander should designate a linkup point for each element to link up with their vehicles. As the aircrafts land, the units immediately move to their linkup point to continue the mission.

7-9. AREA SECURITY OPERATIONS

Area security operations protect specific critical and vulnerable assets or terrain from enemy observation and direct fire. These operations can consist of escorting friendly convoys; protecting critical points such as bridges, command and control installations, or other key and vulnerable sites; or participating in protection of large areas such as airfields. During stability or support operations the platoon may be required to establish OPs, roadblocks, or checkpoints (CPs). The platoon normally performs an area security operation when conventional security or combat operations would not work. The platoon may perform area security operations as part of a larger force or as an independent platoon mission. SBCT infantry platoons normally conduct area security missions to protect high-value points, areas, or assets. Whether and how much protection a point, area, or asset requires (and the defensive technique chosen) depends on the factors of METT-TC. The platoon leader must integrate his elements into the overall security plan for the area he must protect. Area security operations rely on various techniques, which may include reconnaissance, security, defensive tasks, and offensive tasks.

a. When deploying for area security, the platoon generally moves into a coil formation around the point, area, or asset they must secure and dismounts the rifle squad and sets up a perimeter defense. Based upon the situation, the platoon leader integrates the ICV into the defense and places anti-armor weapons along likely enemy mechanized or armored avenues of approach.

b. To further improve the position, the platoon employs hasty protective minefields, wire, and other obstacles, as appropriate and available. It emplaces wire obstacles outside grenade range of friendly positions. Once it sets up vehicle positions and obstacles, the platoon develops a fire plan and submits the plan to higher headquarters. This plan includes integrated direct and indirect fires.

c. In addition to setting up the platoon position around the asset to be secured, the platoon also employs patrols and OPs to enhance security (Figure 7-3). Reconnaissance patrols and combat patrols define the area of operations, gain information on enemy forces, and destroy small dismounted enemy reconnaissance elements. The platoon deploys OPs to observe likely avenues of approach, to provide early warning of enemy activity, and to aid in control of indirect fires.

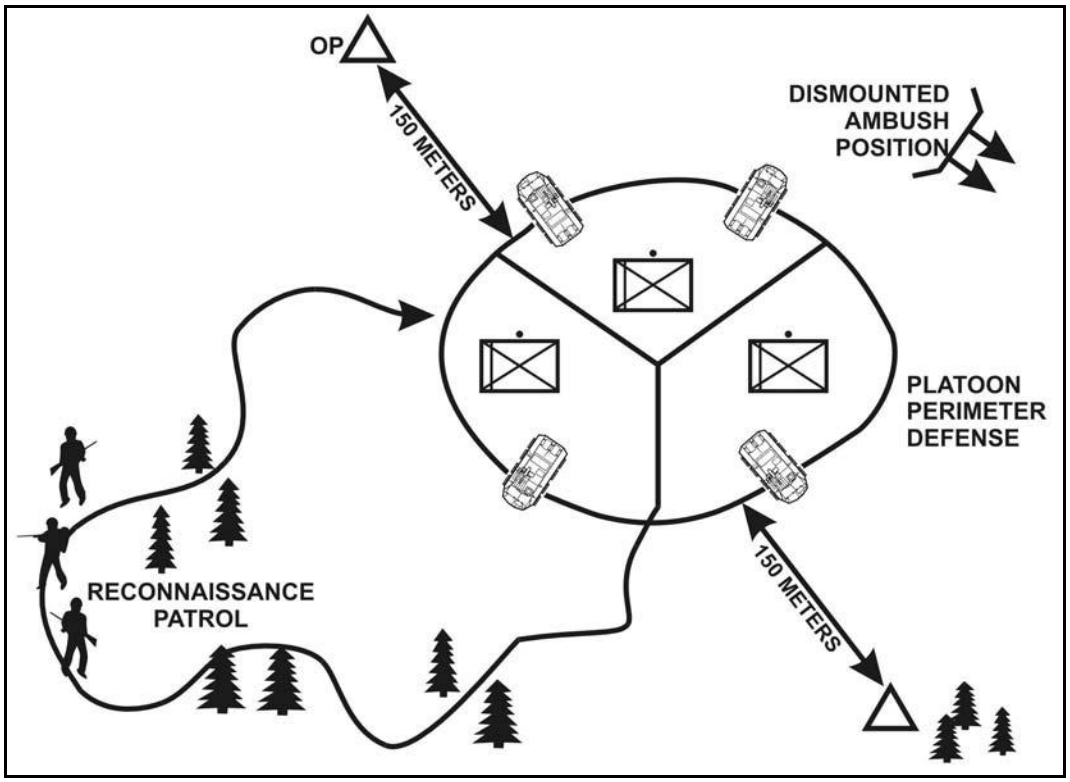


Figure 7-3. Platoon area security dispositions.

7-10. CONVOY AND ROUTE SECURITY

Company and larger organizations usually perform convoy or route security missions. Convoy security provides protection for a specific convoy. Route security aims at securing a specific route for a designated period of time, during which multiple convoys may use the route. These missions include numerous tasks (such as escort, reconnaissance, and combat reaction forces) that become missions for subordinate units. The size of the unit performing the convoy or route security operation depends on many factors including the size of the convoy, the terrain, and the length of the route.

a. **Route Reconnaissance.** In this mission, the platoon leader focuses on the route's trafficability and on enemy forces that might influence the route. The platoon must plan

to call for engineer assets to aid in breaching point-type obstacles. Command-detonated devices pose a major threat during route reconnaissance.

b. **Convoy Escort.** The platoon may perform a convoy escort mission either independently or as part of a larger unit's convoy security mission. The convoy escort mission requires that the platoon provide the convoy with limited close-in protection from direct small arms fire. Platoon vehicles include military CSS and C2 vehicles and civilian trucks and buses. Leaders must carefully evaluate the enemy before assigning a convoy escort mission to platoon-sized elements.

c. **Command and Control.** Because of the task organization of the convoy escort mission, command and control is especially critical. The relationship between the platoon and the convoy commander must provide unity of command and effort if combat operations are required during the course of the mission. In most cases, the platoon will execute the escort mission under the control of the security force commander, who is usually under operational control (OPCON) or attached to the convoy commander. It is vital that the convoy commander issues a complete OPORD to all convoy vehicle commanders before executing the mission because the convoy may itself be task-organized from a variety of units and some vehicles may not have tactical radios. The order should follow the standard five-paragraph OPORD format, but special emphasis should be placed on:

- Route of march (to include a strip map for each vehicle commander).
- Order of march.
- Actions at halts.
- Actions in case of vehicle breakdown.
- Actions on contact.
- Chain of command.
- Communications and signal information.

d. **Tactical Disposition.** During all escort missions, the convoy security commander and platoon leader must establish and maintain security in all directions and throughout the platoon. As noted, several factors, including convoy size, affect this disposition. The key consideration is whether the platoon is operating as part of a larger escort force or is executing the escort mission independently. Additional METT-TC considerations include the employment of ICVs by section and the employment of rifle squads during the mission (fire teams ride in ICVs or ride in escorted vehicles).

(1) ***Large-Scale Escort Missions.*** When sufficient escort assets are available, the convoy commander usually will organize the convoy into three distinct elements: advance guard, close-in protective group, and rear guard. Figure 7-4 shows a convoy in which the platoon is part of a company-size escort force.

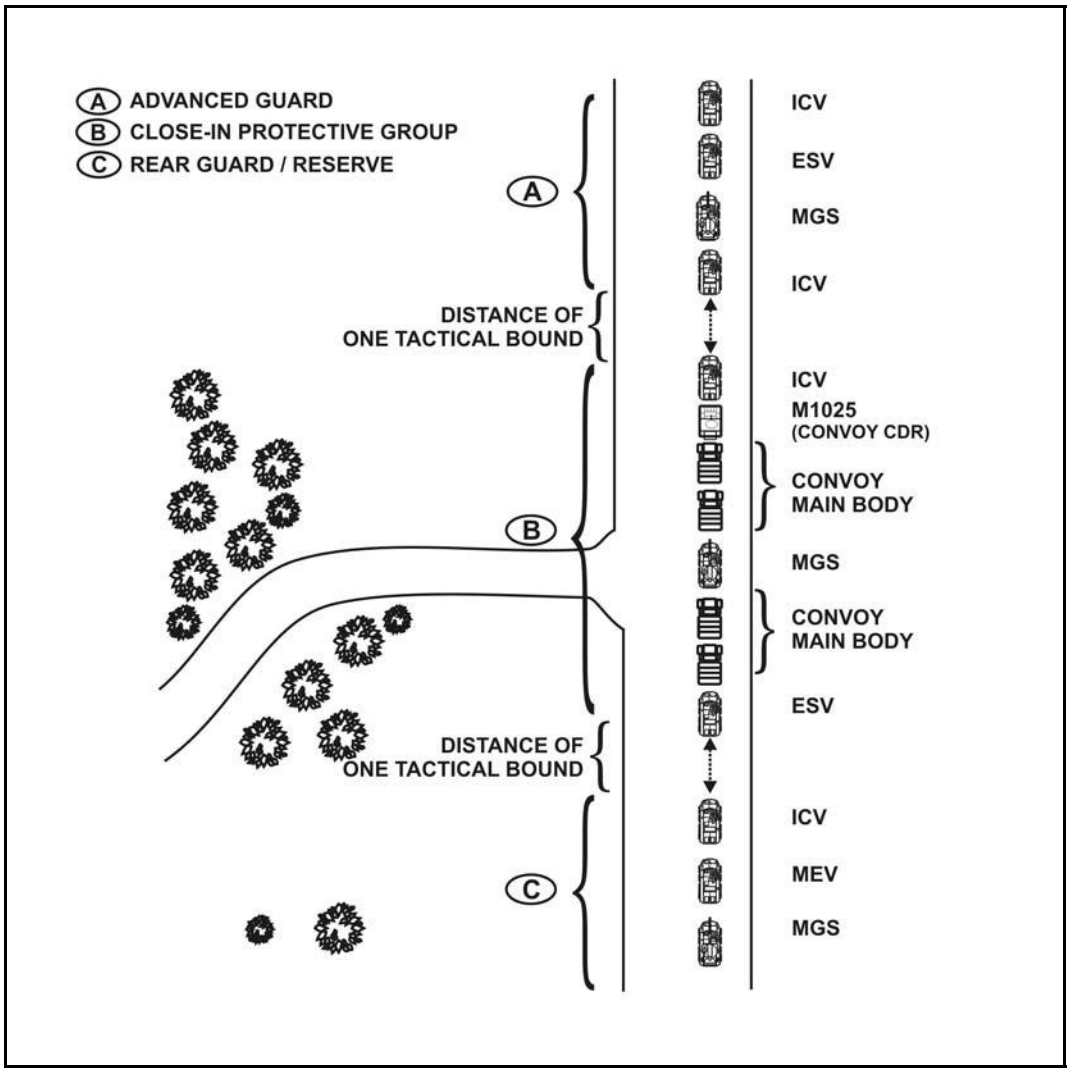


Figure 7-4. ICV platoon as part of larger escort force.

(a) The advance guard reconnoiters and proofs the convoy route. It searches for signs of enemy activity such as ambushes and obstacles. Within its capabilities, it attempts to clear the route, and it provides the convoy commander with early warning before the arrival of the vehicle column. In some cases, an individual platoon vehicle, a section, or the entire platoon may be designated as part of the advanced guard and may receive a tank with a mine plow or mine roller.

(b) The platoon normally will be task organized to operate within the close-in protective group. This group provides immediate, close-in protection for the vehicle column with escort vehicles positioned either in the column or on the flanks. The convoy commander's vehicle is located in this group.

(c) The rear guard follows the convoy. It provides security in the area behind the main body of the vehicle column, often moving medical and recovery assets. Again, an individual vehicle, a section, or the entire platoon may be part of this element.

NOTE: The convoy commander also may designate the rifle or MGS platoon as part of a reserve (reaction) force for additional firepower on enemy contact. The reserve will move with the convoy or be located at a staging area close enough to provide immediate interdiction against the enemy.

(2) ***Independent Convoy Escort.*** When the platoon executes a convoy escort mission independently, the convoy commander and platoon leader disperse the ICVs throughout the convoy formation to provide forward, flank, and rear security. Whenever possible, wingman ICVs should maintain visual contact with their leaders. Engineer assets, if available, should be located near the front to respond to obstacles. At times, engineer assets may be required to move ahead of the convoy with scouts to proof the convoy route. Figure 7-5 illustrates this type of escort operation. In some independent escort missions, variations in terrain along the route may require the platoon to operate using a modified traveling overwatch technique. Figure 7-6 depicts such a situation. It shows one section leading the convoy while the other trails the convoy. Dispersion between vehicles in each section is sufficient to provide flank security. Depending on the terrain, the trail section may not be able to overwatch the movement of the lead section.

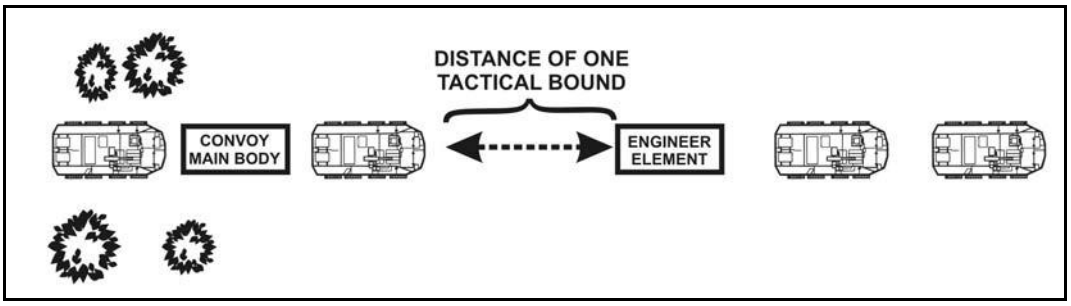


Figure 7-5. Platoon performing convoy escort independently.

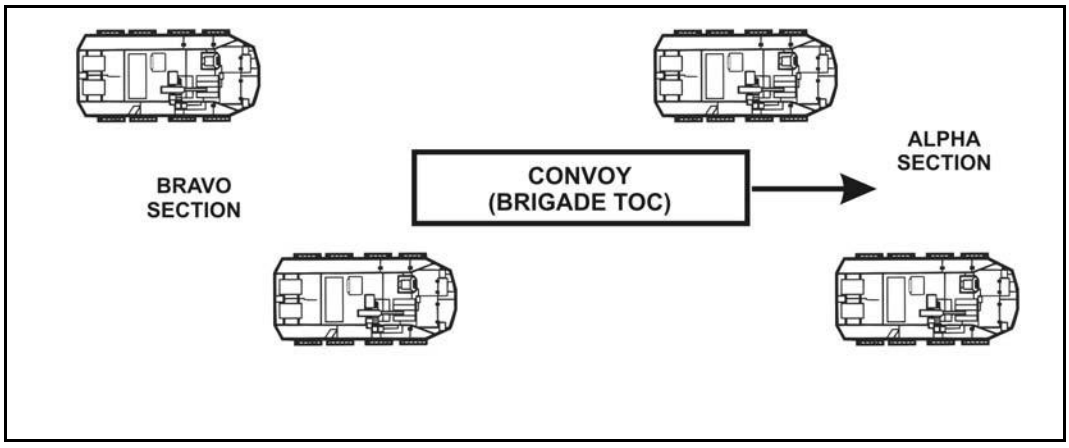


Figure 7-6. Platoon using modified traveling overwatch.

e. **Actions on Contact.** As the convoy moves to its new location, the enemy may attempt to harass or destroy it. This contact usually will occur in the form of an ambush, often with the use of a hastily prepared obstacle. The safety of the convoy rests on the speed and effectiveness with which escort elements can execute appropriate actions on

contact. Based on the factors of METT-TC, portions of the convoy security force, such as the platoon or an ICV section, may be designated as a reaction force. The reaction force performs its escort duties, conducts tactical movement, or occupies an assembly area, as required, until enemy contact occurs and the convoy commander gives it a reaction mission.

f. **Actions at an Ambush.** An ambush is one of the more effective ways to interdict a convoy. Reaction to an ambush must be immediate, overwhelming, and decisive. Actions on contact must be planned for and rehearsed so they can be executed quickly.

(1) In almost all situations, the platoon will take several specific, instantaneous actions when it reacts to an ambush. These steps, illustrated in Figure 7-7 and Figure 7-8 (page 7-20), include:

- As soon as they acquire an enemy force, the escort vehicles take action toward the enemy (Figure 7-8, page 7-20). They seek covered positions between the convoy and the enemy and suppress the enemy with the highest volume of fire permitted by the ROE. Contact reports are submitted to higher headquarters as quickly as possible.
- The convoy commander retains control of the convoy vehicles and continues to move them along the route at the highest possible speed (Figure 7-7).
- Convoy vehicles, if armed, may return fire only if the escort has not positioned itself between the convoy and the enemy force.
- The platoon leader or the convoy commander may request that any damaged or disabled vehicles be abandoned and pushed off the route (Figure 7-8, page 7-20).
- The escort leader (in the example included here this is the platoon leader) uses SPOTREPs to keep the convoy security commander informed. If necessary, the escort leader or the convoy security commander can request support from the reaction force and or call for and adjust indirect fires.

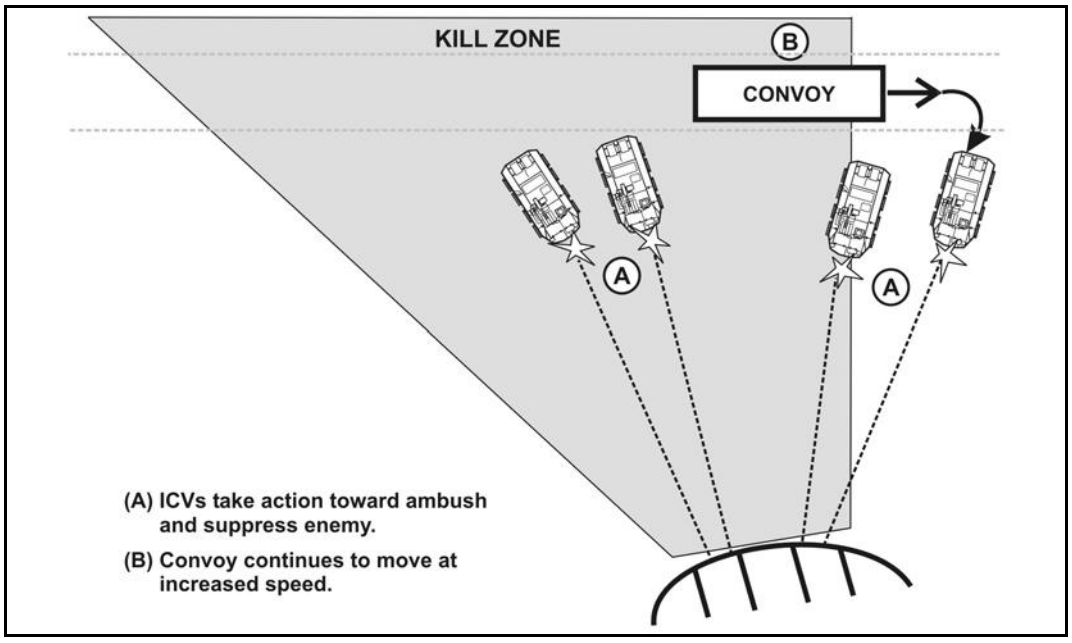


Figure 7-7. Convoy escort actions toward ambush.

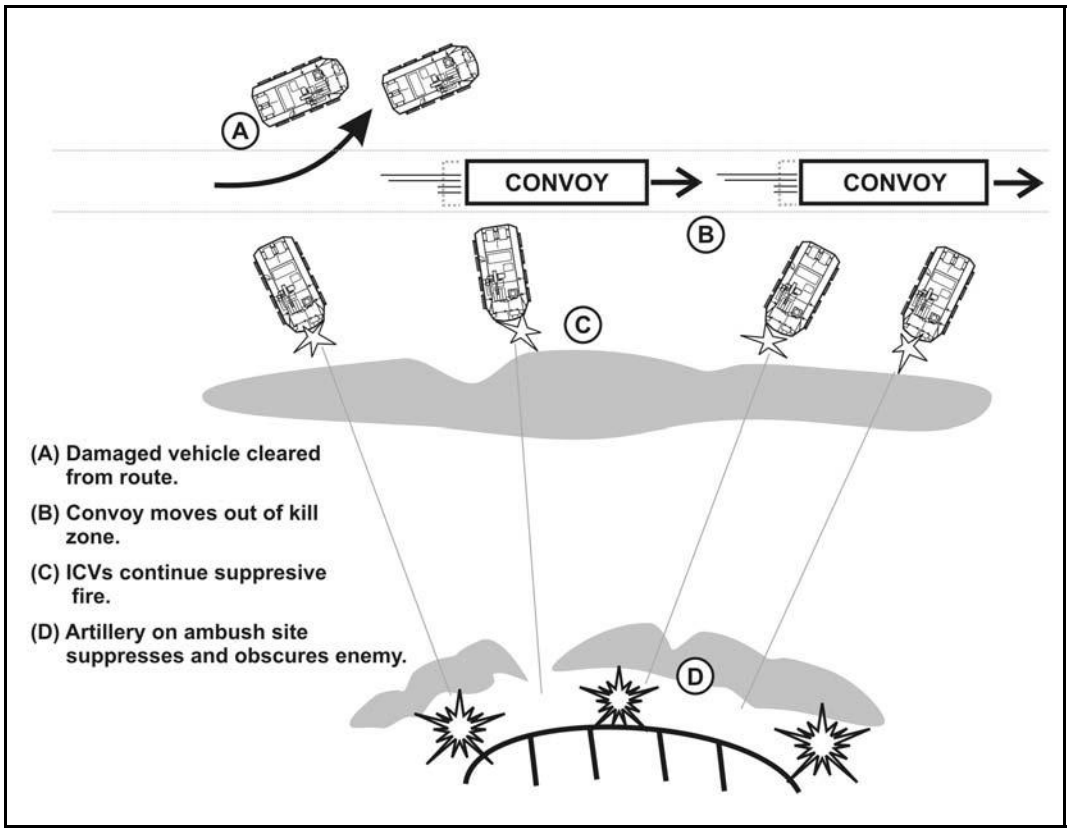


Figure 7-8. Convoy continues to move.

(2) Once the convoy is clear of the kill zone, the escort element executes one of the following courses of action:

- Continues to suppress the enemy as combat reaction forces move to support (Figure 7-9).
- Rifle squads assault the enemy (Figure 7-10).
- Breaks contact and moves out of the kill zone.

(3) In most situations, ICVs and rifle squads will continue to suppress the enemy or execute an assault. Contact should be broken only with the approval of the platoon's higher commander.

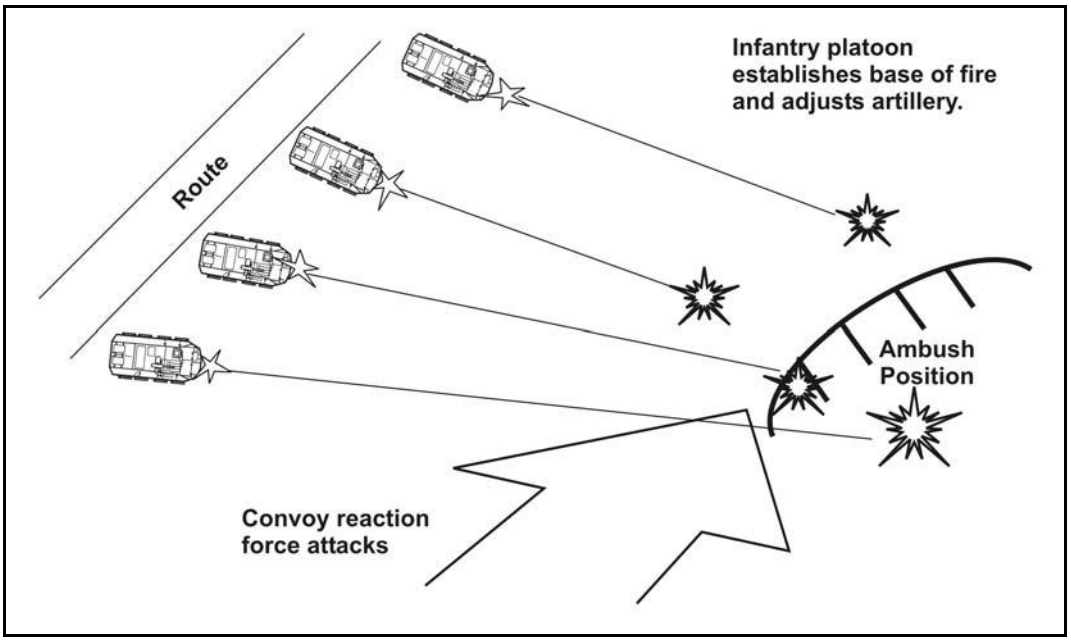


Figure 7-9. Escort suppresses ambush for reaction force attack.

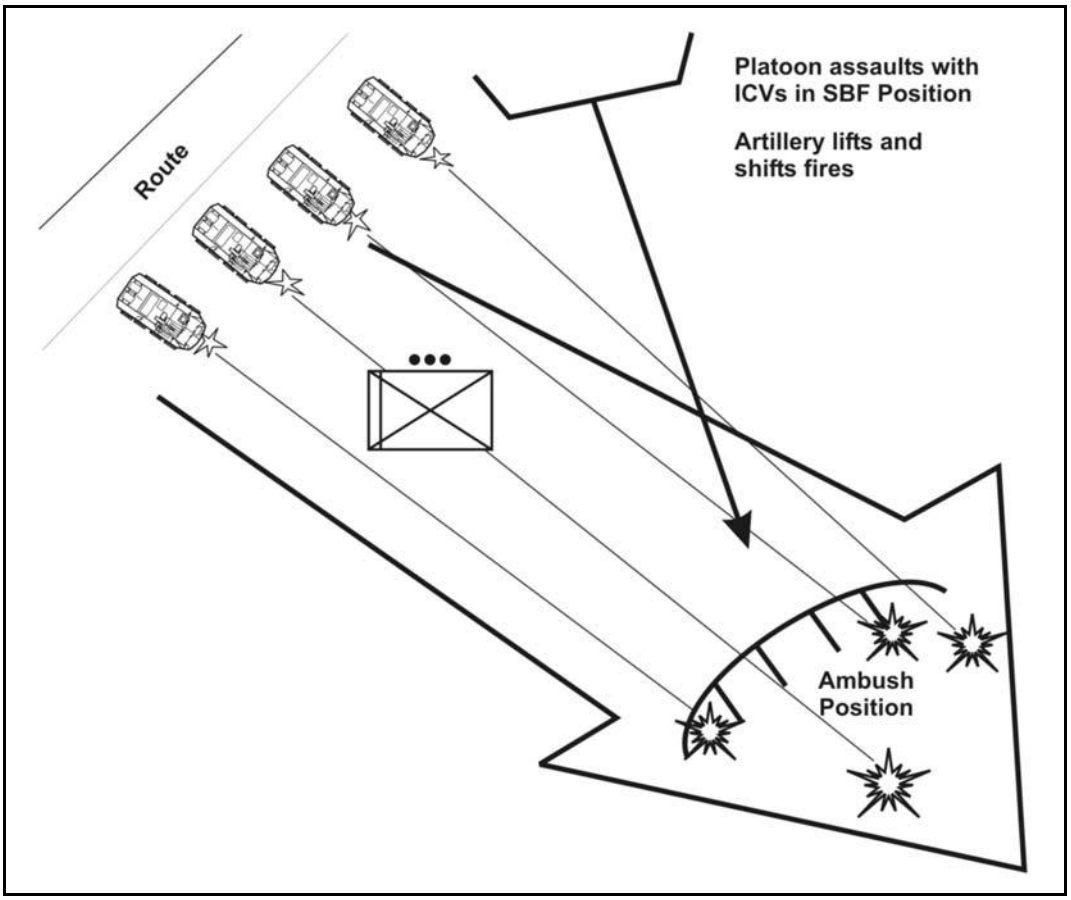


Figure 7-10. Escort assaults ambush.

g. **Actions at an Obstacle.** Obstacles are a major impediment to convoys. The purpose of reconnaissance ahead of a convoy is to identify obstacles and either breach them or find bypasses. In some cases the enemy or its obstacles may avoid detection by the reconnaissance element.

(1) Obstacles can be used to harass the convoy by delaying it. If the terrain is favorable, the obstacle may be able to stop the convoy altogether. Obstacles may canalize or stop the convoy to set up an enemy ambush. When an obstacle is identified, the convoy escort faces two problems: reducing or bypassing the obstacle and maintaining protection for the convoy. Security becomes critical, and actions at the obstacle must be accomplished very quickly. The convoy commander must assume that the enemy is covering the obstacle with direct- and indirect-fire weapon systems.

(2) To reduce the time the convoy is halted and to reduce its vulnerability, the following actions should occur when the convoy escort encounters a point-type obstacle:

- The lead element identifies the obstacle and directs the convoy to make a short halt and establish security. The convoy escort overwatches the obstacle (Figure 7-11) and requests the breach element force to move forward.
- The convoy escort maintains 360-degree security of the convoy and provides overwatch as the breach force reconnoiters the obstacle in search of a bypass.

(3) Once all reconnaissance is complete, the convoy commander determines which of the following courses of action he will take:

- Bypass the obstacle.
- Breach the obstacle with assets on hand.
- Breach the obstacle with reinforcing assets.

(4) The convoy security commander relays a SPOTREP and requests support by combat reaction forces, engineer assets (if they are not part of the convoy), and aerial reconnaissance elements. Artillery units are alerted to prepare to provide fire support.

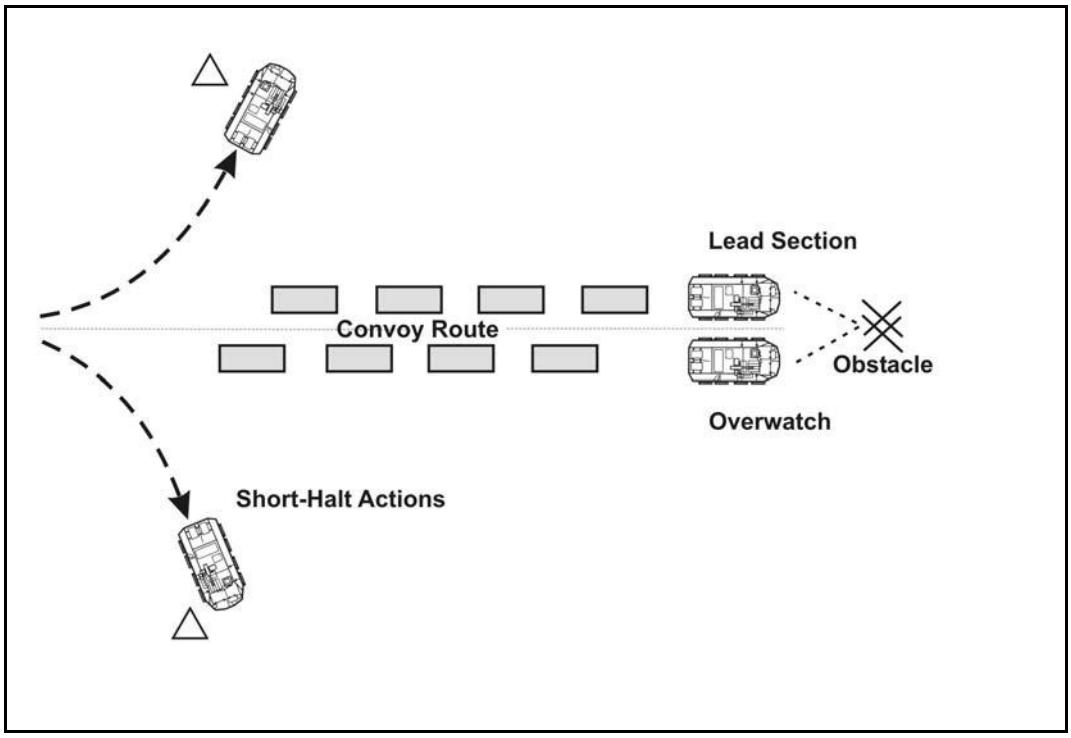


Figure 7-11. Convoy escort overwatches an obstacle.

h. **Actions During Halts.** During a short halt, the convoy escort remains alert for possible enemy activity. If the halt is for any reason other than an obstacle, the following actions should be taken:

- The convoy commander signals the short halt and transmits the order via tactical radio. All vehicles in the convoy assume a herringbone formation.
- If possible, escort vehicles are positioned up to 100 meters beyond the convoy vehicles that are just clear of the route (Figure 7-12, page 7-24). Escort vehicles remain at the ready, dismount the rifles squads as required, and establish local security.
- When the order is given to move out, convoy vehicles reestablish movement formation, leaving space for escort vehicles (Figure 7-13, page 7-24). Once the convoy is in column, local security elements (if used) return to their vehicles, and the escort vehicles rejoin the column (Figure 7-14, page 7-25).
- The convoy resumes movement.

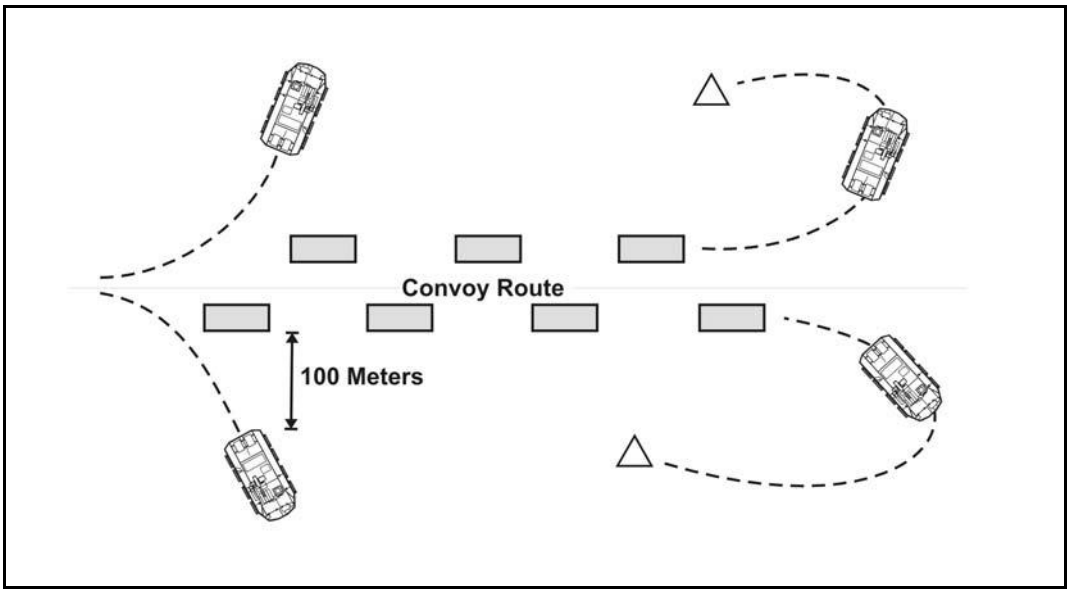


Figure 7-12. Convoy assumes herringbone formation.

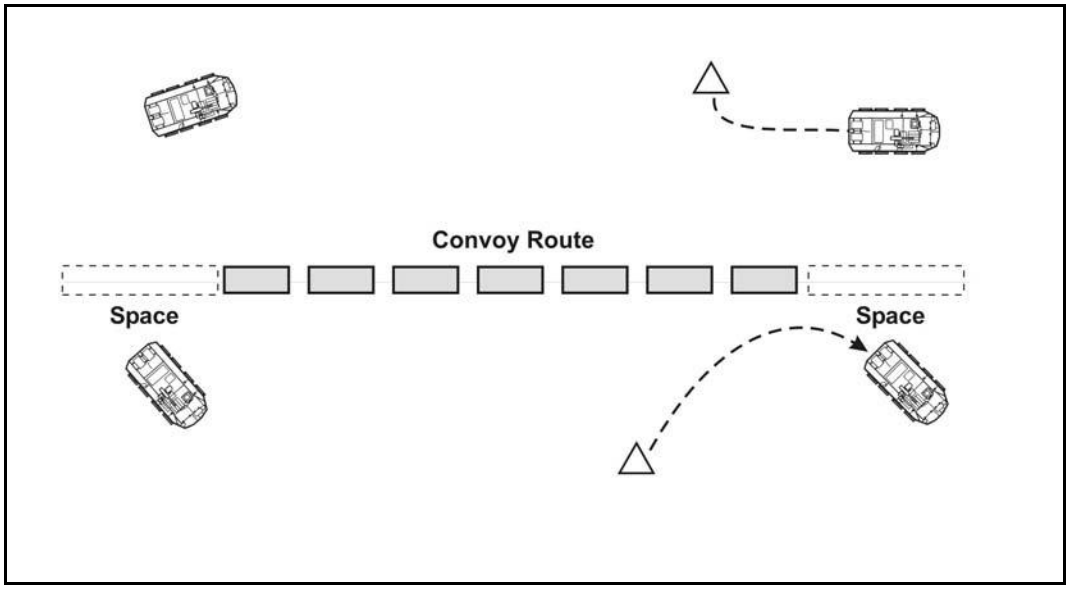


Figure 7-13. Convoy moves back into column formation.

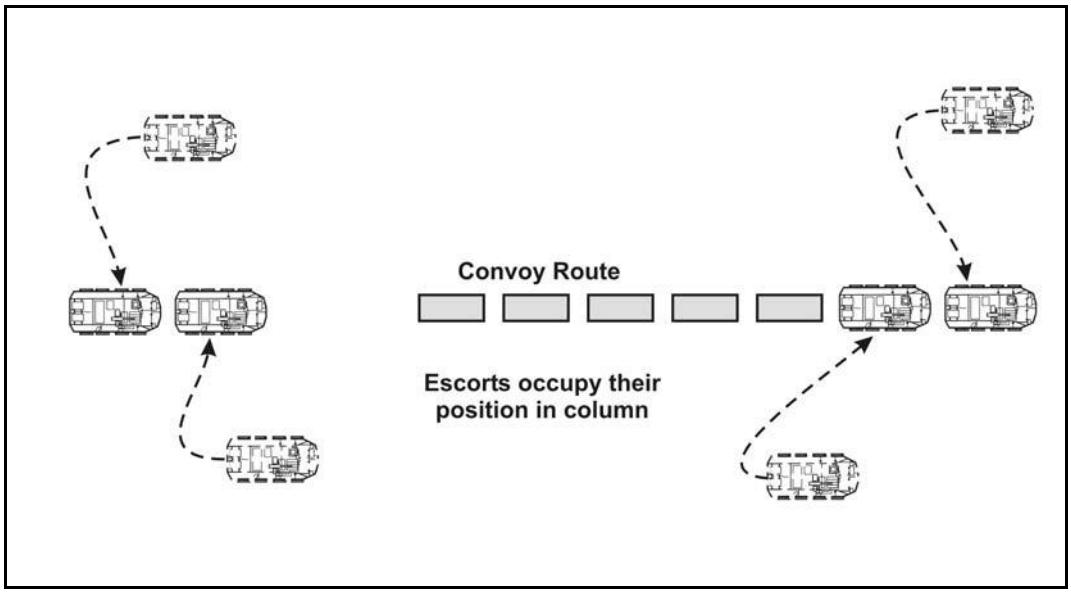


Figure 7-14. Convoy escort vehicles rejoin column.

7-11. CHECKPOINTS, ROADBLOCKS, AND OBSERVATION POSTS

Construction and manning of checkpoints, roadblocks, and observation points are high-frequency tasks for an infantry company and subordinate elements when they must establish area security during stability operations.

- Checkpoints. A CP is a predetermined point used as a means of controlling movement, such as a place where military police check vehicular or pedestrian traffic, to enforce circulation control measures and other laws, orders, and regulations. (Figure 7-15, page 7-27, shows an example of a deliberate CP.)
- Roadblocks. A roadblock is used to limit the movement of vehicles along a route or to close access to certain areas or roads. Checkpoints and roadblocks can be either deliberate or hasty with the primary difference being the extent of planning and preparation conducted by the establishing force.
- Observation Posts. An OP is a position from which military observations are made or fire directed and adjusted and which has appropriate communications. They are both overt (conspicuously visible, unlike their tactical counterparts) and deliberately constructed. Observation posts are similar in construction to bunkers and are supported by fighting positions, barriers, and patrols.

a. **Purposes.** The platoon may be directed to establish a CP, roadblock, or OP for the following reasons.

- To show a military presence to all parties and to the population in the area.
- To survey all activity in the terrain, along roads, and in inhabited areas.
- To check and or inspect and register all personnel and vehicles in and out of the controlled area.
- To survey airspace, coastal areas, airfields, cease-fire lines, and borders.
- To deter illegal movement.
- To create an instant roadblock.
- To control movement into the area of operations or on a specific route.

- To prevent smuggling of contraband.
- To enforce the terms of peace agreements.
- To ensure proper use of routes by both civilian and military vehicles.

b. **Planning and Establishing.** The layout, construction, and manning of CPs, roadblocks, and OPs should reflect the factors of METT-TC, especially the time available for emplacing them. The layout of a deliberate CP can be found in FM 3-90.1 (71-1). The following procedures and considerations may apply:

- Position the CP or roadblock where it is visible and where traffic cannot turn back, get off the road, or bypass without being observed.
- Position a combat vehicle off the road, but within sight, to deter resistance to soldiers manning the CP. The vehicle should be in a hull-down position and protected by local security. It must be able to engage vehicles attempting to break through or bypass the CP.
- Place obstacles in the road to slow or canalize traffic into the search area.
- Establish a reserve.
- Establish wire communications in the CP area to connect the CP bunker, the combat vehicle, the search area, security forces, the rest area, and any other elements involved in the operation.
- Designate the search area. If possible, it should be below ground to provide protection against such incidents as the explosion of a booby-trapped vehicle. Establish a parking area adjacent to the search area.
- If applicable, CP personnel should include linguists.
- Establish an early warning system around the perimeter of the OP (trip flares, empty cans, dry branches, and so on).
- Prepare shelters and defensive positions.

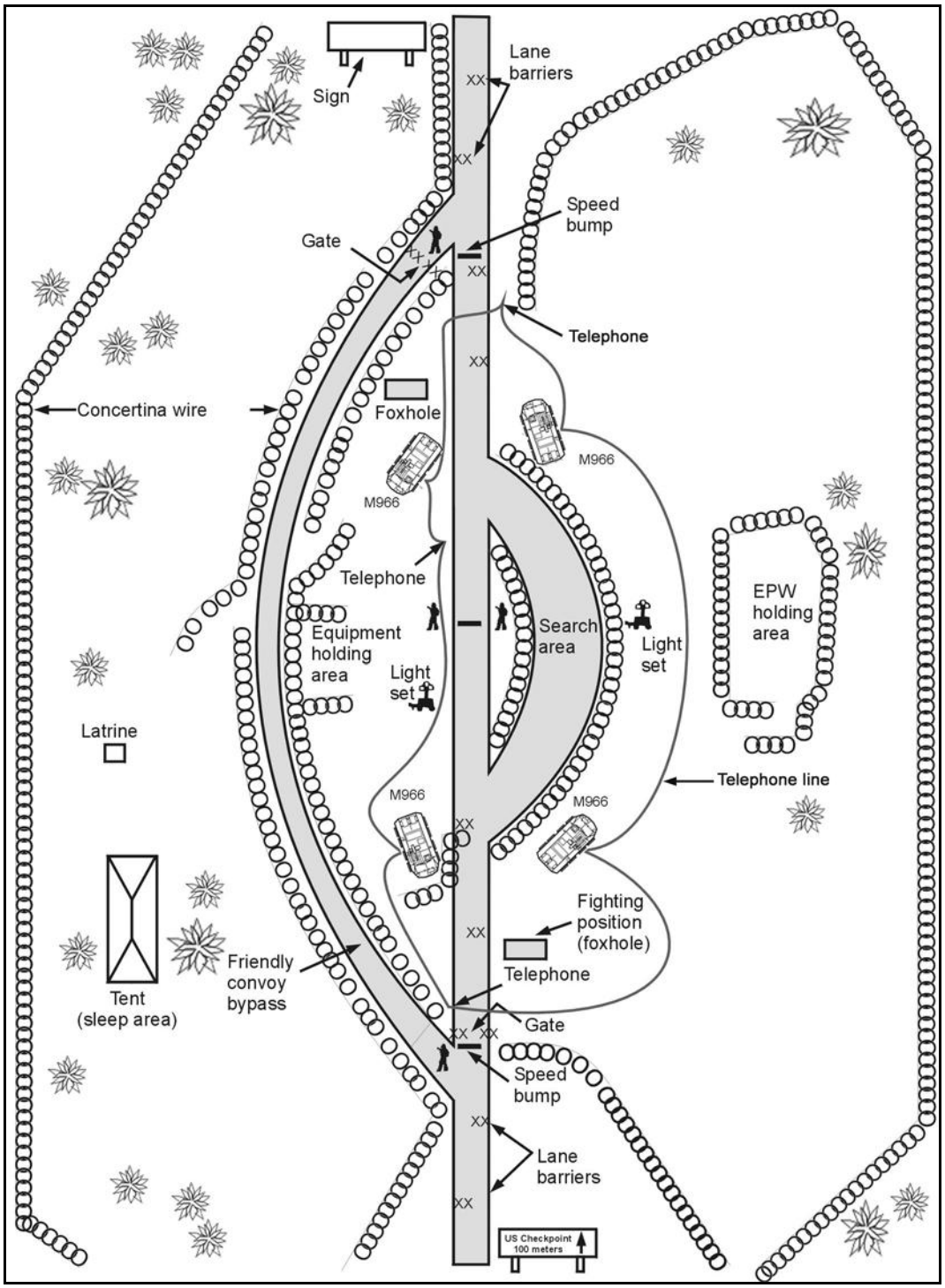


Figure 7-15. Example of a deliberate CP.

c. **Manning Observation Posts and Checkpoints.** When manning OPs and CPs proper order and a systematic approach must be emphasized. Personnel must behave so that no misunderstanding occurs. The personnel manning the CP must be in complete control of the surrounding terrain.

(1) Although the OP is usually manned on a 24-hour basis, it may be manned only by day or night. During darkness, at least two persons must be in the OP position--one observes while the other is resting. In remote areas, or if the situation in the area is tense, more personnel man the OP for security and observation.

(2) A minimum of two soldiers should man the CP, depending on traffic and the general situation. One soldier examines people and vehicles; the other soldier covers the area where people and vehicles are checked. The soldier covering the other area is armed and has easy access to radio and telephone. If more soldiers are manning the CP, one of them should be ready to set up obstacles to stop vehicles trying to force their way through the CP.

d. **Communications.** All OPs and CPs are connected to their unit or directly to the battalion operations center by radio and telephone. A spare radio and batteries should be supplied to the OP and CP, especially to remote OPs located in dangerous areas. Radio and telephone checks are carried out at least twice every 24 hours (three times is recommended). Special code words must be prepared for use in certain situations. Conversation must be coded. Reserve frequencies must be available. OPs and CPs of great operational value may be connected by direct landline to ensure rapid coordination in urgent situations.

e. **Equipment.** Many items are used to reinforce a roadblock, CP, or OP.

(1) Some of the recommended equipment includes:

- Barrels filled with sand, water, or heavy concrete blocks (emplaced to slow and canalize vehicles).
- Concertina wire (emplaced to control movement around the CP).
- Secure facilities for radio and wire communications with the controlling headquarters.
- First aid kit or a medic if available.
- Sandbags for defensive positions.
- Bunker construction material.
- Binoculars, night vision devices, and or flashlights.
- Long-handled mirrors (used to inspect vehicle undercarriages).
- Signs stating the speed limit into and out of the CP. (The text of these signs must be written in English and the local language.)

(2) Elements manning a deliberate CP may require access to specialized equipment such as:

- Floodlights.
- Duty log.
- Flag and unit sign.
- Barrier pole that can be raised and lowered.
- Generators with electric wire.

f. **Control.** During periods in which the civilian administration is not functioning, refugees will be traveling routinely throughout the area. All soldiers participating in these operations must fully understand the procedures for appropriately identifying personnel and for controlling personnel and vehicles moving through their AO.

(1) ***Personnel Identification.*** People who have permission to enter a sector are regulated by special instructions to the patrol conducting the operation. Often local and civilian employees, mayors, and chiefs of tribes in villages in the AO are given special

identification (ID) cards and may pass without being checked. These special ID cards must be registered. The primary reasons for checking people will be for identification and to prevent illegal items being brought into the AO through the CP. Personnel must identify themselves with an ID card, passport, and so on. Such ID cards are written in the local language. Examples of different ID cards must be kept in the CP.

(2) ***Personnel Control***. Personnel control is conducted in different ways. Soldiers manning the CP should watch for people acting strangely or with bulging clothing. If there is a danger of car bombs, special attention should be paid to cars containing only one person. When conducting body searches, soldiers should feel along clothes and not just pat them. Special attention must be paid to the lower parts of the back and from the shoes up to the knees. Armpits also must be checked. The wide trousers used by some cultures should be carefully examined. Soldiers also should check boots and hats.

(3) ***Checking Women and Clerical Personnel.*** Making a body search of women and clerical personnel is often difficult in Moslem countries and may lead to strong reactions. The commander must thoroughly discuss this with mayors and other leaders, and the procedure used must be consistent with agreements and treaties. Women usually are only checked with a metal detector. Elderly women often may remain in the vehicle during inspection of a car. If there is a suspicion that the "rules" are being misused, then other and better checks must be made. The battalion commander makes these decisions

CHAPTER 8
COMBAT SUPPORT

The battalion commander is responsible for effective combat support. Mortars, artillery, air defense artillery, combat engineers, and aviation assets provide CS for the platoon. The battalion commander decides how to employ assets based on his estimate of the situation. He attaches supporting elements to the company, or he places CS elements under operational control, in direct support (DS), or in general support (GS) of the company. The company commander may attach supporting elements to the platoon. The platoon leader must know the employment considerations and abilities of all CS assets.

Section I. FIRE SUPPORT

Fire support is the collective and coordinated use of indirect fire weapons and armed aircraft in support of the battle plan. Fire support assets include mortars, field artillery cannons and rockets, Army aviation, close air support, and naval surface fire support. Support can either be lethal or non-lethal (smoke or illumination). Indirect fire support procedures do not change significantly with the ICV-equipped infantry platoon except that they should be more responsive. Additionally, the mortars organic to the company provide the earliest and most responsive fires to the platoon.

8-1. FIRE PLANNING

Digitization improves company and platoon ability to conduct fire support planning. The platoon leader and FO receive the company indirect fire plan on their CTD or LWS as soon as the company FSO enters it into the database on his hand-held terminal unit (HTU). No longer must the platoon leader or FO wait until the final OPORD is issued to receive the fire support overlay.

a. The platoon leader and or platoon FO call up the operational graphics and the latest enemy situational graphics to aid with their planning, enter the platoon's proposed targets into the HTU, and forward them to the *company* FSO's HTU. The company FSO reviews the proposed targets with the company commander. The company commander accepts, rejects, or adjusts the platoon leader's proposed targets.

(1) If the company commander accepts or adjusts the targets, he incorporates them into the company fire plan. The *company* FSO uses his HTU to forward them to the *battalion* FSO's AFATDS as part of the company fire plan.

(2) It is the FSO's responsibility to clean up the digital fire support graphics. The company FSO ensures only valid targets remain on the digital fire support graphics.

b. Once the battalion and company finalize the targets, the company FSO puts out a net call over his CTD or LWS to inform the platoon leaders and platoon FOs that the fire support graphics are finalized. All leaders must review the digital fire support graphics on their CTD or LWS so they are familiar with any changes and to ensure graphics are updated for subsequent fire missions

c. Fire support planning is conducted concurrently with maneuver planning at all levels. Companies and battalions typically use top-down fire support planning with bottom-up refinement of the plans. The company commander develops guidance for fire support in

terms of task and purpose. In turn, the fire support planner determines the method to be used in accomplishing each task. He also specifies an end state that quantifies task accomplishment.

d. Individual fire support assets incorporate assigned tasks into their fire plans. Units tasked to initiate fires must refine and rehearse their assigned task. This means the platoon leader refines the platoon's assigned portion of the company 's fire support plan to ensure the designated targets will achieve the intended purpose. He also conducts rehearsals to prepare for the mission and, as specified in the plan, directs the platoon to execute its assigned targets.

8-2. LINKING FIRE SUPPORT TASKS AND MANEUVER PURPOSE

A clearly defined maneuver purpose enables the maneuver commander to articulate precisely how he wants indirect fire to affect the enemy during different portions of the battle. This in turn allows fire support planners to develop an effective plan to support the intended purpose. They can determine each required task (in terms of effects on target), the best method for accomplishing each task (in terms of a fire support asset and its fire capabilities), and a means of quantifying accomplishment.

A carefully developed method of fire is equally valuable during execution of the fire support mission; it assists not only the firing elements but also the observers responsible for monitoring the effects of the indirect fires. With a clear understanding of the intended effects, fire support assets and observers can work together effectively, planning and adjusting fires as necessary to achieve the desired effects on the enemy. The following paragraphs describe several types of targeting effects associated with fire support tasks.

a. **Final Protective Fire Planning.** Final protective fires are designed to create a final barrier, or "steel curtain," to prevent a dismounted enemy from moving across defensive lines. They are fires of last resort and take priority over all other fires. The employment of FPFs presents several potential problems. They are linear fires, with coverage dependent on the firing sheaf of the fire support asset(s). In addition, while FPFs may create a barrier against penetration by enemy infantry, armored vehicles may simply button up and move through the fires into the friendly defensive position. FPFs are planned targets with a clearly defined purpose. FPF planning is normally delegated to the company that is allocated the support.

b. **Target Refinement.** The platoon leader is responsible for employing indirect fires in his zone or sector. The most critical aspect of this responsibility is target refinement, in which he makes changes to the fire support plan to ensure targets accomplish the company and or battalion commander's intended battlefield purpose. Rather than merely executing targets without regard to the actual enemy situation, the platoon leader must be ready to support the commander's intent by adjusting existing targets or nominating new targets that will allow engagement of specific enemy forces.

c. **Fire Support Preparation.** As noted, although the company and battalion commanders establish target tasks and purposes and allocate appropriate fire support assets, the platoon leader must ensure execution of assigned targets. Successful execution demands detailed preparation that focuses on areas covered in the following paragraphs.

(1) ***Observation Plan.*** In developing the observation plan, the platoon leader must ensure both a primary observer and an alternate observer for redundancy to cover all targets. The

plan must provide clear, precise guidance for the observers. Positioning is perhaps the most important aspect of the plan.

(a) Observers' positions must allow them to see the trigger for initiating fires as well as the target area and the enemy forces on which the target is oriented. The platoon leader also must consider other aspects of observer capabilities, including available equipment, communication, and security of the teams.

(b) In addition to providing the specific guidance outlined in the observation plan, the platoon leader must ensure each observer understands the target task and the purpose. For example, observers must understand that once the first round impacts, the original target location is of no consequence. They must orient on the targeted enemy force to ensure that fires achieve the intended battlefield purpose.

(2) ***Rehearsals***. The platoon leader is responsible for involving his observers in platoon- and company-level rehearsals. He also should use rehearsals to ensure the platoon's primary and backup communications systems adequately support the plan.

(3) ***Target Adjustment.*** In the defense, the commander should confirm target location by adjusting fires as part of engagement area development.

Section II. INDIRECT FIRE SUPPORT

The main indirect fire support available to the platoon includes mortars and field artillery (Table 8-1, page 8-4). This section discusses the responsibilities, considerations, and procedures for employing all the indirect-fire assets supporting the platoon. (FM 6-30 discusses in detail how to call for and adjust indirect fires.)

CALIBER:	60-mm	81-mm	81-mm (improved)	120-mm	105-mm	155-mm	155-mm
MODEL:	M224	M29A1	M252	M285	M119	M198	M109A6
MAX RANGE (HE)(m):	3,490	4,595	5,608	7,200	14,000	18,100	18,100
PLANNING RANGE (m):					11,500	14,600	14,600
PROJECTILE:	HE, WP, ILLUM,	HE, WP, ILLUM,	HE, WP, ILLUM, RP	HE, SMK, ILLUM,	HE M760 ILLUM, HEP-T, APICM, CHEM, RAP	HE, WP, ILLUM, SMK, CHEM, NUC, RAP, FASCAM, CPHD, AP/ DPICM	HE, WP, ILLUM, SMK, CHEM, NUC, RAP, FASCAM, CPHD, AP/ DPICM
MAX RATE OF FIRE:	30 RPM FOR 1 MIN	30 RPM FOR 1 MIN	30 RPM FOR 2 MIN	15 RPM FOR 3 MIN	6 RPM FOR 1 MIN	4 RPM FOR 1 MIN	4 RPM FOR 1 MIN
SUSTAINED RATE OF FIRE (rd/min):	20	8	15	5	3	2	2
MINIMUM RANGE (m):	70	70	83	180	DIRECT FIRE	DIRECT FIRE	DIRECT FIRE
FUZES:	MO	PD, VT, TIME, DLY	PD, VT, TIME, DLY	MO	PD, VT, MTSQ, CP, MT, DLY	PD, VT, CP, MT, MTSQ, DLY	PD, VT, CP, MT, MTSQ, DLY

LEGEND:

AP - Armor Piercing
APICM - Antipersonnel Improved Conventional Munitions
CHEM - Chemical
CP - Concrete Piercing
CPHD - Copperhead
DLY - Delay
DPICM - Dual Purpose Improved Conventional Munitions
FASCAM - Family of Scatterable Mines
HE - High Explosive
HEP-T - High Explosive Plastic Tracer
ILLUM - Illumination
MIN - Minute
MO - Multioption - VT, PD, DLY
MT - Mechanical Time
MTSQ - Mechanical Time Super Quick
NUC - Nuclear
PD - Point Detonating
RAP - Rocket Assisted Projectile
RD - Round
RP - Red Phosphorus
RPM - Rounds per Minute
SMK - Smoke
TIME - Adjustable Time Delay
VT - Variable Time
WP - White Phosphorus

Table 8-1. Indirect fire weapons capabilities.

8-3. FIRE PLANNING PROCESS

The fire-planning process begins at higher echelons and continues down through the company FSOs and other key personnel, to include the platoon leader and FO. The fire support plan must support the maneuver plan; it should not be planned separately. The effectiveness of this process depends on continuous interaction and feedback from the lower echelons upward. Key functions include refinement and confirmation of target locations and execution of events. Specific responsibilities include those listed on the fire support execution matrix. The matrix shows the leader who bears responsibility for each target, when the responsible party should execute the target, and what means (artillery, mortars, CAS) he or they should use. Figure 8-1 shows an example of a company fire support matrix. It shows maneuver elements along the left side and the different phases of the mission along the top. It shows the platoon's role throughout the operation. The preparer should always include the platoon as a subunit in the matrix.

	AA	LD	CP7	OBJ GREEN
FSO	INITIAL PREP / 1ST PLT	FIRE CA 3012 CFL CHUCK / 2D PLT	FIRE C1A GROUP / 3D PLT	ACS (CAS) 1400Z
1ST PLT	FA FPF	CFL CHUCK		MORTAR FPF
2D PLT	FA FPF	MORT PRI TGT CA 3014 CFL CHUCK		FA FPF
3D PLT	MORTAR FPF	CFL CHUCK	MORT PRI TGT CA 3017 / 2D PLT	FA FPF

Figure 8-1. Example of a company fire support matrix.

8-4. CALL FOR FIRE

The battalion fire support execution matrix may require the platoon to call for and adjust its own indirect fire support. The matrix also might designate platoon targets. The platoon uses these preplanned artillery targets to call for and adjust indirect fire. Either a soldier or an FO can prepare and request a call for fire. However, to receive immediate indirect fire support, the observer must plan targets and follow proper call-for-fire procedures. If available, he should use a GPS and laser range finder. The call for fire must include certain elements and might include others.

a. **Required Elements.** Calls for fire must include--

(1) ***Observer Identification and Warning Order***. Observer identification tells the fire direction center (FDC) who is calling. It also clears the net for the duration of the call. The

warning order tells the FDC the type of mission and the method of locating the target. The types of indirect fire missions are as follows:

- Adjust fire--Use this command when uncertain of target location.
- Fire for effect--Use this command for rounds on target; no adjustment.
- Suppress--Use this command to obtain fire quickly.
- Immediate suppression--Use this command to indicate the platoon is already being engaged by the enemy; must give target identification.

(2) ***Target Location Methods.*** The observer sends the target location as six digits (letters and numbers). Before the first adjusting rounds are fired, the observer gives the direction in mils. The FDC must know the observer's exact location. The observer sends observer-target (OT) direction (to the nearest 10 mils) from his position to the target. He specifies which target location method to use:

- Grid (Figure 8-2).
- Polar (Figure 8-3).
- Shift from a known point (Figure 8-4 and Figure 8-5, page 8-8).

INITIAL FIRE REQUEST	
Observer	FDC
Z57, THIS IS 271, ADJUST FIRE, OVER.	THIS IS Z57, ADJUST FIRE, OUT.
GRID NK180513, OVER.	GRID NK180513, OUT.
INFANTRY PLATOON IN THE OPEN, ICM IN EFFECT, OVER.	INFANTRY PLATOON IN THE OPEN, ICM IN EFFECT, OVER.
MESSAGE TO OBSERVER	
FDC	Observer
Z, 2 ROUNDS, TARGET, AF1027, OUT.	Z, 2 ROUNDS, TARGET IS AF1027, OVER.
DIRECTION 1680, OUT.	DIRECTION 1680, OVER.
NOTE: Send direction before or with the first subsequent correction.	

Figure 8-2. Example fire mission (grid).

INITIAL FIRE REQUEST	
Observer	FDC
Z56, THIS IS Z31, FIRE FOR EFFECT, POLAR. OVER.	THIS IS Z56, FIRE FOR EFFECT, POLAR, OUT.
DIRECTION 4520, DISTANCE 2300, DOWN 35. OVER.	DIRECTION 4520, DISTANCE 2300, DOWN 35, OUT.
INFANTRY COMPANY IN OPEN, ICM, OVER.	INFANTRY COMPANY IN OPEN, ICM, OVER.
MESSAGE TO OBSERVER	
FDC	Observer
Y, VT, 3 ROUNDS, TARGET, AF2036, OUT.	Y, VT, 3 ROUNDS, TARGET AF2036, OVER.

Figure 8-3. Example fire mission (polar plot).

INITIAL FIRE REQUEST	
Observer	FDC
H66 THIS IS H44, ADJUST FIRE, SHIFT AA7733, OVER.	THIS IS H66, ADJUST FIRE, SHIFT AA7733, OUT.
DIRECTION 5210, LEFT 380, ADD 400, DOWN 35, OVER.	DIRECTION 5210, LEFT 380, ADD 400, DOWN 35, OUT
COMBAT OP IN OPEN, ICM IN EFFECT, OVER.	COMBAT OP IN OPEN, ICM IN EFFECT, OUT.
MESSAGE TO OBSERVER	
Observer	FDC
H, 1 ROUND, TARGET AA7742, OVER.	H, 1 ROUND, TARGET, AA7742, OUT.
NOTE: Shift from a known point is performed when the observer and FDC have a common known point. The observer sends OT line, then determines the lateral and range shifts.	

Figure 8-4. Example fire mission (shift from a known point).

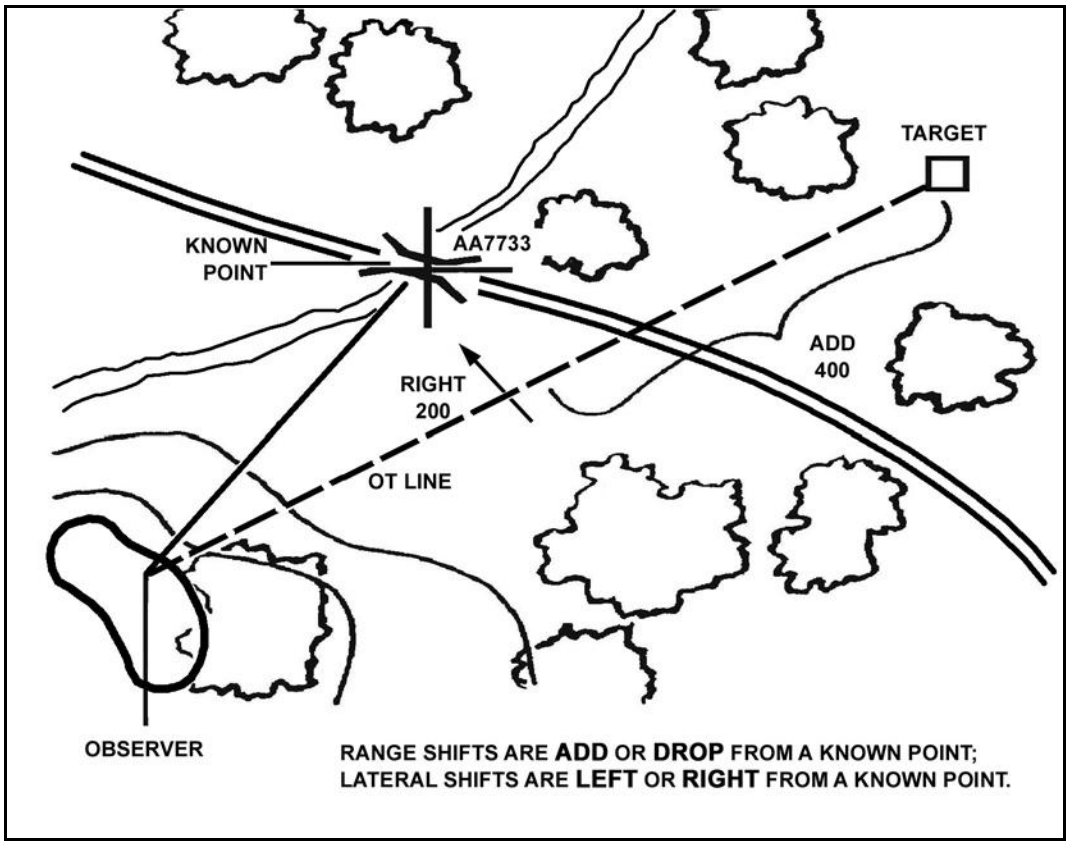


Figure 8-5. Lateral and range shifts from a known point.

(3) ***Target Description.*** Give a brief description of the target using the acronym "SNAP":

- Size and or Shape.
- Nature and or Nomenclature.
- Activity.
- Protection and or Posture.

b. **Optional Elements.** A call for fire also might include the following information:

(1) ***Method of Engagement***. The method of engagement consists of danger-close (if applicable) and distribution, ammunition, and trajectory (DAT).

(2) ***Method of Fire and Control.*** The method of fire and control indicates the desired manner of attacking the target, whether the observer wants to control the time or delivery of fire, and whether he can observe the target. The observer announces methods of fire and control:

- At My Command--fire at observer's command.
- When Ready--standard method of fire control.
- Cannot Observe--fire will not be observed.
- Time on Target--rounds land at specified time.
- Continuous Illumination--FDC determines when to fire.
- Coordinated Illumination--observer determines when to fire.
- Cease Loading--used when two or more rounds are in effect (causes loader to stop loading).

- Check Firing--temporary halt in firing.
- Continuous Fire--will continue to fire unless told to stop.
- Repeat--will repeat last data fired by the firing unit.

(3) ***Refinement and End of Mission.*** The observer should observe the results of the fire for effect (FFE) and then take whatever action is necessary to complete the mission:

- Correct any adjustments.
- Record as target.
- Report battle damage assessment.

(4) ***Danger-Close.*** Danger-close information is included when applicable.

- FA and mortars--Danger-close target is within 600 meters of friendly troops.
- Naval gunfire--Danger-close target is within 750 meters when using 5-inch or smaller guns (1,000 meters for larger naval guns).
- Method of adjustment--During danger-close missions, the FO uses only the creeping method of adjustment (corrections of no more than 100 meters).

8-5. ADJUST FIRE

Once he calls for fire, the observer adjusts the fire onto the target. If he has accurately located the target, he requests fire for effect. If the observer cannot locate the target (because of deceptive terrain, lack of identifiable terrain features, poor visibility, or an inaccurate map), he adjusts the impact point of the rounds. One artillery piece or mortar adjusts fire. The observer chooses an adjusting point: for a destruction mission (precision fire), the target is the adjusting point; for an area target (area fire), the observer picks a well-defined adjusting point close to the center. The observer spots the first and each successive adjusting round, and he sends range and deviation corrections back to the FDC until rounds hit the target. The observer spots by relating the round's point of impact to the adjusting point. (See FM 6-30 for a more detailed discussion of adjusting mortar and artillery fire.)

a. **Deviation Spotting.** Deviation (left or right) spotting involves measuring the horizontal angle (in mils) between the burst and the adjusting point (Figure 8-6, page 8-10). A burst to the right (left) of the target is spotted as "(so many) mils right (left)." The observer uses an angle-measuring device to determine deviation. He might use the mil scale on his binoculars (Figure 8-7, page 8-10) or his fingers and hand (Figure 8-8, page 8-11).

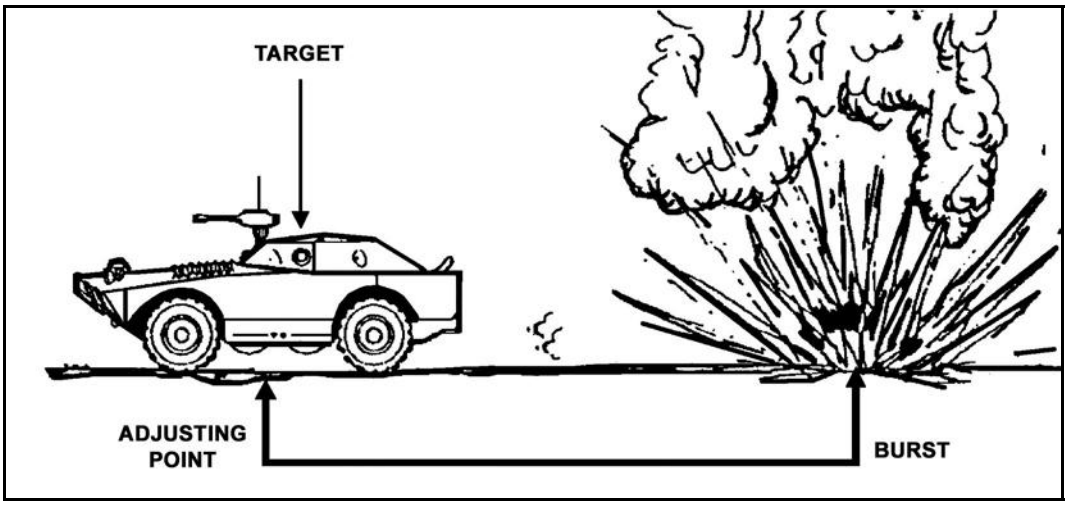


Figure 8-6. Deviation spotting.

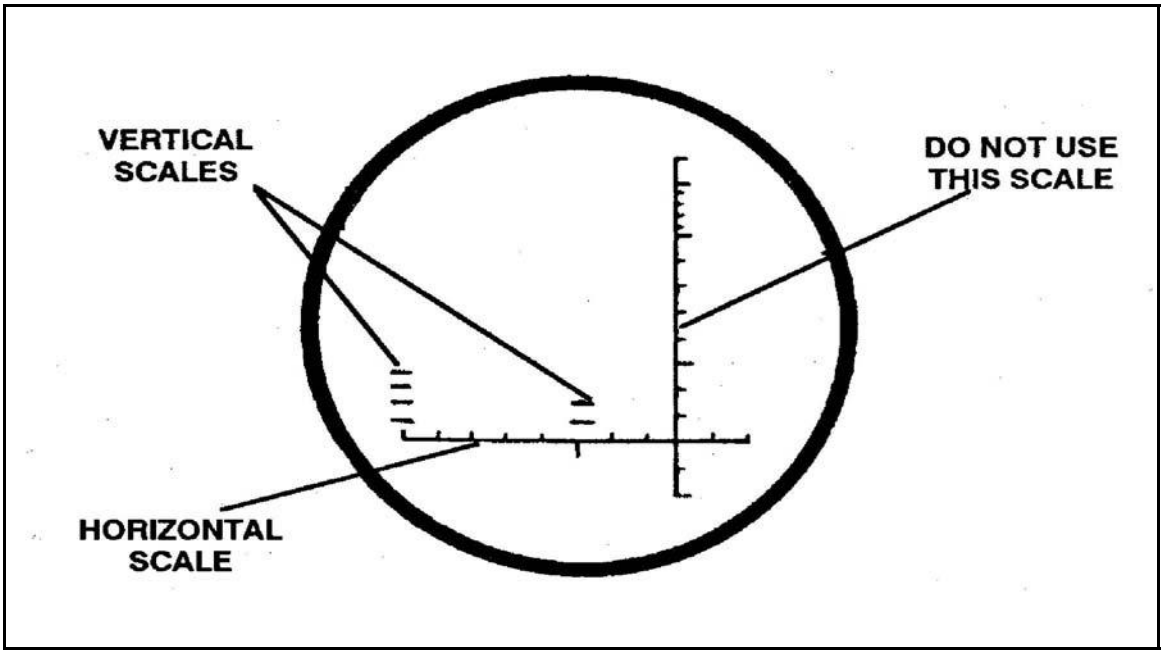


Figure 8-7. Mil scale on M17 binoculars.

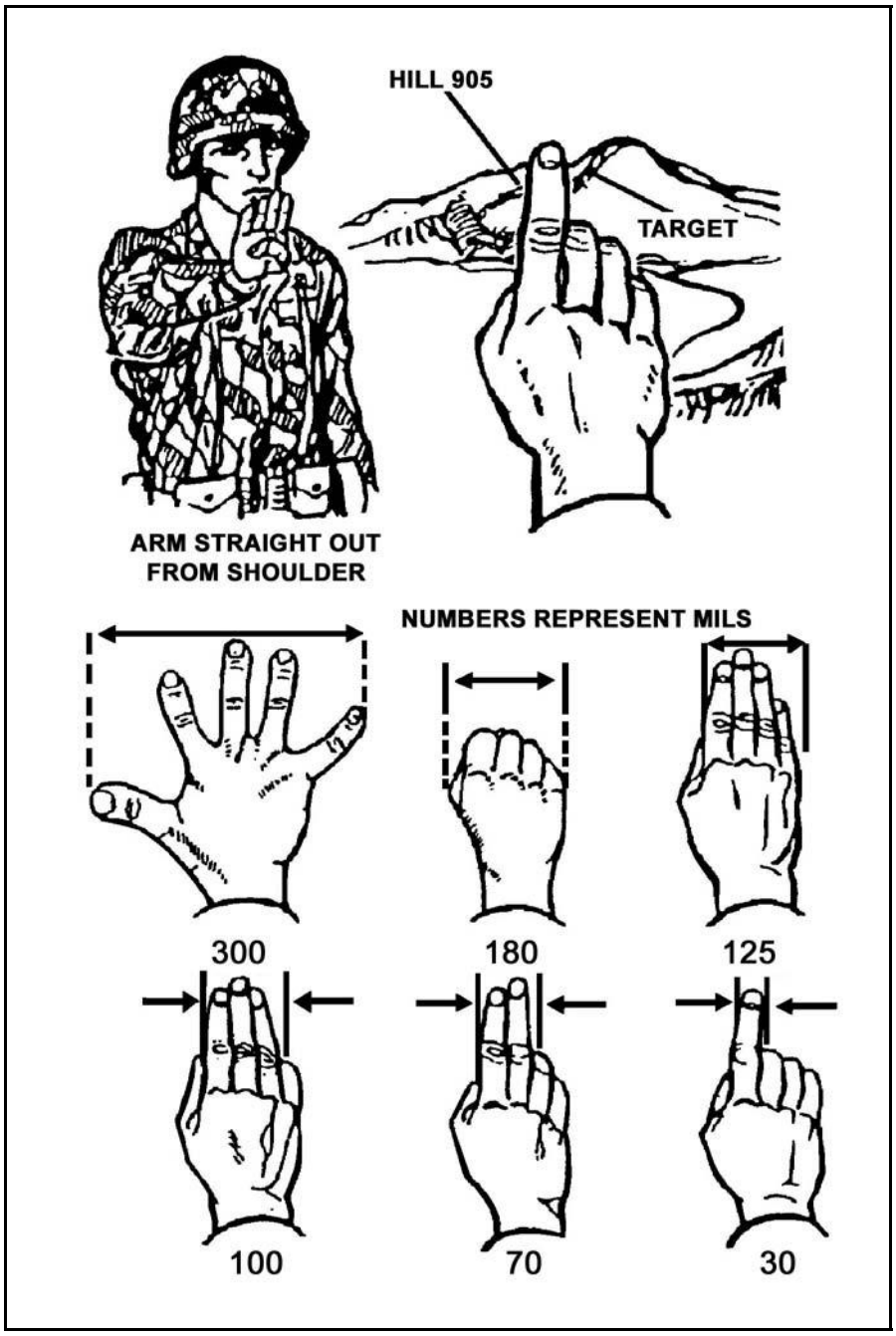


Figure 8-8. Hand and fingers used to determine deviation.

(1) On binoculars, the horizontal scale is divided into 10-mil increments and is used for measuring horizontal angles. The vertical scales in the center and on the left of the reticle are divided into 5-mil increments and are used for measuring vertical angles. The scale on the right, if present, is no longer used.

(2) A burst on the OT line is spotted as "line." Deviation (left or right) should be measured to the nearest 5 mils for area targets, with measurements taken from the center of the burst. Deviation for a destruction mission (precision fire) is estimated to the nearest mil.

Figure 8-9 shows the adjusting point at the center of the binocular horizontal scale.

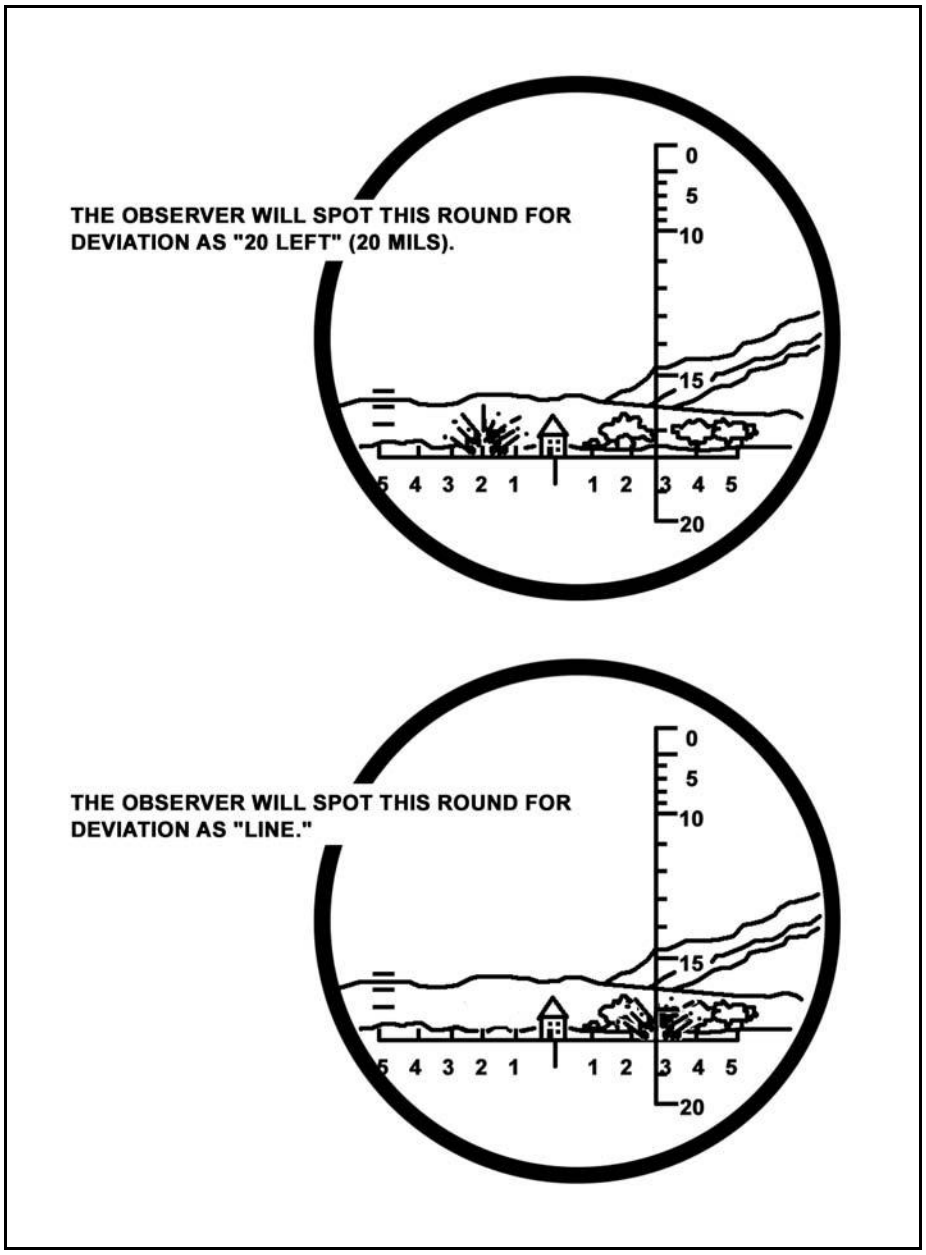


Figure 8-9. Deviation spotting with binoculars [2nd spotting is the same as the 1st]

b. **Deviation Correction.** Deviation correction is the distance (in meters) the burst must be moved left or right to be on line between the observer and the target. Once the mil deviation has been determined, the observer converts it into a deviation correction (in meters). He sends it to the FDC either when sending the range correction for the next adjusting round or when calling for fire for effect.

(1) The deviation correction is determined by multiplying the observed deviation in mils by the distance from the observer to the target in thousands of meters (the OT factor). The

result is expressed to the nearest 10 meters (see Example 1 below). A minor deviation correction (10 to 20 meters) should be made in adjustment of precision fire.

(2) In adjustment of area fire, small deviation corrections (20 meters or less) can be ignored except when a small change determines a definite range spotting. Throughout the adjustment, the observer moves the adjusting rounds close enough to the OT line so that range spotting is accurate.

(3) If the OT distance is greater than 1,000 meters, round to the nearest thousand and express it in thousands of meters (Example 2). If the OT distance is less than 1,000 meters, round to nearest 100 meters and express it as a decimal in thousands of meters (Example 3).

EXAMPLE 1:
Observer deviation 20 mils
OT distance 2,000 meters
OT factor 2
Observer deviation x OT factor = deviation correction.
20 x 2 = 40 meters

EXAMPLE 2:
OT distance 4,200 meters—OT factor 4.0
OT distance 2,700 meters—OT factor 3.0

EXAMPLE 3:
OT distance 800 meters—OT factor 0.8

c. **Angle T.** Angle T (Figure 8-10, page 8-14) is the angle formed by the intersection of the gun-target line and the OT line with its vertex at the target. If angle T is 500 mils or greater, the FDC should tell the observer. If this occurs, the observer continues to use the OT factor to make his deviation corrections. If he sees that he is getting more of a correction than he has asked for, the observer should consider cutting the corrections to better adjust rounds onto the target.

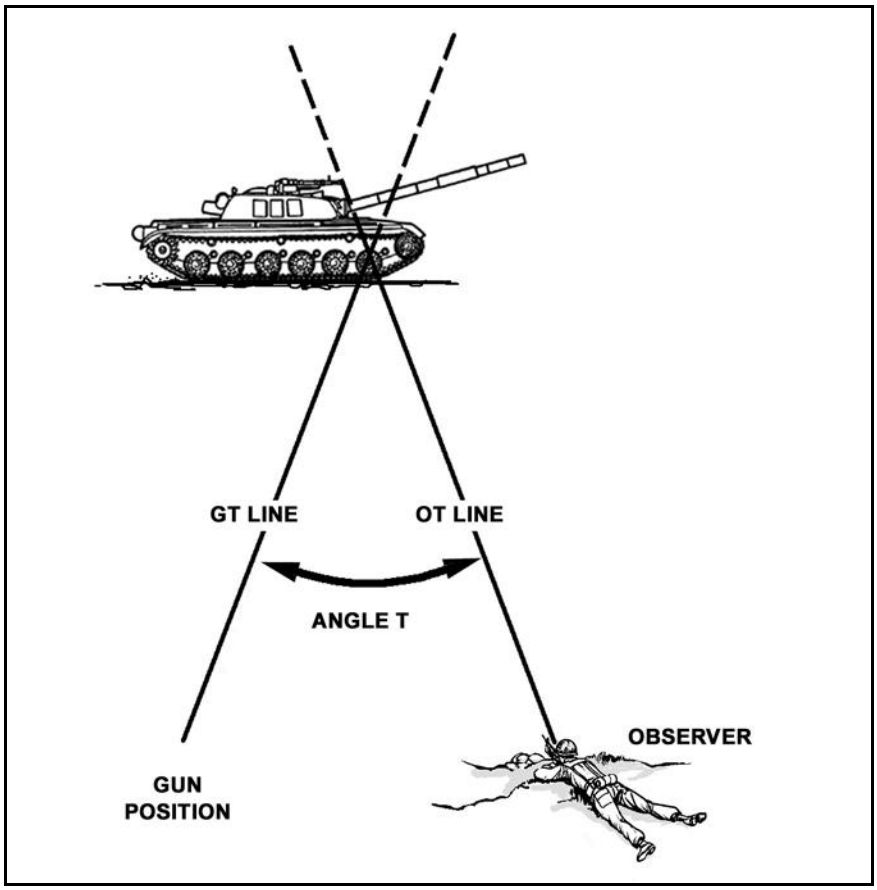


Figure 8-10. Angle T.

d. **Range Spotting.** Range spotting (short or over) requires adjusting the range to obtain fire on the target. An adjusting round's burst on or near the OT line gives a definite range spotting. If he cannot make a definite spotting, the observer announces a "lost" or "doubtful" spotting. In these situations only, he gives the deviation correction to the FDC.

(1) ***"Over."*** The observer sees the burst beyond the adjusting point.

(2) ***"Short."*** The observer sees the burst between himself and the adjusting point.

(3) ***"Target."*** The observer sees the burst hit the target. He uses this spotting only in precision fire (destruction missions).

(4) ***"Range Correct."*** The observer believes that the burst occurred at the correct range.

(5) ***"Doubtful."*** The observer sees the burst but cannot tell whether it occurred over, short, target, or range correct.

(6) ***"Lost, Over" or "Lost, Short."*** The observer cannot see the burst, but he knows that it occurred beyond or short of the adjusting point.

e. **Range Correction.** With each successive correction, the *adjusting round* lands over or short of the *adjusting point*, but closes on the target.

(1) ***Bracketing.*** Bracketing brings fire on a target. Time is important, especially while targets move or seek cover from fire. Accuracy of data and speed of adjustments determine the effectiveness of the fire. To reduce adjustment time, the observer tries to bracket the target with the first two or three adjusting rounds.

(2) ***Successive Bracketing.*** The observer calls FFE when a range correction brings the round within 50 meters of the adjusting point. He also calls FFE when the firer splits a 100-meter bracket; for example, "Drop 50, fire for effect." This technique is called successive bracketing (Figure 8-11). When bracketing, the observer uses the following guide to determine his first range correction:

- OT between 1,000 to 2,000 meters--add or drop at least 200 meters.
- OT greater than 2,000 meters--add or drop at least 400 meters.

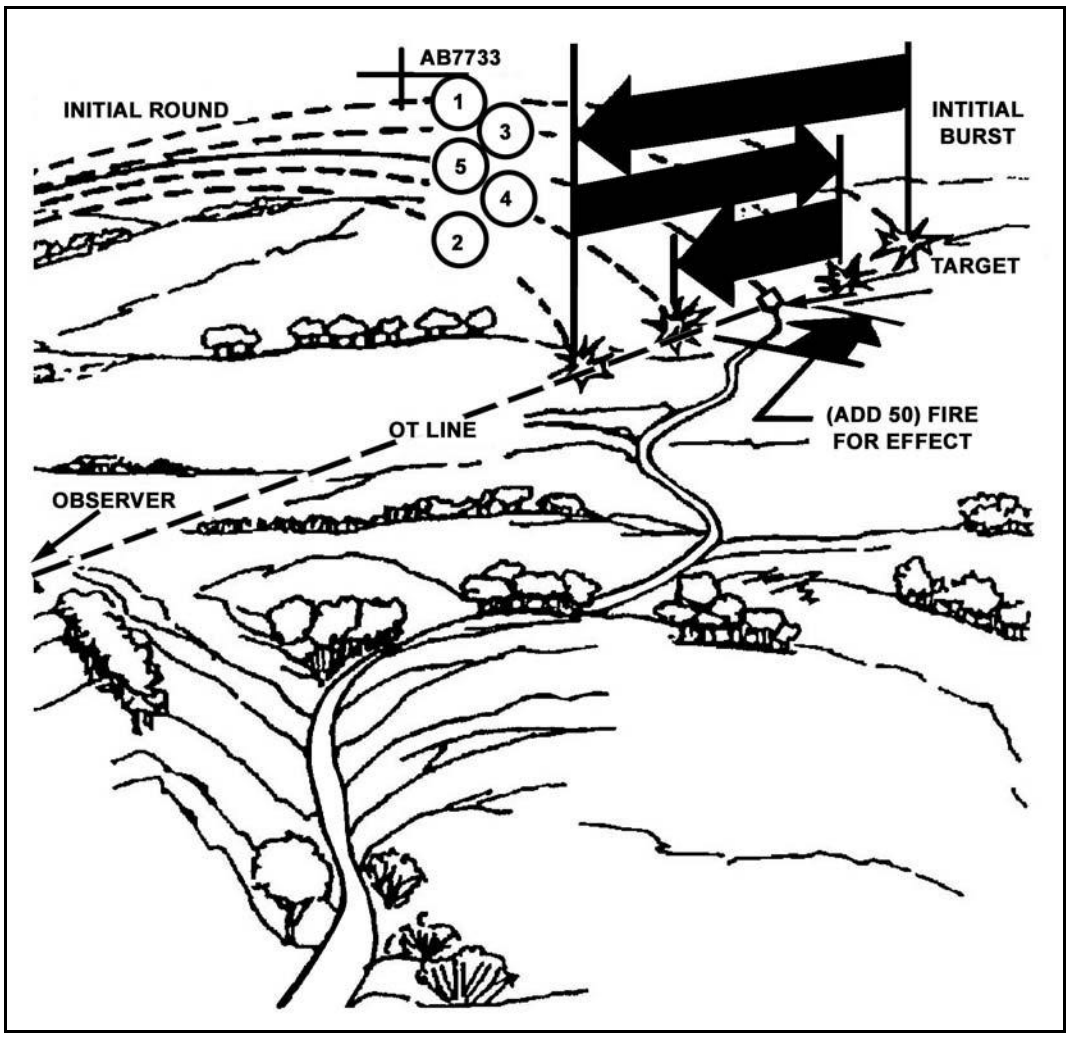


Figure 8-11. Successive bracketing technique.

(3) ***Hasty Bracketing.*** The effect on the target decreases as the number of rounds used in adjustment increases. Successive bracketing ensures that FFE rounds hit within 50 meters of the adjusting point. Hasty bracketing offers a quicker alternative to successive bracketing. A successful hasty bracket depends on a thorough terrain analysis, which gives the observer an accurate initial target location. For his first correction, the observer receives a bracket similar to that used for successive bracketing. Once the observer receives the initial bracket, he uses it like a yardstick to determine the subsequent correction. He then sends the FDC the

correction to move the rounds to the target and to fire for effect (Figure 8-12). Hasty bracketing improves with observer experience and judgment.

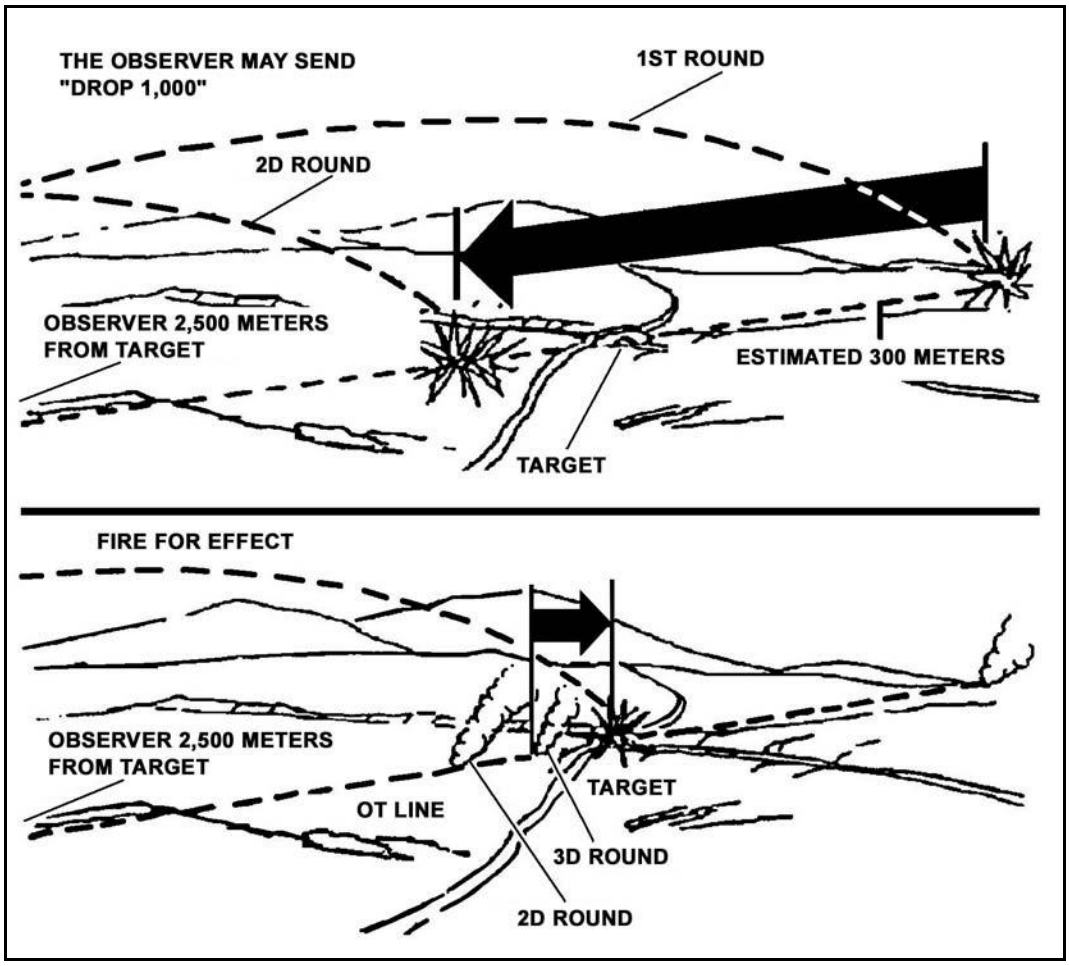


Figure 8-12. Hasty bracketing technique.

(4) ***Creeping Method.*** In danger-close situations the observer uses the creeping method of adjustment. The observer calls for the first round, deliberately overshooting the target. He adjusts rounds in 100-meter increments or less until the fire hits the target (Figure 8-13). This method requires more time and ammunition than other methods; therefore, the observer uses it only when he must consider safety first.

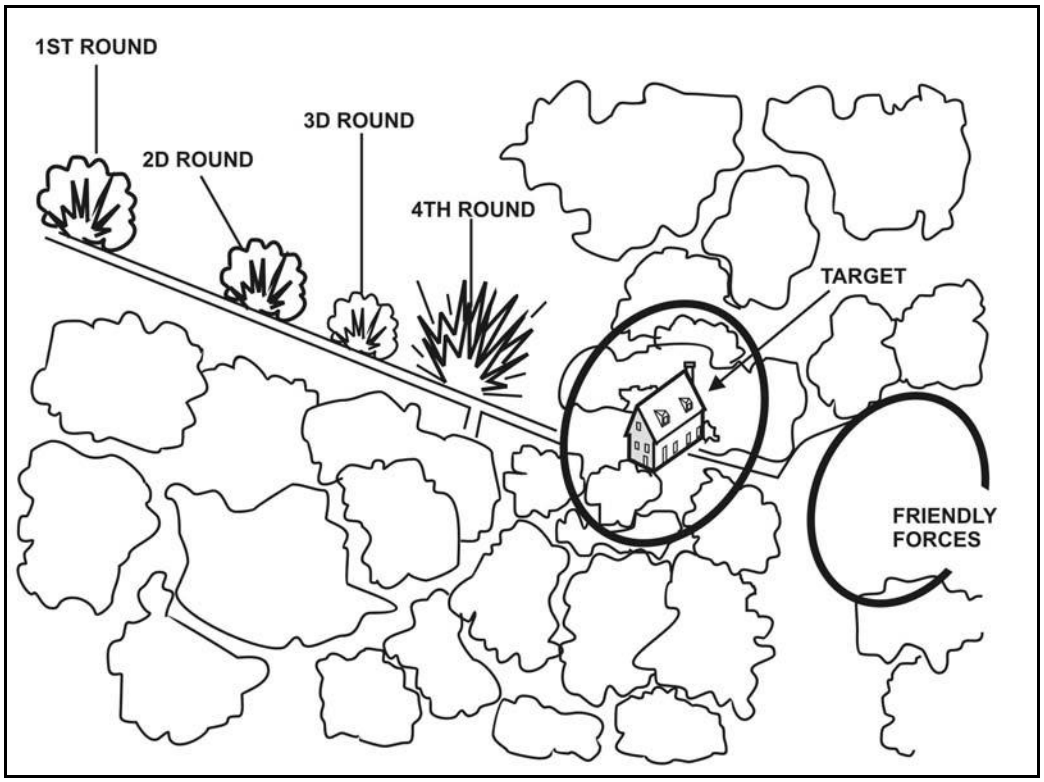


Figure 8-13. Creeping method of adjustment.

8-6. MORTAR SUPPORT

The battalion mortar platoon has both 120-mm and 81-mm mortars. The company has 120-mm and 60-mm mortars. The battalion and company mortars provide immediate indirect fire support. Using mortars, the platoon can quickly place a heavy volume of accurate, sustained fire on the enemy. Mortar rounds can strike targets that low-angle fires cannot reach. These include targets on reverse slopes, in narrow ravines or trenches, and in forests or towns, among others. The platoon will receive the preponderance of indirect fire support from mortars.

a. **Types of Mortar Support.** Mortars provide the following types of effective support.

(1) ***Suppression.*** The platoon can fire HE rounds to force the enemy to button up or move to less advantageous positions. Only a direct hit, however, will destroy an armored vehicle.

(2) ***Smoke***. The platoon uses white phosphorus (WP) rounds for obscuration and screening. Mortar smoke builds up more rapidly than artillery smoke. To obscure the enemy's vision, the platoon places smoke on or just in front of his positions. Placing smoke between the enemy and the platoon's position conceals platoon movement. Mortar smoke marks enemy positions to aid in friendly maneuver and to orient direct fires. Scouts must be careful, however, not to allow smoke to work against them by marking their own positions for enemy gunners. When using WP for obscuration and screening, soldiers should remain aware of its incendiary nature.

(3) ***Illumination.*** The platoon uses illumination rounds to light an area or enemy position during periods of limited visibility. Illumination increases the effectiveness of image-intensification devices, which helps with gathering information, adjusting artillery, and

engaging enemy targets. The platoon also uses ground-burst illumination to mark enemy positions and to provide a thermal TRP for control of fires. The platoon must use illumination carefully so as not to illuminate friendly positions. Because US night vision devices work better than those of most potential adversaries, the platoon may not need to illuminate the battlefield at all. Doing so could cause more harm than good by revealing friendly positions.

b. **Capabilities and Limitations.** The advantages of using the mortar platoon include its close working relationship with the platoons, fast response time, and availability for low-density targets. The limitations of mortars are--

- Short-range capability only.
- Few types of ammunition available.
- Mortar elements can carry only limited amounts of ammunition.
- FDC and mortar tubes cannot be linked to AFATDS.
- Vulnerable to radar detection due to high-angle fire.

8-7. FIELD ARTILLERY SUPPORT

The platoon must know how to use artillery support to its best advantage. Artillery often offers the best way to impede and disrupt enemy formations and suppress enemy positions. It can provide immediate, responsive, and accurate fires with a wide variety of munitions. The platoon may receive FA priority of fire.

a. **Capabilities.** In support of the platoon, FA elements can--

- Provide fires in all weather conditions and on all types of terrain.
- Shift and mass fires rapidly.
- Support the battle in depth with long-range fires.
- Provide a variety of conventional shell and fuze combinations.
- Provide continuous fires by careful positioning and timely displacement.

b. **Limitations.** FA support has the following limitations:

- Limited capability against moving targets.
- May require large amounts of ammunition to destroy point targets.
- Firing signature makes it vulnerable to detection.

c. **Munitions.** FA employs a wide variety of munitions that the platoon can tailor to engage different types of targets.

(1) ***High-Explosive.*** The best targets for HE rounds include personnel, field fortifications, and lightly armored vehicles.

(2) ***Smoke.*** The best uses for smoke include obscuring and screening friendly soldiers.

(3) ***Illumination.*** Ideally, these illuminate only the enemy, not friendly forces.

(4) ***White Phosphorus.*** This volatile material effectively obscures friendly soldiers or actions, marks locations, and burns obstacles and equipment.

(5) ***Cannon-Launched Guided Projectiles.*** These projectiles (Copperheads) work best against point targets but require a laser designation system.

(6) ***Improved Conventional Munitions.*** Improved conventional munitions (ICM) work best against personnel targets.

(7) ***Dual-Purpose Improved Conventional Munitions.*** These munitions (DPICM) work best against personnel and light armored vehicles in the open.

(8) ***Scatterable Mines.*** These include *area denial munitions* for use against personnel and *remote antiarmor mines* for use against armored vehicles. An FA battery cannot mix other fire missions with scatterable mine missions. Scatterable mines require slightly more lead time than other FA-delivered munitions.

NOTE: The commander or leader must consider the danger to friendly troops in areas where friendly forces fire antipersonnel (AP) munitions. The potential dud rate of ICM makes maneuver in the area of an ICM field hazardous.

8-8. FIRE DIRECTION ASSETS

The FIST is organic to the SBCT infantry company. The company FSO is the unit fire support coordinator. He works with the company commander during combat operations to successfully accomplish all company-level fire support tasks. While the maneuver commander is responsible for integrating fire support and maneuver, the FSO must understand the scheme of maneuver as well as the company commander does. Based on the commander's guidance, the FSO devises his fire support plan, which must be presented to the commander for approval. FSO responsibilities include the following:

- Plan, coordinate, and execute fire support.
- Advise the company commander on fire support matters to include capabilities, limitations, and employment of all fire support assets available to support his operation.
- Ensure the company fire support plan is developed as an integral part of the company OPORD and or OPLAN and that essential fire support tasks (EFSTs) are adequately addressed in maneuver company rehearsals.
- Make recommendations to integrate fire support assets (FA and mortars) into the maneuver commander's battle plan.
- Keep key personnel informed of pertinent information (by spot reports and situation reports).
- Train the FIST and FOs in applicable fire support matters.
- Request, adjust, and direct all types of fire support.
- Ensure the fire support plan and or execution matrix is prepared and disseminated to key personnel.
- Advise the company commander on positioning and use of company mortars.
- Allocate FOs and other observers to maintain surveillance of target and named areas of interest.
- Integrate and employ combat observation and laser teams (COLTs) and or Strikers (when allocated) into planned operations.
- Plan, direct, and manage the employment of observer platforms and laser equipment where they will best support the commander's concept of operation.
- Provide emergency control of CAS and naval gunfire (NGF) in the absence of qualified personnel.

8-9. PLATOON FORWARD OBSERVER DUTIES AND RESPONSIBILITIES

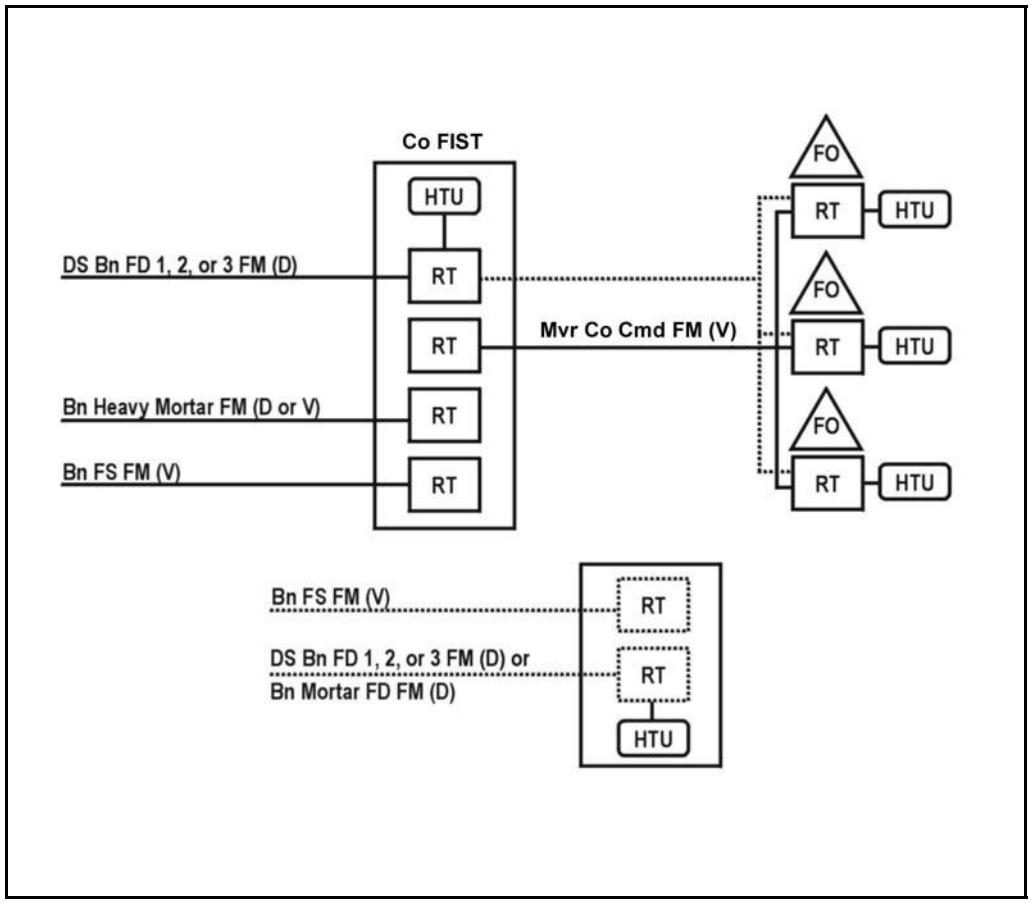
As the platoon's fire support representative, the primary duty of the FO is to locate targets and call for and adjust indirect fire support. Additional responsibilities include the following:

- Refine or submit key targets for inclusion in the company fire plan.
- Prepare, maintain, and use situation maps.
- Establish and maintain communications with company FIST.
- Advise the platoon leader as to the capabilities and limitations of available indirect fire support.
- Report battlefield intelligence.
- Laser designate targets when required.

8-10. MANEUVER COMPANY FIST FIRE REQUEST CHANNELS

The FIST serves as the net control system (NCS) on the company fire support net. The FIST relays the call for fire to supporting artillery on a digital net or sends the fire mission to the mortar platoon or section. The command net allows the FIST to monitor unit operations. It links the FIST to the commander and platoon leaders for planning and coordination.

a. **Company Communications Nets.** Example communications nets for the company FIST are shown in Figure 8-14. Net assignments for platoon FOs may vary. In some cases, the FSO may decide to have all FOs on the mortar net (voice or digital).



8-14. Company FIST communications.

NOTE: The diagrams in figure 8-14 (page 8-20) present a model solution. Standard net structures should be outlined in unit TSOPs and should be kept current as changes in procedures and or systems occur.

b. **Quick Fire Channel.** A quick fire channel is established to directly link an observer (or other target executor) with a weapon system (Figure 8-15). Quick fire channels may be either voice or digital nets. Quick fire channels within a maneuver brigade are normally established on FA or mortar nets. These channels are designed to expedite calls for fire against high profile targets (HPTs) or to trigger preplanned fires. Quick fire channels also may be used to execute fires for critical operations or phases of the battle. Examples include linking a COLT or Striker with a battery or platoon FDC for counter reconnaissance fires or an AN-TPQ-37 radar with the multiple launch rocket system (MLRS) battery FDC for counterfires. Copperhead missions can best be executed by using quick fire channels.

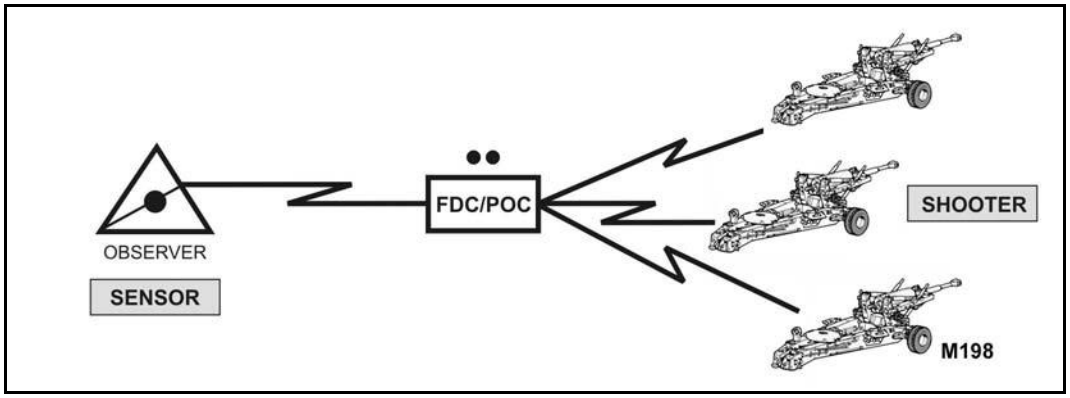


Figure 8-15. Quick fire channel illustrating sensor-to-shooter link.

8-11. CLOSE AIR SUPPORT

All services can provide CAS to the battalion. CAS missions are flown against hostile targets near friendly forces. The forward air controller (FAC) is the battalion commander's expert in planning, requesting, and executing CAS missions. The FAC serves as a link between the maneuver element and the attacking aircraft. The platoon may provide information that the FAC or tactical air control party (TACP) uses to target enemy forces. Soldiers may provide emergency control if an FAC, FSO, or FO is not available (the battalion commander accepts responsibility for friendly casualties). This is possible only with aircraft equipped with FM radios. Most U.S. Air Force, Navy, and Marine Corps fixed-wing aircraft only have UHF radios (A/OA-10, F16, AV-8B, F-14, F/A-18, and AC-130). (For additional information, see FM 6-30.) The platoon also may provide information on battle damage as observed. Figure 8-16, page 8-22, shows the format for assessing and reporting battle damage.

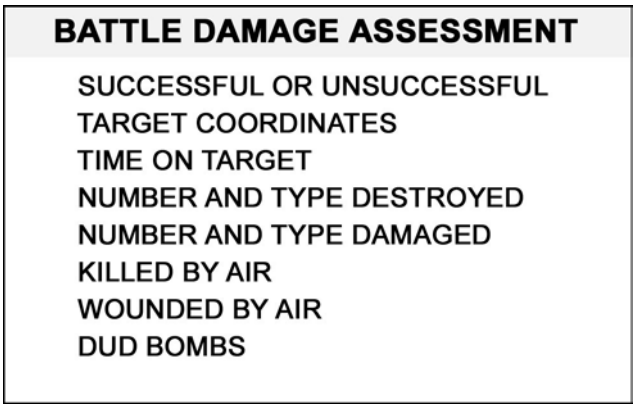


Figure 8-16. Format for battle damage assessment.

a. **AC-130 Gunship.** If the enemy air defense is low, the battalion requests CAS from an AC-130 gunship. The AC-130 provides effective fires during day and night operations and flies CAS and special operations. The aircraft contains one 40-mm gun, two 20-mm guns, two 7.62-mm miniguns, and one 105-mm howitzer. It is equipped with sensors and target acquisition systems that include forward-looking infrared radar and low-light television.

b. **Marking Friendly Positions.** Whenever possible, friendly positions are marked to enhance safety and to provide target area references. Methods of marking friendly positions are shown in Table 8-2, pages 8-23 and 8-24.

METHOD	DAY/ NIGHT	ASSETS	FRIENDLY MARKS	TARGET MARKS	REMARKS
SMOKE	D/N	ALL	GOOD	GOOD	Easily identifiable, may compromise friendly position, obscure target, or warn of fire support employment. Placement may be difficult due to structures.
SMOKE (IR)	D/N	ALL/ NVD AT NIGHT	GOOD	GOOD	Easily identifiable, may compromise friendly position, obscure target, or warn of fire support employment. Placement may be difficult due to structures. Night marking is greatly enhanced by the use of IR reflective smoke
ILLUM, GROUND BURST	D/N	ALL	N/A	GOOD	Easily identified, may wash out NVDs.
SIGNAL MIRROR	D	ALL	GOOD	N/A	Avoids compromise of friendly location. Dependent on weather and available light and may be lost in reflections from other reflective surfaces (windshields, windows, water)
SPOT LIGHT	N	ALL	GOOD	MARGINAL	Highly visible to all. Compromises friendly position and warns of fire support employment. Effectiveness is dependent upon degree of urban lighting.
IR SPOT LIGHT	N	ALL NVD	GOOD	MARGINAL	Visible to all with NVGs. Less likely to compromise than overt light. Effectiveness dependent upon degree of urban lighting.
IR LASER POINTER (below .4 watts)	N	ALL NVG	GOOD	MARGINAL	Effectiveness dependent upon degree of urban lighting.
IR LASER POINTER (above .4 watts)	N	ALL NVD	GOOD	GOOD	Less affected by ambient light and weather conditions. Highly effective under all but the most highly lit or worst weather conditions. IZLID-2 is the current example.
VISUAL LASER	N	ALL	GOOD	MARGINAL	Highly visible to all. Risk of compromise is high Effectiveness dependant upon degree of urban lighting.
LASER DESIG-NATOR	D/N	PGM OR LST EQUIP-PED	N/A	GOOD	Highly effective with PGM. Very restrictive laser acquisition cone and requires line of sight to target. May require pre-coordination of laser codes

Table 8-2. Methods of marking friendly positions.

METHOD	DAY/ NIGHT	ASSETS	FRIENDLY MARKS	TARGET MARKS	REMARKS
TRACERS	D/N	ALL	N/A	MARGINAL	May compromise position. May be difficult to distinguish mark from other gunfire. During daytime use, may be more effective to kick up dust surrounding target.
ELECTRON-IC BEACON	D/N	SEE REMARKS	EXCELLENT	GOOD	Ideal friendly marking device for AC-130 and some USAF fixed wing (not compatible with Navy or Marine aircraft). Least impeded by urban terrain. Can be used as a TRP for target identification. Coordination with aircrews essential to ensure equipment and training compatibility.
STROBE (OVERT)	N	ALL	MARGINAL	N/A	Visible by all. Effectiveness dependent upon degree of urban lighting.
STROBE (IR)	N	ALL NVD	GOOD	N/A	Visible to all NVDs. Effectiveness dependent upon degree of urban lighting. Coded strobes aid in acquisition.
FLARE (OVERT)	D/N	ALL	GOOD	N/A	Visible by all. Easily identified by aircrew.
FLARE (IR)	N	ALL NVD	GOOD	N/A	Visible to all NVDs. Easily identified by aircrew.
GLINT/IR PANEL	N	ALL NVD	GOOD	N/A	Not readily detectable by enemy. Very effective except in highly lit areas.
COMBAT IDENTIFI-CATION PANEL	D/N	ALL FLIR	GOOD	N/A	Provides temperature contrast on vehicles or building. May be obscured by urban terrain.
VS-17 PANEL	D	ALL	MARGINAL	N/A	Only visible during daylight. Easily obscured by structures.
CHEMICAL HEAT SOURCES	D/N	ALL FLIR	POOR	N/A	Easily masked by urban structures and lost in thermal clutter. Difficult to acquire, can be effective when used to contrast cold background or when aircraft knows general location.
SPINNING CHEM-LIGHT (OVERT)	N	ALL	MARGINAL	N/A	Provides unique signature. May be obscured by structures. Provides a distinct signature easily recognized. Effectiveness dependent upon degree of urban lighting.
SPINNING CHEM-LIGHT (IR)	N	ALL NVD	MARGINAL	N/A	Provides unique signature. May be obscured by structures. Effectiveness dependent upon degree of urban lighting.

Table 8-2. Methods of marking friendly positions (continued).

8-12. ATTACK HELICOPTERS

The primary mission of attack helicopter units is to destroy armor and mechanized forces. Employing attack helicopters in combined arms operations increases the lethality of ground maneuver forces.

a. **Aircraft Characteristics.** The AH-64A Apache, the AH-64D Longbow Apache, the OH-58D Kiowa Warrior, and the AH-1W or AH-1Z (USMC) are employed in attack operations. Table 8-3 provides a comparison of the weapon systems and armaments on these attack helicopters. (The table also lists weaponry for the AH-1 Cobra which is no longer in the active Army inventory but might be used to provide attack support in joint operations with U.S. Marine units.)

AIRCRAFT TYPE	WEAPONS SYSTEMS						
	Hellfire/TOW [1]		Air-to-Air Stinger	2.75-inch (70-mm) rockets	Cal .50 MG (rds)	20-mm cannon (rds)	30-mm chain gun (rds)
AH-1 [2]		8		76		750	
AH-64A [3]	16			76			1,200
AH-64D [3]	[4] 16		4	76			1,200
OH-58D [2,3]	4		4	14	500		
AH-1W/Z [5]							
Weapons Range (Max)	8 km	3,750 m	5+ km	8 km	2 km	2 km	4 km

Numbers in each column indicate the maximum load for each system.

1 The AH-1 uses the TOW missile as its armor engagement weapon instead of the Hellfire missile.

2 This aircraft carries one weapon system on each side (Hellfire, TOW, or both; air-to-air Stinger; and 2.75-inch rocket).

3 Aircraft has a laser for target designation and an ATHS.

4 Hellfire/Hellfire II.

5 USMC helicopters will have varied weapons loads. During coordination, request on-board weapon status.

Table 8-3. Helicopter weapon systems.

b. **Close Combat Attack.** The close combat attack is a technique for directing lethal fires within the context of a preplanned mission. It does not replace the integrated military decision-making process (MDMP) between ground maneuver and aviation elements.

(1) To request immediate close combat attack, the ground unit in contact executes a face-to-face coordination or uses a radio transmission to provide a situation update to the attack aircraft (METT-TC permitting). This situation update contains essential elements from the aviation close combat attack coordination checklist (Figure 8-17, page 8-26).

(2) After receipt of a request for immediate close combat attack, the attack team leader informs the ground unit leader of the battle position, attack-by-fire position, or the series of positions his team will occupy that will provide the best observation and fields of fire into

the engagement or target area. The attack team leader then provides the ground maneuver unit leader with his concept for the team's attack on the objective.

(3) Upon mission completion, the attack team leader provides the ground maneuver commander a battle damage assessment (BDA) of the intended target.

CLOSE COMBAT ATTACK CHECKLIST

1. Enemy situation--specific target identification.
2. Friendly situation--location and method of marking friendly positions.
3. Ground maneuver mission and scheme of maneuver.
4. Attack aircraft scheme of maneuver.
5. Planned engagement area and BP/SBF position.
6. Method of target marking.
7. Fire coordination and fire restrictions.
8. Map graphics update.
9. Request for immediate aviation close fight support--used for targets of opportunity or for ground-to-air target handoff.

Figure 8-17. Close combat attack coordination checklist.

Section III. COMBAT ENGINEER SUPPORT

The two core qualities of the SBCT infantry platoon are high mobility and the ability to achieve decisive action through dismounted infantry assault. At the tactical level, overmatching mobility is critical to the success of the force. Given the significance of tactical mobility to the SBCT's successful operations, the SBCT engineers are essential.

8-13. MEDIUM ENGINEER COMPANY

The SBCT's organic medium engineer company (MEC) provides embedded, responsive mounted and dismounted maneuver support. The MEC supports the maneuver force--the SBCT infantry battalions and companies. It readily integrates into maneuver operations and organizations at all levels based on the analysis of tasks required. It is an agile organization that assures freedom to maneuver on the battlefield within the combined-arms team framework. The MEC has three combat mobility platoons, one mobility support platoon, and a company headquarters section. The MEC normally task-organizes its platoons to infantry battalions and companies in a specific command-support relationship to provide a mission-specific, tailored package. It performs mounted and dismounted engineer tasks equally well.

a. **Combat Mobility Platoon.** The combat mobility platoon is normally the lowest-level engineer unit that can effectively accomplish independent mounted engineer missions and tasks. It is the basic building block of engineer force allocation and task organization. A combat mobility platoon is normally task-organized to support an infantry battalion, but it may support an infantry company based on METT-TC analysis. The combat mobility platoon may receive augmentation in the form of special equipment from the mobility support platoon. Engineer platoon-specific common-platform equipment includes engineer squad vehicles (ESVs) with mountable rollers or blades, MICLICs, and multiple-delivery mine systems (Volcanoes) (Figure 8-18). The combat mobility platoon's engineer squads carry a variety of explosives and demolitions. The squad is normally the minimum force

required to provide effective dismounted support to infantry companies. The squad is the engineer organization most likely to support an infantry company, particularly during offensive operations.

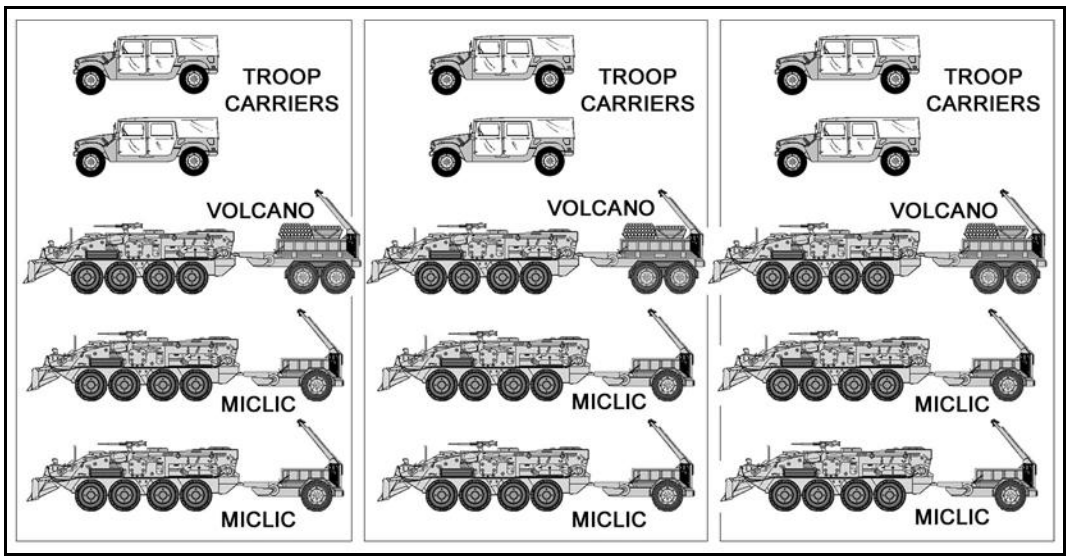


Figure 8-18. Combat mobility platoon.

b. **Mobility Support Platoon.** The mobility support platoon consists of a platoon headquarters section and three equipment-based mobility sections (Figure 8-19, page 8-28), equipped with light assault bridges, light earthmovers (deployable universal combat earthmovers [DEUCEs]), and high mobility engineer excavators (HMEEs). Unlike the combat mobility platoon, it is not organized to operate independently during offensive operations. The mobility support platoon provides the commander with specialized equipment capabilities to weight the main effort and to perform specialized mobility tasks. Each section is structured to provide equipment augmentation, focused on reducing enemy obstacles and fortifications, to each of the three combat mobility platoons. Each section has gap-crossing, obstacle-reduction, special-tool, and heavy-blade capabilities. The mobility support platoon provides a limited capability for countermobility, survivability, and sustainment operations.

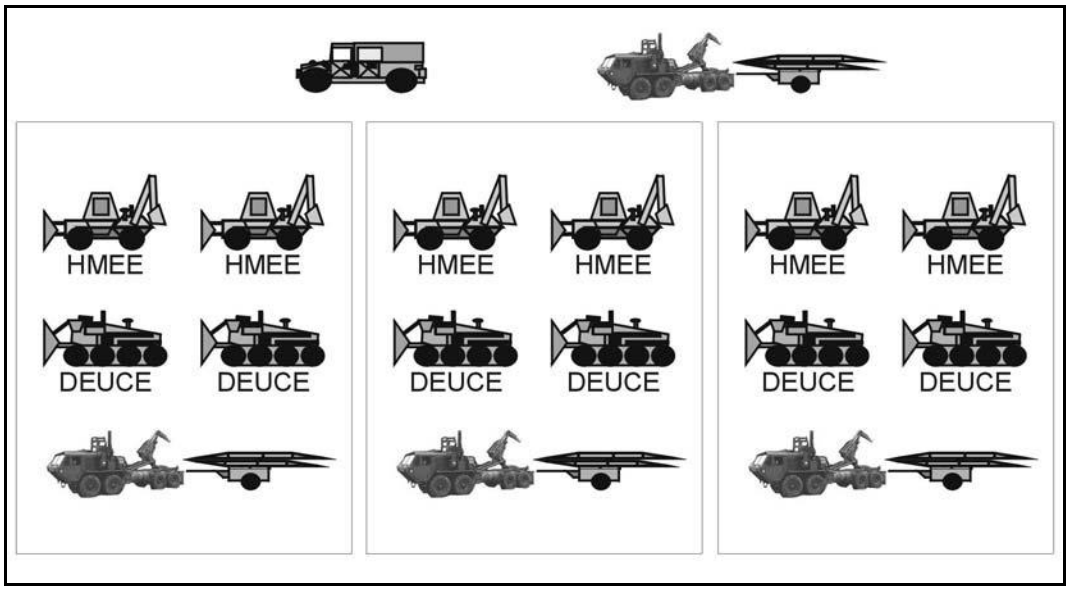


Figure 8-19. Mobility support platoon.

8-14. ENGINEER MISSIONS

Engineer missions fit into one of three categories: mobility, countermobility, and survivability. (Table 8-4 shows the tasks included in each of these categories.) An engineer platoon might be attached to a company. Engineers conduct reconnaissance, evaluate obstacles, and use demolitions and field expedients.

MOBILITY	COUNTERMOBILITY	SURVIVABILITY
Breaching obstacles. Clearing minefields. Clearing routes. Expedient gap crossing. Constructing combat roads or trails.	Constructing obstacles to turn, fix, block, or disrupt enemy forces.	Constructing crew-served weapons and vehicle fighting positions.

Table 8-4. Engineer missions.

8-15. MOBILITY

At the tactical level, overmatching mobility is critical to the success of the force. Engineers support infantry by performing obstacle reduction and route construction and or improvement.

a. **Obstacle Reduction.** Reduction is the creation of lanes through or over an obstacle to allow an attacking force to pass. The number and width of lanes created varies with the factors of METT-TC. The lanes must allow the assault force to rapidly pass through the obstacle. The breach force will reduce, proof (if required), mark, and report lane locations and the lane marking method by unit SOP. Engineers cannot reduce an obstacle until the obstacle has been identified, effective suppression and obscuration are in place, and the point of breach is secure. (For detailed discussions of breaching see FM 3-34.2 and FM 3-90.1.)

b. **Route Construction and Improvement.** Engineers have a limited capability to construct, improve, and maintain roads, bridges, and fords. In addition to providing mobility support during offensive operations, engineers can enhance mobility during defensive operations by focusing on the ability to shift forces. Enhancements to mobility during defensive operations include:

- Mobility between primary, alternate, and supplementary battle positions.
- Mobility of reserves to reinforcing positions.
- Mobility of reserves in the counterattack

8-16. COUNTERMOBILITY

Engineers construct obstacles that prevent the enemy from successfully executing his scheme of maneuver. (See FM 3-90.1 for a detailed discussion of countermobility operations.) Commonly used obstacles include minefields, wire obstacles, antitank ditches, road craters, abatises, and log cribs. Engineers also can reinforce restrictive terrain and existing obstacles to disrupt, fix, turn, or block the enemy. Platoons will execute the company commander's countermobility plan. Within this plan, the infantry rifle squads typically will assist engineers in the emplacement of obstacles. Regardless of the type of defense employed, the platoon leader must remember the five basic principles of obstacle employment:

- Obstacles must support the scheme of maneuver.
- Obstacles must be integrated with and covered by observed direct and indirect fires.
- Obstacles must tie into terrain and existing obstacles.
- Obstacles are most effective when complex and employed in depth.
- Obstacles should be employed to surprise the enemy.

8-17. SURVIVABILITY

The survivability plan will be synchronized with the company countermobility plan. Platoons should prepare by marking vehicle positions, identifying leaders to supervise position construction, and designating guides for the blade movement between positions. Platoons will execute the company commander's plan for priority of the survivability effort. This plan should specify the following:

- Level of survivability of each subordinate unit.
- Priority of survivability support by specific unit, type of weapon system, or combination.
- Type of position to be dug for a unit or type of weapon system.
- Sequence and time allocated for platoons to receive blade support.

Section IV. AIR DEFENSE

The air defense and aviation coordination cell's (ADACC's) air and missile defense (AMD) analysis determines if the SBCT will be task organized with air defense assets from a divisional short-range air defense (SHORAD) battalion. Even if the SBCT and, subsequently, the SBCT infantry battalion receive air defense assets, it is unlikely that the SBCT infantry platoon will be task organized with any of the air defense assets. However, Avengers and Linebackers may operate in and around the company AO in support of battalion and brigade assets. Therefore, the platoon must conduct its own air defense

operations, relying on disciplined passive air defense measures and the ability to actively engage aerial platforms with organic weapons systems.

8-18. SYSTEMS, ORGANIZATION, AND CAPABILITIES

The systems that may operate in and adjacent to the company AO are the Avenger, man-portable air defense systems (MANPADS), and Linebacker (Table 8-5). All systems can operate as MANPADS Stinger teams. The battalion may be supported by an air defense platoon equipped with Avengers or MANPADS. The air defense platoon is responsible for providing DS, GS, or GS-reinforcing (GS-R) coverage to the battalion.

Man-Portable System 	Personnel: 2-man crew Basic load: 6 missiles basic load w/ M998 HMMWV Acquisition/range: Visual Engagement range: 5 km Engagement altitude: 3 km + Mutual support: 2 km +
Bradley Linebacker 	Personnel: 4-man crew Basic load: 10 missiles (4 ready to fire, 6 stowed) Acquisition/range: Visual/thermal Engagement range: 5 km (Stinger), 2500 m 25-mm, 900 m coax Engagement altitude: 3 km + Mutual support: 3 km Emplacement time: Fire on the move Reload time: 4 minutes
Avenger 	Personnel: 2 man crew Basic load: 8 ready-to-fire missiles, 250 rds .50 cal Acquisition/range: Visual/FLIR 9-10 km, laser range finder Engagement range: 5 km +, .50 cal range: 6,470 m Rate of fire: 1025 rpmEngagement altitude: 3 km + Mutual support: 3 km Emplacement time: 6 min, can remote operations out to 50 meters

Table 8-5. Air defense systems.

a. Stinger. Although other SHORAD systems support divisional units, the SBCT infantry platoon is most likely to be supported by the Avenger (Figure 8-20) or a MANPADS (Figure 8-21, page 8-32). Stinger is designed to counter high-performance, low-level, ground attack aircraft; helicopters; and observation and transport aircraft.

(1) The Avenger's combined arms mission is to provide protection to combat forces, combat support elements, and other critical assets from attack. The Avenger is designed to counter hostile cruise missiles, unmanned aerial vehicles, and low-flying, high-speed, fixed-wing aircraft and helicopters attacking or transiting friendly airspace. The Avenger provides

the battalions with highly mobile dedicated air defense firepower. The Avenger is equipped with two standard vehicle-mounted launchers (SVML) which carry four Stinger missiles each and have the following capabilities:

- The modified fire control subsystem fires and the SVML allow the Avenger to shoot on the move.
- The Avenger weapons system has an unobstructed, 360-degree field of fire and can engage at elevations between -10 and +70 degrees.
- The .50 cal machine gun affords a measure of self-protection by providing additional coverage of the Stinger missile's inner launch boundary.
- Avenger's sensor package (forward-looking infrared radar [FLIR], carbon dioxide, eye-safe laser range finder, and a video autotracker) provides target acquisition capability in battlefield obscuration at night and in adverse weather.
- The two-man crew remains in the vehicle under armor protection.
- Targeting data is provided by the forward area air defense (FAAD) command, control, communications, and intelligence (C3I).
- The Avenger system allows shoot-on-the-move and slew-to-cue capability.
- In the event of launcher system damage or failure or static mode, the system maintains dismounted Stinger missile capability.
- The firing sequence is entirely automated, including superelevation and lead, so that the gunner only needs to push the fire button to initiate the fire sequence and immediately select and prepare the next missile for firing.

Figure 8-20. AVENGER.

(2) The MANPADS Stinger missile system employs a two-man crew (crew chief and gunner). The MANPADS team normally has assigned transportation. Unit leaders must carefully consider the consequences before separating a Stinger team from its vehicle. Stinger teams operating away from their vehicles have no more than two missiles available for resupply.

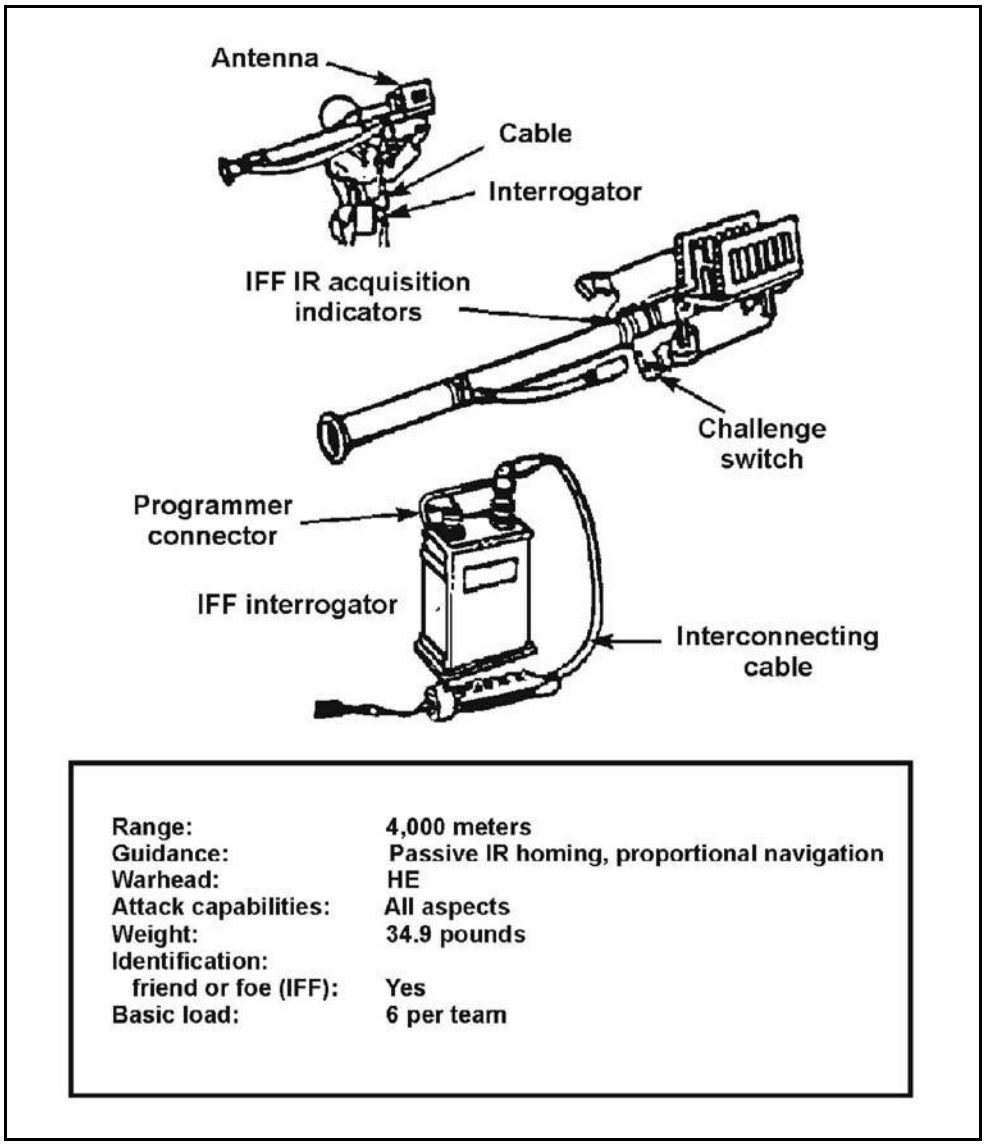


Figure 8-21. Stinger MANPADS air defense system.

b. **Early Warning Alerts.** If the brigade has an attached SHORAD battery, the platoon will receive early warning alerts from the SHORAD battery and its elements. The SHORAD C3I Sentinel radar team can broadcast early warning of enemy air activity to SHORAD elements (battery, platoon, or section), to FA fire units, and to air defense liaison officers (LNOs). The SHORAD battery will then provide voice early warning on the brigade command net. If METT-TC factors permit, the SHORAD platoon provides voice early warning to the battalions. The Sentinel radar (Figure 8-22) provides a 360-degree detection capability for various air tracks (rotary- and fixed-wing aircraft, UAVs, and cruise missiles) to a range of 40 kilometers. The Sentinel radar is normally OPCON to the respective SHORAD battery commander.

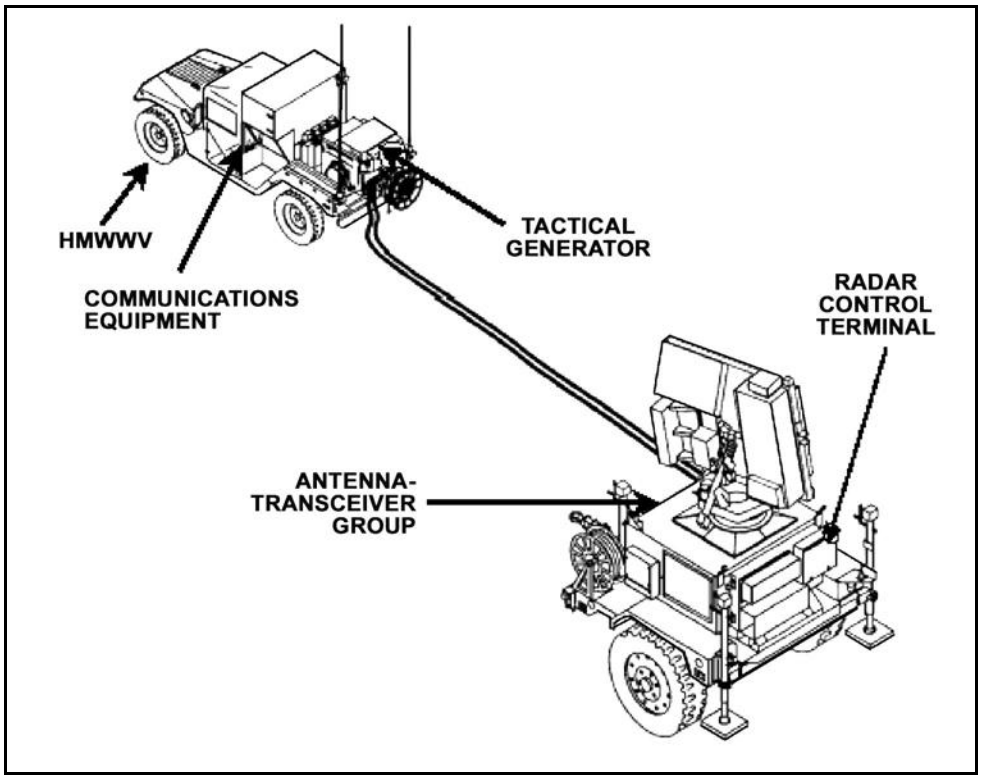


Figure 8-22. Sentinel radar system.

8-19. EMPLOYMENT OF AIR DEFENSE SYSTEMS

In offensive situations, air defense elements accompany the main attack. They may maneuver with the battalion's lead companies, orienting on low-altitude air avenues of approach. When the unit is moving or in a situation that entails short halts, air defense elements should remain within the platoon's organic weapon system maximum ranges to assure mutual support. The Stinger gunners (MANPADS) can dismount to provide air defense when the unit reaches the objective or pauses during the attack. In the defense, air defense elements may establish BPs based on available IPB information and the company commander's scheme of maneuver.

8-20. WEAPONS CONTROL STATUS

The weapons control status (WCS) describes the relative degree of control in effect for air defense fires. It applies to all weapons systems. The weapons control status is dictated in the battalion OPORD and may be updated based on the situation. The three levels of control are:

a. **Weapons Free.** Crews can fire at any air target not positively identified as friendly. This is the least restrictive WCS level.

b. **Weapons Tight.** Crews can fire only at air targets positively identified as hostile according to the prevailing hostile criteria.

c. **Weapons Hold.** Crews are prohibited from firing except in self-defense or in response to a formal order. This is the most restrictive control status level.

8-21. EARLY WARNING PROCEDURES

Air defense warnings (ADWs) include--

- RED - Air or missile attack imminent or in progress.
- YELLOW - Air or missile attack probable.
- WHITE - Air or missile attack not likely.

While air defense warnings cover the probability of hostile air action over the entire theater of war or operations, local ADWs describe with certainty the air threat for a specific part of the battlefield. Air defense units use these local warnings to alert Army units to the state of the air threat in terms of "right here, right now." There are three local air defense warning levels:

- DYNAMITE - Air platforms are inbound or are attacking locally now.
- LOOKOUT - Air platforms are in the area of interest but are not threatening. They may be inbound, but there is time to react.
- SNOWMAN - No air platforms pose a threat at this time.

NOTE: The area air defense commander routinely issues ADWs for dissemination throughout the theater of war or operations. These warnings describe the general state of the probable air threat and apply to the entire area.

8-22. REACTION PROCEDURES

Reaction procedures include both passive and active air defense measures.

a. **Passive Air Defense.** Passive air defense is the platoon's primary method for avoiding enemy air attack. Passive air defense consists of all measures taken to prevent the enemy from detecting or locating the unit, to minimize the target acquisition capability of enemy aircraft, and to limit damage to the unit if it comes under air attack. Target detection and acquisition are difficult for crews of high-performance aircraft, and the company can exploit this advantage. In most cases, enemy pilots must be able to see and identify a target before they can launch an attack.

(1) ***Guidelines*.** The SBCT infantry platoon should follow these guidelines to avoid detection or limit damage if detected:

- When stopped, occupy positions that offer cover and concealment and dig in and camouflage vehicles that are exposed.
- When moving, use covered and concealed routes.
- Disperse vehicles as much as possible to make detection and attack more difficult.
- Wipe out track marks leading to vehicle positions and eliminate or cover the spoil from dug-in positions.
- If moving when an enemy aircraft attacks, disperse and seek covered and concealed positions.
- Do not fire on a hostile fixed-wing aircraft unless it is clear that the aircraft has identified friendly elements. Premature engagement compromises friendly positions.

- Designate air guards for every vehicle and position; establish and maintain 360-degree security.
- Establish an air warning system in the unit SOP, including both visual and audial signals.

(2) ***Procedures.*** When the platoon observes fixed-wing aircraft, helicopters, or UAVs that could influence its mission, it initially takes passive air defense measures unless the situation requires immediate active measures. Passive air defense measures normally means that each platoon initiates its react-to-air-attack battle drill; however, the commander can initiate specific passive measures if necessary. Refer to the passive air defense guidelines for the company discussed earlier in this section.

NOTE: Passive air defense also includes the company's preparations for conducting active air defense measures.

Passive air defense involves these three steps:

- Step 1 - Alert the company with a contact report.
- Step 2 - Deploy or take the appropriate actions. If the company is not in the direct path of an attacking aircraft, the commander or platoon leaders order vehicles to seek cover and concealment and halt with at least a 100-meter interval between vehicles. The team also may be ordered to continue moving as part of the battalion.
- Step 3 - Prepare to engage. Fighting vehicle crews prepare to engage the aircraft with machine-gun or main-gun fire on order of the commander or their platoon leader.

b. Active Air Defense. The platoon avoids engaging enemy aircraft if possible. If engagement is unavoidable, the platoon uses a technique known as volume of fire (Figure 8-23, page 8-36). This technique is based on the premise that the more bullets a unit can put in the sky, the greater the chance the enemy will fly into them. Even if these fires do not hit the enemy, a "wall of lead" in the sky can intimidate enemy pilots, causing them to break off their attack, or it can distract them from taking proper aim. One of the most important points about volume of fire is that once the lead distance is estimated, the soldier must aim at the estimated aiming point and fire at that single point until the aircraft has flown past it. The soldier maintains the aiming point, not the lead distance. Once the soldier starts firing, he does not adjust his weapon. The platoon leader establishes the aiming point based on the type of aircraft that is attacking (Figure 8-24, page 8-36).

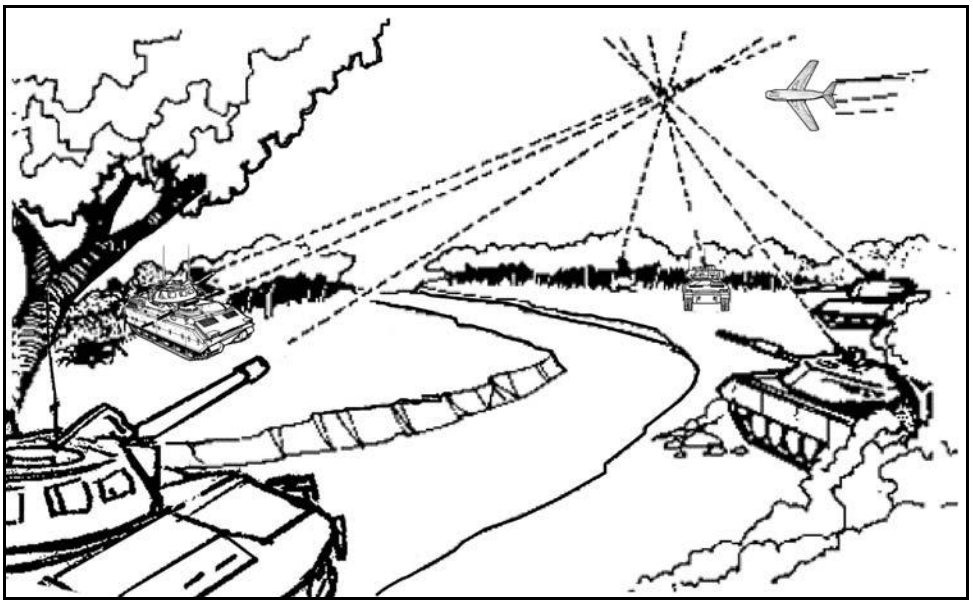
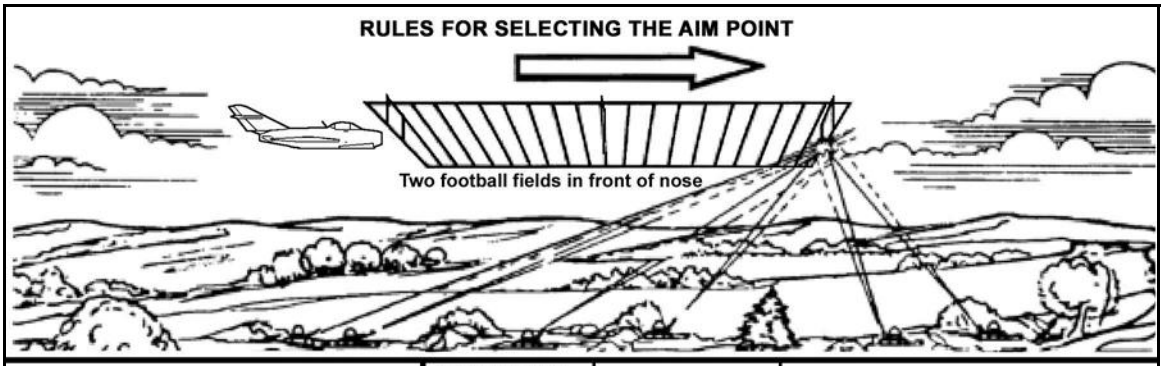


Figure 8-23. Volume of fire.



TYPE AERIAL PLATFORMS	COURSE	AIM POINT
JET/CRUISE MISSILE	CROSSING	TWO FOOTBALL FIELDS IN FRONT OF NOSE
JET/CRUISE MISSILE	OVERHEAD	TWO FOOTBALL FIELDS IN FRONT OF NOSE
JET/CRUISE MISSILE	DIRECTLY AT YOU	SLIGHTLY ABOVE AIRCRAFT NOSE
HELICOPTER/UAV	CROSSING	ONE-HALF FOOTBALL FIELD IN FRONT OF NOSE
HELICOPTER	HOVERING	SLIGHTLY ABOVE HELICOPTER BODY
HELICOPTER/UAV	DIRECTLY AT YOU	SLIGHTLY ABOVE HELICOPTER BODY

Figure 8-24. Aim points.

Section V. NUCLEAR, BIOLOGICAL, AND CHEMICAL SUPPORT

NBC assets within the SBCT are limited; therefore, it is imperative that the platoon practices the fundamentals of NBC defense, avoidance, protection, and decontamination in order to survive on a contaminated battlefield.

8-23. RECONNAISSANCE SUPPORT

The NBC reconnaissance platoon organic to the RSTA squadron is the only internal NBC reconnaissance available to the SBCT. The NBC reconnaissance platoon can locate, identify, and mark areas of contamination. Since NBC reconnaissance assets are limited, the SBCT infantry company commander must plan for alternate means of conducting NBC reconnaissance (such as scouts and military patrols [MPs]).

8-24. DECONTAMINATION SUPPORT

External decontamination support is not available at the company level. For operational decontamination, the platoon must request support from the company, who must request support from the battalion's decontamination team, which is equipped with the modular decontamination system (MDS). Thorough decontamination operations require the support of an external decontamination platoon. The company must request this support through the SBCT infantry battalion and SBCT S3 sections. The contaminated element will be tasked to augment the decontamination platoon during the conduct of thorough decontamination operations. (For a more detailed discussion of decontamination requirements, refer to FM 3-5.)

CHAPTER 9
COMBAT SERVICE SUPPORT

In any military unit, combat service support sustains the force during continuous combat operations. In the ICV-equipped infantry platoon, the platoon leader is responsible for planning CSS; the platoon sergeant is the platoon's main CSS operator. The platoon sergeant works closely with the company executive officer and first sergeant to ensure the platoon receives the required support for its assigned mission. CSS responsibilities and procedures in the platoon remain basically the same. The company normally forecasts supplies and "pushes" rather than "pulls" them to the platoon. The platoon and company rely heavily upon their higher headquarters for their CSS needs.

9-1. INDIVIDUAL RESPONSIBILITIES

This paragraph focuses on specific individual responsibilities within the platoon's CSS chain.

a. **Platoon Sergeant.** As the platoon's main CSS operator, the platoon sergeant executes the platoon's logistical plan based on platoon and company SOPs. The platoon sergeant's CSS duties include:

- Participating in CSS rehearsals at the company level and integrating CSS into the platoon's maneuver rehearsals.
- Receiving, consolidating, and forwarding all administrative, personnel, and casualty reports to the first sergeant as directed or IAW unit SOP.
- Obtaining supplies, equipment (except Class VIII), and mail from the supply sergeant and ensuring proper distribution.
- Supervising evacuation of casualties, EPWs, and damaged equipment.
- Maintaining the platoon's manning roster.

b. **Squad and Section Leader.** Each squad and section leader's CSS duties include:

- Ensuring that crews perform proper maintenance on all assigned equipment.
- Compiling personnel and logistics reports for the platoon and submitting them to the platoon sergeant as directed or IAW unit SOP.
- Obtaining supplies, equipment (all classes), and mail from the platoon sergeant and ensuring proper distribution.

c. **Trauma Specialist/Platoon Medic.** As stated in Chapter 1, the trauma specialist/platoon medic is attached from the battalion medical platoon. He is attached to the rifle platoon to provide emergency medical treatment (EMT) for sick, injured, or wounded platoon personnel. Emergency medical treatment procedures performed by the trauma specialist may include opening an airway, starting intravenous fluids, controlling hemorrhage, preventing or treating for shock, splinting fractures or suspected fractures, and providing relief for pain. The EMT performed by the trauma specialist is under the supervision of the battalion surgeon or physician's assistant (PA).

The trauma specialist is responsible for--

- Triaging injured, wounded, or ill friendly and enemy personnel for priority of treatment.
- Conducting sick call screening for the platoon.

- Evacuating sick, injured, or wounded personnel under the direction of the platoon sergeant.
- Assisting in the training of the platoon's combat lifesavers in enhanced first-aid procedures.
- Requisitioning Class VIII supplies from the BAS for the platoon according to the TSOP.
- Recommending locations for platoon CCPs.
- Providing guidance to the platoon's combat lifesavers, as required

9-2. PLANNING CONSIDERATIONS

Planning CSS operations is primarily a company- and battalion-level operation. While the company commander and executive officer plan the operation, the platoon leader is responsible for his platoon's execution of the plan at platoon level, and the platoon sergeant executes the plan at squad and vehicle level.

a. **Development of the CSS Plan.** The platoon leader develops his CSS plan by determining exactly what he has on hand to accurately predict his support requirements. This process is important not only in confirming the validity of the CSS plan but also in ensuring the platoon submits support requests as early as possible. The platoon leader formulates his CSS execution plan and submits support requests to the company based on his maneuver plan.

b. **Operational Questions.** The CSS plan should provide answers to operational questions such as the following:

(1) ***Types of Support.*** Based on the nature of the operation and specific tactical factors, what types of support will the platoon need?

(2) ***Quantities.*** In what quantities will this support be required?

(a) Will emergency resupply be required during the battle?

(b) Does this operation require prestock supplies?

(3) ***Threat.*** What are the composition, disposition, and capabilities of the expected enemy threat? How will these affect CSS operations during the battle?

(a) Where and when will the expected contact occur?

(b) What are the platoon's expected casualties and vehicle losses based on the nature and location of expected contact?

(c) What impact will the enemy's special weapons capabilities (such as NBC) have on the battle and on expected CSS requirements?

(d) How many EPWs are expected, and where?

(4) ***Terrain and Weather.*** How will terrain and weather affect CSS operations during the battle?

(a) What ground will provide the best security for maintenance and CCPs?

(b) What are the platoon's vehicle and casualty evacuation routes?

(c) What are the company's dirty routes for evacuating contaminated personnel, vehicles, and equipment?

(5) ***Time and Location.*** When and where will the platoon need CSS?

(a) Based on the nature and location of expected contact, what are the best sites for the CCP?

(b) Where will the EPW collection points be located?

(6) ***Requirements.*** What are the support requirements, by element and type of support?

(a) Which section has priority for emergency Class III resupply?

(b) Which section or squad has priority for emergency Class V resupply?

(7) ***Risk Factor.*** Will lulls in the battle permit support elements to conduct resupply operations in relative safety? If no lulls are expected, how can the platoon best minimize the danger to the CSS vehicles providing the required support?

(8) ***Resupply Technique.*** Based on information developed during the CSS planning process, which resupply technique should the platoon use?

c. **Classes of Supply Considerations.** The platoon sergeant obtains supplies and delivers them to the platoon. The platoon leader establishes priorities for delivery, but combat demands that Class I, III, V, and IX supplies and equipment take priority because they are the most critical to successful operations.

(1) ***Class I.*** This class includes rations, water, and ice. It also includes gratuitous issue of items related to health, morale, and welfare. The Daily Strength Report triggers an automatic request for Class I supplies. Personnel in the field trains prepare rations and deliver them with the logistics package (LOGPAC). During the initial deployment, soldiers eat meals-ready-to-eat (MREs) stored on combat vehicles. Due to the probability of long lines of communication (LOC) and resupply, the platoon must keep a three-day supply of rations on hand for each soldier at all times.

(2) ***Class II.*** This class includes clothing, individual equipment, mission-oriented protective posture (MOPP) suits, tentage, tool sets, and administrative and housekeeping supplies and equipment. The platoon sergeant distributes expendable items such as soap, toilet tissue, and insecticide during LOGPAC operations.

(3) ***Class III.*** This class includes POL products. Unusual Class III requests go to the first sergeant and then to the battalion combat trains.

(a) POL includes both bulk and packaged products. Examples of bulk products include JP8 (Army common fuel), diesel fuel, and motor gasoline (MOGAS).

(b) Platoon requests and receives Class III products such as 5-gallon and 55-gallon containers, lubricants, grease, hydraulic fluid, cylinders of liquid and compressed gasses, and solvents in amounts of 55 gallons or less.

(4) ***Class IV.*** This class includes construction materials, pickets, sandbags, and concertina wire.

(5) ***Class V.*** This class covers all types of ammunition and mines including C4 and other explosives.

(6) ***Class VI.*** This class includes personal-demand items normally sold through the exchange system, which can include candy, soaps, cameras, and film.

(7) ***Class VII.*** This class includes major end items such as ICVs, MGSs, and other vehicles. Battle loss reports trigger the issuance of Class VII items. Ready-to-fight weapons systems go forward with the LOGPAC.

(8) ***Class VIII.*** This class covers medical supplies. The battalion aid station (BAS) replaces combat lifesaver bags and first-aid kits on a one-for-one basis.

(9) ***Class IX.*** This class includes repair parts and documents required for equipment maintenance operations. Repair parts are issued in response to a specific request or are obtained by direct exchange of repairable parts. The latter can include batteries for NVDs

and man-portable radios. In combat situations, exchange and cannibalization are normal ways to obtain Class IX items.

(10) ***Class X.*** This class includes materials to support nonmilitary programs such as agricultural and economic development. Division level or higher will provide the platoon with instructions for requesting and issuing Class X supplies.

(11) ***Miscellaneous.*** This category covers anything that does not fall in one of the existing classes of supply.

9-3. RESUPPLY OPERATIONS

Resupply operations fall into one of three classifications: routine, emergency, or prestock. The platoon SOP specifies cues and procedures for each method. The platoon rehearses resupply operations during platoon training exercises. The actual method selected for resupply in the field depends on METT-TC factors.

a. **Routine Resupply.** Routine resupply operations cover items in Classes I, III, V, and IX; mail; and other items requested by the platoon. When possible, the platoon should conduct routine resupply daily. Ideally, it does so during periods of limited visibility. Although the ICV is designed to operate over extended periods of time (72 hours) without Class III resupply, the platoon leader should refuel at every opportunity available, based upon the factors of METT-TC.

(1) The LOGPAC technique offers a simple, efficient way to accomplish routine resupply operations. The key feature of LOGPAC, a centrally organized resupply convoy, originates at the battalion trains. The convoy carries all items needed to sustain the platoon for a specific period (usually 24 hours) or until the next scheduled LOGPAC. The battalion SOP will specify the LOGPAC's exact composition and march order.

(2) As directed by the commander or XO, the first sergeant establishes the company resupply point. He uses either the service station or tailgate method, and he briefs each LOGPAC driver on which method to use. When he has the resupply point ready, the first sergeant informs the commander. The company commander then directs each platoon or element to conduct resupply based on the tactical situation.

(a) The service station method that may be used during mounted operations (Figure 9-1) allows the vehicles and their squads to move individually, or by section, to a centrally located resupply point. Depending on the tactical situation, a vehicle, section, or platoon moves out of its position, conducts resupply operations, and moves back into position. This process continues until the entire platoon has received its supplies. In using this method, vehicles enter the resupply point following a one-way traffic flow. Only vehicles that require immediate maintenance stop at the maintenance holding area. Vehicles move through each supply location. The crews rotate individually to eat, pick up mail and sundries, and refill or exchange water cans. When all platoon vehicles and crews have completed resupply, they move to a holding area. There, time permitting, the platoon leader and the platoon sergeant conduct a PCI.

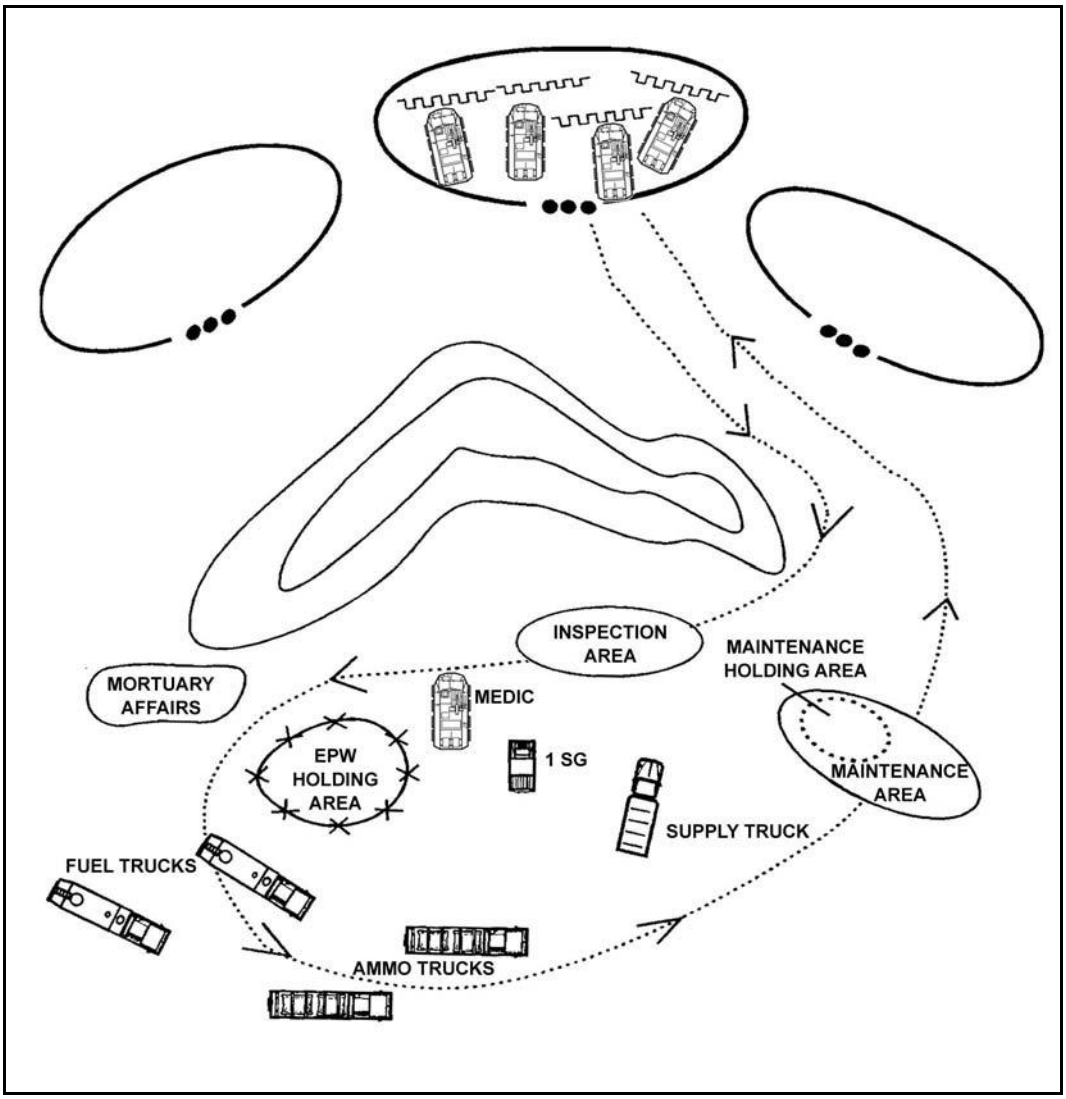


Figure 9-1. Mounted service station resupply method.

(b) The service station resupply method (Figure 9-2, page 9-6) for use during dismounted operations requires the soldiers to leave their fighting positions. Selected soldiers move to a company resupply point to the rear of the platoon position, conduct resupply, and return to their fighting position. This technique is used when contact is not likely and for the resupply of one or several classes of supplies.

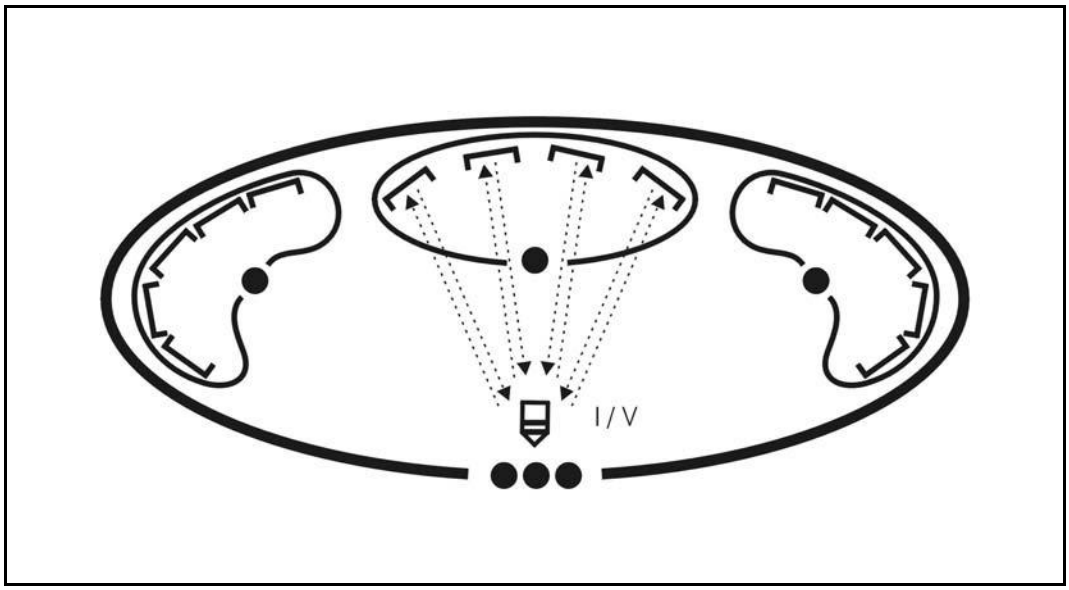


Figure 9-2. Dismounted service station resupply method.

NOTE: The platoon order should state the sequence for moving squads or portions of squads out of position. Companies may vary the technique by establishing a resupply point for each platoon and moving the supplies to that point.

(c) In assembly areas, the first sergeant normally uses the tailgate method (Figure 9-3). Combat vehicles remain in their vehicle positions, or they back out a short distance to allow trucks carrying Class III and V supplies to reach them. Individual soldiers rotate through the feeding area. While there, they pick up mail and sundries and refill or exchange water cans. They centralize and guard any EPW. They take soldiers killed in action (KIA) and their personal effects to the holding area, where the first sergeant assumes responsibility for them.

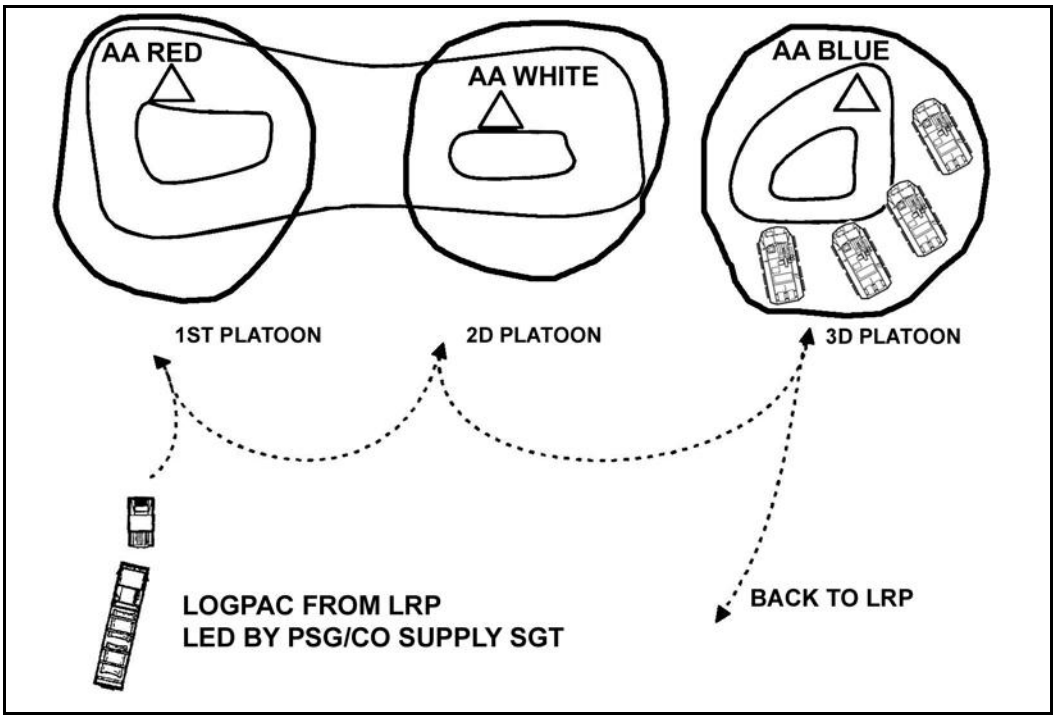


Figure 9-3. Tailgate resupply method.

(d) During operations when the platoon is separated from its vehicles and in contact, or when contact is imminent, the in-position resupply method may be required to ensure adequate supplies are available to the squads. This method requires the company to bring forward supplies or equipment (or both) to individual fighting positions (Figure 9-4, page 9-8). The platoon normally will provide a guide to ensure the supplies (Class V) are distributed to the most critical position first. This method--

- Is used when an immediate need exits.
- Is used to resupply single classes of supply.
- Enables leaders to keep squad members in their fighting positions.

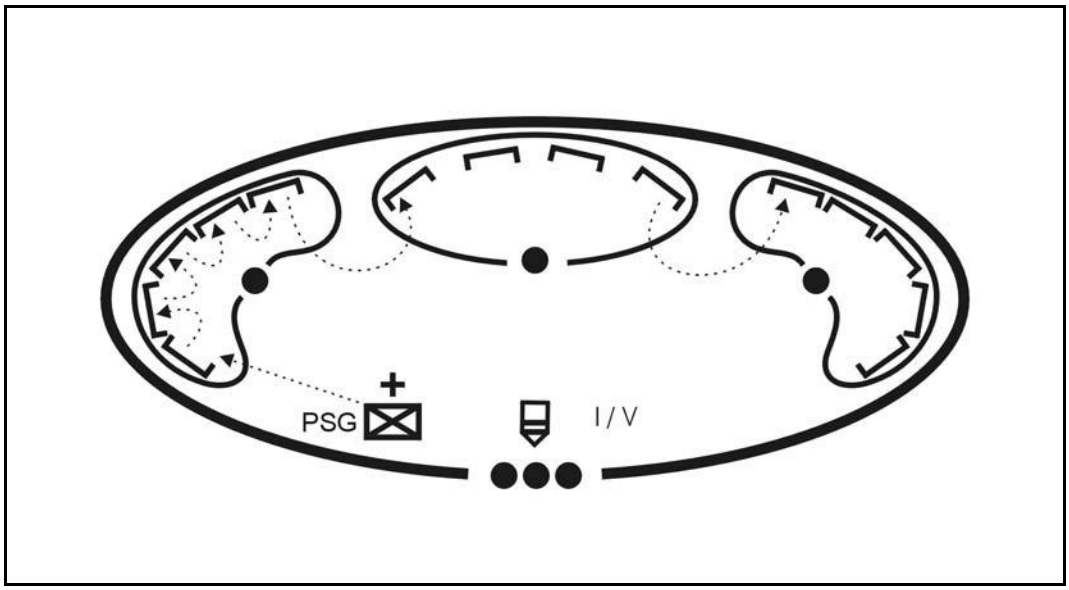


Figure 9-4. Dismounted in-position method.

NOTE: If resupply vehicles cannot move near platoon positions, platoon members may need to help the resupply personnel move supplies and equipment forward.

b. **Emergency Resupply.** Occasionally (normally during combat operations), the platoon might have such an urgent need for resupply that it cannot wait for a routine LOGPAC. Emergency resupply could involve NBC equipment as well as Classes III, V, VIII, and water.

c. **Prestock Resupply.** In defensive operations and at some other times, as appropriate, the platoon most likely will need prestocked supplies, also known as pre-positioned or "cached" resupply. Normally, the platoon only pre-positions Class IV and V items, but they also can pre-position Class III supplies. However, they must refuel platoon vehicles before they move into fighting positions, while first occupying the BP, or while moving out of their fighting position.

(1) All levels must carefully plan and execute prestock operations. All leaders, down to vehicle commanders and squad leaders, must know the exact locations of prestock sites. They verify these locations during reconnaissance or rehearsals. The platoon takes steps to ensure the survivability of the prestocked supplies. These measures include selecting covered and concealed positions and digging-in the prestock positions. The platoon leader must have a removal and destruction plan to prevent the enemy from capturing pre-positioned supplies.

(2) During offensive operations, the platoon can pre-position supplies on trucks or ICVs well forward on the battlefield. This works well if the platoon expects to use a large volume of fire, with corresponding ammunition requirements, during a fast-moving operation.

9-4. SOLDIER'S LOAD

The soldier's load is a main concern of the leader. How much is carried, how far, and in what configuration are important mission considerations. Leaders must learn to prepare for the most likely contingencies based on available information--they cannot be prepared for all possible operations. See FM 7-12 for detailed discussions on load planning, calculating, and management techniques used to assist leaders and soldiers in organizing tactical loads to ensure safety and combat effectiveness.

9-5. COMBAT LOAD AND BASIC LOAD

The platoon's combat load varies by mission and includes the supplies physically carried into the fight. The company commander directs some minimum requirements for the combat load. The unit SOP or the platoon leader specifies most items. The basic load includes supplies kept by the platoon for use in combat. The quantity of most basic load supply items depends on how many days in combat the platoon might have to sustain itself without resupply. For Class V ammunition, the higher commander or SOP specifies the platoon's basic load

9-6. MAINTENANCE

Proper maintenance is the key to keeping vehicles, equipment, and other materials in serviceable condition. It is a continuous process starting with preventive measures taken by each vehicle crew and continuing through repair and recovery efforts by higher-level maintenance personnel. Maintenance services include inspecting, testing, servicing, repairing, requisitioning, recovering, and evacuating vehicles and equipment.

9-7. EVACUATION PROCEDURES

When combat begins and casualties occur, the platoon first must provide initial care to those wounded in action (WIA). This is accomplished through the administration of first aid (self-aid/buddy aid), enhanced first aid (by the combat lifesaver), and EMT (by the trauma specialist/platoon medic). Vehicle commanders and squad leaders arrange for evacuation of WIAs to the CCP. The platoon normally sets up the CCP in a covered and concealed location to the rear of the platoon position. At the CCP, the platoon medic conducts triage on all casualties, takes steps to stabilize their condition, and starts the process of moving them to the rear for more treatment.

NOTE: Before the platoon evacuates casualties to the CCP or beyond, leaders should remove all key operational items and equipment from their persons. This includes SOI, maps, position-locating devices, and laser pointers. Every unit should establish an SOP for handling the weapons and ammunition of its WIA.

9-8. KILLED IN ACTION

The platoon leader designates a location for the collection of KIAs. All personal effects remain with the body, but the vehicle commander removes and safeguards any equipment and issue items. He keeps these until he can turn the equipment and issue items over to the platoon sergeant. The platoon sergeant turns over the KIA to the first sergeant. As a

rule, the platoon should not transport KIA remains on the same vehicle as wounded soldiers.

9-9. ENEMY PRISONERS OF WAR

EPWs and captured enemy equipment and materiel often provide excellent combat information and intelligence. This information is of tactical value only if the platoon processes and evacuates prisoners and materiel to the rear quickly.

a. In any tactical situation, the platoon will have specific procedures and guidelines for handling prisoners and captured material.

(1) The five-"S" procedure reminds soldiers about the basic principles for handling EPWs, which include tagging prisoners and all captured equipment and materiel:

- Search.
- Segregate.
- Silence.
- Speed.
- Safeguard.

(2) In addition to initial processing, the capturing element provides guards and transportation to move prisoners to the designated EPW collection points. The capturing element normally carries prisoners on vehicles already heading toward the rear, such as tactical vehicles returning from LOGPAC operations. The capturing element must also feed, provide medical treatment, and safeguard EPWs until they reach the collection point.

(3) Once the EPWs arrive at the collection point, the platoon sergeant assumes responsibility for them. He provides for security and transports them to the company EPW collection point. He uses available personnel as guards, to include the walking wounded or soldiers moving to the rear for reassignment.

9-10. AERIAL SUSTAINMENT

Aerial sustainment is an aviation mission that consists of moving personnel, equipment, materiel, and supplies by utility, cargo, and fixed-wing assets for use in operations other than air assault or combat support. Overland resupply might not work, due to terrain or the existing enemy threat. The platoon must initiate a request for resupply and must push it through company to battalion. The platoon must prepare to receive the supplies at the specified time and location.

9-11. CASUALTY EVACUATION

Casualty evacuation (CASEVAC) is the term used to refer to the movement of casualties by air or ground on nonmedical vehicles or aircraft. CASEVAC operations normally involve the initial movement of wounded or injured soldiers to the nearest medical treatment facility. Casualty evacuation operations may also be employed in support of mass casualty operations. Medical evacuation includes the provision of en route medical care, whereas CASEVAC does not provide any medical care during movement. For definitive information on CASEVAC, see FM 8-10-6 and FM 8-10-26.

CHAPTER 10
PATROLLING

Patrols are missions to gather information, to conduct combat operations, or to establish a presence in an area of operation as part of a stability operation. The SBCT infantry platoon usually conducts these operations as part of a larger effort. Infantry platoons and squads conduct three types of patrols: reconnaissance, combat, and presence. This chapter describes the planning considerations used in preparation for patrols, conduct of patrols, and establishment of and actions taken in a patrol base. The information aligns directly with FM 7-8 because once the infantry squads dismount the ICVs, they operate as a light infantry platoon. (Refer to FM 7-8 for illustrations.) The key difference is that the platoon has the increased capabilities of vehicles, a weapons squad, and weapon types. The platoon leader has the flexibility to use these assets to enhance the effectiveness of the patrolling mission.

Section I. GENERAL

The SBCT infantry platoon has the ability to transport its squads to positions of advantage to conduct patrolling and to assist in sustainability operations. The weapons squad and the ICV provide additional capabilities for combat patrolling. The platoon leader should, if possible, integrate fires from the ICV as a support or security position. The ICV sections can also perform communications relay. Most patrols are conducted dismounted, but the vehicles can support the operation or be left in a hide position or in the company AA. The information discussed in this section applies to all types of patrols.

10-1. ORGANIZATION

To accomplish the patrolling mission, a platoon or squad must perform specific tasks. As with other missions, the leader assigns tasks in accordance with his estimate of the situation. He identifies those tasks the platoon must perform and decides which elements will perform them. Where possible, the leader should maintain squad and fire team integrity. The terms “element” and “team” refer to the squads, fire teams, or buddy teams that perform the described tasks. The leader must plan carefully to ensure that he has identified and assigned all required tasks in the most efficient way. Platoons conducting patrols include the common and specific elements and teams for each type of patrol. The following elements are common to all patrols.

a. **Headquarters Element.** The headquarters consists of the platoon leader, RATELO, and platoon sergeant. It may consist of other attachments that are assigned or that the platoon leader decides that he or the platoon sergeant must control directly.

b. **Aid and Litter Team.** Aid and litter teams are responsible for treating and evacuating casualties.

c. **Enemy Prisoner of War Search Team.** EPW teams are responsible for controlling enemy prisoners and battlefield detainees IAW the five S's and the leader's guidance.

d. **Surveillance Team.** The surveillance team keeps watch on the objective from the time that the leader's reconnaissance ends until the unit deploys for actions on the objective. They then join their element.

e. **Compass Man.** The compass man assists in navigation by ensuring the lead fire team leader remains on course at all times. The compass man should be thoroughly briefed. His instructions must include an initial azimuth with subsequent azimuths provided as necessary. The platoon or squad leader also should designate an alternate compass man.

f. **Pace Man.** The pace man maintains an accurate pace at all times. The platoon or squad leader should designate how often the pace man is to report the pace. The pace man should also report the pace at the end of each leg. The platoon or squad leader also should designate an alternate pace man.

10-2. INITIAL PLANNING

Leaders plan and prepare for patrols using the troop-leading procedures. Leaders identify required actions on the objective and then reverse plan to the departure from friendly lines and forward to the reentry of friendly lines while making a tentative plan. They normally receive the OPORD in the company CP where communications are good and key personnel are available. Because patrols act independently, move beyond the direct-fire support of the parent unit, and operate forward of friendly units, coordination must be thorough and detailed.

a. Items to be considered by the company commander and platoon leader are--

- Changes or updates in the enemy situation.
- Best use of terrain for routes, rally points, and patrol bases.
- Light and weather data.
- Changes in the friendly situation.
- The attachment of soldiers with special skills or equipment; for example, engineers or interpreters.
- Use and location of landing zones.
- Departure and reentry of friendly lines.
- Fire support on the objective and along the planned routes, including alternate routes.
- Rehearsal areas and times. The terrain for the rehearsal should be similar to that at the objective, to include buildings and fortifications if necessary.
- Signal plan. This should include call signs, frequencies, code words, pyrotechnics, digital communication instructions, as well as the challenge and password.

b. The company or platoon leader coordinates with the unit through which his platoon or squad will conduct its forward and rearward passage of lines.

c. The company commander and battalion S3 coordinate patrol activities with the leaders of other units that will be patrolling in adjacent areas at the same time.

10-3. COMPLETE THE PLAN

As the platoon leader completes his plan, he considers the following.

a. **Essential and Supporting Tasks.** The leader ensures that he has assigned all essential tasks to be performed on the objective at rally points, at danger areas, at security or surveillance locations, along the route(s), and at passage lanes.

b. **Movement and Execution Times.** The leader estimates time requirements for movement to the objective, leader's reconnaissance of the objective, establishment of security and surveillance, completion of all assigned tasks on the objective, movement to an objective rally point to debrief the platoon, and return to and through friendly lines.

c. **Primary and Alternate Routes.** The leader selects primary and alternate routes to and from the objective (Figure 10-1). The return routes should differ from the routes to the objective.

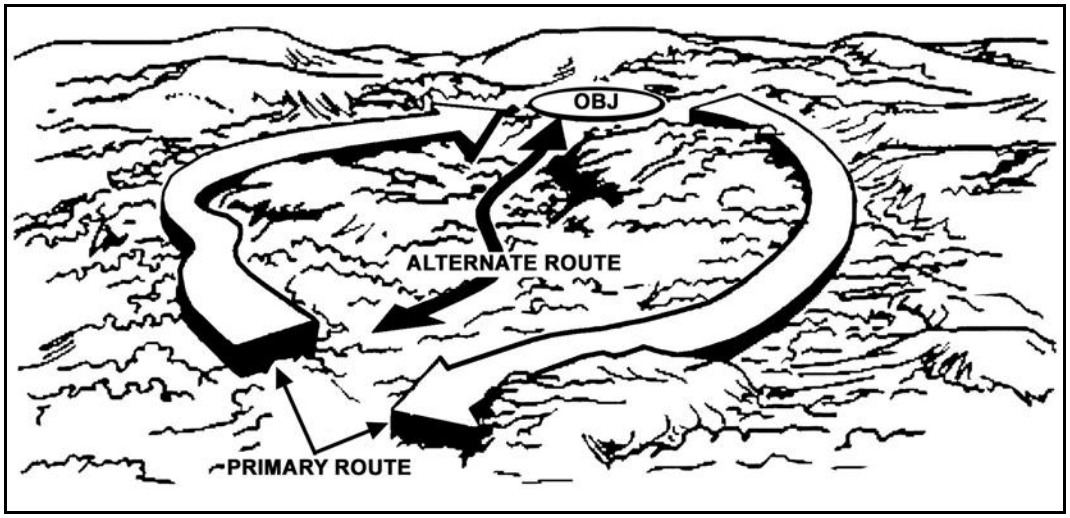


Figure 10-1. Primary and alternate routes.

d. **Signals.** The leader should consider the use of special signals. These include arm-and-hand signals, flares, voice, whistles, radios, and infrared equipment. All signals must be rehearsed so that all soldiers know what they mean.

e. **Challenge and Password Forward of Friendly Lines.**

(1) The platoon can use digital technology to inform units that it can track their progress, and as a redundancy it can use challenge and password.

(2) The platoon leader also can designate a running password. This code word alerts a unit that friendly soldiers are approaching in a less than organized manner and possibly under pressure. This may be used to get soldiers quickly through a compromised passage of friendly lines. The running password is followed by the number of soldiers approaching ("Warrior six"). This prevents the enemy from joining a group in an attempt to penetrate a friendly unit.

f. **Location of Leaders.** The leader considers where he and the platoon sergeant and other key leaders should be located for each phase of the patrol mission. The platoon sergeant normally is with the following elements for each type of patrol:

- On a raid or ambush, he normally controls the support element.

- On an area reconnaissance, he normally stays in the ORP.
- On a zone reconnaissance, he normally moves with the reconnaissance element that sets up the link-up point.

g. **Actions on Enemy Contact.** Unless required by the mission, the platoon avoids enemy contact. The leader's plan must address actions on chance contact at each phase of the patrol mission. The platoon's ability to continue the mission will depend on how early contact is made, whether the platoon is able to break contact successfully (so that its subsequent direction of movement is undetected), and whether the platoon receives any casualties as a result of the contact.

(1) The plan must address the handling of seriously wounded soldiers and KIAs.

(2) The plan must address the handling of prisoners who are captured as a result of chance contact and who are not part of the planned mission.

h. **Contingency Plans.** The leader leaves for many reasons throughout the planning, coordination, preparation, and execution of his patrol mission. Each time the leader departs without radio or wire communications, he must issue a five-point contingency plan. The contingency plan includes--

- Where the leader is going.
- Who he is taking with him.
- The amount of time he plans to be gone.
- The actions to be taken if the leader does not return.
- The unit's and the leader's actions on chance contact while the leader is gone.

10-4. DEPART FRIENDLY LINES

When departing friendly lines, the platoon leader or company commander must coordinate with the commander of the forward unit and the leaders of other units that will be patrolling in the same or adjacent areas. This coordination includes signal plan, fire plan, running password, procedures for departure and reentry lines, dismount points, initial rally points, departure and reentry points, and information about the enemy.

a. The platoon leader provides the forward unit leader with the unit identification, the size of the patrol, the departure and return times, and the area of operation.

b. The forward unit leader provides the platoon leader with the following:

- Additional information on terrain.
- Known or suspected enemy positions.
- Likely enemy ambush sites.
- Latest enemy activity.
- Detailed information on friendly positions and obstacle locations to include the location of OPs.
- Friendly unit fire plan.
- Support that the unit can provide; for example, fire support, guides, communications, and reaction force.

c. In his plan for the departure of friendly lines, the leader should consider the following sequence of actions:

- Making contact with friendly guides at the contact point.
- Moving to the coordinated initial rally point.

- Completing final coordination.
- Moving to and through the passage point.
- Establishing a security-listening halt beyond the friendly unit's final protective fires.

d. If the platoon is dismounted, it should remain in single file. The platoon sergeant follows directly behind the guide so that he can count each soldier who passes through the passage point. He gives the count to the guide, tells him how long to wait at the passage point (or when to return), and confirms the running password. If the platoon makes contact after it is past the departure point, it fights through. Soldiers return to the departure point only if they become disorganized. They then reoccupy the initial rally point, and the leader reports to higher headquarters.

10-5. PATROL BASES

A patrol base is a position set up when a squad or platoon conducting a patrol halts for an extended period. Patrol bases should be occupied no longer than 24 hours, except in an emergency. The platoon or squad never uses the same patrol base twice. Platoons or squads use patrol bases--

- To stop all movement to avoid detection.
- To hide during a long, detailed reconnaissance of an objective area.
- To eat, clean weapons and equipment, or rest.
- To plan and issue orders.
- To reorganize after infiltrating an enemy area.
- To have a base from which to conduct several consecutive or concurrent operations such as ambush, raid, reconnaissance, or security.

a. The leader selects the tentative site from a map. Plans to establish a patrol base must include selecting an alternate patrol base site. The alternate site is used if the first site is unsuitable or if the patrol must unexpectedly evacuate the first patrol base.

b. Leaders planning for a patrol base must consider the mission and passive and active security measures. The leader plans for--

- Observation posts.
- Communication with observation posts.
- Defense of the patrol base.
- Withdrawal from the patrol base to include withdrawal routes and a rally point or rendezvous point or alternate patrol base.
- A security system to make sure that specific soldiers are awake at all times.
- Enforcement of camouflage, noise, and light discipline.
- The conduct of required activities with minimum movement and noise.

c. The leader avoids--

- Known or suspected enemy positions.
- Built-up areas.
- Ridges and hilltops, except as needed for maintaining communication.

- Roads and trails.
- Small valleys.

10-6. RALLY POINTS

A rally point is a place designated by the leader where the platoon moves to reassemble and reorganize if it becomes dispersed. (See FM 7-8 for more information.) The leader physically reconnoiters routes to select rally points whenever possible. He selects tentative points if he can only conduct a map reconnaissance, and he confirms them by actual inspection as the platoon moves through them. The most common types of rally points are initial, en route, objective, reentry, and near- and far-side rally points. Soldiers must know which rally point to move to at each phase of the patrol mission. They should know what actions are required there and how long they are to wait at each rally point before moving to another.

a. **Initial Rally Point.** An initial rally point is a place inside of friendly lines where a unit may assemble and reorganize if it makes enemy contact during the departure of friendly lines or before reaching the first en route rally point. The commander normally selects the initial rally point.

b. **En Route Rally Point.** The leader designates en route rally points every 100 to 400 meters (based on the terrain, vegetation, and visibility). When the leader designates a new en route rally point, the previously designated one goes into effect. This precludes uncertainty over which rally point soldiers should move to if contact is made immediately after the leader designates a new rally point. There are three ways to designate a rally point:

(1) Physically occupy it for a short period. This is the preferred method.

(2) Pass by at a distance and designate using arm-and-hand signals.

(3) Walk through and designate using arm-and-hand signals.

c. **Objective Rally Point**. The ORP is a point out of sight, sound, and small-arms range of the objective area. It is normally located in the direction that the platoon plans to move after completing its actions on the objective. The ORP is tentative until the objective is pinpointed. Actions at or from the ORP include--

- Reconnoitering the objective.
- Issuing a FRAGO.
- Disseminating information from reconnaissance, if contact was not made.
- Making final preparations before continuing operations; for example, re-camouflaging; preparing demolitions; lining up rucksacks for quick recovery; preparing EPW bindings, first aid kits, and litters; and inspecting weapons.
- Accounting for soldiers and equipment after actions at the objective are complete.
- Reestablishing the chain of command after actions at the objective are complete.

(1) ***Occupation of an ORP by a Squad***. In planning the occupation of an ORP, the squad leader considers the following sequence:

- Halt beyond sight, sound, and small-arms weapons range of the tentative ORP (200 to 400 meters in good visibility, 100 to 200 meters in limited visibility).
- Position security.
- Move forward with a compass man and one member of each fire team to confirm the location of the ORP and determine its suitability. Issue a five-point contingency plan before departure.
- Position the Team A soldier in the ORP at 12 o'clock and the Team B soldier at 6 o'clock. Issue them a contingency plan and return with the compass man.

- Lead the squad into the ORP; position Team A from 9 to 3 o'clock and Team B from 3 to 9 o'clock.

NOTE: The squad may also occupy the ORP by force. This requires more precise navigation but eliminates separating the squad.

(2) ***Occupation of an ORP by a Platoon***. The platoon leader should consider the same sequence in planning the occupation of an ORP. He brings a soldier from each squad on his reconnaissance of the ORP and positions them at the 10, 2, and 6 o'clock positions. The first squad in the order of march establishes the base leg (10 to 2 o'clock). The trailing squads occupy from 2 to 6 o'clock and 6 to 10 o'clock, respectively.

d. **Reentry Rally Point**. The reentry rally point (RRP) is located out of sight, sound, and small arms weapons range of the friendly unit through which the platoon will return. This also means that the RRP should be outside the final protective fires of the friendly unit. The platoon occupies the RRP as a security perimeter.

e. **Near- and Far-Side Rally Points.** These rally points are on the near and far side of danger areas. If the platoon makes contact while crossing the danger area and control is lost, soldiers on either side move to the rally point nearest them. They establish security, reestablish the chain of command, determine their personnel and equipment status, and continue the patrol mission, link up at the ORP, or complete their last instructions.

10-7. LEADER'S RECONNAISSANCE

The plan must include a leader's reconnaissance of the objective once the platoon or squad establishes the ORP. During his reconnaissance, the leader pinpoints the objective; selects security, support, and assault positions for his squads and fire teams; and adjusts his plan based on his observation of the objective. Each type of patrol requires different tasks during the leader's reconnaissance. The platoon leader will take different elements with him. The leader must plan time to return to the ORP, complete his plan, disseminate information, issue orders and instructions, and allow his squads to make any additional preparations.

10-8. REENTRY OF FRIENDLY LINES

The platoon could be mounted or dismounted at the reentry rally point. The same considerations apply for coordination. The platoon leader should consider the following sequence.

a. The platoon halts in the RRP and establishes security.

b. The platoon leader radios the code word advising the friendly unit of its location and that it is ready to return. The friendly unit must acknowledge the message and confirm that guides are waiting before the platoon moves from the RRP.

c. If radio communications are not possible, the platoon leader, RATELO, and a two-man security element (buddy team) move forward and attempt to contact an OP using the challenge and password. The OP notifies the friendly unit that the platoon is ready to return and requests a guide.

d. If the platoon leader cannot find an OP, he moves with the RATELO and security element to locate the coordinated reentry point. He must move straight toward friendly lines, never parallel to them. All lateral movement should be outside of small-arms weapons range.

NOTE: The platoon leader should attempt this procedure only during daylight. At night he should use other backup signals to make contact with friendly units. The preferred method is to wait until daylight if contact with the friendly unit cannot be made as planned, but this is METT-TC dependent.

e. The platoon leader uses far and near recognition signals to establish contact with the guide.

f. The platoon leader signals (radio) the platoon forward or returns and leads it to the reentry point. He may post the security element with the guide at the enemy side of the reentry point.

g. The platoon sergeant counts and identifies each soldier as he passes through the reentry point.

h. The guide leads the platoon to the assembly area.

i. The platoon leader reports to the command post of the friendly unit. He tells the commander everything of tactical value concerning the friendly unit's area of responsibility.

j. The platoon leader rejoins the platoon in the assembly area and leads it to a secure area for debriefing.

10-9. DEBRIEF

Immediately after the platoon or squad returns, personnel from higher headquarters conduct a thorough debrief. This may include all members of the platoon or the leaders, RATELO, and any attached personnel. Normally the debriefing is oral. Sometimes a written report is required. Information on the written report should include--

- Size and composition of platoon conducting the patrol.
- Mission of the platoon (type of patrol, location, and purpose).
- Departure and return times.
- Routes. Use checkpoints, grid coordinates for each leg, or include an overlay.
- Detailed description of terrain and enemy positions identified.
- Results of any contact with the enemy.
- Personnel status at the conclusion of the patrol.

Section II. TYPES OF PATROLS

This section discusses the types of patrols the SBCT infantry platoon may be expected to conduct.

10-10. RECONNAISSANCE PATROL

Reconnaissance patrols provide timely and accurate information on the enemy and terrain. They confirm the leader's plan before it is executed. The commander must brief the platoon leader the specific information requirements for each mission. The three types of reconnaissance patrols are area, zone, and route.

a. **Area Reconnaissance Patrol.** An area reconnaissance is conducted to obtain information about a specific location and the area around it. The location may be given as a grid coordinate, an objective, on an overlay. In an area reconnaissance, the platoon or squad uses surveillance or vantage points around the objective from which to observe it and the

surrounding area. In planning for an area reconnaissance mission, the platoon leader considers the following sequence of actions.

(1) The leader may include a surveillance team in his reconnaissance of the objective from the ORP. He positions the surveillance team while on the reconnaissance. The subordinate leader responsible for security establishes security at the ORP and positions other security teams as required on likely enemy avenues of approach into the objective area.

(2) If required, the leader positions other surveillance elements about the objective. He may move them on one route posting them as they move, or he may direct them to move on separate routes to their assigned locations.

(3) After observing the objective for a specified time, all elements return to the ORP and report their observations to the leader or the recorder. Once all information is collected, it is disseminated to every soldier.

b. **Zone Reconnaissance Patrol.** A zone reconnaissance is conducted to obtain information on enemy, terrain, and routes within a specified zone. Zone reconnaissance techniques include the use of moving elements, stationary teams, or multiple area reconnaissance actions.

(1) ***Moving Elements.*** The leader plans the use of squads or fire teams moving along multiple routes to cover the entire zone. Methods for planning the movement of multiple elements through a zone include the fan, the box, converging routes, and successive sectors.

(a) *Fan Method (Figure 10-2, page 10-10).* The leader first selects a series of ORPs throughout the zone. The platoon establishes security at the first ORP. Each reconnaissance and surveillance (R&S) team moves from the ORP along a different fan-shaped route that overlaps with others to ensure reconnaissance of the entire area. The leader maintains a reserve at the ORP. When all R&S teams have returned to the ORP, the platoon collects and disseminates all information to every soldier before moving on to the next ORP.

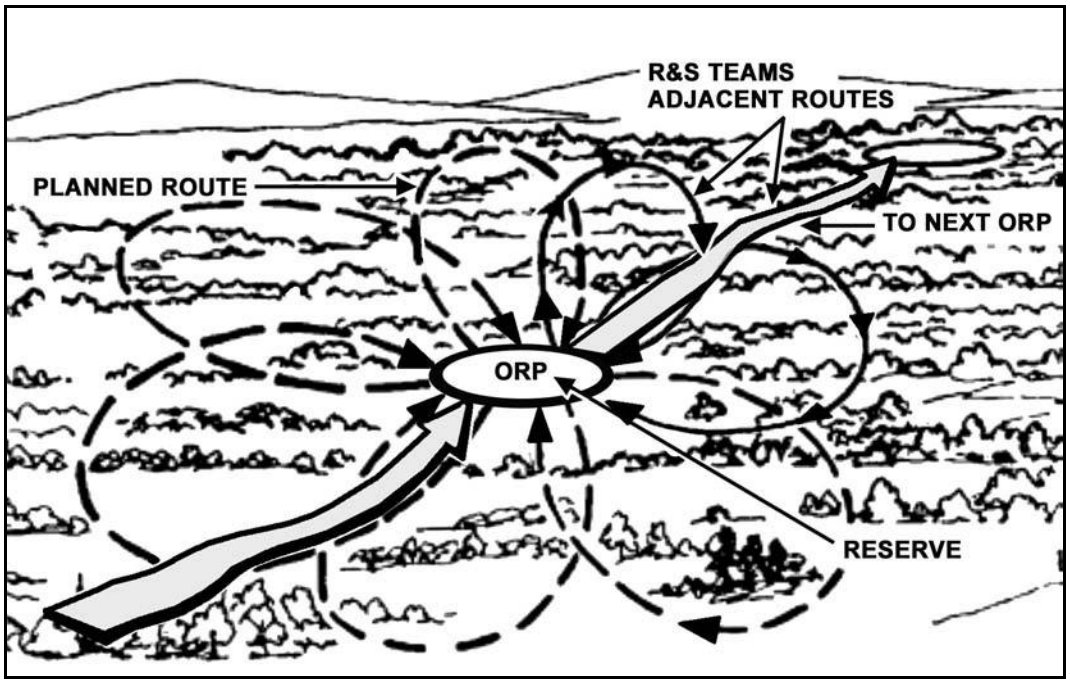


Figure 10-2. Fan method.

(b) *Box Method (Figure 10-3).* The leader sends his R&S teams from the ORP along routes that form a boxed-in area. He sends other teams along routes through the area within the box. All teams meet at a link-up point at the far side of the box from the ORP.

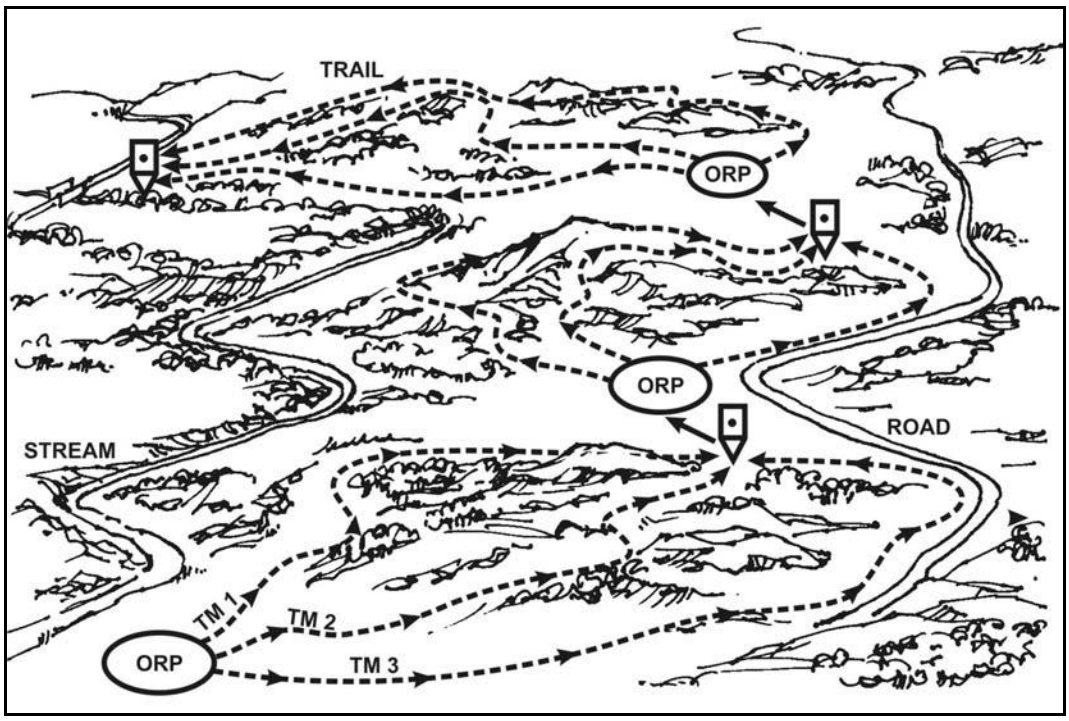


Figure 10-3. Box method.

(c) *Converging Routes Method (Figure 10-4).* The leader selects routes from the ORP through the zone to a link-up point at the far side of the zone from the ORP. Each R&S team moves along a specified route and uses the fan method to reconnoiter the area between routes. The leader designates a time for all teams to link-up.

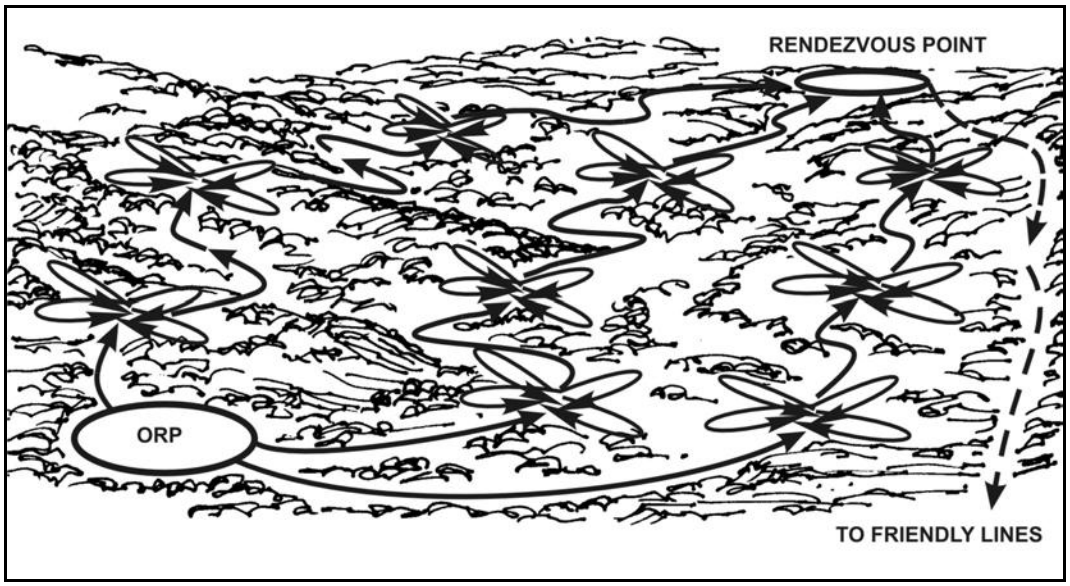


Figure 10-4. Converging routes method.

(d) *Successive Sector Method (Figure 10-5).* The leader may divide the zone into a series of sectors. Within each sector, the platoon uses the converging routes method to reconnoiter to an intermediate link-up point where it collects and disseminates the information gathered to that point before reconnoitering the next sector.

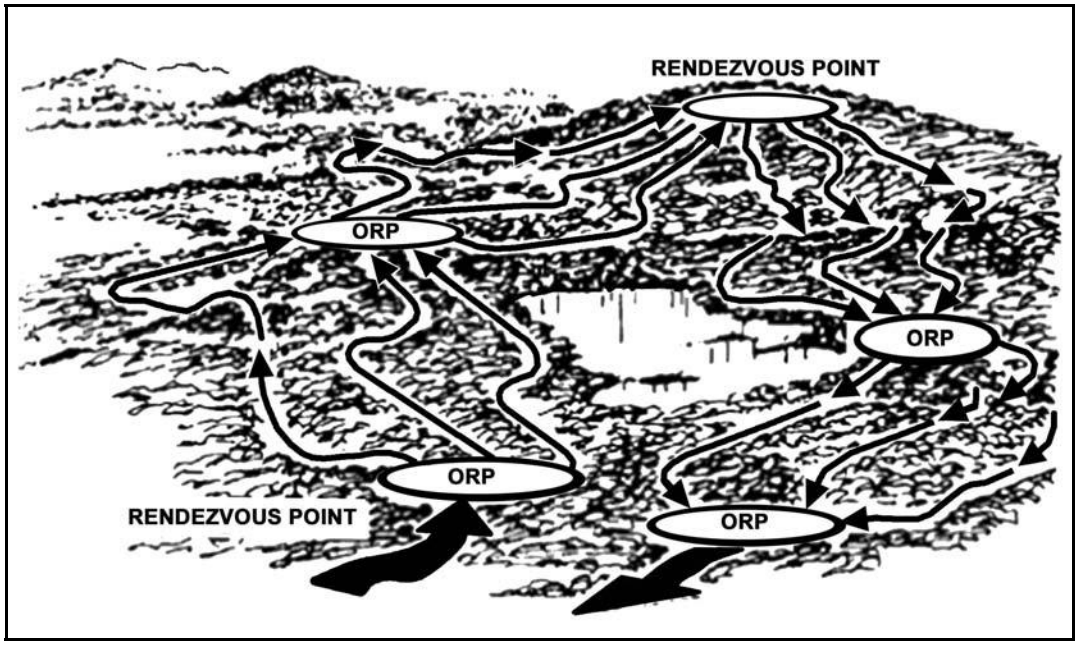


Figure 10-5. Successive sector method.

(2) ***Stationary Teams.*** Using this technique, the leader positions surveillance teams in locations where they can collectively observe the entire zone for long-term, continuous information gathering. He must consider sustainment requirements when developing his soldiers' load plan.

(3) ***Multiple Area Reconnaissance***. The leader tasks each of his squads to conduct a series of area reconnaissance actions along a specified route.

c. **Route Reconnaissance Patrol.** A route reconnaissance is conducted to obtain detailed information about one route and all the adjacent terrain or to locate sites for emplacing obstacles. A route reconnaissance is oriented on a road, a narrow axis such as an infiltration lane, or a general direction of attack. Engineers normally are attached to the infantry unit for a complete route reconnaissance, although infantry can conduct a hasty route reconnaissance without engineer support. A route reconnaissance results in detailed information about trafficability, enemy activity, NBC contamination, and aspects of adjacent terrain from both the enemy and friendly viewpoint. In planning a route reconnaissance the leader considers the following.

(1) The preferred method for conducting a route reconnaissance is the fan method described above. The leader must ensure that the fans are extensive enough to reconnoiter intersecting routes beyond direct-fire range of the main route (Figure 10-6).

(2) The platoon should use a different return route.

(3) If all or part of the proposed route is a road, the leader must treat the road as a danger area. The platoon moves parallel to the road using a covered and concealed route. When required, reconnaissance and security teams move close to the road to reconnoiter key areas.

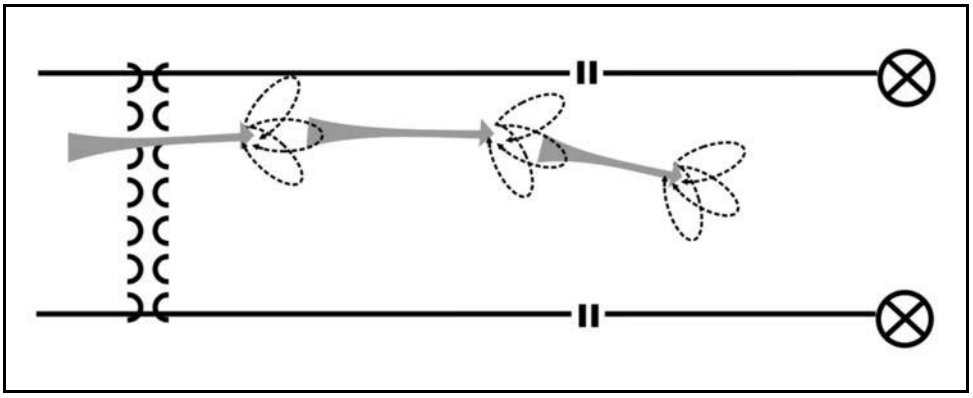


Figure 10-6. Route reconnaissance using fans.

10-11. COMBAT PATROL

Combat patrols are conducted to destroy or capture enemy soldiers or equipment; to destroy installations, facilities, or key points; or to harass enemy forces. They also provide security for larger units. The two types of combat patrol missions are ambush and raid.

a. **Organization.** The platoon leader organizes the platoon with all assets available to include weapons squad, rifle squads, ICVs, and attachments to complete the mission. Besides the common elements, combat patrols also have the following elements and teams.

(1) ***Assault Element***. The assault element seizes and secures the objective and protects special teams as they complete their assigned actions on the objective.

(2) ***Security Element***. The security element provides security at danger areas, secures the ORP, isolates the objective, and supports the withdrawal of the rest of the platoon once it completes its assigned actions on the objective. The security element may have separate security teams, each with an assigned task or sequence of tasks.

(3) ***Support Element***. The support element provides direct fire support and may control indirect fires for the platoon.

(4) ***Breach Element.*** The breach element breaches the enemy's obstacles when required.

(5) ***Demolition Team***. Demolition teams are responsible for preparing and exploding the charges to destroy equipment, vehicles, or facilities on the objective.

(6) ***Search Team***. The assault element may comprise two-man (buddy team) or four-man (fire team) search teams to search bunkers, buildings, or tunnels on the objective. These teams may search the objective or kill zone for casualties, documents, or equipment.

b. **Leader's Reconnaissance.** In a combat patrol, the leader has additional considerations for the conduct of his reconnaissance of the objective from the ORP. He is normally the assault element leader. He should also take the support element leader, the security element leader, and a surveillance team (a two-man team from the assault element).

(1) The leader should designate a release point half way between the ORP and the objective. Squads and fire teams separate at the release point and move to their assigned positions. The release point should have wire communications with the ORP and be set up so that other elements can tie into a hot loop there.

(2) The platoon leader should confirm the location of the objective and determine that it is suitable for the assault or ambush. He notes the terrain and identifies where he can place mines or Claymores to cover dead space. He notes any other features of the objective that may cause him to alter his plan.

(3) If the objective is the kill zone for an ambush, the leader's reconnaissance party should not cross the objective because to do so will leave tracks that may compromise the mission.

(4) The platoon leader should confirm the suitability of the assault and support positions and routes from them back to the ORP.

(5) The platoon leader should post the surveillance team and issue a five-point contingency plan before returning to the ORP.

c. **Ambush.** An ambush is a surprise attack from a concealed position on a moving or temporarily halted target. Ambushes are classified by category--hasty or deliberate; by type--point, area, or antiarmor; and by formation--linear or L-shaped. The leader uses a combination of category, type, and formation in developing his ambush plan.

(1) ***Planning***. The key planning considerations include--

- Covering the entire kill zone by fire.
- Using existing or reinforcing obstacles (Claymores and other mines) to keep the enemy in the kill zone.
- Protecting the assault and support elements with mines, Claymores, or explosives.
- Using security elements or teams to isolate the kill zone.
- Assaulting into the kill zone to search dead and wounded, assemble prisoners, and collect equipment. (The assault element must be able to move quickly through its own protective obstacles.)
- Timing the actions of all elements of the platoon to preclude loss of surprise.
- Using only one squad to conduct the entire ambush and rotating squads over time from the ORP. This technique is useful when the ambush must be manned for a long time.

(2) ***Formations.*** The leader considers either the linear or L-shaped formations in planning an ambush.

(a) *Linear.* In an ambush using a linear formation, the assault and support elements deploy parallel to the enemy's route. This positions both elements on the long axis of the kill zone and subjects the enemy to flanking fire. This formation can be used in close terrain that restricts the enemy's ability to maneuver against the platoon or in open terrain, provided a means of keeping the enemy in the kill zone can be effected.

(b) *L-shaped.* In an L-shaped ambush, the assault element forms the long leg parallel to the enemy's direction of movement along the kill zone. The support element forms the short leg at one end of and at right angles to the assault element. This provides both flanking fires (long leg) and enfilading fires (short leg) against the enemy. The L-shaped ambush can be used at a sharp bend in a trail, road, or stream. It should not be used where the short leg would have to cross a straight road or trail.

d. **Hasty Ambush.** A platoon or squad conducts a hasty ambush when it makes visual contact with an enemy force and has time to establish an ambush without being detected. The actions for a hasty ambush must be well rehearsed so that soldiers know what to do on the leader's signal. They must also know what action to take if detected before they are ready to initiate the ambush. In planning and rehearsing a hasty ambush the platoon leader should consider the following sequence of actions.

(1) Using visual signals, any soldier alerts the platoon that an enemy force is in sight. The soldier continues to monitor the location and activities of the enemy force until his team or squad leader relieves him.

(2) The platoon or squad halts and remains motionless.

(3) The leader determines the best nearby location for a hasty ambush. He uses arm-and-hand signals to direct soldiers to covered and concealed positions. The leader designates the location and extent of the kill zone.

(4) Security elements move out to cover each flank and the rear. The leader directs the security elements to move a given distance, set up, and rejoin the platoon on order or after the ambush (the sound of firing ceases). At squad level, the two outside buddy teams normally provide flank security as well as fires into the kill zone.

(5) Soldiers move quickly to covered and concealed positions, normally 5 to 10 meters apart. Soldiers ensure that they have good observation and fields of fire into the kill zone.

(6) The leader initiates the ambush when the majority of the enemy force enters the kill zone. (If time and terrain permit, the squad or platoon may place out Claymores and use them to initiate the ambush.)

NOTE: If the enemy detects a soldier, the soldier initiates the ambush by firing his weapon and alerting the rest of the platoonby saying ENEMY RIGHT (LEFT or FRONT).

(7) Leaders control the rate and distribution of fires. The leader orders cease-fire when the enemy force is destroyed or ceases to resist, and he directs the assault element to move into the kill zone to conduct a hasty search of the enemy soldiers. All other soldiers remain in place to provide security.

(8) The security elements rejoin the platoon after the assault element has cleared through the kill zone. The platoon withdraws from the ambush site using a covered and concealed

route. The platoon returns to the ORP in effect, collects and disseminates all information, reorganizes as necessary, and continues the mission.

e. **Deliberate Ambush.** A deliberate ambush is conducted against a specific target at a predetermined location. The types of deliberate ambushes are point, area, and antiarmor. The leader requires detailed information in planning a deliberate ambush:

- Size and composition of the targeted enemy unit.
- Weapons and equipment available to the enemy.
- The enemy's route and direction of movement.
- Times that the targeted unit will reach or pass specified points along the route.

(1) ***Point Ambush.*** In a point ambush, soldiers deploy to attack an enemy in a single kill zone. The platoon leader must ensure that all elements and weapons systems are sited. In conjunction with the PSG, the platoon leader must have positive C2 of security, support, and assault elements. If using ICVs, the platoon leader may or may not integrate their fires but should plan and coordinate dismount, remount, or hide positions for the vehicles, if used.

(2) ***Area Ambush.*** The area ambush is a dynamic ambush. Soldiers deploy in two or more related point ambushes based on real-time intelligence. There are three techniques used in employing area ambushes.

- Sequential (linear in nature).
- Concentrated (centralized in nature).
- Distributed (decentralized in nature).

The platoon leader should consider the following sequence of actions when planning a deliberate area ambush.

(a) A platoon is the smallest unit to conduct an area ambush. Platoons conduct area ambushes where enemy movement is largely restricted to trails or streams.

(b) The platoon leader should select one principal ambush site around which he organizes outlying ambushes. These secondary sites are located along the enemy's most likely approach to and escape from the principal ambush site. Squad-sized elements normally are responsible for each ambush site.

(c) The platoon leader must determine that the best employment of all weapon systems and vehicle platforms is used.

(d) Isolating squads are responsible for outlying ambushes and do not initiate their ambushes until after the principal ambush is initiated. They then engage to prevent enemy forces from escaping or reinforcing.

(3) ***Antiarmor Ambush.*** Platoons and squads conduct antiarmor ambushes to destroy one or two armored vehicles. The antiarmor ambush is organized around the platoon's three Javelins and two machine gun teams. The leader must consider additional weapons available to supplement its fires, normally AT4s. The leader must carefully position all antiarmor weapons to ensure the best shot (rear, flank, or top). The remainder of the platoon must function as support and security elements in the same way that they do for other combat patrols.

(a) In an antiarmor ambush, the platoon leader selects a general site for the ambush that restricts the movement of armored vehicles out of the kill zone. The leader should attempt to place his elements so that an obstacle is between them and the kill zone.

(b) The leader should consider the method for initiating the antiarmor ambush. The preferred method is to use a command-detonated antiarmor mine placed in the kill zone. The

armor-killer teams, typically equipped with the platoon's Javelins, attempt to kill the first and last vehicles in the column. All other weapons open fire once the ambush has begun.

(c) The leader must consider how the presence of dismounted enemy will affect the success of his ambush. Because of the speed with which other armored forces can reinforce the enemy in the ambush site, the leader should plan to keep the engagement short and the withdrawal quick. The platoon will not clear through the kill zone as in other ambushes.

f. **Raid Patrol.** The raid patrol is a combat patrol whose mission is to attack a position or installation for any or all of these purposes:

- Destroy the position or installation.
- Destroy or capture troops or equipment.
- Liberate personnel.

(1) Surprise, firepower, and violent action are the keys to a raid.

(a) Surprise is best achieved by attacking--

- When the enemy may least expect an attack.
- When visibility is poor.
- From an unexpected direction, such as from the rear or through a swamp or other seemingly impassable terrain.

(b) Fire is concentrated at critical points to suppress the enemy.

(c) Violence is best achieved by gaining surprise, by using massed fire, and by attacking aggressively.

(2) The patrol moves to the ORP as described for a reconnaissance patrol. The ORP is secured, the leaders conduct reconnaissance, and plans are confirmed. Elements and teams move to their positions. If possible, their movements are coordinated so that all reach their positions about the same time. This improves the patrol's capability for decisive action if the enemy detects the patrol early.

(3) The teams of the security element move to positions from which they can secure the ORP, give warning of enemy approach, block avenues of approach into the objective area, prevent enemy escape from the objective area, or perform any combination of these tasks within their capability.

(a) As the assault and support elements move into position, the security element keeps the leader of the patrol informed of all enemy action. It shoots only if detected or on the leader's order.

(b) Once the assault starts, the security element prevents enemy entry into, or escape from, the objective area.

(c) When the assault is completed, the security element covers the withdrawal of the assault and support elements to the ORP. It withdraws itself on order or on a prearranged signal.

(4) The support element moves into position so that it can suppress the objective and shift fire when the assault starts. It normally covers the withdrawal of the assault element from the immediate area of the objective. It withdraws itself on oral order or on signal.

(5) The assault element deploys close enough to the objective to permit immediate assault if detected by the enemy. As supporting fire is lifted or shifted, the assault element assaults, seizes, and secures the objective. It protects demolition teams, search teams, and other teams while they work. On order or signal, the assault element withdraws to the ORP.

(6) At the ORP, the patrol reorganizes and moves about 1,000 meters away to disseminate information. During reorganization, ammunition is distributed, casualties are treated, and status reports are given.

10-12. PRESENCE PATROL

US forces increasingly are deployed in support of stability and support operations (SASO) missions all around the world. The ICV-equipped infantry platoon conducts a presence patrol much the same as a combat patrol, and the planning considerations are much the same. The primary difference is that the patrol wants to be seen both as a show of force and to lend confidence and stability to the local population of the host nation. As its name implies, this patrol is constituted to effect a presence. A presence patrol can be used only if a peace agreement has been negotiated between belligerents. The presence patrol is armed, and it conducts the planning and preparation necessary for combat operations at all times. The patrol would be used as a component of a larger force conducting stability and or support operations. The platoon could be tasked to conduct mounted or dismounted patrols planned by the higher HQ to accomplish one or more of the following:

- Confirm or supervise an agreed cease-fire.
- Gain information.
- Cover gaps between OPs or checkpoints.
- Show a stability force presence.
- Reassure isolated communities.
- Inspect existing or vacated positions of former belligerents.
- Escort former belligerents or local populations through trouble spots.

APPENDIX A

SBCT PLATOON AND COMPANY ORGANIZATION AND VEHICLE DISMOUNTING

This appendix outlines the organization and drills necessary for conducting combat operations. The SBCT infantry platoon can fight as a part of a mounted or dismounted infantry company, or it may fight as part of a task-organized company of mechanized infantry and tank platoons. The SBCT infantry platoon is equipped much like a conventional Bradley platoon in that it has four vehicles and a light infantry platoon based on its number of rifle and weapon squads SBCT.

A-1. ORGANIZATION

Once the squads have dismounted, the mounted element will integrate into the company/platoon scheme of maneuver based on METT-TC. The mounted element is equipped with four ICVs organized in two sections with two vehicles each. When the squads and the platoon leader are dismounted, the platoon leader must ensure he has a designated representative to control the vehicles and crews. (Refer to Figure A-1, page A-2, and Figures A-2 and A-3, page A-3, for company, rifle platoon, and MGS platoon organization.)

NOTE: Leaders must consider their tactical cross-load plan when conducting operations. The SBCT rifle platoon vehicle seating capacity is 44 personnel; however, it is organized with 45 organic soldiers and one attachment (platoon trauma specialist) for a total of 46 soldiers.

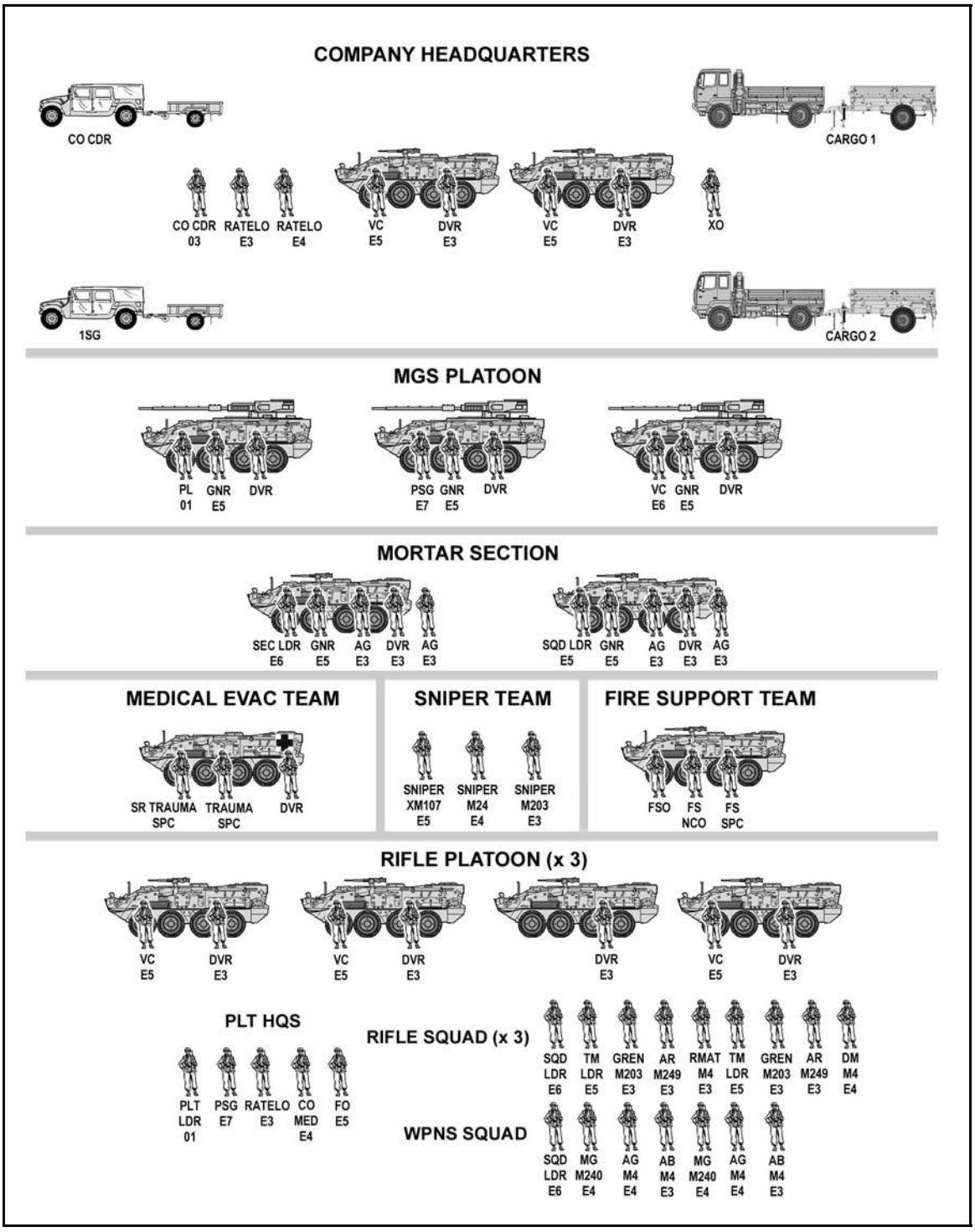


Figure A-1. SBCT infantry company organization.

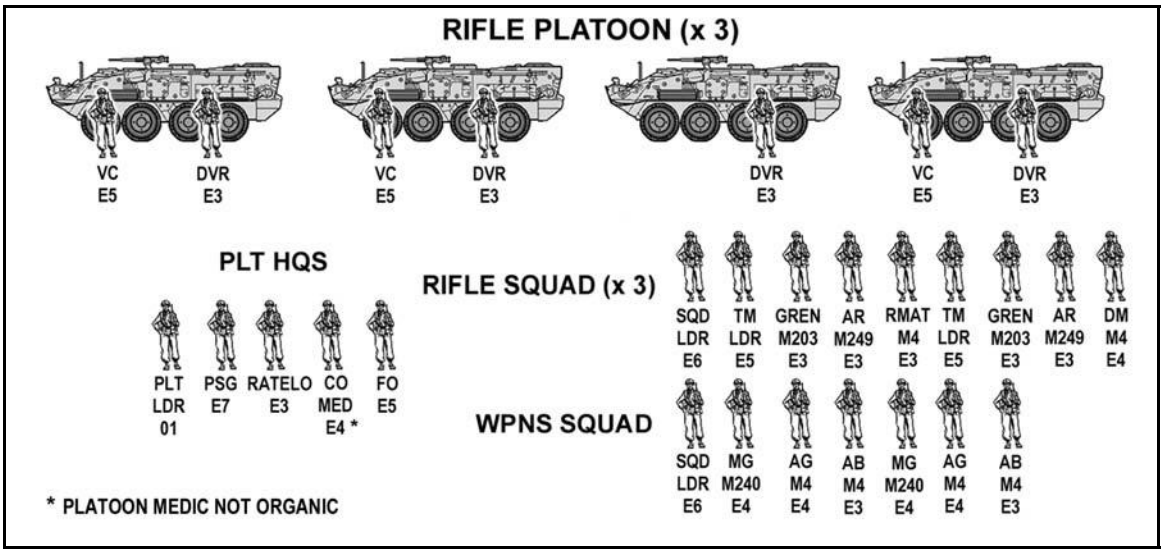


Figure A-2. Rifle platoon organization.

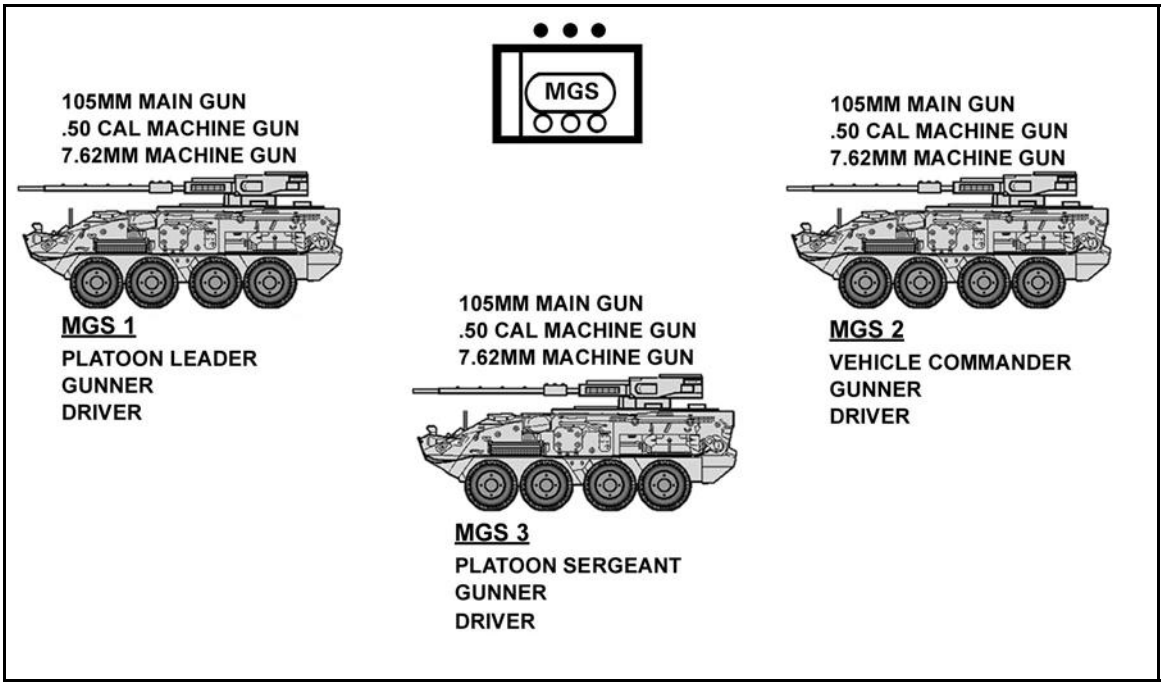


Figure A-3. MGS platoon organization.

A-2. VEHICLE DISMOUNTING

The ICV sections are the base elements for dismounted drills (Refer to Appendix E for Crew Drills). The capability to deliver a rifle squad intact in a single vehicle warrants the need for section drills.

a. When the dismounted force prepares to exit, the VC coordinates with the infantry squad or team leader onboard and orients the leader with the terrain. The VC should provide a view of the threat area of concern, the location of other platoon vehicles, and covered and concealed positions close to the vehicle.

b. While viewing the squad leaders display and LWS screens and conducting voice coordination with the VC, the infantry squad or team leader provides specific instructions to the infantrymen to include assigning specific targets or sectors to each soldier. After this coordination, the leader is ready to give a dismount order to the infantry personnel onboard.

c. Before giving the order to dismount, the leader determines which side of the vehicle provides the best terrain to establish an initial position (left, right, or split). When the leader gives the dismount order, the squad immediately dismounts left or right of the vehicle or splits left and right. The leader positions at the rear of the vehicle and ensures the element occupies the positions as briefed in the vehicle. The leader also attempts to visually locate the other vehicles, infantry squads, and the platoon leader. Next, one of three things happen:

- The squad takes up positions in the vicinity of the vehicle.
- The vehicle moves away from the squad or assumes an overwatch position.
- The squad moves to conduct an assault, links up with the platoon, or continues the mission separately.

APPENDIX B

M240B MACHINE GUN AND M249 SAW EMPLOYMENT

The M240B machine gun and the M249 SAW provide the heavy volume of close and continuous fire needed to accomplish the mission, and they can engage targets beyond the capability of individual weapons with controlled and accurate fire. The long-range, close defensive, and final protective fires delivered by the M240B machine gun form an integral part of a unit's direct fire plan. This appendix addresses the fundamental techniques of fire common to both the machine gun and the SAW.

B-1. M240B MACHINE GUN

The machine gun is the infantry platoon's primary weapon against a dismounted enemy. (Table B-1 provides specifications for the M240B and M249.) It provides a high volume of lethal, accurate fire to break up an enemy assault; it has limited effects against lightly armored vehicles; and it may cause vehicle crews to button-up and operate with reduced effectiveness. The platoon leader employs his M240B machine guns with the dismounted element or with a rifle squad to provide long range, accurate, sustained fires under all visibility conditions against dismounted infantry, apertures in fortifications, buildings, and lightly armored vehicles and trucks. The M240B also provides a high volume of short-range fire in self-defense against enemy aircraft. Machine gunners use point, traversing, searching, or searching and traversing fire to kill or suppress targets. Leaders position machine guns to--

- Concentrate fires where they want to kill the enemy.
- Fire across the platoon front.
- Cover obstacles by direct fire.
- Tie-in with adjacent units.

SPECIFICATIONS	M240B	M249
	7.62-mm gas operated machine gun	5.56-mm gas operated automatic
Weight	25.63 lb (11.1 kg)	15.07 lb (6.85 kg)
Length	1105 mm	1040 mm standard
Muzzle Velocity	853 m/s	965 m/s
Rate of Fire	Cyclic 650-850 rds/min	Cyclic 650-850 rds/min
Effective Ranges: Point	800 m	600 m
Area	1100 m (Tripod)	800 m

Table B-1. Specifications for M240B and M249.

a. In the offense the platoon leader has the option, based on his analysis of the factors of METT-TC, to establish his base of fire element with one or two machine guns, the SAW, or a combination of the two weapons. The platoon sergeant may position this element and control its fires when the platoon scheme of maneuver is to conduct the assault with the three dismounted squads. The machine gun, when placed on tripods,

provides stability and accuracy at greater ranges than the bipod. The machine gunners target key enemy weapons until the assault element masks their fires. They also can suppress the enemy's ability to return accurate fire or to hamper the maneuver of the assault element. They fix the enemy in position and isolate him by cutting off his avenues of reinforcement. They then shift their fires to the flank opposite the one being assaulted and continue to target any enemy automatic weapons that provide mutual support to his position or engage any enemy counterattack. M240B fires also can be used to cover the gap created between the forward element of the assaulting force and terrain covered by indirect fires when the indirect fires are lifted and shifted. On signal, the machine gunners and the base-of-fire element displace to join the assault element on the objective.

b. In the defense, the machine gun provides sustained direct fires that cover the most likely or most dangerous dismounted avenues of approach and protect the unit against the enemy's dismounted close assault. The platoon leader positions his machine guns to concentrate fires in locations where he wants to do the most damage to the dismounted enemy and where they can take advantage of grazing enfilade fires, stand-off or maximum engagement range, and best observation of the target area. They provide overlapping and interlocking fires with adjacent units and cover tactical and protective obstacles with traversing or searching fires. When final protective fires are called for, machine guns (aided by SAW fires) place an effective barrier of fixed, direct fire across the platoon front.

B-2. M249 SQUAD AUTOMATIC WEAPON EMPLOYMENT

The SAW is primarily a squad leader's weapon to use in the close fight as a light automatic weapon. (Table B-1, page B-1, provides specifications for the M249.) The SAW provides the rifle squads with a light automatic weapon to take with them into the assault. These weapons fire from the bipod, from the hip, or from the underarm position. They target any enemy supporting weapons being fired from fixed positions anywhere on the squad's objective. When the enemy's supporting weapons have been destroyed, or if there are none, the SAW gunners distribute their fire over that portion of the objective that corresponds to their team's position. The SAW in the hands of a rifleman can provide mobility and a high volume of fire up front in the assault or across the squad's position in the defense. In the defense, the SAW adds the firepower of 10 or 20 riflemen without the addition of manpower. Characteristically, SAWs are light, fire rapidly, and they have more ammunition than the rifles in the squad they support. Under certain circumstances, the platoon leader may designate the SAW as a machine gun and, with some adjustments, use it as a platoon weapon.

B-3. FUNDAMENTAL TECHNIQUES OF AUTOMATIC FIRE

The fundamental techniques of automatic fire are common to machine guns and squad automatic weapons. (For more detailed information refer to FM 23-68.)

a. **Techniques of Fire.** Techniques of fire include direct lay, assault fire, overhead fire, and fire from a defilade position. Only automatic rifles use assault fire. Only machine guns can employ overhead fire.

(1) ***Direct Lay.*** Gunners and automatic riflemen use the direct-lay technique by aligning the sights of the weapon on the target. This is the easiest and quickest means of delivering fire.

(2) ***Assault Fire.*** Automatic riflemen use assault fire when in close combat. Assault fire involves firing without the aid of sights using the hip, shoulder, and underarm positions. The underarm position is best when rapid movement is required. In all three positions, automatic riflemen adjust their fire by observing the tracer and the impact of the bullets in the target area. Additional considerations for automatic riflemen using assault fire include--

- Maintaining alignment with the rest of the assault element.
- Reloading rapidly.
- Aiming low and adjusting the aim upward toward the target.
- Distributing fires across the objective when not engaging enemy automatic weapons.

(3) ***Overhead Fire.*** Gunners can use overhead fire when there is sufficient low ground between the machine gun and the target area for the maneuver of friendly forces. Normally, overhead fires are conducted with the machine guns on tripods because they provide greater stability and accuracy and the vertical mil angles can be measured by using the elevating mechanism. Gunners must accurately estimate range to the target and establish a safety limit that is an imaginary line, parallel to the target, where fire would cause casualties to friendly soldiers. Gun crews and leaders must be aware of this safety limit. Leaders must designate signals for lifting or shifting fires. Gunners should not attempt overhead fires if the terrain is level or slopes uniformly, if the barrel is badly worn, or if visibility is poor.

(4) ***Fire from a Defilade Position.*** Defilade positions protect gunners from frontal or enfilading fires. Cover and concealment may not provide the gunner a view of some or all of the target area. In this instance, some other member of the platoon must observe the impact of the rounds and communicate adjustments to the gunner. Gunners and leaders must consider the complexity of laying on the target, the gunner's inability to make rapid adjustments to engage moving targets, the ease with which targets are masked, and the difficulty in achieving grazing fires for a final protective line.

b. **Characteristics of Fire.** To help the gunner understand the characteristics of fire for their weapons, the following definitions are helpful:

(1) ***Trajectory.*** Trajectory is the path of the bullet in flight. For the SAW, the path of the bullet is almost flat at ranges of 300 meters or less. At ranges beyond 300 meters, the trajectory curves as the range increases.

(2) ***Maximum Ordinate.*** This is the highest point the trajectory reaches between the muzzle of the weapon and the base of the target. It always occurs at a point about two-thirds of the distance from weapon to target and increases with range.

(3) ***Cone of Fire.*** This is the pattern formed by the different trajectories in each burst as they travel downrange. Vibration of the weapon, variations in ammunition, and atmospheric conditions all contribute to the trajectories that make up the cone of fire.

(4) ***Beaten Zone.*** This is the pattern formed by the rounds within the cone of fire striking the ground or the target. The size and shape of the beaten zone changes as a function of the range to and slope of the target. Gunners and automatic riflemen should engage targets to take maximum effect of the beaten zone. The simplest way to do this is to aim at the center base of the target. Most rounds will not fall over the target, and any that fall short will create ricochets into the target.

(5) ***Danger Space.*** This is the space between the weapon and the target where the trajectory does not rise above 1.8 meters (the average height of a standing soldier) and includes the beaten zone. Gunners should consider the danger space of their weapons when planning overhead fires.

c. **Classifications of Automatic Weapons Fire.** The US Army classifies automatic weapons fires with respect to the ground, the target, and the weapon.

(1) Fire with respect to the ground includes--

- *Grazing Fire*. Automatic weapons achieve grazing fire when the center of the cone of fire does not rise more than 1 meter above the ground. When firing over level or uniformly sloping terrain, the SAW can attain a maximum of 600 meters of grazing fire.
- *Plunging Fire*. Plunging fire occurs when weapons fire at long range, when firing from high ground to low ground, when firing into abruptly rising ground, or when firing across uneven terrain, resulting in a loss of grazing fire at any point along the trajectory.

(2) Fire with respect to the target includes--

- *Enfilade Fire.* Enfilade fire occurs when the long axis of the beaten zone coincides or nearly coincides with the long axis of the target. It can be frontal or flanking. It is the most desirable class of fire with respect to the target because it makes maximum use of the beaten zone.
- *Frontal Fire.* Frontal fire occurs when the long axis of the beaten zone is at a right angle to the front of the target.
- *Flanking Fire.* Flanking fire is delivered directly against the flank of a target.
- *Oblique Fire.* Gunners and automatic riflemen achieve oblique fire when the long axis of the beaten zone is at an angle other than a right angle to the front of the target.

(3) Fire with respect to the weapon includes--

- *Fixed Fire.* Fixed fire is delivered against a stationary point target when the depth and width of the beaten zone will cover the target.
- *Traversing Fire.* Traversing distributes fires in width by successive changes in direction.
- *Searching Fire.* Searching distributes fires in depth by successive changes in elevation.
- *Traversing and Searching Fire.* This class of fire is a combination in which successive changes in direction and elevation result in the distribution of fires both in width and depth.

d. **Types of Targets.** Targets have both width and depth. The size of the target, stated in terms of the number of aiming points required to engage it completely, determines its type.

(1) ***Point Target.*** Point targets require a single aiming point. Examples of this include bunkers, weapons emplacements, vehicles, and troops.

(2) ***Area Targets.*** Area targets require more than one aiming point. Machine gunners and automatic riflemen use traversing and searching (or a combination) to engage the target. Area targets are distinguished as linear, deep, and linear with depth. Gunners and automatic riflemen engage deep targets using searching fire. They engage linear targets

using traversing fire. Finally, they engage linear with depth targets using traversing and searching fire.

e. **Rates of Fires.** Automatic weapons fire in one of three rates: rapid, sustained, or cyclic. Normally machine gunners engage targets at the rapid rate to suppress the enemy quickly. Thereafter, they fire at a sustained rate to conserve ammunition. Automatic riflemen use the three-round burst, resighting their weapons as quickly as possible. In engaging aerial targets machine gunners and automatic riflemen use the cyclic rate.

(1) ***Rapid Fire.*** Rapid fire is 200 rounds per minute in bursts of six to nine rounds at four- to five-second intervals.

(2) ***Sustained Rate.*** Sustained fire is 100 rounds per minute in bursts of six to nine rounds at four- to five-second intervals.

(3) ***Cyclic Rate.*** The normal cyclic rate of fire is 650 to 850 rounds per minute. To fire the cyclic rate, the gunner holds the trigger to the rear while the assistant gunner feeds ammunition into the weapon.

f. **Techniques for Automatic Weapons in the Defense.** Machine gunners and automatic riflemen use a number of techniques to ensure effective fires in defensive operations. Some techniques tie the characteristics of the weapons to the nature of the terrain. Others ensure distribution of fires across the squad or platoon front. Still others facilitate the concentration of fires against likely enemy avenues of approach or in engagement areas bounded by tactical obstacles. Finally, others aid in maintaining accurate fires during limited visibility. (For a detailed discussion refer to Appendix F.)

g. **Field-Expedient Methods.** The two most common field-expedient methods for laying the machine gun in the bipod mode on predetermined targets are the notched-stake or tree-crouch and the horizontal log or board technique.

(1) ***Notched-Stake or Tree-Crotch Technique.*** This technique is effective for all conditions of visibility. It involves sighting the weapon on each target and marking the position and elevation of the stock with a notched-stake or tree-crotch. The automatic rifleman then scoops out a shallow groove to provide for the movement of the bipod legs and to keep the front end of the weapon aligned.

(2) ***Horizontal Log or Board Technique.*** Automatic riflemen use this technique to mark sector limits and engage linear targets. It is best suited for flat, level terrain and involves placing a log or board horizontally so the weapon slides along it easily. The board may then be notched along its length to lay the weapon on a specific target reference point. It may also have limiting stakes placed to define the left and right limits of the weapon.

h. **Fire Control.** Leaders control the engagements of their automatic weapons through the use of control measures, coordinating instructions, and fire commands. (For a detailed discussion of direct fire control refer to Appendix F.)

(1) In the offense, coordinating instructions to machine gunners include instructions to initiate fires, a description of how the platoon leader sees the sequence of automatic weapon engagements, and the location of other friendly soldiers in the area.

(2) In the defense, the leader describes the presence and subsequent action of friendly soldiers to the front of the platoon position (scouts, passing units), the initiation and sequence of weapon engagements, priority targets, and the planned or probable shifting of forces to displace or counterattack.

(3) The signal to initiate fires or FPLs on any occasions not covered by planning can be handled through fire commands. Fire commands must be clear and concise. Machine gunners and automatic riflemen repeat all fire commands. Fire commands contain the following elements:

- *Alert.* The leader must specify WHO is to engage.
- *Direction.* The leader must clearly indicate the general direction of the target. He may do so orally (giving a general orientation or designation of a reference point), by pointing, or by directing fires with tracer rounds from his own weapon. If he uses tracers, this becomes the last part of the command, and he directs, "Watch my tracer."
- *Description.* While visually following the target, the leader briefly describes the target, generally by the type of object: troops, vehicles, aircraft.
- *Range.* Leaders provide an estimate of the range to the target. Gunners and automatic riflemen use this estimate to set their rear sights and to know how far to look to identify the target.
- *Method of Fire.* This element includes two parts: the manipulation (class of fire with respect to the weapon--fixed, traversing, searching, or traversing and searching) and the rate of fire. When the leader omits the rate of fire, the gunner assumes a rapid rate.
- *Command to Open Fire.* Timing the initiation of fires is important to gain surprise. Leaders may preface the command to commence firing with "At my command" or "At my signal." Gunners and automatic riflemen respond with "Ready" when they have identified the target and are ready to engage. Leaders then give the specified command or signal.

(4) Leaders adjust fires (direction, elevation, and rate), identify new targets, order cease-fires, or terminate the alert with subsequent fire commands.

(5) Squads and platoons establish SOPs governing the activities and automatic initiation, control, and cessation of fire for their automatic riflemen and gunners. These SOP items can include standard targets and how often to check with leaders once they have engaged the enemy.

i. **Dead Space Considerations.** Dead space defines an area where the waist of a soldier falls below a gunner's or automatic rifleman's point of aim. The most accurate method for determining dead space is to have one soldier walk the line of sight of the weapon (FPL or principal direction of fire [PDF]) and make a pace count of those areas where he encounters dead space. Dead space also can be determined by observing the flight of tracer ammunition from a position behind and to the flank of the weapon.

APPENDIX C
RISK MANAGEMENT

Risk is the chance of injury or death for individuals and damage to or loss of vehicles and equipment. Risk, or the potential for risk, is always present in every combat and training situation the platoon faces. Risk management must take place at all levels of the chain of command during each phase of every operation; it is an integral part of all tactical planning. The platoon leader, his NCOs, and all other platoon soldiers must know how to use risk management, coupled with fratricide reduction measures, to ensure that the mission is executed in the safest possible environment within mission constraints.

The primary objective of risk management is to help units protect their combat power through accident prevention, enabling them to win the battle quickly and decisively with minimal losses. This appendix outlines the process leaders use to identify hazards and implement a plan to address each identified hazard. It also includes a detailed discussion of the responsibilities of the platoon's leaders and individual soldiers in implementing a sound risk management program. For additional information on risk management, refer to FM 100-14.

Section I. RISK MANAGEMENT PROCEDURES

This section outlines the five steps of risk management. Leaders of the platoon always must remember that the effectiveness of the process depends on the involvement of the chain of command. They should never approach risk management with "one size fits all" solutions to the hazards the platoon will face. Rather, in performing the steps, they must keep in mind the essential tactical and operational factors that make each situation unique.

C-1. STEP 1, IDENTIFY HAZARDS

A hazard is a source of danger. It is any existing or potential condition that could entail injury, illness, or death of personnel; damage to or loss of equipment and property; or some other sort of mission degradation. Tactical and training operations pose many types of hazards. The platoon leader must identify the hazards associated with all aspects and phases of the platoon's mission, paying particular attention to the factors of METT-TC. Risk management never must be an afterthought; leaders must begin the process during their troop-leading procedures and continue it throughout the operation. Table C-1, page C-2, lists possible sources of battlefield hazards that the platoon might face during a typical tactical operation. The list is organized according to the factors of METT-TC.

MISSION • Duration of the operation. • Complexity/clarity of the plan. (Is the plan well-developed and easily understood?) • Proximity and number of maneuvering units.
ENEMY • Knowledge of the enemy situation. • Enemy capabilities. • Availability of time and resources to conduct reconnaissance.
TERRAIN AND WEATHER • Visibility conditions, including light, dust, fog, and smoke. • Precipitation and its effect on mobility. • Extreme heat or cold. • Additional natural hazards (broken ground, steep inclines, water obstacles).
TROOPS AND EQUIPMENT • Equipment status. • Experience the units conducting the operation have working together. • Danger areas associated with the platoon's weapon systems. • Soldier/leader proficiency. • Soldier/leader rest situation. • Degree of acclimatization to environment. • Impact of new leaders or crewmembers. • Friendly unit situation. • NATO or multinational military actions combined with U.S. forces.
TIME AVAILABLE • Time available for troop-leading procedures and rehearsals by subordinates. • Time available for PCCs/PCIs.
CIVIL CONSIDERATIONS • Applicable ROE or ROI. • Potential stability and support operations involving contact with civilians (such as NEOs, refugee or disaster assistance, or counterterrorism). • Potential for media contact and inquiries. • Interaction with host nation or other participating nation support.

Table C-1. Examples of potential hazards.

C-2. STEP 2, ASSESS HAZARDS TO DETERMINE RISKS

Hazard assessment is the process of determining the direct impact of each hazard on an operation (in the form of hazardous incidents). Use the following steps.

a. Determine hazards that can be eliminated or avoided.

b. Assess each hazard that cannot be eliminated or avoided to determine the probability that the hazard can occur.

c. Assess the severity of hazards that cannot be eliminated or avoided. Severity, defined as the result or outcome of a hazardous incident, is expressed by the degree of injury or illness (including death), loss of or damage to equipment or property, environmental damage, or other mission-impairing factors (such as unfavorable publicity or loss of combat power).

d. Taking into account both the probability and severity of a hazard, determine the associated risk level (extremely high, high, moderate, and low). Table C-2 summarizes the four risk levels.

e. Based on the factors of hazard assessment (probability, severity, and risk level, as well as the operational factors unique to the situation), complete the risk management worksheet. Figure C-1 shows an example of a completed risk management worksheet.

RISK LEVEL	MISSION EFFECTS
Extremely High (E)	Mission failure if hazardous incidents occur in execution.
High (H)	Significantly degraded mission capabilities in terms of required mission standards. Not accomplishing all parts of the mission or not completing the mission to standard (if hazards occur during mission).
Moderate (M)	Expected degraded mission capabilities in terms of required mission standards. Reduced mission capability (if hazards occur during the mission).
Low (L)	Expected losses have little or no impact on mission success.

Table C-2. Risk levels and impact on mission execution.

A. Mission or Task:	B. Date/Time Group	C: Date Prepared:
Conduct a deliberate attack	**Begin:** 010035R May XX **End:** 010600R May XX	29 April XX

D. Prepared By: (Rank, Last Name, Duty Position) CPT Smith, Cdr

E. Task	F. Identify Hazard	G. Assess Hazard	H. Develop Controls	I. Determine Residual Risk	J. Implement Controls (How To)
Conduct obstacle breaching operations	Obstacles	High (H)	Develop and use obstacle reduction plan	Low (L)	Unit TSOP, OPORD, training handbook
	Inexperienced soldiers	High (H)	Additional training and supervision	Moderate (M)	Rehearsals, additional training
	Operating under limited visibility	Moderate (M)	Use NVDs, use IR markers on vehicles	Low (L)	Unit TSOP, OPORD
	Steep Cliffs	High (H)	Rehearse using climbing ropes	Moderate (M)	FM 3-97.6, Mountain Operations; TC 90-6-1, Mountaineering
	Insufficient planning time	High (H)	Plan and prepare concurrently	Moderate (M)	OPORD,Troop-leading procedures

K. Determine overall mission/task risk level after controls are implemented (circle one)

LOW (L) **MODERATE (M)** HIGH (H) EXTREMELY HIGH (E)

Figure C-1. Completed risk management worksheet.

C-3. STEP 3, DEVELOP CONTROLS AND MAKE RISK DECISIONS

This step is accomplished in two substeps: develop controls and make risk decisions. These substeps are accomplished during the "make a tentative plan" step of the troop-leading procedures.

a. **Develop Controls.** After assessing each hazard, develop one or more controls that either will eliminate the hazard or reduce the risk (probability, severity, or both) of potential hazardous incidents. When developing controls, consider the reason for the hazard, not just the hazard by itself.

b. **Make Risk Decisions.** A key element in the process of making a risk decision is determining whether accepting the risk is justified or, conversely, is unnecessary. The decision-maker (the platoon leader, if applicable) must compare and balance the risk against mission expectations. He alone decides if the controls are sufficient and acceptable and whether to accept the resulting residual risk. If he determines the risk is unnecessary, he directs the development of additional controls or alternative controls; as another option, he can modify, change, or reject the selected COA for the operation.

C-4. STEP 4, IMPLEMENT CONTROLS

Controls are the procedures and considerations the unit uses to eliminate hazards or reduce their risk. Implementing controls is the most important part of the risk management process; this is the chain of command's contribution to the safety of the unit. Implementing controls includes coordination and communication with appropriate superior, adjacent, and subordinate units and with individuals executing the mission. The platoon leader must ensure that specific controls are integrated into operations plans (OPLANs), OPORDs, SOPs, and rehearsals. The critical check for this step is to ensure that controls are converted into clear, simple execution orders understood by all levels. If the leaders have conducted a thoughtful risk assessment, the controls will be easy to implement, enforce, and follow. Examples of risk management controls include the following:

- Thoroughly brief all aspects of the mission, including related hazards and controls.
- Conduct thorough precombat checks (PCCs) and PCIs.
- Allow adequate time for rehearsals at all levels.
- Drink plenty of water, eat well, and get as much sleep as possible (at least 4 hours in any 24-hour period).
- Use buddy teams.
- Enforce speed limits, use of seat belts, and driver safety.
- Establish recognizable visual signals and markers to distinguish maneuvering units.
- Enforce the use of ground guides in assembly areas and on dangerous terrain.
- Establish marked and protected sleeping areas in assembly areas.
- Limit single-vehicle movement.
- Establish SOPs for the integration of new personnel.

C-5. STEP 5, SUPERVISE AND EVALUATE

During mission execution, leaders must ensure that risk management controls are properly understood and executed. Leaders must continuously evaluate the unit's effectiveness in managing risks to gain insight into areas that need improvement.

a. **Supervision.** Leadership and unit discipline are the keys to ensuring that effective risk management controls are implemented.

(1) All leaders are responsible for supervising mission rehearsals and execution to ensure standards and controls are enforced. In particular, NCOs must enforce established safety policies as well as controls developed for a specific operation or task. Techniques include spot checks, inspections, SITREPs, confirmation briefs, buddy checks, and close supervision.

(2) During mission execution, leaders must continuously monitor risk management controls to determine whether they are effective and to modify them as necessary. Leaders also must anticipate, identify, and assess new hazards. They ensure that imminent danger issues are addressed on the spot and that ongoing planning and execution reflect changes in hazard conditions.

b. **Evaluation.** Whenever possible, the risk management process also should include an after-action review (AAR) to assess unit performance in identifying risks and preventing hazardous situations. During an AAR, leaders should assess if the implemented controls were effective. Following the AAR, leaders should incorporate lessons learned from the process into unit SOPs and plans for future missions.

Section II. IMPLEMENTATION RESPONSIBILITIES

Leaders and individuals at all levels are responsible and accountable for managing risk. They must ensure that hazards and associated risks are identified and controlled during planning, preparation, and execution of operations. The platoon leader and his senior NCOs must look at both tactical risks and accident risks. The same risk management process is used to manage both types. The platoon leader alone determines how and where he is willing to take tactical risks. The platoon leader manages accident risks with the assistance of his platoon sergeant, NCOs, and individual soldiers.

C-6. BREAKDOWN OF THE RISK MANAGEMENT PROCESS

Despite the need to advise higher headquarters of a risk taken or about to be assumed, the risk management process may break down. Such a failure can be the result of several factors; most often, it can be attributed to the following:

- The risk denial syndrome in which leaders do not want to know about the risk.
- A soldier who believes that the risk decision is part of his job and does not want to bother his platoon leader or section leader.
- Outright failure to recognize a hazard or the level of risk involved.
- Overconfidence on the part of an individual or the unit in being able to avoid or recover from a hazardous incident.
- Subordinates who do not fully understand the higher commander's guidance regarding risk decisions.

C-7. RISK MANAGEMENT COMMAND CLIMATE

The platoon leader gives the platoon direction, sets priorities, and establishes the command climate (values, attitudes, and beliefs). Successful preservation of combat power requires him to embed risk management into individual behavior. To fulfill this commitment, the platoon leader must exercise creative leadership, innovative planning, and careful management. Most importantly, he must demonstrate support for the risk management process.

a. The platoon leader and others in the platoon chain of command can establish a command climate favorable to risk management integration by taking the following actions:

- Demonstrate consistent and sustained risk management behavior through leadership by example and emphasis on active participation throughout the risk management process.
- Provide adequate resources for risk management. Every leader is responsible for obtaining the assets necessary to mitigate risk and for providing them to subordinate leaders.
- Understand your own and your soldiers' limitations, as well as your unit's capabilities.
- Allow subordinates to make mistakes and learn from them.
- Prevent a "zero defects" mindset from creeping into the platoon's culture.
- Demonstrate full confidence in subordinates' mastery of their trade and their ability to execute a chosen COA.
- Keep subordinates informed.
- Listen to subordinates.

b. For the platoon leader, his subordinate leaders, and individual soldiers, responsibilities in managing risk include the following:

- Make informed risk decisions. Establish and then clearly communicate risk decision criteria and guidance.
- Establish clear, feasible risk management policies and goals.
- Train the risk management process. Ensure that subordinates understand the who, what, when, where, and why of managing risk and how these factors apply to their situation and assigned responsibilities.
- Accurately evaluate the platoon's effectiveness as well as subordinates' execution of risk controls during the mission.
- Inform higher headquarters when risk levels exceed established limits.

APPENDIX D
FRATRICIDE AVOIDANCE

Fratricide is defined as the employment of friendly weapons that results in the unforeseen and unintentional death or injury of friendly personnel or damage to friendly equipment. Fratricide prevention is the platoon leader's responsibility. All leaders across all operating systems assist the platoon leader in accomplishing this mission. This appendix focuses on actions the platoon leader and his subordinate leaders can take with current resources to reduce the risk of fratricide.

In any tactical situation, it is critical that every platoon member know where he is and where other friendly elements are operating. With this knowledge, he must anticipate dangerous conditions and take steps either to avoid or to mitigate them. The platoon leader always must be vigilant of changes and developments in the situation that may place his sections and teams in danger. He also must ensure that all squad and team positions are constantly reported to higher headquarters so that all other friendly elements are aware of where they are and what they are doing. When the platoon leader perceives a potential fratricide situation, he personally must use the higher net to coordinate directly with the friendly element involved.

D-1. EFFECTS

Fratricide results in unacceptable losses and increases the risk of mission failure; it almost always affects the unit's ability to survive and function. Units experiencing fratricide suffer these consequences:

- Loss of confidence in the unit's leadership.
- Increasing self-doubt among leaders.
- Hesitancy in the employment of supporting combat systems.
- Over-supervision of units.
- Hesitancy in the conduct of night operations.
- Loss of aggressiveness in maneuver.
- Loss of initiative.
- Disrupted operations.
- General degradation of unit cohesiveness, morale, and combat power.

D-2. CAUSES

The following paragraphs discuss the primary causes of fratricide. Leaders must identify any of the factors that may affect their units and then strive to eliminate or correct them.

a. **Failures in the Direct Fire Control Plan.** These occur when units do not develop effective fire control plans, particularly in the offense. Units may fail to designate engagement areas or to adhere to the direct fire plan, or they may position their weapons incorrectly. Under such conditions, fire discipline often breaks down upon contact. An area of particular concern is the additional planning that must go into

operations requiring close coordination between mounted elements and dismounted teams.

b. **Land Navigation Failures.** Units often stray out of assigned sectors, report wrong locations, and become disoriented. Much less frequently, they employ fire support weapons in the wrong location. In either type of situation, units that unexpectedly encounter another unit may fire their weapons at the friendly force.

c. **Failures in Combat Identification.** Vehicle commanders and machine gun crews cannot accurately identify the enemy near the maximum range of their systems. In limited visibility, friendly units within that range may mistake one another as the enemy.

d. **Inadequate Control Measures.** Units may fail to disseminate the minimum necessary maneuver control measures and direct fire control measures. They also may fail to tie control measures to recognizable terrain or events. As the battle develops, the plan cannot address branches and sequels as they occur. When this happens, synchronization fails.

e. **Failures in Reporting and Communications.** Units at all levels may fail to generate timely, accurate, and complete reports as locations and tactical situations change. This distorts the common operating picture at battalion and brigade level (available on FBCB2) and can lead to erroneous clearance of fires.

f. **Weapons Errors.** Lapses in individual discipline can result in fratricide. These incidents include charge errors, accidental discharges, mistakes with explosives and hand grenades, and use of incorrect gun data.

g. **Battlefield Hazards.** A variety of explosive devices and materiel may create danger on the battlefield--unexploded ordnance, booby traps, and unmarked or unrecorded minefields, including scatterable mines. Failure to mark, record, remove, or otherwise anticipate these threats leads to casualties.

h. **Reliance on Instruments.** A unit that relies too heavily on systems such as GPS devices or FBCB2 and Land Warrior will find its capabilities severely degraded if these systems fail. The unit will be unable to maintain situational understanding because it will not have a COP. To prevent potential dangers when system failure occurs, the platoon leader must ensure that he and his platoon use a balance of technology with traditional basic soldier skills in observation, navigation, and other critical activities.

D-3. PREVENTION

The measures outlined in this paragraph provide the platoon with a guide to actions it can take to reduce or prevent fratricide risk. These guidelines are not intended to restrict initiative. Leaders must learn to apply them, as appropriate, based on the specific situation and the factors of METT-TC.

a. **Principles.** At the heart of fratricide reduction and prevention are five key principles:

(1) ***Identify and Assess Potential Fratricide Risks During the Troop-Leading Procedures.*** Incorporate risk reduction control measures in WARNOs, the OPORD, and applicable FRAGOs.

(2) ***Maintain Situational Understanding.*** Focus on areas such as current intelligence, unit locations and dispositions, obstacles, NBC contamination, SITREPs, and the factors of METT-TC. The SBCT infantry platoon gains an advantage in situational understanding with FBCB2 and Land Warrior by automatically updating the COP.

(3) ***Ensure Positive Target Identification.*** Review vehicle and weapons identification cards. Become familiar with the characteristics of potential friendly and enemy vehicles, including their silhouettes and thermal signatures. This knowledge should include the conditions, including distance (range) and weather, under which positive identification of various vehicles and weapons is possible. Enforce the use of challenge and password, especially during dismounted operations.

(4) ***Maintain Effective Fire Control.*** Ensure fire commands are accurate, concise, and clearly stated. Make it mandatory for soldiers to ask for clarification of any portion of the fire command that they do not understand completely. Stress the importance of the chain of command in the fire control process and ensure soldiers get in the habit of obtaining target confirmation and permission to fire from their leaders before engaging targets they assume are enemy elements. Know who will be in and around the area of operations.

(5) ***Establish a Command Climate that Emphasizes Fratricide Prevention.*** Enforce fratricide prevention measures, placing special emphasis on the use of doctrinally sound techniques and procedures. Ensure constant supervision in the execution of orders and in the performance of all tasks and missions to standard.

b. **Guidelines and Considerations.** Additional guidelines and considerations for fratricide reduction and prevention include the following.

(1) Recognize the signs of battlefield stress. Maintain unit cohesion by taking quick, effective action to alleviate stress.

(2) Conduct individual, leader, and collective (unit) training covering fratricide awareness, target identification and recognition, and fire discipline.

(3) Develop a simple, executable plan.

(4) Give complete and concise operation orders. Include all appropriate recognition signals in paragraph 5 of the OPORD.

(5) To simplify operation orders, use SOPs that are consistent with doctrine. Periodically review and update SOPs as needed.

(6) Strive to provide maximum planning time for leaders and subordinates.

(7) Use common language (vocabulary) and doctrinally correct standard terminology and control measures.

(8) Ensure thorough coordination is conducted at all levels.

(9) Plan for and establish effective communications.

(10) Plan for collocation of CPs whenever it is appropriate to the mission, such as during a passage of lines.

(11) Make sure ROE are clear.

(12) Conduct rehearsals whenever the situation allows adequate time to do so.

(13) Be in the right place at the right time. Use position location and navigation devices (GPS or POSNAV), know your location and the locations of adjacent units (left, right, leading, and follow-on), and synchronize tactical movement. If the platoon or any element becomes lost, its leader must know how to contact higher headquarters immediately for instructions and assistance.

(14) Establish, execute, and enforce strict sleep and rest plans.

APPENDIX E

BATTLE DRILLS AND CREW DRILLS

SBCT infantry battle and crew drills describe how platoons and squads apply immediate action and fire and maneuver to commonly encountered situations and equipment malfunctions. They require leaders to make decisions rapidly and to issue brief oral orders quickly. A platoon's ability to accomplish its mission often depends on soldiers, leaders, squads, and sections executing key actions quickly. All soldiers and their leaders must know their immediate reaction to enemy contact and equipment malfunction as well as follow-up actions.

Drills are limited to situations requiring instantaneous response; therefore, soldiers must execute drills instinctively, which results from continual practice. Drills provide platoons with standard procedures essential for building strength and aggressiveness. They identify key actions that leaders and soldiers must perform quickly. They provide for a smooth transition from one activity to another; for example, from movement to offensive action to defensive action. They provide standardized actions that link soldier and collective tasks at platoon level and below. (Soldiers perform individual tasks to common task test [CTT] or self-development test [SDT] standard.) Drills must be understood by each individual and leader, and must be continually practiced by the platoon.

NOTE: The format for drills discussed in this chapter includes the title, the SITUATION that would cue the unit or the leader into initiating the drill, the REQUIRED ACTIONS in sequence, and supporting illustrations. Where applicable, drills are cross-referenced with material in FMs, other drills, or both. Battle drills are in Section I and crew drills are in Section II (crew drills to be published). (See ARTEP 7-8-Drill for the task, conditions, and standards for dismounted drill training.)

Section I. BATTLE DRILLS

Field Manual 25-101 defines a battle drill as "a collective action rapidly executed without applying a deliberate decision-making process." Battle drills --

- Require minimal orders from leaders and are standard throughout the Army.
- Are sequential actions vital to success in combat or critical to preserving life.
- Apply to platoon or smaller units.
- Are trained responses to enemy actions or leaders' orders.
- Represent mental steps followed for offensive and defensive actions in training and combat.

NOTE: The following drills are numbered to correspond to the numbering system used in ARTEP 7-8-Drill.

BATTLE DRILL 2. REACT TO CONTACT

SITUATION: A squad or platoon receives fires from enemy individual or crew-served

weapons.

REQUIRED ACTIONS: (Figure E-1).

a. Soldiers immediately take up the nearest covered positions and return fire in the direction of contact.

b. Team or squad leaders locate and engage known or suspected enemy positions with well-aimed fire, and they pass information to the squad or platoon leader.

c. Fire team leaders control fire using standard fire commands (initial and supplemental) containing the following elements:

- Alert.
- Direction.
- Description of target.
- Range.
- Method of fire (manipulation and rate of fire).
- Command to commence firing.

d. Soldiers maintain contact with the soldiers on their left and right.

e. Soldiers maintain contact with their team leaders and report the location of enemy positions.

f. Leaders check the status of their personnel.

g. The team or squad leaders maintain contact with the squad or platoon leader.

h. The squad or platoon leader--

(1) Moves up to the fire team or squad in contact and links up with its leader. (The platoon leader brings his RATELO, platoon FO, the squad leader of the nearest squad, and one machine gun team. The squad leader of the trail squad moves to the front of his lead fire team. The platoon sergeant also moves forward with the second machine gun team and links up with the platoon leader, ready to assume control of the base-of-fire element.)

(2) Determines whether or not his squad or platoon must move out of an engagement area.

(3) Determines whether or not he can gain and maintain suppressive fires with his element already in contact (based on the volume and accuracy of enemy fires against the element in contact).

(4) Makes an assessment of the situation. He identifies--

- The location of the enemy position and obstacles.
- The size of the enemy force engaging the unit in contact. (The number of enemy automatic weapons, the presence of any vehicles, and the employment of indirect fires are indicators of the enemy strength.)
- Vulnerable flanks.
- Covered and concealed flanking routes to the enemy position.

(5) Determines the next course of action (for example fire and movement, assault, breach, knock out bunker, enter and clear a building or trench).

(6) Reports the situation to the platoon leader or company commander and begins to maneuver his unit.

(7) Calls for and adjusts indirect fire (mortars or artillery). (Squad leaders relay requests through the platoon leader.)

i. Team leaders lead their teams by example (for example, "Follow me, do as I do")

j. Leaders relay all commands and signals from the platoon chain of command.

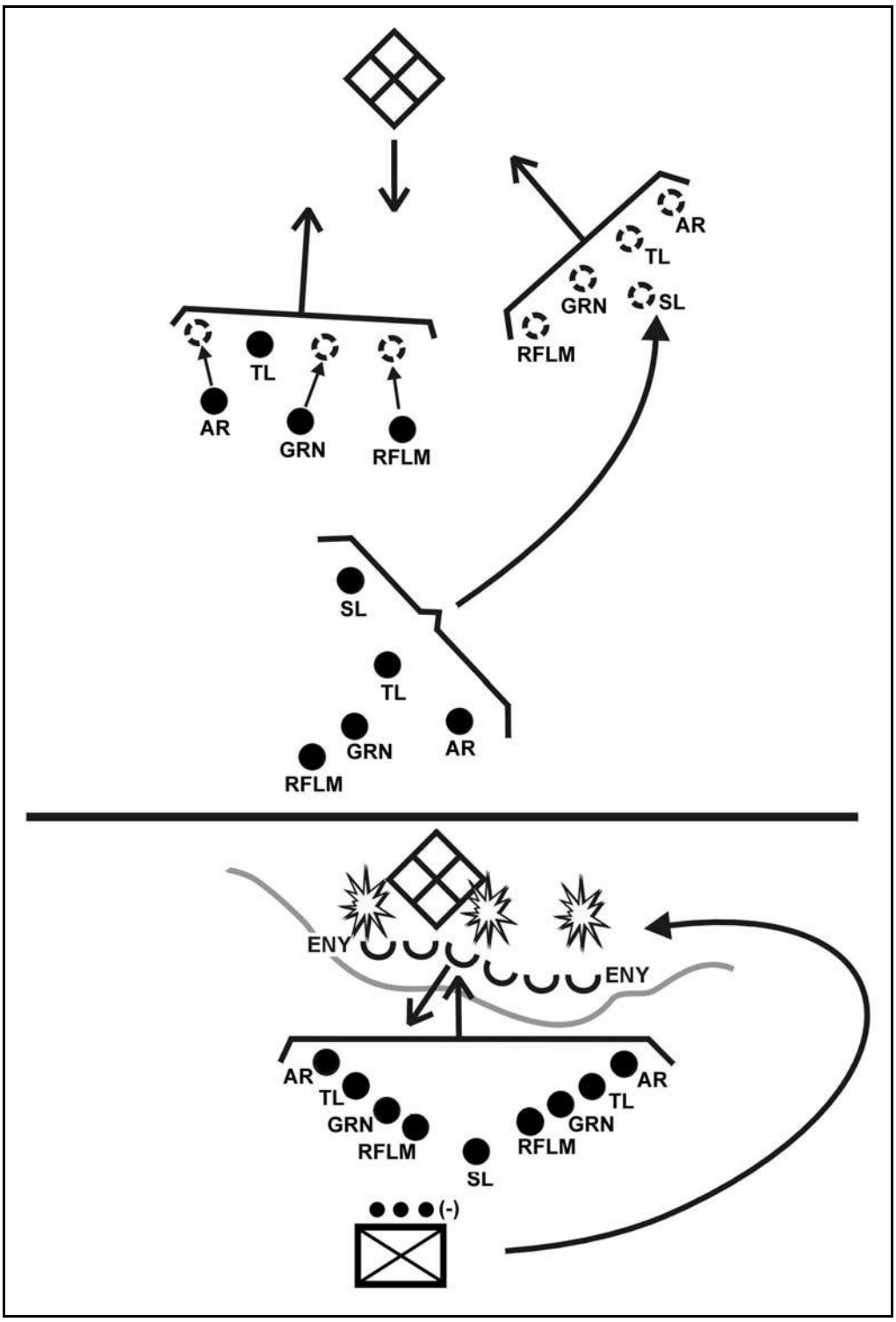


Figure E-1. React to contact (dismounted).

Battle Drill 2A. REACT TO CONTACT (SECTION OR PLATOON) (MOUNTED)

SITUATION: While mounted, the platoon receives fires from enemy individual or crew-

served weapons (including light antiarmor weapons).
REQUIRED ACTIONS: (Figure E-2).

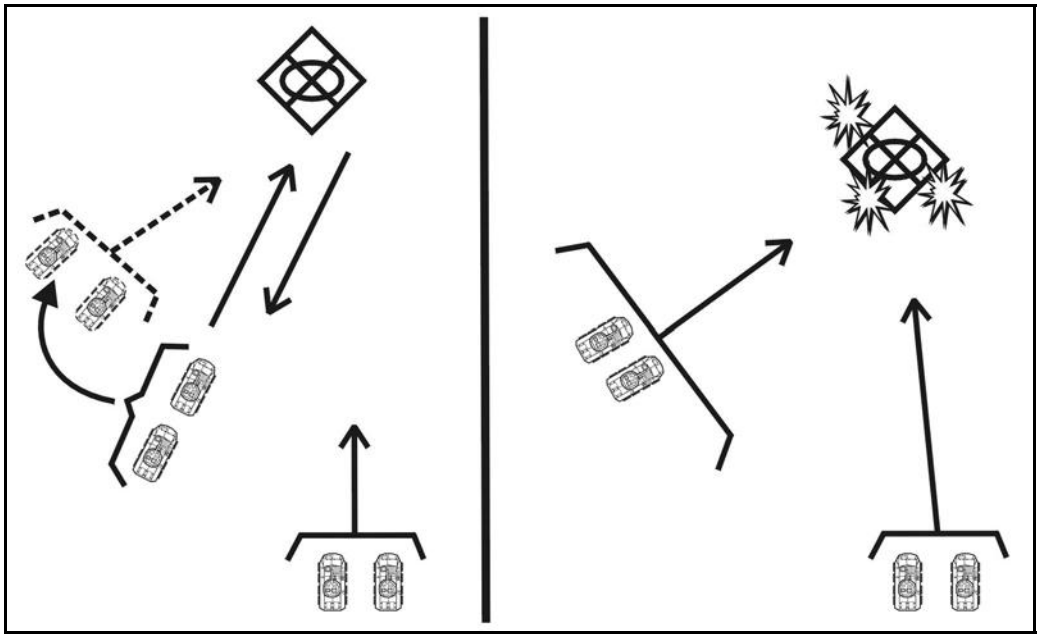


Figure E-2. React to contact (mounted).

a. Vehicles of the section in physical contact with the enemy immediately return fire in the direction of contact while moving out of the beaten zone. The section leader of the section in contact (if not the platoon leader) reports contact to the platoon leader.

b. All vehicles move to the nearest covered and concealed positions.

c. Upon reaching the covered and concealed position, the section in physical contact continues to engage the enemy with well-aimed fire. The squads dismount to provide local security and or add suppressive fires against the enemy position.

d. Vehicles of the section not in physical contact orient their weapons in the direction of the enemy.

e. The platoon leader or platoon sergeant reports contact to the company commander.

NOTE: Once the platoon has executed the React to Contact drill, the platoon leader makes a quick assessment of the situation (for example, enemy size and or location). He decides on a course of action. The platoon leader may elect to bypass, if permitted to do so by the company commander. The platoon leader reports the situation to the company commander.

f. Vehicle commanders within a section maintain visual contact with each other (wingman concept).

g. Vehicle commanders maintain communications with the platoon leader.

h. Vehicle commanders relay all commands to mounted infantry squads.

BATTLE DRILL 3. BREAK CONTACT
SITUATION: The squad or platoon is under enemy fire and must break contact.

REQUIRED ACTIONS: (Figure E-3, page E-6).

a. The squad or platoon leader directs one fire team or squad in contact to support the disengagement of the remainder of the unit.

b. The squad or platoon leader orders a distance and direction, or a terrain feature, or last objective rally point for the movement of the first fire team or squad.

c. The base of fire (fire team or squad) continues to suppress the enemy.

d. The moving element uses fragmentation, concussion, and smoke grenades to mask its movement.

e. The moving element takes up the designated position and engages the enemy position.

f. The unit leader directs the base-of-fire element to move to its next location. (Based on the terrain and the volume and accuracy of the enemy's fire, the moving fire team or squad may need to use fire and movement techniques.

g. The squad or platoon continues to bound away from the enemy until (the squad or platoon must continue to suppress the enemy as it breaks contact)--

- It breaks contact.
- It passes through a higher level support-by-fire position.
- Its fire teams or squads are in the assigned position to conduct the next mission.

h. The leader should consider changing his unit's direction of movement once contact is broken. This will reduce the ability of the enemy to place effective indirect fires on the unit.

i. If the unit becomes disrupted, soldiers stay together and move to the last designated rally point.

j. Squad or platoon leaders account for soldiers, report, reorganize as necessary, and continue the mission.

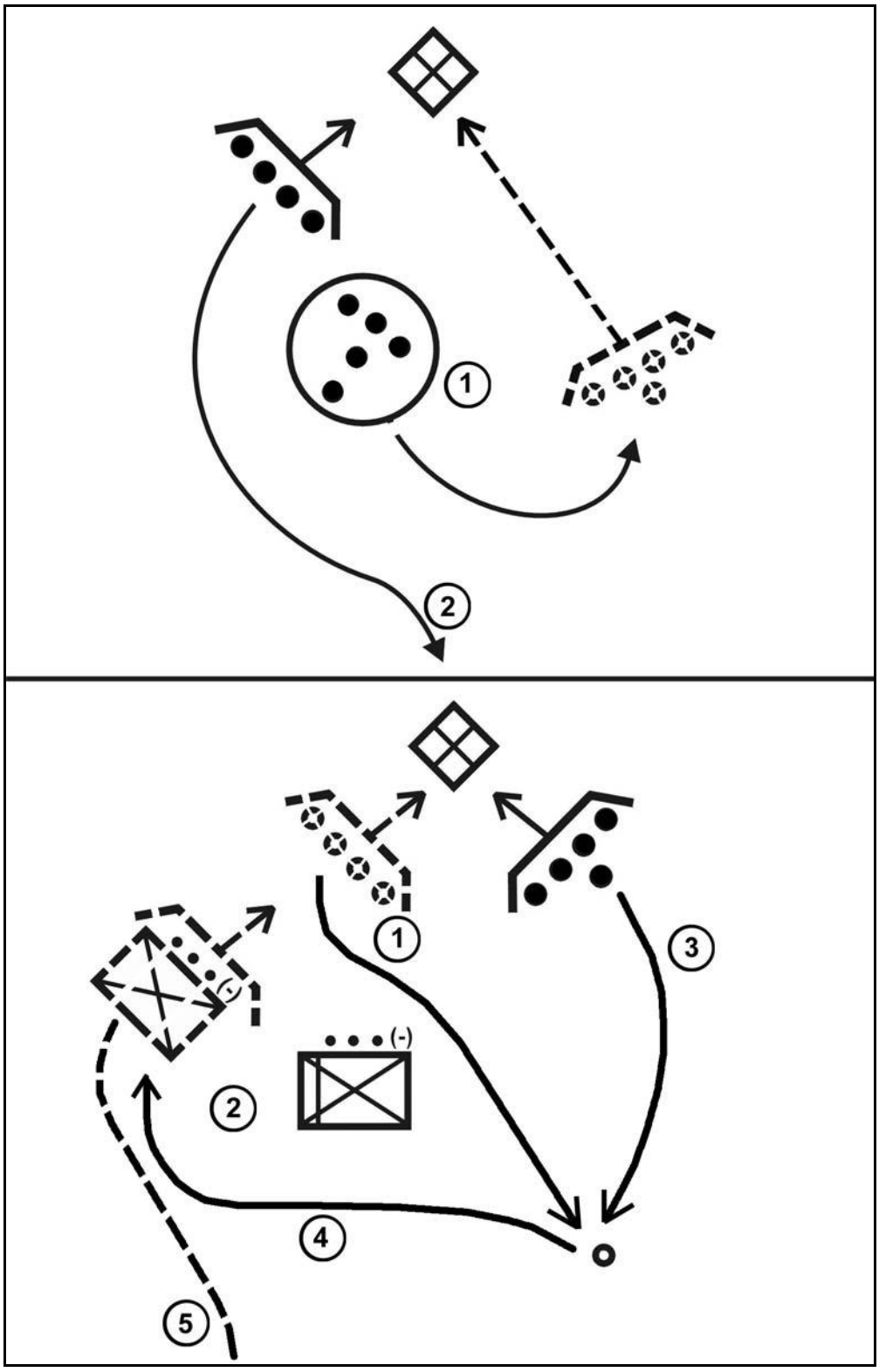


Figure E-3. Break contact dismounted.

Battle Drill 3A. BREAK CONTACT (SECTION OR PLATOON) (MOUNTED)

SITUATION: The platoon is mounted (except for security elements). It is under enemy fire and must break contact.

REQUIRED ACTIONS: (Figure E-4).

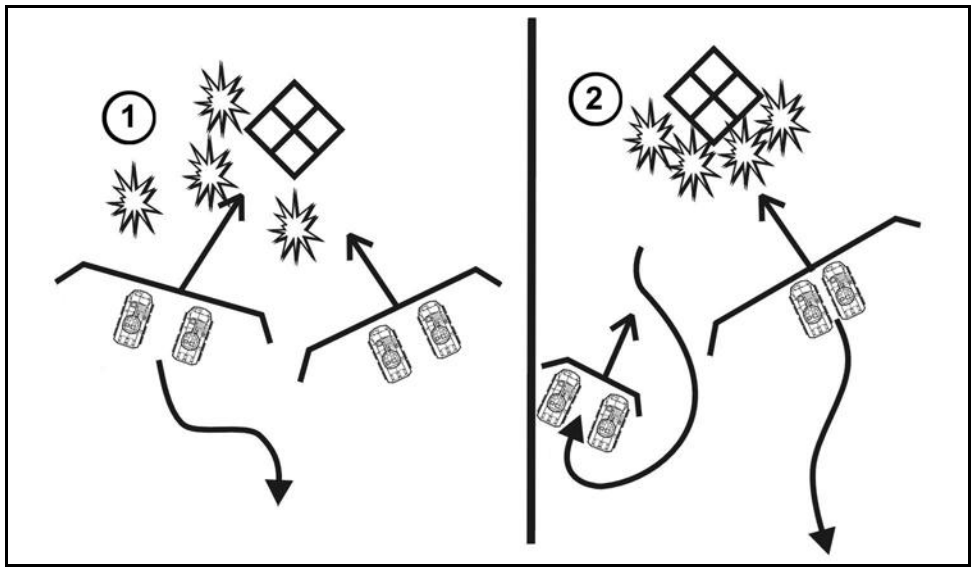


Figure E-4. Break contact (mounted).

a. The platoon leader gives the order to break contact.

b. The platoon leader directs one section to be the base-of-fire element to support the disengagement of the other section.

c. The platoon leader orders a distance and direction, a terrain feature, or last objective rally point for the moving section.

d. The base-of-fire section continues to engage the enemy. It attempts to gain suppressive fire long enough to support the bound of the moving element. (The platoon uses all available direct and indirect fires, including smoke, to assist in disengaging.) The section leader controls fires using standard fire commands containing the alert, direction, description of target, range, method of fire, and command to commence firing.

e. The moving section's security element remounts.

f. The moving section continues to fire while moving to an overwatch position and continues to provide suppressive fires.

g. The platoon leader directs the supporting section to move to its next location.

h. The platoon continues to bound away from the enemy (suppressing the enemy as it breaks contact) until--

- It breaks all contact.
- It passes through a higher level base-of-fire position.
- Its sections are in the assigned position to conduct the next mission.

i. In the absence of a leader's instructions, the platoon moves to the last designated rally point.

j. Section and squad leaders account for soldiers, report, reorganize as necessary, and continue the mission.

k. The platoon leader reports the situation to the company commander.

BATTLE DRILL 4. REACT TO AMBUSH

SITUATION: If the squad or platoon enters a kill zone and the enemy initiates an ambush with casualty-producing device and a high volume of fire, the unit takes the following actions.

REQUIRED ACTIONS: (Figure E-5.)

a. In a near ambush (within hand-grenade range), soldiers receiving fire immediately return fire, take up covered positions, and throw fragmentation, concussion, and smoke grenades.

(1) Immediately after the grenades detonate, soldiers in the kill zone assault through the ambush using fire and movement.

(2) Soldiers not in the kill zone immediately--

- Identify enemy positions.
- Initiate immediate suppressive fires against the enemy.
- Take up covered positions.
- Shift fires as the soldiers in the kill zone assault through the ambush.

b. In a far ambush (beyond hand-grenade range), soldiers receiving fire immediately return fire, take up covered positions, and suppress the enemy by--

- Destroying or suppressing enemy crew-served weapons first.
- Obscuring the enemy position with smoke (M203).
- Sustaining suppressive fires.

(1) Soldiers (teams or squads) not receiving fires move by a covered and concealed route to a vulnerable flank of the enemy position and assault using fire and movement techniques.

(2) Soldiers in the kill zone continue suppressive fires and shift fires as the assaulting team or squad fights through the enemy position.

c. The platoon FO calls for and adjusts indirect fires as directed by the platoon leader. On order, he lifts fires or shifts them to isolate the enemy position or to attack them with indirect fires as they retreat.

d. The squad or platoon leader reports, reorganizes as necessary, and continues the mission.

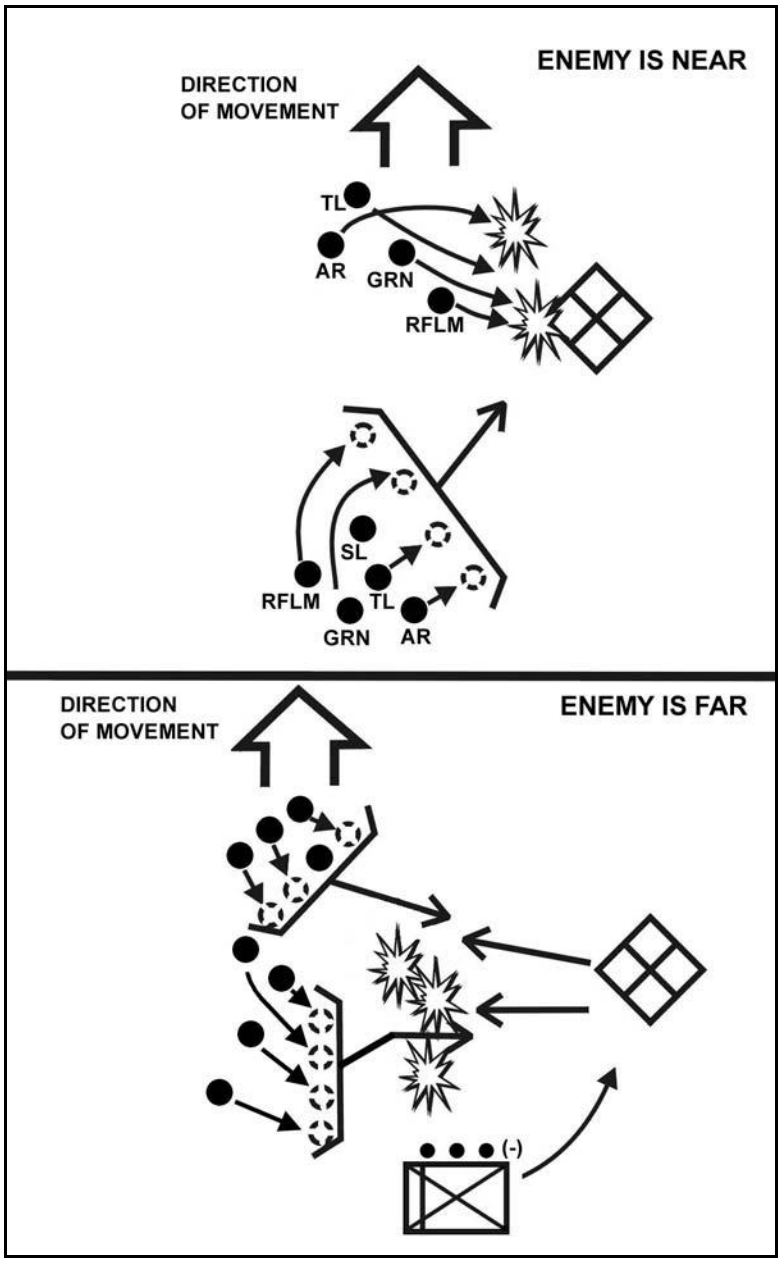


Figure E-5. React to ambush.

BATTLE DRILL 5. KNOCK OUT BUNKERS

SITUATION: The platoon identifies enemy in bunkers while moving as a part of a larger force.

REQUIRED ACTIONS: (Figure E-6, page E-11, and Figure E-7, page E-12).

a. The platoon initiates contact:

(1) The squad in contact establishes a base of fire.

(2) The platoon leader, his RATELO, platoon FO, and one machine gun team move forward to link up with the squad leader of the squad in contact.

(3) The platoon sergeant moves forward with the second machine gun team and assumes control of the base-of-fire element.

(4) The base-of-fire element--

(a) Destroys or suppresses enemy crew-served weapons first.

(b) Obscures the enemy position with smoke (M203).

(c) Sustains suppressive fires at the lowest possible level.

(5) The platoon FO calls for and adjusts indirect fires as directed by the platoon sergeant.

b. The platoon leader determines that he can maneuver by identifying--

- Enemy bunkers, other supporting positions, and any obstacles.
- Size of the enemy force engaging the platoon. (The number of enemy automatic weapons, the presence of any vehicles, and the employment of indirect fires are indicators of enemy strength.)
- A vulnerable flank of at least one bunker.
- A covered and concealed flanking route to the flank of the bunker.

c. The platoon leader determines which bunker is to be assaulted first and directs one squad (not in contact) to knock it out.

d. If necessary, the platoon sergeant repositions a squad, fire team, or machine gun team to isolate the bunker as well as to continue suppressive fires.

e. The assaulting squad, with the platoon leader and his RATELO, move along the covered and concealed route and take action to knock out the bunker.

(1) The squad leader moves with the assaulting fire team along the covered and concealed route to the flank of the bunker.

(a) The assaulting fire team approaches the bunker from its blind side and does not mask the fires of the base-of-fire element.

(b) Soldiers constantly watch for other bunkers or enemy positions in support of it.

(2) Upon reaching the last covered and concealed position--

(a) The fire team leader and the automatic rifleman remain in place and add their fires to suppressing the bunker (includes the use of AT4s).

(b) The squad leader positions himself where he can best control his teams. On the squad leader's signal, the base-of-fire element lifts fires or shifts fires to the opposite side of the bunker from the assaulting fire team's approach.

(c) The grenadier and rifleman continue forward to the blind side of the bunker. One soldier takes up a covered position near the exit, while one soldier cooks off (two seconds maximum) a grenade, shouts FRAG OUT, and throws it through an aperture.

(d) After the grenade detonates, the soldier covering the exit enters the bunker, firing short bursts, to destroy the enemy. The soldier who throws the grenade should not be the first one to clear the bunker.

(3) The squad leader inspects the bunker to ensure that it has been destroyed. He reports, reorganizes as needed, and continues the mission. The platoon follows the success of the attack against the bunker and continues the attack of other bunkers.

f. The platoon leader repositions base-of-fire squads as necessary to continue to isolate and suppress the remaining bunkers and maintain suppressive fires.

g. The platoon leader either redesignates one of the base-of-fire squads to move up and knock out the next bunker or directs the assaulting squad to continue and knock out the next bunker.

NOTE: The platoon leader must consider the condition of his assaulting squad(s)

(ammunition and exhaustion) and rotate squads as necessary.

(1) On the platoon leader's signal, the base-of-fire element lifts fires or shifts fires to the opposite side of the bunker from which the squad is assaulting.

(2) At the same time, the platoon FO shifts indirect fires to isolate enemy positions.

h. The assaulting squad takes action to knock out the next bunker (see paragraph e, above).

i. The platoon leader reports, reorganizes as necessary, and continues the mission. The company follows up the success of the platoon attack and continues to assault enemy positions.

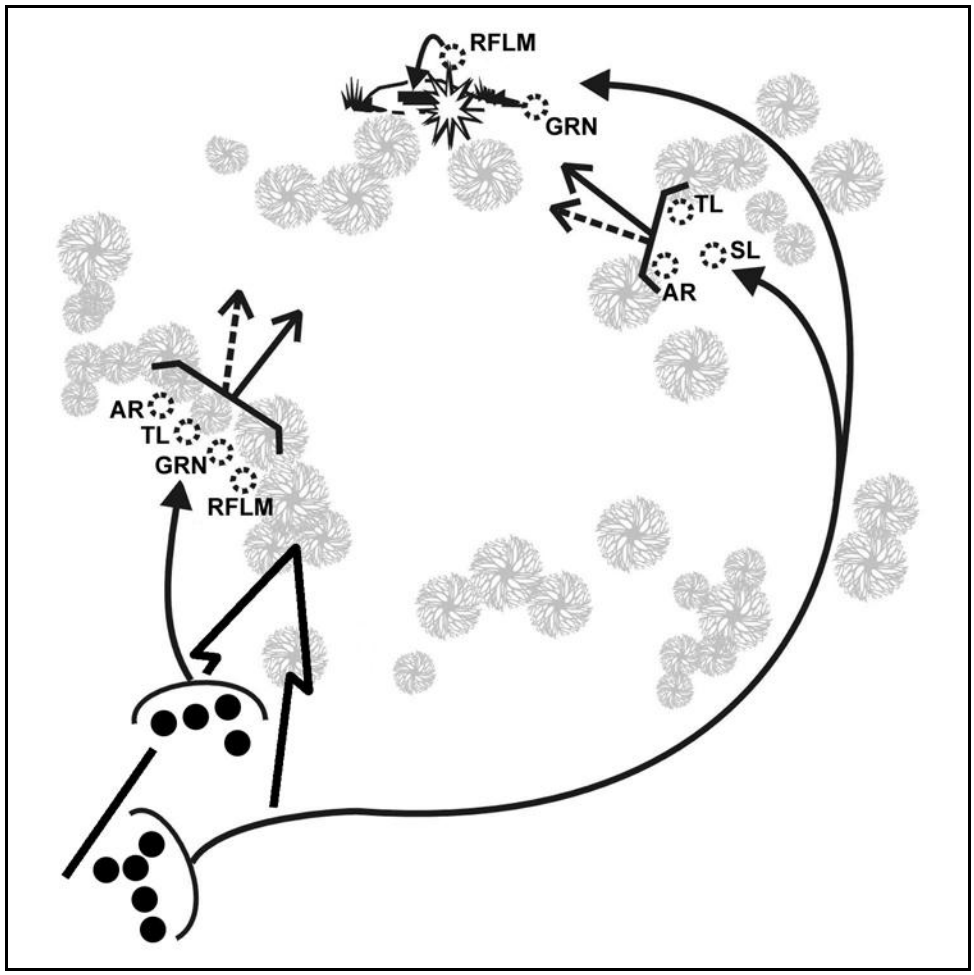


Figure E-6. Knock out a bunker (squad).

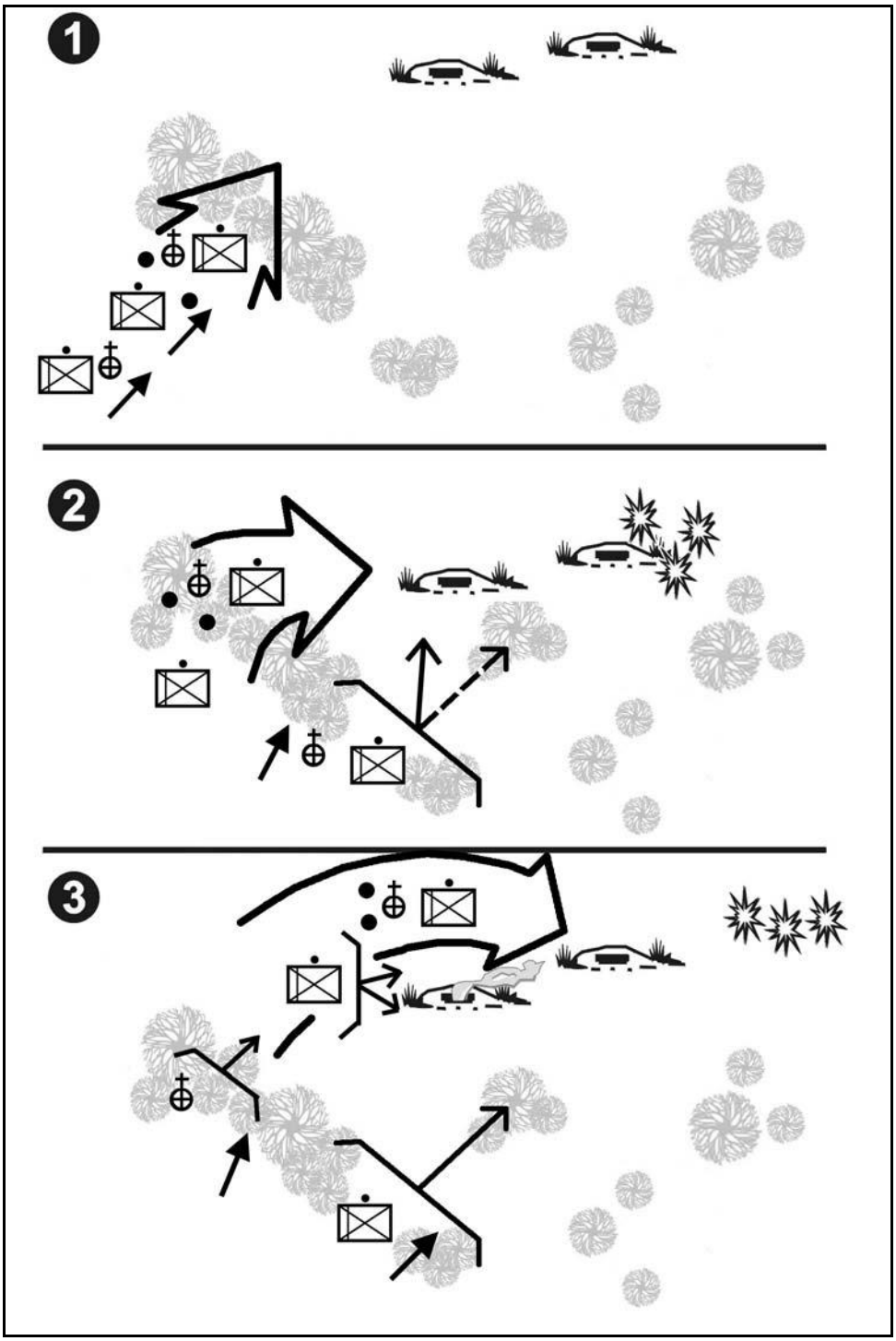


Figure E-7. Knock out bunkers (platoon).

BATTLE DRILL 6. ENTER BUILDING/CLEAR ROOM

SITUATION: Operating as part of a larger force, the squad is moving and identifies an enemy force in a building.

REQUIRED ACTIONS: (Figure E-8, page E-15, and Figure E-9, page E-16).

NOTE: The discussion that follows assumes that only the platoon's organic weapons support the infantry squad. The preferred method of entering a building is to use a tank main gun round, direct fire artillery round, or TOW, Javelin, or Hellfire missile to clear the first room. Additionally, some UO situations may require precise application of firepower. This is true of a UO environment where the enemy is mixed with noncombatants. The presence of civilians can restrict the use of fires and reduce the combat power available to a platoon leader. His platoon may have to operate with "no fire" areas. ROE can prohibit the use of certain weapons until a specific hostile action takes place. The use of hand grenades and suppressive fire to enter rooms may be prohibited to preclude noncombatant casualties and collateral damage. All leaders must be aware of the ROE. They must include the precise use of weapons in their planning for UO missions. This includes how the platoon will employ its organic weapons including snipers and other weapon systems it may have in support (for example AC 130 or AH 64 aircraft). Leaders must coordinate the use of marking systems to prevent casualties due to friendly fire. FM 3-06.11 (FM 90-10-1) provides additional techniques for platoons and squads in UO.

a. The fire team initiating contact establishes a base of fire and suppresses the enemy in and around the building.

b. The squad leader determines that he can maneuver by identifying--

- The building and any obstacles.
- The size of the enemy force engaging the squad.
- An entry point. (Assaulting fire teams should enter the building at the highest level possible.)
- A covered and concealed route to the entry point.

c. The fire team in contact--

- Destroys or suppresses enemy crew-served weapons first.
- Obscures the enemy position with smoke (M203).
- Sustains suppressive fires.

d. The squad leader directs the fire team in contact to support the entry of the other fire team into the building.

e. If necessary, the supporting fire team repositions to isolate the building as well as continue suppressive fires. (Normally, the platoon has added its supporting fires against the enemy.)

f. The squad leader designates the entry point of the building. The platoon and squad shift direct fires and continue to suppress the enemy in adjacent positions and to isolate the building. The platoon FO lifts indirect fires or shifts them beyond the building.

g. The squad leader and the assaulting fire team approach the building and position themselves at either side of the entrance. (Soldiers should avoid entering buildings through doors and windows because enemy weapons from inside the building normally will cover these.)

h. Allowing cook-off time (two seconds maximum) and shouting FRAG OUT, the lead soldier of the assaulting fire team prepares and throws a grenade into the building.

DANGER

IF WALLS AND FLOORS ARE THIN, THEY DO NOT PROVIDE PROTECTION FROM HAND GRENADE FRAGMENTS.

i. After the explosion, the next soldier enters the building and positions himself to the right (left) of the entrance, up against the wall, engages all identified or likely enemy positions with rapid, short bursts of automatic fire, and scans the room. The rest of the team provides immediate security outside the building.

(1) The size and shape of the room may cause the soldier entering the room to move to the left or right. The first soldier in the room decides where the next man should position himself and gives the command NEXT MAN IN, LEFT (or RIGHT). The next man shouts COMING IN, LEFT (RIGHT), enters the building, positions himself to the left of the entrance, up against the wall, and scans the room. Once in position, he shouts NEXT MAN IN (RIGHT or LEFT).

(2) Depending on the enemy's situation, the size of the entry and the training of the squad, two soldiers can enter the room simultaneously after the grenade detonates. The soldier from the right side of the entry enters, fires from left to right, and moves to right with his back to the wall. At the same time, the soldier on the left enters from the left, fires from right to left, and moves to the left with his back to the wall. One soldier goes high, the other low, to prevent firing at one another. This method puts more firepower in the room quickly but is more difficult and requires more practice. When both soldiers are in position, the senior soldier gives the command NEXT MAN IN (RIGHT or LEFT).

j. The assaulting fire team leader shouts COMING IN (RIGHT or LEFT), enters the building initially moving left or right and against the wall, and positions himself where he can control the actions of his team. He does not block the entrance. He makes a quick assessment of the size and shape of the room and begins to clear the room. He determines if the remaining man in his team is required to assist in clearing the room.

(1) If the team leader decides to bring the last man in, he shouts NEXT MAN IN, LEFT (or RIGHT). The last man in the fire team shouts COMING IN LEFT (or RIGHT), enters the building, and begins to clear through the room.

(2) If the team leader decides not to bring the last man in, he shouts NEXT MAN, STAND FAST. The last man remains outside the building and provides security from there. The team leader then directs the soldier on the right of the entrance to begin clearing. The team leader reports to the squad leader and then assumes the duties of the soldier on the right of the entrance to provide support.

DANGER

WHILE CLEARING ROOMS, SOLDIERS MUST BE ALERT FOR TRIP WIRES AND BOOBY TRAPS. THEY SHOULD NOT EXPOSE THEMSELVES THROUGH OPEN WINDOWS OR DOORS.

k. Once the room is cleared, the team leader signals to the squad leader that the room is cleared.

l. The squad leader enters the building and marks the entry point in accordance with the unit SOP. The squad leader determines whether or not his squad can continue to clear rooms and still maintain suppressive fires outside the building. It normally takes a platoon to clear a building.

m. The squad leader and assault fire team move to the entrance of the next room to be cleared and position themselves on either side of the entrance. The squad enters and clears all subsequent rooms by repeating the actions discussed in paragraphs h through l, above.

n. The squad leader directs the team to continue and clear the next room. The squad leader rotates fire teams as necessary to keep the soldiers fresh, to equitably distribute the dangerous duties, and to continue the momentum of the attack.

o. The squad leader follows the fire team that is clearing to ensure that cleared rooms are properly marked in accordance with the unit SOP.

p. The squad leader assesses the situation to determine if he can continue clearing the building. He reports the situation to the platoon leader. The platoon follows the success of the entry into the building.

q. The squad consolidates its position in the building and then reorganizes as necessary. Leaders redistribute ammunition.

NOTE: Normally the squad or platoons will suppress enemy in buildings with large caliber weapons (ICVs, MGSs, or tanks if available).

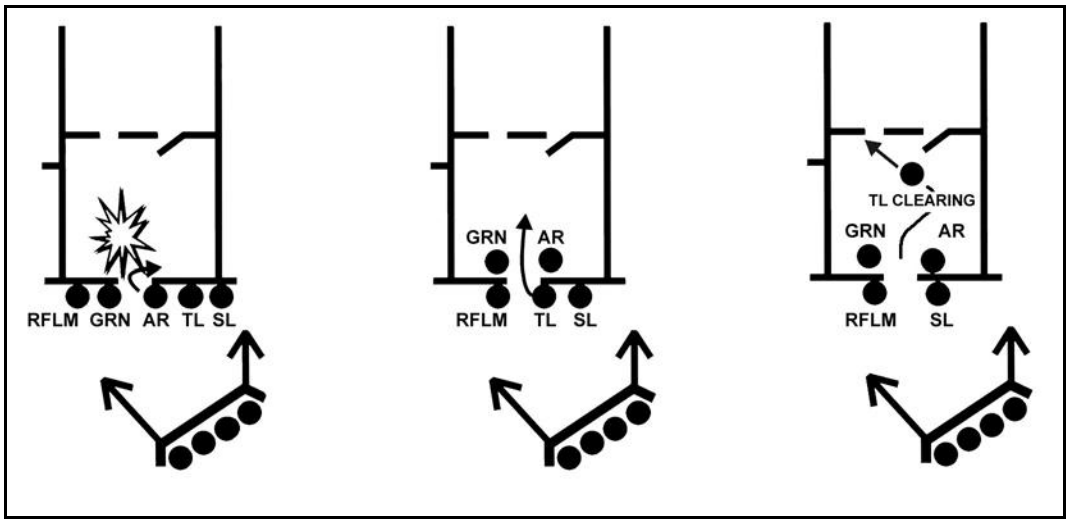


Figure E-8. Enter a building (squad).

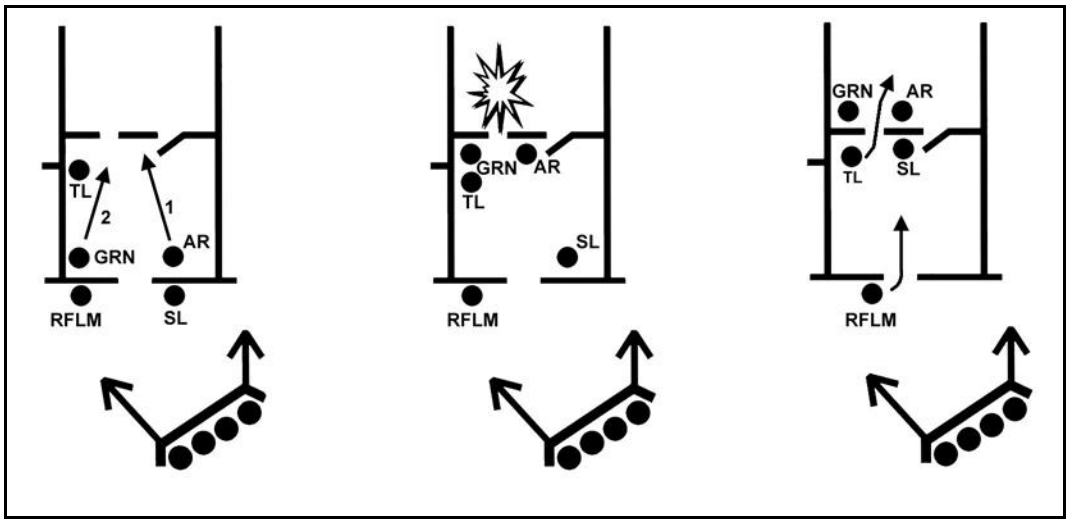


Figure E-9. Clear a room (squad).

BATTLE DRILL 7. ENTER/CLEAR A TRENCH

SITUATION: The platoon is attacking as part of a larger force and identifies enemy in a trench line. The platoon deploys and establishes a base of fire. The platoon leader determines that he has sufficient combat power to maneuver and assault the trench line.

REQUIRED ACTIONS: (Figure E-10, page E-19, and Figure E-11, page E-20).

a. The platoon leader directs one squad to enter the trench and secure a foothold.

b. The platoon leader designates the entry point of the trench line and the direction of movement once the platoon begins clearing.

c. The platoon sergeant positions soldiers and machine guns to suppress the trench and isolate the entry point.

d. The assaulting squad executes actions to enter the trench and establish a foothold. The squad leader directs one fire team to assault and one fire team to support by fire initially, then follow and support the assaulting fire team. He designates the entry point of the trench line.

(1) The squad leader and the assault fire team move to the last covered and concealed position short of the entry point.

(a) The squad leader marks the entry point.

(b) The base-of-fire element shifts direct fires away from the entry point and continues to suppress adjacent enemy positions or isolate the trench as required.

(c) The assault fire team leader and the automatic rifleman remain in a position short of the trench to add suppressive fires for the initial entry.

(d) The two remaining soldiers of the assault fire team (rifleman and grenadier) continue toward the entry point. They move in rushes or by crawling.

(e) The squad leader positions himself where he can best control his teams.

(2) The first two soldiers (rifleman and grenadier) of the assault fire team move to the edge of the trench; parallel to the trench and on their backs; on the squad leader's command, cook-off grenades (two seconds maximum), shout FRAG OUT, and throw the grenades into the trench.

(a) After ensuring that both grenades detonate, the soldiers roll into the trench, landing on their feet, and back-to-back. They fire their weapons down the trench in opposite

directions. Immediately, both soldiers move in opposite directions down the trench, continuing to fire three-round bursts. Each soldier continues until he reaches the first corner or intersection. Both soldiers halt and take up positions to block any enemy movement toward the entry point.

(b) Upon detonation of the grenades, the assault fire team leader and the automatic rifleman immediately move to the entry point and enter the trench. The squad leader directs them to one of the secured corners or intersections to relieve the rifleman or grenadier who then rejoins his buddy team at the opposite end of the foothold.

(3) The squad leader remains at the entry point and marks it.

(4) The squad leader reports to the platoon leader that he has entered the trench and secured a foothold. The platoon follows the success of the seizure of the foothold with the remainder of the platoon as part of the platoon actions to clear a trench line.

(5) The squad reorganizes as necessary. Leaders redistribute ammunition.

e. The platoon leader directs one of the base-of-fire element squads to move into the trench and begin clearing it in the direction of movement from the foothold.

f. The base-of-fire element repositions as necessary to continue suppressive fires.

g. The platoon leader moves into the trench with the assaulting squad.

h. The assaulting squad passes the squad that has secured the foothold and executes actions to take the lead and clear the trench.

(1) The squad leader designates a lead fire team and a trail fire team.

(2) The lead fire team and the squad leader move to the forward-most secure corner or intersection. The squad leader tells the team securing that corner or intersection that his squad is ready to continue clearing the trench. The trail fire team follows, maintaining visual contact with the last soldier of the lead team.

NOTE: Throughout this technique, the team leader positions himself at the rear of the fire team to have direct control (physically, if necessary) of his soldiers. Other soldiers in the fire team rotate the lead. Soldiers rotate the lead to change magazines and prepare grenades. Rotating the lead provides constant suppressive fires down the trench and maintains the momentum of the attack as the squad clears the trench.

(3) The lead fire team passes the element securing the foothold.

(a) The lead soldier of the fire team moves abreast of the soldier securing the corner or intersection, taps him, and announces TAKING THE LEAD.

(b) The soldier securing the corner or intersection acknowledges that he is handing over the lead by shouting OKAY. He allows the fire team to pass him.

(4) The lead fire team starts clearing in the direction of movement. They arrive at a corner or intersection.

(a) Allowing for cook-off (two seconds maximum) and shouting FRAG OUT, the second soldier prepares and throws a grenade around the corner.

(b) Upon detonation of the grenade, the lead soldier moves around the corner firing three round bursts and advancing as he fires. The entire fire team follows him to the next corner or intersection.

(5) The squad leader--

- Follows immediately behind the lead team.

- Ensures that the trailing fire team moves up and is ready to pass the lead at his direction.
- Rotates fire teams as necessary to keep his soldiers fresh and to maintain the momentum of the attack.
- Requests indirect fires, if necessary, through the platoon leader.

DANGER

THE FIRE TEAMS MUST MAINTAIN SUFFICIENT INTERVAL TO PREVENT THEM FROM BEING ENGAGED BY THE SAME ENEMY FIRES.

(6) At each corner or intersection, the lead fire team performs the same actions described above (paragraph [5]).

(7) If the lead soldier finds that he is nearly out of ammunition before reaching a corner or intersection, he announces AMMO.

(a) Immediately, the lead soldier stops and moves against one side of the trench, ready to let the rest of the team pass. He continues to aim his weapon down the trench in the direction of movement.

(b) The next soldier ensures that he has a full magazine, moves up abreast of the lead soldier, taps him, and announces TAKING THE LEAD.

(c) The lead soldier acknowledges that he is handing over the lead by shouting OKAY, positions rotate, and the squad continues forward.

(8) The trailing fire team secures intersections and marks the route within the trench as the squad moves forward. The trailing fire team leader ensures that follow-on squads relieve his buddy teams to maintain security.

(9) The squad leader reports the progress of the clearing operation. (The base-of-fire element must be able to identify the location of the lead fire team in the trench at all times.)

i. The platoon leader rotates squads to keep soldiers fresh and to maintain the momentum of the assault.

j. The platoon sergeant calls forward ammunition resupply and organizes teams to move it forward into the trench.

k. The base-of-fire element ensures that all friendly forces move into the trench ONLY through the designated entry point. (All movement must be made in the trench to avoid casualties by friendly fires.)

l. The platoon leader reports to the company commander that the trench line is secured, or that he is no longer able to continue clearing.

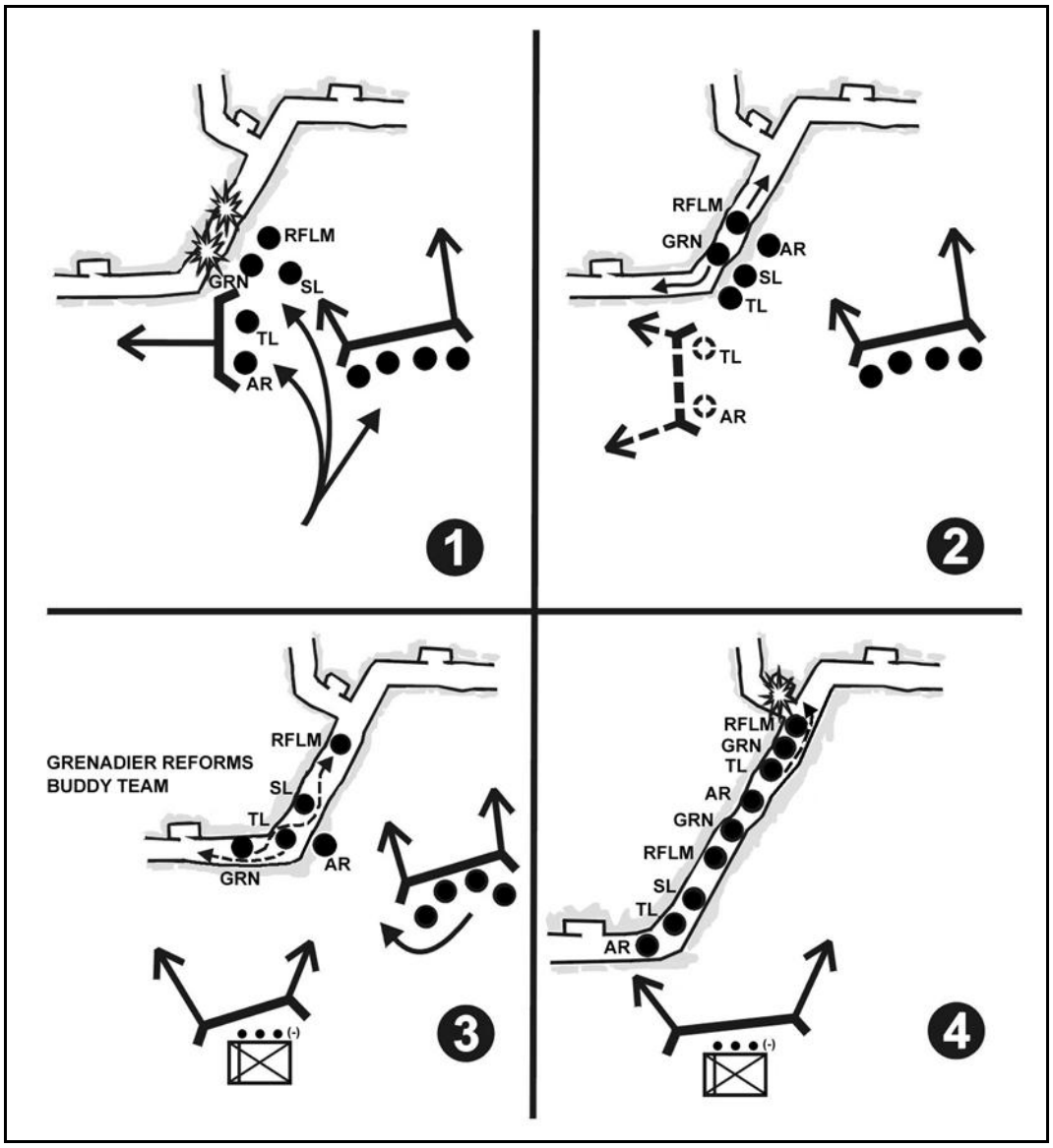


Figure E-10. Enter a trench (squad).

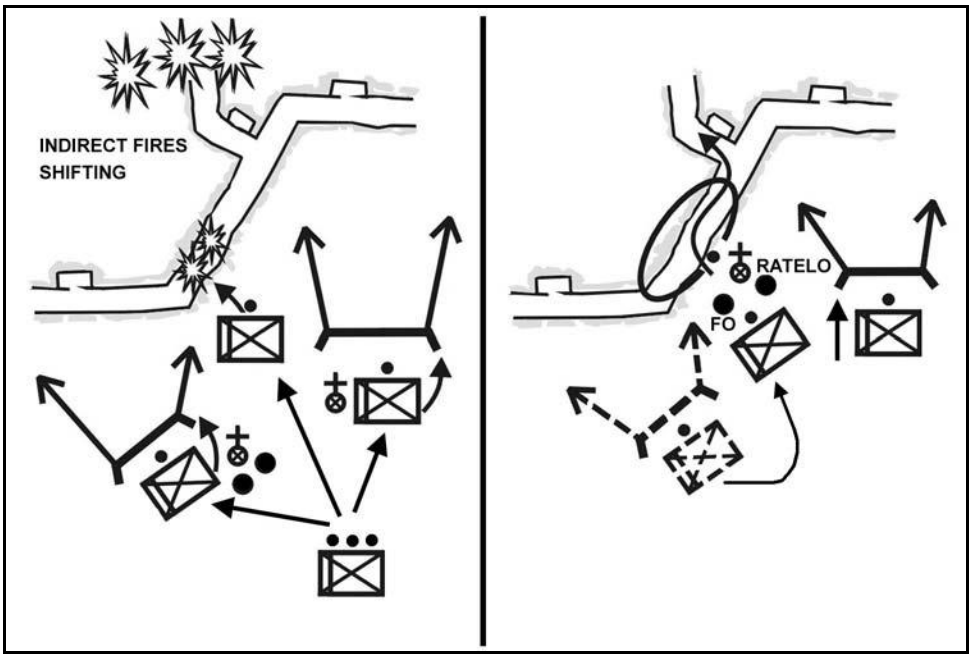


Figure E-11. Clear a trench line (platoon).

BATTLE DRILL 8. CONDUCT INITIAL BREACH OF A MINED WIRE OBSTACLE (PLATOON)

SITUATION: The platoon is operating as part of a larger force. The lead squad identifies a wire obstacle, reinforced with mines that cannot be bypassed, and enemy positions on the far side of the obstacle.

REQUIRED ACTIONS: (Figure E-12, page E-22, and Figure E-13, page E-23).

a. The platoon leader, his RATELO, platoon FO, and one machine gun team move forward to link up with the squad leader of the lead squad.

b. The platoon leader determines that he can maneuver by identifying--

- The obstacle and enemy positions covering it by fire.
- The size of the enemy force engaging the squad. (The number of enemy automatic weapons, the presence of any vehicles, and the employment of indirect fires are indicators of enemy strength.)
- A breach point.
- A covered and concealed route to the breach point.
- A support-by-fire position large enough for a squad reinforced with machine guns.

c. The platoon leader directs one squad to support the movement of another squad(s) to the breach point. He indicates the support-by-fire position, the route to it, the enemy position to be suppressed, the breach point, and the route that the rest of the platoon will take to it. He also gives instructions for lifting and shifting fires.

d. Once the breach has been made, the platoon leader designates one squad as the breach squad and the remaining squad as the assault squad. (The assault squad may add its fires to the base-of-fire element. Normally, it follows the covered and concealed route of the breach squad and assaults through immediately after the breach is made.)

e. The designated squad moves to and establishes a base of fire.

f. The platoon sergeant moves forward to the base-of-fire element with the second machine gun team and assumes control of the element.

g. On the platoon leader's signal, the base-of-fire element--

- Destroys or suppresses enemy crew-served weapons first.
- Obscures the enemy position with smoke (M203).
- Sustains suppressive fires at the lowest possible level.

h. The platoon leader designates the breach point and leads the breach and assault squads along the covered and concealed route to it.

i. The platoon FO calls for and adjusts indirect fires as directed by the platoon leader.

j. The breach squad executes actions to breach the obstacle.

(1) The squad leader directs one fire team to support the movement of the other fire team to the breach point.

(2) The squad leader identifies the breach point.

(3) The base-of-fire element continues to provide suppressive fires and isolates the breach point.

(4) The breaching fire team, with the squad leader, move to the breach point using the covered and concealed route.

(a) The squad leader and breaching fire team leader employ smoke grenades to obscure the breach point. The platoon base-of-fire element shifts direct fires away from the breach point and continues to suppress key enemy positions. The platoon FO lifts indirect fires or shifts them beyond the obstacle.

(b) The breaching fire team leader positions himself and the automatic rifleman on one flank of the breach point to provide close-in security.

(c) The grenadier and rifleman of the breaching fire team probe for mines and cut the wire obstacle, marking their path as they proceed. (Bangalore is preferred, if available.)

(d) Once the obstacle has been breached, the breaching fire team leader and the automatic rifleman move to the far side of the obstacle and take up covered and concealed positions with the rifleman and grenadier. The team leader signals to the squad leader when they are in position and ready to support.

(5) The squad leader signals the supporting fire team leader to move his fire team up and through the breach. He then moves through the obstacle and joins the breaching fire team, leaving the grenadier and rifleman of the supporting fire team on the near side of the breach to guide the rest of the platoon through.

(6) Using the same covered and concealed route as the breaching fire team, the supporting fire team moves through the breach and takes up covered and concealed positions on the far side.

(7) The squad leader reports to the platoon leader and consolidates as needed.

k. The platoon leader leads the assault squad through the breach in the obstacle and positions them beyond the breach to support the movement of the remainder of the platoon or assaults the enemy position covering the obstacle.

l. The platoon leader reports the situation to the company commander and directs his base-of-fire element to move up and through the obstacle. The platoon leader leaves guides to guide the company through the breach point.

m. The company follows up the success of the platoon as it conducts the breach and continues the assault against the enemy positions.

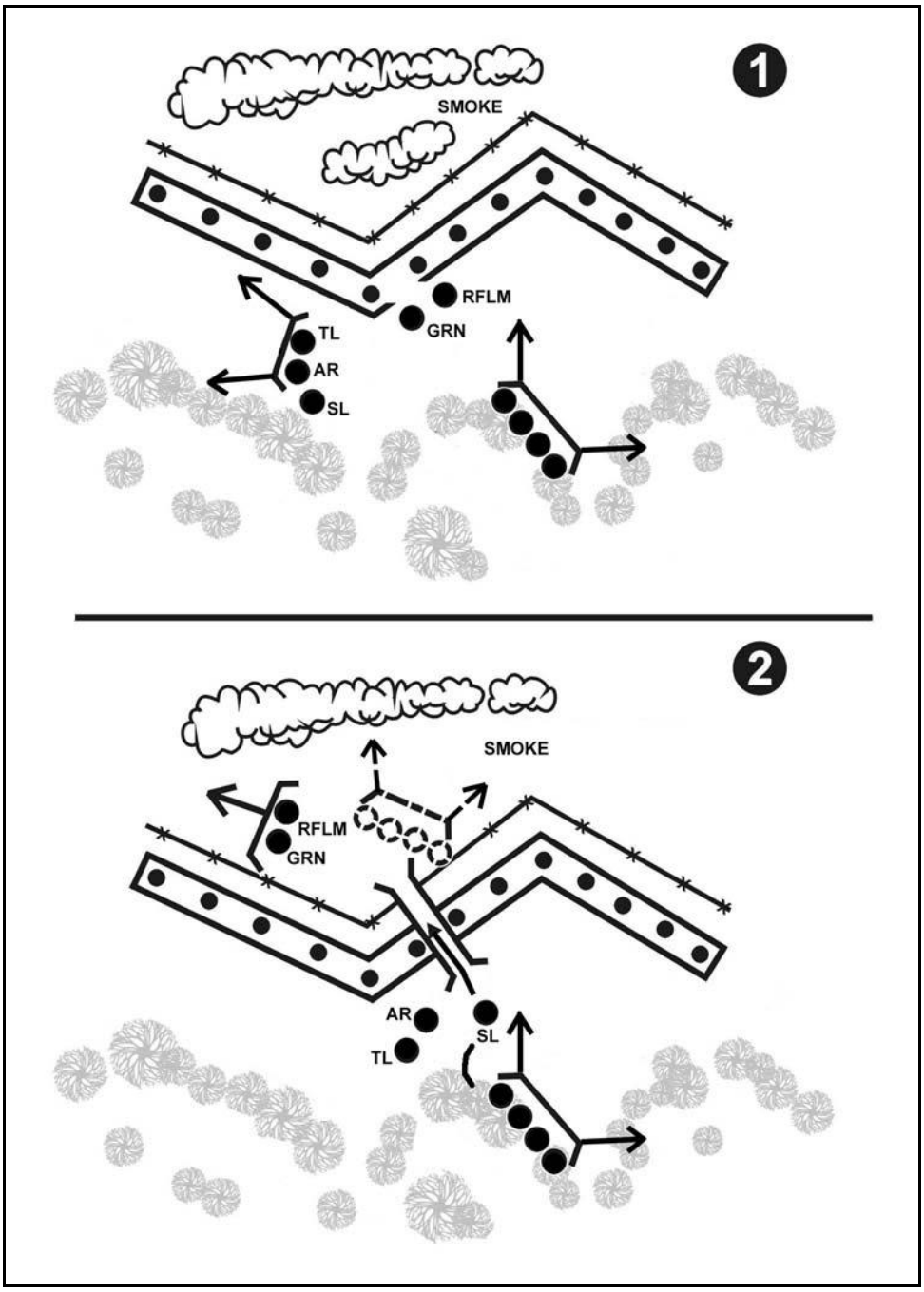


Figure E-12. Conduct initial breach of a mined wire obstacle (squad).

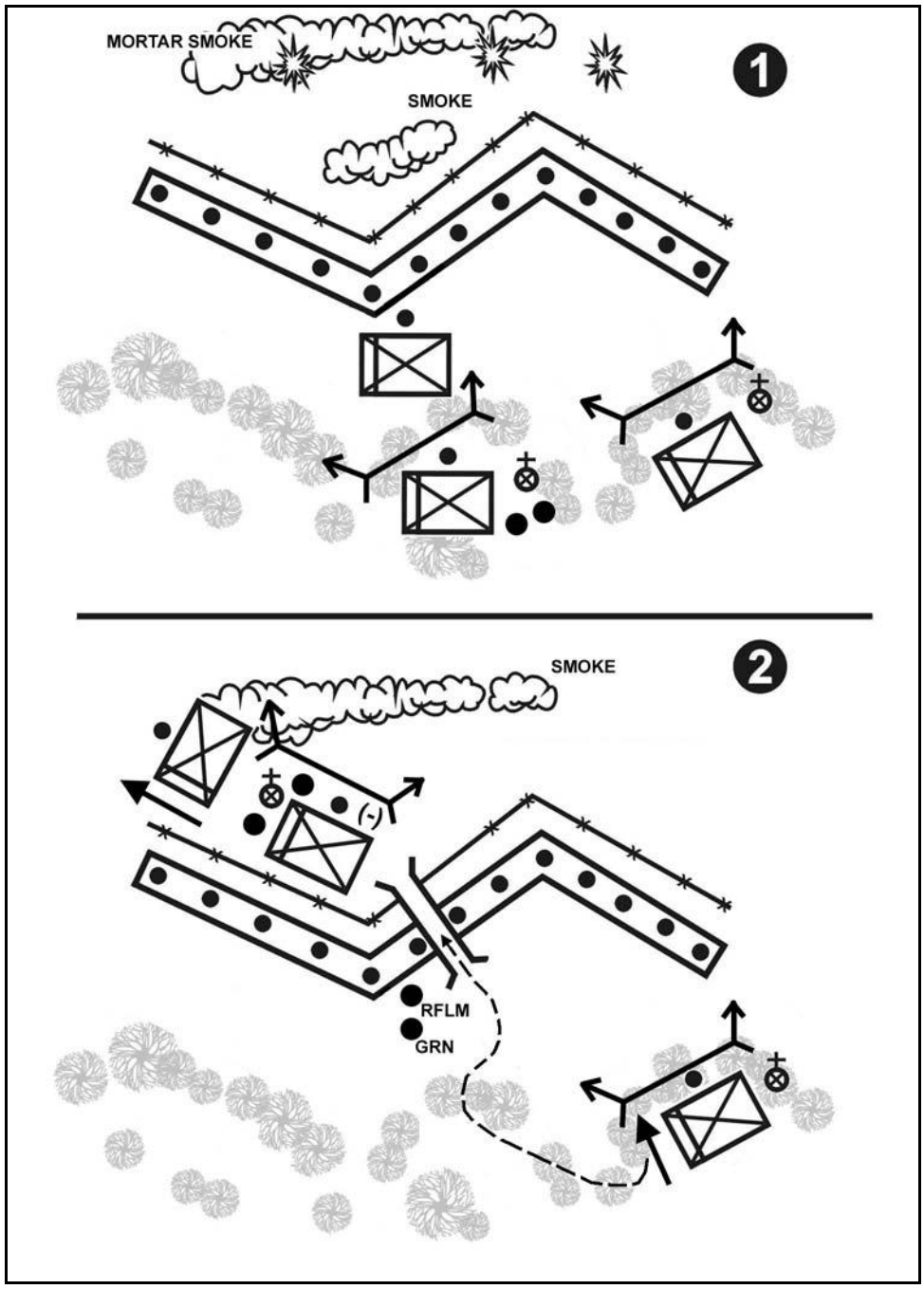


Figure E-13. Conduct initial breach of a mined wire obstacle (platoon).

Section II. CREW DRILLS

A crew drill is a collective action that the crew of a weapon or piece of equipment must perform to successfully use the weapon or equipment in combat or to preserve life. This action is a trained response to a given stimulus, such as a leader's order or the status of the weapon or equipment. It requires minimal orders to accomplish and is standard throughout the Army.

Crew Dill 1. BAIL OUT (CREW/SQUAD)

SITUATION: The ICV, with a squad mounted, has received hostile fire requiring the crew and squad to evacuate the vehicle.

REQUIRED ACTIONS:

a. Bailout procedures for the ICV crew.

(1) Vehicle Commander:

(a) Alerts soldiers by the intercommunications system or by voice command if the intercom system does not work. Commands BAIL OUT.

(b) Turns RWS power off by pressing the RWS fire control unit ON/OFF power switch.

NOTE: As soldiers dismount they should use the ICV for cover from enemy direct fires.

(c) Disconnects the CVC helmet and secures weapon.

(d) Evacuates the vehicle through the troop compartment or VC's hatch.

(e) Accounts for driver.

(f) Secures vehicle.

(2) ***Driver:***

(a) Stops the vehicle.

(b) Lowers the ramp.

(c) Shuts down the vehicle by turning the electrical master switch OFF or pulls the fuel cut-off handle to the OFF position.

(d) Disconnects the CVC helmet and unfastens his seat belt.

(e) Secures his weapon.

(f) Evacuates the vehicle through the driver's hatch, if possible. If the driver cannot evacuate through the driver's hatch, he exits through the troop compartment.

b. Bailout procedures for the troop compartment and squad members.

(1) ***Squad Leader or Fire Team Leader:***

(a) Announces BAIL OUT.

(b) Pulls the quick disconnect to release the CVC helmet or headset.

(c) Disconnects his seat belt.

(d) Secures his weapon and squad radio.

(e) Evacuates the vehicle through the ramp or ramp access door.

(f) Accounts for soldiers and equipment.

(2) ***Squad/Fire Team Members:***

(a) Disconnects seat belts.

(b) Pulls the quick disconnect to release CVC helmets as appropriate.

(c) Secures weapons (individual and crew).

(d) Evacuates the vehicle through the ramp door or the cargo hatch.

CREW DRILL 2. EVACUATE INJURED PERSONNEL FROM AN ICV

SITUATION: A crewmember or squad member has been injured.

REQUIRED ACTIONS:

a. Evacuate vehicle commander's hatch.

(1) Evacuate the VC through the vehicle commander's hatch.

(a) *Squad leader* commands EVACUATE THE VEHICLE COMMANDER.

(b) *Driver--*

- Moves to the nearest covered position and halts the vehicle.
- Lowers the wire cutter.

(c) *Squad leader--*

- Turns RWS power off by pressing the RWS Fire control Unit ON/OFF power switch.
- Conducts immediate first aid.
- Places the VC in position for removal from the vehicle.
- Adjusts the seat to the raised position, being careful not to cause further injury.
- Unfastens the VC's seat belt and disconnects CVC helmet.
- Designates fire team to evacuate the VC.

(d) *Fire Team* exits the vehicle through the ramp access door, the ramp, or ,if necessary, the cargo hatch.

- Moves to the front of the vehicle to assist in removing the injured VC.
- Two Fire Team members mount the vehicle from the front and move to VC hatch.

(e) *Fire Team Members--*

- Open and secure the VC hatch.
- Place a belt (or similar device) around the VC's chest and slowly pull the VC out. If the VC is wearing a CVC suit, grasp the straps on the back of the suit and pull the VC out of the vehicle. (This step may require two squad members to extricate the VC thru the hatch.)
- Two fire team members dismount to the left front of the vehicle to assist in transferring the VC from the vehicle to the ground.
- Lower the VC from the vehicle to the fire team members on the ground.
- Fire team members place the VC on the ground and administer first aid.

b. **Evacuate VC-Troop Compartment.** Evacuate the VC through the troop compartment.

(1) ***Squad Leader.*** Commands EVACUATE VEHICLE COMMANDER.

(a) Turns RWS power OFF by pressing the RWS fire control unit ON/OFF power switch.

(b) Conducts immediate first aid.

(c) Places the VC in position for removal from the vehicle.

(d) Adjusts the seat to the full down position, being careful not to cause further injury.

(e) Unfastens the VC's seat belt.

(f) Designates fire team to evacuate the VC.

(2) ***Driver:*** Moves to the nearest covered position, halts the vehicle, and lowers the ramp.

(3) ***Fire Team Members.*** Two fire team members remove the injured VC from the vehicle, lay him on the ground, and perform first aid, as required.

c. **Evacuate Driver–Troop Compartment**. Evacuate the driver through the troop compartment.

(1) ***Vehicle Commander.*** Commands EVACUATE THE DRIVER

NOTE: If the driver is unable to halt the vehicle, a squad member must move forward, lower the driver's seat, and turn the master electrical power switch

to the off position to stop the engine. The vehicle will slowly come to a stop on level ground.

(2) ***Squad Leader--***

(a) The squad leader removes the Javelin round from the stowage cradle and places it in the center of the troop compartment or directs a squad member to remove the Javelin round from the stowage cradle and place the round in the center of the troop compartment.

(b) The squad leader rotates the squad leader display out of the way.

(c) The squad leader directs a fire team to evacuate the driver.

(3) ***Fire Team Leader.*** Directs a fire team member to evacuate the driver.

(4) ***Fire Team Member--***

(a) The designated fire team member removes his LBV but retains his body armor.

(b) The designated fire team member crawls forward through the driver's compartment access and unbuckles the driver's seat belt.

(c) The designated fire team member releases the seatback release handle and lowers the driver's seat backrest.

(d) The designated fire team member administers immediate first aid.

(e) The soldier pulls the driver backwards out of his seat towards the troop compartment.

(f) The soldier reclines rearward over the Javelin missile stowage rack and passes the driver's body over his as other fire team members pull the driver into the troop compartment.

(g) Fire team members remove the driver from the vehicle, if possible, and administer first aid.

d. **Evacuate Driver-Driver's Hatch.** Evacuate the driver through the driver's hatch.

(1) ***Vehicle Commander.*** Commands EVACUATE THE DRIVER.

(a) Lowers the wire cutter.

(b) Opens the driver's hatch. If the driver's hatch is damaged and will not open, a squad member evacuates the driver back into the troop compartment (See Evacuate Driver-Troop Compartment).

(c) The VC duties can be performed by the squad leader or a squad member.

(2) ***Squad Leader--***

(a) Removes Javelin round from the stowage rack and places it in the middle of the troop compartment.

(b) Designates fire team to evacuate driver.

(c) Designates a fire team to provide a replacement driver, check serviceability, make repairs if necessary, and continue the mission.

(3) ***Fire Team Leader--***

(a) Designates a solider to evacuate the driver.

(b) Directs the remainder of the fire team to dismount and execute the evacuation.

(4) ***Fire Team Members--***

(a) The designated solider removes his LBV and retains his body armor.

(b) The soldier moves forward behind the driver and releases the seatback release handle and lowers the seatback.

(c) The designated fire team member administers immediate first aid.

(d) The solider disconnects the driver's CVC helmet and seat belt.

(e) The designated soldier remains in the vehicle and assists in the removal of the driver by untangling his legs as necessary.

(f) The fire team dismounts and executes the evacuation.

(g) One fire team member mounts the vehicle from the front and assists the VC in evacuating the driver. If the driver is wearing a CVC suit, grasp the straps on the back of the suit and pull the driver out of the vehicle.

(h) Two fire team members dismount to the left of the vehicle to assist by taking the driver from the VC and other fire team member.

(5) ***Vehicle Commander and Designated Fire Team Member--***

(a) The VC crosses the driver's arms over his chest. (If this is not possible, he wraps a belt around the driver's chest to raise him.)

(b) The VC and the fire team member pull the driver out of the vehicle and hand him to the fire team members on the ground.

(c) The fire team members on the ground take the driver and lay him on the ground and administer first aid.

e. **Evacuate Squad Member.** Evacuate an injured squad member.

(1) **Squad/Fire Team Leader.** Informs the VC that a squad member is injured.

(2) **Vehicle Commander.** Commands EVACUATE FIRE TEAM MEMBER.

(3) **Driver.** Moves to the nearest covered position, halts the vehicle, and lowers the ramp.

NOTE: Depending on which soldier is injured, the squad leader designates which fire team will assist in evacuating the casualty. If the squad leader or fire team leader is injured, the next senior man takes charge.

(4) **Squad/Fire Team Members.** Two fire team members remove the injured member, lay him on the ground, and perform first aid, as needed.

Crew Drill 3. EXTINGUISH A FIRE (CREW) (Upon automatic or manual discharge of the automatic fire extinguishing system)

SITUATION: The ICV crew and squad are mounted. The VC alerts personnel of a fire.

REQUIRED ACTIONS:

a. Extinguish a fire in the engine compartment.

WARNING

Engine fire extinguisher assemblies contain HFC-125 (FE25). HFC-125 is a health hazard. Exposure to skin can cause freezing, and inhaling high concentrations may cause respiratory effects such as shortness of breath and produce heart rhythm irregularities.

(1) ***Vehicle Commander.*** Commands FIRE, ENGINE COMPARTMENT.

(a) Alerts the soldiers of an engine compartment fire by the intercommunications system or by voice command if the intercommunications system does not work.

(b) Presses power key on RWS integrated fire control unit and turns RWS power off.

(c) Secures the portable fire extinguisher.

(d) Evacuates the vehicle.

(2) ***Driver--***

(a) Stops the vehicle.

(b) If the automatic fire suppression system has not extinguished the engine fire, he manually discharges the second-shot fire extinguisher assembly by momentarily holding the spring-loaded ENGINE MANUAL DISCHARGE toggle switch, located on the CONTROL ELECTRONICS PANEL, in the up position.

(c) Manually discharges the first-shot fire extinguisher assembly by holding the spring-loaded ENGINE MANUAL DISCHARGE toggle switch, located on the CONTROL ELECTRONICS PANEL, in the up position for a minimum of five seconds.

(d) Lowers the ramp.

(e) Shuts down the engine by turning the auxiliary and electrical master switch off or pulls the fuel cut-off handle to the OFF position.

(f) Disconnects the CVC helmet and unfastens the seat belt.

(g) Secures his weapon.

(h) Secures portable fire extinguishers.

(i) Evacuates the vehicle through the driver's hatch, if possible. If the driver is unable to evacuate through the driver's hatch, he exits through the ramp.

(3) ***Squad Members--***

(a) Disconnect seat belts.

(b) Squad leader or fire team leader pulls the quick disconnect to release the headsets.

(c) Secure their weapons.

(d) Evacuate the vehicle through the ramp or ramp access door.

NOTE: If the fire is not extinguished, use the portable fire extinguishers.

b. Extinguish a fire in the troop compartment.

NOTE: The troop compartment fire extinguisher assemblies contain FN-200. When dispersed, the concentration inside the vehicle is considered to be non-toxic.

(1) ***Squad Leader or Fire Team Leader.*** Alerts the VC of a troop compartment fire by intercommunications system or by voice command if the intercommunications system does not work. Announces FIRE, TROOP COMPARTMENT.

(2) ***Vehicle Commander.*** Alerts the soldiers of a troop compartment fire by the intercommunications system or by voice command if the intercommunications system does not work. Commands FIRE, TROOP COMPARTMENT.

(a) Presses power key on RWS integrated fire control unit and turns RWS power OFF.

(b) Secures the portable fire extinguisher.

(c) Evacuates the vehicle.

(3) ***Driver--***

(a) Stops the vehicle in a position that provides cover and/or concealment, if possible.

(b) If automatic fire extinguishing system has failed to operate properly manually discharges the fire extinguisher assemblies in the troop compartment by moving and holding the spring-loaded TROOP MANUAL discharge toggle switch, located on the CONTROL ELECTRONICS PANEL, in the up position.

(c) Lowers the ramp.

(d) Shuts down the engine by turning the auxiliary and electrical master switch off or pulls the fuel cut-off handle to the OFF position.
(e) Pulls the quick disconnect to release the CVC helmet and seat belt.
(f) Unfastens his seat belt.
(g) Secures his weapon.
(h) Opens driver's hatch and locks it in position.
(i) Secures the portable fire extinguisher.
(j) Evacuates the vehicle through the driver's hatch.
(4) ***Fire Team Members--***
(a) Unfasten seat belts.
(b) Secure weapons.
(c) Evacuate the vehicle through the ramp.

NOTE: If the fire is not extinguished, use the portable fire extinguishers.

Crew Drill 4. DISMOUNT THE VEHICLE (PLATOON/SQUAD)

SITUATION: The platoon/squad is mounted and must dismount. The platoon leader orders the platoon/section to prepare to dismount.
REQUIRED ACTIONS: (Figure E-14, pages E-30 and E-31).

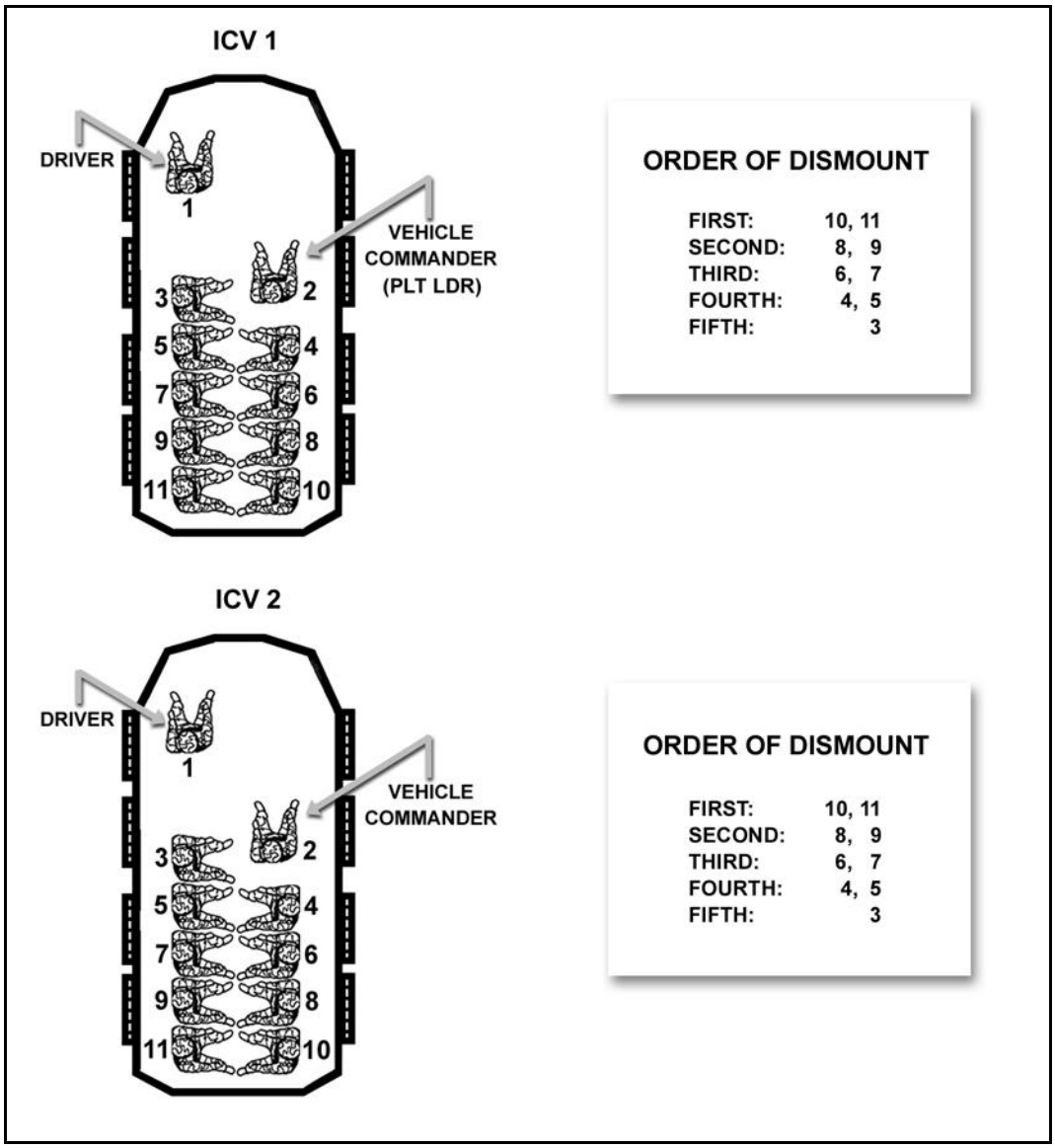


Figure E-14. ICV order of dismount.

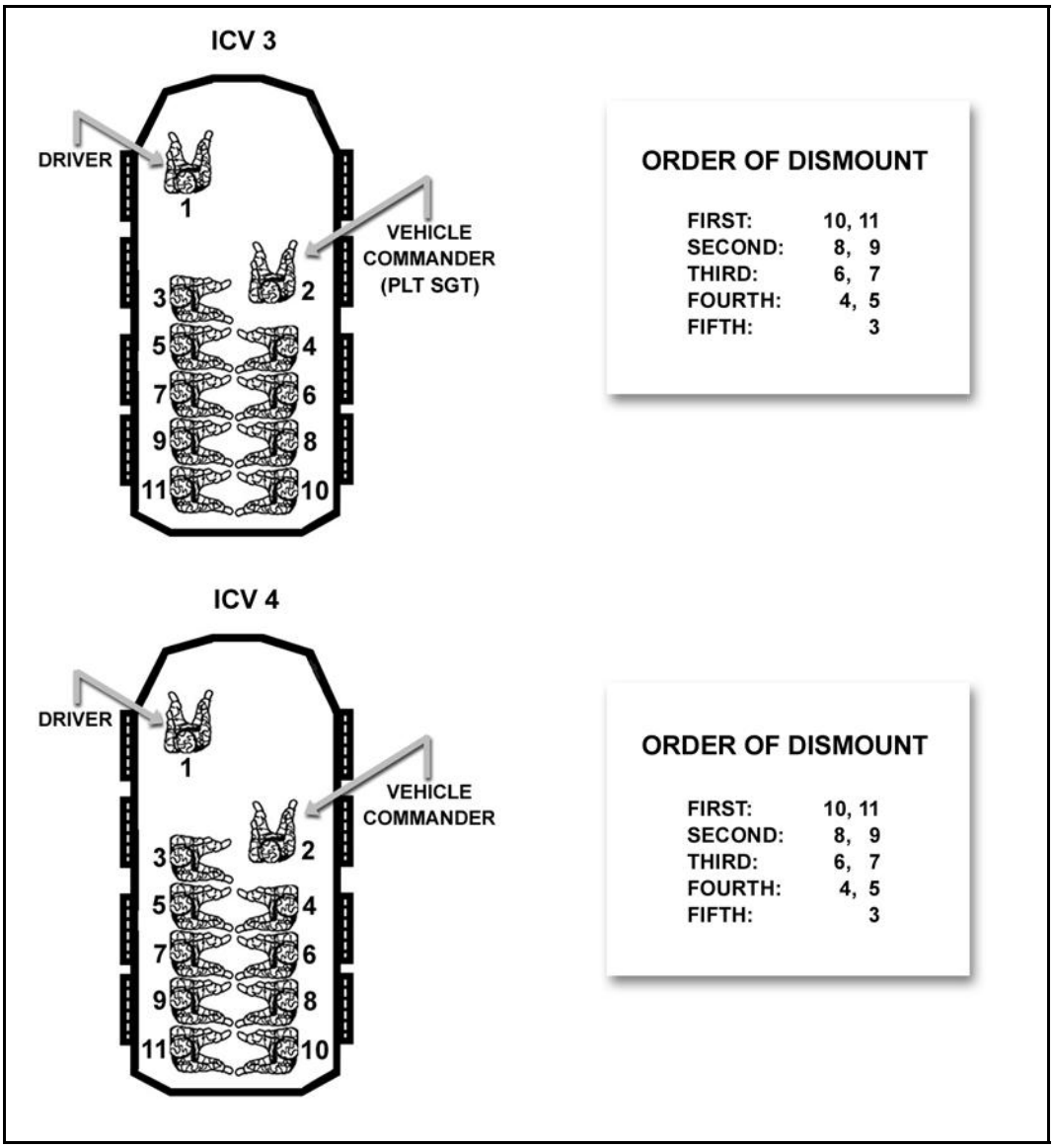


Figure E-14. ICV order of dismount (continued).

a. The platoon leader selects the dismount point.

b. The platoon leader orders personnel to dismount.

(1) Gives the warning PREPARE TO DISMOUNT.

(2) Designates dismounted platoon's weapons composition; for example, "No Javelins," "Heavy on AT4s," or "All M240B."

(3) Gives dismount instructions for each ICV; for example, "Right" (left), distance "Fifty meters," and any identifying terrain feature "Backside of hill." The VC may also give dismount instructions to the squad aboard. The VC can identify the location to the squad/team leader through the squad leader's display (SLD).

c. Squad/fire team leader(s) monitors commands. He then alerts the soldiers in the troop compartment.

d. The drivers move the vehicles to the designated dismount point and orient the front of the vehicle toward the enemy.

e. The VC orients the RWS to provide overwatching support and supporting fire, if necessary.

f. The platoon leader gives the command DISMOUNT.

g. The driver stops the vehicle and lowers the ramp or the VC orders the ramp access door opened.

h. The squad members dismount in the specified order and then move to covered and concealed positions. The squad leader establishes contact with the platoon leader.

i. The mounted element occupies appropriate covered or concealed positions and overwatches the dismounted element with the appropriate weapon or maintains a hide position until called forward to link up with the dismounted element.

j. Platoon/squad leader reports to higher headquarters.

k. All squad members search for enemy positions and respond to orders.

l. Squad and fire team leaders position or reposition squad members (if needed).

m. The platoon sergeant or section leader repositions the ICVs, as necessary.

CREW DRILL 5. MOUNT THE VEHICLE (PLATOON/SECTION)

SITUATION: The squads are dismounted and must remount the vehicle. The platoon/squad leader orders the platoon to mount its vehicles.

REQUIRED ACTIONS: (Figure E-15, pages E-33 and E-34).

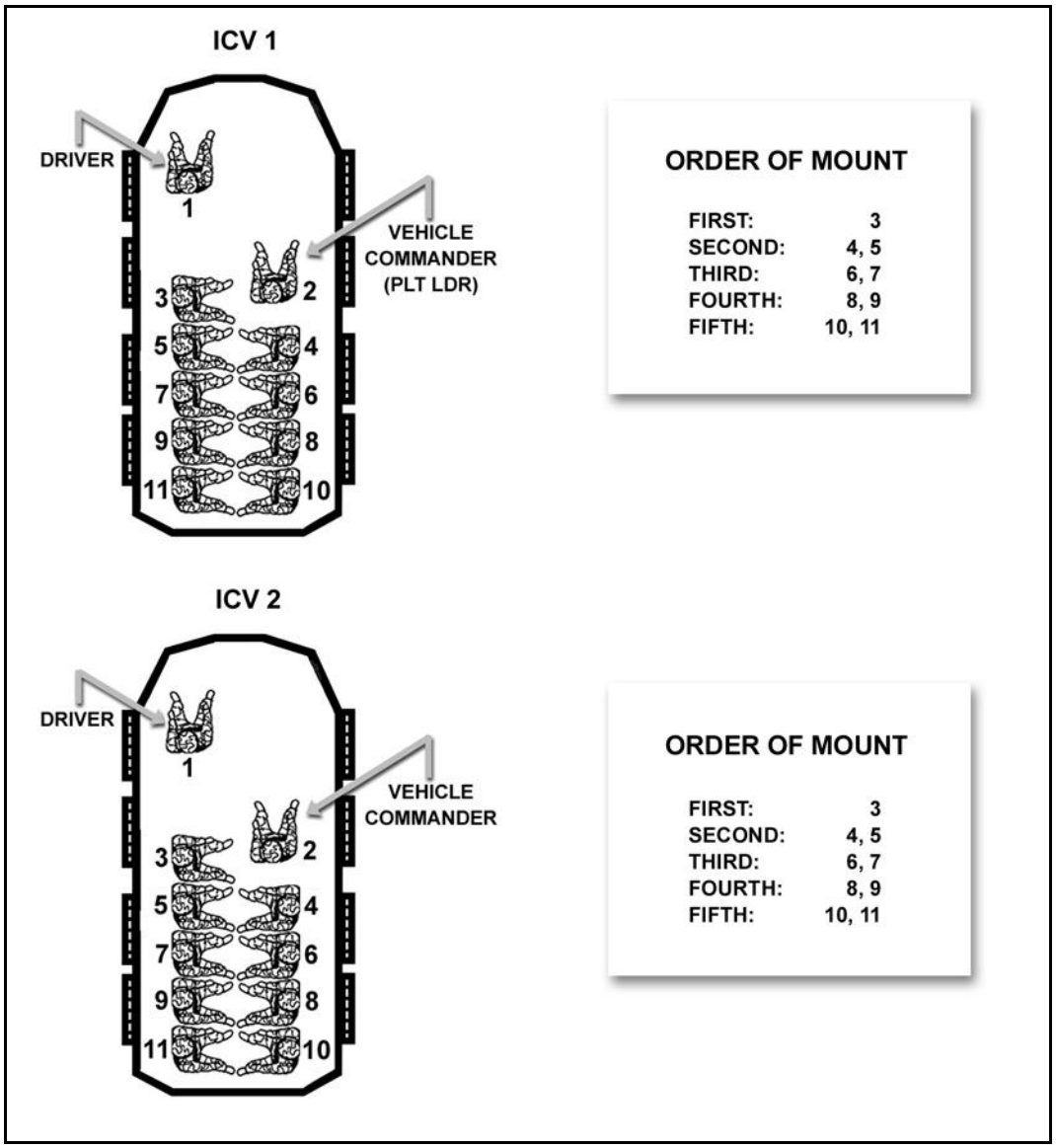


Figure E-15. ICV order of mount.

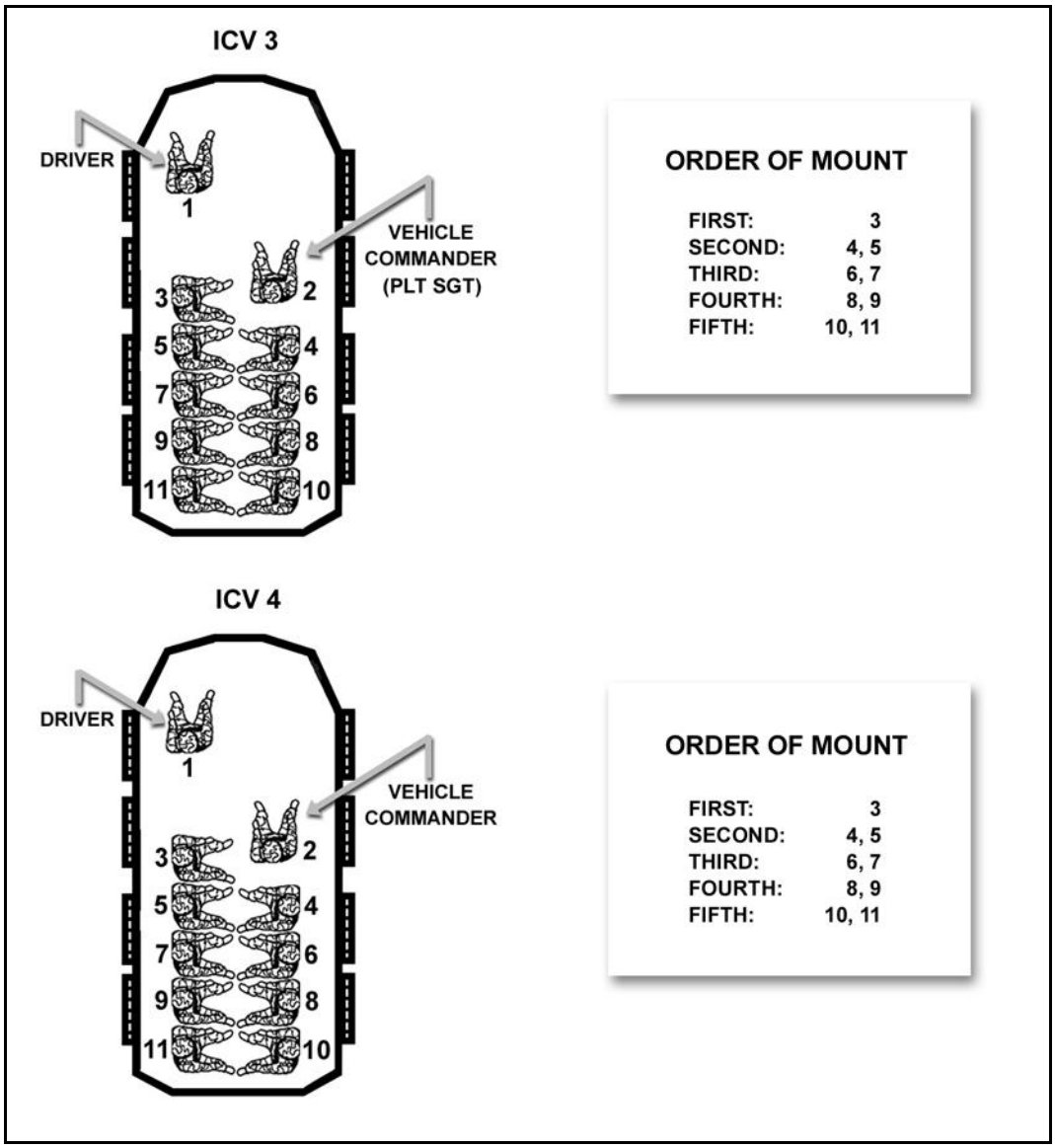


Figure E-15. ICV order of mount (continued).

a. The platoon/squad leader(s) gives the order PREPARE TO MOUNT or the appropriate signal to the squads to mount their ICVs, and designates a mount/remount point.

b. Both elements (mounted and dismounted) move to the mount/remount point using covered and concealed routes.

c. The crew, using the appropriate weapons, over watches primary enemy avenues of approach and provides supporting fire and smoke, if necessary. The VC orders the driver to lower the ramp or the squad to enter through the ramp access door.

d. The platoon/squad leader order MOUNT. (The order to mount may come with clarifying instructions; for example, "1st Squad and 3rd squad, provide a base of fire until the 2nd Squad and weapons are mounted.")

e. Each squad mounts in the order specified. The squad leader designates which fire team mounts first; for example, Team A mount first, Team B provide over watching fires.

f. Soldiers mount/remount the vehicle in reverse sequence of dismount.

g. The platoon leader/VC prepares for mounted operations.

(1) Each squad leader accounts for all personnel and equipment in the ICV and reports to the VC. Announces, ALL UP.

(2) The platoon leader designates a direction of movement, formation, and movement technique from the mount point.

(3) The platoon leader establishes visual or radio contact with the other VCs.

(4) The team leader ensures the dismounted weapons are on SAFE once the soldiers have mounted.

(5) The VC orders the driver to raise the ramp or the fire team to close the ramp access door.

h. The platoon leader reports to the company commander.

CREW DRILL 6. CHANGE FORMATION (MOUNTED) (PLATOON)

SITUATION: The platoon is moving and must change formation. The platoon leader gives arm-and-hand signal, flag signal, or radio for change of formation.

REQUIRED ACTIONS: (Figures E-16 through E-31, pages E-35 through E-50).

a. The platoon leader directs the formation change by giving the standard arm-and-hand signals, flag signals, or by radio.

b. The VCs relay arm-and-hand or flag signals.

c. The VCs direct drivers into position in the new formation. The driver maintains the position in the formation based on the platoon leader and wingmen.

d. The VCs traverse the RWS toward likely enemy positions or assigned sectors and scan for targets in their sectors. The VCs will scan the limits of their sectors using the RWS position indicator (for example, scan from 12 to 2).

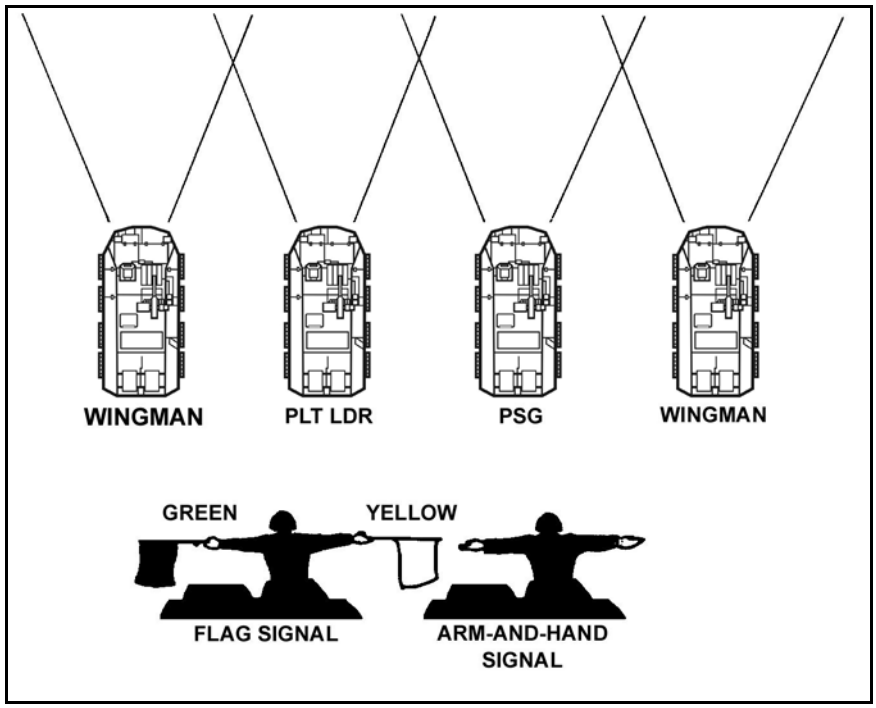


Figure E-16. Line formation.

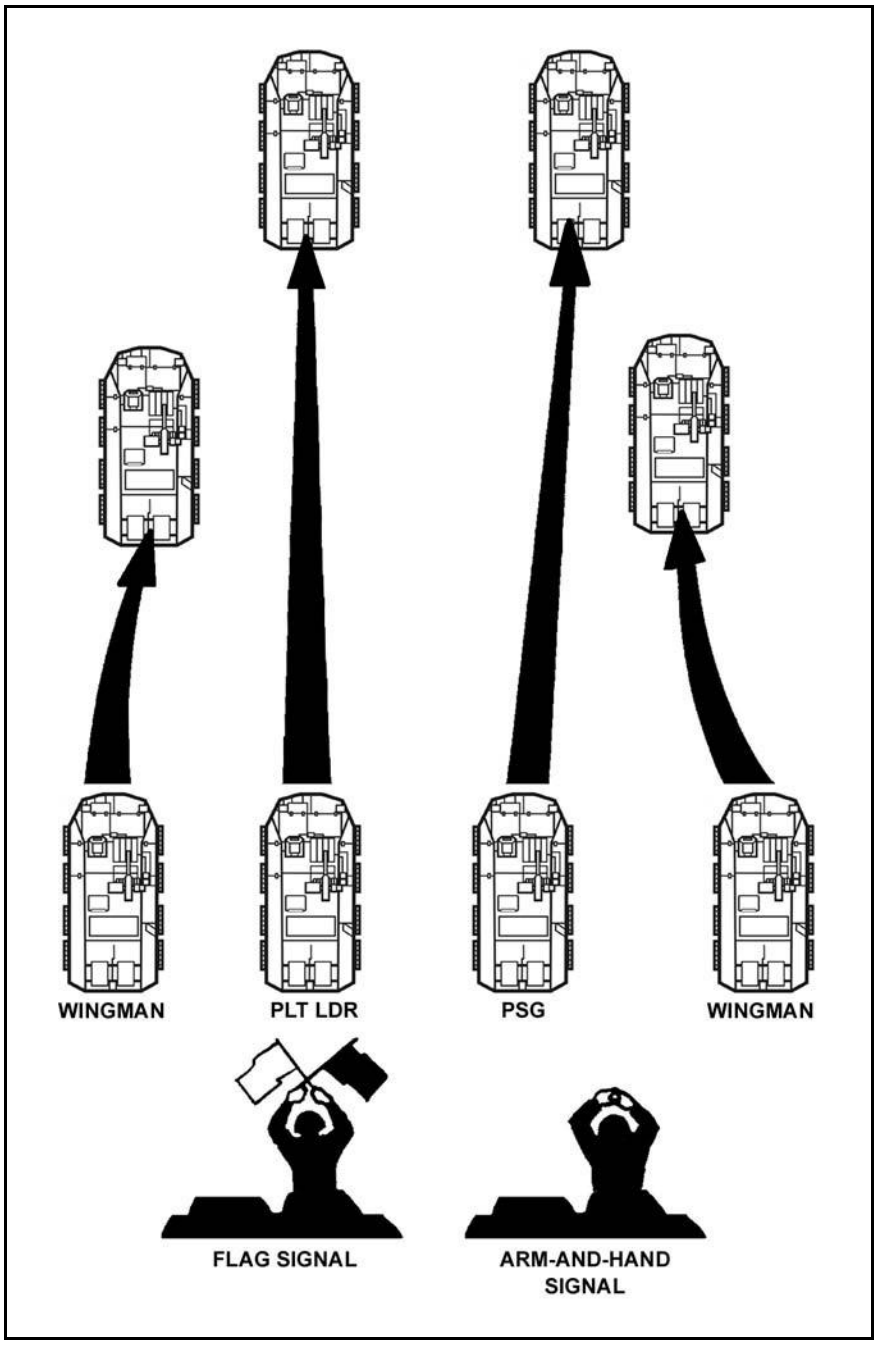


Figure E-17. Line to wedge formation.

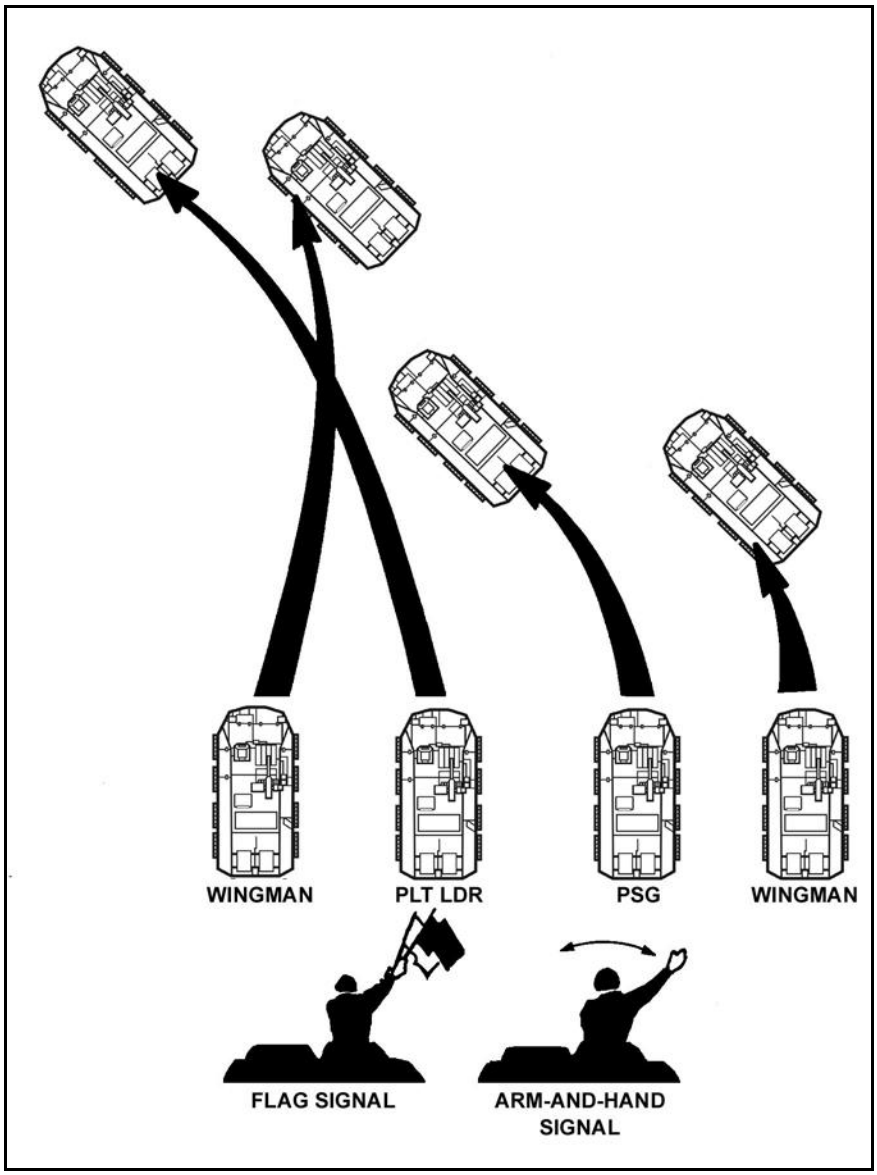


Figure E-18. Line to column formation.

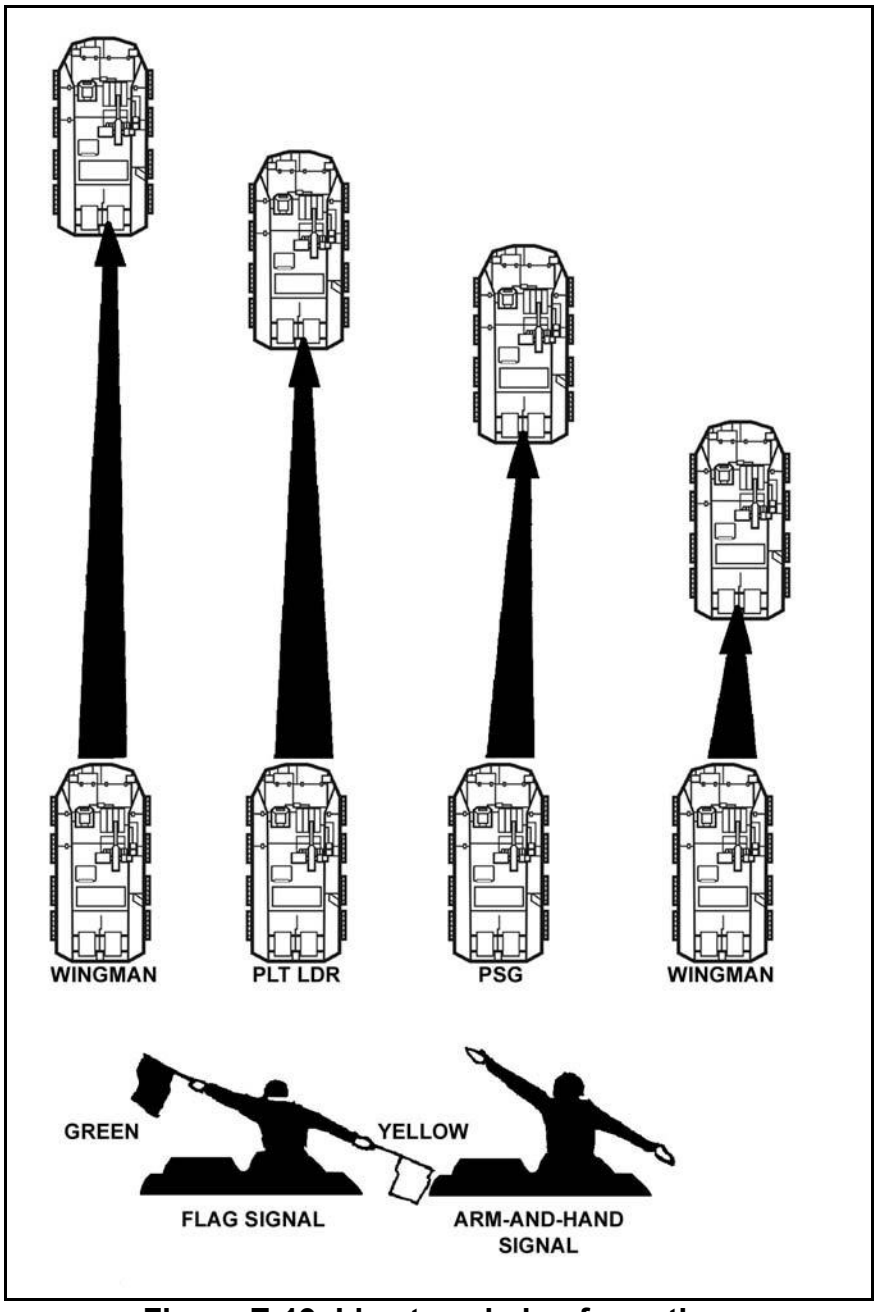


Figure E-19. Line to echelon formation.

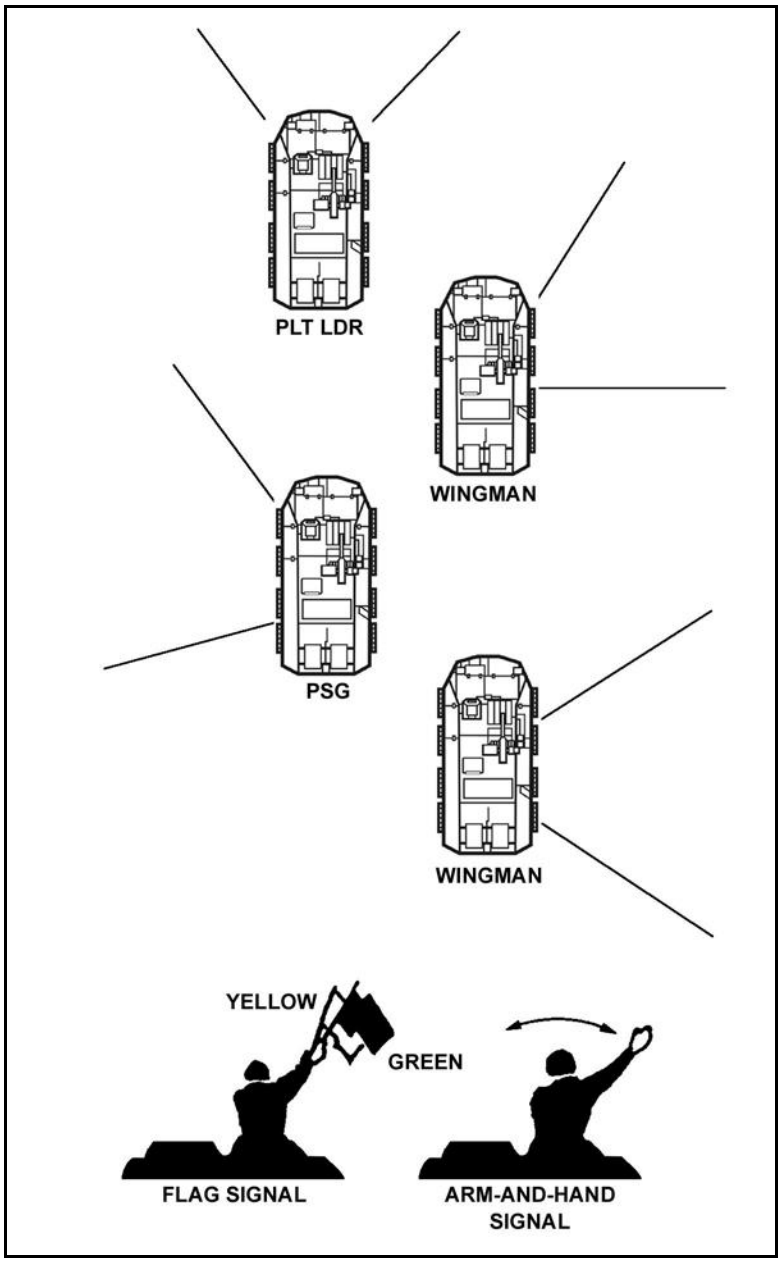


Figure E-20. Column formation.

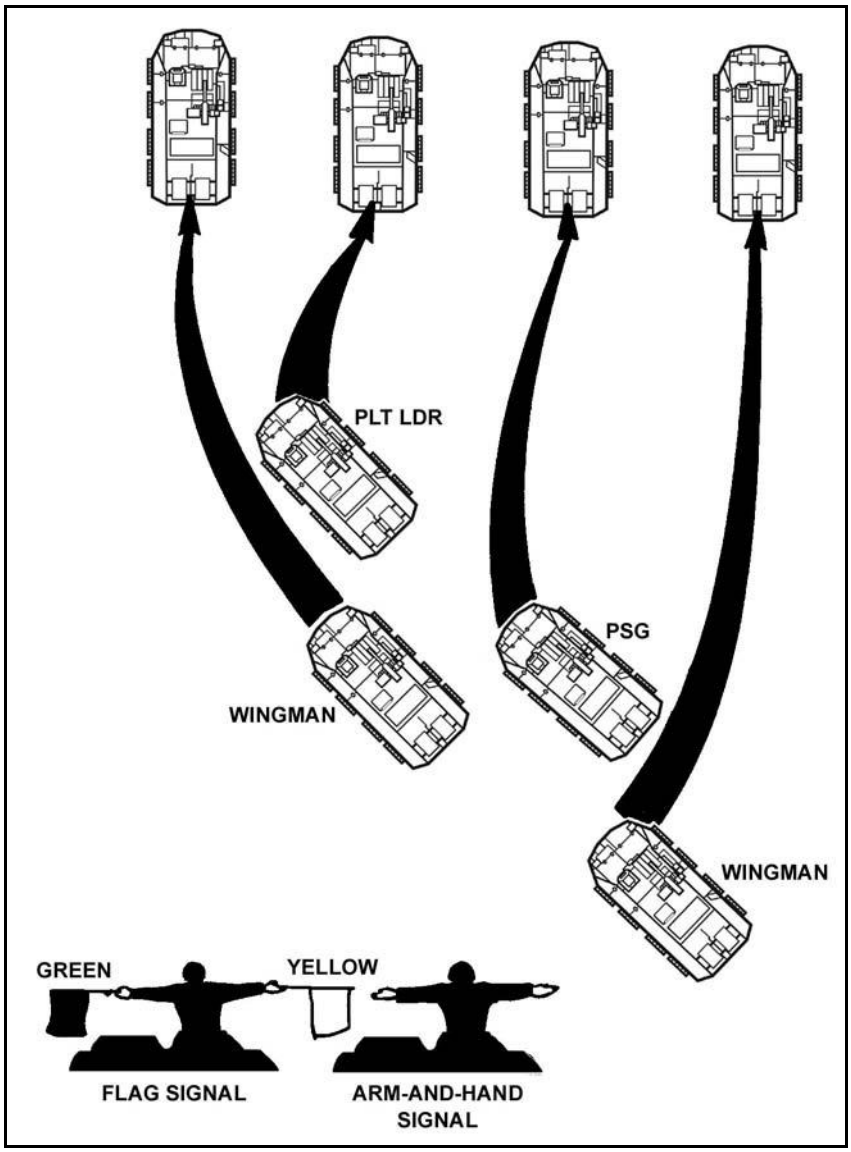


Figure E-21. Column to line formation.

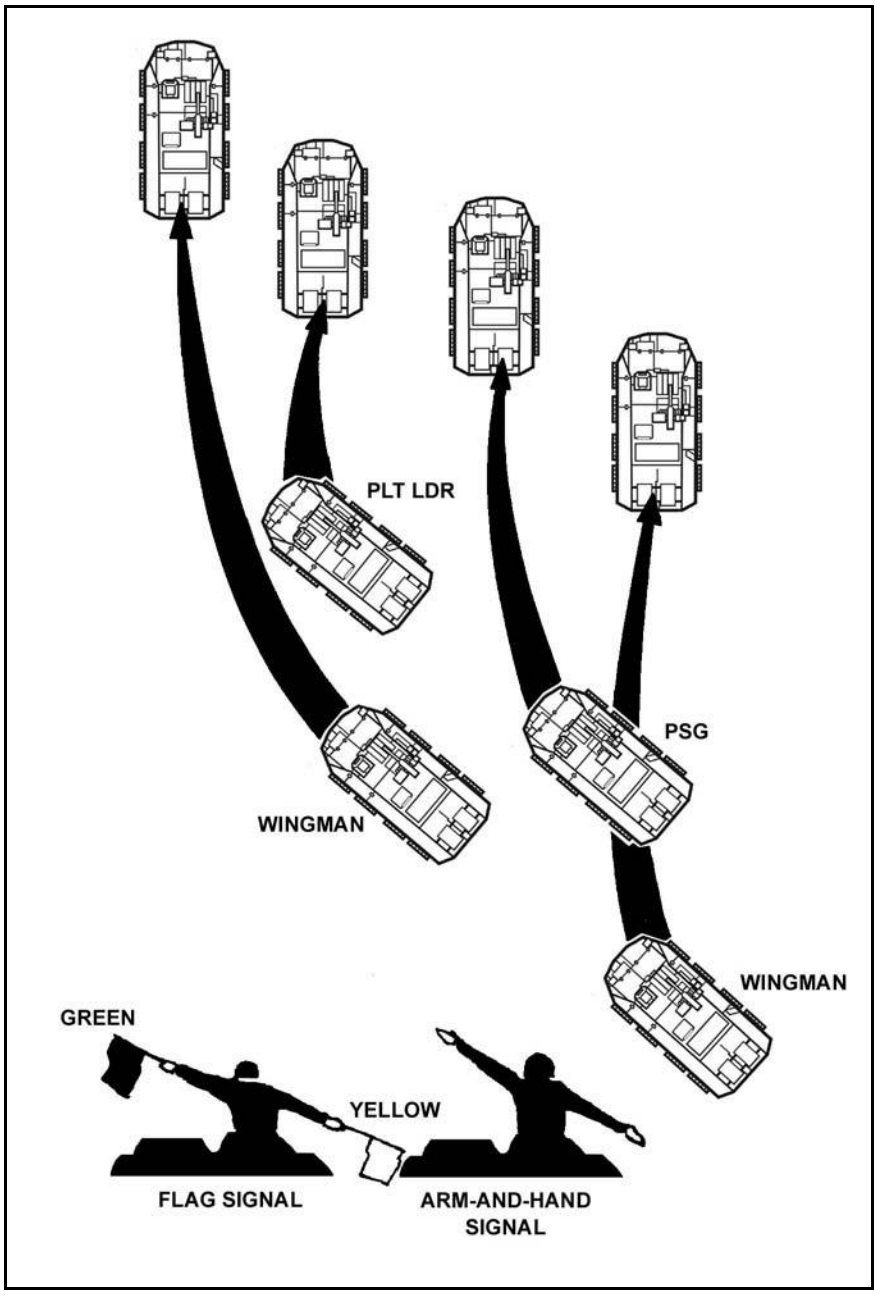


Figure E-22. Column to echelon formation.

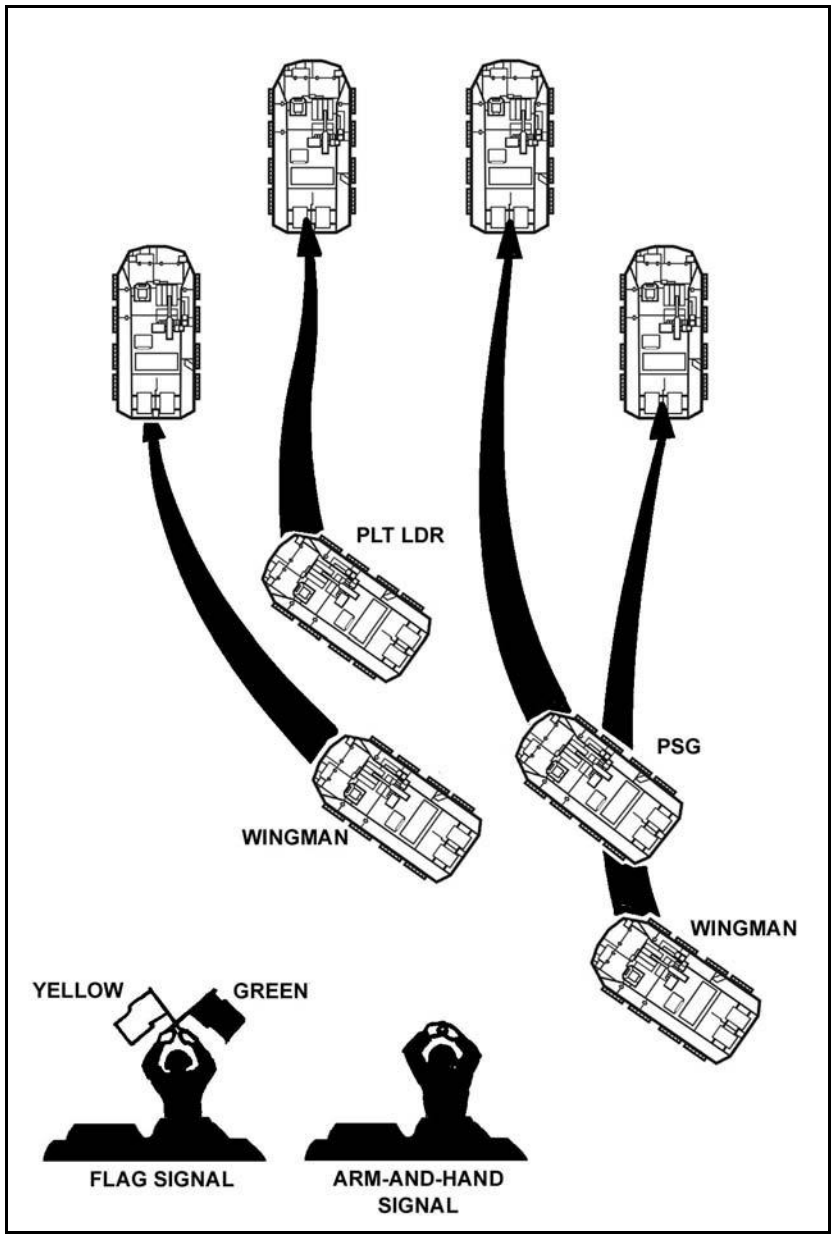


Figure E-23. Column to wedge formation.

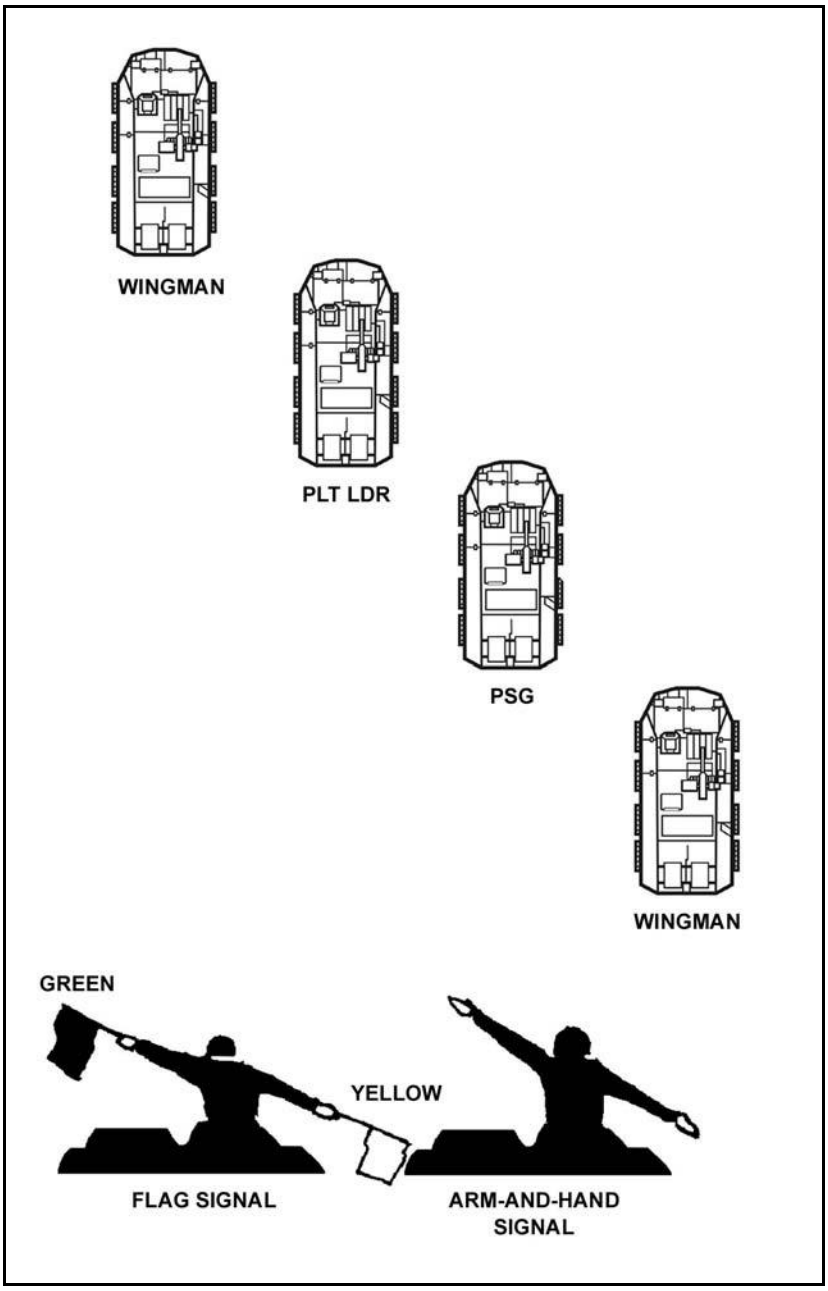


Figure E-24. Echelon formation (right).

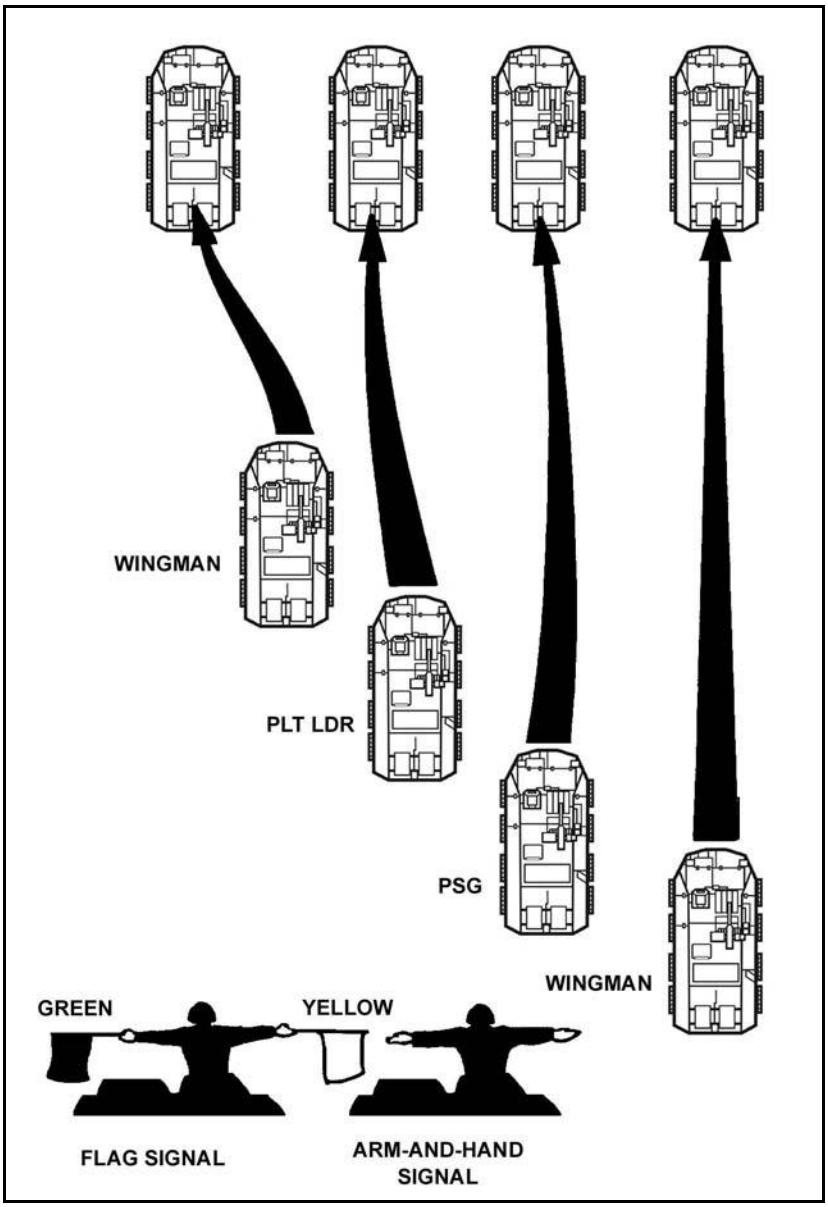


Figure E-25. Echelon to line formation.

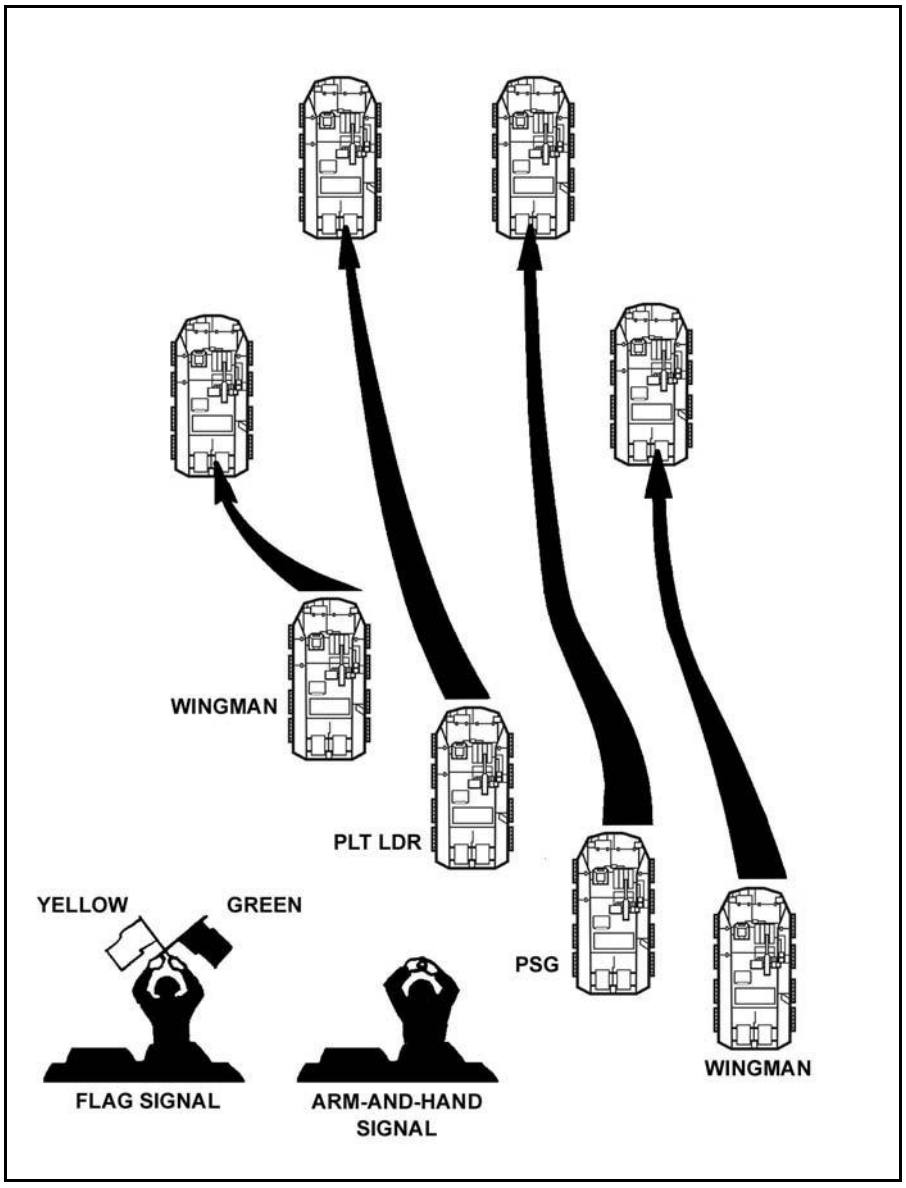


Figure E-26. Echelon to wedge formation.

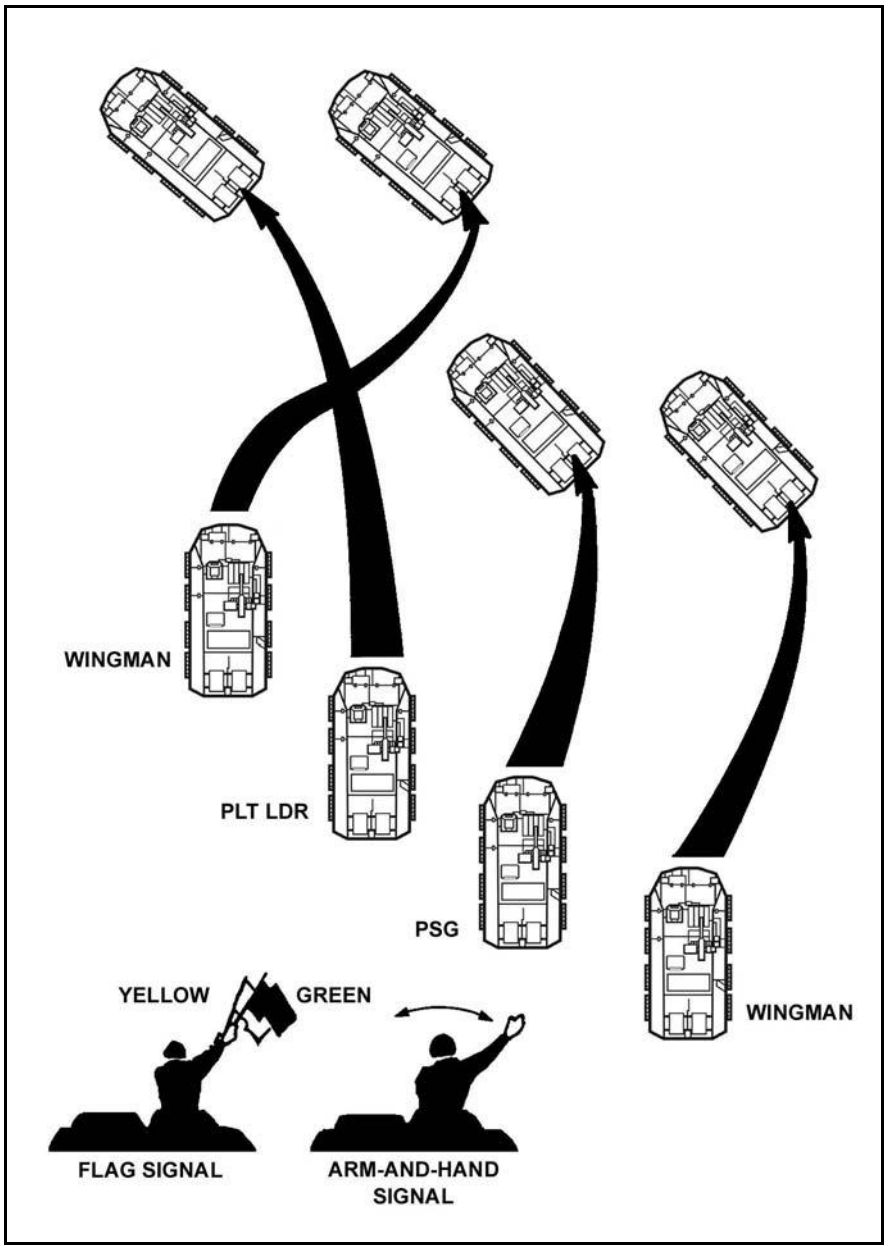


Figure E-27. Echelon to column formation.

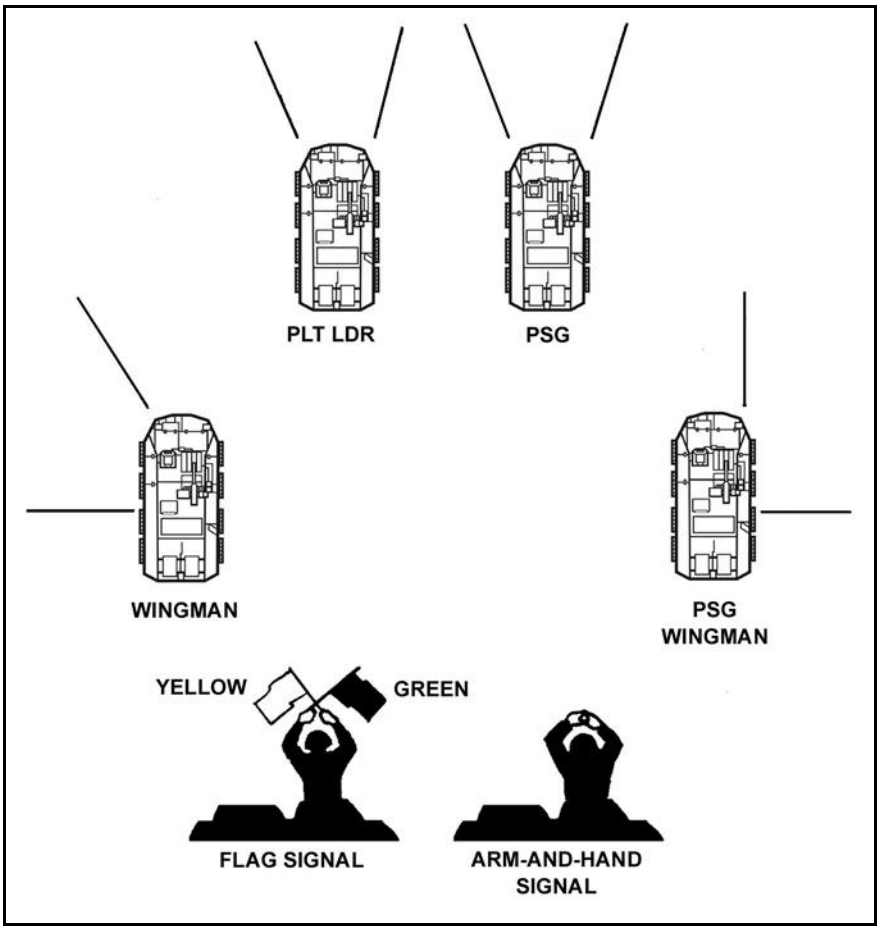


Figure E-28. Wedge formation.

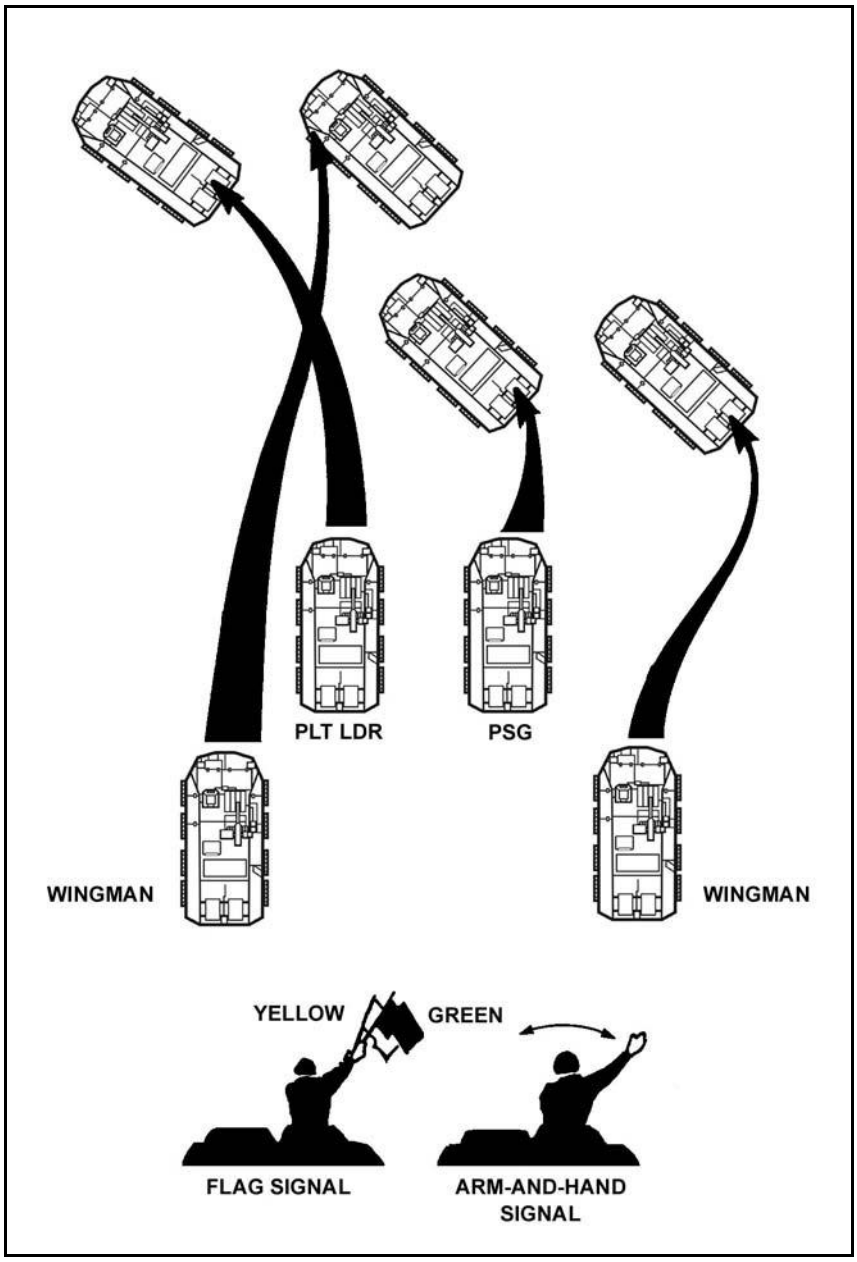


Figure E-29. Wedge to column formation.

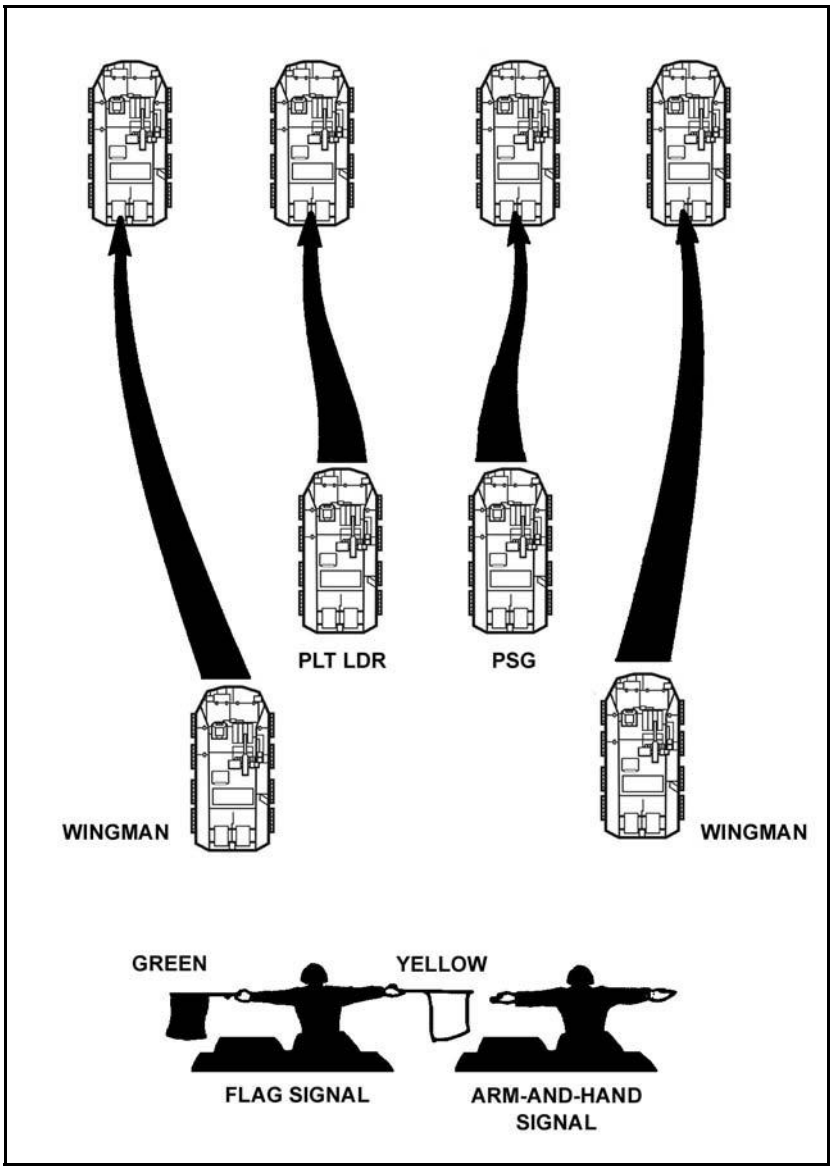


Figure E-30. Wedge to line formation.

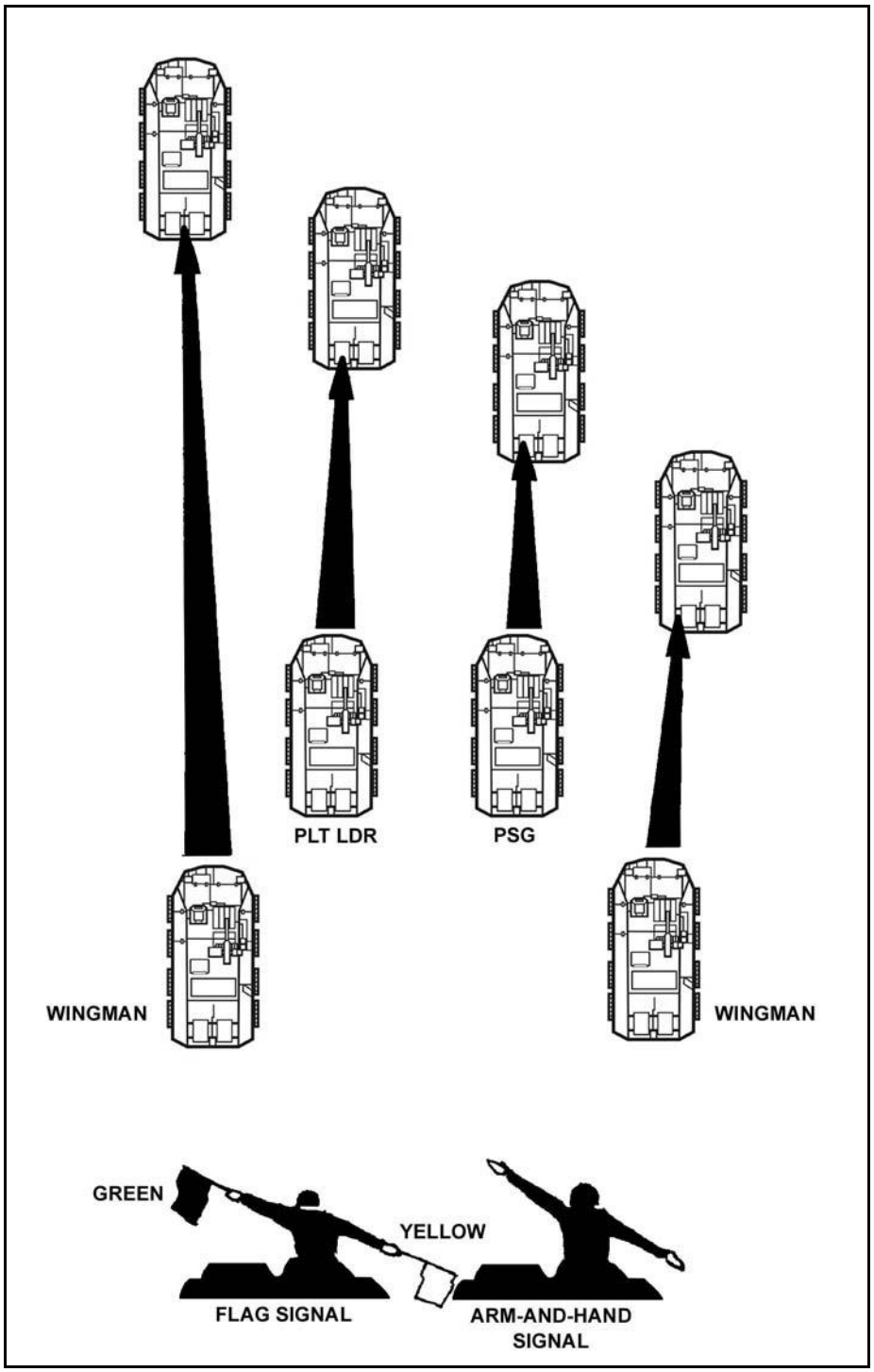


Figure E-31. Wedge to echelon formation.

CREW DRILL 7. SECURE AT THE HALT (PLATOON)

SITUATION: The platoon is moving and must halt.

REQUIRED ACTIONS: (Figures E-32 through E-35, pages E-52 through E-55).

a. The platoon leader gives the arm-and-hand signals for herringbone or coil formation.

b. The platoon halts in the herringbone or coil formation.

c. Each VC ensures his vehicle is correctly positioned, using cover and concealment.

d. The platoon leader orders the squads to dismount and provide local security. (Dismount IAW the task, Dismount the Vehicle.)

e. The squads occupy hasty fighting positions, as designated by the squad leader, in the vicinity of their respective ICV. The squad leader contacts the team leader and adjusts security positions as necessary.

f. Soldiers continue to observe designated sectors.

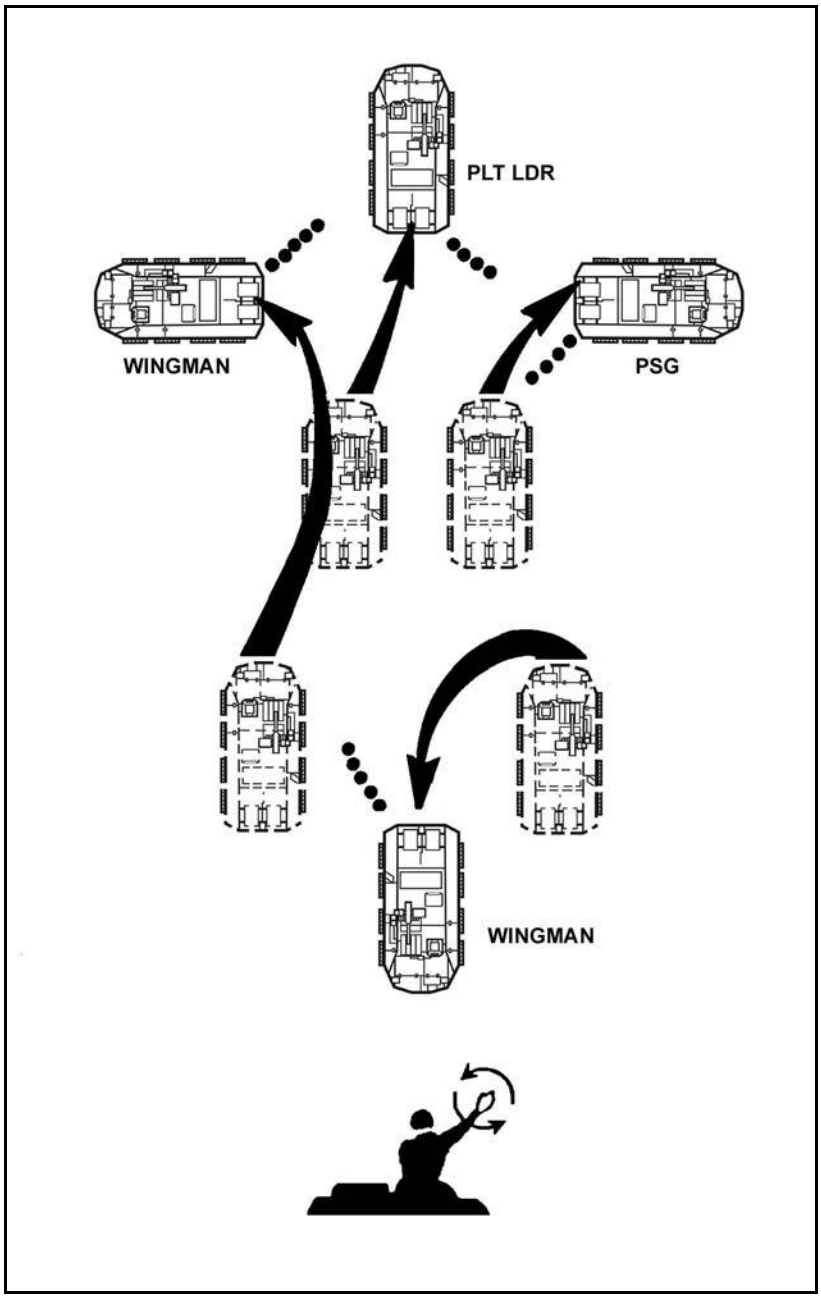


Figure E-32. Wedge to coil formation.

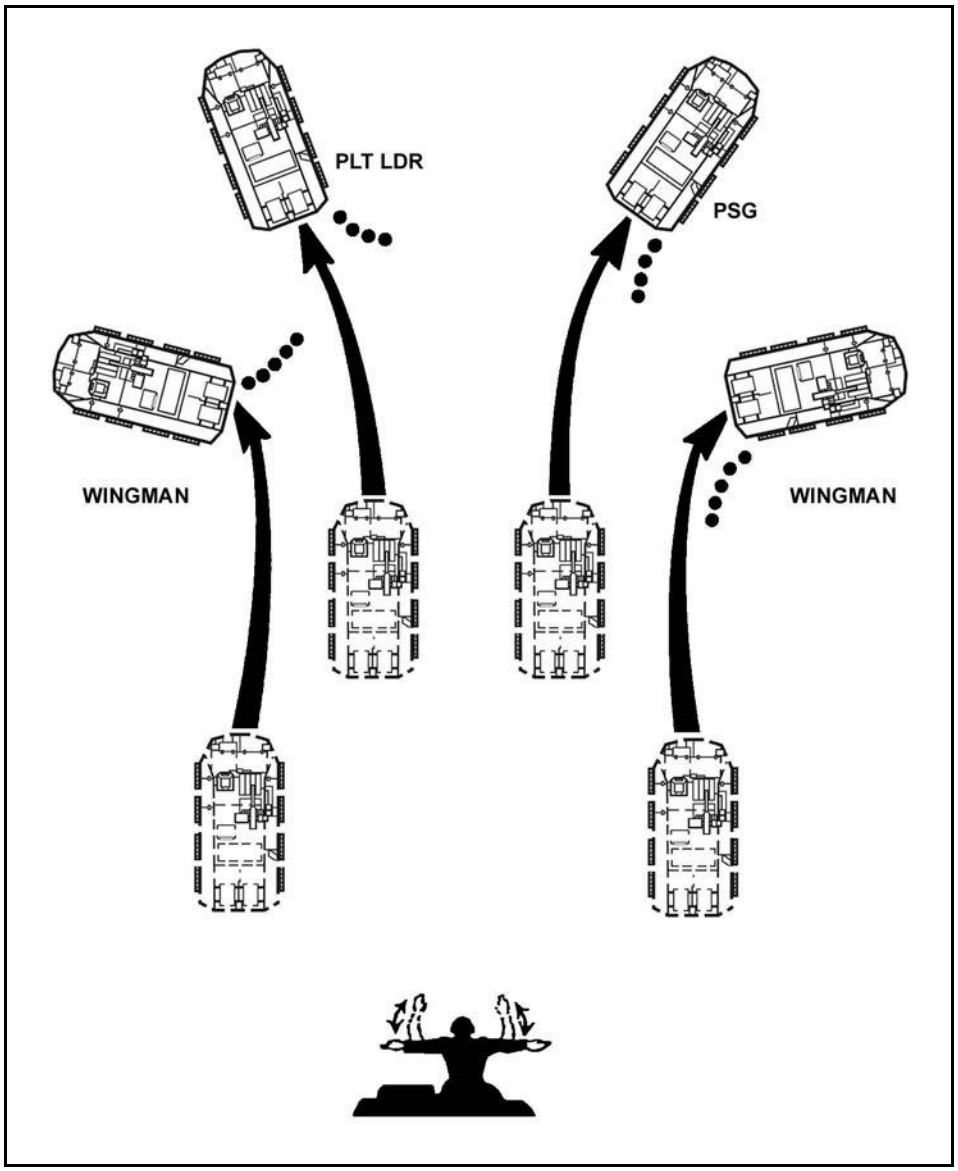


Figure E-33. Wedge to herringbone formation.

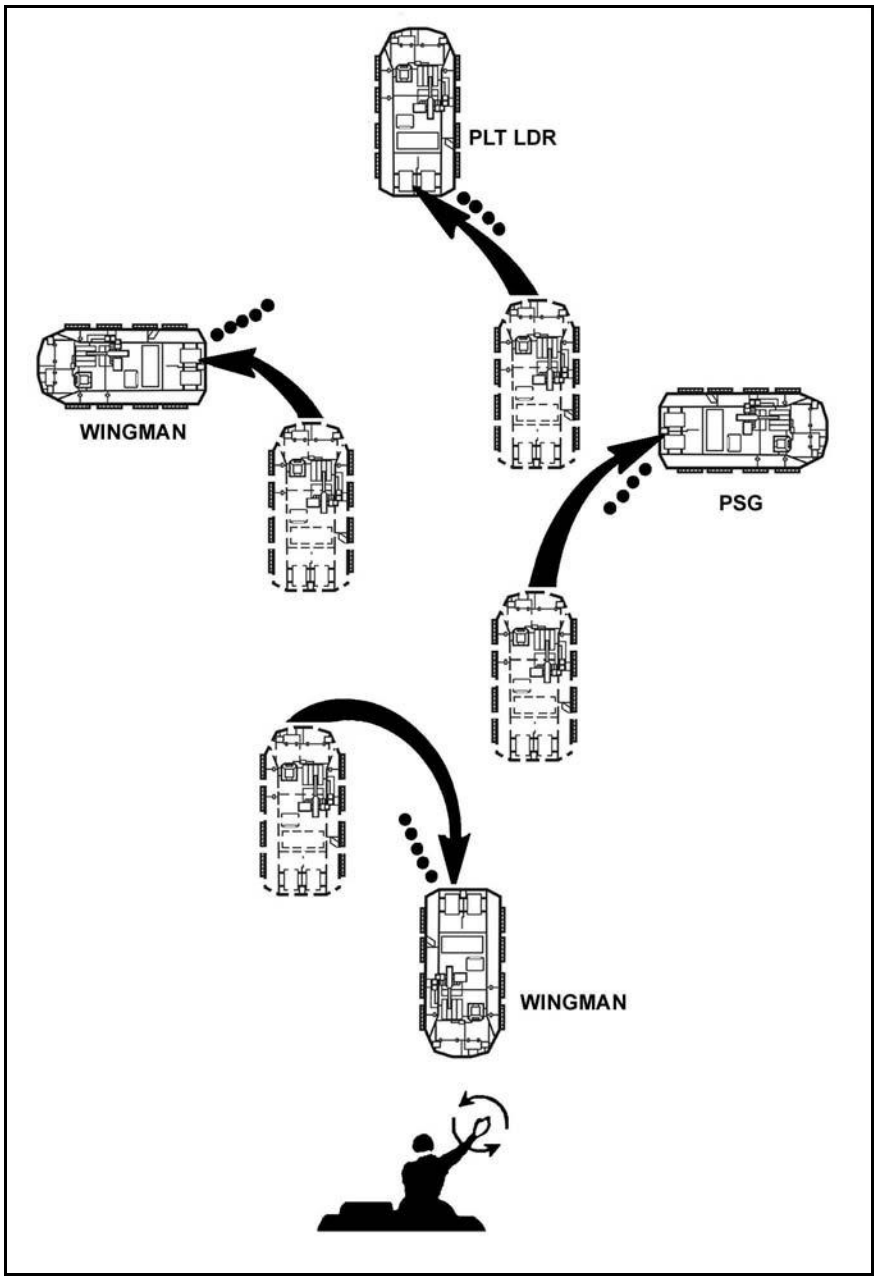


Figure E-34. Column to coil formation.

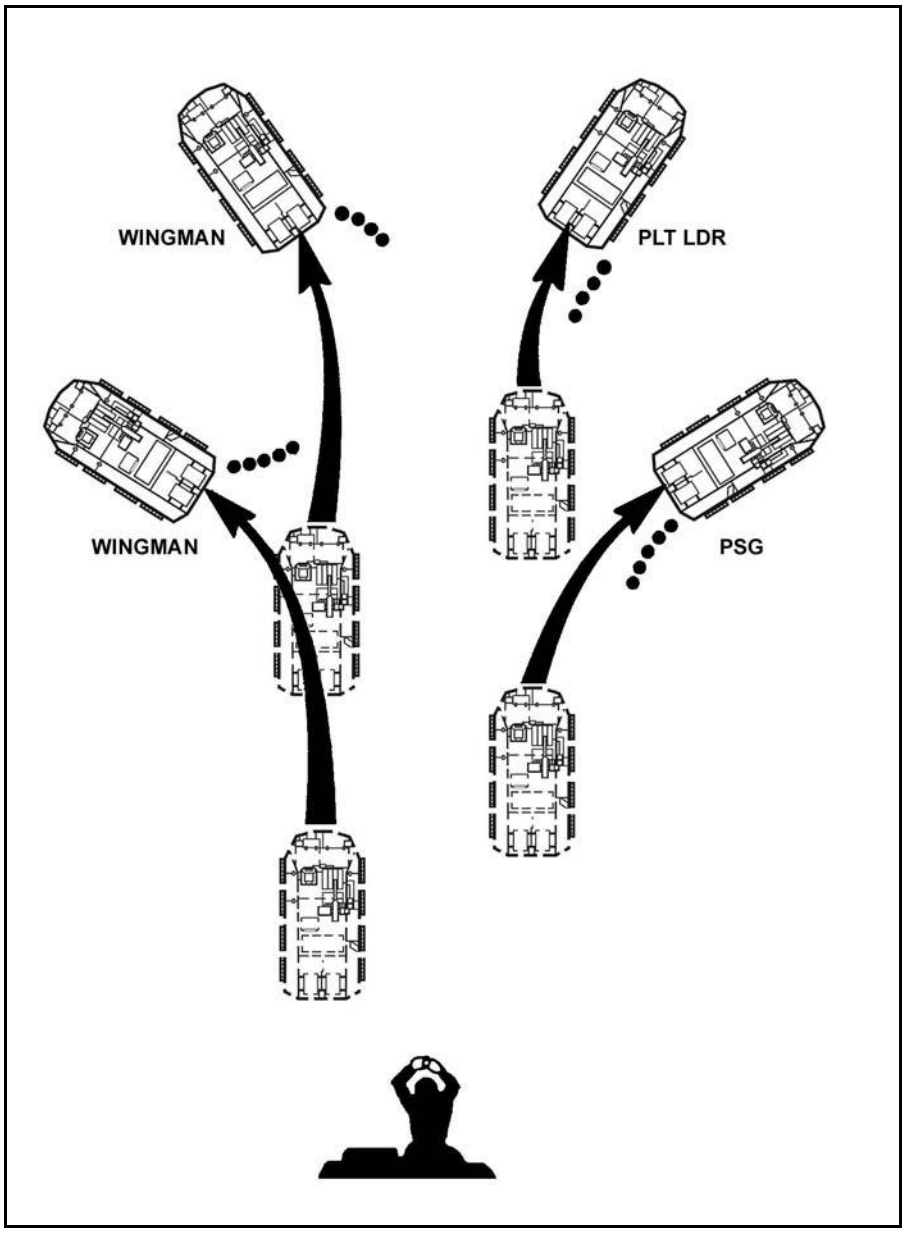


Figure E-35. Column to herringbone formation.

CREW DRILL 8. EXECUTE ACTION RIGHT OR LEFT (PLATOON)

SITUATION: The platoon is moving and must execute action right or left.

REQUIRED ACTIONS: (Figures E-36 through E-43, pages E-56 through E-63).

a. The platoon leader signals action right or left using arm-and-hand, flags, or radio.

b. The drivers immediately execute a turn in the direction indicated while moving into a line formation.

(1) The platoon sergeant orients his vehicle on the platoon leader's vehicle.

(2) Wingmen orient their ICVs on the platoon leader and platoon sergeant vehicles.

c. The platoon leader orders the VCs to seek covered positions for their vehicles or has them continue to move in the direction indicated.

d. The VCs orient the RWS toward the enemy, and the VCs search for targets.

e. The platoon leader determines if it is necessary to dismount the rifle squads.

f. The platoon leader reports the situation to the company commander, if necessary.

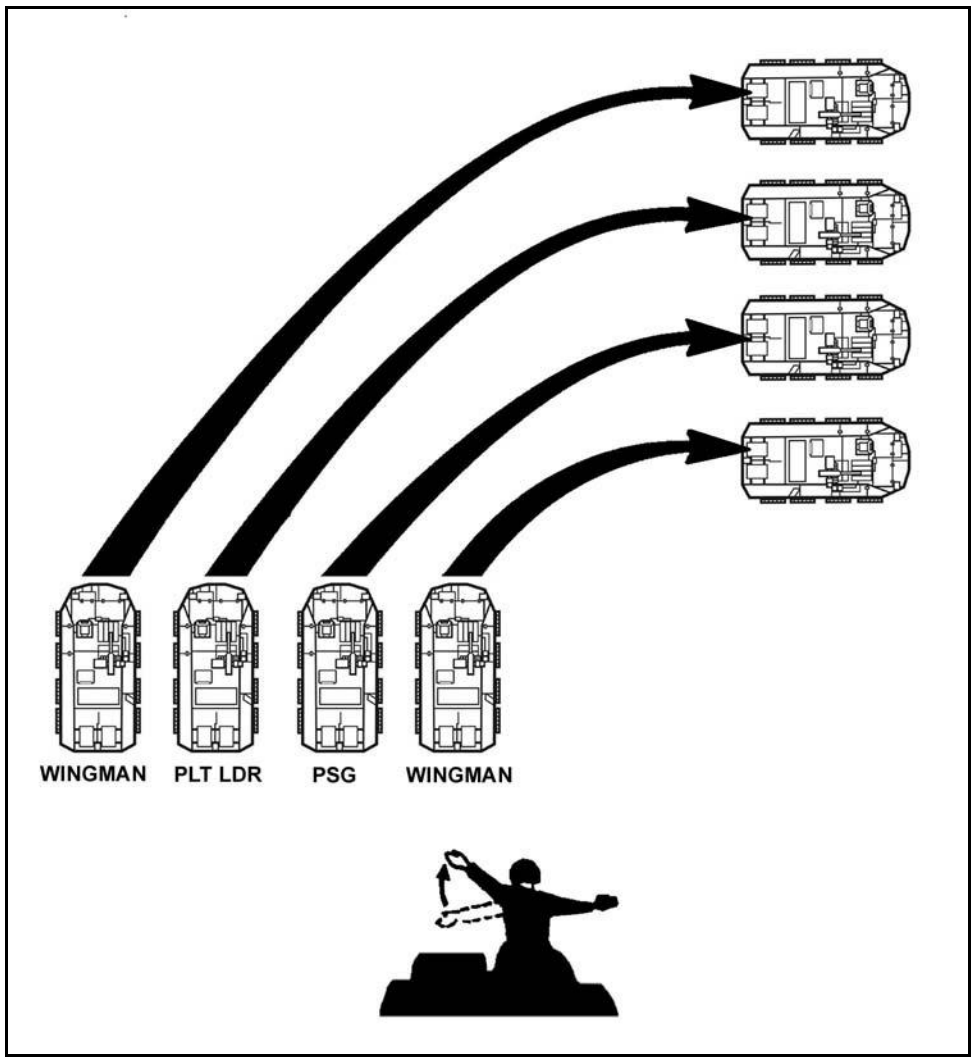


Figure E-36. Action right from line.

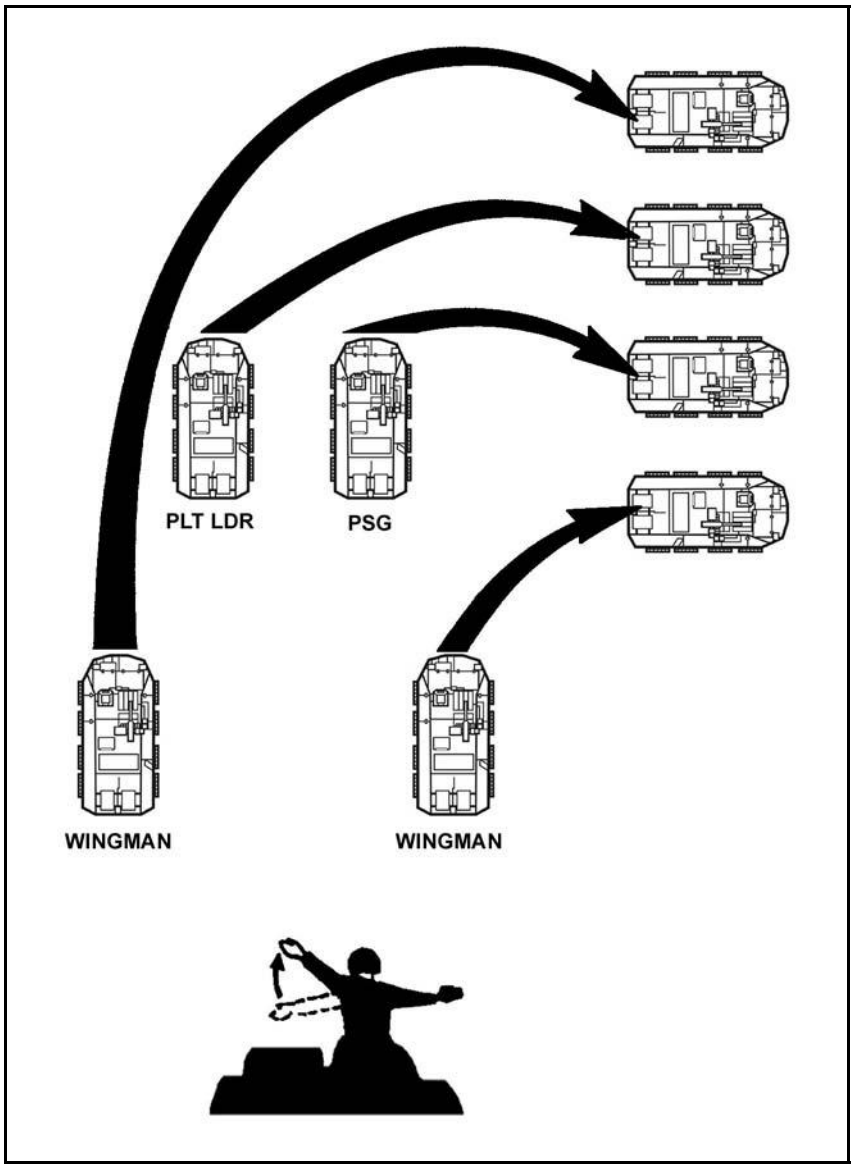


Figure E-37. Action right from wedge.

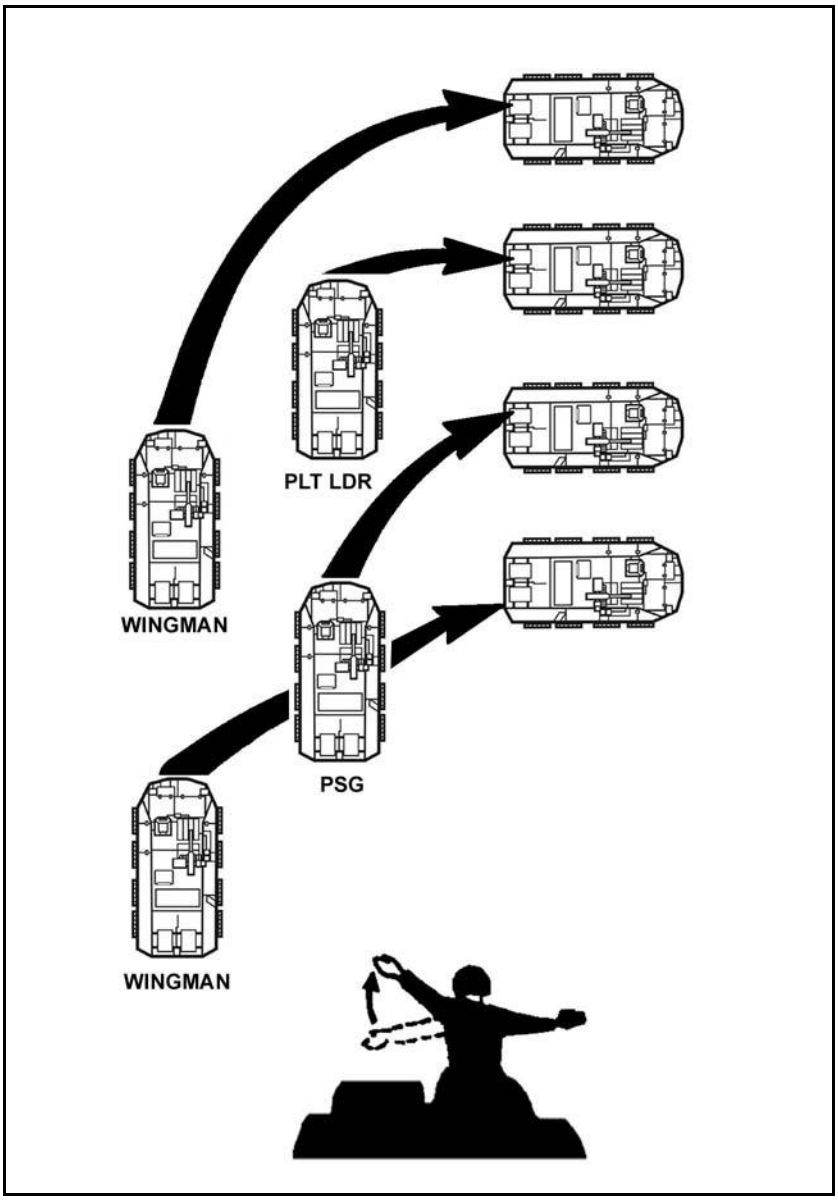


Figure E-38. Action right from column, wingman on left.

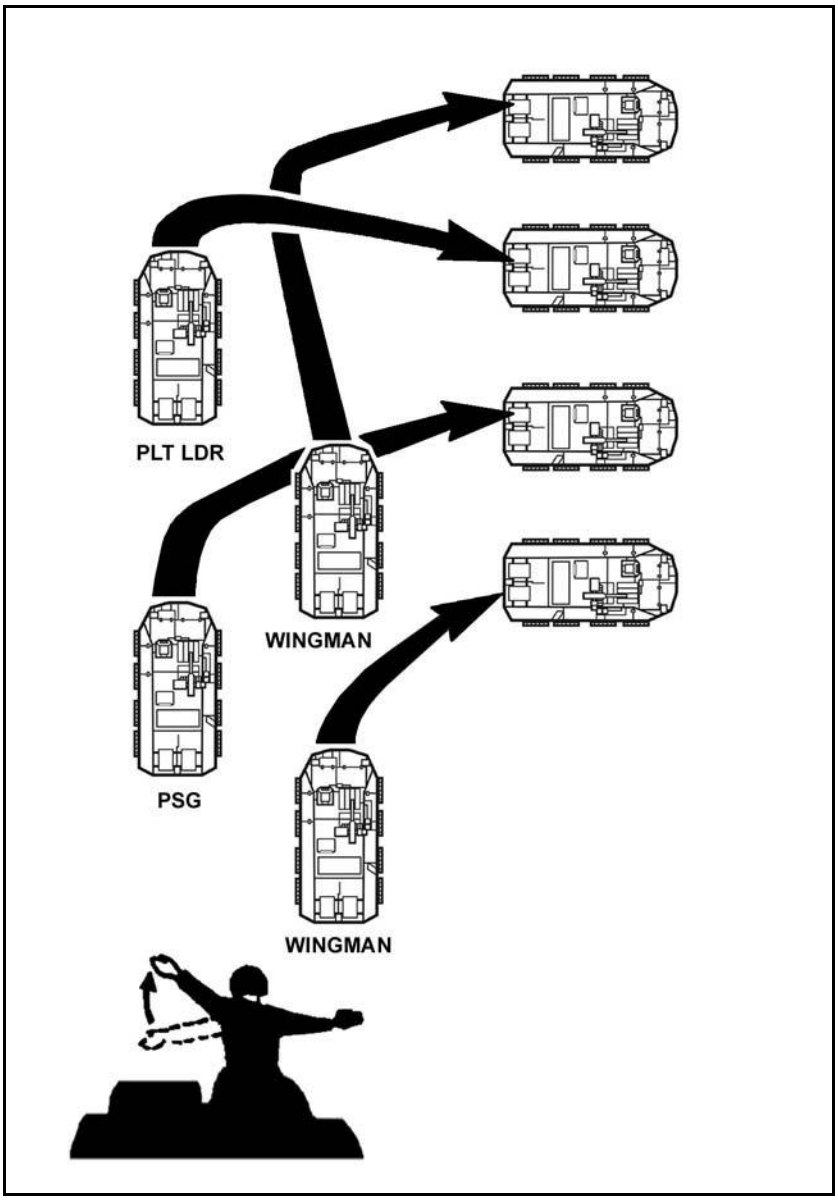


Figure E-39. Action right from column, wingman on right.

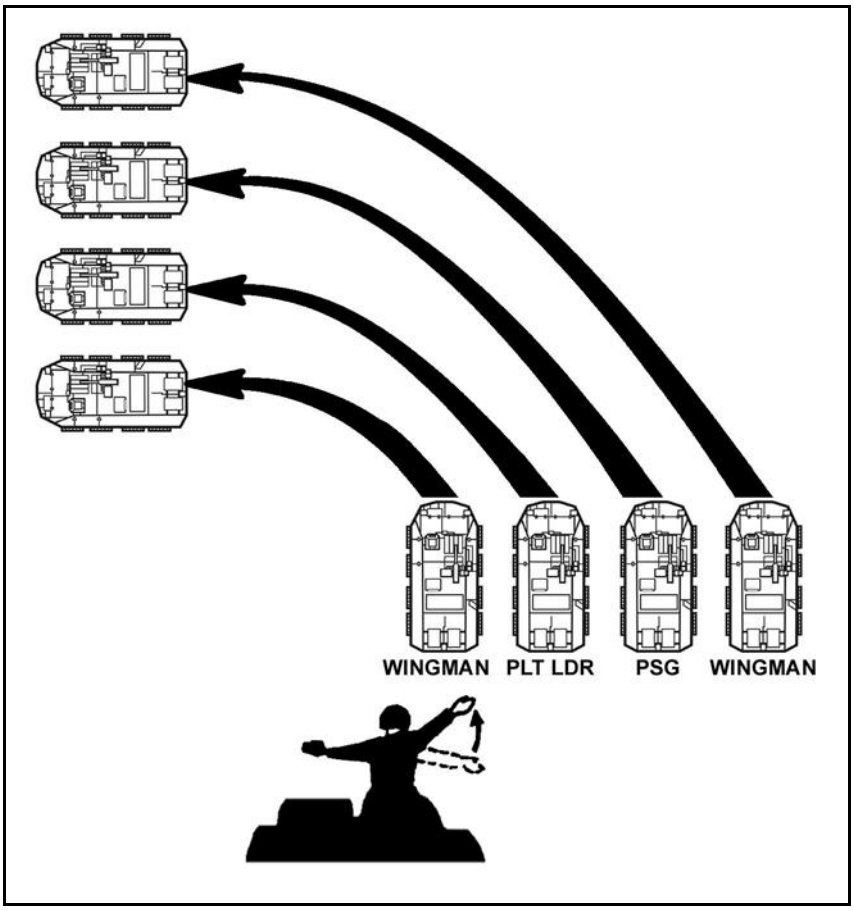


Figure E-40. Action left from a line.

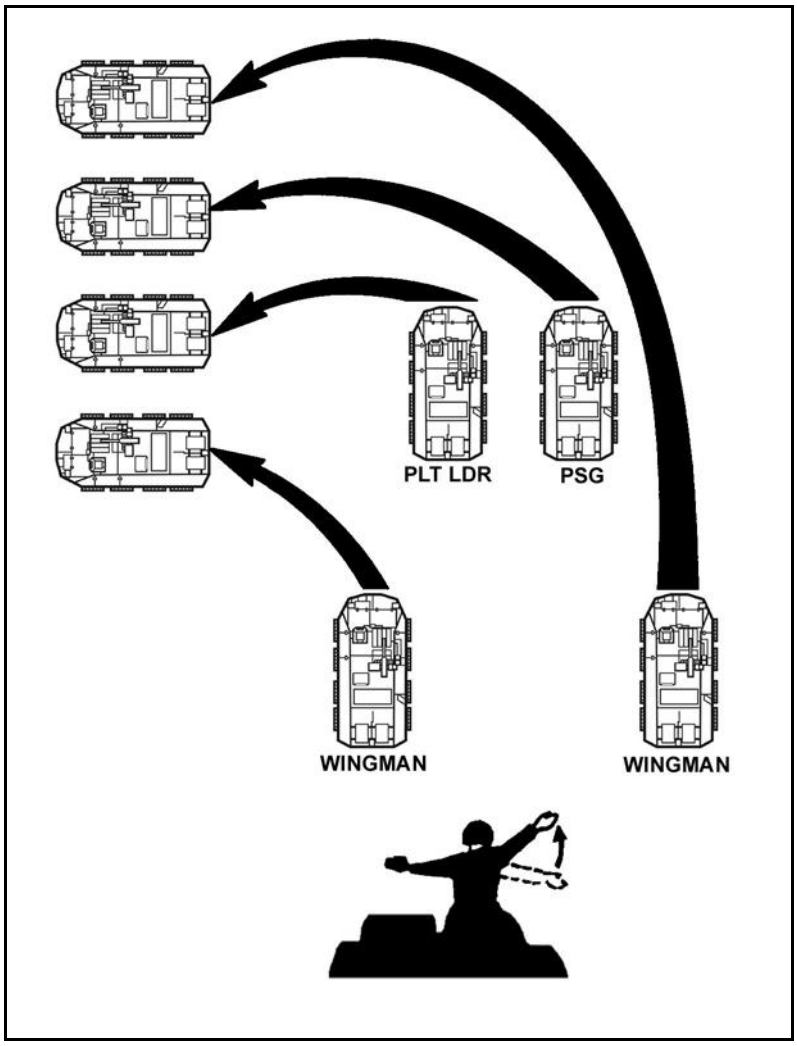


Figure E-41. Action left from a wedge.

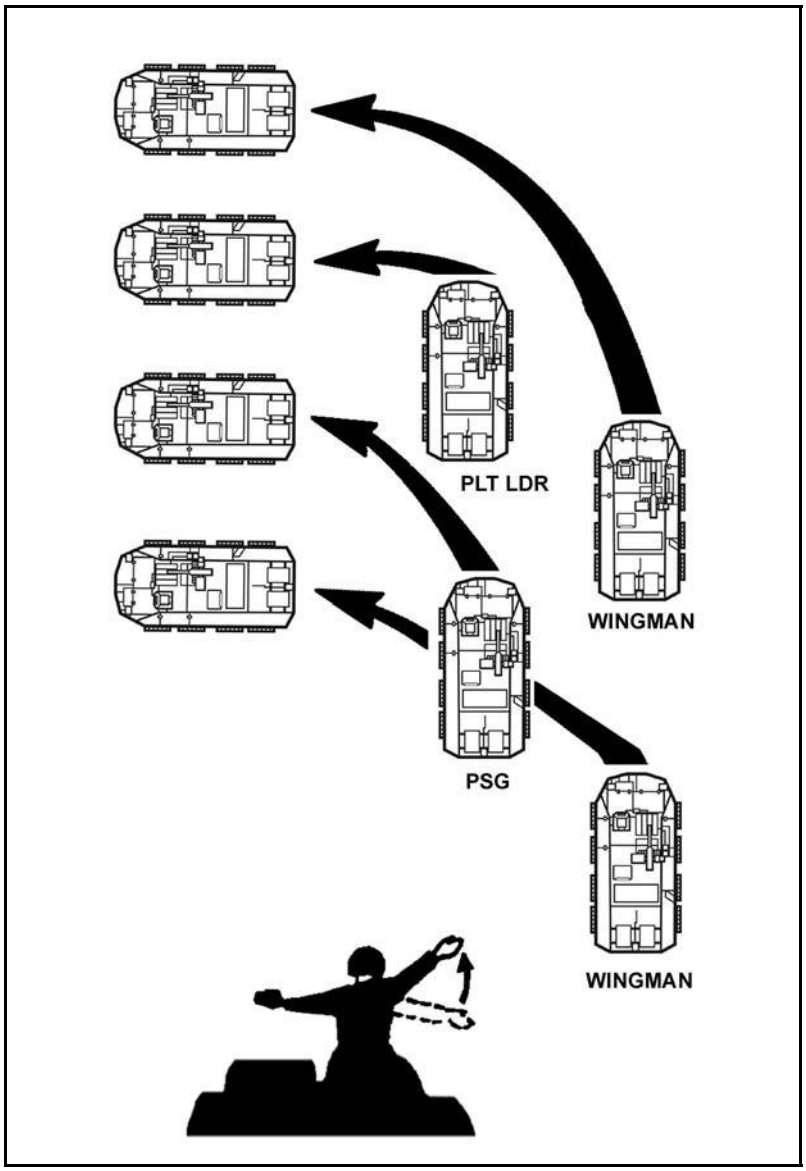


Figure E-42. Action left from a column, wingman on right.

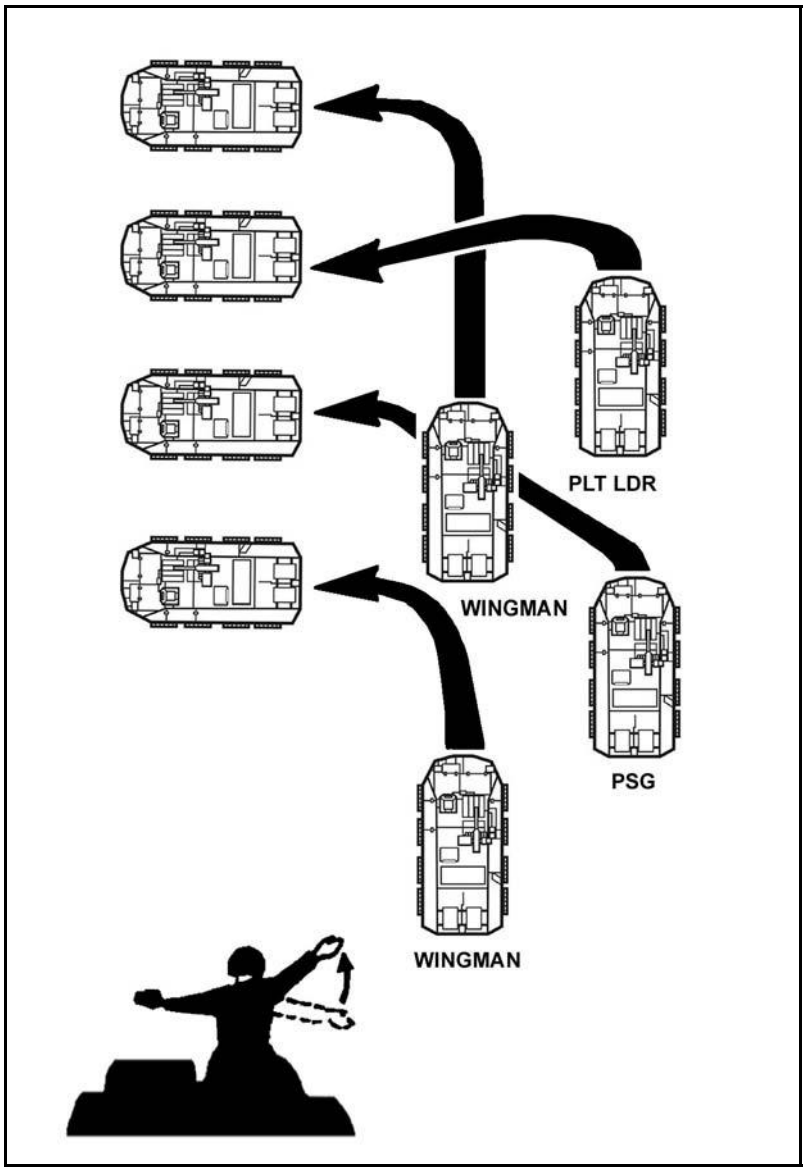


Figure E-43. Action left from a column, wingman on left.

CREW DRILL 10. DESTROY OR ABANDON AN INFANTRY CARRIER VEHICLE (CREW)

SITUATION: Given an order to destroy or abandon the ICV, AT4, Javelin, 15 one-pound blocks of TNT (or equivalent), equipment to complete an electric or nonelectric firing circuit, or two incendiary grenades, and a vehicle crew and a rifle squad.

REQUIRED ACTIONS:

a. **Destruction by Removal or Destruction of Main Components.**

(1) ***Vehicle Commander--***

(a) Removes the M2 machine gun or MK19 grenade launcher backplate and destroys it.

(b) Smashes the radios.

(c) Execute the FBCB2 electronic self-destruct function and smashes computer screen.

(d) Secures his protective mask and individual weapon, equipment, and night vision goggles.

(2) ***Driver--***

(a) Cuts the coolant lines.

(b) Cuts the engine oil hose.

(c) Smashes the AN/VVS-2 night vision viewer or drivers vision enhancer (DVE) (M2A3 only).

(d) Secures his protective mask, individual weapon, and gear.

(3) **Squad *Members--***

(a) Smash the squad leader's display.

(b) Secure all night vision devices.

(c) Secure dismounted radio.

(d) Secure the Javelin command launch unit (CLU).

(e) Secure their protective mask and individual weapons and gear and evacuate the vehicle.

b. **Destruction by Fire.**

(1) **Vehicle Commander--**

(a) Traverses the turret to 4100 mils.

(b) Secures his protective mask and individual weapon.

(2) **Driver--**

NOTE: Discharge the automatic fire suppression system prior to attempting to destroy the vehicle by fire. This will prevent accidental activation of the automatic fire suppression system and fire being inadvertently extinguished.

(a) Manually discharges the second-shot fire extinguisher assembly, by momentarily holding the spring-loaded ENGINE MANUAL DISCHARGE toggle switch, located on the CONTROL ELECTRONICS PANEL, in the up position.

(b) Manually discharges the first-shot fire extinguisher assembly by holding the spring-loaded ENGINE MANUAL DISCHARGE toggle switch, located on the CONTROL ELECTRONICS PANEL, in the up position for a minimum of five seconds.

(c) Lowers the ramp.

(d) Shuts down the engine by turning the auxiliary and electrical master switch OFF or pulls the fuel cut-off handle to the OFF position.

(e) Opens the engine compartment access door.

(f) Opens the main fuel manual shutoff valve and main fuel drain valve and cuts the fuel lines.

(g) Secures his weapon and protective mask and evacuates the vehicle.

(3) ***Squad Members--***

(a) Open the cargo hatch.

(b) Secure the weapon and protective mask and evacuates the vehicle.

(4) ***Vehicle Commander--***

(a) Secures two incendiary grenades.

(b) Places one grenade in the engine compartment and one in the driver's compartment and evacuates the vehicle.

c. **Destruction by Antiarmor Fire.**

(1) ***Vehicle Commander and Driver*** evacuate the vehicle.

(2) ***Squad Leader--***

(a) Has the squad members dismount with protective masks, individual weapons, and light antitank weapons (AT4s).

(b) Has the antiarmor specialist secure the Javelin CLU and missiles.

(c) Moves the team past the minimum range of the Javelin (65-75 meters) and within maximum range of the AT4 (300 meters).

(d) Directs a volley of fire, aiming at the armament, engine, and drive train components.

d. **Destruction by Demolition.**

(1) ***Squad Leader.***Directs fire team to destroy the vehicle by demolition.

(2) ***Fire Team Leader and Members--***

(a) Prepare three 1-pound blocks of TNT or the equivalent.

(b) Place the charges as follows:

- On the receiver of the M2 or MK 19.
- On the FBCB2 and squad leaders display.
- On the RWS.

(c) Prepare six 2-pound charges using 1-pound blocks of TNT or the equivalent.

(d) Place the charges as follows:

- One charge on the accessory end of the engine.
- The second and third charges on the engine - one on the left side and the other on the right side.
- The fourth charge between the engine and the transmission.
- The fifth and sixth charges on the left and right front drive wheels.

(3) ***Squad Leader--***

(a) Provides for dual priming to minimize the possibility of a misfire.

(b) Connects all charges (the charges for the RWS and engine compartment) for simultaneous detonation.

(c) Moves squad members and crew (with protective masks and individual weapons) to a covered area.

(d) Detonates the charge.

NOTE: Ammunition and equipment that are not destroyed by the detonation should be removed from the vehicle and destroyed by other methods.

c. **Destruction by Using Natural Surroundings.** Squad members--

- Remove the major components (backplate from the M2 or MK19, FBCB2, squad leaders display, and RWS) and submerge them in water (lakes, ponds, rivers, and so forth). If possible, they submerge the vehicle.
- If no body of water is near, destroy as appropriate and widely disperse components, preferably into heavy underbrush or inaccessible areas.

CREW DRILL 11. PERFORM BEFORE-, DURING-, AND AFTER-COMBAT OPERATION CHECKS (CREW)

SITUATION: Perform operation checks during assembly area procedures, after an engagement, or during consolidation and reorganization.

REQUIRED ACTIONS:

a. Before-combat operation checks.

> **NOTE:** Follow all safety procedures while working in and around the RWS, and ensure that no weapons are loaded with ammunition when performing the before-combat operation checklist.

(1) ***Squad Leader*** (personally or through coordination with the team leaders)--

(a) Checks to ensure that all personnel are properly wearing personal protective equipment IAW the unit SOP and commander's guidance (for example, protective mask, protective body armor, helmet, nerve-agent antidote).

(b) Ensures that all personnel have hearing protection.

(c) Ensures that all personnel have their assigned weapons and the prescribed ammunition load.

(d) Checks to ensure that all weapons are loaded and placed on SAFE.

(e) Ensures that ammunition and pyrotechnics are properly stowed (for example, grenades, flares, small arms ammunition, smoke, AT-4s, Javelins, Claymores, hand grenades).

(f) Ensures that all target acquisition devices (for example, NVD, binoculars, AN/PVS-7/14,) are properly stowed.

(g) Ensures that the hand grenades are worn properly.

(h) Ensures that all dismount equipment is functional (for example, test fires the weapons, conducts a digital communications check and AN/PRC 119).

(i) For night operations, ensures that all NVD and other target acquisition equipment are mounted and available and are operational and zeroed to the appropriate weapon for night operations.

(j) Ensures that all personnel have additional equipment required to accomplish the mission IAW METT-TC (for example, minefield marking set, wire cutters, obstacle breach kit).

(k) Reports the status of the squad to the platoon sergeant.

(l) Ensures all personnel and vehicles are camouflaged.

(2) ***Vehicle Commander.*** Ensures the following before-combat-operation checks are performed.

(a) Ensures that the RWS is on SAFE (electrical).

(b) Ensures that all vehicle weapons systems are properly installed and the prescribed ammunition is uploaded and stowed IAW the stowage and strapping diagram, vehicle load plan, and platoon SOP.

(c) Ensures RWS is operational and boresighted.

(d) Conducts a prefire check in accordance with the appropriate TM.

(e) Ensures the vehicle communications systems are operational.

(f) Checks individual equipment and weapons of the driver and gunner.

(g) Reports the status of the vehicle to the squad or section leader.

(3) ***Driver--***

(a) Conducts before-operation-hull PMCS IAW TM 9-2320-311-10-1, TM 9-2320-311-01 or TM 9-2320-311-2.

(b) Reports the status of the vehicle to the VC.

(4) ***Platoon Sergeant--***

(a) Consolidates the reports from the squad leaders and VCs, and reports the platoon's status to the platoon leader.

(b) Checks the trauma specialist for complete aid bag.

(c) Checks the FIST for individual weapons and equipment, operational mission equipment (for example, laser range finder), operational communications (for example, digital message device and radios), and any other mission-essential equipment.

(d) Checks other attachments as required.

(5) ***Platoon Leader--***

(a) Checks the special equipment required to execute the mission and designates where it will be carried.

(b) Reports the platoon status to the company commander NLT the mission start time.

b. **During-Combat Operation Checks.** During-combat operation checks should be conducted in a secure location during a lull in the battle.

(1) ***Squad Leader or Team Leader--***

(a) Ensures the accountability of all soldiers and equipment.

(b) Supervises aid to injured soldiers.

(c) Ensures the weapons are on SAFE.

(d) Checks ammunition status, gets more ammunition from vehicle if possible, cross-levels when necessary, and reports the critical shortages to the platoon sergeant.

(e) Reports the status of personnel, equipment, and ammunition to the platoon sergeant.

(f) Ensures dismounted security is established.

(2) ***Vehicle Commander--***

(a) Ensures the RWS is in SAFE mode.

(b) Checks ammunition status for the RWS, performs reload drills when required, cross-levels from other ICVs when necessary, and reports the critical shortages to the section leader or platoon sergeant.

(c) Verifies the boresight of all weapons systems.

(d) Checks for damaged equipment.

(e) Ensures communications (radios and intercommunications) are operable.

(f) Conducts a visual inspection of the RWS.

(g) Performs during-operation RWS PMCS IAW TM 9-2320-311-01, TM 9-2320-311-01 or TM 9-2320-311-2.

(h) Reports the status of the vehicle to the section leader or squad leader.

(i) Supervises expedient vehicle repairs, if necessary.

(3) ***Driver--***

(a) Performs during-operation-hull PMCS IAW TM 9-2320-311-10-1, TM 9-2320-311-01 or TM 9-2320-311-2.

(b) Conducts a visual inspection of the exterior of the vehicle.

(c) Checks all bolts and nuts on the wheels.

(d) Checks fuel status and oil levels.

(e) Checks the engine compartment for any visible signs of damage.

(f) Reports the status to the VC.

(4) ***Platoon Sergeant--***

(a) Reports the status of the platoon to the platoon leader.

(b) Supervises the evacuation of causalities.

(c) Reports the location and status of inoperative vehicles and the WIA or KIA to the platoon leader.

(d) Coordinates for resupply, if required (for example, POL, ammunition).

(5) ***Platoon Leader***--

(a) Reports the status of the platoon to the company commander (if resupply or repairs are necessary to complete the mission, if required by SOP, or if the platoon has suffered combat or maintenance vehicle losses).

c. **After-Combat Operation Checks**. After-combat operation checks are to be forwarded in conjunction with consolidation and reorganization, and the infantry is normally dismounted and provides the local security while the ICV crew performs the necessary checks.

(1) ***Squad Leader or Team Leader--***

(a) Ensures that dismounted security is established.

(b) Checks for injured soldiers.

(c) Accounts for all personnel and equipment.

(d) Checks and ensures that all weapons are on SAFE.

(e) Reestablishes the chain of command.

(f) Checks the status of ammunition and supplies.

(g) Ensures that hasty positions are prepared, ensures that the key weapons are manned, and replaces vehicle crewmembers, as needed.

(h) Ensures that soldiers and vehicles are camouflaged as necessary.

(i) Reports the status of soldiers, equipment, and ammunition to the platoon sergeant.

(2) ***Vehicle Commander--***

(a) Ensure RWS is in SAFE mode.

(b) Ensures that ammunition resupply is conducted for all weapons on the vehicle.

(c) Conducts a visual inspection of the RWS for damages.

(d) Checks communications (radios and intercommunications) for damage.

(e) Performs after-operation-RWS PMCS IAW TM 9-2320-311-10-1, TM 9-2320-311-01 or TM 9-2320-311-2.

(f) Confirms zero with a few rounds.

(g) Reports the status of the vehicle to the section leader or VC.

(3) ***Driver--***

(a) Conducts a visual inspection of the vehicle exterior.

(b) Performs after-operation-hull PMCS IAW TM 9-2320-311-10-1, TM 9-2320-311-01 or TM 9-2320-311-2.

(c) Checks all bolts and nuts on the wheels.

(d) Checks fuel status and oil levels.

(e) Checks the engine compartment for any visible signs of damage.

(f) Reports the status to the VC.

(4) ***Platoon Sergeant--***

(a) Reports vehicle, soldiers, equipment, and ammunitions status to the platoon leader and company executive officer or first sergeant IAW the unit SOP.

(b) Supervises evacuation of wounded soldiers, inoperative equipment, and vehicles.

(c) Requests replacements and resupply (personnel, equipment, batteries, POL, ammunition) from the first sergeant IAW the unit SOP.

(d) Supervises the repair of equipment and vehicles within the capability.

(5) ***Platoon Leader--***

(a) Determines and disseminates the lessons learned with the platoon sergeant and squad leaders.

(b) Reports the platoon status to the company commander.

APPENDIX F

FIRE CONTROL AND DISTRIBUTION TECHNIQUES

Suppressing or destroying the enemy with direct fires is fundamental to success in close combat. Effective direct fires are essential to winning the close fight. Because fire and movement are complementary components of maneuver, the SBCT infantry platoon leader must be able to effectively mass the fires of all available resources at critical points and times to be successful on the battlefield. Effective and efficient direct fire control means that the platoon acquires the enemy rapidly and masses the effects of direct fires to achieve decisive results in the close fight.

Section I. PRINCIPLES OF DIRECT FIRE CONTROL

Effective direct fire control requires a unit to acquire the enemy rapidly, mass effects of fires, and achieve decisive results in the close fight. When planning and executing direct fires, the platoon leader and subordinate leaders must know how to apply several fundamental principles. The purpose of these principles of direct fire is not to restrict the actions of subordinates. Applied correctly, these principles help the platoon to accomplish its primary goal in any direct fire engagement (to acquire first and shoot first) while giving subordinates the freedom to act quickly upon acquisition of the enemy. The principles of direct fire control are:

- Mass the effects of fire.
- Destroy the greatest threat first.
- Avoid target overkill.
- Employ the best weapon for the target.
- Minimize friendly exposure.
- Prevent fratricide.
- Plan for extreme limited visibility conditions.
- Develop contingencies for diminished capabilities.

F-1. MASS THE EFFECTS OF FIRE

The platoon must mass the effects of its fires to achieve decisive results. Massing entails focusing fires at critical points, distributing the effects, and shifting to new critical points as they appear. Random application of fires is unlikely to have a decisive effect. For example, concentrating the platoon's fires at a single target may ensure its destruction or suppression; however, this probably will not achieve a decisive effect on the enemy formation, personnel, or position.

F-2. DESTROY THE GREATEST THREAT FIRST

The platoon engages targets in direct relation to the danger they present. If two or more targets of equal threat present themselves, then the platoon engages the closest target first. The SBCT platoon marks the defense engagement area so it can determine when to engage various targets and plans these ranges on its sketches and range cards. For example, the platoon should mark the engagement area at the Javelin maximum engagement distance (2,000 meters) to ensure that gunners do not waste missiles. Also,

the platoon should mark the BMP danger area of 1,000 meters to determine when BMPs pose a viable threat.

F-3. AVOID TARGET OVERKILL

The platoon strives to avoid engaging a target with more than one weapon system at a time. To avoid target overkill, the platoon can divide engagement areas into sectors of fire or quadrants to better distribute direct fire among the platoon.

a. The platoon can use many techniques to mark the engagement area. The platoon and company should develop an SOP for dividing the engagement area with both infrared and thermal target reference points so that all elements can distribute fires within the engagement area.

b. Squads and platoons should mark the engagement areas with infrared devices for engagements during limited visibility. The thermal sights on the ICV cannot detect infrared sources; therefore, the engagement area also must be marked with thermal devices. For example, the platoon can burn a mixture of rocks, sand, and diesel fuel inside a fuel drum, ammunition can, or bucket shortly before dusk to give off a heat source for most of the night.

c. The platoon leader also may designate rates of fire, by weapon system, to avoid target overkill. Predetermining the rates of fire allows the platoon leader to plan for sufficient ammunition for a desired effect on the enemy. The rates of fire are cyclic, rapid, and sustained.

F-4. EMPLOY THE BEST WEAPON FOR THE TARGET

Using the appropriate weapon for the target increases the probability of rapid enemy destruction or suppression. It also conserves ammunition.

a. Target type, range, and exposure are key factors in determining the weapon that should be employed as well as the desired target effects. The platoon leader task-organizes and arrays his forces based on the terrain, enemy, and desired effects of fires.

b. The platoon leaders, squad leaders, and VCs must ensure that they focus the fires of their weapons systems on the targets they should be engaging. For example, the Javelin is used against armored targets at ranges of 2,000 meters for stand-off protection, whereas the M240B machinegun is used to destroy unarmored vehicles and dismounted infantry at ranges within 1,000 meters.

F-5. MINIMIZE FRIENDLY EXPOSURE

Units increase their survivability by exposing themselves to the enemy only to the extent necessary to engage him effectively. Natural or manmade defilade provides the best cover. Crews and squads minimize their exposure by constantly seeking effective available cover, attempting to engage the enemy from the flank, remaining dispersed, firing from multiple positions, and limiting engagement times.

F-6. PREVENT FRATRICIDE

The platoon leader must be proactive in reducing the risk of fratricide, especially when it concerns his dismounted infantry squads on the multi-dimensional battlefield. He has numerous tools to assist him in fratricide avoidance. (For a detailed discussion of fratricide avoidance refer to Appendix D).

a. The SBCT platoon can use infrared and thermal marking techniques to ensure that adjacent units do not mistakenly fire at friendly forces during limited visibility. The assault element can use the infrared codable Phoenix, infrared chemical lights, blacklight tube lights tied to poles, and many other methods to mark the assault element's progress. The platoon leader must ensure that the enemy does not have night vision capability before marking his soldiers' progress with infrared marking devices.

b. By monitoring the unit locations, leaders at all levels can ensure that they know the precise locations of their own and other elements and can control their fires accordingly. The platoon leader and the platoon sergeant must know the location of each of the squads.

F-7. PLAN FOR EXTREME LIMITED VISIBILITY CONDITIONS

The platoon is equipped with thermal sights and night vision systems that allow the squads and ICVs to engage the enemy during limited visibility at nearly the same ranges that are applicable during the day. Dense fog, heavy smoke, and blowing sand may significantly reduce the platoon leader's ability to control the direct fires of the platoon if he has not taken those conditions into consideration.

F-8. DEVELOP CONTINGENCIES FOR DIMINISHED CAPABILITIES

A platoon leader usually develops a plan based on having all of his assets available and makes alternate plans to account for the loss of equipment or soldiers. The platoon leader should develop a plan that maximizes his unit's capabilities while still addressing the most probable occurrence. He should then factor in redundancy within the platoon. He may, for example, designate alternate sectors of fire for the squads that provide him the means of shifting fires if one squad has been rendered ineffective. These contingencies may become items within a unit SOP.

Section II. DIRECT FIRE CONTROL

Acquiring and destroying the enemy is a precursor to direct fire engagement with a vehicle, antiarmor weapon, machine gun, or individual weapon. Leaders must not assume that the unit will be able to see the enemy; they must expect the enemy to use cover and concealed routes effectively when attacking and to make best use of flanking and concealed positions in the defense. Therefore, the platoon must practice innovative techniques of direct fire control and distribution in offensive and defensive operations, especially since the enemy may not have an established or well-known order of battle. This is often the case when conducting stability operations.

F-9. FIRE CONTROL PROCESS

To bring direct fires against an enemy force successfully, leaders must continuously apply the four steps of the fire control process. (For a detailed discussion of the fire control process refer to FM 3-90.1.) At the heart of this process are two critical actions: rapid, accurate target acquisition and the massing of fires to achieve decisive effects on the enemy. Target acquisition is the detection, identification, and location of a target in sufficient detail to permit the effective employment of all of the platoon's weapons. Massing focuses direct fires at critical points and then distributes the fires for optimum effect. The four steps of the fire control process are--

- Identify probable enemy locations and determine the enemy scheme of maneuver.
- Determine where and how to mass (focus and distribute) direct fires effects.
- Orient forces to speed target acquisition.
- Shift direct fires to refocus or redistribute their effects.

F-10 FIRE CONTROL MEASURES

Fire control measures are the means by which the platoon leader or subordinate leaders control fires. Application of these concepts, procedures, and techniques assists the unit in acquiring the enemy, focusing fires on him, distributing the effects of the fires, effectively shifting fires, and preventing fratricide. At the same time, no single measure is sufficient to effectively control fires. At the platoon level, fire control measures will be effective only if the entire unit has a common understanding of what the fire control measures mean and how to employ them. The following discussion focuses on the various fire control measures employed by the platoon. Table F-1 lists the control measures by whether they are terrain- or threat-based.

TERRAIN-BASED FIRE CONTROL MEASURES	THREAT-BASED FIRE CONTROL MEASURES
Target reference point (TRP)	Fire patterns
Engagement area	Target array
Sector of fire	Engagement priorities
Direction of fire	Trigger
Terrain-based quadrant	Weapons control status
Friendly-based quadrant	Rules of engagement (ROE)
Maximum engagement line (MEL)	Weapons safety posture
Restrictive fire line (RFL)	Engagement techniques
Final protective line (FPL)	

Table F-1. Common fire control measures.

a. **Target Reference Point.** A TRP (Figure F-1) is a recognizable point on the ground that leaders use to orient friendly forces and to focus and control direct fires. In addition, when TRPs are designated as indirect fire targets, they can be used in calling for and adjusting indirect fires. Leaders designate TRPs at probable enemy locations and along likely avenues of approach. These points can be natural or manmade. A TRP can be an established site, such as a hill or a building, or an impromptu feature designated as a TRP on the spot, like a burning enemy vehicle or smoke generated by an artillery round. Friendly units also can construct markers to serve as TRPs. Ideally, TRPs should be visible in three observation modes (unaided, passive-IR, and thermal) so all forces can see them. TRPs include the following features and objects:

- Prominent hill mass.
- Distinctive building.
- Observable enemy position.
- Destroyed vehicle.
- Ground-burst illumination.

- Smoke round.
- Laser point.

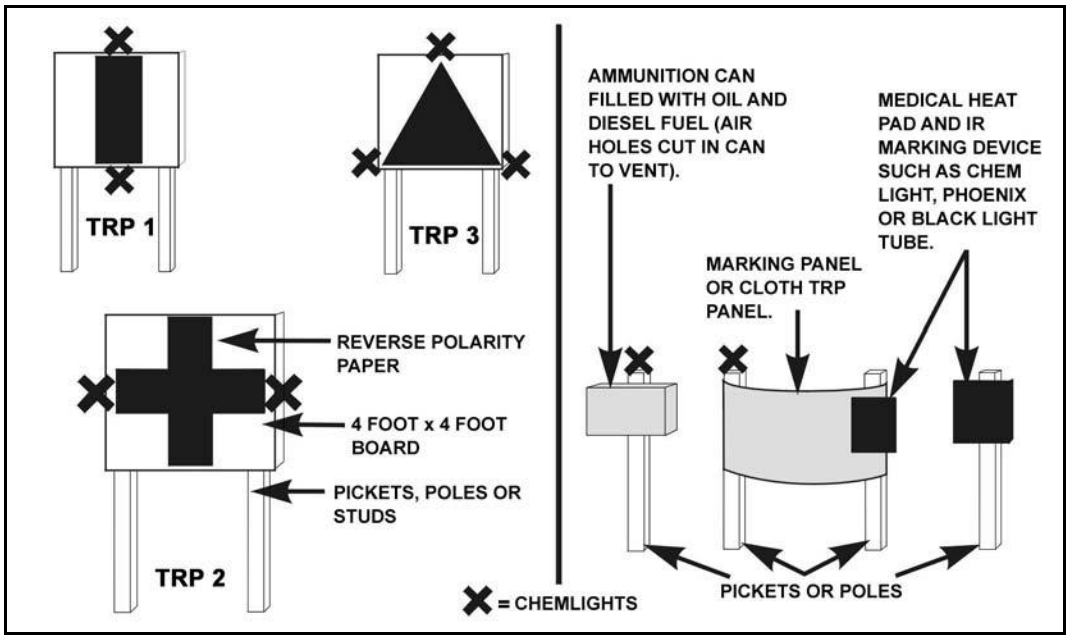


Figure F-1. Example of constructed TRP markers.

b. **Engagement Area.** This fire control measure is an area along an enemy avenue of approach where the platoon leader intends to mass the fires of available weapons to destroy an enemy force. The size and shape of the engagement area are determined by the degree of relatively unobstructed visibility available to the unit's weapons systems in their firing positions and by the maximum range of those weapons. Typically, commanders delineate responsibility within the EA by assigning each platoon a sector of fire or direction of fire; these fire control measures are covered in the following paragraphs.

c. **Sector of Fire.** A sector of fire is a defined area that must be covered by direct fire. Leaders assign sectors of fire to subordinate elements, crew-served weapons, and individual soldiers to ensure coverage of an area of responsibility. They also may limit the sector of fire of an element or weapon to prevent accidental engagement of an adjacent unit. In assigning sectors of fire, platoon leaders and subordinate leaders consider the number and type of weapons available. In addition, they must consider acquisition system type and field of view in determining the width of a sector of fire. For example, while unaided vision has a wide field of view, its ability to detect and identify targets at extended ranges and in limited visibility conditions is restricted. Conversely, most fire control acquisition systems have greater detection and identification ranges than the unaided eye, but their field of view is narrow. Means of designating sectors of fire include the following:

- TRPs.
- Clock direction.
- Terrain-based quadrants.
- Friendly-based quadrants.

d. **Direction of Fire.** A direction of fire is an orientation or point used to assign responsibility for a particular area on the battlefield that must be covered by direct fire. Leaders designate directions of fire for the purpose of acquisition or engagement by subordinate elements, crew-served weapons, or individual soldiers. Leaders most commonly employ direction of fire when assigning sectors of fire because of limited time or insufficient reference points. Means of designating a direction of fire include the following:

- Closest TRP.
- Clock direction.
- Cardinal direction.
- Tracer on target.
- IR laser pointer.

e. **Maximum Engagement Line.** A MEL is the linear depiction of the farthest limit of effective fire for a weapon or unit. The weapon's maximum effective range, the target description, and the effects of terrain determine this line. For example, slope, vegetation, structures, and other features provide cover and concealment that may prevent the weapon from engaging out to the maximum effective range. A MEL serves several purposes for the platoon leader:

- To prevent squads or ICVs from engaging targets beyond the maximum effective ranges of their weapon systems.
- To establish criteria for triggers.
- To depict the maximum extent of the unit’s battle space.

f. **Restrictive Fire Line.** An RFL is a linear fire control measure beyond which engagement is prohibited without coordination. In the offense, the platoon leader may designate an RFL to prevent a base of fire element from firing into the area where an assaulting element is maneuvering. This technique is particularly important when ICVs directly support the maneuver of infantry squads. In the defense, the platoon leader may establish an RFL to prevent the unit from engaging a friendly rifle squad positioned in restricted terrain on the flank of an avenue of approach.

g. **Final Protective Line.** The FPL is a line of fire established where an enemy assault is to be checked by the interlocking fires of all available weapons. The unit reinforces this line with protective obstacles and an FPF whenever possible. Initiation of the FPF is the signal for elements, crews, and individual soldiers to shift fires to their assigned portion of the FPL.

F-11. THREAT-BASED FIRE CONTROL MEASURES

The platoon leader uses threat-based fire control measures to focus and control fires by directing the unit to engage a specific, templated enemy element rather than to fire on a point or area. Threat-based fire control measures may be difficult to employ against an asymmetric threat. The following paragraphs describe the TTP associated with this type of control measure.

a. **Fire Patterns.** Fire patterns are a threat-based measure designed to distribute the fires of a unit simultaneously among multiple, similar targets. Platoons most often use them to distribute fires across an enemy formation. Leaders designate and adjust fire patterns based on terrain and the anticipated enemy formation. The basic fire patterns are frontal fire, cross fire, and depth fire (Figure F-2).

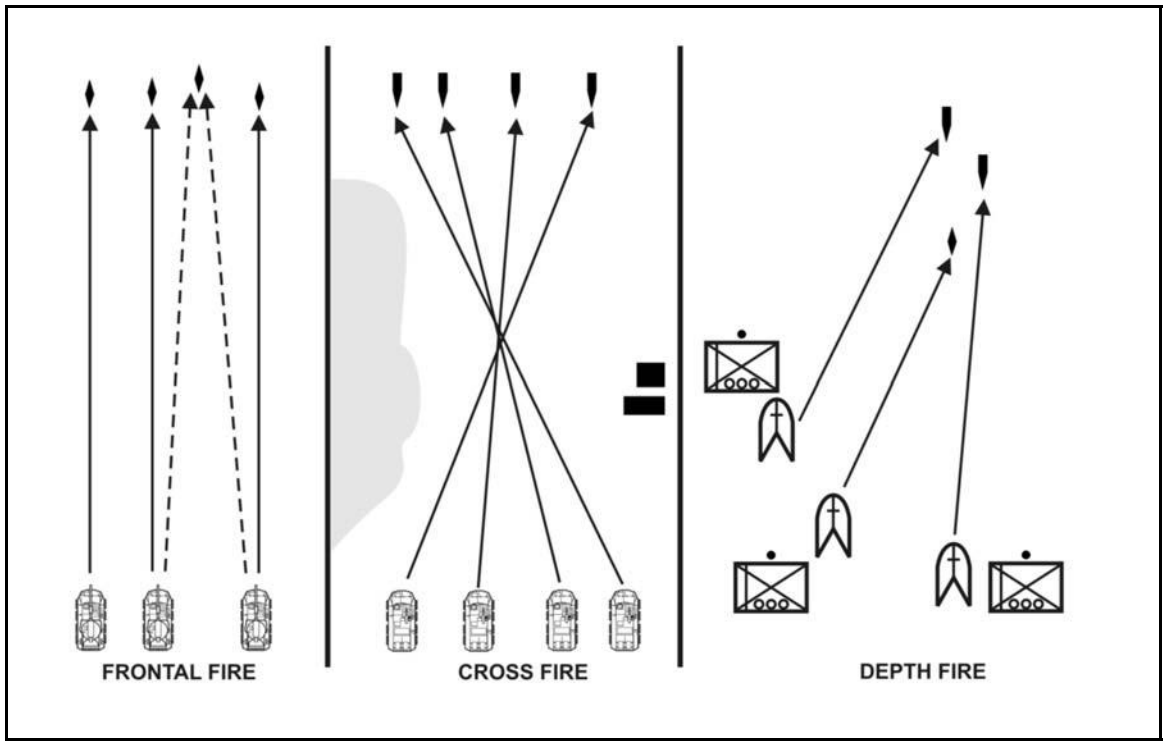


Figure F-2. Fire patterns.

(1) ***Frontal Fire.*** Leaders may initiate frontal fire when targets are arrayed in front of the unit in a lateral configuration. Weapon systems engage targets to their respective fronts. For example, the left flank weapon engages the left-most target; the right flank weapon engages the right-most target. As they destroy enemy targets, weapons shift fires toward the center of the enemy formation and from near to far.

(2) ***Cross Fire.*** Leaders initiate cross fire when targets are arrayed laterally across the unit's front in a manner that permits diagonal fires at the enemy's flank or when obstructions prevent unit weapons from firing frontally. Right flank weapons engage the left-most targets; left flank weapons engage the right-most targets. Firing diagonally across an engagement area provides more flank shots, thus increasing the chance of kills. It also reduces the possibility that friendly elements will be detected if the enemy continues to move forward. As they destroy enemy targets, weapons shift fires toward the center of the enemy formation.

(3) ***Depth Fire.*** Leaders initiate depth fire when targets are dispersed in depth, perpendicular to the unit. Center weapons engage the closest targets; flank weapons engage deeper targets. As they destroy targets, weapons shift fires toward the center of the enemy formation.

b. **Engagement Priorities.** In concert with his concept of the operation, the company commander determines which target types provide the greatest payoff or present the greatest threat to his force. He then establishes these as a unit engagement priority. The platoon leader refines these priorities within his unit.

(1) ***Employ the Best Weapons for the Target.*** Establishing engagement priorities for specific friendly systems increases the effectiveness with which the unit employs its

weapons. As an example, the engagement priority for the ICVs could be enemy personnel carriers (PCs) and then dismounted troops.

(2) ***Distribute the Unit's Fires.*** Establishing different priorities for similar friendly systems helps to prevent overkill and achieves effective distribution of fires. For example, if the commander establishes that Javelins will engage all armored vehicles, the platoon leader may designate the enemy's tanks as the initial priority for one Javelin pair while making the enemy's PCs the priority for the rifle squad's AT4s.

c. **Weapons-Ready Posture.** The weapons-ready posture is a means by which leaders use the situational up-dates via the COP or their estimate of the situation to specify the ammunition and range for the engagement. Range selection is dependent on the anticipated engagement range. Terrain, visibility, weather, and light conditions affect range selection.

(1) Within the platoon, weapons-ready posture affects the types and quantities of ammunition carried by rifle squads and vehicles.

(2) For infantry squads, weapons-ready posture is the selected ammunition and indexed range for individual and crew-served weapons. For example, an M203 grenadier whose most likely engagement is to cover dead space at 200 meters from his position might load HEDP and set 200 meters on his quadrant sight. To prepare for an engagement in a wooded area where engagement ranges are extremely short, an antiarmor specialist might dismount with an AT4 instead of a Javelin.

d. **Trigger.** A trigger is a specific set of conditions that dictates initiation of fires. Often referred to as engagement criteria, a trigger specifies the circumstances in which subordinate elements are to engage. The circumstances can be based on a friendly or enemy event. For example, the trigger for a platoon to initiate engagement could be three or more enemy combat vehicles passing or crossing a given point or line. This line can be any natural or manmade linear feature, such as a road, ridgeline, or stream. It may also be a line perpendicular to the unit's orientation, delineated by one or more reference points.

e. **Weapons Control Status.** The three levels of weapons control status outline the conditions, based on target identification criteria, under which friendly elements may engage. The platoon leader sets and adjusts the weapons control status based on friendly and enemy disposition and the clarity of the situation. In general, the higher the probability of fratricide, the more restrictive the weapons control status. The three levels, in descending order of restriction, are--

- WEAPONS HOLD--Engage only if engaged or ordered to engage.
- WEAPONS TIGHT--Engage only targets that are positively identified as enemy.
- WEAPONS FREE--Engage any targets that are not positively identified as friendly.

As an example, the platoon leader may establish the weapons control status as WEAPONS HOLD when friendly forces are conducting a passage of lines. By maintaining an awareness of his own elements and adjacent friendly forces, however, he may be able to lower the weapons control status. In such a case, the platoon leader may be able to set a WEAPONS FREE status when he knows there are no friendly elements in the vicinity of the engagement. This permits his elements to engage targets at extended ranges even though it is difficult to distinguish targets accurately at ranges beyond 2,000 meters under battlefield conditions. The platoon leader also may establish a different

weapons control status for his elements based on COP updates. Weapons control status is extremely important for forces using combat identification systems. Establishing the weapons control status as WEAPONS FREE permits leaders to engage an unknown target when they fail to get a friendly response.

f. **Rules of Engagement.** ROE specify the circumstances and limitations under which forces may engage. They include definitions of combatant and noncombatant elements and prescribe the treatment of noncombatants. Factors influencing ROE are national command policy, the mission and commander's intent, platoon leader's intent, the operational environment, and the law of war. ROE always recognize a soldier's right of self-defense; at the same time, they clearly define circumstances in which he may fire.

g. **Engagement Techniques.** Engagement techniques are effects-oriented fire distribution measures. The most common engagement techniques in platoon operations are--

- Point fire.
- Area fire.
- Volley (or simultaneous) fire.
- Alternating fire.
- Observed fire.
- Sequential fire.
- Time of suppression.
- Reconnaissance by fire.

(1) ***Point Fire.*** Point fire entails concentrating the effects of a unit's fire against a specific, identified target such as a vehicle, machine gun bunker, or ATGM position. When leaders direct point fire, all the unit's weapons engage the target, firing until they destroy it or until the required time of suppression expires. Employing converging fires from dispersed positions makes point fire more effective because the target is engaged from multiple directions. The unit may initiate an engagement using point fire against the most dangerous threat, then revert to area fire against other, less threatening point targets.

(2) ***Area Fire.*** Area fire involves distributing the effects of a unit's fire over an area in which enemy positions are numerous or are not obvious. If the area is large, leaders assign sectors of fire to subordinate elements using a terrain-based distribution method such as the quadrant technique. Typically, the primary purpose of area fire is suppression; however, sustaining effective suppression requires judicious control of the rate of fire.

(3) ***Volley Fire.*** Units employ volley fire to mass the effects of their fires rapidly or to gain fire superiority. For example, a unit may initiate a support-by-fire operation with volley fire then revert to alternating or sequential fire to maintain suppression. Volley fire also is employed to negate the low probability of hit and kill of certain antiarmor weapons. As an example, a rifle squad may employ volley fire with its AT4s to ensure rapid destruction of a BMP that is engaging a friendly position.

(4) ***Alternating Fire.*** In alternating fire, pairs of elements continuously engage the same point or area targets one at a time. For example, an infantry platoon may alternate the fires of a pair of machine guns or a vehicle section between vehicles. Alternating fire permits the unit to maintain suppression for a longer duration than does volley fire. It also forces the enemy to acquire and engage alternating points of fire.

(5) ***Observed Fire.*** Observed fire allows for mutual observation and assistance while protecting the location of the observing element and conserving ammunition. The

company commander may employ observed fire between elements in the company. He may direct one platoon to observe while another platoon engages the enemy. The platoon may use observed fire when it is in protected defensive positions with engagement ranges of more than 800 meters. For example, the platoon leader may direct the mounted element to engage the enemy while the infantry squads and weapons squad observe the effects of the fires. The observing elements prepare to engage the enemy on order in case the mounted element fails to effectively engage the enemy, has malfunctions, or runs low on ammunition.

(6) ***Sequential Fire.*** In sequential fire, the subordinate elements of a unit engage the same point or area target one after another in an arranged sequence. Sequential fire also can help prevent the waste of ammunition, as when rifle squads wait to see the effects of the first Javelin before firing another. Additionally, sequential fire permits elements that have already fired to pass on information they have learned from the engagement. For example, an infantryman who missed a BMP with AT4 fires could pass range and lead information to the next soldier preparing to engage the BMP with an AT4.

(7) ***Time of Suppression.*** Time of suppression is the period, specified by the platoon leader, during which an enemy position or force must be suppressed. Suppression time is typically dependent on the time it will take a supported element to maneuver. Normally, a unit suppresses an enemy position using the sustained rate of fire of its automatic weapons. In planning for sustained suppression, leaders must consider several factors:

- The estimated time of suppression.
- The size of the area being suppressed.
- The type of enemy force to be suppressed.
- The range to the target.
- The rates of fire.
- The available ammunition quantities.

(8) ***Reconnaissance by Fire.*** Reconnaissance by fire is the process of engaging possible enemy locations to elicit a tactical response, such as return fire or movement. This response permits the platoon leader and subordinate leaders to make accurate target acquisition and then to mass fires against the enemy element. Typically, the platoon leader directs a subordinate element to conduct the reconnaissance by fire. He may, for example, direct an overwatching section to conduct the reconnaissance by fire against a probable enemy position before initiating movement by the bounding section.

APPENDIX G

JAVELIN EMPLOYMENT

The Javelin provides accurate, medium-range antiarmor fire for the SBCT infantry platoon. The Javelin is used in offensive operations to provide precision direct fires that suppress or destroy enemy armored vehicles and destroy fortifications. In defensive operations, the Javelin may be used to overwatch obstacles, destroy armored vehicles, and force the enemy commander to dismount prematurely, exposing his infantry to small arms and indirect fires. The Javelin can destroy targets from medium ranges (65 to 2,000 meters), including helicopters and fortified positions. The platoon leader also can use the Javelin's imaging infrared *(I^2R) sight capability to conduct surveillance of critical avenues of approach in all types of weather. The Javelin also may be used to engage bunkers, buildings, and other fortified targets commonly found during combat in built-up areas.*

G-1. THE JAVELIN WEAPON SYSTEM

The Javelin is a dual-mode (top attack or direct attack), man-portable antitank missile with an increased capability to engage and defeat tanks and other armored vehicles (Table G-1). The Javelin has a missile contained in a disposable launch tube/container and a reusable tracker and is a fire-and-forget weapon system. Additionally, the Javelin has a soft launch that significantly reduces the visual and acoustical signature of the missile.

NOTE: The Javelin will replace the Dragon on a one-for-one basis in infantry and engineer units with no additional changes in current force structure.

Type System:	Fire and Forget
Carry Weight (Total):	49.2 lb (day & night)
Command Launch Unit:	14.1 lb (day & night)
Missile (w/launch tube):	35.2 lb
Crew:	Man portable
Ready to Fire:	Less than 30 sec.
Reload Time:	Less than 20 sec.
Method of Attack:	Top attack or direct attack (top attack is normal)
Range:	Top-attack mode: 150m-2000m Direct-attack mode: 65-2000m
Fighting Position Restrictions:	1m x 2m, ventilation is recommended
Guidance System:	*Imaging Infrared or I^2R* seeker
Sights:	Integrated Day/Night sight unit
Time of Flight:	1,000m = approx. 4.6 sec 2,000m = approx. 14.5 sec
Sight Magnification:	4X day, 4X wide field of view and 9X narrow field of view night

Table G-1. Javelin technical characteristics.

a. **Command Launch Unit.** The nondisposable section of the Javelin is the CLU (Figure G-1). The Javelin's night sight and day sight are integrated into one unit. The *imaging infrared or I²R* sight has a 2,000-meter plus range, under most conditions, which greatly increases target acquisition by the infantryman. The sight can operate for over four hours on a single battery and requires no coolant bottles. It has a built-in test capability, which alerts the gunner if the system is not functioning properly during operation.

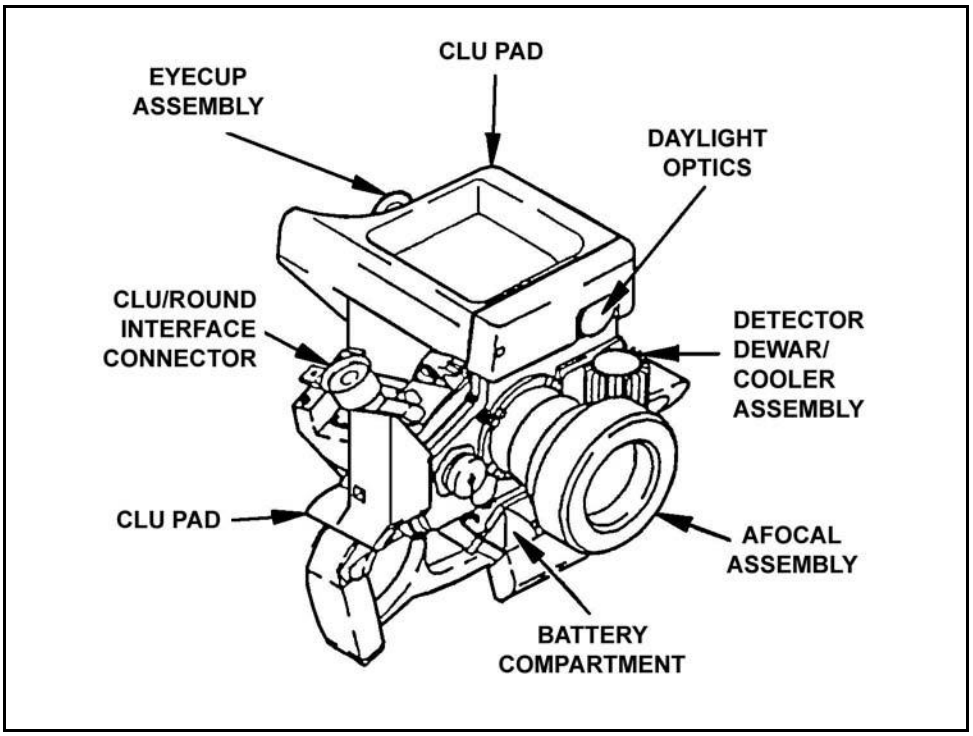


Figure G-1. Command launch unit.

b. **Missile.** The missile is contained in a disposable launch tube. It has a passive imaging infrared system, which locks on to the target before launch and is self-guiding. It uses a tandem shaped-charge warhead and a two-stage solid propellant with a low signature, soft-launch motor, and a minimum smoke flight motor. The launch tube assembly and missile is shown in Figure G-2.

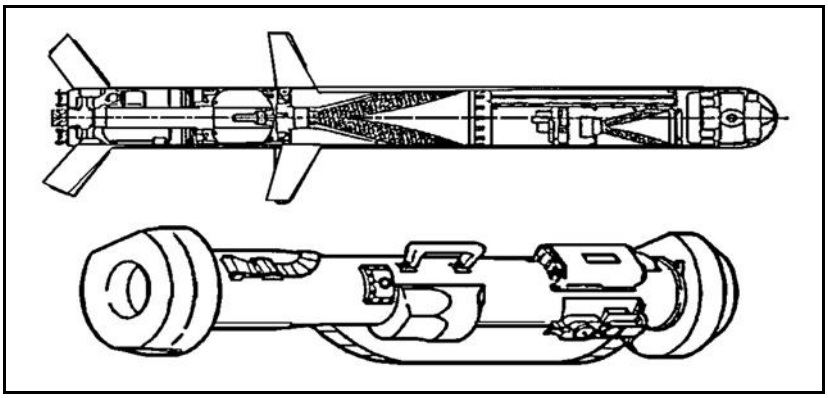


Figure G-2. Launch tube assembly and missile.

G-2. CAPABILITIES

The Javelin antitank missile has improved capabilities over the Dragon.

a. **Lethality.** The Javelin is more lethal than the Dragon. The Javelin's 2,000-meter range and its tandem warhead, which defeats all known armor, enhance the Javelin's lethality.

(1) In the top-attack mode, the missile strikes the thinner armor on the top of an armored vehicle rather than the thicker frontal and side armor plates. Top attack also prevents an enemy target from protecting itself by moving behind frontal cover. When used in urban areas or where obstacles might interfere with the top-attack flight path of the missile, the Javelin also can be fired in the direct attack mode.

(2) The fire-and-forget capability of the Javelin increases the probability of a hit. Because the gunner is no longer exposed to enemy suppressive fires while tracking the target until impact, he can use the missile's flight time to reload in a covered and concealed position and begin engaging another target.

b. **Survivability.** The Javelin's low launch signature decreases the enemy's ability to acquire gunners when they fire the missile. All gunner engagement tasks are accomplished before launching the missile, making time of flight irrelevant. The 2,000-meter range also places the Javelin gunner outside the armored vehicle's effective coaxial machine gun range. However, he is still within the range of the main gun.

(1) The Javelin uses a passive infrared system for target acquisition and lock-on. This means that it emits no infrared or radar beam for enemy vehicles or smart munitions to detect, further increasing the survivability of the Javelin gunner.

(2) The Javelin sight offers the commander a superior observation capability as compared to the Dragon. The Javelin sight can detect targets in excess of 3,000 meters.

(3) Because of the Javelin's low backblast, it can be fired from smaller, harder to locate, better protected positions that give the gunner a greater chance of remaining undetected or, if detected, surviving any suppressive fires.

c. **Agility.** The Javelin is man-portable and relatively lightweight for an antitank missile system, which allows the system to be moved about the battlefield with relative ease. The Javelin's soft launch capability allows it to be fired from inside buildings, bunkers, and other restricted spaces with less disruption to the gunner and less signature to be observed by the enemy. Although flank shots are still the preferred method of engagement, the Javelin's low signature launch and top-attack mode make frontal and

oblique engagements more effective than in the past, giving the infantry leader additional options in his antiarmor fires planning and positioning.

d. **Flexibility.** The capabilities of the Javelin give the leader more flexibility in the use and emplacement of his antiarmor systems. This new degree of flexibility challenges the leader to make a careful METT-TC analysis to ensure that he is taking full advantage of the Javelin's capabilities.

(1) The greater range of the Javelin gives the leader a system that complements MGS fires, allowing him to achieve mutual support and greater overlapping fires between the systems. The Javelin's lethality and more than 2,000-meter range allow the MGS to concentrate main gunfires on targets at standoff range. This allows the platoon leader to attack the enemy throughout the depth of his formation with antiarmor fires.

(2) Engaging at maximum standoff ranges and handing off the fight to the Javelin gunners provides more time for MGSs to be moved to alternate positions and allows the platoon leader to mass fires at the critical time and place on the battlefield.

G-3. LIMITATIONS

There are certain times when the Javelin system is not able to engage targets. These occur either when a target is not exposed long enough for the missile seeker to achieve proper lock on, or when atmospheric conditions interfere with the seeker.

a. **Limited Visibility.** Heavy rain, smoke, fog, snow, sleet, haze, and dust are referred to as limited visibility conditions. The presence of these conditions can affect the gunner's ability to acquire and engage targets with the Javelin, especially when using the day sight of the CLU. The gunner should use the I^2R sight of the CLU to acquire targets because it provides the best target image during limited visibility conditions.

b. **Infrared Crossover.** Infrared crossover occurs at least twice in each 24-hour period when the temperatures of soil, water, concrete, and vegetation are approximately the same and the objects all emit the same amount of infrared energy. If there is little difference in the amount of infrared energy between a target and its background, then neither the Javelin CLU nor the missile seeker can see the target well, thus greatly degrading the performance of the Javelin. This situation may last as long as an hour, until either the background or the target changes temperature enough to become detectable.

c. **Time Space Factor.** Just because a target appears in the open and within range does not always mean a Javelin gunner can acquire it, lock-on it, fire, and hit it. A vehicle must be exposed long enough for the gunner to identify it as a target and then to achieve target lock-on with the Javelin missile seeker. This process is not instantaneous and varies with the skill of the gunner.

G-4. EMPLOYMENT CONSIDERATIONS

The Javelin's primary role is to destroy enemy armored vehicles. When there is not an armored threat, the Javelin can be employed in a secondary role of providing fire support against point targets such as bunkers and crew-served weapons positions. In addition, the Javelin's CLU can be used alone as a night vision device for reconnaissance, security operations, and surveillance.

a. **Mutual Support.** Javelins should be positioned so they can support other Javelins as firing pairs (Figure G-3), MGSs, or AT4s. In terrain that has multiple narrow avenues of approach, the platoon leader may assign them singly. In open terrain, the Javelin can

be positioned to achieve overlapping sectors (Figure G-4). Mutual support prevents the enemy from isolating a portion of the friendly unit and then concentrating on one sector without being subjected to fire from another. If mutual support is achieved, when one Javelin is destroyed or forced to displace, the others can continue covering the assigned sector. As a rule of thumb, gunners normally should be positioned far enough apart so that enemy fires directed at one cannot suppress others.

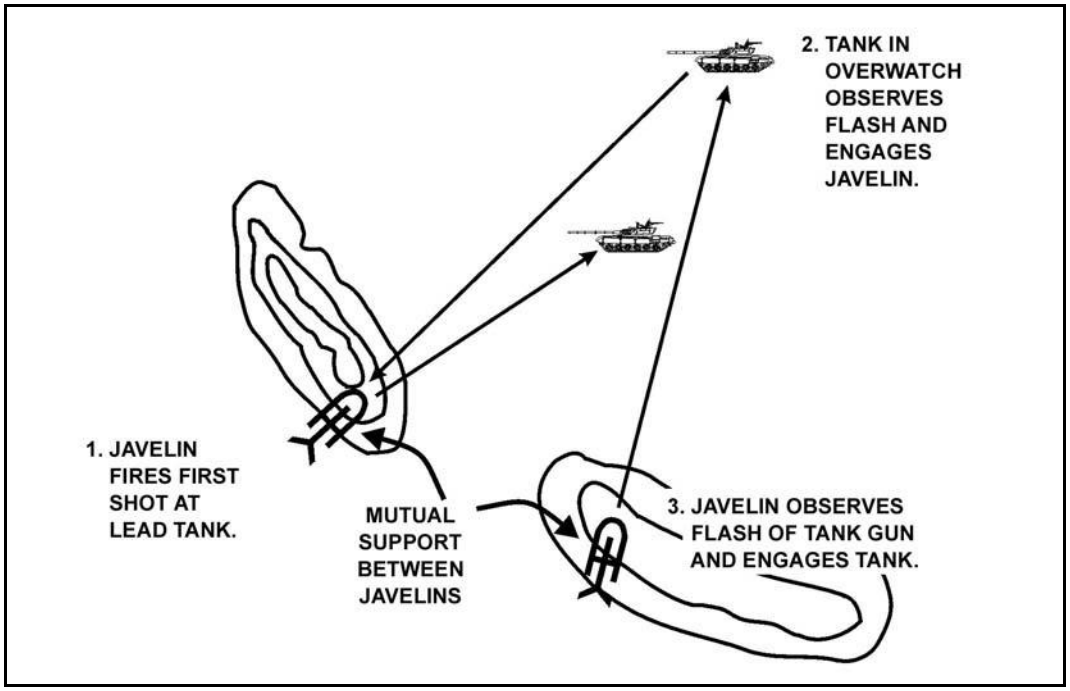


Figure G-3. Employment by firing pair.

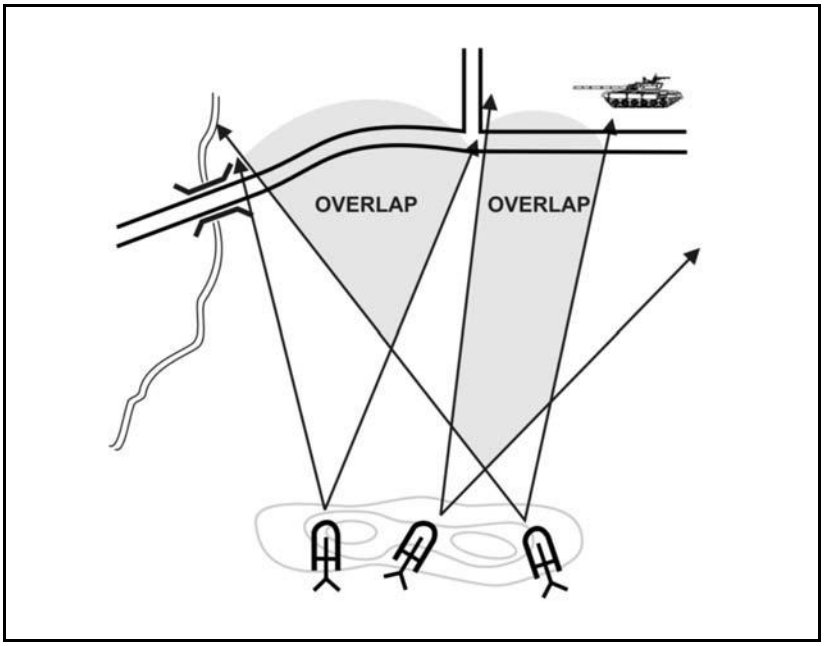


Figure G-4. Overlapping sectors of fire.

b. **Flank Shot Engagements.** Leaders should position Javelins to engage from the flank whenever possible because--

- Armored vehicles are most vulnerable from the flank.
- The focus of the crew normally will be to the front and not to the flank.
- Armored vehicles present the largest visual and infrared target from the flank.
- The vehicle's sighting systems, laser range finder, and firepower normally are oriented to the front, not the flank.
- Armored vehicles have less armor on the sides than on the front. This is important when engaging in the direct-attack mode.

c. **Javelin Standoff Advantage.** The difference between the Javelin's maximum range and the maximum effective range of the enemy tank's coaxial machine gun (Figure G-5) creates an advantage in a standoff. The Javelin's maximum range is 2,000 meters. The maximum effective range of a T-72 coaxial machine gun is 1,000 meters. The Javelin gunner should strive to engage enemy tanks in the 1,000- to 2,000-meter range.

NOTE: Most modern tanks, as well as infantry fighting vehicles, can fire high-explosive ammunition to suppress gunners out to 4,000 meters.

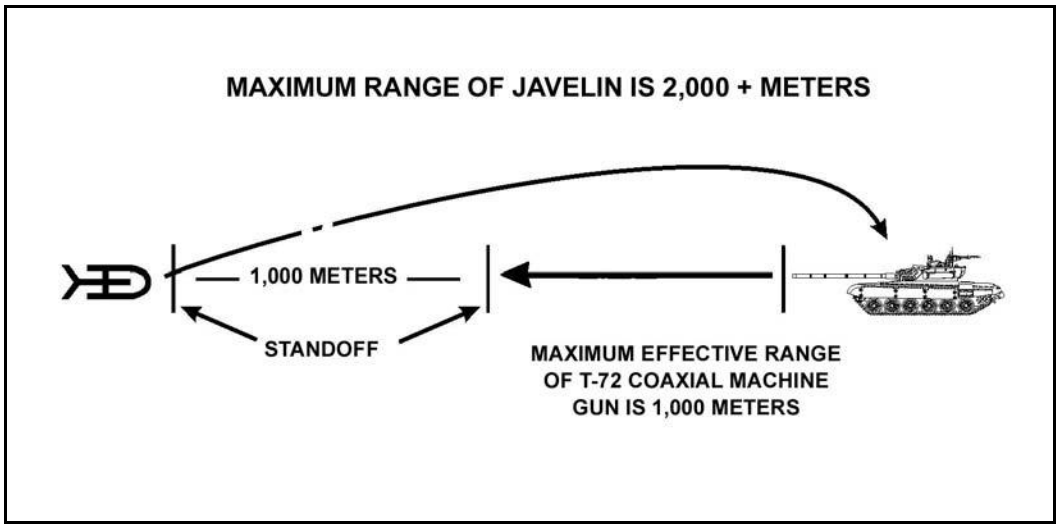


Figure G-5. Standoff range.

d. **Cover and Concealment.** Cover and concealment are critical to the survival of an antiarmor weapon system and its crew. The leader responsible for Javelin employment must analyze cover and concealment along with fields of fire and observation.

(1) ***Cover.*** Cover is protection from enemy weapons fire and may be natural or man-made. Natural cover includes reverse slopes, ravines, and hollows. Man-made cover includes fighting positions, walls, rubble, and craters.

(2) ***Concealment.*** Concealment is the ability to hide from enemy observation. Soldiers should avoid unnecessary movement, stay low and observe, and present themselves and their equipment using the lowest silhouette possible. They should alter familiar shapes by breaking up the common outlines of the position and equipment using vegetation and camouflage netting. They must pay attention to the varied colors and textures of the area to ensure the position blends in with its background. Additionally,

noises, such as engines running, talking, and moving equipment, can be heard by enemy patrols and observation posts. Shiny surfaces can reflect light for great distances; therefore, soldiers must be careful not to expose anything that shines.

e. **Soldier's Load.** When employing the Javelin in the dismounted role, the soldier's load becomes important. With a total system weight of just under 50 pounds, the Javelin is heavy. Although a man-portable weapon, one soldier cannot easily carry the Javelin cross country for extended periods. Leaders should be aware of this problem and address it as they would any other soldier's load difficulty. FM 21-18 discusses soldier's load and cross-leveling equipment during movement to reduce the burden on soldiers. Leaders should develop unit SOPs that identify and describe the details of unit equipment cross leveling.

f. **Massed Fires.** Massed fires are achieved by coordinating the total effects of the platoon's combat power at the decisive place and time to gain favorable results against the enemy. The platoon achieves mass through mutual fire support, detailed fire control, and fire distribution measures that synchronize all of the fires of the platoon's weapon systems and elements. The Javelin always should be positioned so that its fires are part of a cohesive combination including small arms, crew-served weapons, MGS, mortar and artillery, as well as the close-in fires of the squads using AT-4 light antiarmor weapons.

G-5. JAVELIN EMPLOYMENT DURING URBAN COMBAT

Javelins provide overwatching antitank fires during the attack of a built-up area and an extended range capability for the engagement of armor during the defense. Within built-up areas, they are best employed along major thoroughfares and from the upper stories of buildings to attain long-range fields of fire. The missile's minimum arming range and flight profile could limit firing opportunities within the confines of densely built-up areas.

a. **Restrictions.** Ground obstacles and water do not restrict the Javelin, with its fire-and-forget capability. However, with its unique flight characteristics, overhead obstacles can limit its use in urban terrain. In the top-attack mode, the Javelin missile requires up to 160-plus meters of overhead clearance (Figure G-6, page G-8). In the direct-attack mode, the Javelin requires up to 60-plus meters of overhead clearance (Figure G-7, page G-8). Gunners must ensure that sufficient overhead clearance is available along the missile flight path before engaging targets in an urban environment.

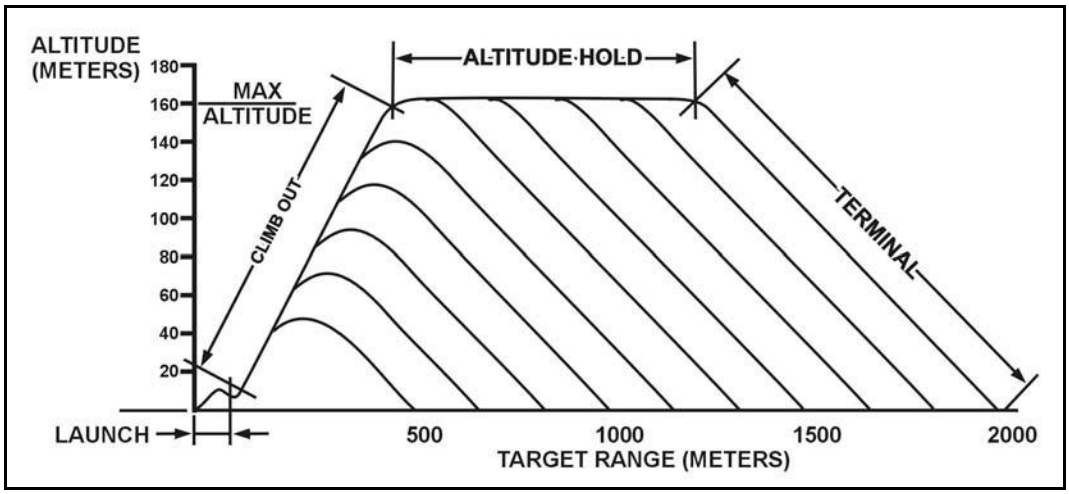


Figure G-6. Javelin flight profile in top-attack mode.

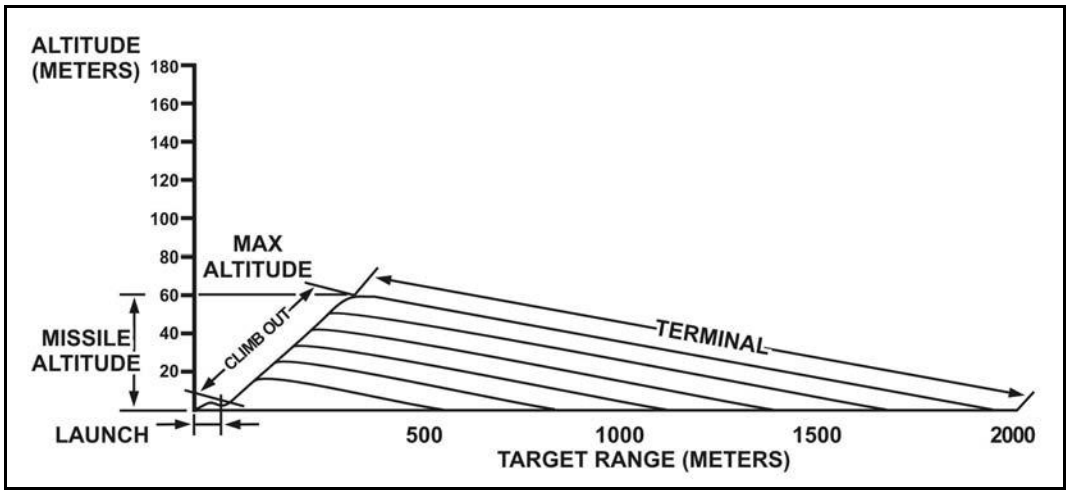


Figure G-7. Javelin flight profile in direct-attack mode.

b. **Dead Space.** The aspects of dead space that affect Javelin fires the most are arming distance and target and background temperature differences.

(1) The Javelin missile has a minimum arming window of 65-75 meters. Few areas in the inner city permit fires much beyond the minimum arming distance. Ground-level long-range fires down streets or rail lines and across parks or plazas are possible. The Javelin may be used effectively from the upper stories or roofs of buildings to fire into other buildings.

(2) The Javelin gunner must take into consideration the targeting dead space sometimes caused by the background of the target and its heat signature. When firing from the upper stories of a building towards the ground, the missile seeker sometimes cannot discriminate between the target and surrounding rubble, buildings, or paving if that background material has the same temperature as the target.

c. **Backblast.** The Javelin's soft launch capability enables the gunner to fire from within an enclosed area (Figure G-8) with a reduced danger from backblast overpressure or flying debris. Personnel within the enclosure still should wear a helmet, protective

vest, ballistic eye protection, and hearing protection. To fire a Javelin from inside a room, the following safety precautions must be taken:

- Ceiling height must be at least 7 feet.
- The floor size of the room should be at least 15 feet by 12 feet.
- Window opening must be at least 5 square feet
- Door opening must be at least 20 square feet
- When launching a missile from an enclosure, allow sufficient room for the missile container to extend beyond the outermost edge of the enclosure.
- All personnel in the room must be forward of the rear of the weapon.

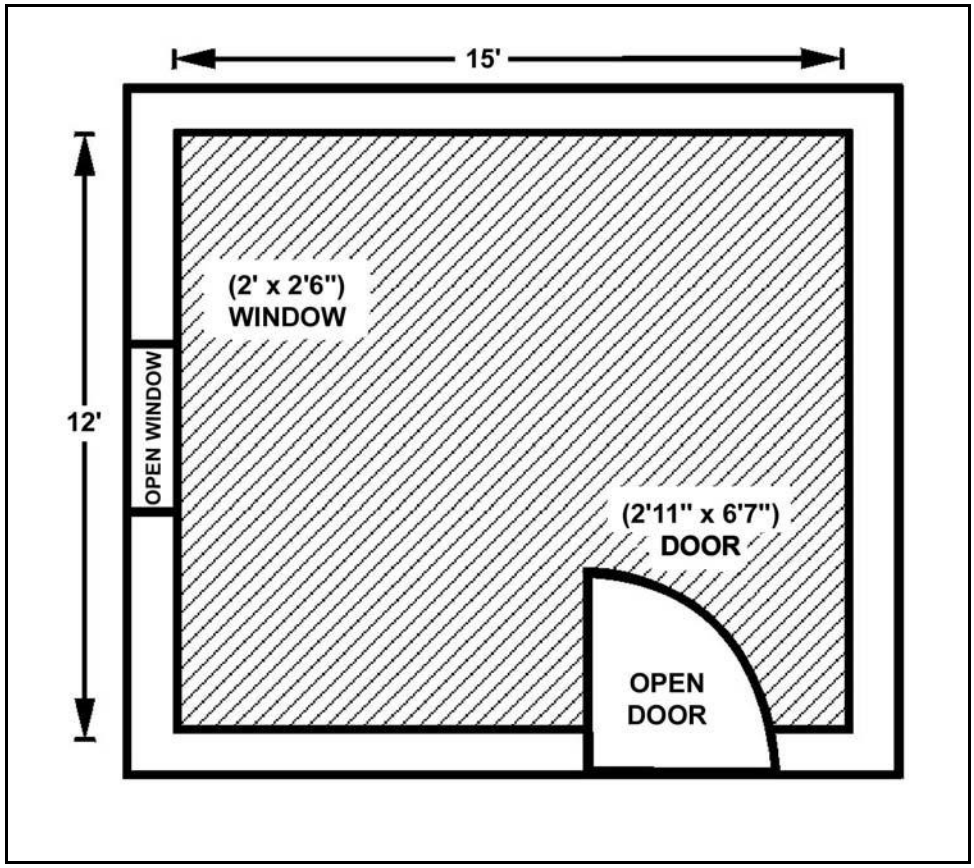


Figure G-8. Minimum room enclosure for Javelin firing.

d. **Weapon Penetration.** The warhead of the Javelin can achieve significant penetration against typical urban targets. Penetration, however, does not mean a concurrent destruction of the structural integrity of a position. When engaging a position in a building, the gunner must use the direct-attack mode to hit the target. When engaging a position or bunker in the open, the gunner may use either the top-attack or direct-attack mode.

G-6. JAVELIN FIRING POSITIONS

Each Javelin gunner should have a primary firing position and at least one alternate position. Depending on the factors of METT-TC, a supplementary position may also be assigned. A Javelin firing position must allow for target engagement and provide

protection for the soldiers and the weapon system. When selecting firing positions, leaders should consider the following:

- Cover to the front, flank, and overhead.
- Concealment from ground and aerial observation.
- Good observation and fields of fire.
- Covered and concealed routes to and between positions.
- Mutual support between squad positions and with other elements.
- Below ridgelines and crests, preferably on the sides of hills.
- Avoid positions in swampy areas and very steep hillsides as well as positions on or near prominent terrain features.

a. **Types of Javelin Positions.** The platoon leader should consider what type of positions he needs for his key weapons, including the Javelin. If time and material are available, the standard Javelin fighting position with overhead cover should be used. If time or material is short, then the platoon leader may opt to have his squads prepare flush positions. This paragraph discusses the advantages and disadvantages of the two types of Javelin positions.

(1) ***Standard Javelin Fighting Position with Overhead Cover.*** The standard Javelin fighting position has cover to protect gunners from direct and indirect fires (Figure G-9). It is a fairly large position with room for the Javelin gunner and another squad member plus their equipment. The position should be concealed among irregularities in the terrain and should be well camouflaged.

(a) Advantages of this position are:

- Provides most protection against direct and indirect fire.
- Protects equipment from elements.

(b) Disadvantages of this position are:

- Requires extensive Class IV items or cut timber.
- Requires extensive labor and may require engineer assistance or demolitions.
- Creates large, distinctive silhouette; difficult to hide completely in open terrain.

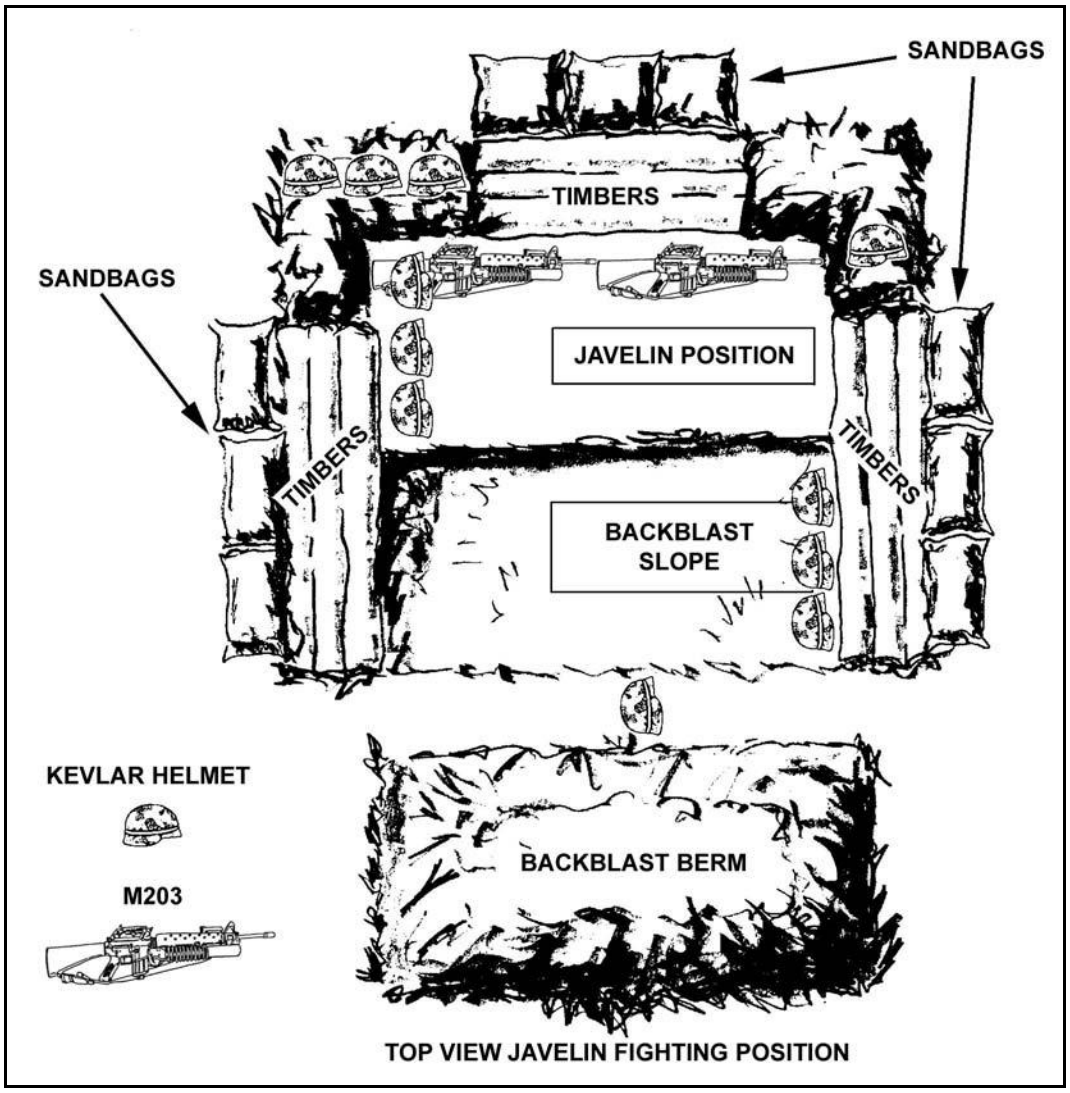


Figure G-9. Standard Javelin fighting position.

(2) ***Flush Position.*** The flush position (Figure G-10, page G-12) is a hasty position that does not provide overhead protection for the gunner during firing. The position is basically a hole dug to approximately armpit depth. Overhead cover can be prepared either to the center or the flanks of the position.

(a) Advantages of this position are:

- Allows the Javelin gunner to reposition quickly.
- Less labor intensive (more positions built in same amount of time).
- Requires less Class IV than the standard Javelin position.

(b) Disadvantages of the position are:

- No overhead protection.
- Gunner not protected from indirect fires while in the target acquisition and firing sequence.
- Thermal signatures of gunner and assistant gunner not hidden.
- Gunner movements are easier to detect by the enemy.

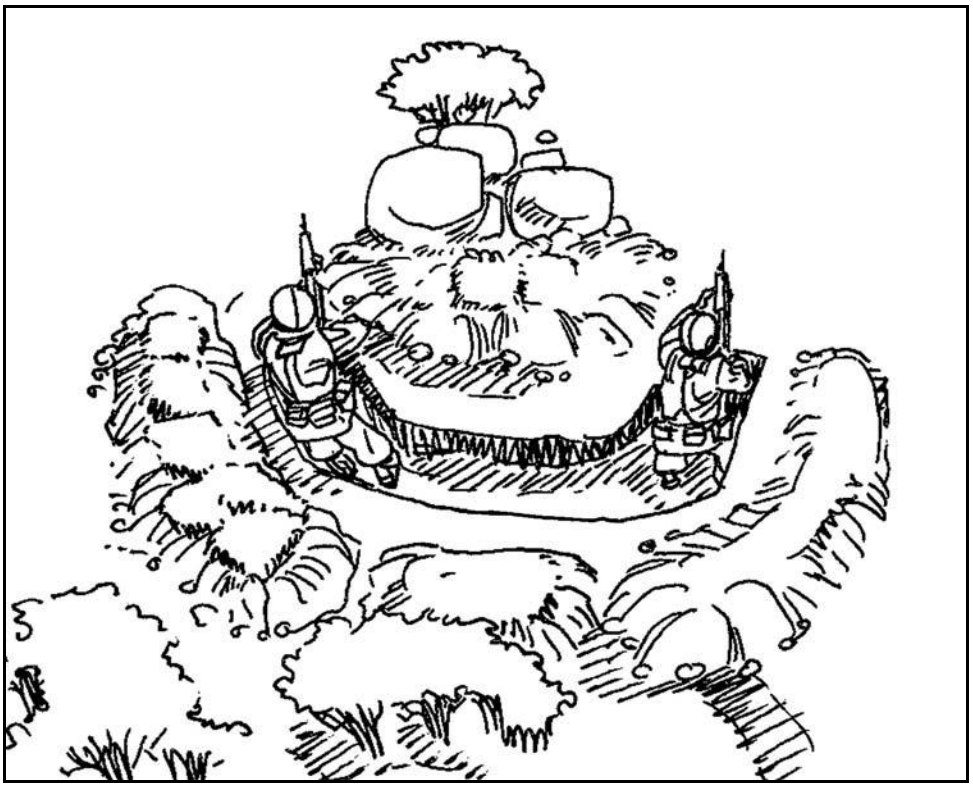


Figure G-10. Flush fighting position.

b. **Occupation of Firing Positions.** Javelin gunners should be careful to avoid detection while occupying a firing position; carelessly occupying a well-concealed position can compromise the position.

c. **Preparation.** The squad should prepare and improve a firing position from initial occupation until it is vacated. These actions include digging in, preparing a range card, and camouflaging the position. Once the position has been dug, it must be camouflaged using sod, leaves, brush, grass, or any other natural material. Camouflage nets or other man-made materials also can be used, but these work best if mixed with natural materials. Gunners must be ready to fight, even while preparing and improving the position. They must constantly observe the sector of responsibility to allow quick reaction if the enemy appears before the position is completely occupied.

d. **Movement Between Firing Positions.** Most enemy armor forces consider antitank guided missile systems to be critical targets. They expect antitank fires and will react immediately to suppress them. Because of this, Javelin gunners must be prepared to move to their alternate positions when the platoon or squad leader directs. The platoon or squad leader must coordinate the movement of their Javelins so that all of the weapons are not moving at once. Once the enemy has been destroyed, the leader can move the Javelins back to their primary firing position. Platoon fire plans must consider the amount of time needed to move Javelins between positions on the battlefield. The plans also must provide alternate methods of destroying or disrupting the enemy to offset problems associated with movement. These alternate methods include mutual support of MK19, M2, and MGS; incorporation of obstacles and obscurants; and employing indirect fire, CAS, and attack helicopters, if available.

e. **Routes Between Positions.** The squad leader must personally reconnoiter all routes to alternate and supplementary positions. The routes to, from, and between positions should offer cover and concealment and should allow the gunner to enter the firing position from a direction opposite to the enemy's location.

G-7. DETECT, CLASSIFY, AND RECOGNIZE

US forces must engage targets quickly and efficiently to win in combat. Speed of target engagement depends on each Javelin gunner's proficiency in acquiring targets, identifying targets, and determining whether targets can be engaged. Dust and smoke make locating and identifying the enemy difficult. As the battle progresses, and friendly and enemy units merge into the same maneuver area, acquiring and identifying targets become crucial tasks. Gunners should be trained to acquire enemy targets that are camouflaged or partially concealed by terrain, vegetation, or smoke. They should also be trained to identify targets as friend or foe. Once soldiers know where to look, they must know how to detect enemy targets rapidly.

a. **Primary Analysis.** Because the Javelin's primary targets are armored vehicles, specifically tanks, gunners should look for terrain where these targets are most likely to appear. Understanding armor tactics and the characteristics of armor vehicles can help Javelin gunners recognize the terrain where these vehicles are most likely to be employed.

(1) ***Enemy Analysis.*** The tactics of many potential adversaries stress using speed and massive firepower to overwhelm and destroy an opposing force. This dictates a very high average daily rate of advance. To move consistently at a high rate, armored forces require firm ground to move rapidly and enough space to deploy, maneuver, and fire. High-speed avenues of approach, such as road networks, broad ridges, and flat or rolling terrain, should be observed constantly.

(2) ***Terrain and Weather Analysis.*** A detailed analysis of the terrain and weather is useful in pinpointing armored or mechanized avenues of approach and to evaluate them from the enemy's viewpoint. Some questions that the leader should ask himself are "How can the enemy use this terrain?" and "Where is he most likely to appear first?" Because weather significantly affects the trafficability of terrain, a ground reconnaissance is needed to obtain current, detailed information about roads, trails, manmade objects, density of trees and brush, and the seasonal conditions of streams and rivers. If a ground reconnaissance is not possible, an aerial reconnaissance should be conducted or recent aerial photographs should be used.

(3) ***Armored and Mechanized Vehicles' Mobility Characteristics.*** Javelin gunners can more easily determine where to look for enemy armored vehicles if they know the vehicles' mobility characteristics. If possible, tank and motorized rifle units will avoid terrain or obstacles that can stop or impede their movement. Terrain factors that restrict armored or mechanized vehicle mobility include--

- Slopes steeper than 30 degrees.
- Sturdy walls or embankments 3 or more feet high.
- Ditches or gullies 9 or more feet wide and 3 or more feet deep.
- Hardwood trees 10 inches or larger in diameter and 10 feet or less apart.
- Water obstacles at least 5 feet deep.

- Very swampy or very rough, rocky terrain.
- Built-up areas where vehicles are restricted to moving on confined roads, through park areas, or across sports fields.

b. **Range Estimation**. Javelin gunners do not need to know the exact range to a enemy target before engaging; they only need to know when it is in range. To speed this determination, gunners use a maximum engagement line. A Javelin maximum engagement line is an imaginary line drawn across a sector's maximum allowable range from a Javelin firing position. To determine the location of this line on the ground, the squad leader or gunner identifies terrain features at or near maximum range. Therefore, any target that crosses or appears short of this line should be within range. Establishing a maximum engagement line greatly reduces target engagement times, especially for targets that seem to be near maximum range. Several range-determination techniques can be used to find the maximum range line or the range to specific targets.

(1) ***Laser Range-Finding Method.*** Most units and all forward observer teams should have laser range-finders. The range from the Javelin position to an easily identifiable terrain feature can be determined easily with the laser range finder. Once the maximum engagement line is determined, the gunner makes a note of a terrain feature at that location on his range card. Any vehicle nearing that feature will be in range.

(2) ***Object Recognition Method.*** Range determination by object recognition is simple and can be accurate with training. The soldier looks at the target with his naked eye, sights through 7X binoculars, or uses a Javelin optical sight. Targets listed in Table G-2 are recognizable out to the ranges indicated--for example, if a target can be recognized with the naked eye as an armored or wheeled vehicle, it is probably within 2,000 meters. When using this method, the gunner must consider terrain, visibility conditions, and target size.

TARGETS	RANGE (meters)	
	NAKED EYE	7X SCOPE
Tank crew members	500	2,000
Soldiers, machine gun, mortar	500	2,000
Antitank gun, antitank missile launchers	500	2,000
Tank, APC, truck (by model)	1,000	4,000
Tank, howitzer, APC, truck	1,500	5,000
Armored vehicle, wheeled vehicle	2,000	6,000

Table G-2. Range determination recognition method.

(3) ***Map and Terrain Association Method.*** The maximum engagement line can be determined from a map. Do this for each firing position as follows:

- Draw an arc on the map across the assigned sector of fire at 2,000 meters.
- Examine the map to identify the distinctive natural or man-made terrain features that the line touches.

- Study the terrain in the sector of fire using binoculars or the Javelin CLU until all the selected terrain features are located and positively identified.
- Connect these features by an imaginary line from the maximum engagement line.

G-8. PRINCIPLES OF FIRE CONTROL

Effective fire control requires a unit to rapidly acquire the enemy and mass the effects of fire in order to achieve decisive results. The following principles are fundamental to achieving effective fires. When planning and executing direct fires, the platoon leader and squad leaders should apply these principles of fire control (refer to Appendix F for a detailed discussion of principles of fire control):

- Mass the effects of fire.
- Destroy the greatest threat first.
- Avoid target overkill.
- Employ the best weapon for the target.
- Minimize friendly exposure.
- Minimize the chances for fratricide.

G-9. FIRE CONTROL MEASURES

Fire control measures must enable Javelin gunners to distribute or mass fires effectively into a given area and over time. Fire control measures are the means by which the platoon leader or subordinate leaders control fires. Application of these concepts, procedures, and techniques assists the unit in acquiring the enemy, focusing fires on him, distributing the effects of the fires, effectively shifting fires, and preventing fratricide. At the same time, no single measure is sufficient to effectively control fires. At the platoon level, fire control measures will be effective only if the entire platoon has a common understanding of what the fire control measures mean and how to employ them. When executing direct fires, the platoon leader and squad leaders should apply these methods of fire control (refer to Appendix G for a detailed discussion of methods of fire control):

- Distribution of fires over a given area.
- Massing of fires into a given area.
- Distribution of fires over time.
- Massing of fires in time and space.
- Target reference points.
- Trigger lines and phase lines.
- Engagement priorities.

G-10. SELF-DEFENSE AGAINST HELICOPTERS

Because Javelin positions are selected to cover enemy armor avenues of approach, the medium-range fields of fire afforded by these positions also enable Javelin gunners to engage aircraft.

a. **Weapons Control Status.** The weapons control status established for air defense weapons applies to Javelin gunners too. Unless ordered otherwise, gunners should fire in unit self-defense only; for example, only engage aircraft that are attacking friendly positions.

b. **Self-Defense Engagements.** A Javelin gunner can automatically engage an enemy helicopter that is attacking its position. The gunner's target engagement sequence is the same as against ground targets. The Javelin should be in the direct-attack mode when engaging helicopters. The rotors of the helicopter may interfere with the sensors of the missile in the top-attack mode and result in erratic flight of the missile and a target miss.

APPENDIX H

RANGE CARDS AND SECTOR SKETCHES

The success of a defense depends on the positioning of soldiers and weapons. To position their weapons effectively, platoon leaders must know the characteristics, capabilities, and limitations of their weapons, the effects of terrain, and the enemy. However, the platoon leader is not done after merely positioning his weapons. He must ensure that each weapon can effectively engage the enemy, and the sum of his weapons can effectively mass coordinated direct fires on the enemy. The platoon leader accomplishes this by making his soldiers produce detailed range cards and by making his squad leaders and section leaders produce detailed, coordinated sector sketches. He personally inspects individual soldier positions, reviews subordinate sector sketches, and coordinates with adjacent units to develop a detailed and accurate platoon sector sketch.

Section I. RANGE CARDS

A range card is a sketch of the assigned sector that a direct fire weapon system is intended to cover. A range card aids in planning and controlling fires and aids the crews and squad gunners in acquiring targets during limited visibility. It is also an aid for replacement personnel or platoons or squads to move into the position and orient on their sector. The individual soldier or gunner should make the range card so that he becomes more familiar with the terrain in his sector. He should continually assess the sector and, if necessary, update his range card. To prepare a range card, the gunner must know the following information.

- Sectors of fire.
- Target reference points.
- Dead space.
- Maximum engagement line.
- Weapons or gunners reference point.
- Weapons symbol, left and right limits, and north seeking arrow.

H-1. SECTORS OF FIRE

A sector of fire is a piece of the battlefield for which a gunner is responsible. He may be assigned a primary and a secondary sector. Leaders use sectors of fire to ensure fires are distributed across the platoon's area of responsibility.

a. A sector of fire is assigned to cover possible enemy avenues of approach. Leaders should overlap sectors to provide the best use of overlapping fire and to cover areas that cannot be engaged by a single weapon system.

b. The leader assigns left and right sector limits using prominent terrain features or easily recognizable objects such as large rocks, telephone poles, fences, or stakes.

H-2. REFERENCE POINTS AND TARGET REFERENCE POINTS

Leaders designate natural or man-made features as reference points. A soldier uses these reference points for target acquisition and range determination. Some reference points may also be designated as target reference points. A TRP is an easily recognizable point

on the ground (natural or manmade) used to initiate, distribute, and control fires. The company or battalion designates TRPs, and platoon and squad leaders also should designate TRPs. TRPs always should be visible. These also may be useful as indirect-fire targets.

a. The commander or platoon leader designates TRPs used as indirect fire targets so that target numbers can be assigned.

b. TRPs should be visible through all spectrums available to the unit. They must be easily identifiable to the defender during daylight. TRPs must be heated so they can be recognized with thermal sights, and they must have an infrared signature so they can be recognized through night vision devices.

H-3. DEAD SPACE

Dead space is any area that cannot be observed or covered by direct-fire systems within the sector of fire. All dead space within the sector must be identified to allow the platoon leaders and squad leaders to plan indirect fires (mortars, artillery, MK19, or M203) to cover the area. The squad leader must walk the engagement area to identify dead space for his M249s and M240B. When the vehicles are used in the defense, the section leaders must walk the engagement area so gunners can detect dead spaces through their remote weapons sighting system.

H-4. MAXIMUM ENGAGEMENT LINE

The MEL is the depth of the sector and normally is limited to the maximum effective engagement range of the weapons systems. However, it can be less if there are objects that prevent the soldier from engaging targets at maximum effective ranges of his assigned weapon. To assist in determining the distance to each MEL, the soldier should use a map to ensure that the MELs are depicted accurately on the range card. Identifying the MEL will decrease ammunition expenditure during an engagement.

H-5. WEAPONS REFERENCE POINT

The weapons reference point (WRP) is an easily recognizable terrain feature on the map used to assist leaders in plotting the vehicle, squad, or weapon position. The WRP is used to assist leaders in plotting positions and assisting replacement personnel in finding positions.

H-6. WEAPONS SYMBOL, LEFT AND RIGHT LIMITS, AND NORTH SEEKING ARROW.

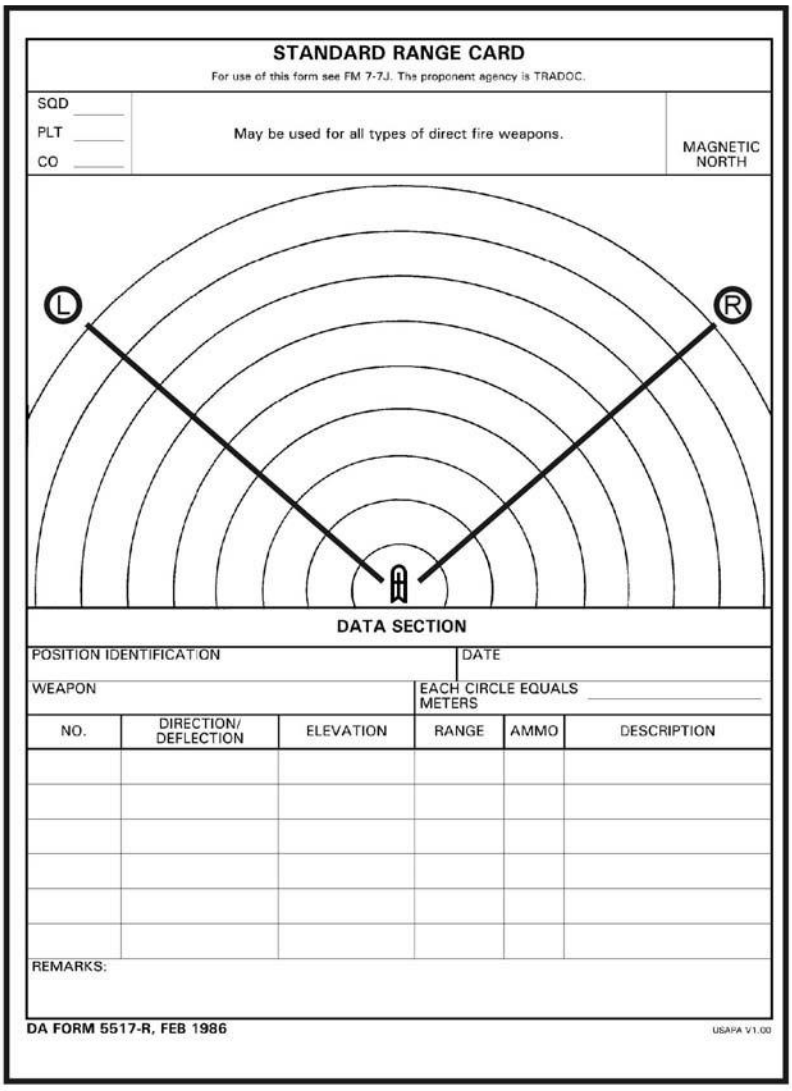
- Weapon Symbol. Indicates the type of weapon that the range card was designed for.
- Magnetic North. Take the range card and orient it with the assigned sector of fire. Use a lensatic compass to determine magnetic north. Keep the range card oriented to the sector of fire and draw the magnetic north symbol in the appropriate direction in the *Magnetic North* box.
- Left Limit and Right Limit. Left and right limits are imaginary lines from the gunner's firing position to a designated point on the ground. Use terrain features when possible to designate left and right limits. Other recognizable objects such as a building or other man-made structures can be used. The area

between the left and right limits depicts the gunner's sector of fire or area of responsibility.

H-7. PREPARATION PROCEDURES

The individual soldier or gunner prepares two copies of the range card. If alternate and supplementary firing positions are assigned, two copies are required for these as well. One copy is kept with the gunner and the other is given to the section or squad leader for his sketch.

a. Draw the weapon symbol in the center of the small circle. Draw two lines from the position of the weapons system extending left and right to show the limits of the sector (Figure H-1, page H-4). The area between the left and right limits depicts the gunner's sector of fire or area of responsibility. Number the left limit as *No. 1*, number the right limit *No. 2*, and place a circle around each number. ***Record the azimuth and distance of each limit in the data section***.


STANDARD RANGE CARD

For use of this form see FM 7-7J. The proponent agency is TRADOC.

SQD _____
PLT _____
CO _____

May be used for all types of direct fire weapons.

MAGNETIC NORTH

L

R

DATA SECTION

POSITION IDENTIFICATION | DATE

WEAPON | EACH CIRCLE EQUALS _____ METERS

NO.	DIRECTION/ DEFLECTION	ELEVATION	RANGE	AMMO	DESCRIPTION

REMARKS:

DA FORM 5517-R, FEB 1986 USAPA V1.00

Figure H-1. Placement of weapon symbol and left and right limits.

b. Determine the value of each circle by finding a terrain feature farthest from the position and within the weapon system's capability. Determine the distance to the terrain feature. Round off the distance to the next even hundredth, if necessary. Determine the maximum number of circles that will divide evenly into the distance. The result is the value of each circle. Draw the terrain feature on the appropriate circle on the range card. Clearly mark the increment for each circle across the area where DATA SECTION is written. For example, in Figure H-2 a hilltop at 2,345 meters is used. The distance is rounded to 2,400 meters, divided by 8, and equals 300. Thus, each circle has a value of 300 meters.

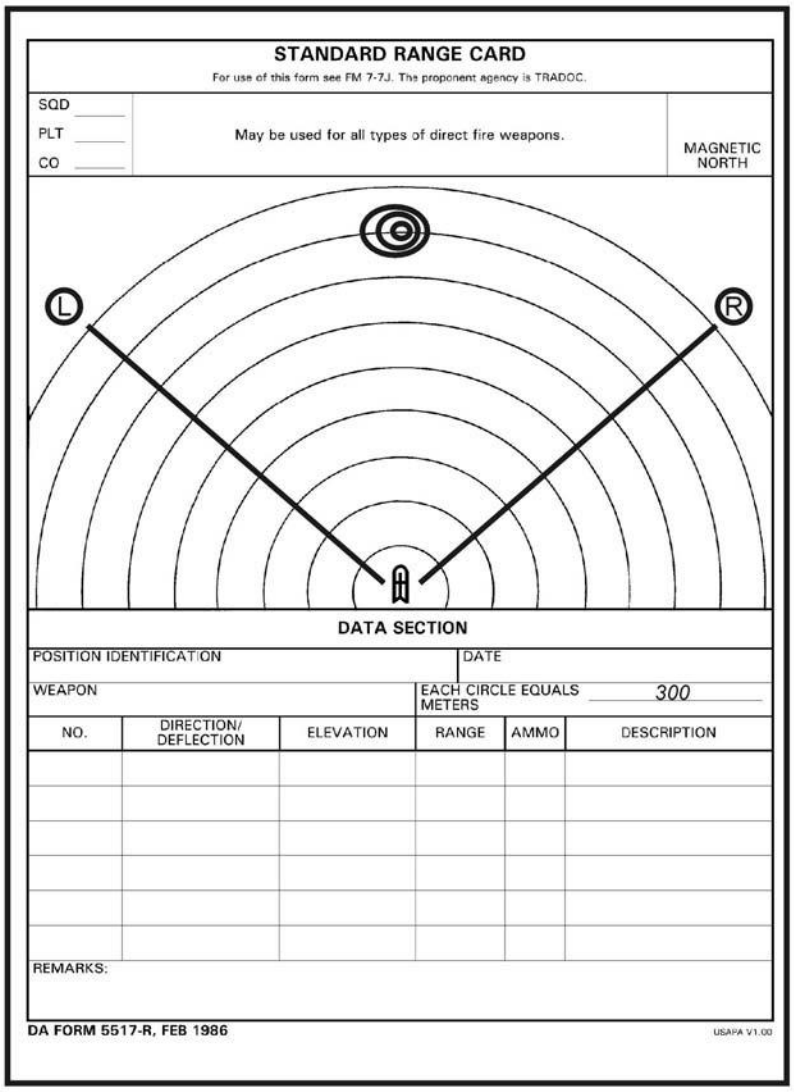


Figure H-2. Circle value.

(1) Figure H-3, page H-6, shows a farmhouse at 1,500 meters on the left limit. The wood line at 2,000 meters annotates the right limit. Determine the distance to these features by using a map or laser range finder. Note how the circle markings can assist in positioning the features on the range card.

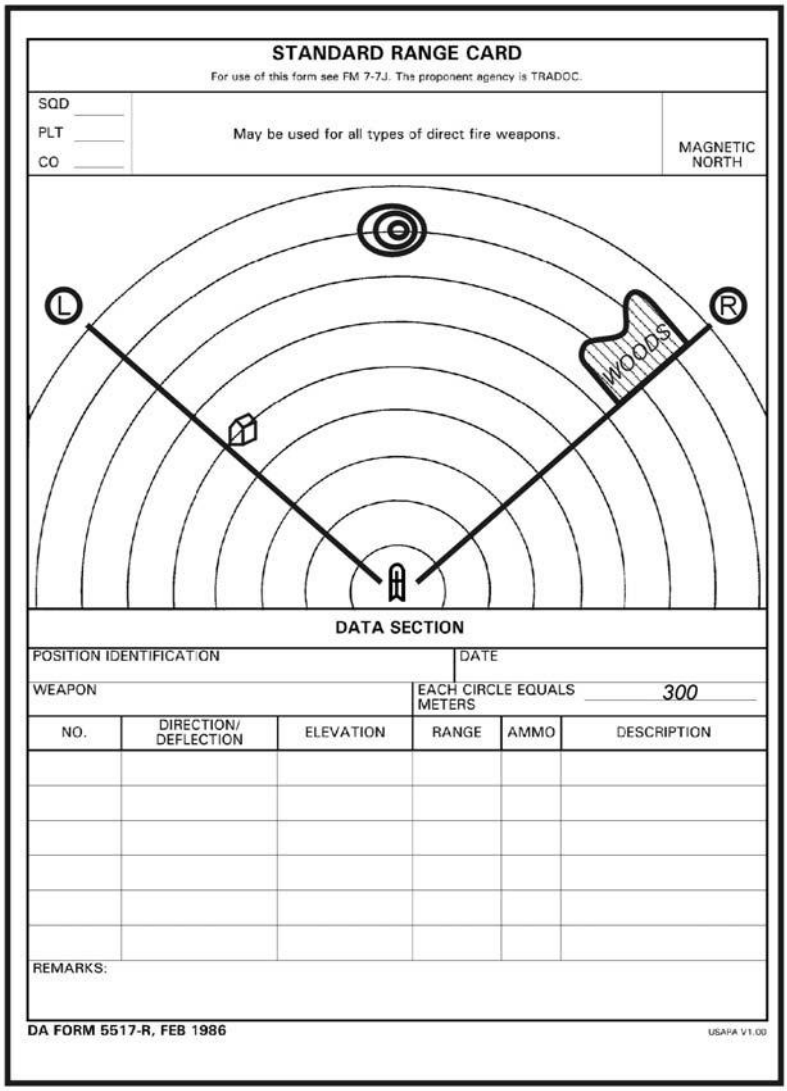


Figure H-3. Terrain features for left and right limits.

(2) Draw all reference points and target reference points in the sector. Mark each with a circled number beginning with 1. Figure H-4 shows the hilltop as reference point (RP) 1, a road junction as RP 2, and road junction RP 3. There are times when a TRP and a reference point are the same point (for example, RP 2 and RP 3 above). The TRP is marked with the first designated number in the upper right quadrant, and the reference point is marked in the lower left quadrant of the cross. This occurs when a TRP is used for target acquisition and range determination. Road junctions are drawn by determining the range to the junction, by drawing the junction, and by drawing the connecting roads from the road junction.

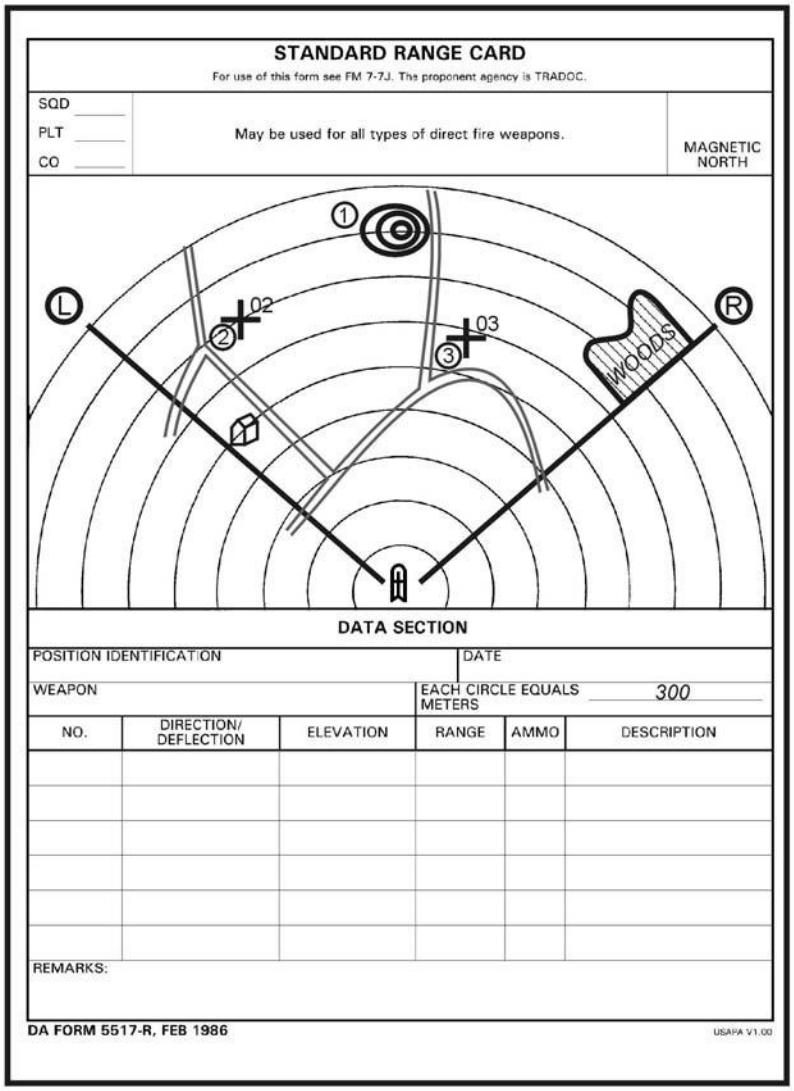


Figure H-4. Reference points and target reference points.

(3) Dead space (Figure H-5, page H-8) is shown as an irregular circle with diagonal lines drawn inside. Any object that prohibits observation or coverage with direct fire will have the circle and diagonal lines extend out to the farthest maximum engagement line. If the area beyond the dead space can be engaged, the circle is closed.

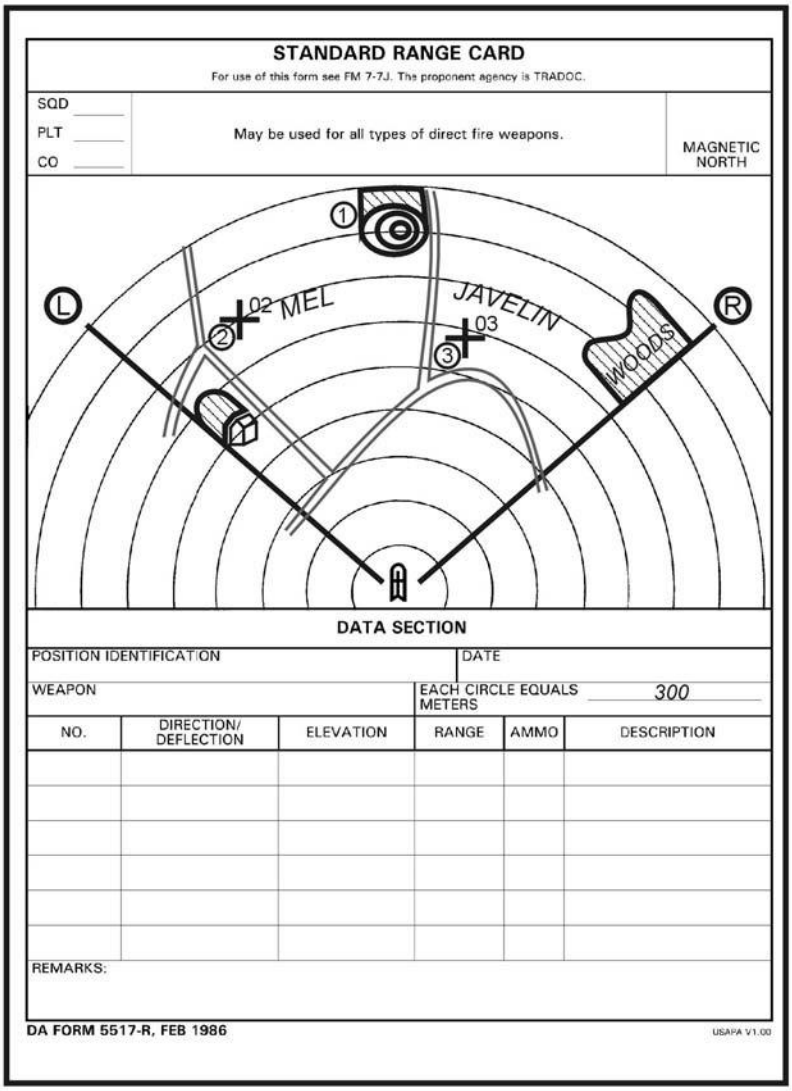


Figure H-5. Dead space.

(4) MELs are shown as in Figure H-6. They are drawn at the maximum effective engagement range per weapon if there is no dead space to limit their range capabilities. MELs are not drawn through dead space.

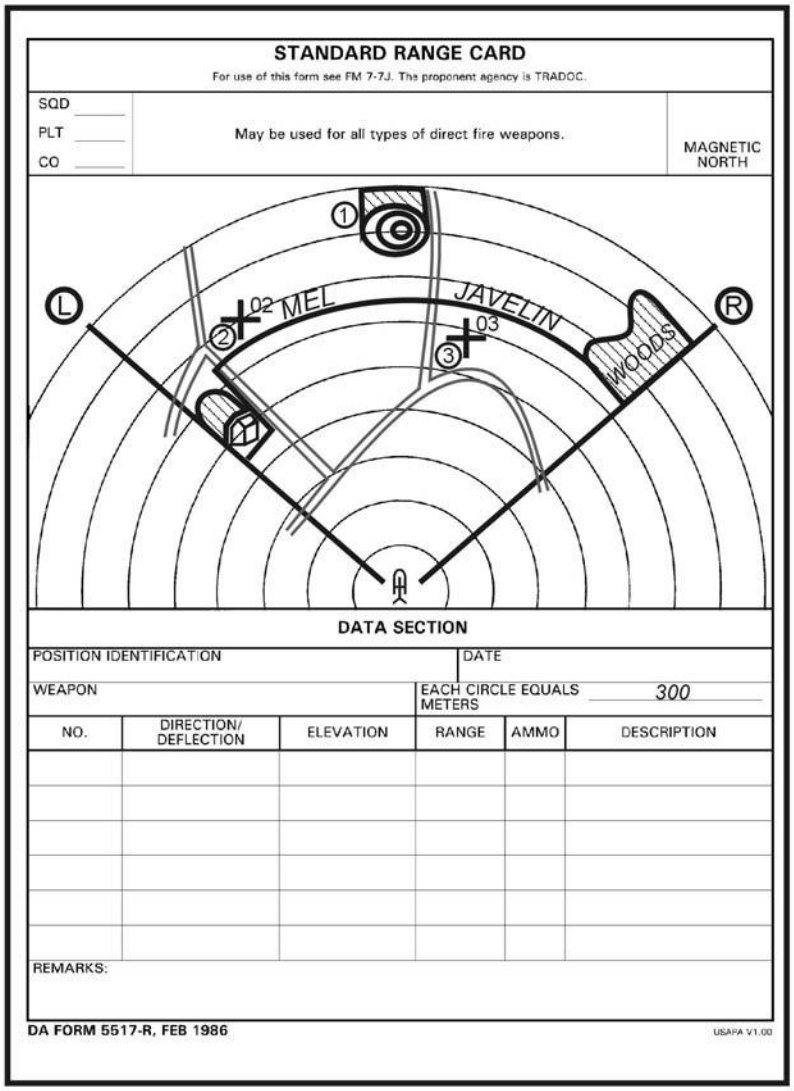


Figure H-6. Maximum engagement lines.

(5) The WRP (Figure H-7, page H-10) is represented as a line with a series of arrows extending from a known terrain feature and pointing in the direction of the weapon system symbol. This feature is numbered last. The WRP location is given a six-digit grid. When there is no terrain feature to be designated as the WRP, the weapon system's location is shown as an eight-digit grid coordinate in the remarks block of the range card. (In Figure H-7 the WRP is number 4.)

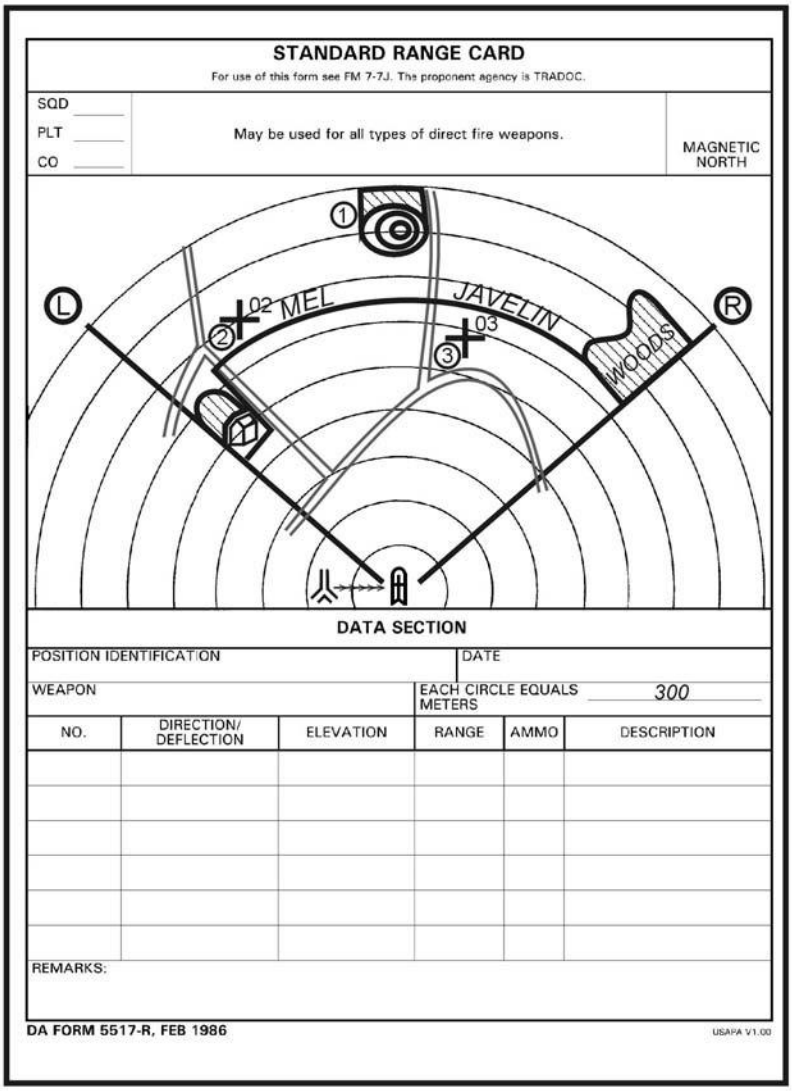


Figure H-7. Weapon reference point.

c. Complete the data section (Figure H-8).

(1) ***Position Identification.*** List primary, alternate, or supplementary positions. Alternate and supplemental positions must be clearly identified.

(2) ***Date.*** Show date and time the range card was completed. Range cards, like fighting positions, are constantly updated. The date and time are vital in determining current data.

(3) ***Weapon.*** The weapon block indicates weapon type.

(4) ***Each Circle Equals ____ Meters.*** Write in the distance, in meters, between circles.

(5) ***NO (number).*** Start with L and R limits, then list TRPs and RPs in numerical order.

(6) ***Direction/Deflection.*** The direction is listed in degrees. The deflection is listed in mils.

(7) ***Elevation.*** The elevation is listed in mils.

(8) ***Range.*** This is the distance, in meters, from weapon system position to L and R limits and TRPs and RPs.

(9) **Ammunition.** List types of ammunition used.

(10) **Description.** List the name of the object (for example, farmhouse, wood line, or hilltop).

(11) ***Remarks.*** Enter the WRP data. As a minimum, WRP data includes a description of what the WRP is, its six-digit or eight digit grid coordinate, the magnetic azimuth, and the distance from the WRP to the position.

d. Complete the marginal information at the top of the card (Figure H-8).

(1) ***Unit Description.*** Enter unit description such as squad, platoon, or company. Never indicate a unit higher than company.

(2) ***Magnetic North.*** Orient the range card with the terrain and draw the direction of the magnetic north arrow.

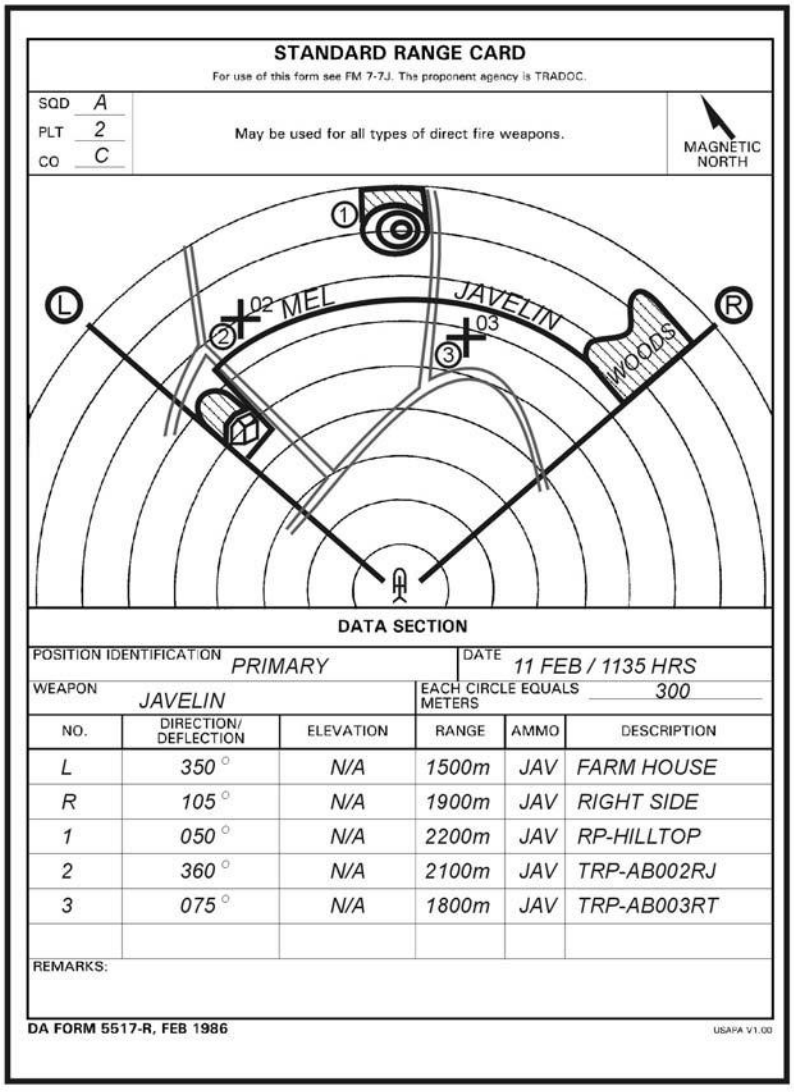


Figure H-8. Example of a completed range card.

Section II. SECTOR SKETCHES

Individual soldiers, crew-served weapon crews in the squads, and ICV gunners prepare range cards. Squad leaders prepare squad sector sketches, and section leaders prepare section sector sketches. The platoon leader reviews his squads' and sections' sector sketches and ensures the sketches meet his intent. If he finds any gaps or other flaws, the platoon leader adjusts weapons locations or sectors. Once the platoon leader approves the squad and section sector sketches, he prepares a consolidated report for the company commander and incorporates this into a consolidated platoon sector sketch. The platoon leader or platoon sergeant physically prepares the platoon sector sketch. The sector sketch can be on acetate taped to a map or it can be a hand drawn sketch. Accurate and detailed sketches aid in direct fire planning and in direct fire control and distribution.

H-8. SQUAD AND SECTION SECTOR SKETCH

The squad leaders and section leaders make two copies of their sector sketches; one copy goes to the platoon leader, the other remains at the position. The squad leaders and section leaders draw sector sketches (Figure H-9) as close to scale as possible, showing:

- Main terrain features in the sector and the range to each.
- Each primary position.
- Engagement area or primary and secondary sectors of fire covering each position.
- M240B machine gun FPL or PDF (if applicable)
- M249 squad automatic weapon FPLs or PDFs.
- M2 and MK 19 FPLs or PDFs.
- Type of weapon in each position.
- Reference points and TRPs in the sector.
- Observation post locations.
- Dead space.
- Obstacles.
- MELs for all weapon systems.
- MELS for Javelin (if applicable) and AT4s.
- Indirect fire targets.

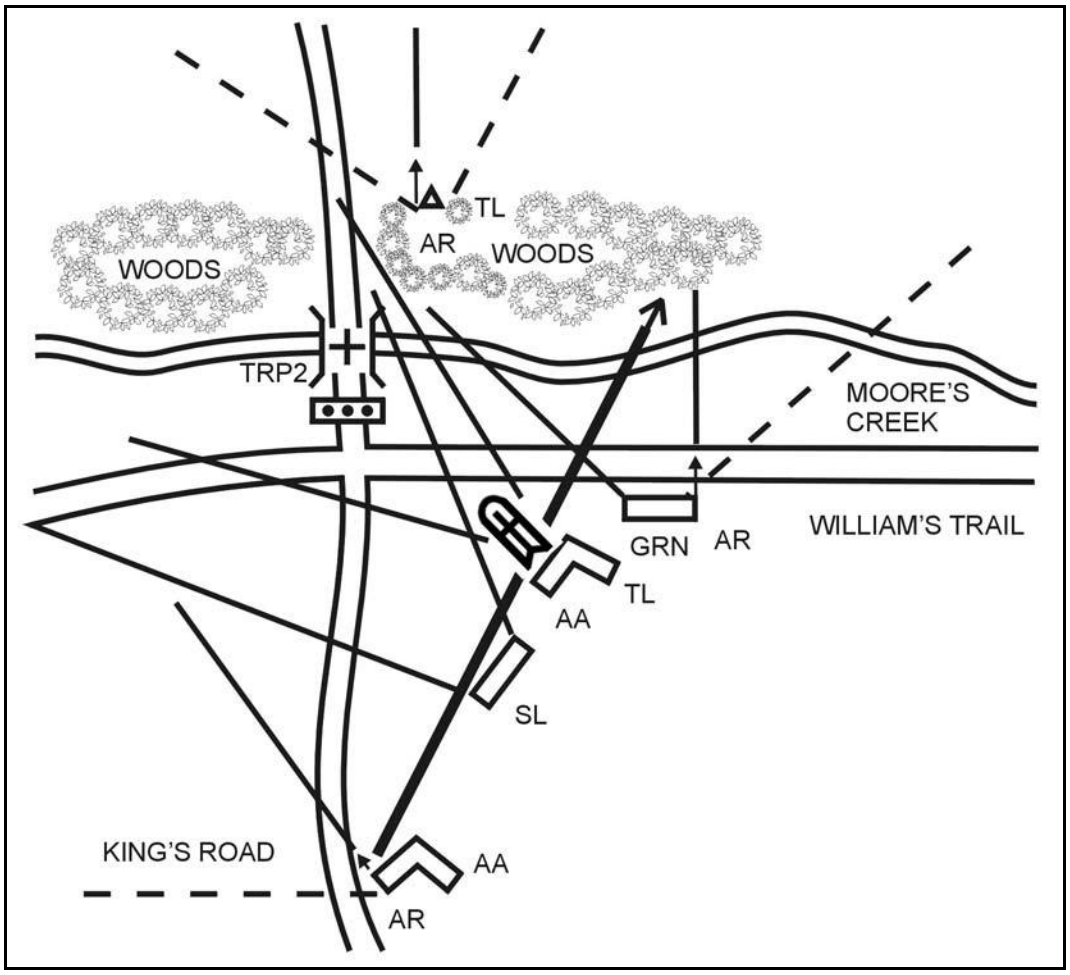


Figure H-9. Squad sector sketch.

H-9. PLATOON SECTOR SKETCH

Squad leaders and section leaders prepare their sketches and submit them to the platoon leader. The platoon leader combines all sector sketches (and possibly separate range cards) to prepare a platoon sector sketch. A platoon sector sketch (Figure H-10, page H-14) is drawn as close to scale as possible and includes a target list for direct and indirect fires. One copy is submitted to the company commander, one copy is given to the platoon sergeant (controlling the mounted element), and one copy is given to the leader of the dismounted element (usually the platoon leader). As a minimum, the platoon sector sketch should show:

- Primary and secondary sectors of fire or engagement areas.
- Primary, alternate, and supplementary vehicle and squad positions.
- Remount points.
- Javelin, M240B, and M249 positions with primary directions of fire.
- M2 and MK19 positions with primary direction of fire.
- M240B and M249 FPLs or PDFs.
- MELs for all weapon systems.
- Observations posts.

- Target reference points.
- Mines and other obstacles.
- Indirect fire target locations and FPF location (if applicable).
- Position and sector of flanking unit vehicles.
- Priority engagement by weapon system and crew.

NOTE: FBCB2-equipped units provide leaders a more accurate means for recording and sharing sector sketch and range card data. If the platoon leader finds any gaps or other flaws, the platoon leader adjusts weapons locations or sectors. Once the platoon leader approves the squad sector sketches and vehicle range cards, he prepares a consolidated report and incorporates this into a consolidated platoon sector sketch. These locations are forwarded to company (then to battalion) using FBCB2 to plot the requisite no-fire areas and graphic fire control measures.

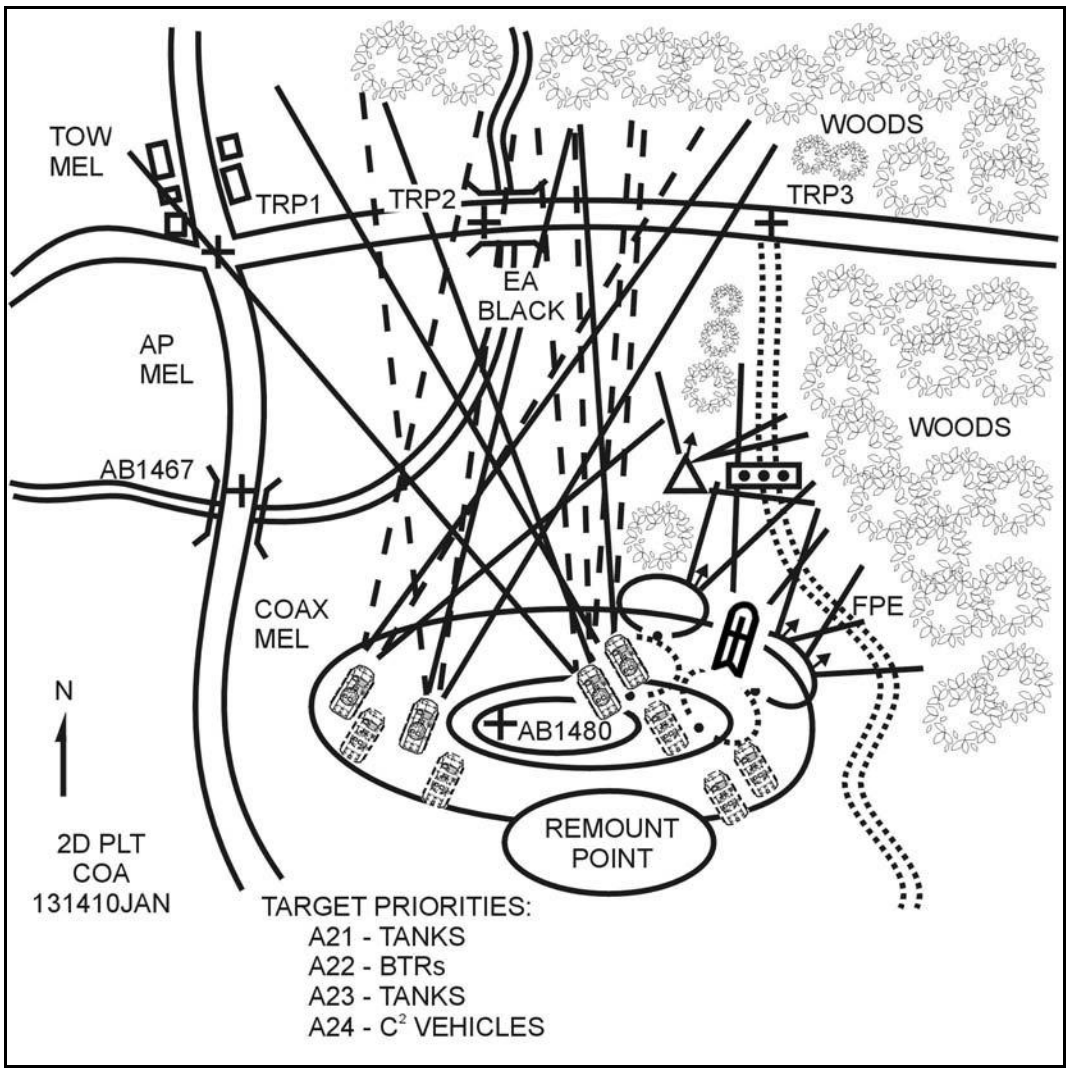


Figure H-10. Platoon sector sketch.

H-10. COORDINATION WITH ADJACENT UNITS

Platoon leaders coordinate with adjacent platoons, and squad leaders coordinate with adjacent squads, so that all positions and all platoons and squads are mutually supporting. The platoon leader must ensure that this coordination takes place. Coordination usually is initiated from left to right. As a minimum, gaps between positions are covered by fire. Contact points are established to ensure friendly forces meet at some specific point on the ground to tie in their flanks. In many cases, the exchange of sector sketches will accomplish most of the coordination necessary for tying in the flank positions. Typical information that is exchanged includes:

- Locations of primary, alternate, and supplementary positions.
- Sectors of fire for ICVs, M240Bs, and Javelins.
- Location of dead space between platoons and how it is to be covered.
- Location of observation posts.
- Location and types of obstacles and how to cover them.
- Patrols (size, type, time of departure and return, and routes).

GLOSSARY

AA	assembly area; antiarmor
AAR	after-action review
ABF	attack by fire
ACE	ammunition, casualty, equipment (report)
ADA	air defense artillery
ADACC	air defense and air coordination cell
ADW	air defense warning
AFATDS	advanced field artillery tactical data system
AIM-1	laser aiming light for the M249, M60, and MK19
AMD	air and missile defense
AN/PAQ-4B/C	laser aiming light for the M16, M4, M203, codeable infrared light device
AN/PVS-14	night vision goggle
AN/TPQ-37	
AO	area of operation
AP	antipersonnel
ARTEP	army training and evaluation program
ASAS	all-source analysis system
ASLT POSN	assault position
AT	antitank
ATGM	antitank guided missle
ATK POSN	attack position
BAS	battalion aid station
BCIS	battlefield combat identification system
BDA	battle damage assessment
BHL	battle handover line
BMNT	beginning morning nautical twilight
BMP	Russian abbreviation for tracked infantry fighting vehicle
BN	battalion
BOS	battlefield operation systems
BP	battle position
BSA	brigade support area
BTR	abbreviation for Russian wheeled armored personnel carrier
C2	command and control
C3	command, control, and communications
C3I	command, control, communications, and intelligence
CAS	close air support
CASEVAC	casualty evacuation
CCP	casualty collection point
CDR	commander
CIV	commander's independent viewer
CLU	command launch unit

CO	company
COA	course of action
COLT	combat observation and laser team
COMSEC	communications security
COP	common operating picture
COTS	commercial off-the-shelf
CP	command post; checkpoint
CS	combat support
CSOP	combat security outpost
CSS	combat service support
CSSCS	combat service support control system
CTD	commander's tactical display
CTT	common task test
DA	Department of the Army
DAT	damage assessment team
DEUCE	deployable universal combat earthmover
DLIC	detachment left in contact
DM	designated marksman
DPICM	dual-purpose improved conventional munitions
DS	direct support
EA	engagement area
EENT	end of evening nautical twilight
EFST	essential fire support task
EPLRS	enhanced position location reporting system
EPW	enemy prisoner of war
ESV	engineer squad vehicle
1SG	first sergeant
FA	field artillery
FAAD	forward area air defense
FAC	forward air controller
FBCB2	force XXI battle command brigade and below
FDC	fire direction center
FEBA	forward edge of battle area
FFE	fire for effect
FIST	fire support team
FLIR	forward-looking infrared radar
FM	frequency modulated; field manual
FO	forward observer
FPF	final protective fire
FPL	final protective line
FRAGO	fragmentary order
FSE	fire support element
FSO	fire support officer

GCP-1	ground commander's pointer
GPS	global positioning system
GS	general support
GS-R	general support-reinforcing
HE	high explosive
HEAT	high explosive anti-tank
HEDP	high explosive, dual purpose
HMEE	high mobility engineer excavator
HPT	high profile target
HQ	headquarters
HTU	hand-held terminal unit
IAW	in accordance with
ICM	improved conventional munitions
ICV	infantry carrier vehicle
ID	identification
INU	inertial navigation unit
IPB	intelligence preparation of the battlefield
IR	infrared
ISR	intelligence, surveillance, and reconnaissance
IV	inter-visibility
IVIS	inter-vehicular information system
JP8	army common fuel
KIA	killed in action
LD	line of departure
LNO	liaison officer
LOC	line of communication
LOGPAC	logistics package
LWS	land warrior system
LZ	landing zone
MANPADS	man-portable air defense system
MBA	main battle area
MCOO	modified combined obstacle overlay
MCS	maneuver control system
MDMP	military decision-making process
MDI	modernized demolition initiator
MDS	modular decontamination system
MEC	medium engineer company
MEL	maximum engagement line

METT-TC	mission, enemy, terrain, troops and equipment, time available and civil considerations
MG	machine gun
MGS	mobile gun system
MICLIC	mine clearing line charge
MLRS	multiple launch rocket system
mm	millimeter
MOGAS	motor gasoline
MOPMS	modular pack mine system
MOPP	mission-oriented protective posture
MP	military patrol
MPAT	multipurpose antitank
MR	moon rise
MRE	meal, ready to eat
MRP	motorized rifle platoon
MS	moon set
MTC	movement to contact
NAI	named area of interest
NBC	nuclear, biological, and chemical
NCO	noncommissioned officer
NCS	net control system
NFA	no-fire area
NGF	naval gunfire
NLT	not later than
NVD	night vision device
NVG	night vision goggle
OAKOC	observation and fields of fire, avenues of approach, key terrain, obstacles, cover and concealment
OBJ	objective
OP	observation post
OPCON	operational control
OPLAN	operations plan
OPORD	operations order
OPSEC	operational security
ORP	objective rally point
OT	observer target
OTN	own the night
PC	personnel carrier
PCC	precombat check
PCI	precombat inspection
PD	point of departure
PDF	principal direction of fire
PIR	priority intelligence requirements

PL	platoon leader
PLD	probable line of deployment
PLGR	precision lightweight global positioning system receiver
PNS	precision navigation system
POL	petroleum, oils, and lubricants
POSNAV	position navigation
PSG	platoon sergeant
PSYOP	psychological operations
PZ	pickup zone
RATELO	radiotelephone operator
RFL	restrictive fire line
RLEM	rifle-launched entry munitions
ROE	rules of engagement
ROI	rules of interaction
RRP	re-entry rally point
RSTA	reconnaissance, surveillance, and target acquisition
R&S	reconnaissance and surveillance
RP	release point; reference point
SALUTE	size, activity, location, unit, time, equipment (report)
SASO	stability operation and support operations
SAW	squad automatic weapon
SBCT	Stryker brigade combat team
SBF	support by fire
SDT	self-development test
SHORAD	short-range air defense
SINCGARS	single-channel ground and airborne radio system
SITEMP	situational template
SITREP	situation report
SNAP	size or shape, nature or nomenclature, activity, protection or posture
SOI	signal operating instructions
SOP	standard operating procedures
SPOTREP	spot report
SR	sun rise
SS	sunset
SSC	small-scale contingency
SU	situational understanding
SVML	standard vehicle-mounted launchers
TACP	tactical air control party
TI	tactical internet
TL	team leader
TLP	troop-leading procedures
TOW	tube-launched, optically tracked, wire-guided (missile)

TP-T	target practice-tracer
TRP	target reference point
TSOP	tactical standing operating procedures
TTP	tactics, techniques, and procedures
UAV	unmanned aerial vehicle
UO	urban operations (replacing term MOUT)
VC	vehicle commander
VIS	vehicular intercommunication system
VMS	vehicle motion sensor
WARNO	warning order
WCS	weapons control status
WIA	wounded in action
WP	whitephosphorus
WRP	weapons reference point
XO	executive officer

DEFINITIONS

Advanced Field Artillery Tactical Data System (AFATDS): A computer that provides fire support officers command and control and fire direction capabilities for field artillery. AFATDS replaces TACFIRE.

black lights: Various configurations of infrared light sources including buttons, post lights, bike lights, tube lights, and remote unit lights. The lights are powered by AA and 12-volt batteries. They can be used to mark landing and pickup zones, obstacles, checkpoints, routes, sectors of fire, TRPs, routes.

digital communications: The transmission of information using a digital radio.

digital system: Any combination of computers, radios, or software enhancing the soldier's ability to do his job.

digitization: The combination of a number of electronic enhancements designed to increase information sharing across the battlefield at all echelons. The enhancements functioning together are referred to as digitization

doctrine: The fundamental principles by which military forces or elements thereof guide their actions in support of national objectives. It is authoritative but requires judgment in application.

flare, infrared, parachute: A parachute flare that emits infrared light once discharged. The flare is essentially the same as its conventional "white light" counterpart but it emits infrared light.

flare, handheld infrared: A handheld tube with an infrared flare on one end and a smoke on the other. The smoke burns for about 16 seconds and the flare's burn time is about 20 seconds.

goggles, night vision (AN/PVS-14): A night vision goggle fitted with a fourth generation image intensification tube that provides increased resolution and tube life. The goggles have a 40-degree field of view, weigh 680 grams, and are powered by two AA batteries or one lithium battery.

Javelin: An antitank weapon that has a 2,000+ meter range. It is a fire-and-forget missile that has a "top-down attack" capability. The Javelin has a second generation forward-looking infrared nightsight. The missile weight is approximately 50 pounds. This weapon is a replacement for the Dragon.

laser aiming light (Aim-1): A device that mounts on the M249, M-240B machine gun, and MK19 Grenade Launcher to fire an eye safe infrared laser aiming light on the target for improved target sighting. The Aim-1 weighs 200 grams and is powered by two AA batteries.

laser aiming light (AN/PAQ-4B/C): A pulsating infrared aiming laser that mounts on the M16, M4, M203, and M249. The laser is designed for use with night vision goggles and provides a pulsating laser on the spot the shooter intends to fire at for target sighting. The AN/PAQ-4 weighs 125 grams and is powered by two AA batteries.

magnifier 10X: A snap on/screw on optic lens for the AN/PVS-14 that magnifies the image seen in the image intensification tube to increase clarity and resolution. Weight is 190 grams.

own the night (OTN): Any system or piece of equipment designed to enhance the soldier's night fighting capability.

Phoenix codeable infrared light: An infrared light source used with night vision goggles that can be programmed for a steady or flashing code or sequence up to 4 seconds in duration. The Phoenix weighs 57 grams and is powered by one 9 volt battery.

pointer, ground commander's (GCP-1): An infrared laser pointer/illuminator that provides clandestine target designation and illumination for night vision goggles. The laser beam can be adjusted from a thin to wide beam of infrared light, weighs 190 grams, and is powered by a 9-volt battery or two AA batteries.

POSNAV (position navigation): Any system providing individual soldier or unit locations via GPS or digital system. It greatly reduces the risk of navigation errors.
procedures: A standard detailed course of action that describes how to perform a task. Procedures prescribe the way of accomplishing tasks.

smoke, handheld infrared: A handheld tube with an infrared flare on one end and a smoke on the other. The smoke burns for about 16 seconds and the flare's burn time is about 20 seconds.

tactics: (1) The employment of units in combat. (2) The ordered arrangement and maneuver of units in relation to each other and/or to the enemy to use their full potential.

tactical SOP: A set of instructions covering those features of operations which lend themselves to a definite or standardized procedure without loss of effectiveness. The procedure is applicable unless ordered otherwise.

techniques: The general and detailed methods used by troops or commanders to perform assigned missions and functions, specifically, the methods of using equipment and personnel. Techniques describe a way, not the only way.

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