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Marine Infantry Platoon

U.S. Marine Corps

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FOREWORD

Marine Corps Reference Publication (MCRP) 3-10A.3, *Marine Infantry Platoon,* provides planning and operating considerations inherent to current operational environments and tactics, techniques, and procedures for infantry platoons. This publication is a foundational document to assist in the preparation and execution of platoon-level operations. When taken in context with other Marine Corps doctrine, it is designed to form the educational foundation required to empower small unit leaders with the knowledge needed to apply creative and adaptive thought to tactical decision making, in order to make timely and sound tactical decisions.

Its primary audience is infantry platoon commanders, platoon sergeants, and section and squad leaders. he secondary audience consists of leaders assigned as platoon commanders, platoon sergeants, and section and squad leaders from units across the Marine air-ground task force when serving as provisional infantry.

This publication is not intended to be all-encompassing. Rather, it references relevant information from other doctrinal publications as appropriate. Also, it does not address force structure and weapon system changes made recently or anticipated over the next several years unless sufficient experimentation and testing have already been conducted to generate best practices that are ready to be codified herein. As those best practices are developed, this publication will be changed or revised to reflect them.

This publication cancels Marine Corps Interim Publication 3-10A.3i, *Marine Infantry Platoon* dated 10 June 2019.

Reviewed and approved this date.

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CHAPTER 1
EMPLOYMENT

THE OPERATIONAL ENVIRONMENT

The Marine infantry platoon will operate across the full range of military operations, and in any clime and place. The platoon can expect to meet the many challenges presented by the operational environment, some of which are characterized by globalization, demographic shifts, water and food shortages, natural disasters, and the proliferation of weapons and technology. Within the same month, a platoon could conduct some combination of offensive, defensive, amphibious, and stability actions. See Marine Corps Warfighting Publication (MCWP) 3-10, *MAGTF Ground Operations*, for more information.

Expectations of Small Unit Leaders

Marine Corps small unit leaders in the 21st century must be more than just physically fit and tactically competent. Leaders from the squad level on up will be required to make decisions of greater magnitude and complexity than their predecessors. Platoons and companies will continue to be employed in operations where they are dispersed far from their higher headquarters (HHQ). Small units will increasingly be employed in a distributed manner where they are not mutually supportable. Marines' actions will often be observed and reported on by US and international media, and have significant impact on the situation, whether for good or ill.

Small unit leaders will most often be the ones on the ground making decisions, identifying desired effects, and directing weapon employment in physically and mentally challenging and dynamic situations. This publication, along with other Marine Corps doctrine, is designed to form the educational foundation required to empower small unit leaders with the knowledge needed to apply creative and adaptive thought to the tactical situation in order to make timely and sound tactical decisions. This publication also addresses common procedures, techniques, and tactics used at the platoon level.

Procedures

Procedures are standardized, detailed steps that prescribe how to perform specific tasks. These include battle drills, weapons employment drills, and call for fire procedures. Small unit leaders establish, train to, and employ standing operating procedures (SOPs) which shorten the time required to execute common tasks and enable inherent communication among small units.

Techniques

Techniques are nonprescriptive ways or methods used to perform missions, functions, or tasks. Techniques include a range of ways a task can be accomplished. As an example, techniques for how a leader chooses to communicate orders to subordinates include face to face, over a voice network (net), or by digital transmission of a data file.

Tactics

Tactics are the art and science of winning engagements and battles. They include the technical application of combat power, which consists of the techniques and procedures for accomplishing specific tasks within a tactical action. For the small unit leader, tactics focuses on the application of combat power to defeat an enemy force in combat at a particular time and place. For the infantry platoon commander, this often boils down to evaluating the tactical problem and making tactical decisions regarding the use of fire and maneuver to seize specific objectives or accomplish assigned tasks.

INFANTRY PLATOON EMPLOYMENT

An infantry platoon typically operates as a maneuver element of an infantry company; although, when appropriately task-organized, it may conduct semi-independent, dispersed, or distributed operations for various lengths of time. An example of a semi-independent operation carried out by a platoon would be an ambush patrol. The mission, organization, and employment of a variety of infantry platoons are discussed below. The following capabilities apply to all infantry platoons:

- Conduct day and night offensive and defensive operations in all environments.
- Operate in austere conditions.
- Employ combined arms.
- Conduct limited independent, noncontiguous, and distributed actions, when directed.
- Operate in conjunction with other Services, agencies, and special operations forces.
- Participate in amphibious operations.

The following are some of the limitations of the infantry platoon:

- Lack adequate organic firepower in some scenarios.
- Limited ammunition and personnel trained in ammo handling.
- Can conduct only short duration operations before resupply is mandatory.
- Does not possess organic electronic warfare (EW) or cyber threat capabilities.
- Lack the capability to detect small unmanned aircraft systems (UASs) in a timely manner.

SMALL UNMANNED AIRCRAFT SYSTEMS

Advancements in small unmanned aircraft system technologies allow a threat to collect information, conduct attacks, or trigger other tactical events. The relatively inexpensive cost and commercial availability of these systems provides the threat a highly effective, easily replaced, and affordable means of conducting surveillance and reconnaissance. The more prevalent and commercially available UASs are typically slow, small tactical-level systems which operate at relatively low altitudes and under high visibility and low wind speed conditions. They may be

fixed-wing or rotary-wing and powered by either battery energy or liquid fuel. Integrated air and missile defense capabilities can effectively identify and counter larger, higher flying classes of UASs that are common to military use. However, they have difficulty identifying, tracking, or engaging small UASs due to their smaller signature and low flight characteristics. The mass employment of UASs by threat forces can produce many negative effects on the platoon whether in the defense or on patrol. The ability of these smaller types of UASs to operate in low altitudes decreases the likelihood of friendly forces detecting them in a timely manner. Small units operating in and around combat areas should assume they are being observed by the threat through all observation methods and techniques available, to include UAS employment. The tactics, techniques and procedures (TTP) for UAS employment and their related planning considerations are still under development. For more on reacting to small UASs while on patrol, see Marine Corps Tactical Publication (MCTP) 3-01A, *Scouting and Patrolling*.

DUTIES OF KEY PERSONNEL

The following are duties of key personnel billets common to all infantry units.

Platoon Commander

The platoon commander of an infantry platoon—

- Has overall responsibility for the platoon, and is accountable for everything the platoon does or fails to do.
- Leads the platoon in an austere, chaotic, uncertain, and mentally and physical demanding environment.
- Is responsible for the platoon's training, discipline, morale, welfare, sustainment, and administration.
- Seeks to know and understand the capabilities of the enemy, the threat level, and the operational environment.
- Knows, understands, and develops situational awareness across the platoon.
- Is responsible for the accountability and combat readiness of assigned personnel, weapons, and equipment.
- Is responsible for planning, coordinating, and supervising the execution of assigned tasks.
- Plans and coordinates the emplacement and controls the fires of all organic and nonorganic assets supporting the platoon.
- Is capable of integrating attachments and enablers into platoon operations.

Platoon Sergeant

The platoon sergeant of an infantry platoon—

- Serves as the platoon's second in command and assumes command in the platoon commander's absence.
- Assists in the planning, execution, sustainment, and command and control of assigned missions.
- Serves as a technical and tactical advisor to the platoon commander and squad leaders.

- Coordinates the platoon's administrative, logistical, training, operational, and maintenance requirements with the company gunnery sergeant and/or company first sergeant.
- Establishes and enforces SOPs related to discipline, the accountability of personnel and equipment; weapons and vehicle maintenance, field craft, noise and light discipline, field hygiene, and casualty evacuation.
- Provides professional development and mentorship to Marines assigned to the platoon.
- Executes required logistics functions, including casualty evacuation and detainee or enemy prisoner of war operations.

Squad and Section Leaders

A squad or section leader in an infantry platoon—

- Plans for assigned missions and carries out the orders issued by the platoon commander.
- Is responsible for the discipline, training, control, conduct, and welfare of their squad/section at all times.
- Is responsible for the condition, care, and economical and effective use of weapons and equipment.
- Is responsible in combat for the tactical employment, fire discipline, fire control, sustainment, and maneuver of their squad/section during offensive, defensive, amphibious, and stability actions.

Platoon Radio Operator

Platoons are not typically assigned a radio operator from the battalion's communications platoon. The platoon commander usually assigns a suitably trained Marine from the platoon to serve as a radio operator. A platoon radio operator—

- Is responsible for establishing and maintaining communications with higher, adjacent, supporting, and subordinate units.
- Is trained in the operation of all tactical communications assets used by the platoon.
- Is proficient in radio procedures and reporting formats.
- Assists the platoon commander in maintaining situational awareness.

Platoon Corpsman

A platoon is typically reinforced by one to three corpsmen from the battalion medical platoon. The senior corpsman advises the platoon commander and platoon sergeant on the physical well-being of the platoon.

A platoon corpsman—

- Assesses, treats, and assists in evacuating all casualties.
- Is the primary liaison with the company aid station.
- Coordinates the requisition and sustainment of medical equipment and supplies required by the platoon.

Attached and Supporting Unit Leaders

The infantry platoon is often reinforced with attached and supporting units. The senior individual from the attached or supporting unit—

- Assists in planning, providing recommendations on the employment of the unit's capabilities.
- Carries out orders issued by the platoon commander.
- Is responsible for the discipline, training, control, conduct, and welfare of their unit at all times.
- Is responsible for the condition, care, and economical and effective use of weapons and equipment.
- Is responsible in combat for the tactical employment, fire discipline, fire control, sustainment, and maneuver of their unit.

TYPES OF PLATOONS

Rifle Platoon

The mission of the Marine rifle platoon is to defeat the enemy by fire, maneuver, and close combat and to conduct other operations as directed by the company across the range of military operations.

Organization. The rifle platoon is composed of three squads and a small headquarters (HQ) as illustrated in figure 1-1. Each squad consists of three fire teams, with each squad issued one antiarmor personnel weapon for additional firepower and capabilities. The platoon HQ provides command and control of the squads and any attachments, and coordinates actions with higher, adjacent, and supporting units. The platoon HQ consists of a platoon commander and platoon sergeant. The platoon HQ is typically reinforced with a radio operator drawn from one of the

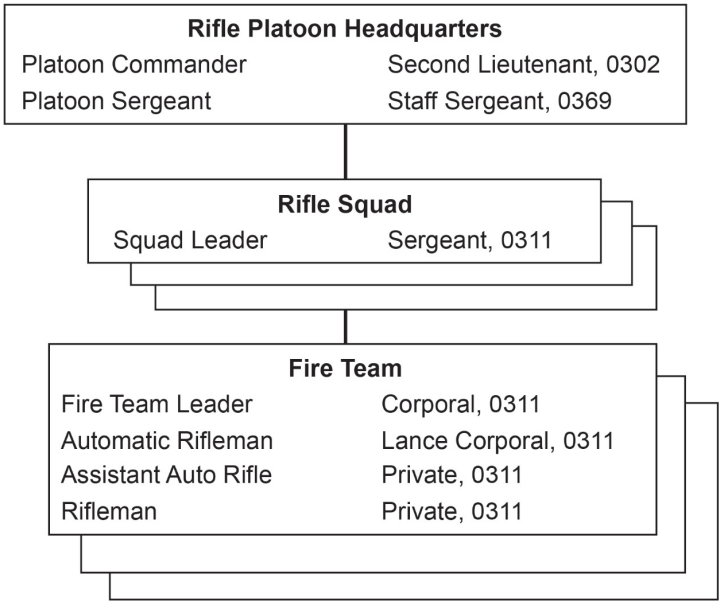


Figure 1-1. Marine Rifle Platoon.

squads, and one or more corpsmen assigned from the battalion medical platoon. Depending on the platoon's mission, it may be reinforced with additional assets and capabilities.

Employment. The rifle platoon generally operates as a maneuver element in the rifle company's scheme of maneuver. In the attack, the platoon's squads—assisted by organic and/or supporting fires—maneuver to locate, close with, and destroy the enemy. In the defense, the platoon typically defends as part of the rifle company defense. The platoon utilizes terrain, organic weapons, and supporting arms to accomplish assigned tasks. Rifle platoons or their subordinate squads may be assigned to conduct patrols in offensive, defensive, or stability missions. When required, rifle platoons can be task-organized to conduct distributed operations for a specific period of time. See Marine Corps Reference Publication (MCRP) 3-10A.4, *Marine Rifle Squad*, for information on the organization, duties, and employment of the rifle platoon's organic squads.

Weapons Platoon

Mission. The mission of the weapons platoon of the rifle company is to provide fire support coordination, light mortar, antimechanized assault, and medium machine gun support for the infantry company and its subordinate elements.

Organization. The weapons platoon consists of a platoon HQ, a medium machine gun section, a 60mm mortar section, and an assault section, as illustrated in figure 1-2. The weapons platoon HQ provides command and control of the platoon and coordinates the fires of the three sections. The 60mm mortar section consists of three mortar squads, each of which employs one 60mm mortar. The medium machine gun section consists of three machine gun squads; each squad consists of two machine gun teams. The assault section consists of three squads; each squad consists of two assault teams armed with antiarmor personnel weapons.

Employment. The weapons platoon is the organic fire support element of the infantry company. The weapons platoon is usually task-organized to support rifle company operations based on the company commander's estimate of the situation. During combat operations, the weapons platoon

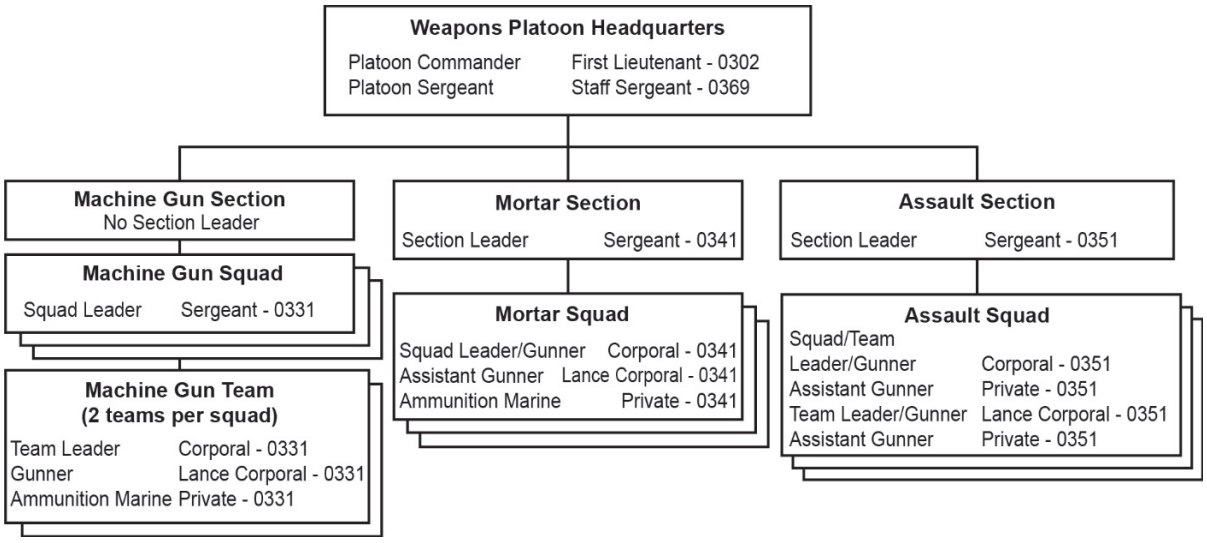


Figure 1-2. Weapons Platoon, Rifle Company.

commander generally serves as the company fire support team (FST) leader, coordinating fires in support of operations. The weapons platoon's sections or subordinate squads may reinforce the rifle platoons, or the platoon may be employed under the direction of the platoon sergeant in support of the rifle company's scheme of maneuver. The mortar section is typically employed as a section in support of the company's scheme of maneuver.

Weapons Platoon Commander Duties. In addition to the regular duties of a platoon commander, the weapons platoon commander generally serves as the FST leader for the rifle company. The FST leader is responsible for planning the company's fire support plan in accordance with the company commander's concept of operations and guidance, coordinating this plan with the battalion fire support coordination center (FSCC), and executing it by managing all available fire support assets using members of the team responsible for controlling each fire support agency. The FST leader ensures that all aspects of the commander's essential fire support tasks (EFSTs) are applied during planning and execution. In addition, the weapons platoon commander advises the company commander on the capabilities, limitations, and restrictions of all organic and nonorganic supporting arms.

Assault Section Leader Duties. In addition to the standard duties of a section leader, the assault section leader is the subject matter expert on explosive and nonexplosive breaching techniques and rocket employment. The assault section leader coordinates the attachment and detachment of assault teams to support the rifle platoons.

Machine Gun Squad Leader Duties. In addition to the responsibilities as a squad leader, the machine gun squad leader also serves as a subject matter expert on medium machine gun employment.

Mortar Section Leader Duties. In addition to the normal leadership responsibilities of a section leader, the mortar section leader is responsible for providing timely and accurate indirect fires in support of the company. The section leader lays the mortars for firing as directed. When required, the section leader operates a fire direction center (FDC) to support the company with indirect fires. The section leader is responsible for crater analysis and for submitting shell reports to HHQ.

81mm Mortar Platoon

The mission of the 81mm mortar platoon is to provide organic indirect fire support to the battalion.

Organization. The platoon consists of a platoon HQ and two mortar sections. Each section consists of a HQ capable of serving as an FDC and four 81mm mortar squads, as illustrated in figure 1-3.

Employment. The 81mm mortar platoon is the battalion commander's primary organic indirect fire support asset and is usually kept in general support of the battalion, maneuvering as part of the battalion's scheme of maneuver. The platoon is organized to enable it to conduct split platoon operations. This enables the platoon commander to have one section in place and able to respond to calls for fire while the other section displaces. Based on the logistical requirements of 81mm mortars, the platoon is motorized when possible. The platoon can conduct dismounted operations, but is then limited in the amount of ammunition it can carry. For more information, see MCTP 3-01D, *Tactical Employment of Mortars*.

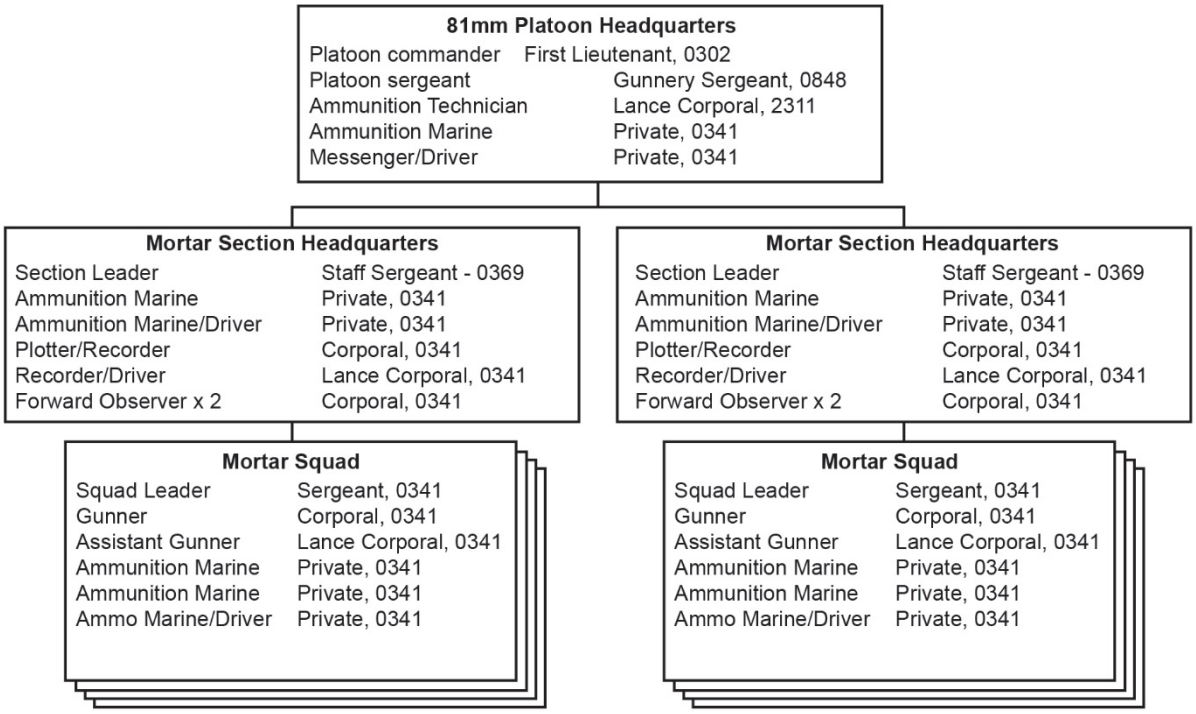


Figure 1-3. 81mm Mortar Platoon, Weapons Company.

81mm Mortar Platoon Commander Duties. In addition to the regular platoon commander duties, a mortar platoon commander is also the principal advisor to the battalion fire support coordinator on the tactical employment of mortars.

81mm Mortar Platoon Sergeant Duties. In addition to regular platoon sergeant duties, the mortar platoon sergeant is responsible for training on FDC and call for fire procedures throughout the battalion.

81mm Mortar Section Leader Duties. In addition to the regular duties of a section leader, the 81mm mortar section leader must be able to maneuver their section independently and operate an independent FDC.

Antiarmor Platoon

The antiarmor platoon provides heavy caliber, long-range antiarmor fires for the battalion.

Organization. The antiarmor platoon contains a small platoon HQ, a Javelin missile section, and a tube-launched, optically tracked, wire-command link guided missile (TOW) section. The Javelin section consists of a section leader and two 9-Marine Javelin squads equipped with four Javelin missile systems each. The TOW section consists of a section leader, a driver/radio operator, and four 5-Marine TOW squads, each equipped with two TOW systems and two vehicles, as illustrated in figure 1-4.

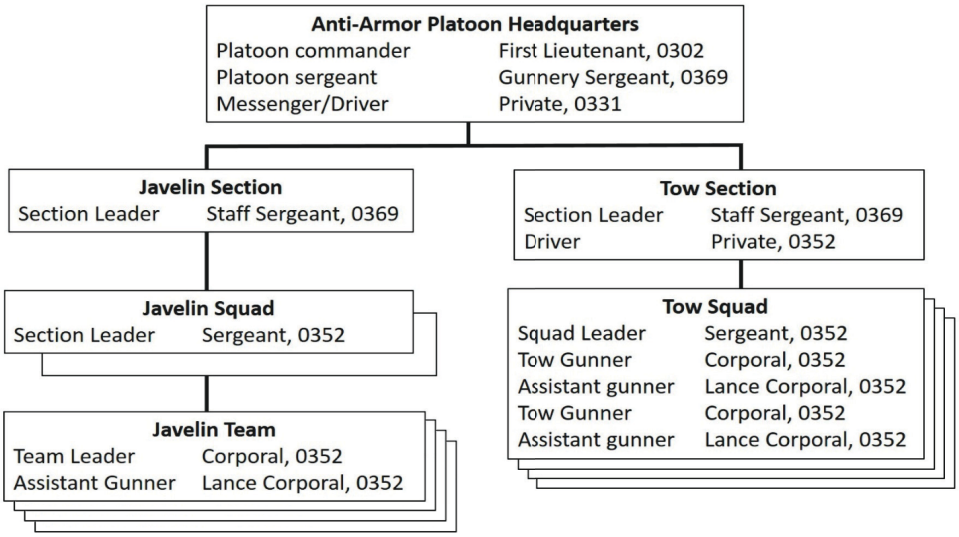


Figure 1-4. The Antiarmor Platoon, Weapons Company.

Employment. The Javelin section is typically employed dismounted, and is usually attached by squad to one or more of the rifle companies based on the enemy armor threat. The TOW section is typically mounted. The TOW section or squads can be attached to a rifle company to increase the range and lethality of antiarmor fires. The TOW section from the antiarmor platoon and the heavy machine gun (HMG) platoon are often task-organized to provide two combined antiarmor team (CAAT) platoons. For more information, see MCTP 3-01F, *MAGTF Antiarmor Operations*.

Antiarmor Platoon Commander Duties. In addition to the normal platoon commander duties, the antiarmor platoon commander is also the principal advisor to the battalion operations officer on the tactical employment of antiarmor assets.

Heavy Machine Gun Platoon

The HMG platoon provides heavy caliber direct and grenade launcher machine gun fire for the battalion.

Organization. In addition to a platoon HQ, the HMG platoon has three 8-Marine HMG sections, each consisting of two 4-Marine squads equipped with a vehicle and both M2A1 .50 caliber and Mk-19 40mm machine guns, as illustrated in figure 1-5.

Employment. The HMG platoon is typically employed mounted. The HMG platoon or a section can be attached to a rifle company to increase the range and lethality of fires. The HMG platoon and TOW section from the antiarmor platoon are often task-organized to provide two CAAT elements.

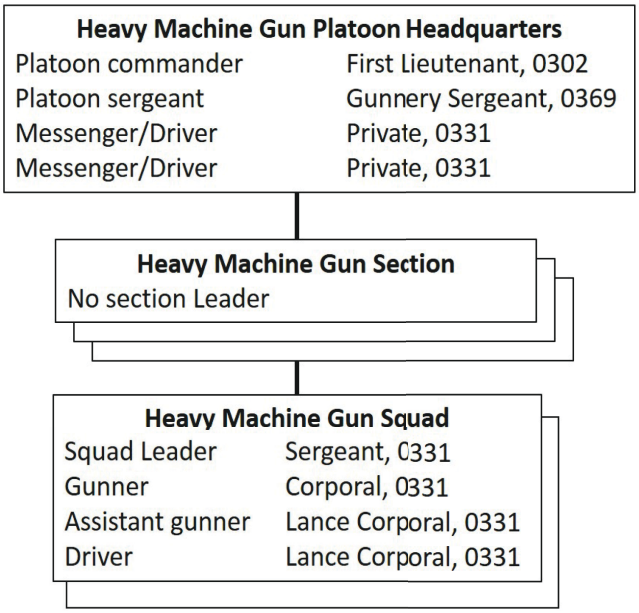


Figure 1-5. Heavy Machine Gun Platoon, Weapons Company.

Combined Antiarmor Team

There is no standard mission statement for the CAAT since it is a task-organized unit and not a standardized unit in an infantry battalion's table of organization. Combined antiarmor teams may be employed as independent maneuver elements in general support of the battalion, contributing to the battalion commander's situational awareness and security. Combined antiarmor teams may be attached to a rifle company, providing increased fires capability.

Organization. Combined antiarmor teams are task-organized with assets from the antiarmor and HMG platoons, usually in two sections of four vehicles each, with each section containing two

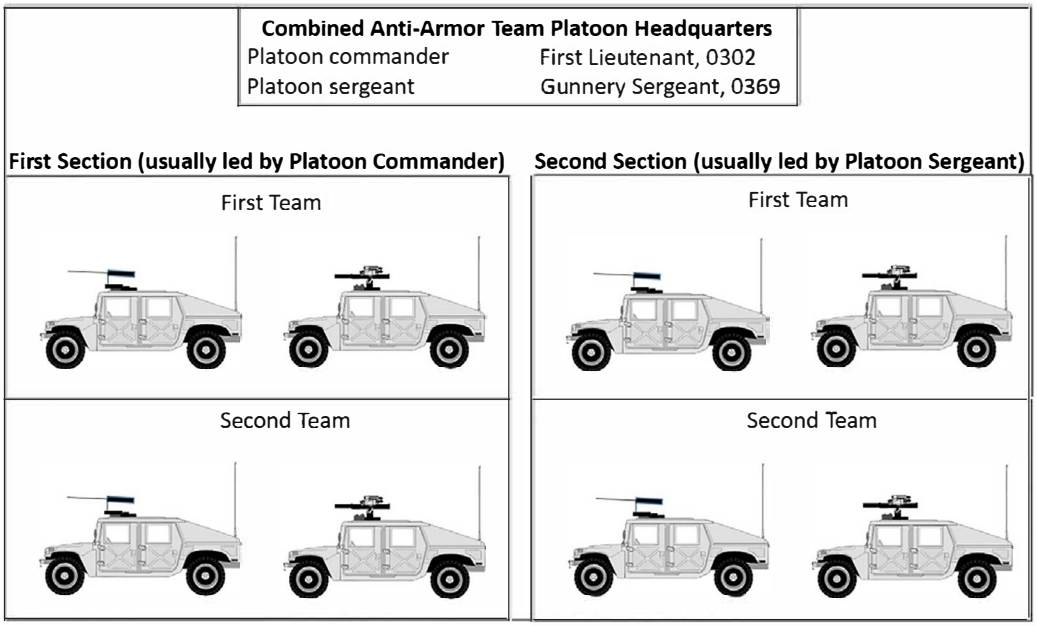


Figure 1-6. Example Combined Antiarmor Team.

teams of two vehicles each. A typical arrangement is to cross-attach units to create two balanced CAATs, each equipped with four TOW systems and four HMGs, as shown in figure 1-6. One CAAT is led by the platoon commander from the antiarmor platoon, and the other is led by the platoon commander from the HMG platoon.

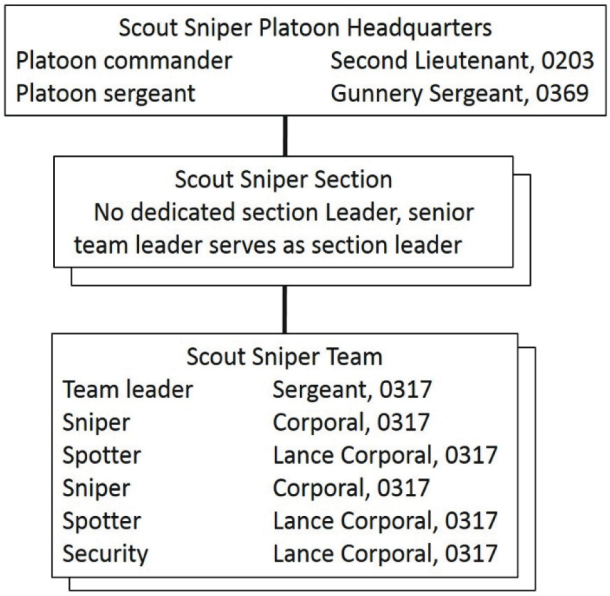
Employment. Combined antiarmor teams provide the battalion commander highly mobile and relatively well-armed and protected motorized units. These units are often employed to conduct motorized reconnaissance or to scout in front of a mechanized advance. They can be tasked to isolate or suppress an enemy or support by fire. They can provide depth to the battalion's defense by conducting operations in the battalion security area and/or on a flank. Combined antiarmor teams may employ a mobile defense with specific disengagement criteria and a planned withdrawal route.

Scout-Sniper Platoon

The scout-sniper platoon supports the infantry battalion's combat operations by delivering precision fire on selected targets from concealed positions and gathering information for intelligence purposes (derived from MCTP 3-01E, *Sniping*).

Organization. The platoon consists of a platoon HQ and two scout-sniper sections; each scout-sniper section consists of two 6-Marine teams. Refer to figure 1-7. The platoon is equipped with eight M40A3 7.62mm sniper rifles and four M82A3.50 caliber, special application scoped rifles. The scout-sniper platoon is assigned to the headquarters and service company by table of organization. Commanders may assign the scout-sniper platoon to the weapons company for operations.

Employment. The platoon employs the teams under the direction of the battalion operations officer. Scout-sniper teams may be attached to a maneuver element (e.g., a rifle company or CAAT) or tasked as part of the battalion's reconnaissance and surveillance plan. They participate



1-7. Scout-Sniper Platoon, Headquarters and Service Company.

in activities designed to deny the enemy freedom of movement by targeting enemy leaders and other key personnel with precision fire, employing a mixture of 7.62mm and .50 caliber weapons as required by mission, enemy, terrain and weather, troops and support available-time available (METT-T) factors. In addition to precision rifle fire, scout-sniper teams are trained to call and adjust supporting arms. For more information, see MCTP 3-01E.

Scout-Sniper Platoon Commander Duties. In addition to the normal platoon commander duties, the scout-sniper platoon commander advises the battalion operations and intelligence officers on the tactical employment of snipers.

Provisional Infantry Platoon

Provisional infantry platoons do not have a standard mission statement. They may be formed and tasked to conduct a wide range of offensive, defensive, or stability tasks as required by the situation. Provisional infantry platoons are usually organized as rifle platoons, possessing the same mission, capabilities, limitations, and employment considerations.

Organization. Provisional infantry platoons are non-infantry units that are task-organized to conduct close combat tasks. Examples could include personnel from an artillery battery being employed in a situation where artillery is prohibited by the rules of engagement (ROE) or elements of a combat logistics battalion which form a provisional infantry platoon to deal with a rear area threat. The provisional infantry platoon is generally organized with a platoon commander, a platoon sergeant, and three subordinate squads, allocating available weapons among the squads. Many combat support and combat service support units are well-supplied with vehicles and crew-served weapons, and these systems are integrated into the task organization based on METT-T factors.

Employment. Provisional infantry platoons may be employed in a wide range of tasks as required by the situation. They are commonly used to provide local area security. They may be organized to create a reserve. They may be used to conduct limited offensive operations by non-infantry units. Provisional infantry units cannot be expected to function as effectively as actual infantry units, unless they have been given a significant amount of time to reorganize and train to standard. Commanders should assess the level of training and the availability of antiarmor and automatic weapons when considering the tasking of a provisional infantry platoon. Since every Marine should be trained to conduct offensive and defensive tasks, non-infantry small unit leaders have a responsibility to ensure that their units conduct periodic tactical training.

CHAPTER 2
PLANNING

MARINE CORPS PLANNING

This chapter discusses planning at the tactical level, tailored for the platoon commander. It details the tools and processes used by platoon commanders to receive an order from HHQ, allocate available time, conduct an estimate of the situation, make a tactical decision, develop a platoon order, and effectively communicate the plan to subordinates.

The Marine Corps philosophy of maneuver warfare describes planning as an essential part of the broader field of command and control. The aim of command and control is to enhance the commander's ability to make sound and timely decisions. Effective decision making requires both the situational understanding to recognize the essence of a given problem and the ability to devise a practical solution. Hence, an essential function of planning is to create a common understanding of the problem—the difference between existing and desired conditions—and to devise ways to solve it.

Planning is not an isolated activity, process, or phase of an operation; rather, planning is an integral component of the planning-execution-assessment continuum. It does not stop at the issuance of the order. Planning is a continuous process which monitors, adapts, and takes into account the actions of the enemy, as well as higher, adjacent and supporting units. Success in a fluid environment demands that leaders think critically, understand the purpose of the operation, gain and maintain an understanding of the situation, make rapid tactical decisions, and exercise initiative throughout the planning, execution, and exploitation of an operation.

A platoon commander plans prior to the commencement of operations. The situational awareness developed during that planning and shared with subordinates forms the foundation for subsequent tactical decisions. The age-old adage, "no plan survives contact with the enemy" acknowledges that the enemy will act unpredictably. In combat, the situation can change in an instant. The understanding of a situation developed during planning is invaluable. A shared understanding of the situation enables effective decision making, which is key to recognizing and exploiting opportunities, as well as identifying and mitigating vulnerabilities, during the conduct of an operation. Commanders, and just as importantly their subordinates, who share an understanding of the situation and understand the commander's intent, can recognize changes in the situation and make decisions resulting in successful accomplishment of the mission. Platoon commanders are responsible for making those decisions for their platoons. They must also ensure understanding of the situation and provide intent to enable their subordinates to make those decisions.

TENETS OF MARINE CORPS PLANNING

The tenets of the Marine Corps Planning Process—top-down planning, single-battle concept, and integrated planning—are derived from the doctrine of maneuver warfare. These tenets guide Marine commanders at every level while planning and executing military operations.

Top-Down Planning

Planning is a fundamental responsibility of command. Commanders do not merely participate in planning; they drive the process. Their personal involvement and guidance are key to planning. Company commanders use planning to ensure that there is a common understanding of the situation. Similarly, platoon commanders ensure that their subordinates share this understanding of the situation.

Single-Battle Concept

Operations or events in one part of the battlespace often have profound and consequent effects on other areas and events; therefore, a commander always views their unit's operations as a component of the larger whole. Platoon commanders keep their commander's intent in mind, which provides the larger context when planning.

Integrated Planning

Integrated planning is conducted to focus efforts toward a common purpose by all elements of the force. Integrated planning is facilitated by cross-talk between adjacent and supported/supporting units during planning. The key to integrated planning is to involve the right personnel from the right organizations in the planning process as early as possible to consider all relevant factors, reduce omissions, and share information as broadly as possible.

Mission Tactics

A key way to put maneuver warfare into practice is through the use of mission tactics. Mission tactics means assigning subordinates missions without specifying how the mission must be accomplished. Leaving the manner of accomplishing the mission to the subordinate allows them the freedom, as well as establishes the duty, for the subordinate to take whatever steps deemed necessary based on the situation. The use of mission tactics relies on a subordinate's exercise of initiative enabled by proper guidance and understanding.

Mission tactics are enabled by mutual understanding of the situation achieved during planning and rehearsals. The planning and orders process is designed to create understanding among the units executing the operation, lessening the amount of control necessary to operate, and enabling mission tactics to occur and succeed. In addition to specific guidance and rehearsals, a well-rehearsed SOP simplifies operations, builds confidence, and avoids confusion.

The platoon commander should utilize a combination of mission tactics and directive orders to exercise effective command and control based on the tactical situation. In general, night operations and close combat operations require more control to coordinate maneuver and avoid fratricide. More fluid operations are often best accomplished by leaving the details of execution to be decided by the on-scene small unit leaders, guided by mission orders.

TACTICAL TENETS

Tactics is the application of combat power to defeat the enemy in engagements and battles. The six tactical tenets identified in Marine Corps Doctrinal Publication (MCDP) 1-3, *Tactics*, are discussed in the following subordinate paragraphs.

Achieving Decision

Decision is achieved by ruthlessly seeking out gaps and focusing all available combat power to exploit them. Within a battle, decisive actions must lead directly to achieving the commander's intent. It is vitally important that when we enter battle, the end results are decisive.

Gaining Advantage

When a platoon is committed to a fair fight, the platoon commander has failed. We seek to focus overwhelming combat power against enemy vulnerabilities. Concepts of operation should employ combat power in such a manner that the enemy has no options other than surrender or destruction. In addition to the quantity of combat power, tactical advantage is gained through well-coordinated and intelligently applied combat power. The use of combined arms is a classic way to gain advantage. Aviation and indirect fires suppress the enemy while a platoon maneuvers to attack from the flank. Recognizing the psychological value of achieving surprise, Marines seeks to achieve it at every opportunity. Surprise can be accomplished by attacking from an unexpected location or direction, by initiating an ambush along what was thought to be a secure line of communication in the middle of the night, or by attacking with asymmetric assets, such as using close air support against enemy infantry. Advantage is gained from the intelligent use of terrain and weather. For example, a Marine infantry unit may execute a night attack against an enemy that is ill equipped with night vision devices (NVDs). The organization of the Marine air-ground task force (MAGTF) allows Marine infantry platoons reliable and closely coordinated aviation and logistics support that provides advantages most enemies cannot match.

Being Faster

We must be faster than our opponent. The aim is to tailor our tactics so that we execute faster than the enemy force can react. Our ability to plan, decide, and execute faster than the enemy creates advantages that can be exploited. Tempo is not merely a matter of acting at the earliest opportunity. It is also a matter of timing (i.e., acting at the right time). It is physically impossible to operate at peak speed at all times; units must take into account the need to plan, coordinate, sleep, and replenish supplies. If decisive action is the goal, it must be timed to occur at the proper moment.

Commanders can do a number of things to increase the tempo of a unit. First, plans should be kept simple. Simplicity promotes speed; complexity slows things down. Second, speed is increased through decentralization. Mission tactics enable subordinates to understand the intent and exploit opportunities. A third way is the building of implicit communication between cohesive units, developed through aggressive training and codified in SOPs. When subordinates know what to expect, the unit can think, act, and move faster. Fourth, commanders place themselves where they can understand the situation and communicate and coordinate to take advantage of that understanding.

Finally, it is important not only to be faster, but to maintain that relative advantage over time. Sustained tempo requires physical and mental fitness. The platoon commander must plan for transitions and follow-on actions. This planning is essential to preventing the unit from hitting a culminating point and to allow the force to maintain the initiative. Prior planning addresses both contingencies (i.e. branch plans) and planned follow-on actions (i.e., sequels). Momentum can be maintained through the use of combined arms; using artillery and aviation fires to keep the enemy at a disadvantage while Marines on the deck consolidate and reorganize is an example of this. Logistics planning is critical. Although physical exhaustion is a factor, halts are usually driven by logistics. Proper planning for resupply and casualty evacuation is essential to sustaining tempo.

Adapting

There are two basic ways to adapt. Sometimes leaders have sufficient situational awareness to anticipate the situation and take preparatory action. At other times, leaders have to adapt to the situation as it develops. This is improvisation. To be fully adaptable, leaders must be able to do both. Commanders must not remain tied to plans; they must recognize and take advantage of unforeseen opportunities.

During planning, flexibility is increased by planning for branches and sequels. Branches are options designed to deal with possible conditions on the battlefield that may affect the plan. Examples might be to address changes of formation required by early detection of an attack or reorienting the defense (likely accomplished by moving from primary to supplementary positions), or actions on contact during a movement to contact. Sequels are courses of action to follow the achievement of the immediate objective. For example, once the objective is secured, the unit must be prepared to continue the attack northwest to sever enemy line of communications; or once the enemy attack is defeated, it must be prepared to transition to the offense.

The value of branches and sequels is that they prepare us for several different actions and help accelerate the decision-making process, increasing tempo. Branches and sequels are invaluable in helping subordinates prepare for and exploit opportunities.

Cooperation

Marine Corps tactics rely on combined arms and mutual support, which is enabled by commander's intent and lateral communication. Cooperation requires the union of self-discipline and initiative in pursuit of a common goal. Infantry Marines rely on Marine aviators and logisticians to provide essential support. Similarly, cooperation is key to the execution of fire and maneuver where one unit fixes and the other flanks and destroys the enemy. Lateral communication—in this case between the flanking unit and the unit providing the base of fire—is essential.

Exploiting Success

Decisive victories rarely result from initial action, but from quickly and aggressively exploiting the opportunities created by that action. Rapidly identifying and exploiting enemy vulnerabilities can turn a defeat into a route, yielding decisive results. A goal in Marine Corps tactics is not merely to gain advantage, but to boldly and ruthlessly exploit that advantage to achieve final victory. Marine Corps leaders seek to create, recognize, communicate, and exploit these opportunities.

MARINE CORPS PLANNING PROCESSES

There are three planning processes commonly used by Marines in the operating forces—the troop leading steps, the Marine Corps Planning Process, and the Rapid Response Planning Process. Platoon commanders may participate in the Marine Corps Planning Process in support of company or battalion-level operations, or in the Rapid Response Planning Process if they are in a battalion landing team assigned to a Marine expeditionary unit or special purpose MAGTF. However, platoon commanders typically use the troop leading steps to plan their own operations.

The troop leading steps are used principally by small unit leaders without staffs. The six troop leading steps, known by the acronym BAMCIS, are—begin planning, arrange for reconnaissance, make reconnaissance, complete the plan, issue the order, and supervise. The troop leading steps are a proven tool that small unit leaders use to make tactically sound decisions, formulate plans, coherently communicate those plans, and turn decisions into action. The troop leading steps are described in figure 2-1.

Tactical Level planning using BAMCIS	
Receive higher's order ⬇ **Issue a warning order to subordinates** ⬇	
BAMCIS	
Begin planning	Conduct an estimate of the situation using the tactical though process. Think through METT-T, focused on enemy's most likely course of action, develop tentative scheme of maneuver and fire support plan.
Arrange for reconnaissance	Plan reconnaissance to answer remaining questions about the enemy and terrain. Choose the method to validate assumptions and the tentative scheme of maneuver. Determine method of reconnaissance. Coordinate for leaders reconnaissance patrol as required.
Make reconnaissance	Conduct the reconnaissance to confirm assumptions.
Complete the plan	Revisit the tactical thought process incorporating information collected during the reconnaissance.
Issue the order	Effectively communicate the plan over a terrain model.
Supervise	Supervise subordinate execution of orders through the execution of the mission.

Figure 2-1. Tactical-Level Planning Using BAMCIS.

Begin Planning

The platoon commander begins planning as soon as either an order or warning order is received from the company commander. Upon receiving the mission, leaders perform an initial assessment of the situation using METT-T analysis, focusing on the platoon's task and purpose and allocating available time for planning and preparation. The most important products from this initial assessment are the task, purpose, and a timeline.

The first step in planning is to determine how to allocate available time. In the process, leaders reserve roughly one-third of available time for their planning, allowing their subordinates the remaining two-thirds. Time allocation usually utilizes reverse planning, starting with times specified to conduct certain activities, such as crossing the line of departure (LD), and then working backward to allocate the remaining time.

The second step in planning is to issue a warning order to maximize use of available time by subordinates. The intent is to provide subordinates the information required to prepare for impending action while planning is carried out. As an example, a platoon commander might inform the platoon sergeant that they will conduct an attack as part of the company crossing the LD at a specified time; that in preparation for the operation, the platoon needs to draw additional ammunition, rations, or batteries from the company gunnery sergeant; and that the platoon order will be issued at a specified time. This allows subordinates time to prepare for action while the platoon commander conducts a detailed analysis of the situation. The platoon radio operator may be tasked to build a terrain model at this time. At a minimum, the warning order should include the following:

- The task and purpose of the operation.
- The timeline for the operation.
- The time and location for issuing the operation order.
- Any changes to the task organization.
- Any mission specific preparation not addressed by unit SOP.
- The rehearsal plan, with guidance for each element.

Once the initial warning order is issued, the platoon commander executes a detailed analysis of the situation. Whenever information is uncovered or decisions are made that affect preparation, the platoon commander updates the warning order. The situation is evaluated through a METT-T analysis, discussed in detail below. During planning, the platoon commander assesses the enemy's most likely course of action (COA) and any critical vulnerabilities that might be assailable at the platoon level. Next, the platoon commander develops a concept of operations designed to capitalize on the relative strengths of the platoon, including available fire support and command and control (C2) capabilities, while mitigating the enemy capabilities. During the METT-T analysis, gaps in knowledge about the situation are discussed with the company. Unanswered questions are identified to the company as priority intelligence requirements (PIRs).

Arrange for Reconnaissance

Platoons do not conduct independent reconnaissance unless coordinated with and authorized by the company. Based on the situation, a platoon commander may arrange for reconnaissance to answer outstanding PIRs by submitting information requirements to the company commander,

conducting coordination with adjacent or supporting units, or conducting a leader's reconnaissance. If the assets are available, a leader's reconnaissance may be conducted using either assault support aircraft or UASs assigned to or supporting the company. When aircraft are not available, a leader's reconnaissance is typically coordinated and conducted as a reconnaissance patrol. In the defense, a reconnaissance patrol will often reconnoiter proposed defensive positions; while in the offense, they are more likely to move to a vantage point from which leaders can overlook objectives.

Make Reconnaissance

At a minimum, the platoon commander should conduct a map reconnaissance to visualize the terrain and enemy positions as indicated from HHQ. Platoon commanders should coordinate with higher, adjacent, and supporting units. As time and assets permit, more extensive reconnaissance is conducted. While a platoon commander's reconnaissance is focused on PIRs required in support of their own planning, they ensure that the personnel collecting is cognizant of company and higher echelon commander's critical information requirements (CCIRs). The platoon looks for enemy activity or signatures which may confirm enemy composition and disposition. While it is unlikely that a reconnaissance will determine the enemy's entire layout or formation, combat information from forward units—fused with information provided by HHQ—often allows commanders to deduce the enemy's COA. Information uncovered during the platoon's reconnaissance is passed to the company and often allows the platoon commander to update the warning order to subordinates.

Complete the Plan

After completing the reconnaissance, the platoon commander completes the analysis of the situation, integrating the new information collected during the reconnaissance and finalizing the concept of operation, including the scheme of maneuver and the fire support plan. The platoon commander develops requested targets for mortar and artillery fire which become part of the company's list of targets (see chapter 5 for a detailed discussion of fire support planning). Further coordination with the company is often required to integrate the fire support plan.

Platoon commanders often participate in a confirmation briefing or rehearsal of concept drill with the company commander. This is done to ensure the understanding of the commander's mission, intent, and concept of the operation, as well as their role within the operation. It often starts with an intelligence update. During the confirmation brief, the company commander may modify the scheme of maneuver as required due to changes in the situation.

Issue the Order

At a time specified in the warning order, the platoon sergeant gathers the orders group, which typically includes the platoon sergeant, radio operator, the squad leaders, and any attached or supporting small unit leaders, such as machine gun or engineer squad leaders or a joint terminal attack controller (JTAC). The platoon commander provides a terrain orientation and issues a five-paragraph order. The platoon commander usually issues the order verbally, ensuring that each subordinate leader understands the commander's intent, their task, and the purpose of the operation. When time permits, the order is issued over a terrain model. Following the order being issued, the platoon commander makes time for questions and answers.

Supervise

The platoon commander and platoon sergeant supervise preparation and the execution of the plan. Based on the timeline established by the platoon commander, pre-combat checks and pre-combat inspections, confirmation briefs, and mission rehearsals are conducted prior to the initiation of operations. During the operation, the platoon commander and platoon sergeant position themselves where they can best supervise the execution of the operation. As the situation develops, the platoon exploits opportunities and addresses threats, ensuring that actions are communicated with higher and adjacent units.

THE PLATOON COMMANDER'S ROLE IN PLANNING

Platoon commanders are responsible for sound detailed planning, timely decisions, clear definitive orders, and personal supervision. While they do seek out and consider recommendations from their platoon sergeants, squad leaders, and the leaders of attached or supporting elements, the ultimate responsibility remains with the platoon commanders.

Throughout the planning and execution of an operation, commanders communicate with both senior and subordinate leaders. It is essential that a platoon commander shares information both up and down the chain of command to ensure a common understanding of the existing situation.

The platoon commander assesses the mission and the tactical situation and develops a clear and concise order. The concept of operations is developed to allow coordinated application of combat power against enemy vulnerabilities. A vital part of the order is the statement of the platoon commander's intent, which is nested with the mission and commander's intent of the company and battalion commanders. The platoon commander's intent is a clear, concise statement that defines success by establishing in advance the general conditions they want to obtain at the conclusion of the battle or operation. It allows subordinates to make decisions in a fluid environment in the absence of orders.

THE ESTIMATE OF THE SITUATION

Regardless of what planning process is used, the first requirement of a commander is to understand the situation. Marine leaders and planners consider a wide range of factors which impact operations. These include the METT-T factors. These factors collectively are known as the estimate of the situation. The consideration of the effects of operations on the civilian population in the area is also inherent in every situation. During military operations on urban terrain, it may be the dominant consideration.

The estimate of the situation is not a list of information provided from HHQ; rather, it is a focused analysis of how various considerations interrelate in the context of the platoon's specific task. It considers threat and friendly capabilities, limitations, objectives, and desired end states relative to one another, while assessing the effects of terrain, weather, and civilian considerations.

At the platoon level, this analysis is focused on identifying the enemy's most likely COA and the critical vulnerabilities that can be exploited. The enemy's most likely COA is used to develop the concept of operations, which is intended to accomplish the assigned mission. Analysis of the various factors during the estimate of the situation leads to the development of a large portion of the operation order. Routes, tactical tasks, and even rates of fire required often become obvious when the objectives, covered and concealed avenues of approach, and the space required to assault from the assault position to the objective are considered. While the METT-T process is taught and remembered as a linear process, it is important to remember that all the various aspects are considered relative to one another.

Mission Analysis

The first step in the estimate of the situation is to analyze the mission in order to gain a complete understanding of the task and purpose. This understanding of the mission is derived from the company commander's mission, commander's intent, scheme of maneuver, the platoon's specific tasks, and coordinating instructions. During mission analysis, a platoon commander takes into consideration how their mission supports the company and how the company's mission supports the battalion. Platoon commanders consider their specified and implied tasks and the purpose of the mission when developing tasks for their subordinates.

Specified Tasks. Specified tasks are tasks explicitly given by HHQ. The platoon commander must understand the tasks and the implications of those tasks required for the success of the mission. Maneuver to accomplish specified tasks typically provides the basis for a unit's scheme of maneuver.

Implied Tasks. Implied tasks are tasks not explicitly given, but derived based on the platoon commander's analysis of tasks required to accomplish the higher commander's intent. For example, if a platoon is tasked to seize Objective A, the platoon must suppress (i.e., directly or indirectly) and isolate the enemy on the objective prior to assaulting it. Implied tasks often translate into tasks for squads (e.g., first squad—establish a support by fire position to suppress and isolate the objective).

Enemy Analysis

The objective of an enemy analysis is to develop an understanding of how the enemy is likely to employ its combat power and how it will affect the accomplishment of the unit's mission. A platoon commander takes into account the enemy's overall doctrine, training, equipment, and objectives, most likely derived from intelligence briefings provided by the battalion intelligence section or the company intelligence noncommissioned officer (NCO). The platoon commander must go beyond this and analyze in detail how the expected tactical employment of enemy forces will affect the platoon's immediate area of operations (AO). The commander analyzes the enemy by mentally assuming the role of the enemy and considering what the enemy's preferred scheme of maneuver may be. A key effort of the platoon commander is to assess the enemy capabilities and identify critical vulnerabilities which can be exploited.

Composition, Disposition, and Strength. The platoon commander will typically be briefed on the enemy's expected composition, disposition, and strength in the most general terms by size, activity, location, unit, time, and equipment. During analysis, the composition, disposition, and strength serve as the facts. Then the implications are considered. In conducting this part of the

enemy analysis, the platoon commander focuses on the enemy facing the platoon, remaining cognizant of the enemy threat two levels higher. For example, when tasked to destroy a squad strong point, the platoon commander must consider the enemy platoon and company capabilities to support the squad's defense. The analysis makes educated assumptions about the enemy's scheme of maneuver; if the enemy is defending, assumptions are made about the location of enemy listening posts (LPs), observation posts (OPs), and patrol routes.

Capabilities and Limitations. Analyzing capabilities and limitations should answer the question, "what is the enemy capable or incapable of doing?" This is typically focused on identifying the enemy's ability or inability to defend, reinforce, attack, withdraw, or delay. Based on knowledge of the enemy, other tactical tasks are considered, such as interdiction, harassment, and influencing the population. The platoon commander examines the available information and intelligence. The enemy's doctrine, historical means of fighting, and patterns are additional considerations.

The platoon commander considers the "so what" behind the facts. For example, the platoon commander simply restating that the enemy has AK [Avtomat Kalashnikova]-74s and rocket propelled grenades (RPGs) lacks analysis. However, recognizing that "the enemy is believed to be dug in on this ridge and is equipped with AK-74s capable of accurate fires at 400 meters and RPG-7s capable of accurate fires at 300 meters, and is not believed to have night vision sights" is a far more meaningful analysis. When taken in conjunction with terrain analysis, these components allow development of a prediction of enemy line of sight and engagement areas.

Examples of some questions the platoon commander may ask during the capabilities and limitations analysis are as follows:

- Are their additional enemy units whose location is not provided by HHQ?
- How does the composition and disposition of the enemy defense affect their ability to defend?
- Where are likely OP/LPs?
- Under what conditions will the enemy commander call for reinforcements?
- How long will it take for reinforcements to arrive?
- What is the composition of the reinforcing element and where will it come from?
- What conditions will limit the reinforcement?
- Is reinforcement executable during the day or only at night?
- Will it be a mounted reinforcement force or will it be traveling on foot?
- Where and how will the enemy withdraw?

When considering enemy capabilities and limitations, commanders may identify required contingency plans. If a platoon commander expects that the enemy may withdraw or reinforce a position, then their concept of operations may address this contingency as a branch plan.

Enemy's Most Likely Course of Action. The enemy's most likely COA is an educated deduction of the enemy's scheme of maneuver which serves as a planning assumption for the platoon commander. The enemy's most likely COA includes the enemy's mission and intent, an estimate of the size and disposition or formations of the enemy, and their actions on contact with friendly forces. Through the METT-T analysis, the commander distills the enemy's most likely COA and

identifies critical vulnerabilities to exploit. The platoon commander's tactical decisions and concept of operations are typically based against the enemy's most likely COA.

Centers of Gravity and Critical Vulnerabilities. Like all organizations, the enemy will function as a system, with distinct and interrelated elements that generate their military capabilities. In order to focus planning, a relatively few centers of gravity are identified, which are sources of enemy strength. They can be tangible assets such as a tank platoon, capabilities such as responsive fire support from a supporting artillery battalion, or intangibles such as morale.

Units should seek to identify and focus on an enemy critical vulnerability which, when exploited, will do the most significant damage to the enemy's ability to resist. However, most enemy systems will not have easily identifiable and/or targetable centers of gravity on which everything else depends. It is often necessary to create an opportunity to attack the enemy critical vulnerabilities. This is done by focusing friendly strengths against the enemy's relative weaknesses. At the platoon level, this often means surprising the enemy, capitalizing on combined arms capabilities and exploiting our night fighting and EW capabilities.

Terrain and Weather Analysis

The platoon commander analyzes the terrain and weather from both the friendly and enemy perspectives. The enemy perspective is arguably the more important of the two because the platoon commander uses this information in conjunction with the enemy analysis to develop the enemy's most likely COA. This is not simply a regurgitation of existing terrain and current weather conditions, but rather an analysis of the effects of the military aspects of terrain and weather considered from the enemy's perspective and taking into consideration their mission and capabilities. The information analyzed will usually be derived from the HHQ order, the platoon commander's map reconnaissance, physical reconnaissance, or the intelligence section.

Observation and Fields of Fire. Observation is the influence of terrain on visual reconnaissance and target acquisition. The platoon commander should ask; "What can be seen or not seen from where?" Fields of fire are the influence of terrain on the effects of weapons systems. Both observation and fields of fire are important in determining how the enemy can identify and engage friendly forces and vice versa. When considering observation and fields of fire, the platoon commander considers the effects of daylight, lunar illumination, and the use of both friendly and enemy night vision and/or thermal weapons sights. High ground usually provides better observation. Observation and fields of fire are principle drivers for tactical decisions on the employment of weapons. Emplacement of key weapons systems is usually designed to give them the best fields of fire relative to expected enemy avenues of approach.

Cover and Concealment. Cover is protection from the effects of fires. Concealment is protection from observation or target acquisition. The analysis of cover and concealment often relates to consideration of observation and fields of fire. Again, both enemy and friendly aspects are considered. The effects of cover and concealment take into account both friendly and enemy weapons systems and optics. For example, a mud adobe building may provide good cover against small arms rounds, but be less effective cover against a tank's main gun. Similarly, vegetation may provide effective concealment against the naked eye, but provide very little against a unit using thermal weapons sights effectively.

Obstacles. Obstacles are natural and existing or reinforcing obstructions that canalize, delay, restrict, or divert the maneuver or movement of a force. A defender's scheme of maneuver is often designed to take advantage of existing obstacles. Enemy employment of tactical obstacles, wire entanglements, or anti-vehicle ditches often provides key information about their intentions. The enemy may employ mines, improvised explosive devices (IEDs), or booby traps to reinforce existing obstacles.

Key Terrain. Key terrain is an area which the seizure, retention, or control of affords a marked tactical advantage to either combatant. Controlling it does not require occupation, but it must potentially affect mission success for either combatant. Key terrain is analyzed considering the friendly and enemy missions, and is identified relative to the friendly or enemy scheme of maneuver. It is relative to the level of the force. As an example, a battalion may recognize a crossroads which allows the enemy to freely use a series of roads to reinforce, resupply, or withdraw as key terrain. A company commander may recognize that a hill that provides overwatch of the crossroads is key to the plan. For the platoon commander, a wooded draw which offers good covered and concealed approach to the objective may be key terrain.

Avenues of Approach. Avenues of approach are air or ground routes a force of a given size may use leading to its objective or to key terrain in its path. Avenues of approach and movement corridors are considered relative to the mobility and security of a force. Open terrain may provide high speed avenues of approach for motorized and mechanized forces. Restrictive terrain, such as a wooded draw, may provide a covered and concealed avenue of approach for dismounted forces. They offer friendly and enemy forces the best opportunities to advance or withdraw. Platoon commanders develop their schemes of maneuver taking into account the avenues of approach and the friendly and enemy abilities to use them to achieve mass, shock, and speed. When friendly forces are attacking, platoon commanders identify avenues of approach to the objective, as well as possible enemy withdrawal or reinforcement routes. In the defense, identifying enemy avenues of approach determines the orientation and design of the defense, the establishment of OP/LPs, and the creation of engagement areas.

Weather. The platoon commander analyzes weather using its five military aspects: temperature/humidity, precipitation, wind, clouds, and visibility (i.e., both day and night). The platoon commander should ask, "How will these elements influence the operations of each combatant?" Weather affects equipment (including electronic and optical), route trafficability, and visibility. Inclement weather affects visibility, rates of movement, routes of movement, unit efficiency, and morale, and makes command and control more difficult. Poor weather conditions can be as much of an advantage as a disadvantage to a unit, depending upon the unit's capabilities, equipment, and training.

Troops and Fire Support Available

Platoon commanders must understand the capabilities of their Marines and the assets they bring to the fight in the same way they analyze the enemy's capabilities and how it will fight. They must consider and analyze the mental and physical condition of their Marines, their level of training, level of supply, status of equipment, and available fire support assets. Some of this information, to include nonorganic fire support assets, can be found in the HHQ's friendly situation and tasking statements.

During the estimate of the situation, platoon commanders list and thinks through the best way to employ all personnel, assets, and capabilities, available to their platoons. Refer to appendix I for US and common foreign weapons capabilities. During the estimate of the situation, a platoon commander may identify and request additional capabilities, equipment, munitions, or personnel required to accomplish the mission. For example, if tasked to lead a movement in an area that may contain a variety of explosive hazards, the platoon commander may request an explosive detection dog team or combat engineer support. In preparation for a defense, the platoon commander may identify the need to draw pioneer tools (i.e., shovels, picks, and axes), light machine guns, rockets, and claymore mines.

The platoon is task-organized as required to accomplish assigned tasks. Task organization considerations include detachments and attachments. Squads may be reorganized as required by the mission. For example, all of a platoon's grenade launchers may be placed in a single squad to allow it to mass high explosive fires as part of a support by fire mission.

Organic Assets. The platoon commander must consider the unit's capabilities and limitations. Previous training and experience are vital to having a realistic understanding of the capabilities of a unit in combat. While it is never good to underestimate the enemy, Marine Corps infantry units usually have a significant advantage in small unit leadership training and night fighting capabilities over most adversaries. The platoon commander should know the strengths of the platoon and seek to capitalize on them while minimizing its vulnerabilities.

Attachments and Detachments. The platoon commander considers attachments and detachments and how they will affect the mission. Detached forces typically affect the number of Marines available to the platoon commander. Attachments and supporting units usually add additional capabilities to an infantry platoon. See chapter 3 for definitions and discussion of attached, direct support, and general support command relationships.

Common attachments for an infantry platoon include machine gun teams or squads, assault squads, sniper teams, antiarmor weapons squads (i.e., either TOW or Javelin), mortar forward observers, artillery scouts, combat engineers, and assault amphibian sections. An infantry platoon commander should be familiar with the basic capabilities of each of these, but should confirm their capabilities and limitations and receive input from the supporting unit leaders during planning when they are attached or placed in direct support. Infantry platoons may also find themselves reinforced with or supported by other units; these might include military working dog teams, interpreters, human intelligence teams, signals intelligence teams, explosive ordnance disposal (EOD) teams, or helicopter support teams.

Integrating attachments requires both art and science. The science is knowing how to employ a particular capability, and requires knowledge about weapons ranges and effects, and capabilities and limitations. The art addresses the leadership factors of integrating the attachment into the unit for the period of the operation. The platoon commander and platoon sergeant should make a habit of welcoming attached or supporting unit leaders, discussing their capabilities and limitations at the specific time (including ammunition and supply status and human factors), and ensuring they understand the concept of employment and commander's intent. The platoon commander should make a habit of seeking out and integrating input from these subject matter experts during planning.

Higher, Adjacent, and Supporting Units. The platoon commander identifies how higher, adjacent, and supporting units' schemes of maneuver effect the platoon's operations. A platoon's assigned mission within a company's operation, either as the main effort, a supporting effort, or the reserve, has a significant impact on employment and the ability to call for supporting fires. The main effort is typically supported by the company mortars. Depending on the company's role in the battalion's operations, it may be able to request 81mm mortar, artillery, and close air support fires. In relation to adjacent and supporting units, the platoon commander considers (and must often coordinate) geometries of fire, speed of advance, control measures, and signals.

Time, Space, and Logistics

The ability to appreciate the aspects and effects of time and space is one of the more important qualities in a leader.

Time. A solid understanding of time required versus time available drives planning and execution. Platoon commanders must identify time constraints and restraints given by HHQ. Within these given time constraints, the platoon commander plans the use of time to develop and execute plans to accomplish the assigned mission. The platoon commander considers the time required to plan, prepare, and rehearse an operation and secure required logistics. To the extent that the situation permits, sleep for both the individual Marines and key leaders must be taken into account.

Planning also takes into account estimates of time required after initiating the operation. In the offense, this includes the estimates of time required to move from the assembly area to the LD, from the LD to the assault position, and from the assault position to close on the objective. The time required for an assaulting unit to move from the assault position to the objective has significant impacts on fire support planning and ammunition requirements. In the defense, the defend no later than time is critical for planning. Platoon commanders allocate as much time as possible to their subordinates while simultaneously conducting METT-T analysis. A general rule is that platoon commanders should use no more than one third of the available time for their use, while allocating two thirds to subordinates.

Space. The platoon commander considers the AO and identifies tactical control measures, fire support coordination measures (FSCMs), and airspace control measures within the AO, as applicable, to understand and manage the geometry of fires. The interrelated consideration of time, space, and ammunition requirements is critical to planning for maneuver and supporting fires.

Logistics. Platoon commanders integrate logistical planning when estimating the situation. History is full of examples of units which have been defeated due to a failure to account for logistical requirements. Planning for water, ammunition, and fuel (for those units equipped with vehicles) resupply is an integral requirement for mission accomplishment. Planning for the capabilities necessary to stabilize and evacuate casualties often means the difference between life and death. Logistics must be taken into consideration as part of the estimate of the situation, affected by other factors. Understanding where the company logistics team is and its duties and responsibilities is important to the success of integrating logistics planning and execution.

Civil Considerations

Commanders must always consider the impact of operations on civilians. Appropriate actions are taken to protect the lives of civilians and their property from unnecessary destruction. The nature

of the operation will dictate the depth of civil analysis required by a platoon commander. In high intensity combat operations, consideration will usually be made to minimize civilian casualties, known as collateral damage. In other environments, platoon commanders might find themselves deeply involved in providing security and minimal essential services to a civilian population. Civil considerations are generally considered through the lens of the areas, structures, capabilities, organizations, people, and events, known by the acronym ASCOPE.

Areas. This addresses political, religious, functional, or other divisions that have significance to local populations. The platoon commander may have to consider functional divisions between residential, commercial, industrial, religious, and governmental areas in a city or be concerned with tribal boundaries in a more rural area.

Structures. Planning for urban operations requires an understanding of the impact of significant physical structures in an assigned area. Hospitals, schools, monuments, and religious sites are likely to be politically and culturally sensitive structures. Dams, bridges, power plants, and similar infrastructure are often essential to the economic and thus the political well-being of an area. Platoon commanders will typically be briefed about significant structures in their AO and should plan accordingly. For example, if Marines enter a religious structure for a tactical reason, the negative reaction from the population may outweigh the benefits. Conversely, the security of structures such as a hospitals or governmental centers may be vitally important to the accomplishment of a unit's mission.

Capabilities. Capabilities are functions and services that local authorities provide. Examples include the capabilities of courts, hospitals, police, firefighters, and civil infrastructure, such as drinking water and sanitation. A platoon commander may have to coordinate with or support the local police during an operation. Platoons may be tasked to support locals in securing or improving their capabilities in order to gain popular support.

Organizations. Religious groups, criminal organizations, nongovernmental organizations (NGOs), or other organizations are made of people with shared interests and goals. The relationship of friendly forces to these organizations is dependent on their effect on the platoon's mission and commander's guidance. Considerations to support or eliminate organizations are dependent on their effect on the overall mission and guidance from HHQ.

People. Key individuals in any area are as important as key terrain. The local populace's support or opposition can significantly affect the platoon's mission, and platoon commanders will frequently interact with tribal, religious, or political leaders who can influence the population to support the mission.

Events. Every culture has key events and dates that are important. History has demonstrated that key events and dates often impact military operations. For example, elections may be targeted by the enemy to attack friendly forces or the general population. More routinely, platoon commanders should understand the daily and weekly patterns of life; activities such as school hours, market hours, and prayer hours will impact their platoons. Understanding when and where events typically take place in an AO is useful in identifying unusual variations and predicting enemy activities.

EXECUTION OF LEADER'S RECONNAISSANCE

A leader's reconnaissance is conducted when the situation warrants it, after being coordinated with the company. It is usually conducted after the initial estimate of the situation to confirm assumptions and address information requirements. The leader's reconnaissance is conducted as a reconnaissance patrol. Specific objectives of the patrol are identified in the order, and patrol members are briefed on the PIRs and CCIRs of the company and battalion. More detail is provided on leader's reconnaissance for both offensive and defensive operations in the relevant chapters. More details on patrolling are found in MCTP 3-01A.

DEVELOPING THE CONCEPT OF THE OPERATION

Having built an understanding of the situation through analysis, coordination, and reconnaissance, the platoon commander then must decide on a practical solution. The concept of operations communicates a platoon commander's decisions on tactics to subordinates. The concept of the operation consists of the scheme of maneuver and the fire support plan. The scheme of maneuver is developed to avoid enemy strengths and focus efforts against enemy weakness to accomplish the commander's intent. The scheme of maneuver tells the platoon how the commander envisions the operation unfolding chronologically.

The platoon commander's scheme of maneuver is developed based on the enemy's most likely COA. Branches may be briefed to account for variations in the enemy's deployment. Sequels are often briefed as "be prepared to" tasks in order to prepare the platoon for likely follow-on actions.

The fire support plan supports the scheme of maneuver. It may include direct fires, indirect fires, and other supporting assets. The fire support plan typically includes target reference points (TRPs) for direct fires, approved targets for indirect fires, the type of fires, expected effects, and expected duration, as well as signals to commence, shift, and cease fires.

PLANNING QUESTIONS FOR PLATOON LEADERSHIP

The following list of questions, while not comprehensive, should be considered by platoon commanders before each mission:

- Is the commander's intent one and two levels up understood by every Marine in the platoon?
- How is the platoon integrated into the overall plan?
- Has the platoon synchronized its actions with the units on its flanks?
- How can I surprise the enemy to gain advantage?
- Have I scheduled inspections, checks, and rehearsals?
- What can we do to speed up the tempo?

- What enablers have been assigned or attached?
- Do we understand the capabilities of the enablers or attachments placed with the platoon?
- What is the plan for the employment and sustainment of the enablers or attachments?
- What are our intelligence collection responsibilities and the plan to fulfill them?
- Is the fire support plan understood by platoon leaders down to the squad level?
- Is the platoon ammunition supply cross-leveled and is it adequate for the upcoming mission?
- When/where will the platoon receive the next ammunition draw?
- Is the platoon adequately supplied with food and water?
- What is the plan for resupply?
- Where is the nearest casualty collection point?
- What is the plan for transferring enemy prisoners of war?

CHAPTER 3
COMMAND AND CONTROL

This chapter discusses command and control considerations at the platoon level. The uncertainty and time constraints that characterize military operations create significant challenges in maintaining effective command and control. At the platoon level, command and control must facilitate making timely and sound decisions despite incomplete and unclear information. During execution, the commander monitors the evolving situation. As the situation changes, the platoon commander must be able to effectively communicate orders to subordinates while keeping higher and supporting units informed.

Commander's intent is the commander's personal expression of the purpose of the operation. The platoon commander considers the commander's intent of both the company and battalion commander, while developing their own. Commander's intent allows subordinates to make decisions in a fluid environment in the absence of orders by describing the purpose of an end state, which may address not only the physical environment, but also the cognitive state of adversaries, allies, and the local populations. A clearly stated commander's intent allows mission tactics and decentralized execution. When combined with a bias for action, understanding of the commander's intent and end states empowers subordinate leaders to aggressively execute operations and make decisions that support the unit's mission.

THEORY OF COMMAND AND CONTROL

As stated in MCDP 6, *Command and Control*, "command and control encompass all military functions and operations, giving them meaning and harmonizing them into a meaningful whole." Command and control is the exercise of authority and direction by a properly designated commander over assigned and attached forces in the accomplishment of the mission.

Command

Command is the lawful exercise of a commander's authority over subordinates. Platoon commanders are responsible for everything their platoons do or fail to do. They accomplish their responsibilities through sound planning, making timely decisions, issuing effective orders, and by personal supervision and leadership. Their duties require a thorough understanding of the tactical and technical employment and the capabilities and the limitations of their platoons, and of those units which may be attached to or in support of them. They meet their responsibilities by exercising the three elements of command; authority, leadership, and decision making.

Authority. The platoon commander's authority is conferred by virtue of rank and assignment. Command includes the authority and responsibility to plan and employ assigned forces for the

accomplishment of assigned missions. It also includes responsibility for the health, welfare, morale, and discipline of assigned personnel, as well as the accountability and tactical employment of assigned weapons and equipment.

Leadership. The infantry platoon commander exercises leadership through personal example, direction, and delegation. The platoon commander demonstrates by example the actions and characteristics required of the platoon while executing operations in physically and mentally demanding environments. The platoon commander directs operations through planning, orders, and supervision. Effective commanders balance the need for exact and easily understood orders with the imperative to empower their subordinates with the highest degree of initiative and flexibility. The platoon commander delegates authority to subordinate leaders as required by the situation. An important goal of leadership is to build a close-knit sense of teamwork, which is essential to developing trust and understanding.

Decision Making. It is in the realm of decision making that commanders set their units up for success or failure. Effective command and control supports decision making by increasing a commander's situational awareness and enabling a faster decision-to-execution cycle, which generates the speed and tempo advantages necessary to dominate adversaries. The ability to make decisions quickly with little or incomplete information is an essential skill for the platoon commander, as is the ability to issue orders which rapidly translate the decision into action.

The platoon commander must be able to transition between and conduct rapid, time-critical decision making and deliberate decision making during any operation to provide their subordinate elements updated guidance as events and situations unfold.

Control

Control is the iterative process of adjusting the guidance and directions given to subordinate and supporting units based on situational awareness and feedback. Situational awareness is knowledge of the present environment, including knowledge of METT-T factors. Information and skill are the two elements of situational awareness. Higher, adjacent, supporting, and subordinate elements provide feedback which helps build the commander's understanding of the situation.

For a commander to exercise control in the dynamic environment of military operations, they must have more than a fixed appreciation of the situation. They must constantly observe their environment, monitor the situation around them, and receive relevant information from subordinates. This feedback allows commanders to constantly update their estimates of the situation and modify orders as needed. Information may come from anywhere in any form, such as intelligence about enemy actions, reactions, and counteractions; information about the status of subordinate or adjacent units; revised guidance from HHQ based on developments; or something as subtle as the inflection in a subordinate's voice during a contact report. Feedback is the mechanism that allows commanders to adapt to changing circumstances, exploit fleeting opportunities, respond to developing problems, modify schemes, or redirect efforts. The three elements that comprise control are people, information, and C2 structures.

People. The general aim of the platoon in regards to command and control should be to build unity of effort, reasonable levels of control, cohesive and effective teams, and effective information distribution. The commander accomplishes this through training. The goal is to develop a

cohesive team which trusts and understands one another, enabling implicit communication, rapid distribution of information (i.e., up and down the chain of command), and execution of operations. The platoon commander and platoon sergeant must know the capabilities and limitations of their Marines and assign tasks and responsibilities appropriately. The squad and team leaders are the most important links in the platoon chain of command; therefore, they also must be given the responsibility and opportunity to build cohesive teams.

Information. Information allows commanders to make decisions beyond those that are purely intuitive. In a situation when a commander must make an instant decision, intuition and information previously received will form that decision. In a situation when a commander has the advantage of time between present demands and the need for a decision, the C2 architecture should provide relevant and timely information. Modern C2 systems can overload platoon commanders with information, which creates an environment in which the most relevant information is difficult to identify. Therefore, information must also be prioritized and organized so that the most important information is not overlooked or lost.

Awareness and understanding of the operational environment allow the platoon commander to anticipate future conditions, develop courses of action, and accurately assess risks. This awareness and understanding can be obtained only through collecting, processing, analyzing, and assessing information. Information is, in a sense, the raw material that fuels the entire C2 process. The ability of commanders to exercise command and control depends on their ability and that of their subordinates to receive and share that information.

Today's C2 infrastructure has the ability to overwhelm units with masses of data and information. Each battalion establishes an information management plan to collect, sort, store, analyze, fuse, and share information. Platoons and companies operate in accordance with the information management plan. The following subordinate paragraphs address the key elements of the information management plan for the platoon.

Commander's Critical Information Requirements. All hands in a platoon should understand the CCIRs of the platoon, company, and battalion. When a CCIR event occurs or answers to a CCIR are discovered, the platoon must immediately transmit that information by the most expeditious manner to the company HQ.

Common Tactical Picture. The common tactical picture (CTP) is an accurate and complete display of relevant tactical data that integrates tactical information from the multi-tactical data link network, ground network, intelligence network, and sensor network. In most situations, platoons are equipped with automated systems capable of automatically updating their locations (and their squads if so equipped) in the CTP.

Regardless of whether the CTP is updated on an electronic medium or on a standard military map, the platoon commander must ensure that each subordinate element has the most current CTP and has the means to update/change it as events progress. Having the most current CTP gives subordinate leaders a clear understanding of the battlefield and allows them to make decisions and/or recommendations at a greater speed.

Reports. The platoon makes periodic reports to the company based on time or events, such as crossing a phase line or making contact with the enemy. The format and method of transmission of these reports are directed by the battalion information management plan.

Briefing and Debriefing Summaries. In accordance with the battalion's information management plan, platoons submit relevant information from briefings and debriefings to the company HQ. Written information is often supplemented by digital photographs and map tracks.

These briefings and debriefings allow the platoon, company, and HHQ to update and resynchronize its situational awareness. This in turn allows for other subordinate, adjacent, and higher units to reassess the current battlefield and make changes as necessary.

Feedback. Commanders communicate with both senior and subordinate leaders to keep higher-level commanders informed of the situation. While the company and battalion commanders may have a clear understanding of the overall situation, platoon commanders are likely to have a better perspective of a specific tactical situation. Both perspectives are essential to a sound solution. During a commander's decision-making process, subordinate commanders should actively share their perspectives with senior leaders with the intent to identify opportunities or resolve issues at the earliest opportunity.

Command and Control Systems. The platoon's command and control is enabled, sped up, and/or automated by C2 systems, freeing small unit leaders to focus on the tactical situation and leading their Marines. An infantry platoon normally has voice and limited digitally-interoperable C2 systems. Command and control systems facilitate—

- Rapid dissemination of information and decisions.
- Generation/reporting of relevant information, including position locating information.
- Efficient information flow up, down, and across the chain of command.

Cohesive and well-trained units can function much more effectively as they understand and trust one another. Despite the best efforts of planners and commanders, the enemy still gets a vote in the outcome of events. The complex, high-stress, and time-competitive environment of combat makes it imperative for units to share situational awareness and develop the ability to operate in a mutually supportive manner despite unforeseen events or failure of communications systems.

Explicit Communication. Explicit communication, as given through orders and signals, is essential for platoon command and control. Explicit communication is required to convey the missions and commander's intent and to inform subordinates on changes in the situation. Platoon commanders position subordinate unit leaders and allocate communication assets to ensure timely and direct communication. When possible, leaders communicate directly with one another to ensure orders and information are understood.

Implicit Communication. Implicit communication is made possible through mutual understanding, SOPs, and a shared understanding of the situation and the commander's intent. Other techniques include leadership by example and established, event-driven actions. Implicit communication enables subordinate small unit leaders to maintain momentum through common understanding of

the situation and the exercise of initiative. It enables decentralized decision making in execution and generates tempo on the battlefield.

TASK ORGANIZATION

Platoons are task-organized to prepare to conduct specific operations and establish command and control. In organizing a platoon for a specific mission, the platoon commander considers the tasks required of each squad and attached element. The location and tasking of attached weapons platoon assets and forward observers and/or JTACs is often critical. The platoon task organization accounts for such considerations as communications, logistics, and fires, as well as assigned tasks and the capabilities and limitations of leaders. The platoon commander should be flexible, reorganizing the platoon for each specific mission. The appropriate task organization is derived from specified and implied tasks along with the troops and fire support available during mission analysis.

Maintaining cohesive teams is important; however, the platoon should not rule out task-organizing to suit the situation. This might include creating nonstandard and temporary mission-oriented elements. For example, a platoon might concentrate all of the grenade launchers in one squad to allow it to mass fires on a specific objective.

Command and Support Relationships

A significant portion of organizing for combat is determining the relationships between individuals and units. There are two types of relationships for consideration—command relationships and support relationships. Table 3-1reflects the types of command and support relationships recognized within the Marine Corps at the tactical level. The command relationships include organic and attached. The support relationships include direct support, general support, and general support reinforcing. The platoon commander must understand these relationships to understand the authorities and limitations on employing these attached and supporting assets, as well as the responsibility to support them.

Attached. Attached units are under the command and control of the platoon commander. The platoon commander is responsible for the conduct and actions of attached Marines in the same manner as personnel organic to the platoon, and can task-organize attachments and assign missions as required. Likewise, they are responsible for the logistical support of attached units.

Direct Support. The direct support (DS) relationship requires one force to support another specific force; it directly answers to the supported force's request for assistance. The platoon commander requests support directly from the supporting unit instead of going through its HQ. The platoon commander cannot suballocate, reassign, or reorganize a DS unit. Command, administrative, and logistical responsibilities generally remain with the supporting unit's parent unit; however, given the distance and distributed nature of some missions, the platoon may be responsible for command and logistical responsibilities as directed by the common higher commander. For example, when an engineer squad is in direct support of a platoon, the platoon commander cannot assign engineer

teams to the squads, but could task the squad to conduct a breach at a specific location, and assign the squad positions in the platoon's movement formations.

Table 3-1. Command and Support Relationships.

Command Relationship	Definition	Tasking and Logistical Support Responsibilities
Organic	Elements listed in a unit's table of organization	Commander may task and task-organize organic unit. Commander is responsible for logistical support.
Attached	A unit that is bound temporarily to a unit other than it's organic command.	Commander may task and task-organize attached units as if they were organic forces. Supported commander is responsible for logistical support.
Support Relationship		
Direct Support	A mission requiring a force to support another specific force and authorizing it to answer directly to the supported force's request for assistance.	Unit is tasked and task-organized by its organic commander. Unit receives tactical tasks from supported commander. Supported commander is responsible for logistical support.
General Support	That support given to the supported force as a whole and not to any particular subdivision thereof.	Unit is tasked and task-organized by its organic commander. Organic commander is responsible for logistics support.

General Support. A unit in general support provides support to the total force and not to any particular subdivision of the supported force. When a unit is in general support of a company, the platoon commander may request support from the supporting asset, but the company commander prioritizes and assigns the supporting asset's missions. A general support unit is still under the command of and is task-organized by its parent unit. For example, if the company mortar section is in general support of the company, it will respond to calls for fire from any of the company's platoons. The platoon commander can call on them for fire support, but may not assign them a tactical position or task.

Supported and Supporting Units

Depending on the company concept of operations, a platoon may be either a supported or supporting unit during any specific phase of an operation. The main effort is normally the supported unit, while other units are supporting units. The supported commander is responsible for ensuring that the supporting commander understands the assistance required. The supporting commander is responsible for providing the assistance required by the supported commander. Lateral communications between supported and supporting units is expected. The platoon commander also needs to recognize when the transition between supporting and supported relationships occurs. The main effort may change several times during an operation.

PLATOON ROLES AND RESPONSIBILITIES IN COMMAND AND CONTROL

Platoon Commander

The platoon commander—

- Develops and implements the platoon's training plan.
- Conducts planning and coordination with higher, adjacent, and supporting units.
- Ensures shared understanding of the tactical problem both up and down the chain of command.
- Develops and issues warning orders, operation orders, and fragmentary orders.
- Supervises the conduct of operations.

Platoon Sergeant

The platoon sergeant—

- Supervises platoon training.
- Performs the duties of the platoon commander in their absence.
- Establishes and supervises standards.
- Enforces SOPs.
- Ensures all necessary reports are made to the company.
- Supervises the distribution, maintenance, and employment of platoon communication assets.
- Directs the supply and resupply of the platoon.
- Plans and supervises casualty evacuation.

Platoon Radio Operator

Platoon radio operators—

- Monitor appropriate radio networks and initiate appropriate action.
- Maintain situational awareness on all friendly and enemy activity.
- Notify the platoon commander of any CCIR event.
- Transmit all necessary reports to the company.
- Maintain platoon's CTP by operating and maintaining the position location information systems.
- Monitor and operate digital communications systems.
- Support the squads' use of radio systems.
- Construct or assist in the construction of terrain models.

Squad Leaders and Noncommissioned Officers in Charge of Attached and Supporting Units

Squad leaders and the leaders of attached and supporting units—

- Monitor platoon-level nets.
- Receive and execute orders from the platoon.
- Notify the platoon commander of any CCIR event.
- Monitor and operate digital communications and EW systems as directed.

METHODS OF COMMAND AND CONTROL

Base Unit

The base unit method of command and control is a method by which a small unit leader directly controls the direction, tempo, and orientation of a single unit, with the other units positioning themselves in relation to that base unit. In a platoon operation, the platoon commander designates one squad as the base unit, while the other squads and supporting assets base their movements and decisions on that unit. Likewise, a squad leader often designates a fire team as the base unit within the squad.

Command and Control Using the Base Unit. The base unit allows the platoon commander to issue orders to one squad leader who is usually in close proximity. As the base unit leader directs their subordinates, adjacent units adjust their tempo, direction, or orientation in accordance with the base unit.

The base unit method gives unit leaders the ability to communicate implicitly in situations where explicit communication may be ineffective or impractical. Battlefield noise and dispersion between elements can make verbal communication virtually impossible. Even with radios at the fire team level, application of the base unit concept prevents leaders from having to use that net to communicate information that could be implicitly understood. Restrictive terrain, adverse weather conditions, and limited illumination can also make visual and verbal contact difficult between unit leaders.

Platoon commanders set the conditions for employing base units by establishing SOPs and conducting training on the employment of base unit maneuver. The specific tasks for each specific mission are communicated in the operation order. The platoon commander and squad leader can change their base units during the conduct of an operation in the event that the assigned base unit becomes unable to fulfill its responsibilities due to the enemy situation, terrain, or any other limiting factor. The platoon commander may designate a different base unit for different parts of the operation.

Location of Key Personnel. Platoon commanders ensure effective command and control by positioning their squad leaders and platoon sergeants. After developing the scheme of maneuver, they assign tasks to their squad leaders that they are best suited to accomplish based on their strengths and weaknesses. Leaders determine where to position themselves within an element, but platoon commanders identify which element they, their platoon sergeants, and any enablers (e.g., interpreters) will be located with. Platoon commanders and their platoon sergeants are normally not collocated to reduce the chance of both of them being rendered combat ineffective by enemy action. This separation also facilitates more effective command and control of the platoon. Platoon commanders identify potential friction points within the operation and position themselves or their platoon sergeants to mitigate anticipated friction. Different operations and situations require different positioning, so it is imperative for a platoon commander to apply critical thought to each action within an operation to best assess where friction will occur and how it can be mitigated.

Fighter-Leader

Marines at each echelon of leadership in the platoon are fighter-leaders and must balance the responsibility to fight with leading and directing their subordinates. Successful combat leadership depends on the platoon commander and squad leader's ability to lead and direct their Marines amid the physical and mental challenges that characterize war. Combat makes verbal communication extremely challenging. Even with communication assets distributed to the lowest echelon of leadership, verbal communication is not a reliable method for relaying information to Marines within a fire team. Additionally, fear and uncertainty in combat can result in hesitation and indecision even among Marines with an understanding of the situation and their role in the operation. It is in this environment that leaders at all levels, from the platoon commander down to the fire team leader must recognize the need to inspire and drive action through their own actions and example. Through this, Marines gain confidence in their leaders and the plan, allowing them to overcome the friction around them. Leaders within the platoon must understand the extent to which they must fight and lead in such an environment.

Fire Team Leader. Fire team leaders' billet responsibilities require them to lead by personal example while employing their weapons alongside their teams and providing a base of movement. Fire team leaders' initiate their teams' movements towards the enemy and physically directs them through fire commands and the employment of their personal weapons.

Squad Leader. Squad leaders' billet responsibilities require them to execute the fighter-leader concept primarily by directing the actions of their base unit fire team leaders. By controlling their base units, squad leaders exert their influence on the rest of their squads. Though squad leaders' primary responsibility is to lead by controlling their base units, they must be able to recognize moments when their squads require their leadership by personal example. Squad leaders can enable their squads to succeed during these moments of elevated friction by leading their Marines from the front or by applying unique skill sets to the situation.

Platoon Commander. The platoon commander establishes the concept of operations during planning. As time permits, the concept of operations is rehearsed, as well as any required battle or immediate action drills. The platoon commander makes adjustments in execution and should be able to identify the appropriate actions during the planning process. The platoon commander typically observes the overall situation of the platoon and provides the minimum necessary direction to the base squad so the other squads can take appropriate action. Platoon commanders should generally not employ their personal weapons, but observe and influence the overall situation of the platoon by directing the squad leaders and forward observers to employ direct and indirect fires to accomplish the mission. Platoon commanders must be able to communicate directly with their unit leaders, while maintaining awareness of their units' locations on the battlefield relative to adjacent and supporting units. Should other means of communication fail or become impractical, platoon commanders may lead their Marines from the front in order to inspire action and demonstrate their intent.

Platoon Sergeant. Platoon sergeants position themselves where they can maintain an overall understanding of the situation and assume the duties of the platoon commander if necessary. The platoon sergeant may be positioned to influence points of friction or command subelements, such as a support by fire position, an internal base of fire, or an OP to control and observe fires. This position compliments where the platoon commander is positioned and enables each of them to

communicate and update each other through each part of a mission. Should other means of communication fail or become impractical, the platoon sergeant may lead the Marines by example in order to inspire action.

Standing Operating Procedures

Standing operating procedures are invaluable aids to the execution of operations. They simplify command and control since basic tactical procedures are standardized and known to the members of the unit, allowing intrinsic communication. Standing operating procedures allow small unit leaders to make and communicate decisions more rapidly and effectively. They can detail the appropriate combat load for different operations, the techniques for movement across danger areas, signals, and immediate action to take in a given situation. The platoon commander should aggressively train to the company SOP, which should be nested with the battalion SOP.

Event-Driven Actions

The platoon commander can increase command and control for specific events by establishing event-driven actions in the concept of operations. This is based on an existing SOP, which can be modified for specific situations as required. The execution of suppression, obscuration, security, and obstacle reduction are examples of event driven actions. When event driven actions are applied, the platoon bases the timing and execution of tasks on specified criteria or the occurrence of recognizable conditions on the battlefield. Whether it is an individual Marine or the entire platoon, Marines act based on identified conditions instead of basing their actions on timing alone or depending on additional orders. As an example, when in the defense, the platoon commander may establish trigger lines and assign specific criteria for engagement based on the enemy's actions. A common understanding of which events or conditions drive follow-on actions facilitates communication within the platoon. This implicit communication is essential because the platoon commander may be unable to observe the situation or issue required orders. The use of event driven actions allows small unit leaders to understand when it is appropriate for them to act without explicit commands.

Tactical Control Measures

During planning, the platoon and company commanders identify requirements for and establish tactical control measures to facilitate command and control in execution. Once the platoon commander has developed a general scheme of maneuver, they establish tactical control measures to designate where specific actions are to occur. In offensive operations, the platoon commander typically uses tactical control measures such as assembly areas, attack positions, LDs, assault positions, checkpoints, phase lines, release points (RPs), fire support targets, and FSCMs. In defensive operations, the platoon commander establishes an engagement area and assigns sectors of fire, TRPs, and trigger lines. Checkpoints, routes, and rendezvous points are established to help control movement and minimize the chance of fratricide when units are moving toward one another. Tactical control measures help generate momentum and tempo by enabling subordinate unit leaders to understand the scheme of maneuver and how maneuver and fires will be executed within the context of the operation.

COMMAND AND CONTROL SYSTEMS AND NETWORKS

Available C2 systems and networks vary greatly based on the operational situation. In general, platoons have access to several tactical radio nets that facilitate command and control. They are normally encrypted and use frequency hopping to limit the threat's ability to intercept communications or "direction find" units. Some of these nets carry voice communications while others are assigned for data and text transmissions.

The platoon commander is typically allocated a platoon tactical net to communicate with the squad leaders. Squads may be allocated squad tactical nets. The platoon commander considers communications when task-organizing for a mission and prioritizes and allocates communication assets to support communication in support of each mission. Platoons must also consider battery consumption and plan for battery and frequency changes and resupply.

Battalion and Higher Tactical Nets

The battalion maintains one or more battalion tactical nets. Other battalion nets that the platoon should be aware of include the battalion mortar net (used to request and adjust battalion-level mortars), the artillery conduct of fire net (used to request and adjust artillery fire), the tactical air control party local net (used by forward air controllers and JTACs to request air support), and the medical evacuation common net (used for casualty evacuations).

Company Tactical Nets

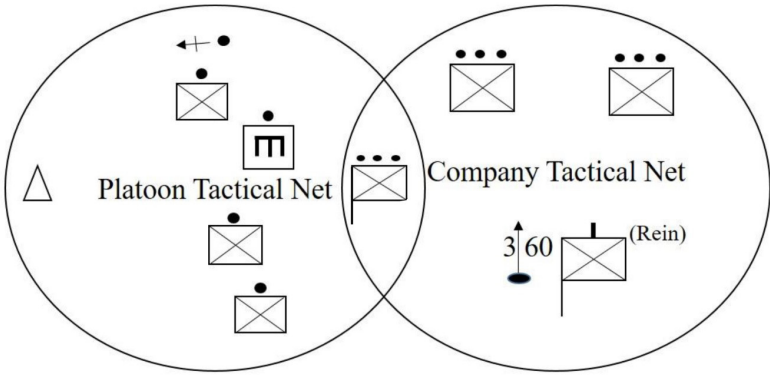
Battalions normally establish a tactical net for use by each company. This net is primarily used by the company commander, platoon commanders, company mortars, and any company-level reinforcements or enablers. Platoons constantly monitor the company tactical nets unless wire communications are established. The platoon commander or radio operator normally utilize the company tactical net to communicate with higher, adjacent, and supporting units.

Platoon Tactical Nets

The company usually requests that the battalion establish a tactical net for use by each platoon commander. This net is primarily used by the platoon commanders, squad leaders, and any platoon-level reinforcements or enablers. The squads and platoon constantly monitor platoon tactical nets unless wire communications are established, or the units are located in immediate proximity, rendering it unnecessary. The platoon commander or radio operator normally utilize the platoon tactical net to communicate with subordinate units, including units operating in direct support of the platoon. The utilization of platoon and company nets is illustrated in figure 3-1.

Squad Tactical Nets

Squads typically use the tactical net associated to their platoon and may use company tactical nets in extreme situations to communication with their platoon commander, if communication assets are available. In extremely rare situations, when additional communication assets are available, the company may request that the battalion establish a tactical net for specific squads. This net is used by the squad leader to communicate with the fire team leaders and any squad-level reinforcements or enablers. If every Marine is equipped with a personal radio, the individual Marines will typically monitor (but not transmit) on the squad tactical net. Generally, squads only employ this net when conducting movement or offensive operations, and rely on verbal communications for routine communication in defensive positions and assembly areas.



Notes: Not to scale. Platoons may, as required, use battalion mortar net, artillery conduct of fire net, tactical air control party local net, and medical evacuation common net.

Figure 3-1. Notional Illustration of Platoon and Company Tactical Nets.

Signals

The platoon also employs visual or audible signals to communicate simultaneously with all members. Before getting into more detail on signals, a cautionary note is in order as to their use. Caution must be taken when using signals. Since they are made to be obvious and easily visible, they can also be seen by the enemy. While the enemy may not know what the signal signifies, it does alert them to the presence of friendly forces and the fact that an operation is being conducted. If the enemy can respond quickly enough, they can move to the point of origin of the signal and catch friendly forces by surprise.

To be effective, signals should be original, appropriate, and redundant. They should be original in that one signal should communicate one action vice multiple actions; appropriate in that they can be seen or heard by the units who need to take action based on the signal; and redundant in that all signals have an alternate signal and, where possible, a tertiary signal.

Visual signals include pyrotechnics, smoke, hand and arm signals, marking rounds, flags, visible and infrared lights, infrared lasers, and air panels. Visible signals used in operations are specified in the operation order. The company may assign signals, or the platoon may assign them as required. Audible signals include whistle blasts and anything else with a distinctive sound, but not explosions or other battlefield noise that can be easily confused. The platoon commander must employ a signal plan appropriate for the operational environment.

While the hours of darkness make visual signals such as smoke or hand and arm signals ineffective, they enable the use of other signals such as infrared signals. Platoons normally mark key leaders so they can be easily identified in accordance with company SOPs.

Position Location Information Equipment

The platoon may be equipped with radios integrating position location information capabilities, providing near real-time tactical information and supporting the CTP. These systems provide accurate positioning information to both the using unit and its HHQ.

Messengers

Messengers provide a secure and reliable means of communication for units located in the immediate vicinity.

COMBAT ORDERS

Orders are issued to coordinate the execution of an operation and must be brief, clear, and communicated with confidence. They are typically issued verbally at the platoon level, preferably with the aid of a terrain model, a map, or photographic imagery. They provide the required detail to enable subordinates to accomplish the assigned mission, even if the platoon commander becomes a casualty or loses communication. The most common types of orders are the operation order, the warning order, and the fragmentary order. By utilizing established SOPs, commanders can shorten the time required to prepare, issue, receive, and understand orders, increasing unit tempo.

Warning Order

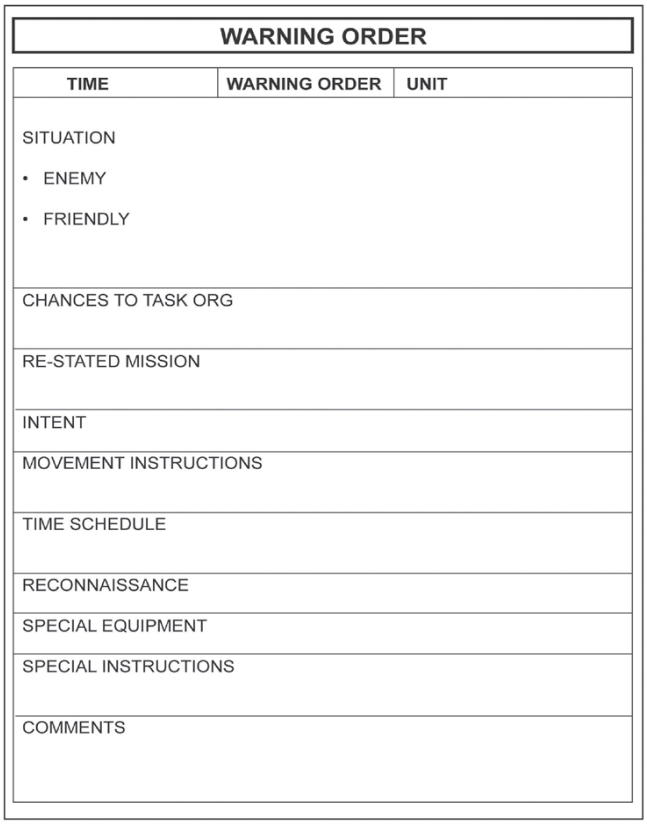
A warning order is a preliminary notice of an impending action issued by the platoon commander shortly after the receipt of an order from HHQ. At a minimum, the warning order consists of information required to allow subordinates to prepare for action concurrent with planning. The warning order typically includes the mission, enemy situation, planning timelines, priorities of rehearsals, concurrent actions, and ammunition and equipment to be drawn. An example warning order format is contained in figure 3-2. The platoon commander should not delay issuing a warning order until all desired information is available; the warning order can be updated once more information is received.

The following information may be included in a warning order:

- Task and purpose of the operation.
- Timeline for preparing for the operation.
- Time and location for issuing the operation order.
- Any changes to the task organization.
- Any mission specific preparation not addressed by unit SOP.
- Rehearsal guidance.

Operation Order

The purpose of the operation order is to communicate the required information needed by subordinates to plan and execute an assigned mission. The order follows the standard five-paragraph order format found in appendix J. The platoon commander should address the key components in this format, which should be familiar to all Marines. As discussed in chapter 2, the platoon commander normally issues one or more warning orders during planning, which allow the platoon sergeant and squad leaders to prepare the platoon for combat. The order is issued to whom the platoon commander deems necessary, ranging from only key leaders of each element to everyone involved in the operation. If issued to key leaders, the order is issued to the



WARNING ORDER		
TIME	WARNING ORDER	UNIT
SITUATION • ENEMY • FRIENDLY		
CHANCES TO TASK ORG		
RE-STATED MISSION		
INTENT		
MOVEMENT INSTRUCTIONS		
TIME SCHEDULE		
RECONNAISSANCE		
SPECIAL EQUIPMENT		
SPECIAL INSTRUCTIONS		
COMMENTS		

Figure 3-2. Example Warning Order Format.

orders group, consisting of the platoon sergeant, squad leaders, radio operator, and the leaders of any attached or direct support units. As operations are conducted and the situation changes, the platoon commander may issue a fragmentary order to update the unit's situational awareness and modify tasks.

Orientation. When issuing the order, the platoon commander begins with a terrain orientation using a terrain model, including tactical control measures. The orientation provides a foundational understanding of the environment that the Marines will be operating in and sets conditions for subordinates to understand the order. A roll call and/or introduction of the unit leaders with any new attachments or supporting units may be conducted at the beginning. Key components of an orientation may consist of the following:

- North seeking arrow.
- AO boundaries.
- Significant terrain in the AO and discussion of vegetation and its impact on cover and concealment.
- Avenues of approach.
- Obstacles and hazards.
- Significant terrain en route to and on the objectives.
- Expected enemy disposition en route to and on the objective.
- Tactical control measures.

Situation. The situation paragraph explains the overarching reasons behind the operation and the expected enemy resistance.

Enemy Situation. This paragraph addresses the enemy's expected scheme of maneuver and the actions to be taken on contact. It includes the enemy's composition and disposition, capabilities and limitations, and most likely course of action.

The *composition and disposition* portion of the order communicates information on the composition and disposition of enemy forces which are expected to be encountered during the operation. This information is normally derived from intelligence reporting and the leader's reconnaissance. The platoon commander often describes each force by size, activity, location, unit, time, and equipment, which is known by the acronym SALUTE.

The *capabilities and limitations* subparagraph addresses what the enemy is capable of doing and their limitations. Capabilities and limitations are briefed relative to the friendly scheme of maneuver. This is broken down into considerations about whether the enemy is capable of defending, reinforcing, attacking, withdrawing, and/or defending (and with what assets), known by the acronym DRAW-D.

The *most likely course of action* portion addresses the enemy's expected scheme of maneuver. This normally includes the enemy's current mission and intent and expected actions on contact. The enemy's most likely course of action is the result of analyzing the enemy's capabilities, limitations, and mission in order to make a logical assessment of how the enemy will act in combat.

Friendly Situation. The friendly situation communicates where the platoon's mission fits into the larger picture. This paragraph should address the mission and intent of the company and battalion, the actions of adjacent and supporting units, and any attachments or detachments.

Mission. The mission is a clearly stated task given from HHQ, laying out the when, who, where, what, and why (often called the five Ws).

Execution. The execution paragraph explains how the platoon will execute its assigned mission.

Commander's Intent. This subparagraph explains the platoon commander's purpose, method, and end state for the operation. The purpose of the operation explains how it supports the larger operation. The method includes how the unit will exploit one or more enemy vulnerabilities. It identifies the enemy's center of gravity and how they will succeed. It also identifies the critical vulnerability, and what the method will be to exploit the vulnerability and neutralize the center of gravity. The end state explains the desired results of the operation.

Concept of Operations. The concept of operations is composed of the scheme of maneuver and fire support plan.

The *scheme of maneuver* subparagraph explains how the unit will maneuver, to include the use of formations during movement or the conduct of defensive operations. A platoon's operations are

often broken down into several parts which are addressed consecutively. An example of the parts of a scheme of maneuver could include the following:

Part 1. *Maneuver to the Objective*. This begins with crossing the LD and ends with the platoon deployed in Assault Position Titan.

Part 2. *Assault on the Objective*. This begins with the firing of target AB2294 and ends with the seizure of Objective Hilary.

Part 3. *Consolidation and Reorganization*. This begins with the establishment of a hasty defense oriented Northwest to repulse a possible platoon-sized counterattack, and ends on receipt of orders.

The *fire support plan* explains how fires will be used in support of the scheme of maneuver. It addresses the signals for commencing, shifting, and ceasing fires; the duration of fires; and the desired effects. When briefing the fire support plan, the platoon commander addresses the geometries of fire for organic and supporting fires.

Tasks. This subparagraph covers the task and purpose of each subordinate unit during the operation. Each task statement covers at least the five Ws.

Coordinating Instructions. Coordinating instructions are any items of information common to all elements, such as the timeline, formations for movement, rally points, and rehearsal plan. Mission specific equipment common to all (such as NVDs) is addressed in coordinating instructions.

Administration and Logistics. This paragraph communicates the essential information to sustain the unit and its equipment. The logistics section addresses plans for casualty evacuation and detainee handling, as well as information about resupply and the amount of ammunition, water, food, and batteries to carry or embark. Much of the logistics plan may be covered by SOP. A large portion of the logistics information is usually disseminated through the warning order, allowing subordinate leaders to resource and distribute ammunition and equipment while planning is underway.

Command and Signal. The signal subparagraph includes information such as primary and alternate frequencies and call signs; challenge and passwords; and primary, alternate, and tertiary signals for mission specific actions. Both day and night signals must be considered. The command subparagraph includes information on the locations of key leaders and the succession of command.

Fragmentary Order

A fragmentary order (FRAGO) is an abbreviated operation order issued as required to update the unit on changes to the situation, mission, or tasks. The FRAGO is based on the previously issued operation orders. Only changes to the base order are addressed. The information changed frequently pertains to the enemy situation, the mission, or the execution of the plan. When briefing the FRAGO, only the changes are briefed, but each paragraph is usually addressed with the briefer noting “no change” for paragraphs that have not changed. It is important that the platoon commander prioritizes the information to be briefed based on the time allocated.

CHAPTER 4
INTELLIGENCE

This chapter discusses how platoons access, utilize, and contribute to the collection of intelligence. Intelligence is the product resulting from the collection, processing, integration, evaluation, analysis, and interpretation of available information concerning foreign nations, hostile or potentially hostile forces or elements, or areas of actual or potential operations. Intelligence reduces uncertainty about the enemy and the surrounding environment, thereby supporting the decision-making process. Intelligence identifies and evaluates enemy capabilities, estimates possible enemy COAs, identifies friendly vulnerabilities, and assists in developing friendly COAs.

Intelligence is a process, not just a product. This process is described by the six steps of the intelligence cycle. The infantry battalion's intelligence section initiates and supervises the intelligence cycle. Battalions are increasingly distributing assets during current operations, allowing their companies to maintain their own intelligence sections in the form of the company level intelligence cell (CLIC), which enables the intelligence cycle at the company level. The battalion intelligence section or CLIC analyzes information inputs and produces intelligence products based on these inputs. Infantry platoons are both a user of intelligence from the CLIC and a means of collecting intelligence required for operations.

The intelligence cycle consists of six sequential steps. These are not prescriptive, but describe a process that is generally followed. These steps are—planning and direction, collection, processing and exploitation, production, dissemination, and utilization. The cycle is designed to ensure that intelligence reaches the right people in a form that is understandable and in time to affect the decision-making process.

Platoon commanders must understand the intelligence cycle in order to understand their role and the role of their platoons in the process. The information collected by a platoon during operations may have implications beyond the platoon's own mission; it may contribute to the understanding of the situation maintained by higher and adjacent units.

Intelligence planning and direction establishes the following:

- Information required for mission planning by priority.
- Assets available for collection.
- Plan for asset allocation and collecting information.
- Process for collecting, receiving, and analyzing information.
- Plan to disseminate to units requiring the intelligence created.

A platoon commander must be aware of the company and battalion PIRs so that they are able to collect information related to these requirements. They must also understand the assets available

so that they may request available support. For more information on tactical intelligence, see MCWP 2-10, *Intelligence Operations*.

PLATOON COMMANDER'S ROLE

Evaluating Intelligence

The platoon commander evaluates and integrates intelligence from the company. Intelligence forms an integral component of the commander's assessment of the battlespace. To improve the quality of intelligence that commanders receive, they need to regularly coordinate with and provide feedback to the company combat operations center (COC) Marines and intelligence specialist.

Receiving Priority Intelligence Requirements

The platoon commander receives intelligence requirements from the company. Priority intelligence requirements allow commanders to provide focus and direction to intelligence collection. In addition to those received from the company, they may identify their own PIRs. Priority intelligence requirements are specific to a specific tactical situation and must be adjusted and updated as the situation changes.

Integrating Intelligence Assets

Platoon commanders need to understand, integrate, and take advantage of intelligence assets that are (or could be) requested to support operations in their battlespace. Few intelligence assets are likely to be attached to a platoon, but UASs and signals intelligence units can often support a small unit's operations from remote locations. Support during key phases of an operation is often possible if the platoon commander makes time to coordinate the support, allowing the supporting unit or asset to be tasked and to understand the supported unit's scheme of maneuver. Platoon commanders need an appreciation for the capabilities and limitations of these assets to employ them properly.

Reporting

The intelligence process requires that small unit leaders identify and quickly report items of intelligence value to HHQ. Therefore, the platoon commander is responsible for accurately documenting information collected by Marines and communicating that information to the company.

OPERATIONS AND INTELLIGENCE INTEGRATION

Maneuver, fires, and intelligence are complementary. Intelligence drives operational planning. Maneuver causes enemy reactions, which allow the enemy to be identified and targeted. Commanders should think of operations and intelligence as "combined arms" to capitalize on the synergistic effects. Infantry platoons serve as maneuver elements. They also provide intelligence collection capability and capacity.

Conducting Reconnaissance

The battalion creates an intelligence collection plan that utilizes intelligence, surveillance, and reconnaissance (ISR) assets and organic elements, including the subordinate platoons, to collect information. The battalion uses organic assets such as scout snipers and UASs, as well as nonorganic assets such as human intelligence exploitation teams or signals intelligence support teams. On occasion, the unit may have theater-level collection assets in direct support.

Upon arriving in a new AO, a platoon must quickly establish a baseline of environmental characteristics, allowing them to identify changes in the baseline that are out of the ordinary. This information forms the raw basis for many intelligence products. Whether on a reconnaissance patrol or a deliberate attack, every Marine in the platoon observes or hears important information that may be the missing piece of information needed for decision making.

Every Marine a Collector

The *every Marine a collector* methodology, commonly referred to as EMAC, recognizes each Marine as a collection source. Because each Marine has a different perspective, one Marine may observe a change in the baseline that is not noticed by another. During the orders process, the platoon commander must thoroughly communicate the orientation and situation to encourage and enable subordinates to identify baseline changes. The platoon commander can further focus the Marines' observations and interactions by identifying the PIRs from the managing unit. The information collected is captured during the mission debrief.

The *every Marine a collector* method requires a thorough documentation plan that facilitates analysis by the managing unit. Information not documented and communicated to the HHQ is a missed intelligence opportunity. Therefore, the platoon commander is responsible for accurately documenting information collected by Marines and communicating that information to the managing unit. Mission logbooks are the platoon commander's primary method of documentation. The platoon commander assigns a Marine to maintain a logbook during mission execution. Photographs and video can supplement the information in the logbook. The logbook should contain the following information:

- A summary of the observation or interaction.
- The Marine who made the observation or interaction.
- The time and date of the observation or interaction.
- The location of the observation or interaction.
- How the observation or interaction occurred.
- Identification of persons interacted with and their personal information, if applicable.
- Identification of corresponding photo and/or video, if applicable.

TACTICAL INTELLIGENCE PROCEDURES

Detainee and Captured Enemy Materiel Processing

All personnel who are detained by the platoon are handled in accordance with SOPs for detainee handling. The platoon plans to process and evacuate detainees and captured enemy materiel as part of the operation order. Evacuating large numbers of detainees is normally done using logistical assets, but attention is paid to maintaining security and a chain of custody, and preserving items of intelligence value. The basic detainee handling processes are taught and remembered as the "5 S-es and a T."

Search. Detainees are thoroughly searched for weapons, electronics, and documents as soon as they are captured. Weapons, electronics, and documents should be tagged and evacuated to the company. The searcher should wear gloves to protect themselves and to preserve fingerprints and other evidence. The search should include searching dead enemy personnel for items of intelligence value.

Safeguard. Detainees are safeguarded as they are moved. They may be restrained, but are not abused. Based on the situation, they may be secured by flexi-cuffs, gagged, or have blackout goggles placed over their eyes. Detainees must not only be safeguarded from the enemy, but also from friendly and civilian personnel.

Segregate. Prisoners are segregated into groups—officers, NCOs, non-NCOs, deserters, civilians, and females. This prevents leaders from organizing escapes and issuing orders to subordinates.

Silence. Preventing detainees from communicating is essential. Detainees must not be allowed to talk to one another. One method is to use duct tape or a gag to cover a detainee's mouth. Marines must ensure that detainees are able to breathe and hydrate, and that they are treated humanely.

Speed. Speed is required in evacuating detainees and associated captured enemy materiel to the company detainee collection point. The timeliness of information secured from detainees is essential.

Tag. Detainees and captured materiel are tagged per unit SOP. A unit may use a biometric identification device to tag the detainee and associated material. There are four components to tagging a detainee:

- The date and time of capture.
- The place where the enemy was captured (i.e., in grid coordinates).
- The identification of the capturing unit.
- Materiel (e.g., currency, weapons, global positioning system [GPS], or smart phones) taken from detainees is tagged so it may be associated with the detainee it was taken from. Captured weapons are cleared and tagged. Ammunition, including explosive devices or their components, are inspected by an EOD technician prior to transport.

Site Exploitation

The site exploitation collection method exploits a site that is of significance to the intelligence effort. Common examples of missions requiring planned site exploitation are cordon and searches, raids, and recovery of enemy equipment. The platoon commander includes the site exploitation plan in the operation order. The platoon may be reinforced with specialized assets and personnel if required.

Reactionary site exploitation occurs when the platoon unexpectedly experiences an opportunity. Common examples include the discovery of enemy equipment, ambush, or attack. The unit's SOP should provide a basis for the execution of site exploitation with commonly carried equipment.

Equipment Considerations. Flashlights, GPS, flexi-cuffs, rubber gloves (i.e., for handling evidence), tape (i.e., for labeling or taping off rooms), a digital camera, permanent markers, evidence collection bags, site collection bags, engineer tape, blindfolds, gunpowder residue test kits, metal detectors, and biometric tools allow a platoon to conduct site exploitation as needed.

Personnel Considerations. The platoon commander must consider personnel to cordon and control the site, clear and secure the site, and exploit and document the site.

Cordon and Control Considerations. The platoon must restrict site access for both friendly and civilian personnel who may remove, damage, or distort the evidence.

Clear and Secure Considerations. The platoon must clear and secure the scene prior to exploitation to ensure no threats remain in the area. Once cleared, the site exploitation team can begin the search. The platoon commander may consider restricting site access after it is secured to further preserve evidence.

Exploitation Considerations. If given limited time on the objective, key spaces such as offices, storage rooms, sheds, bedrooms, or studies should be searched first. A top-down approach encourages Marines to sweep systematically room to room. During the search, the search team marks searched spaces on the site, ensuring all rooms are searched. It draws a diagram to display the location of evidence discovered to a location within the site, and photographs evidence to aid documentation.

Evidence and Detainee Considerations. The search team should collect evidence in plastic bags, wear rubber gloves, and avoid over-handling items. Each bag should be labeled with a date and time, location (i.e. both within the site and the site's grid location), and a brief description. This systematic and redundant method helps recreate the scene during debrief and for the HHQ during analysis. Computers, cell phones, communication devices, and media products present further exploitation opportunities for the managing unit. Detainees should be tagged in accordance with the managing unit's SOP; the search team should establish and document a connection between specific contraband and specific detainees. Photos and video with a detainee and the connected evidence together can ensure the detainee remains detained. For more information, see Army Techniques Publication 3-90.15, *Site Exploitation*.

Tactical Questioning

Tactical questioning is a method of gathering information of immediate or time-sensitive value during a mission. The *every Marine a collector* mission logbook documents tactical questioning encounters. The platoon normally receives guidance on tactical questioning from HHQ. Intelligence personnel often develop questions to enable Marines to communicate with locals in a conversational manner in order to answer PIRs. Platoon commanders should select and train specific Marines to conduct tactical questioning. One word or "yes" or "no" answerable questions should be avoided. Questions that lead into follow-on questions are most effective. For instance, if a Marine asks a local about any interaction with or the location of the enemy, the response will not provide much opportunity for follow-on questions. Further, such direct questioning runs the risk of an individual being apprehensive. The combat hunter train the trainer course teaches Marines to both conduct and train other Marines to conduct tactical questioning.

Tactical Ground Mission Debrief

The tactical ground mission debrief seeks to gain exploitable information from the Marines upon returning from a mission. Tactical ground mission debriefs are reviews and critiques of the actions taken or not taken during an operation. They include a review of thoughts, observations, and interactions by all Marines involved. An intelligence Marine from the CLIC may participate in a mission debrief utilizing a format established by the managing unit. In the absence of HHQ representation, the platoon commander should seek a Marine who did not conduct the mission (such as another platoon commander) to conduct the mission debrief. A Marine outside the mission is less apt to bias the mission debrief. If there are no other personnel available, the platoon commander should conduct the mission debrief. The mission debrief is a formal, organized event. The explanation of each step below assumes the platoon commander debriefs the platoon.

Mission and Information Requirement Review. The platoon commander reviews the operation with a focus on the purpose of the mission and the PIRs associated with the mission.

Debrief Outline and Checklist. The platoon commander should run the mission debrief in accordance with the unit's SOP debrief format. This ensures the platoon commander maintains the information standard set forth by the managing unit, facilitating its ability to analyze the collected information.

Conduct of the Mission Debrief. The conduct of the debrief should be systematic and professional. The platoon commander should prohibit the use of non-tactical terms that may be unclear. The platoon commander should conduct the mission debrief in three phases, in accordance with the managing unit's SOPs.

The Approach Phase. The approach phase is the introductory phase in which the platoon commander summarizes the process and identifies the purpose of the mission debrief.

The Questioning Phase. The questioning phase is the most significant phase of the debrief process. During this phase, the platoon commander first solicits a recount of events from the Marines. The platoon commander should allow Marines to speak freely. The recount should progress sequentially through the conduct of the mission and each Marine should provide input. Throughout the recount, the platoon commander should assign a Marine to cross-reference the story with *every Marine a collector* mission logbook. Additionally, the platoon commander should

take detailed notes during the mission debrief. If a recorder is available during the debrief, it can facilitate future review. Following the discussion, the platoon commander can verify the events by back-briefing the Marines from the notes that were taken. The platoon commander should follow up with any questions to clear up discrepancies and gaps in the narrative. Finally, they should assess the information to determine whether it answers the managing unit's information requirements and whether further questioning is required.

The Reporting Phase. The final phase is the reporting phase, in which the platoon commander reviews and organizes the notes and information gathered, and documents it in the format directed by the company.

Biometrics

Biometric data consists of the individual fingerprints, facial features, iris, and DNA (deoxyribonucleic acid) that are associated with an individual. Biometric data is used to conduct identity operations, which enables the force to establish the identity, affiliations, and authorizations of individuals, deny anonymity to the adversary through a better understanding of the operational environment, and protect our assets, facilities, and forces. The fundamental purpose of the Service's biometric collection and intelligence system is to provide Marines with a means to collect and process identity information in the conduct of maritime and expeditionary operations. There are three key aspects of this capability: enable forces to rapidly identify unknown individuals encountered during operations; verify an unknown individual's claimed identity; and enable forces to update, manage, and share the identity information on friendly, neutral, and enemy individuals gained from identity operations in support of the mission.

Marines conducting biometric collection must ensure they have the most current biometric data and biometric-enabled watch list loaded on their devices, which identify high-value targets and other persons of interest.

For more information, see MCRP 10-10F.1, *Multi-Service Tactics, Techniques, and Procedures for Tactical Employment of Biometrics in Support of Operations*.

CHAPTER 5
FIRE SUPPORT

This chapter addresses how infantry platoons employ combined arms fires to accomplish assigned missions. The authority to employ fires is done with consideration of the applicable ROE. The platoon must be able to select and employ the correct weapon at the correct time to achieve the commander's intent. The effective and efficient employment of fires is enabled by planning based on intelligence. The scheme of maneuver and fire support plan are integral components of the concept of operations, and must be synchronized.

The infantry platoon is capable of employing fires as a component of a company operation or during semi-independent operations. It must be capable of massing its fires effectively in support of company operations. It must also be capable of planning for and employing organic and supporting assets, both lethal and nonlethal, to accomplish assigned missions when operating independently. Nonlethal fires are discussed further in chapter 9.

The employment of combined arms is a Marine Corps core competency. Supporting arms are integral to infantry operations generating decisive combined arms effects and reducing friendly casualties. The platoon's scheme of maneuver should be designed to enable the early detection of the enemy, allowing fires to be massed at critical times. Refer to MCTP 3-10F, *Fire Support Coordination in the Ground Combat Element*, and MCRP 3-31.6, *Multi-Service Tactics, Techniques, and Procedures for the Joint Application of Firepower (JFIRE)*, for more information.

Marine infantry platoons are often supported by a huge range of lethal and nonlethal capabilities. The platoon must be capable of planning for and employing weapons ranging from nonlethal weapons to precision rifle fire, automatic weapons, rockets, mortars, artillery, and aviation delivered fires. The platoon's employment of fire and maneuver is made with consideration for battlespace geometry, including the location of elements of the platoon, higher and adjacent units, and local civilians.

ROLES AND RESPONSIBILITIES

Company Fire Support Team

The company FST plans, coordinates, and deconflicts surface-to-surface and air-to-surface fires to support the ground scheme of maneuver. It executes its mission based on the company commander's fire support tasks, develops the company fire support plan, assists platoon commanders with fires for platoon missions, directs fire support, assesses the effects of fires against the enemy, and prevents unnecessary risks to maneuvering elements from the effects of fires.

Platoon Commander

The platoon commander is primarily responsible for planning, coordinating, and executing the platoon's fire support plan, which is developed within the context of the company commander's guidance for fires. Platoon commanders coordinate with the company FST during operations. They must ensure that the FST is aware of the locations of their platoons at all times.

Joint Terminal Attack Controller

Platoon commanders can employ a JTAC (i.e., if assigned to them) to develop the aviation portion of the fire plan, route aircraft, deconflict aircraft with maneuver and indirect fire, provide terminal control of aircraft, and assess the effects of air-to-surface fires.

Joint Fires Observer

Each platoon should have at least one Marine trained as a joint fires observer (JFO). They increase the capability of the platoon to plan and employ supporting arms and reduce the demand on the platoon commander by increasing the number of observers and potential controllers in the platoon and squads. The JFO—

- Requests, adjusts, and controls surface-to-surface fires.
- Provides targeting information in support of type two and three close air support.
- Maintains communication with appropriate support and supporting agencies.

Artillery and Mortar Forward Observers

Forward observers may be attached to infantry platoons as required by the situation. They help to develop indirect fire plans, coordinate targets, and conduct call for fires. They assess and report the effects of fires and are trained to conduct crater analysis as required.

Attached or Supporting Unit Leaders

The leaders of attached or supporting units with fires capabilities provide recommendations on the employment and placement of their respective weapons systems. Common examples include company machine gun or assault sections, snipers, battalion HMGs or antitank guided missile (ATGM) teams, or assault amphibian sections.

FOUNDATIONS OF EFFECTIVE FIRE SUPPORT PLANNING

To employ fires successfully in support of maneuver, the platoon commander must understand the following key concepts.

Combined Arms

The Marine Corps employs combined arms to enable maneuver. Fires are used at the right time and place to shape the enemy's actions, making the enemy more vulnerable to subsequent engagements. The effects of terrain, obstacles, aviation fires, indirect fires, and direct fires are planned and synchronized. Lethal fires are used to physically attack enemy assets. Nonlethal fires target the enemy's psychological and cognitive capabilities. As an example, a combinationof precision fires and EW can be employed to attack the enemy's C2 systems, rendering enemy

commanders' incapable of coordinating fires and maneuver and making enemy maneuver elements more vulnerable to direct fires from the infantry platoon.

Clearance of Fires

The battalion fire support coordinator works in the FSCC and approves fires throughout the battalion's AO. The FSCC works with the battalion operations officer to prioritize, apportion, allocate, and approve or deny requests for fire. The FSCC tracks battlespace geometry and maneuver across the battalion to ensure fires are coordinated and deconflicted. An FST serves similar functions as the FSCC at the company level. The platoon commander may request fires from supporting assets at any time. The company FST and/or battalion FSCC clears the fires and may approve, deny, or modify calls for fire. This also takes into account the ROE, collateral damage assessments, priorities of fire, target precedence, and ammunition availability.

Synchronization

Synchronization is the major factor in providing fires in support of maneuver. Synchronization is the arrangement of military actions in time, space, and purpose to produce maximum relative combat power at a decisive place and time. The synchronization of fires includes efforts to ensure that fires impact the enemy at the right time and place. The synchronization of fires in support of a platoon operation may be performed by the company FST or by the platoon commander. The timing of fires is synchronized with maneuver. Units must be in position to exploit the effects of fires; an infantry platoon often exploits the shock of fires to close with and destroy the enemy. Conversely, fires assets must be able to sustain fires to enable maneuver. Synchronization also reduces the risk of fratricide by ensuring that fires are ceased and/or shifted when required to enable and protect maneuver.

Battlespace Geometry

Battlespace geometry refers to the spatial relationships between friendly and enemy maneuver, surface-to-surface fires, aviation-to-surface fires, and their effects. Situational awareness regarding the battlespace geometry is essential to effective decision making. Small unit leaders must have excellent situational awareness to make good decisions on the employment of supporting and organic arms. An example battlespace geometry is shown in figure 5-1.

The platoon commander and all Marines involved in fires planning and execution must, at the minimum, plot the following battlespace geometry elements on their maps to synchronize fires in support of maneuver (refer to figure 5-1):

- Enemy positions and threat rings.
- Friendly positions and maneuver including artillery, mortars, and support by fire positions.
- Rotary-wing battle positions.
- Fixed-wing stay-above or stay-below altitudes.
- Fixed-wing attack headings and rotary-wing routing.
- Minimum safe distances for training and risk estimate distances for combat.
- Gun target lines.

Minimum Safe Distance and Risk Estimate Distance. When planning and executing fires in support of maneuver, generating maximum effects on the enemy while minimizing the risk to friendly troops is critical to success. To accomplish this, the platoon commander must understand how close dismounted troops can get to the impacts of friendly ordnance. In training, minimum safe distances are restrictions used to ensure safety. During combat operations, risk estimate distances are used to control risks to the force. Due to the threat of short rounds, the platoon commander establishes gun-target line buffers which laterally separate maneuver from mortar gun-target lines. The risk estimate distance for the type of mortar is used to establish the width of the buffer from the gun-target line when using mortars, as illustrated in figure 5-2.

During planning for company operations, the platoon commander must communicate to the FST where the platoon intends to maneuver to allow the FST to determine the best locations to place indirect assets and FSCMs to maximize ground maneuverability. In combat, the platoon commander used risk estimate distances to estimate risks and determine when to shift and/or cease fires. Terrain may mitigate the effects of fire. For example, a squad on the back side of a finger may be protected from the effects of fires impacting a draw. Similarly, units in armored vehicles or well-constructed fighting positions would be at less risk. During combat operations, a conscious decision may be made to assume greater risk by maneuvering elements inside the risk estimate

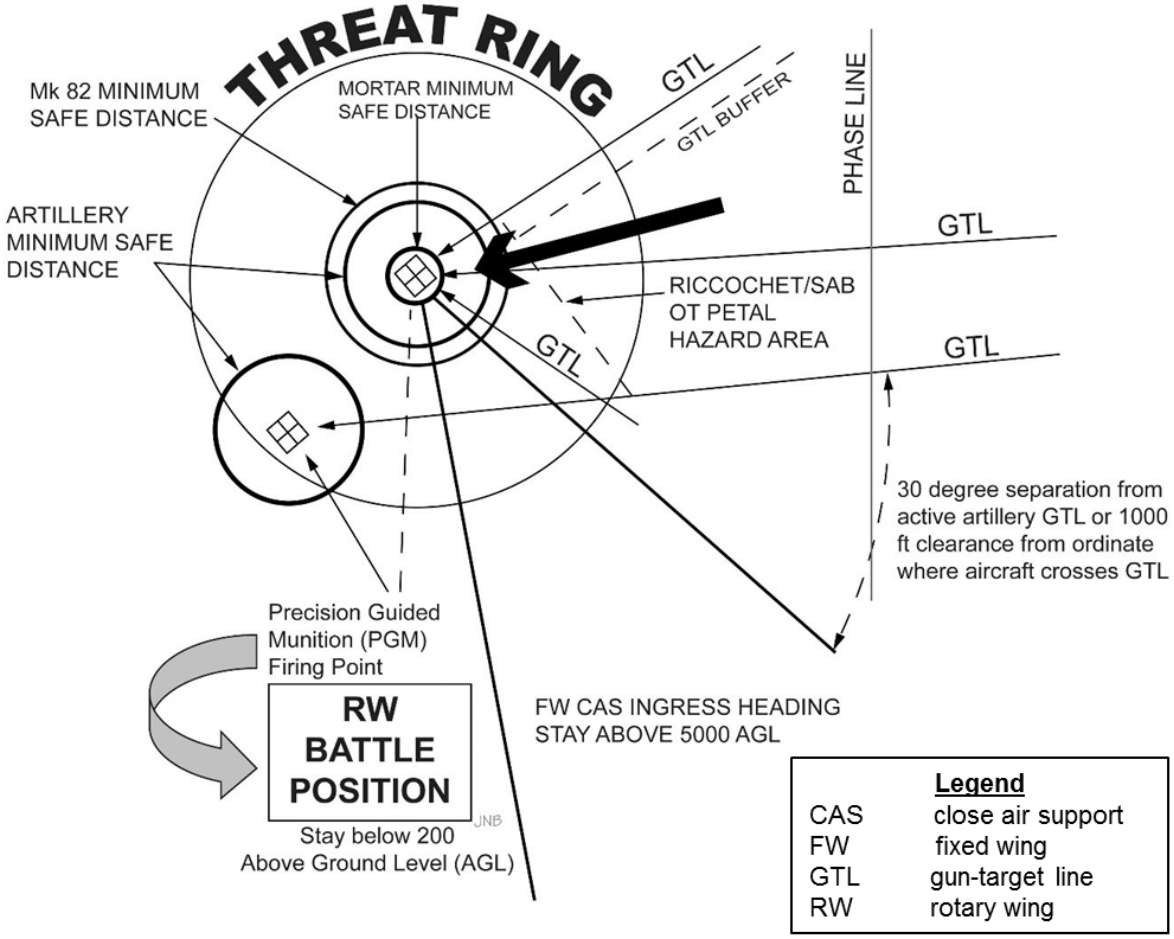


Figure 5-1. Example of Fire Support Planning Battlespace Geometry.

distance, based on the situation. The determining factors for accepting risk include the enemy situation, the effects desired, mitigating terrain, the proficiency of firing units, and the accuracy of the munitions used. Understanding minimum safe distances and risk estimate distances supports decision making in execution, assists in echeloning fires, and minimizes enemy actions against the maneuver force. As the maneuver force nears these points, the fires can cease in echelon, or the maneuver force can slow its advance until the fires achieve the desired effect. The platoon commander can construct an overlay with rings at the given risk estimate distance for each ordnance as shown in figure 5-2.

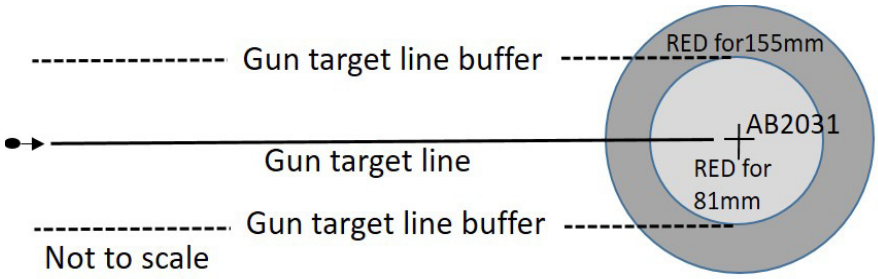


Figure 5-2. Example of Risk Estimate Distance and Gun-Target Lines.

Coordination

Coordination for fire support involves the identification of available fires support assets, the integration of the fire support plan and the scheme of maneuver, and the development of orders and FSCMs. The platoon's mission and role as a main effort, supporting effort, or reserve has an impact on the type and responsiveness of fires available. Understanding the mission leads to appropriate coordination of fires and maximizes physical damage and psychological effects through surprise and concentrated area fires. The surprise delivery of a large volume of concentrated and accurate fires into target areas to inflict inflicts maximum physical damage and psychological shock.

Time on Target. Time on target (TOT) is the actual time when rounds will impact a target. When synchronizing fires with maneuver, the most effective means to ensure actions happen at a desired time is using a TOT. A TOT allows ordnance from multiple agencies to impact simultaneously and coordinates the impact with the intended action of maneuver. Platoon commanders can use a TOT to coordinate a basic suppression mission in support of actions such as occupying a support by fire position or use it in a complex fire mission involving several agencies. While a TOT ensures events happen at the desired time, the platoon commander must assess the effects of fires before exposing troops to enemy fires.

Time and Distance Appreciation. An appreciation of the time required to cover distance in the local terrain is essential for fires planning, whether in the offense or the defense. In the defense, the commander anticipates the enemy's scheme of maneuver and estimates how quickly the enemy can advance. When possible, obstacles are used to delay or fix the enemy. Intelligence, surveillance, and reconnaissance assets and OP/LPs are used to acquire targets as early as possible. During planning and preparation, the platoon may establish TRPs or trigger lines which enable the use of fire support assets against maneuvering enemy formations. Table 5-1 shows how long it will take a unit moving at a given rate to cover certain distances. This table is useful in estimating both friendly and enemy movement times.

Table 5-1. Example of Time Distance Table.

		Distance						
		1km	2km	3km	4km	5km	6km	7km
Rate of Movement	5km/hr	12 min	24 min	36 min	48 min	60 min	72 min	84 min
	10 km/hr	6 min	12 min	18 min	24 min	30 min	36 min	42 min
	15 km/hr	4 min	8 min	12 min	16 min	20 min	24 min	28 min
	20 km/hr	3 min	6 min	9 min	12 min	15 min	18 min	21 min
	25 km/hr	2.4 min	4.8 min	7.2 min	9.6 min	12 min	14.4 min	16 min
	30 km/hr	2 min	4 min	6 min	8 min	10 min	12 min	14 min

In the attack, the commander estimates how long it will take units to cover certain distances. This estimation is critical in planning for the initiation, sustainment, and shifting or ceasing of fires. Estimating how long it will take a squad to cover a certain distance from the assault position to the objective, for example, is an integral component of developing a fire support plan to support that movement. This estimation allows the commander to establish a time of suppression.

Time of Suppression. Time of suppression is the duration of suppression required. Suppression time is typically dependent on the time it will take a supported element to maneuver. Suppression is generally more event-driven than time-driven. Suppression can be accomplished by supporting arms, direct fires, or a combination of the two. In planning, leaders must consider several factors, including—

- Estimated time of suppression.
- Size of the area being suppressed.
- Type of enemy force to be suppressed.
- Range to the enemy target.
- Rates of fire.
- Available ammunition quantities.

Echeloning Fires. Echeloning fires is a technique by which the unit coordinates and deconflicts the employment of fires with maneuver. Units use sequentially smaller weapons systems to engage and suppresses the enemy as the distance between friendly and enemy forces diminishes. The platoon may use all available assets based on the situation and the desired effects on the enemy. As the maneuver element advances on the enemy or the enemy maneuvers toward the platoon's battle positions, the platoon commander echelons fires. The platoon employs larger weapons with larger risk estimate distances earlier while forces are farther from the point of impact. As distances are closed, those fires are ceased or shifted, and smaller weapons engage the targets, resulting in continuous engagement and suppression with diminished risk to the friendly force. This technique provides maximum effect on the enemy while reducing unnecessary risk to the maneuver unit.

In the attack, fires are initiated before the assault element enters the enemy threat ring or advances from the assault position, and are ceased as the assault force approaches the risk estimate distance. The platoon plans for overlap fires; before the larger assets cease firing, the next asset begins. An example would be to employ aviation delivered Mk-82 bombs followed by fires from 155mm howitzers until the assault unit reaches a phase line corresponding to the risk estimate distance of

the howitzers. Then the howitzers would cease or shift fire, and the battalion mortar platoon would begin fires on the same target. As the assault element approaches the 81mm risk estimate distance, grenade launchers and rocket fires from a support by fire position would open fire before the 81mm mortar fires are shifted.

Weaponeering

Weaponeering is the process of determining the quantity of a specific type of lethal or nonlethal means required to create a desired effect on a given target. Weaponeering considers target vulnerability, target movement, weapons effects, munitions delivery accuracy, damage criteria, probability of kill, and weapon reliability. For the platoon commander, weaponeering is determining the right weapon to engage targets with at a given time to achieve the desired effects. The platoon commander must consider the combination of direct, indirect, and (potentially) aviation fires simultaneously or in the right sequence to support the operation.

The platoon commander communicates direct fire weaponeering decisions to the platoon through engagement criteria, target precedence, and FSCMs, enabling the unit to prioritize high value targets and allowing fires to be massed or distributed as required by the tactical situation. The employment of supporting arms is coordinated through the fires planning process described below.

Weaponeering decisions also consider the psychological impact of fires on the enemy. The platoon may consider employing indirect fires early to shape the enemy maneuver. Snipers or designated marksmen may deliver precision rifle fire targeting enemy small unit leaders. Similarly, precision guided munitions may be employed to target enemy high value targets. Alternatively, a unit may hold all direct fires until the enemy is well inside a kill zone or engagement area, and then employ mass surprised fires. Fire from crew-served weapons is normally held until appropriate targets present themselves.

FIRE SUPPORT PLANNING

The goal of fire support planning is to coordinate and integrate fires from aircraft, land-based and sea-based indirect fire systems, and EW systems to engage enemy forces, combat formations, and facilities to achieve tactical and operational objectives. Fire support planning answers the question, “How will fires support the scheme of maneuver?” To accomplish this, units must determine—

- What types of targets to attack.
- How to acquire and track targets.
- When to attack targets.
- What fire support assets are available to attack targets.
- How to coordinate the attacks.
- What defines success.

Table 5-2 shows how the troop leading steps can be used in fire support planning. The result of fire support planning must be an effective, integrated, executable, and flexible fire support plan. An effective fire support plan clearly defines and focuses on generating the effects required to support the scheme of maneuver, which together form the overall concept of operations. An integrated fire support plan uses all available acquisition and fire support assets and maximizes combat power to create combined arms effects. An executable fire support plan has the time, space, and resources to generate and assess the planned effects. It is simple, flexible, opportunistic, and redundant. A flexible plan is simple, understandable, and has the agility to support the commander's intent when unforeseen events arise through well-defined decision points. Finally, maneuver commanders and all fire support agencies must understand the plan. Assessment of the terrain and enemy should—

- Identify enemy formations, equipment, facilities, and terrain that must be attacked to ensure success.
- Identify the best fire support assets to create required effects.
- Identify the best location to engage the enemy.
- Position or coordinate for target acquisition assets.

Table 5-2. Fire Support Planning Steps.

Troop Leading Step	Fire Support Actions
Begin planning	Update friendly and enemy situations. Find out assets available, allocations, and FSCMs. Obtain company's target list worksheet, fire support execution matrix, and attack guidance. Understand the company fire support plan and how it affects the platoon. Issue a warning order to fire support personnel and the mortar section on fire support issues.
Arrange for reconnaissance	Conduct map analysis. Plot obstacles and known enemy locations. Plot all company targets. List fire support tasks. Refine company targets and request additional assets as required. Plot targets necessary to support commander's guidance (within target allocation). Determine purpose, engagement criteria, trigger points, and primary and alternate executors. Develop target list worksheet.
Make reconnaissance	Ensure battlespace observation is maintained. Conduct leader's reconnaissance and confirm or modify the plan. Verify target locations, trigger points, and the observation plan (i.e. both primary and alternate).
Complete the plan	Modify the plan as necessary after reconnaissance. Coordinate with the company FST. Plan for observer movement, observation plans, and triggers. Receive approval for the fire support plan and requested targets.
Issue the order	Participate in company orders brief. Ensure fire support representatives and the mortar section leader attend the orders brief, if assigned.
Supervise	Conduct rehearsals. Conduct inspections as required. Continue to refine targets and triggers for actual location, ground reconnaissance, or new enemy information. Continuously update and coordinate the plan as necessary.

Essential Fire Support Tasks

Essential fire support tasks are the means by which fires tasks are developed and communicated. Typically, the platoon commander will submit request to the company FST. Therefore, the platoon commander should have a working knowledge of EFSTs. Commanders develop and communicate EFSTs by describing the task, purpose, method, and effect concerning the particular objective. Further information on EFSTs can be found in MCTP 3-10F.

Task. Fire support tasks determine the targeting objective and how it relates to the enemy formation or function. The fire support tasks can include limit, divert, delay, disrupt, and destroy. For example, a fire support task would be stated as "disrupt the enemy position's ability to effectively engage forces conducting the breach."

Purpose. The purpose is given with respect to friendly maneuver; it defines what the task will allow maneuver to do. For example, a purpose statement would be stated as "in order to allow first squad to occupy the assigned support by fire position."

Method. The method describes how the fires will achieve the task and purpose. This is transmitted from the company through the fire support priorities, allocations, and restrictions.

Effect. The effect is the desired outcome of the fires based on the relative combat power and assets available. The effect is articulated through quantitative measures and is not based on percentages. The observer must assess the effects to determine if the fires met the criteria and if conditions are set to begin maneuver or take the next action. The fire support effects include: suppress, harass, neutralize, and destroy. For example, a fire support effect statement would be stated as "enemy suppressed for 7 minutes." This will enable the platoon commander to determine how many targets should be planned for, which assets are available to be used, and any restrictions placed on fires.

The Four-Step Fire Support Planning Technique

The four steps of fire support planning allow platoon commanders to develop a synchronized plan supporting maneuver. This plan can either be given as a recommendation to the company commander or FST leader, or used to communicate the plan to supporting units. The four steps are discussed in the following subparagraphs.

Identify Parts. The platoon commander breaks down the platoon's scheme of maneuver into parts. The platoon commander may break the fire support plan into as many as needed. For example, a platoon is tasked to clear a dug-in reinforced squad position anchored by a dug in T-72 tank. The enemy is known to be equipped with SA-14 surface-to-air missiles. A section of AH-1Z cobras, the company 60mm mortar section, and a section of the battalion 81mm mortar platoon (i.e., four tubes) is available for support. In this case, the platoon commander determines that the fire support plan will have two parts—the destruction of the tank and the closure of the platoon.

Identify Effect. The desired effect will generally reflect the effect of an EFST. Specifically, the platoon commander will decide if the effects needed are to suppress a target for a determined amount of time to facilitate closure or to destroy a target to facilitate continuance of the scheme of maneuver. Following the example above, during the first part of the operation, the platoon commander decides to employ a destruction series to destroy the tank. During the second part, the platoon will employ a closure series employing 81mm mortar fires to engage the enemy position while 60mm mortar fire obscures the movement of the assault element.

Identify Kill Asset. By understanding the capabilities and limitations of each available indirect fire asset, and through an analysis of the enemy and the target, the platoon commander employs the best asset or mix of assets to create the desired effects. Continuing the example from above, the platoon commander decides that the best asset to kill the tank is the attack helicopter, employing a precision guided munition. During the second part, the platoon will employ the more lethal 81mm mortars to suppress the trench line while the 60mm mortar section fires smoke to obscure the movement of an assault element.

Develop a Plan Around the Kill Asset. Once the kill asset has been identified, a plan can be developed to employ it. The plan should be as simple as possible while still accomplishing the required effects. The simplest way to develop, communicate, and coordinate the plan is through the development of a timeline. Continuing with the example, the platoon commander develops a series using the company mortars to suppress the enemy, enabling the cobras to engage. The second series used both the battalion and company mortars.

Targeting

Targeting is the process of selecting targets and matching the appropriate effects to them, taking into account operational requirements and capabilities. After deciding how fires can support the platoon's scheme of maneuver, the platoon commander coordinates with the company FST and submits a list of targets. Once the FST has coordinated with the battalion and approved the targets, it distributes the target list with the approved planned targets.

Planned targets are prearranged targets against which fires (i.e., surface or air delivered) can be delivered quickly. Planned targets give the supporting arms agencies time to work firing data or plan missions for aircraft. Planned targets are subdivided into the four categories: on-call targets, scheduled targets, priority targets, and final protective fires.

On-Call Targets. On-call targets are targets—

- On which certain supporting arms will deliver a predetermined type and amount of munitions when requested.
- That provide responsiveness and flexibility on time of delivery, such as in the defense when the enemy's time of attack is not known.

Scheduled Targets. Scheduled targets are—

- On-call targets with a timeline associated with them.
- Fired at a specific time, for example at H-hour or L-hour in support of a landing.

Priority Targets. Priority targets are primarily used in the offense when rapid response is needed. Priority targets take priority over all other requests when they are requested and have a planned type and amount of munitions to be fired. When not engaged in a fire mission, supporting units that are assigned a priority target set the priority target data on their guns and lay on that target. Priority targets are designated at the discretion of the maneuver commander, and may be shifted or changed as the supported unit moves forward. A firing unit can have a priority target or a final protective fire (FPF), but not both.

Final Protective Fires. Final protective fires offer an immediately available prearranged barrier of fire designed to impede enemy movement across defensive lines or areas. They are only used in the defense. When not engaged in fire missions, artillery and mortar units set FPF data on their guns and lay on their assigned FPF targets. A firing unit will have only one FPF.

The fire support portion of an operation order directs how fires will support the scheme of maneuver. The fires support paragraph must clearly describe the logical sequence of fires and identify specific fire support tasks. The platoon commander coordinates with the FST to have platoon fire support tasks included on the company EFST list. Fires observers (i.e., mortar and artillery forward observers and/or a JFO) use guidance in the fire support paragraph to engage the enemy.

OFFENSIVE FIRES EMPLOYMENT

Preparation Phase

During the preparation phase, fire support assets may be employed to set conditions for the attack by engaging enemy indirect fire weapons, OPs, reserves, C2 centers, logistics and assembly areas, or front-line defenses. Information operations are conducted throughout the preparation phase to soften the enemy defenses. Electronic warfare assets will seek to locate and defeat enemy C2 capabilities. Deception efforts may be supported by artillery fires. A range of methods may be employed to lower enemy morale and attempt to convince the enemy to surrender or withdraw.

During preparation, the platoon commander conducts planning and reconnaissance, seeking to identify and prioritize enemy forces and/or positions which can affect the platoon's mission. This can be done using ISR assets such as tactical UASs, or a leader's reconnaissance patrol. The platoon commander submits a list of targets for fire support assets, and may modify the order to account for direct fire requirements such as suppression or defeat of fortified positions.

Movement and Assault Phase

Starting with crossing of the LD, fires assets provide immediately responsive support to maneuver elements, usually by laying on assigned priority targets supporting the main effort. In the attack and/or assault, fire support assets are used to destroy, neutralize, or suppress targets that could impede or react to the attack. This is often achieved by firing planned targets and series.

Fires may be used to attack enemy artillery and reserves with indirect fires and air support. While this is normally conducted at the battalion or above, platoon commanders should be aware that the use of artillery and aviation assets for counterfire or isolation missions may make them unavailable to respond to calls for fire.

Consolidation Phase

After seizing an objective, fires may be used to defeat enemy counterattacks and to prevent enemy reinforcement, disengagement, or resupply.

Exploitation Phase

During exploitation, fires may be used to provide flexible fire support for maneuvering units. Fires may be used to fix bypassed enemy pockets of resistance or to slow the slow the enemy retreat.

Employment of Company Mortar Section

The company's 60mm mortar section is normally employed as a section. During offensive operations, it typically moves close behind the lead platoon and establishes firing positions as required to support the company's maneuver.

Direct Fires Planning in the Offense

The platoon plans for the employment of direct fires through support by fire positions and fire and movement in the assault. Support by fire positions are positioned to allow support forces to both control supporting arms and employ direct fires assets. Machine guns are generally used to suppress positions, while rockets, grenade launchers, ATGMs, and well-aimed rifle fire are used to destroy point targets. Supporting units plan to occupy support by fire positions using covered and concealed routes.

Support positions are often occupied in stages, with fires observers occupying the position early while crew-served weapons teams wait in "cold positions." Once fires are adjusted on to the target and assault units report that they are ready in assault positions, the crew-served weapons teams occupy their "hot positions." When possible, support by fire positions and assault positions are sited so that fires are delivered perpendicular to the assault force's axis of advance. Close coordination of both direct and indirect fires is required to allow the assault force to exploit the effects of fires, while not being impacted by them. Target reference points using visible features can be used to subdivide objectives. Refer to figure 5-3.

In the assault, squads and platoons use fire and movement to suppress and destroy those enemy who have survived the employment of fires.

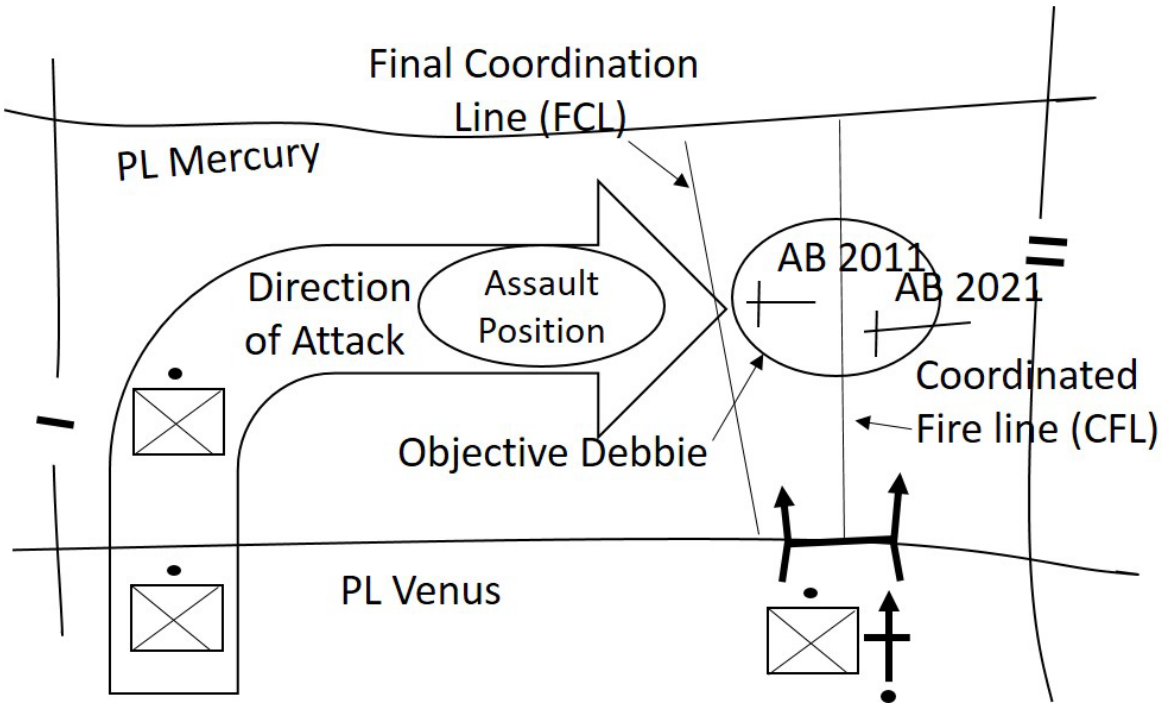


Figure 5-3. Example of Platoon-Level Offensive Employment of Support.

DEFENSIVE FIRES EMPLOYMENT

In the defense, fires are used to add depth to the unit's engagement areas and to mass fires at critical points.

Long-Range Fires

Fires and security forces are often employed at the company or battalion level to defeat the enemy's reconnaissance effort. Fires assets can provide fire support for security units, including infantry patrols. Engaging the enemy with long range fires can create confusion and cause the enemy to deploy into assault formations prematurely. Long range direct fire assets, including ATGMs and sniper fire, may also confuse the enemy. Even after the enemy lead elements have reached the main battle area, the battalion continues to employ fires against the enemy follow-on echelons.

Platoons add depth to their own fighting positions by positioning observers forward in OP/LPs, where they can control fires and dominate avenues of approach.

Close Defensive Fires

See chapter 7 for a detailed discussion of engagement area development. When planning fire support in the main battle area, commanders plan to—

- Generate combined arms effects on the enemy.
- Force enemy armor to button up, restricting their vision, and making them more vulnerable to direct fire and obstacles.
- Mass aviation and indirect fires to destroy enemy force concentrations.
- Cover existing and reinforcing obstacles by fire to ensure that units fixed by obstacles are taken under effective fire.
- Use fire support to isolate enemy forward echelons.
- Suppress enemy air defenses.
- Use smoke and other fires to assist supported units in disengaging and moving.
- Use aviation fires to add depth to the defense.
- Use fires to separate infantry from armor, and/or separate lead elements from follow-on elements.

Final Protective Fires

Final protective fires are situated to bar enemy advance across the most likely avenues of approach. The FPFs of available fire support assets are allocated based on the priorities of fire for the defense. The dimensions of FPFs for common Marine Corps fire support assets are illustrated in table 5-3.

Table 5-3. Dimensions of Final Protective Fires.

155mm Artillery Battery - 300m x 50m	120mm Mortar Battery - 360m x 60m
81mm Mortar Platoon - 280m x 35m	81mm Mortar Section - 140m x 35m
60mm Mortar Section - 90m x 30m	

Employment of Company Mortar Section

The company's 60mm mortar section is typically employed as a section. During defensive operations, it is usually dug in close to the company command post.

Direct Fires Planning in the Defense

The platoon employs direct fires in the defense to mass and distribute fires as required in planned engagement areas. Platoon commanders may choose to employ fires at their maximum engagement range, or hold fires until the enemy is well inside the engagement area. Either on command or when the enemy crosses designated trigger lines, the unit engages with massed surprise fires, with fires distributed by sectors of fire and in depth.

Final Protective Line. A final protective line (FPL) are assigned to machine guns as their contribution to the FPF. The FPL is sighted to employ grazing fire to block the enemy's advance. The guns are laid on the FPF unless other targets are being engaged.

Principal Direction of Fire. A principal direction of fire (PDF) is generally assigned to rockets and ATGMs, and to machine guns when the terrain does not lend itself to an FPL. A PDF is a direction of fire that is assigned priority to cover an area with good fields of fire or one or more likely dismounted avenues of approach. If a PDF is assigned and other targets are not being engaged, machine guns should remain on the PDF.

CHAPTER 6
OFFENSIVE OPERATIONS

PURPOSE OF THE OFFENSE

The offense is the decisive form of warfare. While defensive operations can do great damage to an enemy, offensive operations are the means to achieve decisive victory. This chapter discusses basic concepts and fundamentals pertaining to offensive operations at the infantry platoon level. Offensive operations allow the commander to seize and retain the initiative and impose their will on the enemy. The offense allows us to choose the time and place of decisive combat, taking advantage of our strengths while exploiting the enemy's weaknesses. Marines actively seek opportunities to dictate the tempo of operations through offensive operations whenever possible. Offensive operations are usually focused on the enemy rather than the terrain, shattering the enemy's moral, mental, and physical cohesion. Commanders execute offensive operations to destroy enemy forces and equipment, seize key terrain, deprive the enemy of resources, deceive or divert the enemy, disrupt enemy plans, gain information, or force an enemy decision.

For further information on the offense than what is contained in this publication, refer to MCWP 3-01, *Offensive and Defensive Tactics*.

CHARACTERISTICS OF THE OFFENSE

During offensive operations, Marines seek to achieve surprise, concentrate combat power, control the tempo of combat, and be audacious. These are mutually supporting characteristics. Surprise disrupts the enemy's ability to defend effectively and inflicts psychological shock. Concentrating the effects of overwhelming combat power against a targeted weakness in the enemy's defense contributes to surprise and often ruptures the defense. Dictating the tempo of operations allows us to maintain dominance, momentum, and the initiative. A faster tempo degrades enemy situational awareness and ability to make timely or relevant decisions, denies them a chance to rest, disrupts their plans, and destroys their ability to react effectively. Audacious actions inspire subordinates and shock opponents.

FUNDAMENTALS OF THE OFFENSE

The fundamentals of offensive operations are general truisms observed throughout history.

Orient on the Enemy

Orienting on the enemy is the cornerstone of Marine Corps doctrine. The purpose of the offense is to use decisive action to force the enemy to comply; it follows that the key to conducting offensive actions in the battlespace relies upon focusing actions on influencing the enemy. Such things as terrain, infrastructure, or the environment are not the focus of the offense, but become goals and objectives if they serve to enforce the commander's will on the enemy.

Gain and Maintain Contact

The infantry's role in gaining contact with the enemy is critical to fixing and finishing them. Once in contact, the platoon aggressively develops the situation, employing both organic and supporting assets to find and exploit or create a gap. Aggressively maintaining contact ensures the initiative is retained and protects friendly forces from surprise. While in contact, the platoon must deliver a steady stream of intelligence on the enemy. It is essential that all hands understand PIRs and CCIRs, and understand their role as intelligence collectors.

Develop the Situation

Developing the situation is an approach to resolving complex problems and situations. It is both a philosophy and a method that seeks to take advantage of available time, experience, observation, and other inputs to build understanding of the situation at hand. As commanders build this context, they recognize patterns, identify opportunities, and take offensive action to positively influence the future.

Concentrate Superior Firepower at the Decisive Time and Place

Successful offensive action requires the massing of superior combat power, resources, or fires at the decisive place and time and the rapid application of this power to destroy the enemy. Marine infantry units benefit from the MAGTF's abilities to integrate fires at the decisive time and place.

Achieve Surprise

Surprise is fundamental to the offense; it allows maneuver while the enemy is unable to react effectively and coherently. Surprise does not have to be absolute; Marines can gain great advantages by conducting operations during periods of limited visibility with a precision and tempo that less capable enemies cannot match.

Exploit Known Enemy Weaknesses

Maneuver warfare doctrine is based on identifying and aggressively exploiting critical enemy vulnerabilities while avoiding enemy strengths. Platoon commanders must not hesitate to take advantage of fleeting opportunities.

Seize or Control Key Terrain

The successful accomplishment of the offensive mission is often dependent upon the early control or neutralization of key terrain. The mere possession or dominance of key terrain, whether physical terrain or in the human environment, is irrelevant unless exploited to the detriment and defeat of the enemy and to establish the conditions for further success and mission accomplishment.

Gain and Maintain the Initiative

A paramount objective of the commander in the offense is to seize and retain the initiative. By taking the initiative, platoon commanders dictate the terms of the battle or the resolution of the

problem while forcing threats to react on the commanders' terms. Through seizing and retaining the initiative, the friendly force imposes its will upon the problem and upon the enemy.

Neutralize the Enemy's Ability to React

Platoon commanders develop concepts of operation designed to disrupt and neutralize the enemy's ability to prevent accomplishment of the mission. This effort applies to both the enemy's capability to comprehend our maneuver, as well as their ability to employ fire and maneuver. Isolation of specific objectives and destruction of or interference with enemy support and reinforcement actions reduce their responsiveness, mitigate risk, enhance the security of friendly forces, and assist in gaining and retaining the initiative.

Advance by Fire and Maneuver

Fires (i.e., lethal, nonlethal, or both) without maneuver do not provide decisive results. Attempting maneuver without fires invites destruction or failure. Fire and maneuver characterize the infantry company's offensive actions. Depending on the situation, platoons may maneuver under supporting fires from the company, or squads may maneuver under supporting fires from the platoon. Internal to the platoon, squads often use fire and movement during the final assault.

Maintain Momentum

Maintaining momentum means establishing a consistently higher operating tempo than the enemy. In offensive actions, the platoon commander seeks to avoid or mitigate the culminating point—that point at which logistics, fatigue, or the enemy stops the attack or offense. When planning, the platoon commander considers friendly weaknesses; mitigates them; and, once in contact, makes every effort to gain and maintain momentum until securing the objective. In order for infantry platoons to be able to exploit success, they must avoid a culminating point. Establishing a sustainable battle rhythm is essential to maintaining momentum and avoiding the culmination point in steady state and dynamic operations.

Speed

Speed is a weapon and a function of momentum. The infantry company seeks to act and move faster than the enemy does. The platoon must be able to execute operations quickly to impose the commander's will on the enemy. Training and effective, well-rehearsed SOPs are key elements in allowing platoons to act quickly. Speed contributes to surprise and mitigates risks to friendly forces.

Exploit Success

Infantry platoons must be able to recognize and exploit advantages. Reinforcing success and exploiting tactical advantages often generates tactical momentum and psychological effects far out of proportion to the initial success. Mission tactics enable the small-unit leaders to take the initiative.

Be Flexible

Flexibility is essential to the infantry's ability to adapt successfully to changing battlefield conditions. The enemy exercises independent will, and the platoon commander will never have complete knowledge of the battlefield. Throughout planning and execution, commanders take potential contingencies into account.

Be Aggressive

As the agent of decisive action, the offense is inherently aggressive and focused on the energetic pursuit of victory. Aggressive action is not the same as rash or reckless action; rather, it is characterized by bold initiative, speed, endurance, and the willingness to succeed in the face of hardship, unexpected obstacles, and the challenge of facing an independent will.

Provide for the Security of the Force

Force protection is a warfighting function; the defense of the operational area is inherent to all activities across the range of military operations. Security is necessary whether a force is in garrison, moving, participating in security operations in permissive or hostile environments, or in active combat. All units are responsible for their own security, regardless of the security provided by other units.

TYPES OF OFFENSIVE OPERATIONS

There are four general types of offensive operations—movement to contact, attack, exploitation, and pursuit. Though described in a logical or notional sequence in figure 6-1, these operations may occur in any order or simultaneously throughout the battlefield. A movement to contact may be so successful that it immediately leads to exploitation, or an attack may lead directly to pursuit. At the platoon level, most operations consist of a series of movements to contacts and attacks. Exploitation and pursuit at the platoon level are conducted using movement to contact and/or attack techniques, based on the situation.

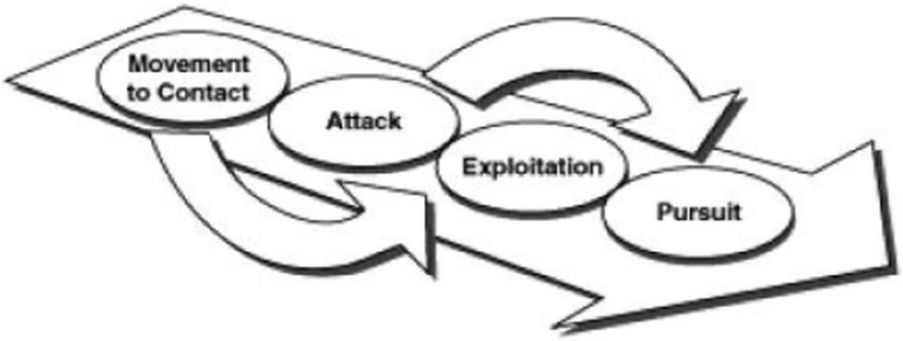


Figure 6-1. Types of Offensive Operations.

PHASES OF OFFENSIVE OPERATIONS

The actual phasing of any offensive operation depends on how the commander decides to solve the tactical problem. In general, and subject to the needs of the commander and the mission, offensive operations generally have the following five phases:

- Gain and maintain enemy contact.
- Disrupt the enemy.

- Fix the enemy.
- Maneuver.
- Follow through.

The first three phases are shaping actions, while the maneuver phase is the decisive action. Follow through may be the establishment of a defense to protect a recently seized objective, or a sequel or branch to the plan based on the current situation, such as an exploitation or pursuit.

FORMS OF MANEUVER

The Marine Corps recognizes six forms of offensive maneuver—frontal attack, flank attack, envelopment, turning movement, infiltration, and penetration. The forms of maneuver are the basis for developing offensive COAs and synchronizing warfighting functions. They may be combined in different ways at different levels of command (e.g., a company may conduct a flank attack in executing its portion of the parent battalion's envelopment). While higher commanders rarely specify forms of maneuver, their guidance and intent, along with the mission and any implied tasks, may impose constraints which narrow a subordinate's options, such as time, security, and direction of attack. Key factors such as terrain, the actions of adjacent units, and the dispositions and likely reactions of the enemy also impact the choice of maneuver. A single operation may contain several forms of maneuver, such as a frontal attack to clear a security area, a penetration to create a gap in enemy defenses, and envelopments to defeat the rest of the enemy force.

Frontal Attack

A frontal attack is an attack directed against the front of the enemy force. An attacking force may use a frontal attack to rapidly destroy a weaker enemy force. A commander might use a frontal attack as a supporting effort in conjunction with other forms of maneuver, such as applying pressure on forward positions to enable a penetration to be performed as the decisive action, or to fix an enemy force in support of an envelopment. Since a frontal attack often pits strength against strength, frontal attacks without significant combat power advantages over the enemy are rarely decisive and often unwarranted.

Figure 6-2 depicts a frontal attack. A commander may utilize a frontal attack to—

- Clear enemy security forces.
- Overwhelm a shattered enemy during an exploitation or pursuit.
- Fix enemy forces in place as part of a shaping action.

A force conducting a frontal attack typically uses supporting arms and support by fire positions to suppress and degrade the enemy as shown in figure 6-3, allowing the assault force to seize objectives. The preponderance of combat power is typically in the supporting elements, setting conditions for successful assault. The assault unit usually uses fire and movement to close with and destroy a suppressed enemy.

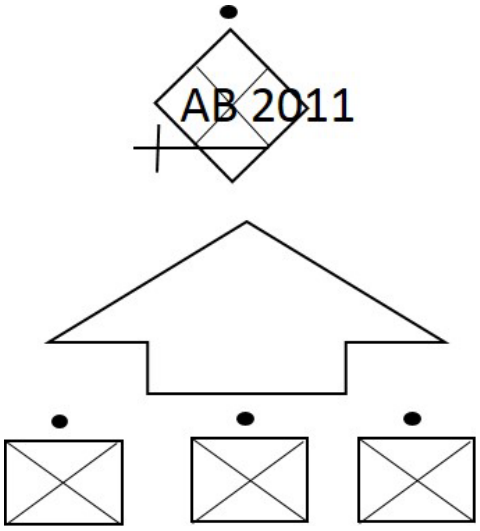


Figure 6-2. Frontal Attack.

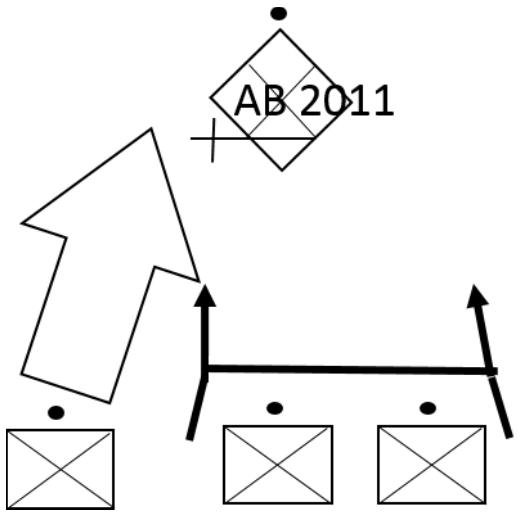


Figure 6-3. Frontal Attack Utilizing Support by Fire Element.

A platoon may execute a frontal attack on its own, or participate in a company's frontal attack. As required by the situation, the platoon commander allocates forces between the support by fire elements, assault elements, and a reserve to conduct the decisive action or exploit success. When participating in a company attack, the platoon as a whole may be employed as the assault or support by fire element.

If planning a frontal attack against considerably weaker enemy forces, the planning focus is on maintaining tempo. Planners seek efficiency and rapidity in deploying into assault formations, executing the assault, and conducting consolidation and reorganization. At the battalion level and below, units often use battle drills to accomplish these. When conducting a frontal attack as part of a shaping action, the primary planning objective is how to fix or disrupt the enemy force without incurring prohibitive losses. In this case, a commander may choose to execute a feint or demonstration, or use an attack by fire as the method to conducting a frontal attack.

The unit conducting a frontal attack advances on a broad front, typically with its subordinate ground maneuver elements abreast (except for the reserve). This clears the enemy's security area of its security forces, ground ISR, and target acquisition assets while advancing the friendly force into the enemy's main defenses. Once the unit makes enemy contact, the attacking force's subordinate elements rapidly develop the situation and report enemy dispositions immediately to the commander, so the commander can direct the exploitation of enemy weaknesses. The attacking force fixes enemy forces in their current locations and seeks to gain positional advantage to destroy them using fire and movement.

If the attacking unit discovers a gap in the enemy's defenses, the commander seeks to exploit that weakness and disrupt the integrity of the enemy's defense. After assessing the situation to make sure that it is not a trap, the commander can employ the reserve to exploit the opportunity. The commander synchronizes the exploitation with the actions of other maneuver and support elements to prevent possible enemy counterattacks from isolating and destroying the reserve and other exploitation elements.

If a unit conducting a frontal attack can no longer advance, it adopts a defensive posture. The commander may require it to assist the forward passage of lines of other units. It continues to perform reconnaissance of enemy positions to locate gaps or assailable flanks.

Flank Attack

A flanking attack is directed at the flank of an enemy force. This form of maneuver seeks to place friendly combat power against an enemy's flank, defeating the enemy while minimizing the effect of the enemy's frontally oriented combat power. Flanking attacks are typically conducted utilizing a support by fire element to suppress the enemy's frontage while a maneuver element assaults through one of the flanks, as illustrated in figure 6-4. However, a flanking attack can be conducted without utilizing a support by fire element in situations where the detailed planning and coordination necessary to deconflict friendly fires is limited, such as in a hasty attack. The advantage of a flanking attack is that it puts the maneuver element against a relatively weak part of the defense.

A platoon may take part in its company's flanking attack, serving either as a base of fire or an assault element. Marine forces may create a flank through the use of fires or by a successful penetration. Usually, a supporting effort engages and fixes the enemy by a combination of fires and maneuver while the main effort maneuvers to attack the enemy's flank. This form of maneuver is often used in hastily conducted attacks or as a battle drill in meeting engagements.

The primary difference between a flank attack and an envelopment is one of depth relative to the enemy's positions. A flank attack is able to come in on the flank of an enemy's defense, while an envelopment is directed against the enemy's rear area.

Envelopment

An envelopment is a form of maneuver in which the main attacking force passes around or over the enemy's principal defensive positions to secure objectives to the enemy's rear. Companies and platoons typically participate in envelopments as part of a larger force. Envelopments focus on seizing terrain, destroying specific enemy forces (often HQ and logistics forces), interdicting

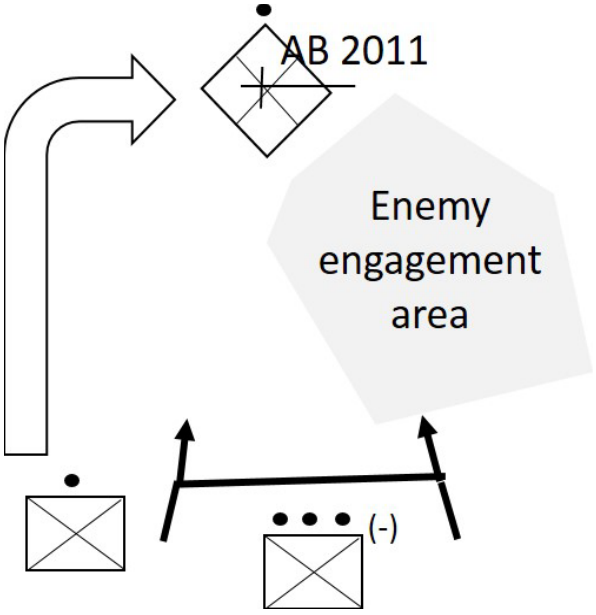


Figure 6-4. Flank Attack.

enemy withdrawal routes, and delivering a psychological shock to the enemy. Friendly forces avoid the enemy's strength while gaining a position of advantage. If no assailable flank is available, the attacking force may seek to create one by conducting a penetration. The four methods of envelopment are the single envelopment, double envelopment, encirclement, and vertical envelopment. A single envelopment is an offensive maneuver in which the main attacking force passes around or over the enemy's principal defensive positions to secure objectives to the enemy's rear. A double envelopment is an offensive maneuver designed to force the enemy to fight in two or more directions simultaneously to meet the converging axis of the attack. An encirclement is restricting the enemy's freedom of maneuver by controlling all ground routes of evacuation and reinforcement. Refer to figure 6-5 for a depiction of an envelopment.

A vertical envelopment is a tactical maneuver in which a unit conducts air assault operations to attack the rear and flanks of a force, cutting off or encircling it. Envelopments are a preferred form of maneuver because the attacking force tends to suffer fewer casualties while having the most opportunities to destroy the enemy.

A successful envelopment depends on some combination of surprise, overwhelming combat power, superior tactical mobility, air and information superiority, and the success of fixing the bulk of the enemy in their positions. The commander uses ISR assets to determine enemy dispositions, guide the enveloping force, and provide continuous intelligence collection to identify changes in enemy COAs throughout the execution of the envelopment.

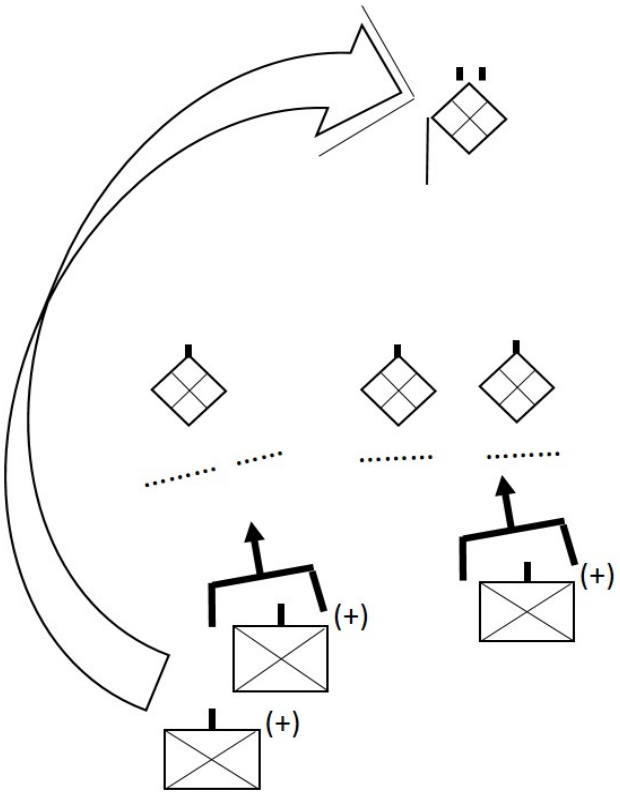


Figure 6-5. Company Conducting Vertical Envelopment, Other Companies Support from Attack by Fire Positions.

Platoons and companies executing envelopments usually execute a series of attacks against less well defended positions. To execute an envelopment, a unit must have a substantial mobility advantage over the defender. Marine Corps infantry units are most likely to conduct envelopments as part of air assault or amphibious operations.

Turning Movement

A turning movement is an attack designed to avoid the enemy's principal defensive positions by seizing objectives to their rear, causing defending forces to move out of their current positions or to divert major forces to meet the enemy. This differs from flank attacks and envelopments, in which the friendly force seeks to engage the defending enemy in their current location. For a turning movement to be successful, the unit trying to turn the enemy must attack something that the enemy will fight to save, such as a supply route, artillery emplacement, or HQ. In addition to attacking such a target, the attacking unit should be strong enough to pose a real threat to the enemy. The turning movement differs from an envelopment in that the attacker attempts to avoid the defense entirely. Instead, attackers seek to secure key terrain deep in the enemy's rear and along their lines of communication (LOCs). Faced with a major threat to their rear, the enemy is "turned" out of their defensive positions and forced to attack rearward. Refer to figure 6-6 for a depiction of a turning movement.

The company likely participates in a turning movement as part of a battalion. A platoon participates in a turning movement as part of a company or battalion operation. A turning movement often includes attacking deep into the enemy's rear, then transitioning into a pre-planned defense. For a platoon, a higher echelon turning movement typically takes the form of a movement to contact or an attack, followed by a planned defense.

Infiltration

Infiltration is a form of maneuver in which friendly forces move through or into an area or territory occupied by either friendly or enemy troops or organizations. The movement is made

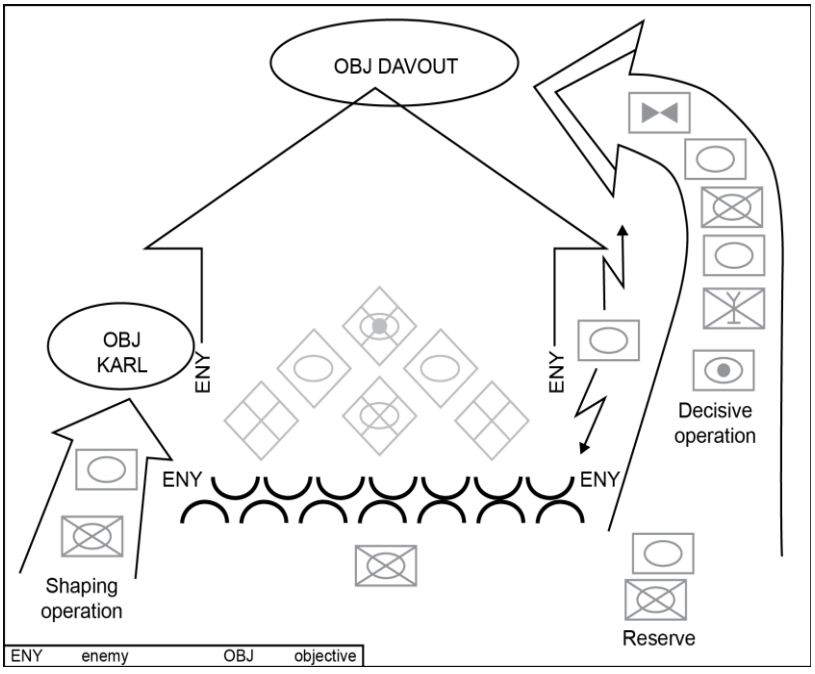


Figure 6-6. Turning Movement.

either by small groups or by individuals, at extended or irregular intervals. When used in connection with the enemy, it implies that contact is to be avoided.

Infiltration is also a march technique used within friendly territory to mask the movement of forces by moving them in small groups at extended or irregular intervals. For example, a company could have its platoons patrol by squads into an assembly area over a period of 48 hours.

When moving into and through enemy territory, units conducting an infiltration attempt to remain undetected. Contact is to be avoided until the commander chooses to initiate the attack. Infiltration movement is often used to set the conditions for limited visibility attacks and ambushes. A successful infiltration bypasses the enemy's strengths, allowing the commander to surprise the enemy from a position of advantage.

Infiltration is generally used in conjunction with or in support of another form of maneuver. For example, a scout-sniper team may infiltrate to an objective rally point (ORP) to provide reconnaissance and subsequent precision rifle fire in support of a larger attack. Similarly, an infantry company infiltration, taking advantage of terrain favorable to dismounted maneuver, might be supported by mechanized forces conducting feints against the enemy defensive positions.

Infiltrations are most often executed by small units (i.e. usually squad or platoon sized) using covered and concealed routes. Figure 6-7 depicts a company infiltration of an enemy defense along an infiltration lane. Control measures for an infiltration typically include one infiltration lane per company, the LD, linkup and rally points, and one or more geographic or force-oriented

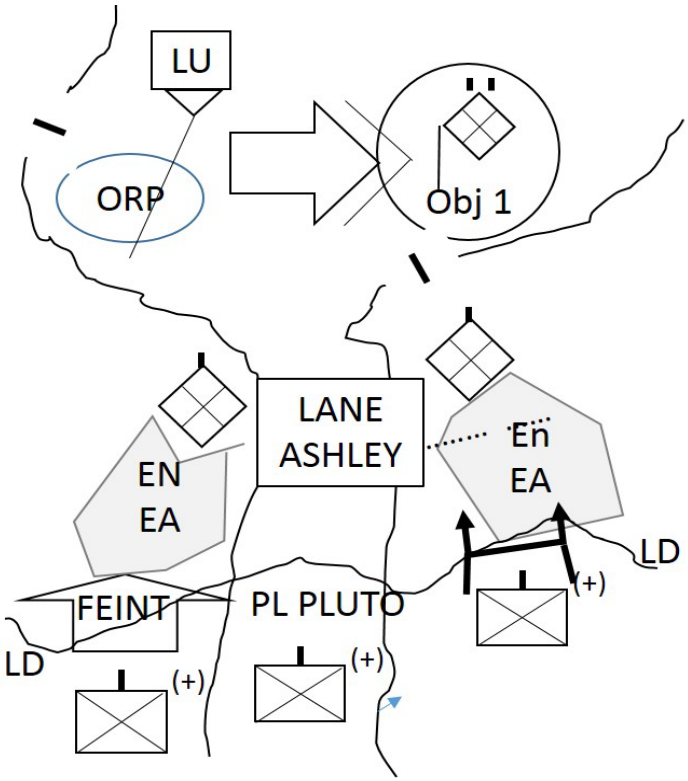


Figure 6-7. Company Conducting Infiltration.

objectives. The commander can impose other measures to control the infiltration, including checkpoints, phase lines, and assault positions.

The infiltration lane is a control measure that coordinates the forward and lateral movement of infiltrating units and fixes fire planning responsibilities. The commander selects infiltration lanes that avoid the enemy, provide cover and concealment, and facilitate navigation. Each platoon in a company is either assigned a route or allowed to pick its own within the infiltration lane. The left and right limits of the infiltration lane are boundaries and cannot be crossed without coordination.

Establishing rendezvous points, which are easily identifiable locations on the ground where forces meet, minimizes the risk of fratricide since units expect to encounter friendly forces at these points. In an infiltration, rendezvous points should be close to an ORP that provides cover and concealment and is large enough to allow infiltrating elements to assemble. The commander chooses rendezvous points and ORPs on defensible terrain located away from expected enemy positions and movement routes.

A unit may conduct an infiltration in order to—

- Reconnoiter enemy positions and conduct surveillance of named areas of interest (NAIs) and target areas of interest.
- Attack an enemy-held position from an unexpected direction.
- Occupy a support by fire position to support an attack.
- Secure key terrain or interdict enemy LOCs.
- Conduct ambushes and raids.
- Conduct a covert breach of an obstacle

Planning an Infiltration. An infiltration typically has three phases—the infiltration, actions on the objective, and link-up and relief procedures after mission accomplishment. Across these three phases, the key factor in planning an infiltration is detailed intelligence on the enemy. A second key factor in infiltration planning is supporting fires, information operations (IO), and their integration. Operations security (OPSEC), ruses, tactical deception, and similar information related capabilities assist the infiltrating force in avoiding an enemy force, minimizing direct contact and maximizing surprise. The use of ground and aviation fires can assist in tactical deception, support feints and demonstrations, and fix the enemy in their positions. A third key planning factor is the command and control of the infiltration, including deconflicting communications between multiple units on multiple lanes, handling contingencies, synchronizing and coordinating follow-on activities, and conducting link-ups and reliefs.

After identifying gaps or weaknesses in the enemy's defensive positions, the commander assigns infiltration lanes and objectives. When the situation permits, assigned infiltration lanes should be reconnoitered before the main body is committed. This is an appropriate task for a scout-sniper team, or it may be conducted by a reconnaissance patrol from the company.

Each subordinate unit commander picks one or more routes within their assigned lane(s) and establishes additional contact points, rally points, assault positions, and other control measures as required. Routes should provide cover and concealment while avoiding known enemy and civilian

locations and traffic routes as much as possible. Multiple routes within infiltration lanes should be far enough apart to prevent elements from seeing one another, but close enough that elements can swiftly move from one to another. Depending on METT-T factors, infiltration element commanders also determine the movement method by which they will move on the routes within assigned lanes—the unit as a whole, in smaller elements, or even as fire teams.

Planning for the movement portion of an infiltration addresses contingency plans for the following situations:

- A lead element makes contact, but the trail elements have not started infiltrating.
- A lead element infiltrates successfully, but compromises one or more trailing elements.
- A compromised linkup point.
- Abort criteria.

After planning for the infiltration, additional planning addresses the accomplishment of the mission, post-mission activities such as link-ups and relief, and sustainment. The manner in which the infiltration force links up with other friendly forces is a function of the larger plan.

Execution of an Infiltration. Reconnaissance and security operations continue throughout the conduct of the infiltration to enable infiltration elements to maintain situational awareness of enemy locations and reactions. When the conditions are set by supporting efforts, the infiltrating force advances from an assembly area task-organized into its various infiltration elements, moving from their start positions, through their assigned infiltration lanes, to an ORP. Infiltration elements use redundant navigation methods and report progress and statuses to their HHQ. If a platoon conducts an infiltration by squad, the platoon establishes a linkup point to reassemble. If the platoon infiltrates as a unit, it will typically use an approach march technique with an advance guard, main body, flank security, and rear guard. The distance and time between these elements can vary depending on METT-T factors. For example, a narrow infiltration lane may require the unit to accept risk by forgoing or bringing in their flank security. All considerations for using the approach march apply, to include elements remaining within supporting distance of each other and the necessity for the main body to avoid having decisive engagement forced upon it.

As it exits the infiltration lane, the unit's elements move to one or more ORPs to consolidate combat power, refine the plan, and conduct any last-minute coordination prior to continuing the mission. The infiltration force then conducts those tasks needed to accomplish its assigned mission.

A commander may need to abort an infiltration operation if the situation changes so drastically during it that the infiltrating force is no longer capable of accomplishing its mission. Examples of changes that might trigger such an action include—

- Significant portions of the infiltrating force's combat power are lost through navigation errors, enemy action, accidents, or maintenance failures.
- Movement or significant reinforcement of a force-oriented objective.
- Detection of the infiltration by the enemy.
- Changes in the tactical situation that make the mission no longer appropriate, such as the initiation of an enemy attack.

Penetration

A penetration is a form of maneuver in which an attacking force seeks to rupture enemy defenses on a narrow front to disrupt the defensive system. This differs from penetrate as a tactical task. Destroying the continuity of the defense allows the enemy's subsequent isolation and defeat in detail by follow-on forces. A successful penetration begins in the enemy's security area and passes through their main defensive positions into their rear area. A commander employs a penetration when there is no assailable flank, methods of envelopment are impractical or are expected to take too much time, or enemy defenses are overextended and possess exploitable weak spots. Penetrations often require the commander to conduct breaching operations. A breach is to break through or secure a passage through an obstacle. A breach is a synchronized combined arms activity under the control of the maneuver commander conducted to allow maneuver through an obstacle. Breaching operations begin when friendly forces detect an obstacle and begin to apply the breaching fundamentals, and they end when battle handover has occurred between follow-on forces and a unit conducting the breaching operation.

Organization of Forces. Penetrating a well-organized position requires focusing overwhelming combat power at the point of penetration. Planning for penetrations includes plans for follow-on operations. Maintaining the momentum and tempo of operations following a penetration is essential to successful penetration operations. In addition to analyzing likely penetration points, planners must also analyze the terrain beyond them to ensure that it enables maneuver elements to proceed from the breach to a decisive objective.

The initial penetration is weighted to ensure its success; commanders are willing to accept risk in follow-on penetrations to do so. Forces conducting penetrations are organized into breach, support, and assault forces. Breach, support, and assault forces are typically designated for each defensive position the force is required to penetrate. Commanders may designate security and reserve forces to conduct reconnaissance, isolate the area of penetration, deal with expected or unexpected contingencies, and prevent the enemy from interfering with the main effort.

Commanders designate an LD, time of attack or time of assault, phase lines, objective(s), and a limit of advance (LOA) or battle handover line (BHL) to control and synchronize the attack. A BHL is used instead of an LOA when forces tasked to follow-and-assume the attack of the next objective are already designated. At the small unit level, commanders add additional control measures such as breach points, lanes, checkpoints, support by fire and attack positions, probable lines of deployment (PLDs), and attack and assault positions as required. The commander's plan for the penetration typically consists of four phases:

- Isolating the area of penetration.
- Breaching the enemy's main defensive positions.
- Widening the breach into a gap by enveloping one or both of the newly created enemy flanks.
- Seizing the objective and subsequently exploiting the success of the penetration.

Isolating the area of penetration means denying enemy the ability to affect the fight. This includes IO to disrupt and mislead enemy decision making, ruses and OPSEC regarding friendly troop movements, fires to prevent support and physical reinforcement, and actions to inhibit the enemy's use of communications and supporting arms.

Small unit leaders create detailed and synchronized plans to suppress and destroy enemy elements that can affect the penetrations and/or breaches, determining the effects necessary to commit breach and/or assault forces. Planning is coordinated to ensure that fires are employed at a sustainable rate which allow the support force to continuously suppress the enemy. Refer to chapter 10 for further information on breaching. Planning for this phase includes how to achieve and maintain fire superiority to allow the breach element to create the breach and the assault elements to pass through it and secure the far side. The sustainment of fires required by the support by fire force is vital to the survival of the breach and assault elements. The planning and control of fires is critical, including the provision of ammunition required for sustained fire. This may be the deciding factor between conducting a hasty penetration or a more deliberate operation, after additional ammunition is brought forward.

The final phase of the plan, seizing objectives beyond the penetration and exploitation, requires equally detailed coordination and synchronization. Isolation fires must be lifted or shifted and the enemy must be prevented from interdicting the penetration point. Units likely conduct battle hand-overs and forward passage of lines, and combat service support assets must phase forward. Finally, equipment and personnel casualties retrograde through the same narrow movement channels in use by elements moving forward. The key for planners in this phase is to ensure that friendly forces drive deep enough into the enemy's rear to force their displacement or risk destruction. While the gap must be held open, diverging combat power to roll up the enemy's flanks risks allowing them to successfully withdraw and reconstitute a defense.

Executing a Penetration. The following sections describe the sequence for conducting a penetration.

Isolating the Area of Penetration. Shaping actions conducted by one or more support forces set the conditions for a successful breach and mark the beginning of the penetration. Reconnaissance and shaping actions precede the beginning of the operation and continue throughout the penetration and subsequent exploitation. Information operations, including EW, are often used to degrade the enemy command and control and fire support. The planed penetration site may be designated as a critical friendly zone, and friendly assets tasked to neutralize enemy indirect fires assets. Supporting arms are not only directed against units in the vicinity of the breach sites, but also to fix enemy reserves and interdict movement routes. Feints, demonstrations, and frontal attacks against other parts of the enemy's defense reinforce IO effects and fix the enemy in their positions. Figure 6-8 illustrates a task-organized rifle platoon (reinforced with an engineer squad, a machine gun squad, and an artillery scout) setting conditions for a penetration.

Breaching the Enemy's Main Defensive Positions. Once the support force has set the necessary conditions, the commander commits the breach force. Elements of the support force continue to deliver suppressive and destructive fires to enable the maneuver of the breach and assault forces. The commander ensures that supporting efforts coordinate and synchronize their actions with the maneuver of the breach and assault forces (e.g., the shifting of fires, EW, and other IO continue to disrupt enemy reactions; supporting efforts move forward to occupy other support positions; and follow-on units prepare to immediately move forward and reinforce or exploit the breach). Figure 6-9 shows a penetration of enemy defenses.

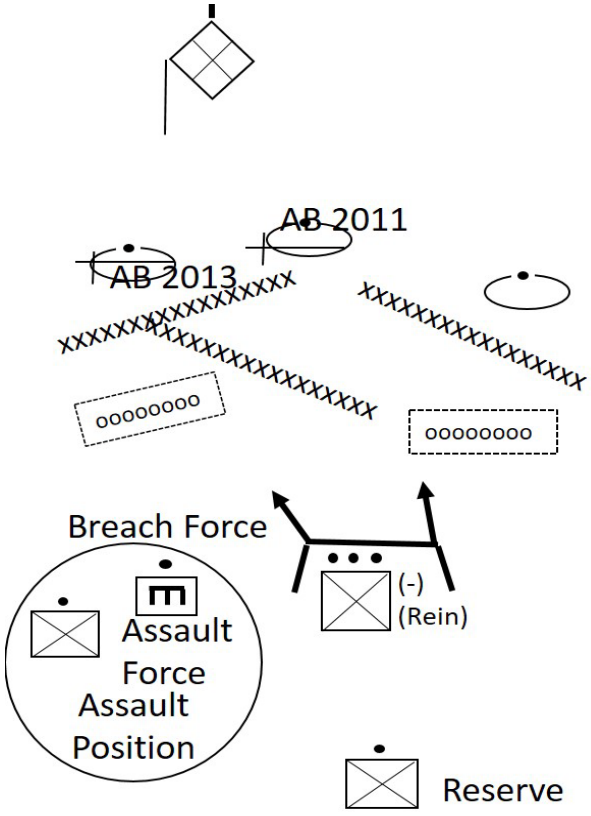


Figure 6-8. Platoon Setting Conditions for a Penetration.

Widening the Breach to Secure the Flanks. Upon successfully creating a breach in the enemy's defenses, the assault force moves through and assaults to widen and secure the penetration. The fires of supporting arms continue to be closely coordinated to simultaneously maintain isolation of the area of penetration, support the assault force, and support follow and support forces and their missions. Figure 6-10 illustrates an assault force widening the breach to secure the flanks of the penetration.

Seizing the Objective and Subsequent Exploitation. Either the assault force can conduct the decisive action by seizing the primary objectives or the commander can commit other follow and support forces. Coordination and synchronization remain critical to phase exploitation units forward, shift supporting arms, and counter enemy actions. Figure 6-11 shows a graphic display of the seizure of an objective

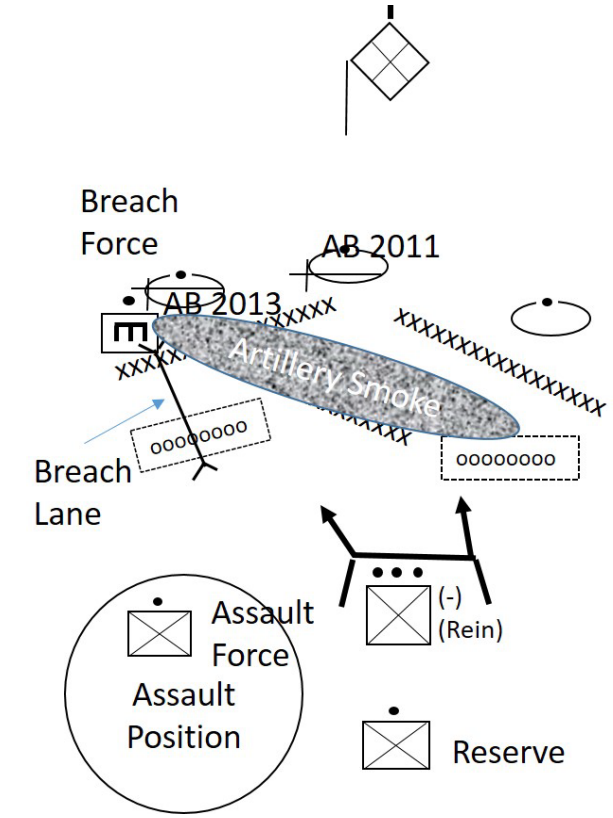


Figure 6-9. Penetration of the Enemy Defenses.

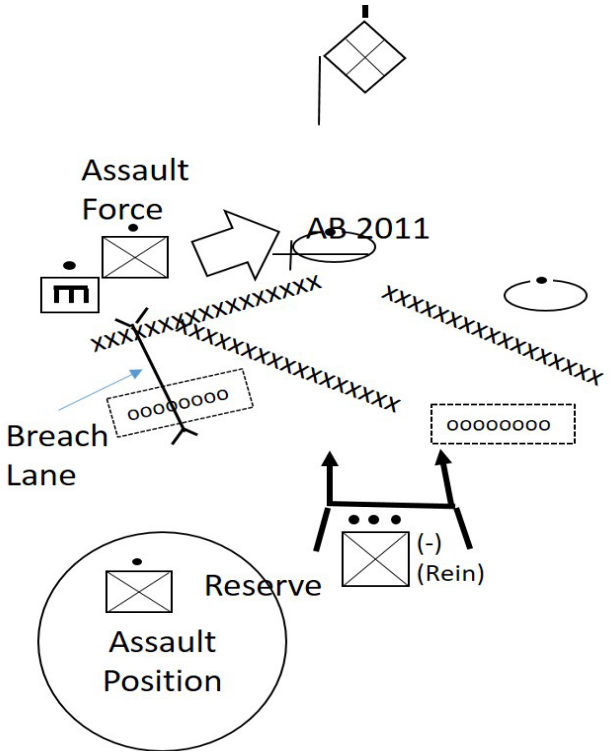


Figure 6-10. Securing the Flank of a Penetration.

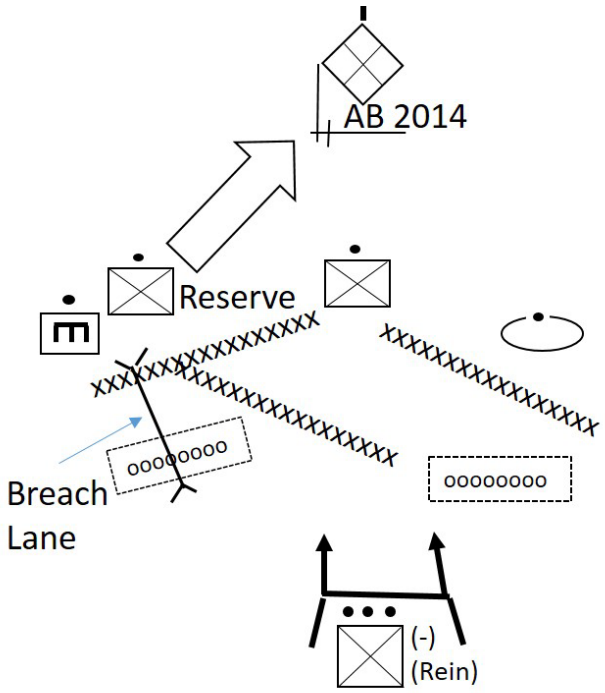


Figure 6-11. Seizing the Objective.

MOVEMENT TO CONTACT

A movement to contact is an offensive operation conducted when the enemy's location is uncertain. The intent of a movement to contact is to develop the situation and gain or regain contact. It is intended to allow the commander to make initial contact with minimal forces, then to develop the situation and concentrate forces and generate effects to attain the desired end state, creating favorable conditions for subsequent actions. Platoons conducting a movement to contact move expecting imminent contact with the enemy. The intention is to locate the enemy before being seen, or failing that, to make contact with the smallest force possible, enabling the rest of the unit to maneuver and develop the situation.

The fundamentals of movement to contact are speed, security, control, and flexibility. When conducting movement to contact, platoons must achieve speed while maintaining security, control, and the flexibility to deploy. These factors are balanced based on guidance from the commander and the expected threat. Platoons move rapidly and aggressively to maintain momentum. The speed of movement and formation are decided on in relation to the expected enemy and terrain. When possible, ISR assets such as lightweight UASs are used by the advance guard to locate the enemy. If contact is made, the advance guard executes immediate action drills or battle drills in accordance with commander's guidance. Advance guards maximize the use of ISR assets and fires to find and destroy enemy formations without becoming decisively engaged, unless tasked to destroy enemy security assets.

Since commanders often have poor information about the enemy, they must plan for contingencies and provide guidance to subordinates that allow them to act appropriately. Orders should specify engagement criteria in accordance with commander's intent. Immediate action and battle drills should be rehearsed prior to movement. The immediate action drills allow squad and team leaders to respond to enemy action, time for fires to be brought to bear, and the initiation of battle drills and orders. Formations are chosen and key leaders positioned to allow the platoon to maneuver with security and deploy into combat rapidly.

Within the overall operation order addressing the task and purpose of the movement to contact, platoon commanders devote substantial effort to ensure their subordinates understand the mission and intent for the movement to contact and what actions they should take on locating the enemy or being fired upon, allowing decentralized execution. The order should direct the route, destination, schedule, rate of march, formations, the relationships between elements, and contingencies. The movement to contact is a fundamental operation for infantry platoons. Platoon SOPs should address the common procedures and they should be rehearsed frequently.

Units have five broad options based on METT-T considerations—take offensive action, take defensive action (which may include conducting a hasty ambush), bypass, delay, or withdrawal. Company commanders typically provide guidance to the platoon commanders on actions to take on contact, based on their desired end states. This guidance often takes into account the type and size of the enemy force encountered. For example, a platoon may be tasked to destroy enemy OPs and squad-sized security elements to allow the continued advance of the main body. A platoon might be tasked to establish a base of fire and/or fix a platoon or company-sized element, allowing the company commander to decide on a COA. The platoon commander in contact usually has good situational awareness and should provide a recommendation to the company commander.

When the enemy is located or identified, the unit in contact reports up the chain of command and takes appropriate action based on the commander's intent and the situation. Whether the unit has been detected by the enemy or not is key to deciding on the action to take. If undetected, a unit may deploy into a hasty ambush or other formation and develop the situation, to include coordinating fires and the actions of the main body. If detected, they conduct immediate action drills—assault and destroy the enemy unit, bypass it, or fix it based on the METT-T factors. Guidance on bypassing enemy elements is typically provided in the operation order. Squads or platoons employ supporting arms in addition to organic weapons to fix or destroy enemy units.

Conducting a movement to contact for extended periods is tiring, particularly for the advance guard. If executing lengthy movements, the commander should plan for and rotate squads into the advanced force mission.

In planning movements to contact, the platoon commander plans for—

- Direct control of the main body, which is typically the decisive element.
- The possibility of multiple elements finding the enemy.
- Decision points and criteria for committing the main body.
- Integrating available ISR assets (i.e., small UASs) or support from external ISR platforms.
- The availability of supporting arms.

Movements to contact are generally executed as either approach marches or search and attacks, each of which are discussed below.

Approach March

Commanders choose the approach march method of conducting a movement to contact when the location of the enemy is suspected. Platoons or companies tasked to conduct an approach march move along a route to the place of expected contact. Units are task-organized and movement formations are designed to enable immediate deployment from the march.

Approach marches are generally organized as depicted in figure 6-12. The advance guard provides forward security and reconnaissance as it seeks out the enemy or moves into an uncertain or chaotic situation, and the rear guard and flank security protect the force, while the main body is the decisive maneuver element. If terrain is restricted, a platoon may operate without flank security. The advance guard is typically tasked to locate the enemy. It may also be tasked to destroy or fix enemy elements of specified sizes. The advance guard often becomes the fixing force, which allows the main body to deploy and flank the enemy.

A platoon often conducts movement to contact as a component of company operations. In this situation, a platoon could be tasked as the advance guard or it could move as part of the main body, which typically provides the flank and rear security. Platoons may also conduct movements to contact independently. At a minimum, a platoon conducting an independent movement to contact should establish an advance guard (usually squad sized) and rear guard (usually a fire team), ensuring freedom of maneuver for the platoon's main body.

The advance guard, usually a rifle platoon for a company-sized movement, precedes the main body in order to provide forward security and reconnaissance. Based on guidance from the company commander and the expected threat and terrain, the advance force either uses patrolling techniques or advances in combat formations. If available, the advance guard commander should

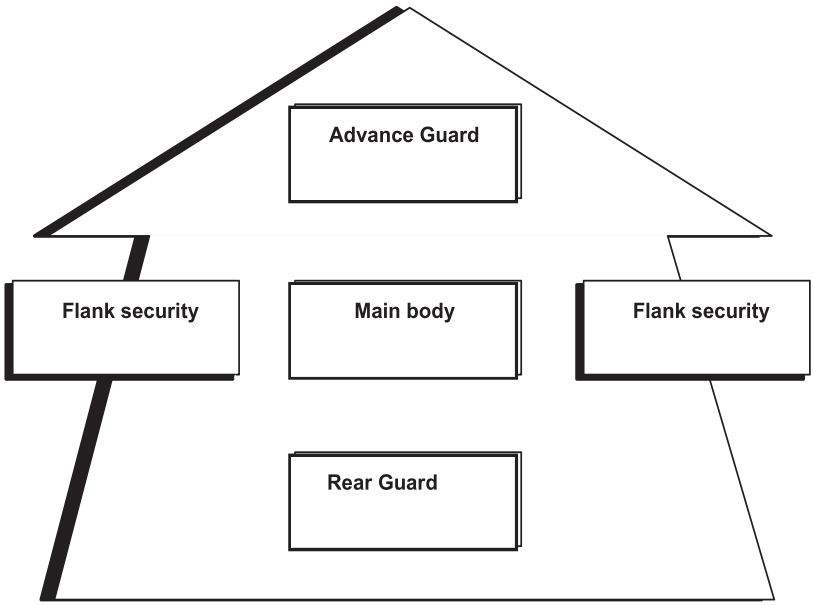


Figure 6-12. Movement to Contact Formation.

have tactical UASs available. It is likely for a unit to initially move in patrolling formations until it approaches the suspected enemy location, where it transitions into combat formations. This transition would typically occur as the platoon crosses a designated phase line, though the platoon commander may designate formation changes based on terrain. The advance guard platoon typically uses a squad as its point element, with the remainder of the platoon following and supporting them.

The main body is the decisive element in the approach march. When encountering an enemy or reaching the destination for further operations, the advance guard deploys, reports, and develops the situation. Based on previous guidance, the advance guard may be tasked to destroy enemy security elements and/or fix the enemy. The advance guard reports the situation and makes recommendations to the commander, who decides upon a COA and then uses the main body to execute that plan. The main body contains the bulk of the company's combat power and resources, and typically contains the unit's main effort and reserve. During movement, the main body groups itself tactically along the assigned route, generally forming a tactical column.

The rear guard is a security detachment that follows the main body in order to protect the rear of the movement. Typically consisting of a squad for a company movement, the rear guard is organized and tasked similarly to the advance guard. A fire team sized rear point provides security and early warning of enemy threats. The rest of its parent squad forms the rear party that supports the rear point if necessary and delays enemy attacks until support from the main body can arrives. The rear guard provides its own flank security.

When conducting the approach march, the nature of the mission dictates speed, formation, and other variables. The purpose of the operation is to locate the enemy and maneuver to a position of advantage. Platoon commanders should not let caution slow the approach march so much that the enemy can either avoid or dictate contact. Similarly, units should not move so fast that their movement loses cohesion, blunders into unexpected threat situations, or becomes unable to mass fires at the point of decision. As may be expected with offensive action, the ideal solution is to move aggressively, relying on good security and reconnaissance, and to find the enemy first, thereby allowing the company to deploy as it pleases on ground of its choosing to resolve the problem when desired.

The advance and rear guards and flank security elements protect the main body during movement and halts. Flank security units establish blocking positions to deny the enemy avenues of approach until the force passes. Contact between the various elements of the tactical march column is the responsibility of the senior unit. The main body is responsible for maintaining contact with the advance guard and rear guard in the same way that the support element of the advance guard is responsible for maintaining contact with the advance party.

Search and Attack

Infantry companies employ the search and attack method when the location of the threat is unknown, but it is suspected to be located within a unit's AO. Search and attack operations are used against widely dispersed enemies, often insurgents and enemy special operations forces. Company commanders conduct search and attack operations when the enemy is operating as small, dispersed elements in order to deny the enemy the ability to operate in the battlespace, or

when the company seeks to further develop the situation within a given area. Some examples of purposes behind search and attack situations are—

- *Protect the force*. The enemy is prevented from massing for an attack or other operations; such as disruption or destruction of friendly military or civilian operations, equipment, property, and key facilities.
- *Collect information*. Information is collected about the threat, the human environment, the physical terrain, and other intelligence required to support operations.
- *Destroy the enemy*.
- *Deny the area*. The enemy is prevented from operating unhindered in a given area that it might use as a base camp or for logistical support.

Mission-related considerations dictate whether the company commander tasks subordinate platoons with independent search and attack missions, or with serving as reconnaissance, maneuver, and support by fire elements within a larger company scheme of maneuver. A robust enemy threat might dictate that one platoon locates the enemy, another platoon supports by fire to fix the enemy, and another platoon maneuvers to decisively finish the enemy. A less capable and/or more dispersed enemy might dictate that each rifle platoon in the company is assigned a sector to carry out search and attack operations. In either case, the force integrates MAGTF ISR and fires assets in support of their operations.

If conducting independent operations, the company commander typically provides the platoons AOs, routes, NAIs, actions upon contact, and engagement and disengagement criteria. This information is typically derived from intelligence reporting and the company commander's estimate of the situation. Based on the platoon commander's estimate of the situation, the platoon may operate as a platoon or be task-organized into reconnaissance, maneuver, and support by fire elements. Alternatively, the platoon may task-organize so that each squad can maneuver independently to gain contact, supported by MAGTF ISR assets and fires, with other squads either conducting independent operations or rotating through the response force missions. Rotating forces allows a platoon to sustain search and attack operations over extended periods. Elements tasked to find the enemy (i.e. including locating enemies hiding among the population) do so through patrolling, OP/LPs, checkpoints, tracking techniques, and interaction with the local population.

In some instances, units conduct search and attack operations from forward operating bases or combat outposts. In other situations, the units must enter the assigned battlespace to begin operations. Based on the intelligence estimate, the security threat, and the mission, the company commander chooses to enter the battlespace in one of two manners:

- *En masse*. Company commanders may choose en masse occupation in the face of significant enemy threats, when forceful occupation of the battlespace is part of establishing dominance over the enemy or population, or when speed and simplicity are required.
- *Infiltration*. Company commanders may direct infiltration when the level of enemy threat is low and does not immediately threaten the survivability of any part of the company, when surprise or stealth are desired, when avoiding intimidating or alarming the populace, and when time is not a factor in the speed of occupation. The platoon may infiltrate as a unit or by squads.

Stealth, aggressiveness, flexibility, sustainment, rapidity of decision making, and exploitation of opportunities characterize the daily actions of a search and attack operation. Conducting search and attack operations requires detailed planning. Key planning considerations include geometries of fire, control measures, the update and dissemination of intelligence, communications, linkup procedures, and logistical support. Creating an environment in which subordinate units safely and efficiently operate with maximum independence and initiative is difficult. An honest assessment of the company's abilities is required before employing this movement to contact technique, and should include the following points:

- HHQ's desired end state.
- ROE.
- Succinct mission statements for platoons and squads.
- Engagement criteria and triggers.
- Size of the force required based on intelligence estimates.
- Logistical support considerations based on mission duration and requirements.
- Control measures.
- Rehearsals.
- Force protection guidance.
- Small UAS—threat and employment.

ATTACKS

An *attack* is an offensive operation of coordinated movement and maneuver supported by fires to defeat, destroy, or capture the enemy or seize and/or secure key terrain. An attack may be either a decisive action or a shaping action. The execution of an attack must mass the effects of overwhelming combat power against the targeted portions of the enemy force. The resulting combat should not be a contest between near equals. Attackers must be determined to seek decision on the ground of their choosing through the deliberate synchronization and employment of the combined arms team. An invaluable advantage of the attack is that it allows the commander to choose the time and location of decisive operations.

Attacks take place along a continuum defined by the time and degree of planning that are put into them. At one end of the continuum, a unit already conducting operations rapidly executes battle drills based on verbal orders and utilizing the forces immediately available. At the other end, a force that has been task-organized specifically for the operation utilizes detailed published orders with multiple branches and sequels and detailed knowledge of all aspects of the enemy disposition, and conducts extensive rehearsals before conducting the attack. Most attacks fall between the ends of this continuum.

Marine infantry platoons typically conduct attacks as part of a company attack. Within the construct of a company attack, platoons may be tasked to establish security, to serve as a base of fire, to conduct an assault, to serve as the reserve, or to execute some combination of these tasks in

sequence. A platoon's tasks may change over the course of an attack, usually in conjunction with a phase of the operation. For example, a platoon may cross the LD as the advance guard of a company with tasks to destroy enemy security elements, then move into a support by fire position and support another platoon's seizure of an objective. Upon seizure of the objective, they might become the reserve.

The company commander designates platoon objectives and provides the purpose and tasks for the support, breach, and assault elements. Attacks are usually aimed at destroying the cohesion and combat effectiveness of the enemy through high tempo offensive operations, exploiting combined arms capabilities to the fullest. Platoons conduct attacks employing supporting arms in addition to organic weapons.

When tasked to conduct an attack independently, platoons plan and execute a leader's reconnaissance to identify and/or confirm the enemy composition and disposition, as well as to identify gaps and strong points. This helps the platoon commander build the concept of operations. Careful attention is paid to the battlefield geometry to ensure that friendly fires do not impact Marines. The effects of fires cannot cross unit boundaries without prior coordination. Risk estimate distances from supporting fires are considered, as are the signals to shift or cease fire as assault elements assault the objectives. The final coordination line is a line used to coordinate the ceasing and shifting of supporting fires and the final deployment of the assault echelon in preparation for an assault against an enemy position. Final adjustments to supporting fires necessary to reflect the actual tactical situation (i.e., as opposed to the one planned for) take place prior to crossing this line. It should be easily recognizable on the ground.

Attacks are conducted in a pre-planned sequence, with the support element setting conditions for the assault before the assault element exposes itself to enemy fire. Marine platoons are designed to function in a combined arms formation that provides a range of tools to employ against the enemy. Supporting arms allow the platoon commander to gain and maintain fire superiority during an attack. Fire superiority is the degree of a force's fires dominance over an enemy force that permits it to maneuver at a given time and place without prohibitive interference by the enemy. To successfully maneuver without prohibitive losses requires the attacker to achieve fire superiority at critical points during the attack (e.g. when assault forces are moving from the assault position to the objective). The commander gains fire superiority when needed by integrating maneuver, direct fires, fire support, and IO. Common TTP include mortar and artillery counterfire, maneuvering to support by fire positions, neutralizing enemy positions, employing EW to disrupt enemy command and control, tactical deception, and destruction of key facilities and assets.

An attack is a tactical problem like any other, and planning begins with the commander's understanding of the situation and environment, and a vision of how to solve the problem. The commander weighs known and likely enemy positions and capabilities, the effects of the environment, and the capabilities of the friendly force. In doing so, commanders develop a general concept of the operation. This concept informs further planning. For example, the commander may look at the planning time available, the enemy situation, and the friendly force's mobility and combat power and decide that the most likely solution to the tactical problem is a flank attack or single envelopment. This becomes guidance for further development of the attack plan.

Achieving surprise to offset and mitigate enemy defensive measures is central to maneuver planning. Marines may seek to gain surprise by attacking from an unexpected direction or at an unexpected time, by attacking during inclement weather or periods of limited visibility, by taking advantage of greater operational tempo, or by crossing seemingly impassable terrain. Units integrate IO to maximize surprise by deceiving the enemy, introducing hesitation, and creating decision paralysis. For example, a unit in extremely hilly or mountainous terrain may use assault support aircraft to place infantry on high ground and have them maneuver down the terrain. The commander may also use feints and demonstrations to mask true decisive and shaping actions.

Other maneuver planning focuses on enabling and coordinating the movement of subordinate units. Commanders and subordinate leaders analyze METT-T factors to determine the routes, combat formations, formation changes, directions of movement, and navigational aids they will use to traverse the ground from the LD to the objective. When required, units use security forces to post guides at locations that are critical to movement and maneuver.

Daylight attacks allow friendly forces to effectively use their equipment while facilitating control of their maneuver. They are the least stressful psychologically and physically on the attacking units. One major disadvantage is that the enemy force can effectively use its weapon systems to oppose the attack. Another disadvantage is that it does not take advantage of the Marine Corps' generally superior night vision capabilities.

Limited Visibility Attacks

Night attacks are a standard component of Marine Corps operations, and commanders should expect to conduct at least half of their operations during periods of limited visibility.

Advantages and Disadvantages of Limited Visibility Attacks. Daylight attacks are simpler and less stressful for attacker and defender alike. Daylight attacks fail to take advantage of the Marine Corps' generally superior night vision and navigational capabilities. For conditions of limited visibility to be an opportunity rather than a disadvantage, commanders must ensure they train to fight and operate in these conditions, to include phasing from daylight to night operations. They provide significant tactical and psychological advantages over a less capable enemy. Limited visibility operations require more detailed planning, direction, and control than daylight attacks to allow units to maneuver effectively without an unacceptable risk of fratricide.

Despite technology, limited visibility operations degrade the capabilities of individuals and units. Cognitive abilities tend to degrade more rapidly than physical strength and endurance, though this tendency can be overcome by training and experience. Operating at night often reduces a unit's tempo of operations and requires more planning and preparation time than usual. However, well trained units have great advantages relative to the enemy.

Marine Corps units employ night attacks to—

- Maintain the tempo of operations and keep pressure on the enemy.
- Take advantage of technology.
- Achieve surprise and psychological advantage.
- Use limited visibility to avoid heavy losses.

Planning and Directing Limited Visibility Operations. The limited visibility attack requires a detailed yet simple plan, recognizable control measures, and discipline from individual Marines. For units to be successful at night, they must have a foundation developed through thorough and intensive training. Training must be sustained, and these capabilities must be rehearsed and employed frequently for Marines to operate effectively in the dark.

At the platoon level, platoon commanders must ensure that their units are properly trained and supervised, and that rehearsals, pre-combat checks and pre-combat inspections (commonly referred to as PCCs and PCIs) are done before crossing the LD. The concept of operations should be kept simple. Familiar battle drills should be used, as well as a plain, explicit signal plan that incorporates event driven methodology, to include controlling direct and indirect fires.

Factors to consider for a limited visibility attack include—

- What are the enemy's night vision and artificial illumination capabilities?
- How can surprise be achieved and psychological shock generated among the enemy?
- How effective at limited visibility operations are the assault units?
- How effective at limited visibility operations are the supporting aviation and logistics units?
- Is there enough ambient light for NVDs?
- The scheme of maneuver for limited visibility attacks should be relatively simple.
- The reconnaissance and surveillance plan should employ night-capable ISR assets.
- Additional control measures and techniques may be required.
- Limited visibility operations typically take more time.
- Controlling supporting fires is more difficult.

Surprise is obtained through proper planning and execution of coordinated night operations. Surprise does not have to be absolute; Marines can gain great advantages by conducting operations during periods of limited visibility with a precision and tempo that less capable enemies cannot match.

Reconnaissance. Reconnaissance is critical in every attack. The success of limited visibility operations may be even more closely tied to effective reconnaissance and rehearsals since the ability of small unit leaders to execute mission tactics is decreased during limited visibility. Marine infantry commanders capitalize on the ISR capabilities of the MAGTF to plan and execute limited visibility operations. In addition to organic MAGTF assets, Marines leverage additional Joint and National systems. The reconnaissance plan should employ night-capable ISR systems to their full potential, and the information collected should be used to develop the situational awareness of leaders down to the lowest possible level.

Continuous surveillance of the objective and the approaches to it are established whenever possible. The preference is to use both ISR systems and personnel, such as a scout sniper team, though this is not always possible due to the demand for these assets. Continuous surveillance allows monitoring of the situation, and may alert the attacking unit if the enemy repositions forces or prepares additional obstacles. These same assets can be used to control fires in support of the assault. Sniper teams may also engage high value targets at the right time.

Commanders must balance the need for detailed information against the risk of losing surprise. Considering the risk of compromise, a physical reconnaissance may be performed by an element from the battalion's scout-sniper platoon or by a leader's reconnaissance patrol from the platoon or company conducting the attack. The platoon may be tasked, or the platoon commander may request authority to conduct a leader's reconnaissance. Any leader's reconnaissance must be coordinated with the company and battalion intelligence collection plan. The leader's reconnaissance may execute a route rehearsal, mark routes and control measures (i.e., both physically and by GPS waypoints), and insert guides. Prior to stepping off, members of the patrol should be briefed on the platoon's mission, as well as the company and battalion PIRs and CCIRs.

Decisions on Use of Illumination and Active Systems. Effective use of technology allows the infantry Marine to maneuver and engage targets with great accuracy, providing a marked advantage over less well equipped and trained enemies during periods of limited visibility. While the enemy should never be underestimated, very few forces are as capable at night operations as a well-trained Marine infantry unit. Each Marine in the platoon is equipped with NVDs and aiming lights for individual weapons. Select leaders and crew-served weapons typically have thermal weapons sights. Other systems provide position location and navigation capabilities that enable effective movement or maneuver during periods of limited visibility. Well trained and practiced units may conduct limited visibility attacks very much like daylight attacks.

Enemy night vision capabilities, to include their ability to use artificial illumination, will impact our conduct of limited visibility operations. If the enemy is equipped with NVDs, active emitters that give off infrared light visible to NVDs must be used prudently. Just as we must be disciplined in the use of visible lights, we must also be disciplined in the use of active infrared emitters.

Generally, Marines execute non-illuminated attacks to gain advantage, maintain surprise, and maximize the psychological impact on the enemy. The MAGTF has significant capabilities to illuminate objectives using visible or infrared flares fired by hand, grenade launcher, mortar, artillery, or aircraft. This illumination is considered as part of the concept of operations, and illumination missions are factored into the fire support plan. Illumination (i.e., both visible and infrared) is typically planned in support of limited visibility attacks, giving the leader the option to call for it when required. Battalion commanders usually control the use of conventional illumination, but may delegate the authority to a company commander. Coordinating instructions should state the conditions under which a platoon may or may not employ illumination or infrared emitters. Platoon commanders issue specific guidance and criteria on the employment of illumination in their operation orders, to include active infrared emitters.

Units may employ visible illumination to support reconnaissance, feints, and deception operations. If fired, illumination rounds should be placed on several locations over a wide area to confuse the enemy as to the location and scope of the attack. The use of illumination is also effective during reorganization and consolidation, particularly for casualty evacuation.

When illumination is employed (i.e., either visible or infrared), the commander considers the time requirements for the illumination fires and coordinates to ensure sufficient ammunition to support the attack throughout its duration. Any break in illumination may reduce the effectiveness of suppressive fire when the attackers need it most. Illumination is typically placed beyond the objective, assisting the assaulting unit's visibility by backlighting the enemy.

Marines must be prepared in case the enemy employs illumination. In circumstances where the enemy is likely to use illumination or possesses an effective night vision capability, platoon commanders should consider using smoke to obscure friendly movement in the same manner as in a daylight attack. As with normal obscuration fires, smoke is placed close to or on enemy positions to avoid restricting friendly movement.

Rehearsals. As soon as a warning order for a limited visibility attack is received, the unit can initiate pre-combat checks, pre-combat inspections, and rehearsals of battle drills related to night movement, night attacks, and night time fire control. For limited visibility operations, particular care is taken to ensure mission critical systems (e.g., laser designators and GPSs) are functional and have fresh batteries.

Taking into account intelligence collected by ISR systems and/or a leader's reconnaissance patrol, the platoon can rehearse the scheme of maneuver, paying particular attention to battlespace geometry considerations and actions on the objective. Leaders should confirm that all hands understand the marking and communication plan, as well as light discipline restrictions.

Control of Limited Visibility Operations. Limited visibility attacks require a greater emphasis on control due to their increased complexity and greater risk. Concepts of operation are developed, taking into account the terrain, the natural illumination, and the capabilities and limitations of the units that have to conduct the maneuver during periods of limited visibility. Ideally, the control measures that are developed are finalized after a leader's reconnaissance. Depending on the situation, the terrain may be physically marked by a patrol prior to the attack.

Control measures, such as assault positions, probable LDs, and support by fire positions are selected to be effective relative to the enemy and identifiable to units occupying them at night. Control measures are located on identifiable terrain features. They are also marked using GPS waypoints as a redundant backup. Target reference points and coordinated fire lines are used to orient supporting fires and reduce the risk of fratricide. Mortar or artillery illumination rounds may be fired to burn on the deck to orient attacking units and/or serve as TRPs.

Figure 6-13 depicts a reinforced platoon conducting a night attack against an enemy squad. A support by fire position established by a rifle squad and a machine gun squad provides fire support for the platoon (-) maneuver to conduct a flank attack. The platoon (-) moves from the ORP to the PLD utilizing the crows foot method, with each squad moving independently from the RP. As they approach the minimum safe line for fires, which was instrumental in establishing the final coordination line, the support by fire element shifts fires and the platoon (-) assaults the objective.

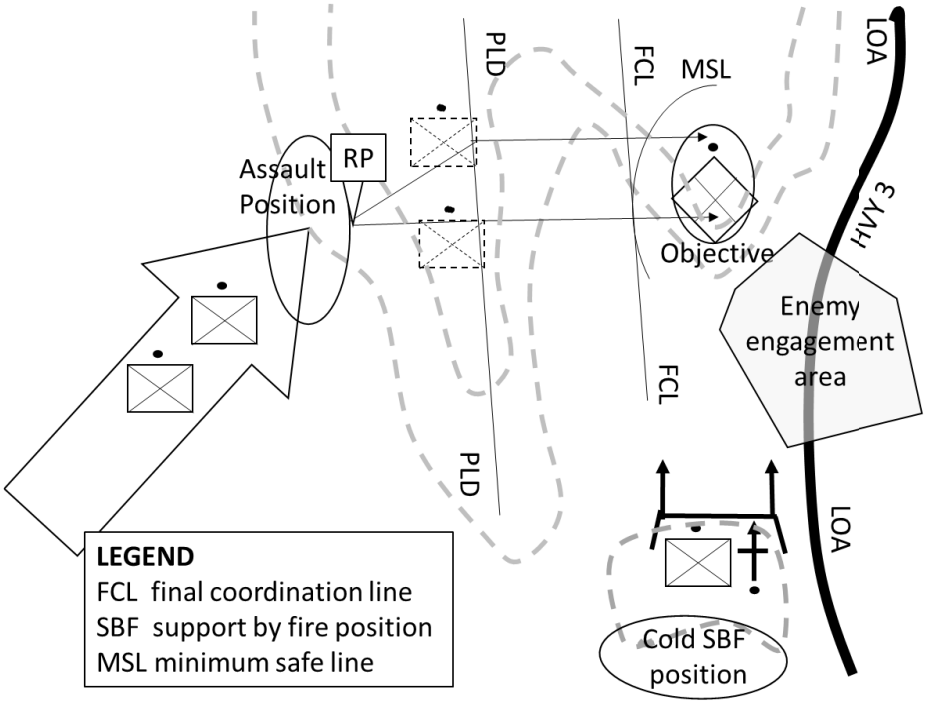


Figure 6-13. Platoon Limited Visibility Attack.

As with all operations, combat formations are selected based on the tactical situation. During periods of limited visibility, it is critical to assign a base squad to navigate and serve as the base of movement. This unit typically navigates using a pre-designated magnetic azimuth, maintaining a pace count. Navigation by GPS is used, but the GPS is checked against unit leader judgment, taking into account the actual micro-terrain. Very rarely will intelligence be accurate enough to allow the platoon commander to select GPS waypoints as the primary navigation method.

Particular attention is given to the placement of key leaders in the formation. Platoon commanders most often move with or immediately in trace of the base squad, allowing them to provide control and decisions as required. The platoon sergeant may move with the support by fire element or the trail team.

In accordance with unit SOPs, leaders ensure that uniforms and personal protective equipment are marked with luminous tape, often called glint tape. As required by the scheme of maneuver, key leaders, base units, guides, and other personnel may be marked with infrared chemical lights or even infrared strobe lights. In general, the marking plan should use low power passive markers, such as directional chemical lights, so that the enemy cannot see them. Two techniques are to place tape on the back of the helmet and to use small infrared chemical lights.

When units are maneuvering in coordination with supporting arms, the supporting elements must be able to identify the lead assault element. Based on risk analysis, it may be safer to use active systems, such as infrared strobes, to mark personnel in the lead of the assault and prevent fratricide. Platoon commanders must ensure reporting discipline is good enough to allow the FST to clear fires. The platoon should task-organize to ensure that each squad is equipped to report

position location information to enable clearance of fires. Care is taken to ensure the systems remain near the front of the squads maneuvering toward the objective.

Marking terrain can greatly assist the control of a limited visibility attack. The advantage of marking terrain is weighed against the risk of possible enemy detection. Marking GPS waypoints based on ISR systems is one method. However, marking GPS waypoints based on physical reconnaissance is preferred, as micro-terrain can be hard to discern using ISR platforms. Methods of physically marking the terrain include using directional chemical lights, engineer tape, luminous tape, and infrared devices.

Light discipline must be maintained, even in the infrared spectrum. Leaders keep their infrared pointers off except to designate targets. Marines turn on their aiming lights only when they are shooting. Most units will have a night fire control element to their SOPs. As an example, squad leaders and platoon commanders may carry magazines filled with all tracers to designate targets.

If a platoon has been tasked to occupy a support by fire position, or if the platoon commander decides to establish one internally, they may be assigned hot and cold support by fire positions. The cold support by fire position is a covered and concealed rally point short of the actual support by fire position. The unit may navigate to the cold support by fire position and remain there until conditions are set to occupy the hot support by fire position. Premature occupation of the hot support by fire position allows the enemy to engage the supporting unit by fire and may alert the enemy to an impending attack. Timing would most likely be coordinated by radio, but the support unit would typically move to the support by fire position as the assault element approaches the assault position.

Fires in Support of Limited Visibility Attacks. Marine infantry platoons typically have several types of fire control enhancements for use during periods of limited visibility—target designators, aiming lights (e.g., AN/PAQ-15s), and target illuminators. Target illuminators include infrared flares, grenade launchers, and mortar and artillery illumination rounds. Leaders can designate targets with great precision using infrared laser designators, which are only visible to personnel (i.e., whether friendly or enemy) equipped with NVDs to designate targets and sectors of fire, and to concentrate fire.

The platoon commander and squad leaders follow SOPs and sound courses of action to synchronize and deconflict the employment of infrared illumination devices, target designators, and aiming lights. Leaders can use target designators to pinpoint a target as part of the fire command, allowing Marines to mass fires on the target. These processes must be worked out in advance, and should be part of a unit SOP to ensure that signals are compatible. Marines then use the aiming lights on their individual and crew-served weapons to engage the target.

When possible, automatic weapons use ammunition without tracers, relying on infrared pointers instead. The benefit of tracers is outweighed by the degradation of friendly night vision caused by the use of tracers in crew-served weapons, and the ease with which the enemy can locate the support by fire position. The leader of the support by fire element must personally inspect every automatic weapon to ensure it is properly placed and that the effects of fires will not cross the restrictive fire line (RFL).

As in daylight, supporting fires are planned and employed based on the scheme of maneuver. Mortar, artillery, and supporting direct fire weapons fires may be planned, but not be fired unless the platoon attack is detected or until the unit is ready to conduct the assault. Alternatively, some weapons may fire before and throughout the attack, sustaining the fires to deceive or suppress the enemy and to help cover noise made by the attacking force's movement.

Obscuration fires are planned to further reduce the enemy's visibility, particularly if they have NVDs. Smoke grenades prevent observation by NVDs. If the enemy has thermal weapons sights, then white phosphorous smoke fired by artillery may be employed to block observation during critical moments of the attack, though the obscuration effect of the rounds may only last seconds. As in daylight attacks, the smoke is laid close to or on enemy positions so it does not restrict friendly movement or hinder obstacle breaching. Employing smoke on the objective during the assault may make it hard for assaulting Marines to find enemy fighting positions; however, if enough thermal sights are available, smoke on the objective may provide a decisive advantage for a well-trained platoon.

Target designators may be used to direct fires from supporting assets, including tanks and attack helicopters. Attack helicopters have very effective thermal weapons sights and can be integrated effectively into the fire support plan of night attacks, but close coordination with the aviation combat element is required to ensure that they understand the marking system and signals being used. Helicopters can also carry illumination rockets equipped with either white or infrared warheads.

Illuminating rounds can be fired to burn on the ground to mark objectives or serve as TRPs. While this can help the platoon orient on the objective and navigate, it adversely affects NVD use.

Probable Line of Deployment. The PLD is the designated line for a unit to deploy into assault formations prior to beginning an assault. The PLD should be located on a recognizable feature on the ground. Ideally, it should offer cover and concealment. It must be close enough to the enemy positions so the distance moved during the assault is relatively short, yet far enough away to prevent discovery by the enemy. If possible, it should be placed within the enemy's obstacle plan.

If the platoon is authorized a leader's reconnaissance patrol, the PLD should be identified and marked. Once near the objective, the patrol leader moves forward to locate the objective. After establishing security, the patrol leader supervises guides as they locate and mark the necessary RPs. A small element may be left behind to maintain security on the PLD and serve as guides while the patrol returns to linkup with the platoon and guide them to the PLD. Directional or infrared chemical lights can be used to mark the PLD.

Urban Attacks

Offensive operations in the urban environment place a premium on small unit leadership. Small unit leaders must be able to execute mission tactics, taking into account the commander's intent, as well as the ROE and civil considerations. Contemporary operations, particularly those occurring among the population in urban environments, require the ability to use precision and restraint in the employment of lethal force to mitigate collateral damage.

Offensive operations in urban terrain requires detailed planning and reconnaissance. Operating in an urban environment is challenging, as even small urban areas usually contain a complex mixture of high-rise business or administrative sections, suburbs, shantytowns, industrial areas, parklands, waterways, transportation infrastructure, and underground complexes of subways, basements, and sewers. As difficult as the physical terrain of the urban environment is, understanding the political, military, economic, social, information, and infrastructure aspects, known by the acronym PMESII, is usually more challenging. Urban areas are densely populated (i.e., the key characteristic that separates them from other complex terrain), and the population invariably includes a number of organizations with their own agendas and frequently competing priorities.

For more information on urban operations see MCRP 12-10B.1, *Military Operations on Urbanized Terrain (MOUT)*.

Task Organization. Infantry platoons operating in an urban environment will typically be task-organized and reinforced with attachments and enablers, such as combat engineers, medical augmentation, and translators.

A rifle platoon tasked to conduct independent operations in an urban environment is usually task-organized into assault, support, and security elements. The infantry squads may rotate through these three roles as the platoon advances. The support force provides direct and/or indirect fire support, and sets conditions for the assault force. The assault force seizes the objective. The security force isolates the objective area, provides security, and serves as the reserve.

Assault Element. The assault element usually consists of one rifle squad reinforced with assault Marines or combat engineers equipped for urban breaching. They should be equipped with unmanned ground vehicles for reconnaissance, if available. Translators are most likely to be attached to the assault force.

Support Element. The typical support element consists of one rifle squad, attached machine gunners and assault Marines and attached forward observers and/or JTACs. Attached or supporting armored fighting vehicles would typically be incorporated into the support force to provide direct fire support.

Security Element. The security element usually consists of one squad reinforced with assault Marines or engineers. They also serve as the reserve, and are ready to assume the mission of the assault force. They are usually tasked with protecting the exposed flanks.

Platoon Tasks in an Urban Environment. Platoon commanders can generally expect to execute or participate in the following offensive operations in an urban environment, either independently as a platoon or as part of the company's scheme of maneuver:

- Isolation of an urban objective.
- Attack of a building.
- Attack of an enemy outpost.
- Attack of a block or group of buildings.
- Raids.
- Cordon (i.e., a terrain-oriented tactical task per MCWP 3-01), which can include a search.

Isolation of an Urban Objective. The platoon may serve as the isolation element for a company assault. The purpose of isolation is to prevent interference from the outside (i.e., while preventing enemy from escaping) and separate forces on the objective from each other (i.e., denying mutual support and repositioning). This is accomplished by achieving fire superiority and seizing positions of advantage. If the platoon is conducting a semi-independent assault, it should be organized to accomplish both the isolation and assault function. Commanders use observed fire, direct fire, physical occupation, or appropriate combinations thereof to achieve the isolation effect. Units moving forward to isolate an objective are mindful of how they move toward and occupy assigned positions in order to preserve surprise and avoid exposure to enemy fire.

Seizure of a Building. Platoons typically seize buildings as part of a company operation. They may participate in a company assault of a large building when it is too large for a single platoon to assault and clear. The platoon must isolate the building, gain a foothold, and clear the building. This action could be the main effort of the company, or the platoon could conduct this mission as part of a supporting effort, such as passing the main effort platoon through the newly cleared building so they can assault the main objective.

The attack should enter the building at the least defended point or through a breached hole. Clearing is conducted either top-down or bottom-up; each method has advantages and disadvantages that must be weighed by the unit leader. Regardless of the method, close coordination between the assault and support forces is required.

The assault consists of three steps:

- Isolate the building and deny the enemy the ability to maneuver or reinforce.
- Enter the building to secure a foothold for further action.
- Clear the building systematically.

Clearing is performed by individual squads and teams, which leapfrog as rooms and floors are secured. Platoons tasked to clear buildings may be reinforced with combat engineers or assault Marines to conduct urban breaching.

Attack of an Enemy Outpost. An infantry platoon may encounter or be tasked to destroy enemy outposts, checkpoints, or strong points in its advance. A platoon may conduct a hasty attack over a substantially weaker enemy, bypass the outpost, or attack and reduce the outpost using classic strong point reduction tactics—isolate, suppress, breach, and assault—utilizing urban battle drills for urban movement, building entry, and room clearing.

The platoon occupies positions of advantage. The support force uses organic and supporting fires to isolate the outpost and set conditions for the assault. Once the conditions are right, the assault force assaults the objective from a covered route, entering the outpost at a vulnerable point. Smoke may be employed to screen the assault force's movement.

Attack of a Block or Group of Buildings. The size, construction, and expected enemy resistance inside of a block or group of buildings will determine the company commander's task to the platoon. A suburban, residential block consisting of single-family dwellings might be an

appropriate mission for a platoon to isolate and clear on its own. However, even in an uncertain or permissive environment, an infantry platoon is unlikely to receive a mission to clear a city block with multiple buildings of varying construction and size on its own. In such cases, the platoon will more likely operate as part of the company.

Before an assault, the platoon commander employs smoke to conceal the movement of assaulting squads. Depending on the estimate of the situation, the assault elements may move through buildings to their assault positions. Suppression fires is provided to their flanks with direct fire weapons. The company may provide additional security forces for flank protection.

Concealed by smoke and supported by direct fire weapons, an assaulting squad attacks the first isolated building. The squad must close on the building quickly while the enemy is still stunned by supporting fire. The platoon commander closely coordinates the assault with supporting fire so that the fire is shifted at the last possible moment.

The platoon commander directs platoon attacks on a designated front, supported by direct and indirect fires. Success depends on isolating the enemy positions (which often become squad objectives), suppressing enemy weapons, securing a foothold in the block, and systematically clearing the block's buildings room by room. The platoon continues to seize each building until the block is cleared. After seizing the block, the platoon either consolidates and reorganizes to repel a counterattack or continues the attack.

Raids. Platoons may be tasked to perform raids in urban terrain, which are planned similarly to raids on other terrain. The ability to conduct reconnaissance and to move undetected by the enemy in an urban environment is highly dependent on the support or hostility of the local population. Raid objectives will typically be located in built up areas, and the company may have to move through urban terrain. The platoon may conduct an urban raid independently, or it may act as a maneuver element in a company raid.

Special Purpose Attacks

There are several types of special purpose attacks. They include the spoiling attack, counterattack, feint, demonstration, reconnaissance in force, raid, and ambush. Based on

METT-T factors, commanders may choose to execute any of the above types of attack in a hasty manner, relying on battle drills and the information available at the moment, or they may choose to conduct some degree of reconnaissance and preparation for a more deliberate attack.

An attack differs from a movement to contact in that, even in a hastily conducted attack, the commander knows part of the enemy's disposition. This knowledge enables the commander to better synchronize the attack and employ combat power more effectively than in a movement to contact. When an attack is successful, the enemy is no longer willing or able to offer meaningful resistance.

Spoiling Attack. Spoiling attacks are limited objective attacks used to delay, disrupt, or destroy the enemy's ability to attack. Spoiling attacks typically occur when the enemy is in the defense, though they may also be conducted to stop the enemy's offensive action prior to launching a larger friendly attack. Platoon and company commanders generate these effects by striking the enemy

during vulnerable moments in their preparation, such as when they are in their assembly areas or attack positions, or while they are on the move. Spoiling attacks may be either hasty or deliberate, and they are conducted similar to other types of attacks.

Counterattack. A counterattack is an offensive action conducted by forces in the defense to regain the initiative or to deny the enemy success in an attack. Pre-planned counterattacks, typically using the reserve, are integrated into the defensive plan and are preferred to improvised counterattacks that risk reinforcing failure. Commanders conduct counterattacks either with the reserve or with lightly committed forward elements. A counterattack is executed after the enemy launches its attack, reveals its main effort, or creates an assailable flank.

Planning and rehearsing counterattacks is similar to that of other types of attacks. Combat power, tasks, supporting fires, routes, triggers, and similar measures are determined and assigned. Moreover, counterattacks planned as part of the defensive scheme of maneuver receive greater planning emphasis than those planned as contingencies. Well-planned counterattacks are likely to succeed, given the defender's superior knowledge of the terrain, the ability of the defender to generate parity between forces at the point of attack, and the inevitable degradation of cohesion experienced by attackers as they penetrate an objective.

Feint. A feint is a limited scope attack with a specific objective intended to delay or disrupt the enemy's preparations, or to cause them to react in a particular way, such as repositioning forces, committing reserves, uncovering supporting assets, or shifting fires. An infantry platoon is unlikely to conduct a feint as its own scheme of maneuver. It is more likely to be tasked to conduct an attack with limited objectives as part of a feint organized by a HHQ.

The following are some of the planning considerations for the platoon commander:

- The higher commander's intent regarding force preservation.
- Disengagement criteria and plans.
- Assignment of limited depth and attainable objectives.
- Clear follow-on orders that ensure the feinting force is prepared to exploit the success of the main attack, if necessary.

A feint is successful only if the enemy believes that a full-scale attack is underway; therefore, it is essential that the feint occurs with the same level of precision and violence as any other attack. Higher headquarters must issue a clear task and purpose, including identifying the specific enemy actions the feint must trigger or deny. Feints are most effective under the following conditions:

- When they reinforce the enemy's expectations.
- When the attack appears to present a definite threat to the enemy.
- When the enemy demonstrates consistent early committal of their reserve.
- When the attacker has several feasible COAs, any of which the enemy could confuse for the main effort.

Demonstration. Similar to a feint, the demonstration is an attack designed to deceive the enemy about the location of the main attack; however, the friendly force does not make contact with the enemy. Demonstrations may be conducted as an economy of force measure. When participating in a demonstration as part of a larger force, the platoon commander should consider the following:

- *Limit of advance*. The LOA is a control measure that ensures the enemy can see the demonstration force, but cannot effectively engage it with direct fires.
- *Security measures*. Security measures, such as robust local security or a counter-reconnaissance plan, prevent engagement by the enemy.
- *Contingency plans*. The demonstration force must be prepared to respond effectively to enemy direct or indirect fires while avoiding decisive engagement.
- *Follow-on orders*. Clear, specific follow-on orders must ensure that the demonstration force is prepared to exploit the success of the main attack if necessary.

Reconnaissance in Force. A reconnaissance in force is an attack designed to gain information and to locate and test enemy dispositions, strengths, and reactions. An infantry platoon is unlikely to conduct a reconnaissance in force attack on its own, but may participate in a reconnaissance in force conducted at the battalion level or above. While it may share some similarities with a movement to contact, which is designed to leave a commander maximum latitude for final disposition (i.e., transitioning to the offense or defense, or avoiding decisive engagement), the reconnaissance in force is an offensive action that seeks specific information and enemy reactions.

While lacking the subtlety of other methods, a reconnaissance in force tends to develop information more rapidly and, in more detail, than other types of reconnaissance. An infantry company or platoon participating in a reconnaissance in force may be tasked to conduct limited objective assaults that are designed to determine the enemy's situation and maintain pressure on them by uncovering weaknesses or forcing them to commit planned fires and use of the reserve. Since the situation is unknown, the infantry company can expect to be part of a task-organized combined arms force that is capable of dealing with a variety of situations.

Raids. A raid is a limited objective attack involving a swift penetration into a hostile area and a planned withdrawal upon completion of the mission. The planned withdrawal distinguishes raids from other types of attacks. Raids may be executed in a permissive environment in support of a host nation government, or in uncertain or hostile environments.

Infantry platoons can conduct platoon-level raids or participate in company or battalion-level raids. Raids may be conducted in daylight or during periods of reduced visibility. They may be conducted either within or beyond the scope of supporting friendly units and artillery fires. A raid force is task-organized to conduct independent operations for the duration of the raid. Raid forces receive specific objectives to focus their efforts and assist in decision criteria. The primary differences between the raid as a type of attack or as a type of patrol are size and scope. (Refer to chapter 8 for more information on patrolling. The raid force should withdraw using a different route from that used to approach the objective.

A platoon may be tasked to conduct raids to accomplish the following missions:

- Capturing personnel.
- Capturing or destroying C2 assets or locations.
- Destroying logistics, caches, and other means of support.
- Obtaining information concerning enemy locations, dispositions, strength, intentions, and methods of operation.
- Confusing the enemy and disrupting their plans.

The raid force is typically task-organized into command, support, assault, and security elements, but may also contain reconnaissance and reserve elements. Specialized attachments typically move with the assault force. There are four phases to a raid:

- Movement to the objective area.
- Isolation of the objective.
- Actions on the objective.
- Withdrawal from the objective area.

When planning a raid, the platoon commander makes the following considerations:

- Selection of routes to and from the objective.
- Lethal and nonlethal fires planning.
- Specialized assets required for the mission, such as demolitions, explosive detection dogs, or site exploitation equipment.
- Method and resources to isolate the objective.
- Emergency extraction or reinforcement plans.
- Medical evacuation plan.
- Detainee processing plan.
- Signal plan.

Ambush. An ambush is a surprise attack from concealed positions designed to reduce the overall combat effectiveness of an enemy force, capture or harass a threat, or to destroy or capture equipment or supplies. Imagination, need, and the platoon's abilities and capabilities are the only limitations on the types, methods, and purposes of ambushes.

Surprise is a primary characteristic of the ambush. Ingress and egress routes are selected to enable the force to remain undetected. While the actual method used to conduct the ambush varies by the level of the threat, the terrain, and the skill of the ambush force, there are two general types of ambush:

- Point ambush, in which the ambush force deploys to attack the enemy in a single kill zone.
- Area ambush, in which the ambush force deploys to conduct several point ambushes throughout an area.

The ambush force is typically task-organized into assault, support, and security elements. The assault element executes the ambush. The support element fixes the enemy with direct fires, pro-

vides additional personnel for tasks such as litter bearing and detainee handling, and may be responsible for controlling supporting arms. The security element secures the ORP, provides protection and early warning to the assault element, and isolates the ambush site.

Figure 6-14 illustrates point and area ambushes. Common layouts of ambushes are linear (depicted in figure 6-15), L-shaped (depicted in figure 6-16), and V-shaped (depicted in figure 6-17).

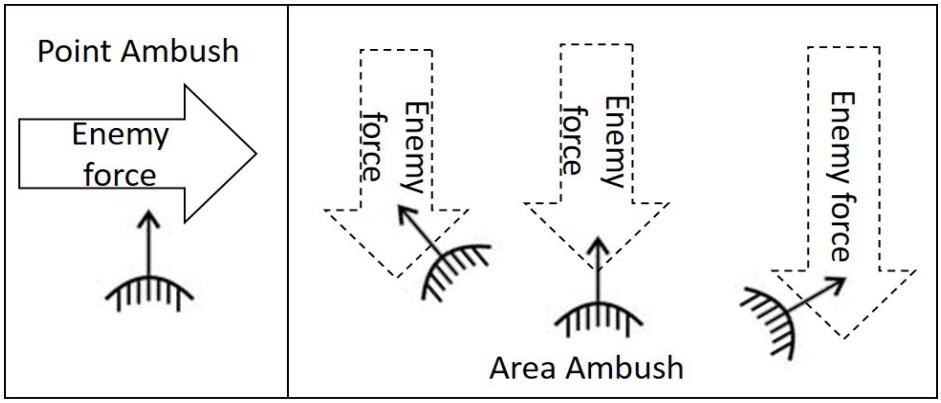


Figure 6-14. Point and Area Ambushes.

Regardless of how an ambush is employed, the general phases required to execute it successfully are as follows:

- Tactical movement to the ORP.
- Reconnaissance of the ambush site.
- Establishment of ambush site security.
- Preparation of the ambush site.
- Execution of the ambush.
- Withdrawal.

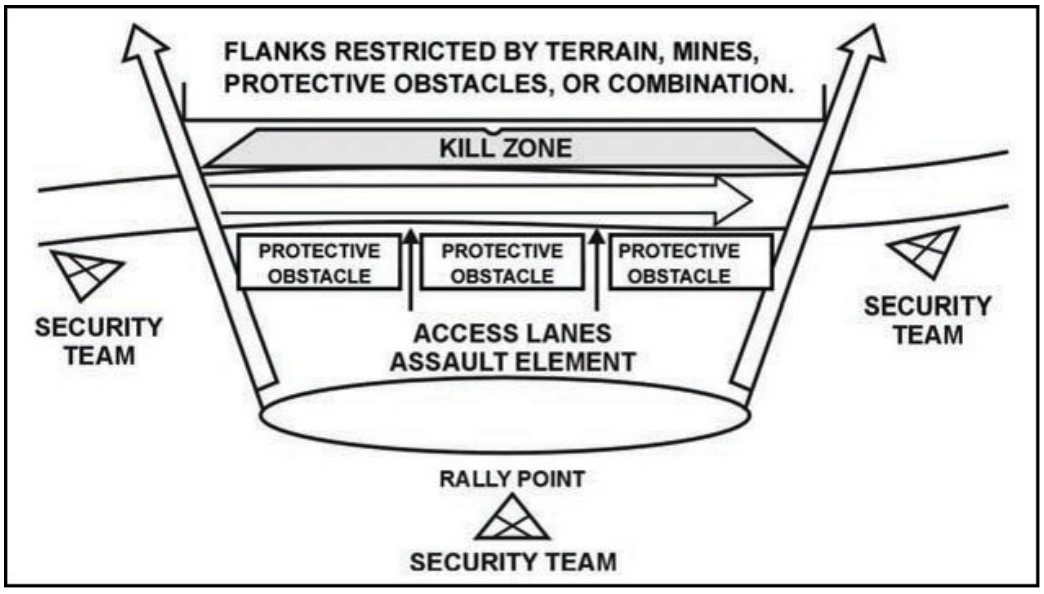


Figure 6-15. Linear Ambush.

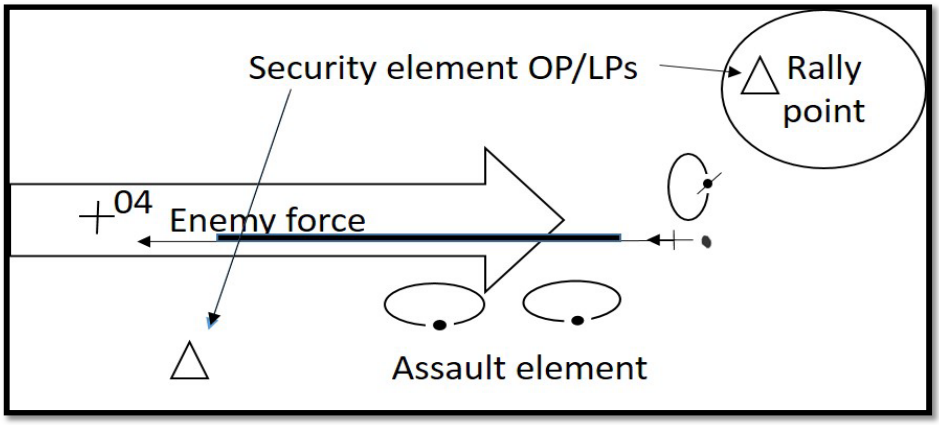


Figure 6-16. L-Shaped Ambush.

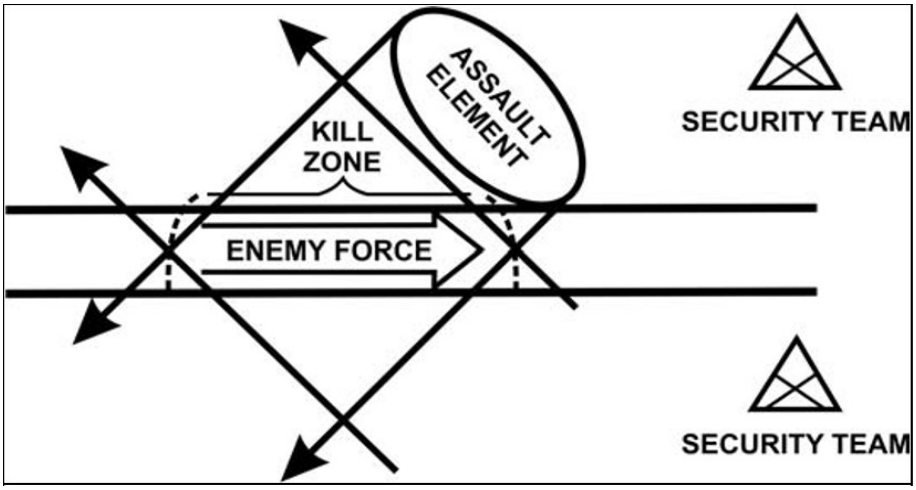


Figure 6-17. V-Shaped Ambush.

EXPLOITATION

An exploitation is an offensive operation following a successful attack that is designed to disorganize the enemy in depth. It capitalizes on the success of an attack by preventing the enemy from disengaging, withdrawing, and reestablishing an effective defense. Exploitations seek to disintegrate enemy forces to the point where they have no alternative but to surrender or take flight. Whether conducting hasty or deliberate operations, commanders plan to exploit the success of every attack without losing momentum or the initiative.

Exploitation may be conducted by the attacking force itself or by a reserve held for that purpose. Exploitations must be executed quickly to prevent the enemy from reestablishing an effective defense. It therefore places great—but necessary—demands on the endurance of Marines and equipment.

For a platoon, an exploitation may take the form of a movement to contact or an attack against follow-on objectives in the enemy's rear. The platoon may execute an exploitation as a sequel to a successful attack which creates the opportunity. Alternatively, the platoon, serving as a reserve, may be tasked to conduct a forward passage of lines and attack into the enemy's rear.

PURSUIT

A pursuit is an offensive operation designed to catch or cut off a hostile force attempting to escape, with the aim of destroying it. A pursuit typically follows a successful exploitation. However, any offensive operation can transition into a pursuit when enemy resistance has broken down and the enemy is fleeing the battlefield. Because the conditions necessary to conduct a pursuit are not predictable, they are difficult to plan. Commanders and staffs must be flexible enough to recognize and exploit success. Pursuits entail rapid movement and decentralized control. Similar to an exploitation, it places great demands on the endurance of Marines and equipment to take advantage of the opportunity to decisively defeat the enemy. A platoon's participation in a pursuit is likely to be similar to a movement to contact or an attack against fleeing or disorganized enemy forces.

CONDUCT OF OFFENSIVE OPERATIONS AT THE PLATOON LEVEL

As a platoon commander plans for an offensive mission, their plans and orders must address the platoon's actions in the following areas:

- Assembly area.
- Reconnaissance and ISR employment.
- Movement to the LD.
- Maneuver.
- Deployment.
- Assault.
- Consolidation and reorganization.

Infantry platoons typically conduct offensive operations as elements of a company. As discussed in chapters 2 and 3, the platoon commander conducts a through estimate of the situation when planning for offensive operations. Planning is supported by friendly reconnaissance operations that determine the defender's disposition, composition, strength, capabilities, and most likely courses of action.

The platoon commander does not attempt to manage every detail. Unless more detailed instruction is required to achieve surprise or reduce fratricide, the platoon commander assigns mission orders which assign a task and purpose and allow subordinates to execute assigned tasks using their judgment and initiative.

Actions in the Assembly Area

Actions in the assembly area prepare the platoon for the upcoming operations. The platoon commander plans, directs, and supervises mission preparations in the assembly area. This time allows the platoon to conduct pre-combat checks, pre-combat inspections, rehearsals, and sustainment activities. The platoon typically conducts these preparations within a company assembly area; it will rarely occupy its own assembly area.

Task Organization. During offensive operations, companies and platoons are typically task-organized based on METT-T considerations into a main effort, supporting efforts, and a reserve. Each force is assigned a task and purpose. The task and purpose may vary during each phase of an operation. Based on the concept of operations, the platoon commander task-organizes the platoon for the assigned mission. They may retain control of attached or direct support elements directly, or they may assign them to one or more squad leaders. The platoon commander should consider the cohesion and leadership of each squad when assigning tasks. The most challenging tasks are often assigned to the best squad.

The platoon commander often task-organizes the platoon into assault, support, and breach elements to conduct an assault. The support element sets the condition for the breach element's initial breach of the objective by placing suppressive fires on the most dangerous enemy positions. As the breach is being established, the supporting element shifts fires to allow the breach element to penetrate the objective and avoid fratricide.

Preparation and Rehearsals. When considering the concept of operations, the platoon commander must develop a plan that the platoon can realistically execute giving the current situation. Planning for the use of available time is one of the most significant decisions that the platoon commander makes. An excellent technique to generate tempo is to integrate immediate action drills and battle drills into the concept of the operations. When the unit is well rehearsed in drills, it simplifies the communication of the order, preparation, and execution.

Immediate Action Drills. Immediate action drills are rehearsed drills usually found in the unit SOPs. Examples include reaction to a near ambush, hasty ambush, and hasty attack. They are used by small unit leaders to react to contact without orders. They enable immediate action without need for orders, enabling a platoon to rapidly react to enemy actions or to exploit opportunities. Immediate action drills initiate action and buy time and space for decisions.

Battle Drills. Battle drills are procedures used to execute common tactical tasks, such as flank attack, bypass, breach, rotate the squads' order within the platoon (or the platoons' order within the company), and others. They are the result of decisions made by the platoon commander. The integration of rehearsed battle drills increases tempo. When a unit is well rehearsed in battle drills, small unit leaders can exploit the process to a specific tactical situation.

Reconnaissance and ISR Employment. Leaders at every level continuously and aggressively seek to increase knowledge about the terrain and the enemy. Platoon commanders submit intelligence requirements through the company. The enemy situation and available planning and ISR assets often require a platoon to conduct reconnaissance. This is typically integrated into the company and battalion intelligence collections plans to answer PIRs. The platoon commander often conducts a leader's reconnaissance to answer questions specific to the platoon's operations.

Throughout the planning and execution of operations, the platoon commander monitors the situation to maintain situational awareness, taking care to report changes in the situation to the company and informing subordinates.

Reconnaissance of an objective is typically conducted by ISR assets, at least initially. Time and authorities permitting, intelligence from ISR assets are confirmed by leader's reconnaissance. This is typically conducted prior to the attack crossing the LD. Ideally, continuous surveillance is established to monitor and shape the objective as a unit moves toward it.

Small unit leaders use knowledge gained from reconnaissance to develop their own COAs, maximizing friendly advantages while mitigating the defender's advantages. One of the principle strengths of the offense is that the attacker has the advantage of choosing the time, place, and method of the engagement. Platoon commanders maximize this advantage by engaging the enemy in a way that the enemy is unprepared for.

Movement to the Line of Departure

Platoon commanders must reconnoiter, time, and rehearse the route to the attack position. Section and squad leaders must know where they are to locate within the assigned attack position, which is the last position an attacking element occupies or passes through before crossing the LD. The point of departure (PD) is the point where the unit crosses the LD and begins moving along a direction of attack or axis of advance.

Maneuver

The platoon commander plans the approach of the platoon to the objective. If operating as part of a company scheme of maneuver, the platoon synchronizes operations with other elements of the company. Maneuver from the LD to the objective must provide for security, speed, and flexibility. The platoon may maneuver as a unit, or each squad may maneuver in a mutually supporting manner. The platoon commander's order addresses movement techniques, formations, and actions on contact.

Deployment

An assault position is the last covered and concealed position short of the objective from which final preparations are made to assault the objective. The platoon typically deploys into assault formations in the assault position. If the platoon is conducting independent operations with support elements and assault elements, the assault element deploys in the assault position, while the support element occupies the support by fire position. The support element may maneuver into a covered and concealed position short of the actual support by fire position, commonly called the cold support by fire. The support element remains in the cold support by fire until the correct time to occupy the "hot" support by fire position and begin engaging the enemy. Similarly, the assault element may either move straight through or take cover in the assault position and wait for the support element to set conditions for the assault. The units communicate primarily by radio, with visual signals as backup.

Assault

Attacks can be massive operations sustained over periods of days or weeks and spanning great distances. The assault is where infantry Marines close with the enemy to secure objectives or finish destruction of enemy forces. The assault is a short, violent, but well-ordered attack against a

local objective, such as a gun emplacement, a fort, or a machine gun nest. During offensive operations, seizing terrain-oriented objectives may require the platoon to seize a designated area, and often requires fighting through defending enemy forces. The assault, frequently described as actions on the objective, are often categorized into five phases—reconnoiter the objective, isolate the objective, gain a foothold, seize the objective, and consolidate and reorganize. These phases, often referred to as "RIGS-C," apply to all levels of operations from the company down. The platoon commander applies it against a named objective. Squad and fire team leaders use the same thought process when reducing enemy strong points encountered during the assault.

The communications plan for a platoon assault typically uses radio with redundant visual signals. The platoon commander and platoon sergeant position themselves where they can best observe and control the operation.

Reconnaissance. The initial reconnaissance of an objective is usually conducted by ISR assets. As units move into position, leaders verify the intelligence through personal observation.

Isolation. Isolation of the objective is done by fire. It begins when the platoon initiates direct and indirect fires on the objective. This may occur while the platoon is still moving toward the objective from the assault position or PLD.

Gaining a Foothold. Once the support element has set the conditions, the assault element moves to seize a foothold, usually utilizing fire and movement. The supporting elements monitor the forward progress of the assault element and shift or cease fires as required. If required, a breach element creates a breach and passes the assault force forward to seize the foothold. The seizure of a foothold provides the attacking force with a position from which they can continue the assault through the objective area. By establishing footholds, a unit establishes strong points during the assault that can be used for consolidation, coordination, base of fire positions, rally points, and casualty collection points. This is usually done on a narrow frontage to limit the defender's ability to employ weapon systems.

Seize the Objective. Once the assault element has seized the initial foothold, it may expand the foothold to seize the objective. As this occurs, the platoon commander closely observes the progress of the assault element to ensure there is no loss of momentum, and that the fires of the support element support—but do not impact—the assault element.

Consolidation and Reorganization. Unless tasked to pursue or exploit, as soon as enemy resistance on the objective has ceased, the platoon quickly consolidates and reorganizes. Assaulting elements assume hasty defensive posture to repel possible enemy counterattacks. Consolidation consists of actions taken in order to be prepared to defend against an enemy counterattack. The platoon commander assesses the situation and condition of the unit and immediately begins taking necessary action to secure the objective. Reorganization complements consolidation and is the process by which the platoon prepares to carry out further operations, whether defending the newly seized objective, continuing the attack, or beginning the pursuit of the enemy.

Reorganization often requires displacing and positioning forces, such as bringing support by fire elements forward and integrating them into a hasty defense. Actions required during consolidation and reorganization typically include—

- Reporting the seizure of the objective and the enemy situation.
- Assigning defensive positions and sectors of fire.
- Emplacing automatic weapons on avenues of approach for counterattacks.
- Receiving ammunition, casualty, and equipment reports from squads and attachments.
- Directing the redistribution of ammunition.
- Directing Marines to aid the corpsmen in stabilizing and transporting casualties to the casualty collection point, if required.
- Reporting the status of the platoon to HHQ.

CHAPTER 7
THE DEFENSE

PURPOSE OF THE DEFENSE

Defensive operations are coordinated efforts conducted to defeat enemy attacks or prevent the enemy from achieving its objectives. Each defense is planned and conducted using the foundational concepts related to planning, intelligence, command and control, and fires discussed in chapters 2 through 5. This chapter introduces the fundamentals and techniques of the defense and considerations for applying those concepts at the platoon level. The platoon commander applies the foundations and the fundamentals presented in this chapter during decision making in defensive operations.

A platoon may be ordered to conduct defensive actions for a wide range of reasons, including to set conditions favorable to offensive or stability actions, to protect the force, to deny the enemy key terrain, to gain time, to economize forces, to facilitate other operations, to preoccupy the enemy in one area while friendly forces attack them in another, or to destroy attacking enemy forces.

At the platoon level, every time a unit in combat ceases movement, it assumes a security posture utilizing the fundamentals of defensive operations. The transition between offensive and defensive operations must be rapid and is an important consideration during planning. As an example, the consolidation and reorganization battle drills conducted following the seizure of an objective are done to prepare the platoon to conduct basic defensive operations in order to be prepared to defeat enemy counterattacks.

Marines on the defense do not wait passively to be attacked. Patrols and OP/LPs add depth to the defense and deny the enemy information on the location and disposition of our positions, while also giving the commander tools to gather information on the terrain and the enemy. Supporting fires and obstacle plans are used to disorganize and attrit enemy forces before they can initiate close combat.

For further information on the defense than what is detailed here, refer to MCWP 3-01.

CHARACTERISTICS OF THE DEFENSE

The characteristics of defensive operations are enduring concepts that assist commanders in the planning and execution of a defense. Successful defensive operations share various combinations of the following; maneuver, preparation, mass and concentration, flexibility, use of terrain, mutual support, defense in depth, surprise, knowledge of the enemy, and local security.

Maneuver

Maneuver is as important in the defense as it is in the offense, and offensive action in the defense is a means of gaining an advantage. While fighting from well-prepared positions is an essential part of the defense, the defender must not lose the ability to maneuver. Platoon commanders can maneuver in depth throughout the battlespace through the use of patrols, ambushes and spoiling attacks. These operations are coordinated with the company and are conducted to gain information, disrupt enemy preparations, and shape the battlespace.

An example of platoons maneuvering in the defense would be a CAAT platoon delaying from a series of successive battle positions to delay, deceive, and disrupt the enemy prior to their arrival in the main battle area. A CAAT platoon would likely have a planned subsequent battle position or attack by fire position supporting a rifle company's defense.

The commander's defensive plan always considers the employment of a reserve. A reserve allows the commander the capability to maneuver to exploit success, counterattack to regain key positions, block enemy penetrations, or attack by fire. A reserve force—

- Must be as mobile as possible, and rehearsed in movement.
- May be a dedicated fire team at the platoon level. More often the platoon commander will employ the least engaged squad as the platoon reserve.
- Should be centrally located to facilitate maneuver to threatened areas.

Preparation

One of the inherent advantages of the defense is the defender's ability to choose advantageous terrain, to understand and improve the ground, and to use the available time to organize a defense, developing mutually supporting, camouflaged, and fortified positions. As soon as a unit arrives in a potential defensive position, defensive preparations start. After local security is established, small unit leaders reconnoiter and select favorable terrain based on METT-T (specifically including the enemy's most likely COA), and the commander selects the engagement areas and organizes the defense, assigning positions and sectors of fire. Once positions are selected, key weapons systems are emplaced and units occupy their fighting positions and begin to dig them in and camouflage them. As time and materials allow, the unit or supporting engineers emplace obstacles covered by direct and indirect fires to channelize or fix the enemy.

Developing defensive plans and improving fighting positions are continuous processes. Even during the fight, the defending force takes the opportunities afforded by lulls in the action to improve its positions and repair combat damage.

Mass and Concentration

Based on the METT-T considerations, platoons must be able to mass overwhelming effects of combat power at the expected decisive place and time. They must obtain a local advantage at points of decision. Offensive action may be a means of gaining this advantage. The platoon commander must remember that this massing refers to combat power and its effects, not just numbers of Marines and weapons systems.

Flexibility

Flexibility is a result of preparation and effective command and control. A platoon commander gains flexibility in the defense by conducting detailed and thorough planning which leads to the development of contingency plans; the progressive development of primary, alternate, and supplementary positions; and plans and rehearsals for counterattack and pre-planned fires. One of the three squads is generally positioned behind the other two, allowing the platoon to conduct patrolling operations, or for the third squad to function as a reserve during combat operations.

Use of Terrain

Platoon commanders exploit every aspect of terrain and weather by placing squads, OP/LPs, and key weapons in covered and concealed positions which offer good observation and fields of fire against likely enemy avenues of approach.

Mutual Support

A platoon commander ensures mutual support by positioning their squads and attached weapons where they can support each other and tie into adjacent units with interlocking sectors of fire. Detailed coordination is needed to ensure effective mutual support and prevent fratricide. The platoon commander coordinates with subordinate and adjacent unit leaders to identify the following:

- Sectors of fire and lateral limits.
- Location of fighting positions.
- The location, sector of observation, and withdrawal route of OP/LPs.
- The location and types of obstacles, including claymores.
- The location, activities, and passage plan for patrols and other units forward of the platoon's position.
- The location of all positions in and around the platoon's AO.

In situations where gaps exist between units, the platoon commander reconnoiters the gaps and coordinates with adjacent units to cover them through sensors, OP/LPs, a patrolling effort, and coordinated fires. If the gap poses a threat, supplementary positions may be assigned and prepared as time permits to cover the gap.

Defense in Depth

A shallow defense is vulnerable to a concentrated, surprise enemy attack and is essentially fighting in the blind. Defense in depth is achieved by—

- Aggressively patrolling and establishing OP/LPs forward of the main defensive position.
- Employing sensors or UASs to provide indications and warning and targeting by supporting fires.
- Engaging the enemy forward of the engagement area with indirect or direct fire. This may be done by patrols, snipers, or OP/LPs.
- Forcing the enemy into the engagement area through the use of long-range direct and indirect fire, or by harassing attacks from a patrolling element.
- Movement between primary and alternate positions, adding depth to the defense.
- Disrupting the enemy's formation using obstacles integrated with the fire support plan.

Surprise

The attacker generally possesses the initiative and chooses the time and place of the assault. However, the defender may achieve tactical surprise by denying the enemy effective intelligence on the location and composition of the friendly defense. Patrolling efforts forward of defensive positions, deception, and camouflage and concealment make it difficult for the enemy to determine the location and disposition of our defensive positions, and thus target them. Patrols, OP/LPs, and the employment of sensors prevent the enemy from approaching undetected. Deception; individual discipline regarding camouflage, noise and light; and the use of concealment protect the force and preserve combat power by misleading the enemy as to the true location of friendly positions and strength of the force. Likewise, occupying primary positions during daylight hours and shifting to alternate positions during periods of reduced visibility may surprise the enemy. The keys to surprise are concealment, counter-reconnaissance, OPSEC, and thorough preparation.

Knowledge of the Enemy

The defense is largely reactive. What the attacker does or does not do dictates a platoon commander's options in the defense. When conducting a METT-T analysis, an understanding of the environment and a thorough knowledge of the enemy's capabilities, operational concepts, equipment, and weapons capabilities are essential to selecting a valid scheme of maneuver.

Local Security

Local security consists of security elements and activities established and conducted in the proximity of a unit to prevent it from being surprised and to mitigate enemy actions. Platoon commanders provide security to their forces by maintaining a defensive posture, establishing OP/LPs on likely enemy avenues of approach, and patrolling in front of the friendly positions. Platoons may be tasked as part of the company's or battalion's security elements. Security operations prevent enemy ISR assets from determining friendly locations, strengths, and weaknesses; provide early warning; and execute shaping operations that disrupt enemy preparation and attacks.

TYPES OF DEFENSIVE OPERATIONS

The three types of defensive operations are area, mobile, and retrograde. Each type has its own purpose and unique considerations. As in all operations, the decisions on employment and arrangement of forces to address the tactical problem are up to the commander. Platoon commanders are most often tasked to conduct specific tasks as part of a company scheme of maneuver. Different types of defensive operations may be employed by the various echelons of a unit conducting a defense. For example, based on a battalion's scheme of maneuver to conduct a mobile defense, CAAT platoons employed forward in a battalion's security area might find themselves tasked to conduct a retrograde, while one of the companies conducts an area defense.

Area Defense

The area defense distributes the bulk of the defending force on terrain where the decisive battle is to be fought. Principal reliance is placed on the ability of the forces in the defended localities to

maintain their positions and to control the terrain between them. The reserve is used to add depth, to block, or to restore the battle position by counterattack. An area defense capitalizes on the strength inherent in closely integrated defensive organization on the ground. The conduct of an area defense facilitates the consolidation and reconstitution of forces necessary to transition to offensive or stability activities.

Mobile Defense

The mobile defense destroys an attacking enemy through maneuver and offensive action. The commander retains the majority of available combat power in a reserve as the main effort to affect a counterattack. The commander commits the minimum possible combat power to the security and main battle area forces to shape the enemy's advance and set the conditions for the counterattack. In the mobile defense, terrain is only retained relative to its value in defeating the enemy through maneuver and offensive action. The mobile defense is often employed when units have areas of operation that are too large to defend with a traditional area defense, but the commander can mass sufficient combat power by employing fires and mobile units.

A platoon or company conducting operations as part of a mobile defense might be tasked to hold a strong point or battle position defense to fix the enemy, or they may be part of the mobile reserve tasked to execute the counterattack. Platoons do not execute a mobile defense as their own scheme of maneuver. If the company is assigned a mobile defense mission, a platoon's role will be to conduct attacks and/or movement to contact.

Retrograde Defense

The retrograde is a defensive operation that consists of movement or maneuver to the rear, or away from the enemy. The enemy may force these operations or a commander may execute them voluntarily. In either case, the higher commander of the force executing the operation must approve the retrograde. The three core methods of conducting a retrograde are delay, withdrawal, and retirement. Denial measures and stay behind operations are unique considerations of retrogrades.

Delays. In a delaying operation, a force under pressure trades space for time by slowing down the enemy's momentum and inflicting damage on the enemy without—in principle—becoming decisively engaged. Delays may be conducted to buy time to establish an effective defense, to determine enemy intentions, or to disrupt enemy plans while degrading their force. Delays are often components of security operations. Commanders may execute delays when they do not possess enough combat power to effectively attack or defend. Units may conduct delays when ordered to do so as part of a shaping operation or economy of force effort.

For the platoon commander, a delay is effectively a defense followed by a planned withdrawal based on established criteria, followed by movement to and occupation of a subsequent defensive position. As forces conducing delays are often forward of friendly forces preparing to receive an enemy attack, they have to conduct a rearward passage of lines. The establishment of control measures and effective communication between the moving and stationary unit are critical to preventing fratricide.

Withdrawals. A withdrawal is a method of retrograde in which a force in contact disengages from an enemy force and moves in a direction away from the enemy. Withdrawals may be used in

conjunction with other methods of retrograde—a delay may cover a withdrawal and a withdrawal may precede a retirement. A platoon may withdraw to an assembly area or to their alternate or supplementary positions. The two principle types of withdrawals are those conducted under enemy pressure and those not conducted under enemy pressure. The preferred method is to conduct a withdrawal without enemy pressure. If required to conduct a withdrawal under pressure, the platoon commander maneuvers the squads and attached weapons, using fires and smoke to the extent available. Typically, a platoon withdraws the most exposed elements first, while the others cover their movement to covered and concealed positions from which they can support the rest of the platoon's withdrawal. Consideration is given to the displacement of heavy weapons teams, as they may not be able to move as rapidly as more lightly equipped rifle squads. When assigned alternate and/or supplementary fighting positions, a platoon should rehearse movement to those positions. Rehearsals are conducted assuming they will be conducted under pressure from the enemy.

Retirements. A retirement is an operation in which a force out of contact moves away from the enemy. For a platoon commander, this equates to a tactical movement to an assigned area.

Denial Measures. A platoon may be ordered to conceal, degrade, or destroy military essential material or infrastructure (such as fuel supplies or a bridge) prior to their retrograde in order to deny it to the enemy.

Stay Behind Operations. Based on METT-T considerations, units may be ordered to stay behind and conduct operations after the main body of a force withdraws. An example of this might be a platoon ordered to maintain a concealed patrol base from which to conduct patrols and control supporting arms to disrupt enemy activities for a period of time prior to rejoining friendly lines. The defense of a strong point to deny enemy access to key terrain after the retrograde of the main body is another example.

DEFENSIVE METHODS

The following section addresses the defensive methods that commanders are likely to use in their defensive schemes of maneuver. The common defensive methods are sector, battle position, strong point, linear, perimeter, and reverse slope defenses.

Sector Defense

Commanders employ the sector defense when they wish to provide subordinate commanders maximum latitude to accomplish assigned tasks. For instance, a battalion commander might task a company with delaying the enemy and then provide them a defensive sector in which to generate that effect. The designated company commander might choose to use a combination of ambushes and battle positions within the assigned sector to create the delay. The extent of the assigned sector is based on METT-T, but should be no larger than what can be influenced by the unit.

A company commander will typically order a platoon to defend a sector when flexibility is desired and when retention of specific terrain features is not necessary, or when the unit cannot

concentrate fires because of an extended frontage, intervening or cross-compartmented terrain features, or multiple avenues of approach. The platoon assigned a sector defensive mission will be tasked to prevent a specific amount of enemy forces from penetrating the AO.

Figure 7-1 depicts a sector defense where the company commander has assigned two platoons' sectors, while the third platoon is the reserve.

Battle Position Defense

A battle position, as illustrated in figure 7-2 is a defensive position oriented on the most likely enemy avenue of approach from which a unit may defend or attack. It can deny or delay the enemy the use of certain terrain or an avenue of approach. Battle position defenses are often designed to be executed as combined arms ambushes focusing fires on units advancing in the engagement areas. Company commanders employ this defensive method when their scheme of maneuver requires the force, or a portion of the force, to orient relative to terrain. The battle position defense is an effective method, focusing the fires and effects of a unit on likely enemy avenues of approach. A company may be tasked to occupy a battle position to disrupt, delay, or block enemy movement along an avenue of approach to set the conditions for the rest of the battalion to counterattack. In this situation, the platoon would occupy part of the company's battle position. The same company might task the platoons to establish separate platoon battle positions to cover separate avenues of approach. Commanders employing battle positions as part of their schemes of maneuver must consider the time and material necessary to prepare them.

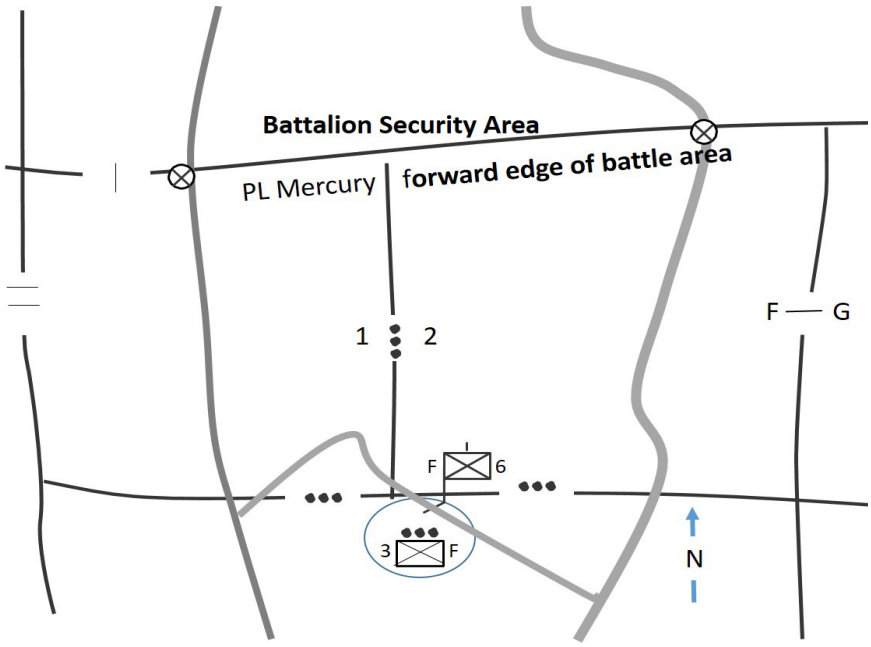


Figure 7-1. Sector Defense Example.

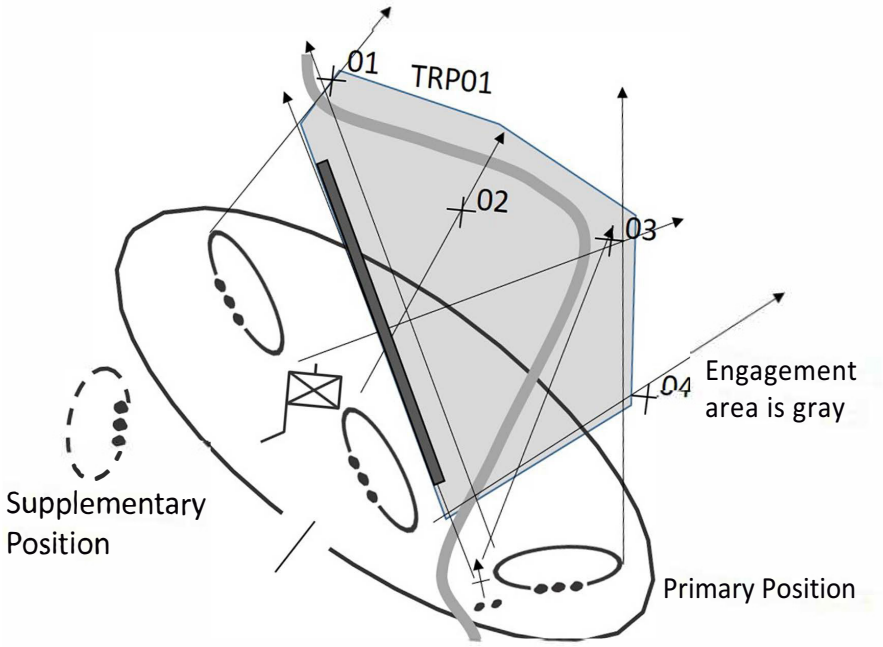


Figure 7-2. Battle Position Defense Example.

Strong Point Defense

A strong point is a defensive method employed by commanders whose mission requires the retention of terrain indefinitely, and when it is possible that the defending force may be isolated for periods of time by enemy action. The primary characteristic of an effective strong point is that it cannot be easily overrun or bypassed. It is designed to deny the enemy certain terrain and the use of an avenue of approach. It differs from a battle position in that it is designed to be occupied for an extended period of time. It is established on critical terrain and must be held for the defense to succeed. A strong point requires all-around defense and should have sufficient supplies and ammunition to continue to fight even if surrounded or cut off from resupply. Strong points are time, labor, and material intensive, requiring significant investment in engineer support (i.e., expertise, materials, and equipment). When a platoon is directed to defend a strong point, it must retain the position until ordered to withdraw. Figure 7-3 depicts a platoon occupying a strong point to control a bridge. A strong point defense mission may require the platoon to—

- Hold key or decisive terrain that is critical to the company or battalion scheme of maneuver.
- Block an avenue of approach.
- Canalize the enemy into one or more engagement areas.

During operations against terrorist, insurgent, or guerrilla forces, a platoon may develop a strong point defense, providing a secure location from which to conduct offensive and patrolling operations. This strong point position is called a combat outpost.

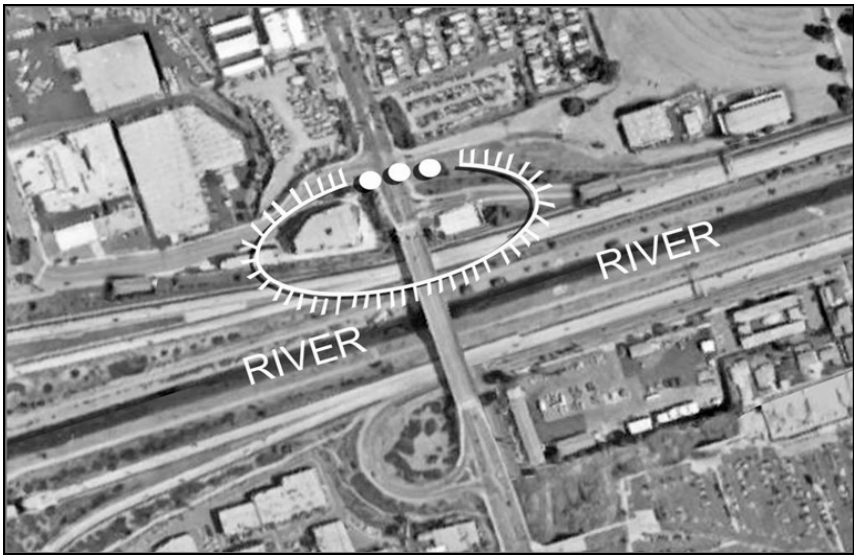


Figure 7-3. Defending a Strong Point.

An infantry platoon may be given the mission to conduct a strong point defense to secure key terrain. It makes the best use of its weapons and supporting fires, organizing all-around defense. It should be reinforced and/or supported with ISR assets and supporting arms. The platoon commander analyzes the unit's sector to request resources to construct obstacles and control supporting fires. The platoon should also maintain a reserve.

Depending on the length of the mission, the rifle platoon should have the following available:

- UASs and/or other ISR assets.
- Pioneer equipment (e.g., axes, shovels, hammers, picket pounders) and fortification materiel.
- Ammunition, food, and water.
- Medical supplies.

Linear Defense

The linear defensive method allows interlocking and overlapping observation and fields of fire across the company's front. Refer to figure 7-4 for an example. It is typically associated with the area defense. The bulk of the company's combat power is well forward. Sufficient resources must be available to provide adequate combat power across the sector to detect and stop an attack. The company relies on fighting from well-prepared, mutually supporting positions. The main concern when fighting a linear defense is the lack of flexibility and difficulty to both seize the initiative and seek out enemy weaknesses. When the enemy has a mobility advantage, a linear defense entails accepting extreme risk. Obstacles, indirect fires, and contingency plans are critical to this maneuver. The company depends upon surprise, well-prepared positions, and deadly and accurate fires to defeat the enemy. The reserve is usually small, perhaps a squad.

Linear defenses are generally oriented along a linear terrain feature, such as a river line or a ridge. They are characterized by the commitment of the majority of ground combat forces forward along the linear feature, strong mutual support between forward units, limited depth within the main

battle area, and a relatively small reserve. Security forces typically conduct shaping actions forward of the main battle area, while OP/LPs and patrols prevent the main body from being surprised. The presence of security forces forward often means that the main body units will have to will plan for a rearward passage of lines.

Figure 7-4. Linear Defense Example.

Perimeter Defense

The perimeter defensive method is a tool applied to all manner of military operations, from ORPs and assembly areas to the strong point defensive method. It is useful in all three types of defense, and may be used in conjunction with any of the defensive methods. A perimeter defense orients in all directions. It is usually employed by battalions or smaller, though larger units executing base security functions may also employ it. Commanders employ the perimeter defensive method to—

- Hold key terrain (e.g. a strong point) or protect important assets.
- Provide for immediate self-protection or when bypassed by advancing enemy forces.
- When the defensive scheme of maneuver does not tie in adjacent units physically.

A major characteristic of a perimeter defense is a secure inner area with most of the combat power located on the perimeter. The security area is maintained through aggressive patrolling and security operations. Another characteristic is the ease of access for resupply operations. The commander coordinates direct and indirect fire plans to prevent accidentally engaging neighboring friendly units and noncombatants. Typically, the reserve centrally locates to react to a penetration of the perimeter at any point.

Perimeters vary in shape depending on the terrain and situation. If the commander determines the most probable direction of enemy attack, the part of the perimeter covering that approach may be reinforced with additional resources. The perimeter shape conforms to the terrain features that best facilitate friendly observation and fields of fire. The commander can increase the effectiveness of

the perimeter by tying it into a natural obstacle, such as a river, which allows the defending unit to concentrate its combat power in more threatened areas. Refer to figure 7-5 for an example.

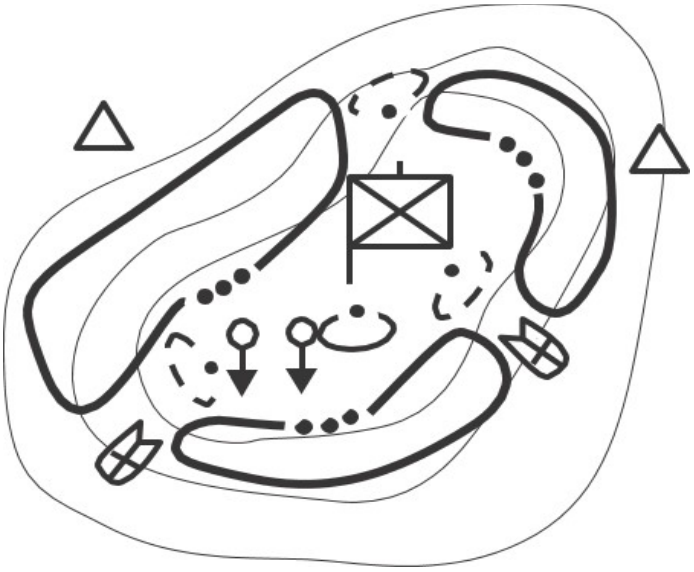


Figure 7-5. Perimeter Defense Example.

Reverse Slope Defense

Reverse slope defenses are organized in a single direction on terrain that has a topographical crest, providing protection from enemy direct fire and observation. The aim is to surprise the enemy and wrest the initiative. In addition, a reverse slope defense may deny the enemy information about the location and strength of defending forces. The defender can deliver surprise fires on the enemy as they cross the crest of the forward slope or when significant enemy forces are fully exposed on the reverse slope. However, the defender may not be able to cover obstacles on the forward slope by direct fires effectively, and if the enemy gains control of the crest, they can fix forward units and maneuver to a flank or attack downhill. Success depends on denying the enemy control of the topographical crest, as illustrated in figure 7-6. Infantry units may choose to use the reverse slope defense against enemy armored or mechanized units, as it allows them to mitigate range advantages. Observation posts positioned on the forward slope control supporting arms to engage the enemy as they close. Similarly, attached long-range weapons such as TOWs and Javelins could be deployed on the crest or forward slopes, with subsequent positions on the counter slope.

Combination of Defensive Methods

Marines conducting defensive operations employ a mixture of defensive types and methods based on METT-T considerations. In the example in the vignette below and illustrated in figure 7-7, Battalion Landing Team 2d Battalion, 6th Marines is conducting an area defense.

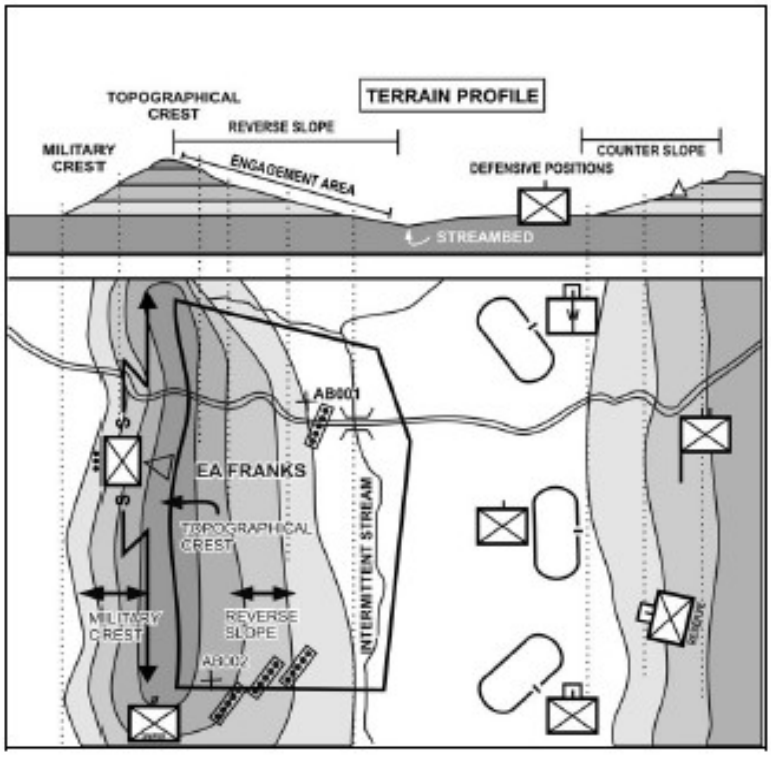


Figure 7-6. Reverse Slope Defense Example.

ESTABLISHING A DEFENSE

Infantry platoons usually conduct defensive operations as part of a company scheme of maneuver. The company commander's order typically dictates the type of defense, the general position of the units, and the time available to establish the defense. However, a platoon may develop and conduct an independent defense based on the platoon commander's planning.

Reconnaissance

Once assigned a defensive mission, the platoon commander conducts initial planning and prepares for a leader's reconnaissance. The platoon commander provides a warning order to the platoon, including contingency plans. With a small team for security and support, the platoon commander conducts a reconnaissance of the defensive positions. When possible, the leader's reconnaissance patrol is conducted from the enemy side toward the friendly side.

The battalion commander has assigned the CAAT sectors in the battalion security area, and tasked them to identify and delay the enemy advance before falling back to support the rifle companies. Each CAAT has established disengagement criteria; after the first enemy vehicle crosses a trigger line, the unit will displace and conduct a rearward passage of lines, moving to their planned subsequent positions. The battalion commander has assigned Companies F and G sectors in the battalion main battle area. Company F is executing a sector defense in the more restrictive terrain in the west. Company G is executing a battle position defense focused on the one high speed avenue of approach in the east. Company E (reinforced) serves as the battalion reserve. Due to the distances, the 81mm mortar platoon is operating by section, with one section in direct support of Company F and one in direct support of Company G. Battery G, 2d Battalion, 10th Marines, an artillery battery, occupies a designated position of artillery in general support of the battalion landing team.

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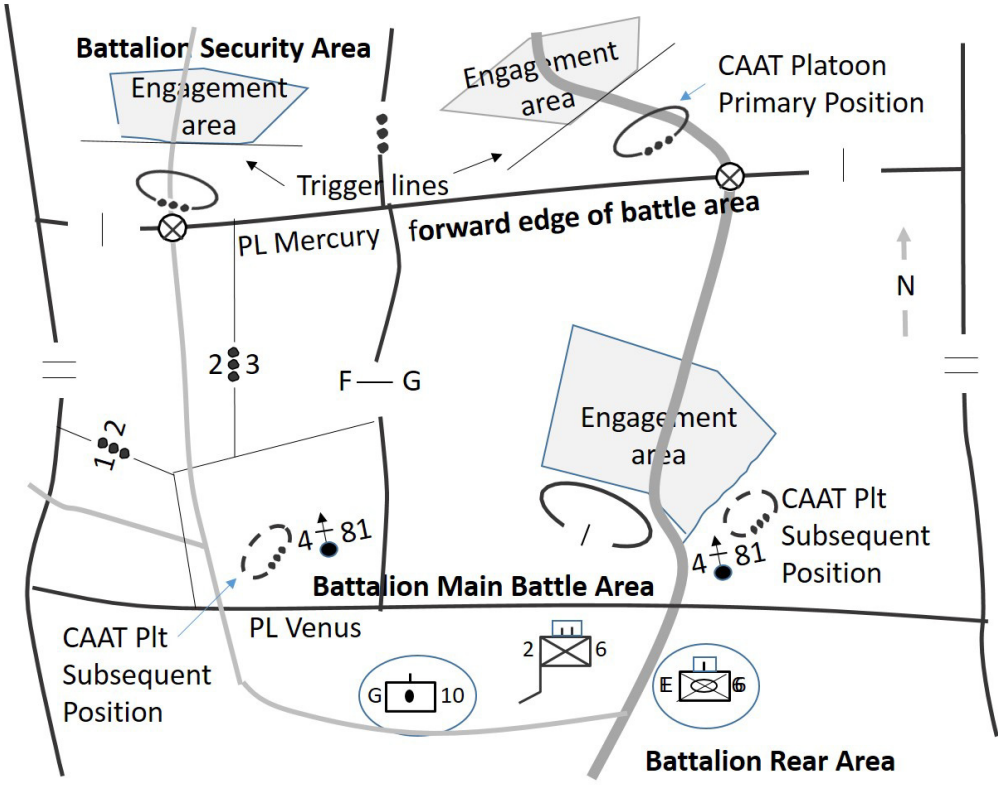


Figure 7-7. Example of a Battalion Defense.

To enable effective and efficient occupation of the defensive positions, the reconnaissance patrol may mark the positions and left and right lateral limits. Priority is typically given to selecting positions with good observation and fields of fire. Members of the leader's reconnaissance patrol may be assigned to remain as guides for the occupation of the position.

Engagement Area Development

Regardless of the defensive method selected, the engagement area is where the platoon intends to destroy an attacking enemy. Successful destruction of the enemy within the platoon's engagement area is dependent on the platoon's ability to detect the enemy and integrate direct fires, indirect fires, and obstacles. The development of engagement areas is a complex and detailed process that requires an understanding of the enemy, concurrent and parallel planning, and detailed coordination and integration between all organic, supporting, and adjacent units. The platoon

commander and subordinate unit leaders rely on SOPs to reduce the complexity of engagement area development. Based on the platoon's task, the company's method of defense, and the location of adjacent units, a platoon commander may face multiple constraints in establishing and conducting a platoon defense. The following are the seven steps to engagement area development, which may be conducted concurrently:

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

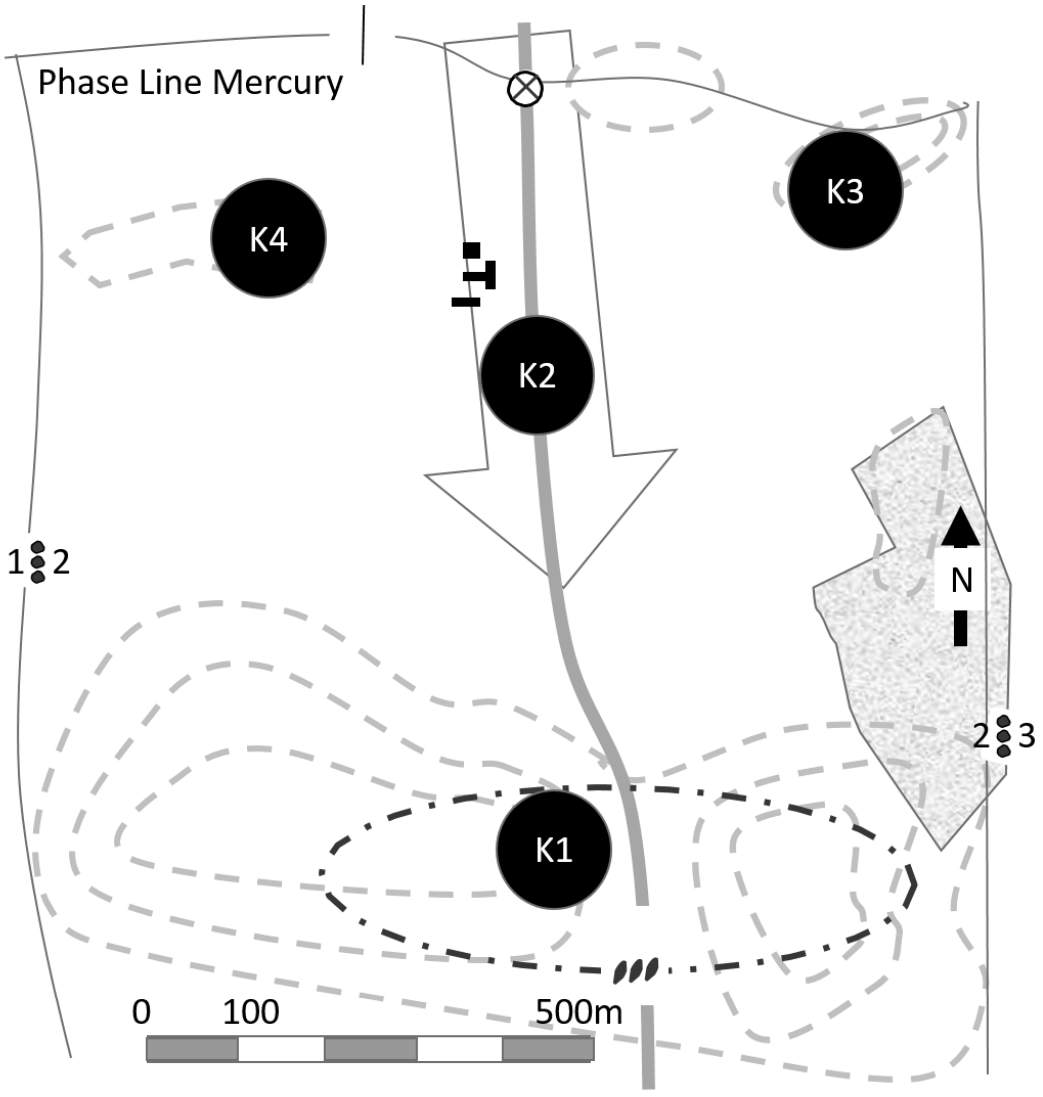
Identify Likely Avenues of Approach. Beginning with a METT-T analysis and map reconnaissance, the platoon commander determines likely enemy avenues of approach and tentative defensive positions. To accomplish this, platoon commanders put themselves in the role of the enemy commander and think through the enemy scheme of maneuver, based on what is known about the enemy's mission, composition, and disposition. These assumptions are then confirmed during a leader's reconnaissance patrol of the defensive position and engagement area. The platoon commander should conduct the leader's reconnaissance from the enemy's perspective if possible, moving along each likely avenue of approach into the engagement area. Figure 7-8 depicts a platoon that has been ordered to establish a battle position defense to block an enemy high-speed avenue of approach. The platoon commander considers—

- *Identification of key and decisive terrain*. This includes terrain that could be used by the enemy as follows:
  - Support by fire positions.
  - Internal base of fire.
  - Overwatch.
  - Assault position.
  - Observation posts.
  - Chokepoints or canalizing terrain.
- *Cover and concealment*. The avenues of approach which offer the enemy the best concealment and cover from friendly effects should be determined.

Determine Enemy Scheme of Maneuver. The platoon commander deduces the enemy's most likely course of action in the engagement area based on the intelligence brief and an understanding of the enemy's tactics and past performance. Figure 7-9 depicts a platoon commander's expectation

of the enemy's most likely COA. The platoon commander determines the enemy scheme of maneuver in as much detail possible, including—

- Where the enemy will go when conducting their leader's reconnaissance.
- The enemy's direction of attack and formation.
- How, when, or if the enemy will employ indirect fires.
- How, when, and where the enemy will occupy a support by fire position.
- Where the enemy will establish an assault position.
- Where the enemy will attempt breaching operations.
- Where the enemy will employ an internal base of fire.
- What conditions need to be set for the enemy to withdraw or commit follow-on forces.



Key
K1 Saddle controlling enemy movement
K2 High speed avenue of approach
K3 Excellent support by fire position
K4 Potential support by fire position

Figure 7-8. Example of Key Terrain and Enemy Avenues of Approach.

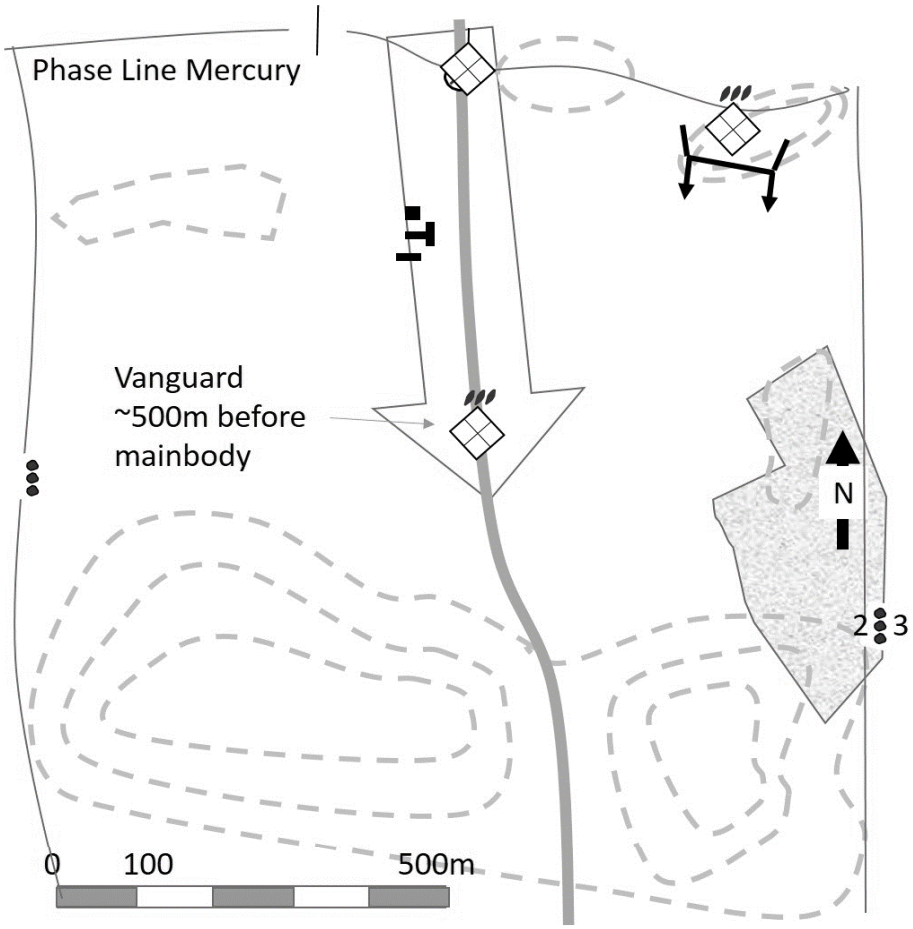


Figure 7-9. Example of Enemy Scheme of Maneuver.

Determine Where to Destroy the Enemy. After determining the enemy's most likely COA, platoon commanders determine their defensive scheme of maneuver. Figure 7-10 depicts the TRPs, sectors of fire, and machine gun FPLs for an engagement area. The focus is the location where the platoon has the greatest ability to mass effects on the enemy and accomplish the following:

- Determine the location of OP/LPs and the conditions to withdraw them.
- Determine how the platoon will control, distribute, and mass fires, or otherwise react to enemy action.
- Identify and mark the platoon engagement area lateral limits.
- Identify, mark, and record trigger lines that control engagement.
- Identify, mark, and record TRPs that allow the unit to create desired effects through distribution or massing fires.
- Determine engagement criteria and target precedence.
- Determine the number and type of weapons systems needed to create the desired effects for each TRP.
- Determine which squads can mass fires on each TRP.

- Determine the tentative location, engagement criteria, and target precedence for trigger lines throughout the platoon engagement area to create depth and desired effects.
- Develop a list of targets for supporting arms to submit to the company, including FPFs, if allocated.
- Determine the FPLs to stop enemy assaults.
- Determine the conditions needed to displace to supplemental or alternate positions.
- Determine the conditions and scheme of maneuver for counterattack.

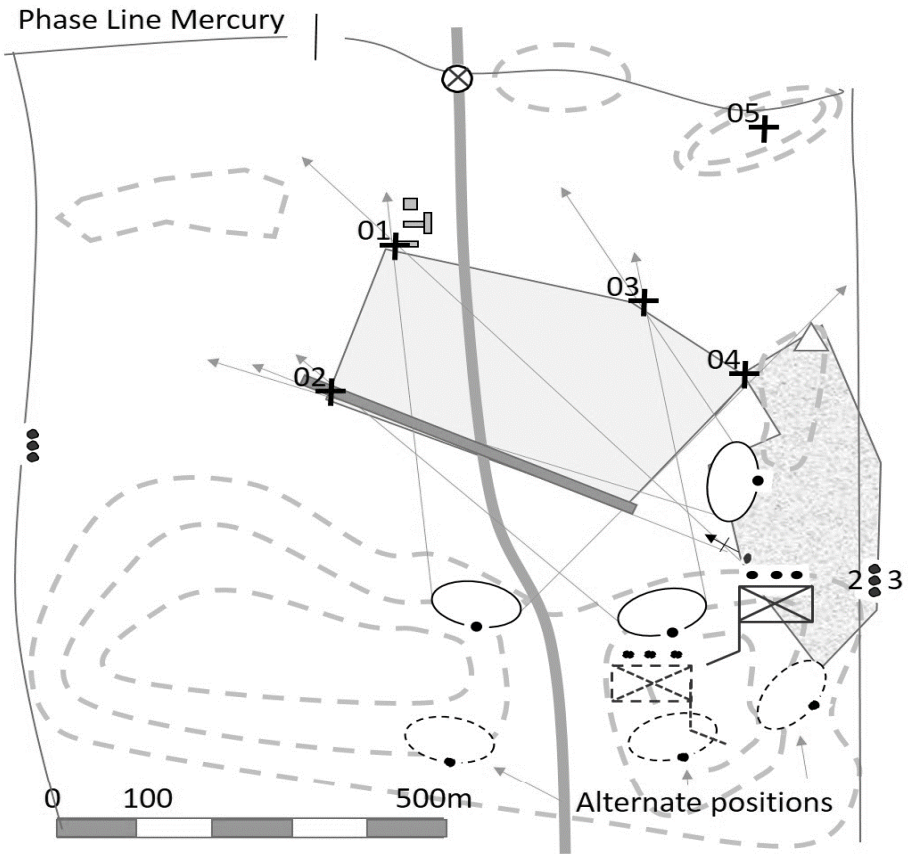


Figure 7-10. Selection of Engagement Areas.

Emplace Weapons Systems. After determining where to destroy the enemy, platoon commanders and subordinate leaders position weapon systems to create the effects needed while maximizing weapon strengths and minimizing or mitigating weaknesses. During the leader's reconnaissance, the platoon commander selects positions for key weapons, then squads. All positions are tentative until line of sight is confirmed from the position. If the platoon is assigned a position that cannot effectively cover the sector, the platoon commander locates fighting positions that can cover the sector and informs the company commander.

To position weapons effectively, leaders must consider the characteristics, capabilities, and limitations of friendly weapons; the effects of terrain; and the tactics and composition of the enemy. Weapons emplacement is affected by whether the primary threat is motorized, mechanized, or dismounted, and how effective the enemy fires assets are (i.e., mortars and

artillery). Generally, if the enemy is expected to fight dismounted, priority is given to emplacing machine guns. If the enemy is expected to fight mounted, priority is given to emplacing antiarmor weapons, followed by automatic weapons. After fields of fire, cover and concealment of positions has next priority. The platoon commander should consider the following steps when emplacing weapons and battle positions:

- Conduct leader's reconnaissance of tentative positions. Walk the engagement area if the situation permits.
- Select (for attached or direct support assets) or recommend (for general support assets) tentative crew-served weapons positions that support the desired effects on TRPs.
- Final protective lines are assigned to machine guns to stop dismounted assaults on the defensive positions.
- Proposed FPLs must be "walked out" to determine the extent of grazing fire available and to locate dead space.
- Identify and cover dead space with—
  - Grenade launchers.
  - Anti-personnel and anti-vehicle obstacles.
  - Indirect fires.
  - Remote sensors and/or pyrotechnics.
- Select tentative squad battle positions that support crew-served weapons emplacement.
- Confirm and mark squad battle positions and crew-served weapons positions.
- Assign and mark sectors of fire. Ensure fires interlock and do not impact adjacent units.
- Target reference points are used to identify sectors of fire and distribute and concentrate fires.
- Ensure each squad leader is positioned to effectively control fires and communicate laterally.
- Ensure each weapon system is assigned a target precedence and engagement criteria.
- Select and mark supplementary and alternate positions.
- Assign and mark sectors of fire for supplementary and alternate positions.

Plan and Integrate Obstacles. Platoon commanders identify and exploit existing obstacles in the engagement area, both natural (e.g., a creek or woods) and constructed (e.g., chain link fences or ditches). Obstacles must be covered by observation and fires to have a tactical effect. Relatively minor obstacles that will cause an enemy to pause for only a few seconds can have tactical importance if they are covered by fire effectively. Platoons may build protective obstacles to protect their positions or tactical obstacles to increase the effectiveness of direct and indirect fires.

Protective Obstacles. Protective obstacles are employed close to friendly fighting positions, but beyond hand grenade range, generally between 40 and 100 meters from fighting positions. They protect the platoon by delaying and canalizing an enemy assault. Infantry platoons generally plan and construct their own protective obstacles. Platoons may employ command detonated claymores to augment their close fires and deny the enemy dead space. Trip flares can serve to provide early warning.

Tactical Obstacles. Tactical obstacles are employed in the engagement area to disrupt, fix, turn, or block enemy movement. They are typically employed 200 to 500 meters away from friendly fighting positions to delay the enemy where they can be taken under effective fire. Tactical obstacles may be built by infantry units if materials (e.g., barbed/concertina wire, engineer stakes) are available or can be obtained. Supporting engineer units may construct tactical obstacles. While the installation of the tactical obstacle may be assigned to an engineer unit, responsibility for locating the obstacles and covering them by fire remains with the supported unit.

When an infantry platoon is to receive engineer support for the creation of tactical obstacles, the platoon commander either includes them in the orders brief, or briefs them separately when they report on the obstacles' intent and how they support the defensive scheme of maneuver. During obstacle emplacement, it is critical that the physical location of obstacles support the desired tactical effect and be covered by fire. The following steps apply in planning and integrating obstacles in the platoon defense:

- Determine what obstacles can be built with available materiel in the available time.
- Site and mark individual obstacles, ensuring they are covered by direct fire.
- Provide security for the engineering effort, which first marks the trace of the obstacles and then begins construction, working from the enemy side toward the friendly units.
- Create and integrate fire control measures such as TRPs.
- If lanes or gaps are to be left for patrols or to allow the withdrawal of a security force, identify the desired location of the lanes and/or gaps.
- Report obstacle locations and gaps to HHQ.

Obstacle Lanes. When friendly forces are located or will patrol forward of defensive positions, lanes must be left in obstacles. This may correspond to a route for a rearward passage of lines. Covering units must assign units to overwatch the lane, and may be tasked to provide guides for elements passing through the obstacle and closing lanes when directed.

Obstacle Effects. Obstacles are integrated with the fire support plan to shape the battlespace. See MCWP 3-34, *Engineering Operations*, or MCTP 3-34B, *Combined Arms Countermobility Operations*, for a detailed discussion of countermobility. The four types of obstacles are disrupting, turning, fixing, and blocking.

Disrupting obstacles are used to disrupt the enemy's timetable and formations, deceive them, and force them to conduct a time-consuming breach. Disrupting obstacles are often employed forward of the principle engagement areas and are covered by indirect and sniper fires. Effective use of disrupting obstacles covered by fires can deceive the enemy and add depth to the defense. Platoon or squad far ambushes may be planned in conjunction with disruption obstacles, with the force engaging and then falling back to pre-planned positions. Figure 7-11 depicts a disrupting obstacle.

Turning obstacles are used to canalize the enemy into engagement areas or kill zones, where combined arms fires can be concentrated. Turning obstacles can also be used inside the engagement area, forcing enemy vehicles to maneuver and expose their flanks. Figure 7-12 depicts a turning obstacle.

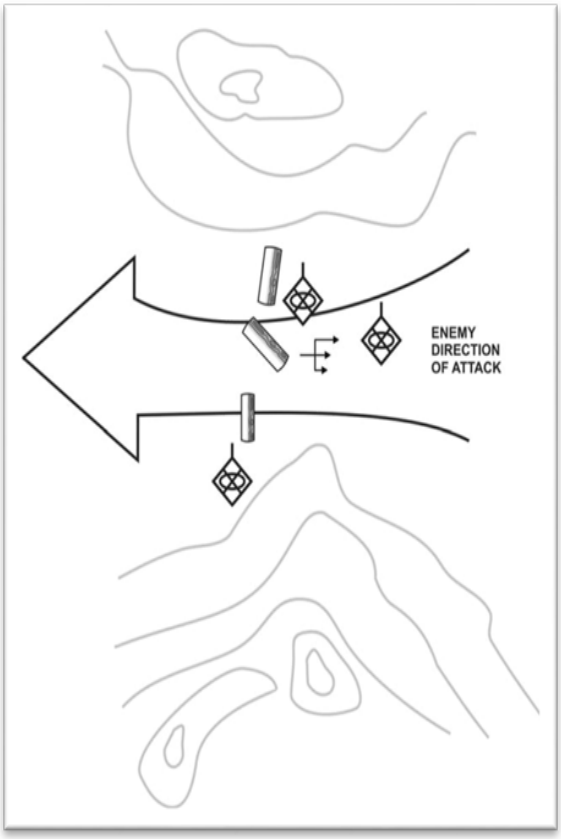


Figure 7-11. Disrupting Obstacle.

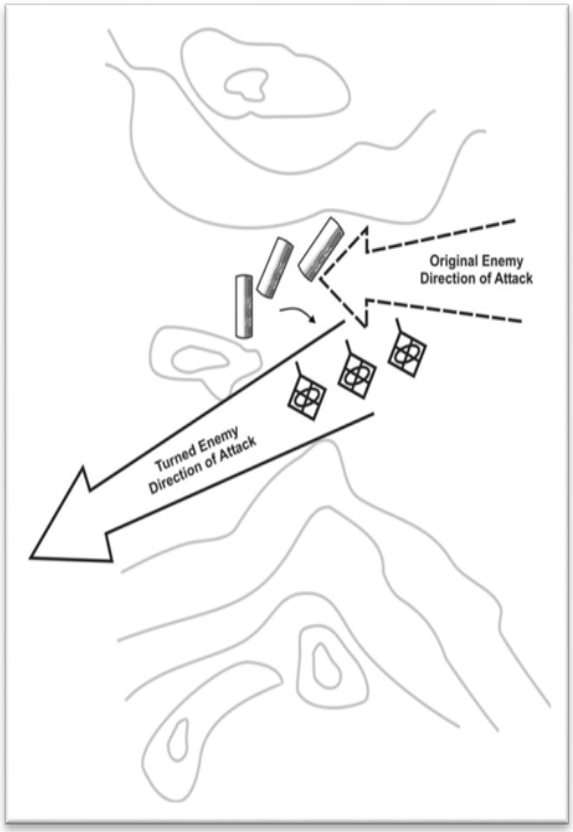


Figure 7-12. Turning Obstacle.

Fixing obstacles are typically employed in the engagement area. Fixing obstacles are employed to increase the effect of friendly fire by delaying the enemy inside the effective range of weapons systems. Tactical wire is often used to achieve a fixing effect, maximizing the effects of grazing fire, usually in support of a machine gun's FPL. Similarly, mortar and artillery targets are planned to engage targets fixed by obstacles. Figure 7-13 depicts a fixing obstacle.

Blocking obstacles prevent or delay the enemy from moving past a certain point. Achieving a blocking effect is resource-intensive and requires the close integration of fires. Figure 7-14 depicts a blocking obstacle.

Types of Wire Obstacles. There are three types of wire obstacles: protective, tactical, and supplementary. Figure 7-15 displays an example.

Protective wire obstacles are employed beyond hand grenade range to prevent the enemy from assaulting positions. They may provide all-around protection of a platoon perimeter. Protective wire is more often used to fix enemies approaching on likely dismounted avenues of approach.

Tactical wire obstacles are positioned to increase the effectiveness of the platoon's direct fire weapons. They are usually positioned along the friendly side of the machine gun FPL.

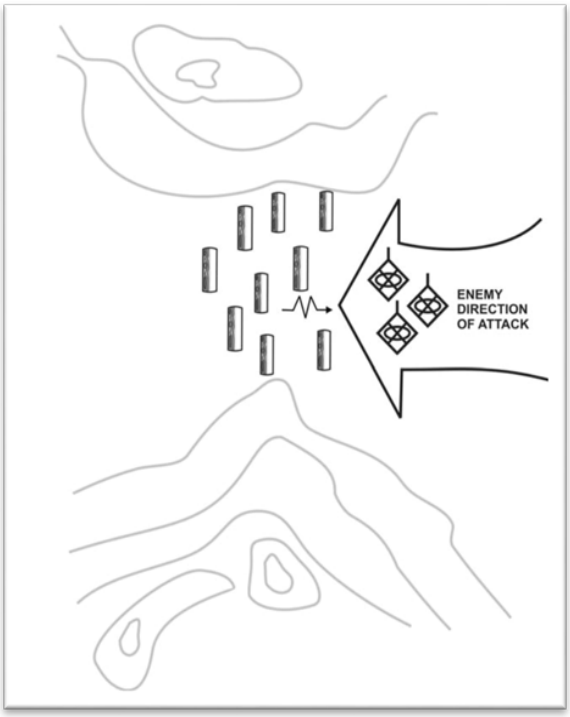


Figure 7-13. Fixing Obstacle.

Figure 7-14. Blocking Obstacle.

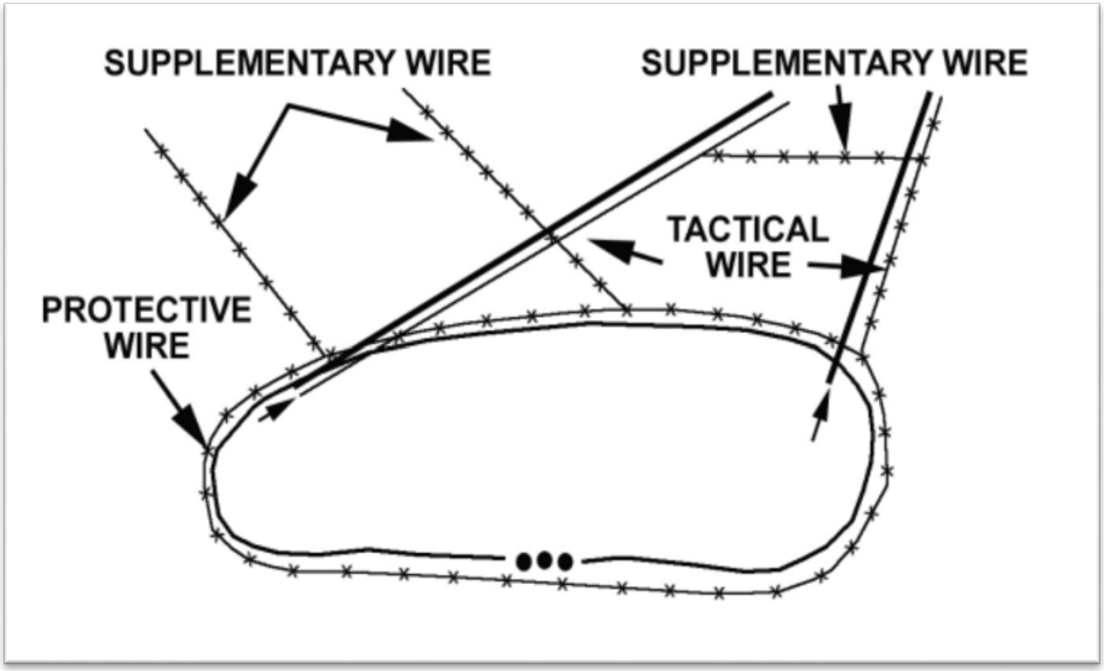


Figure 7-15. Types of Wire Obstacles.

Supplementary wire obstacles are employed to break up the line of tactical wire to prevent the enemy from locating platoon weapons.

Plan and Integrate Indirect Fires. When executing a platoon defense as part of a larger company defense, fires planning and integration is generally conducted at the company level. Figure 7-16 shows the integration of fires and obstacles. The platoon commander must be ready to—

- Provide bottom-up refinement and recommendation to the company commander and FST leader regarding the task, purpose, or effect of fires.
- Determine the task, purpose, and effect of fires in line with the company commander's intent.
  - Disrupt or destroy enemies maneuvering to positions of advantage.
  - Target, suppress, and blind enemy support by fire and overwatch positions.
  - Defeat enemy assaults through fires, including the FPF.
  - Provide illumination.
  - Support counterattacks.
- Establish an observation plan with redundancy for each target in the platoon engagement area.
- Ensure the FST has an accurate trace of the platoon's positions, to include OP/LPs.
- Consider the proximity of friendly forces and minimum safe lines relative to targets.
- Establish or observe established triggers to call for fire based on enemy action.
- Refine target locations to ensure the intent is met.
- Register indirect fire agencies.
- Plan FPFs.
- Plan to employ organic grenade launchers to cover dead space.

Conduct an Engagement Area Rehearsal.The purpose of conducting an engagement area rehearsal is to ensure that every unit leader and Marine understands the plan and is prepared to cover their assigned areas with direct and indirect fires. Platoons may be directed to participate in company-level rehearsals or conduct their own platoon-level rehearsals. Both day and night rehearsals should be conducted. Platoon rehearsals should cover—

- The rearward passage of lines of security forces.
- Use of fire commands, trigger lines, and TRPs to initiate direct and indirect fires.
- Shifting, concentrating, and ceasing fires.
- Displacement from primary to supplementary and alternate positions.
- Disengagement criteria.
- The communications and signal plan.
- Casualty evacuation procedures.
- Counterattack.

Occupation of the Defensive Position

The platoon occupies defensive positions in accordance with the commander's plan based on the results of the platoon's reconnaissance. Each squad moves in or is led in by a guide to its position.

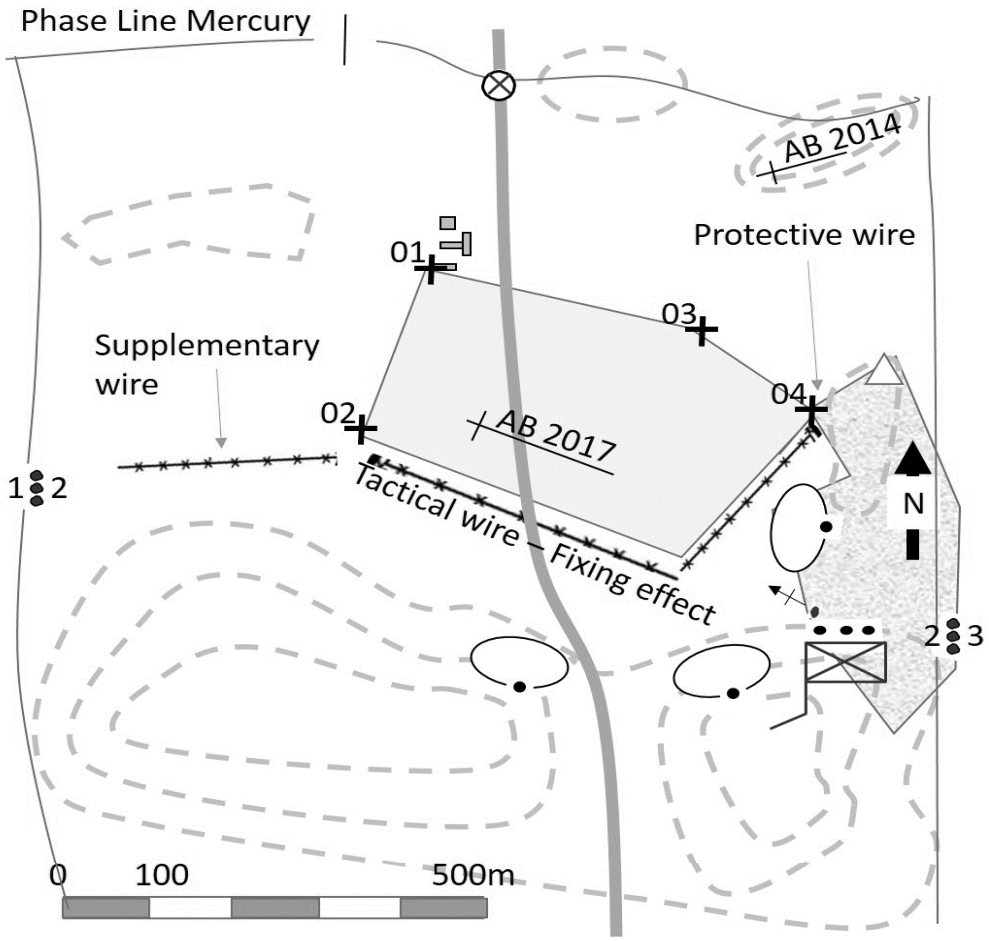


Figure 7-16. Integration of Obstacles and Fires.

Figure 7-17, figure 7-18, figure 7-19, and figure 7-20 show common methods of occupying positions.

Development of Fire Plans. Once defensive positions are occupied, each squad leader walks the lines, ensuring that each team has effective line of sight, assigning sectors of fire to fire teams and

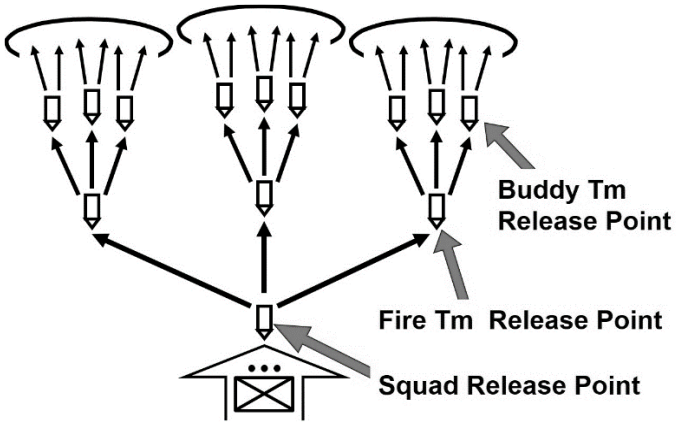


Figure 7-17. Crows Foot Occupation.

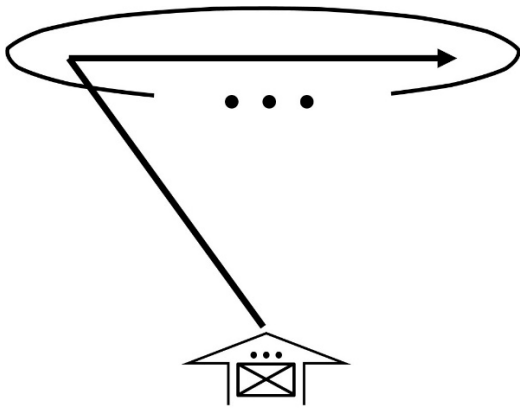


Figure 7-18. Bent L Occupation.

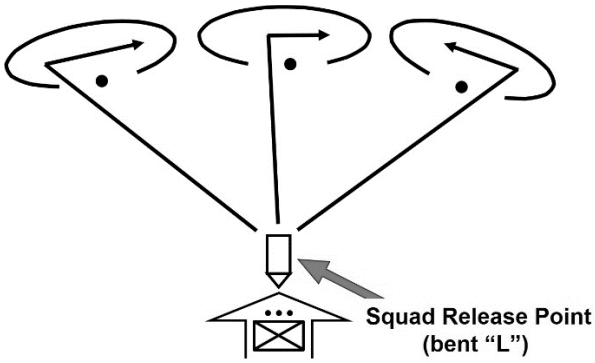


Figure 7-19. Combination Occupation.

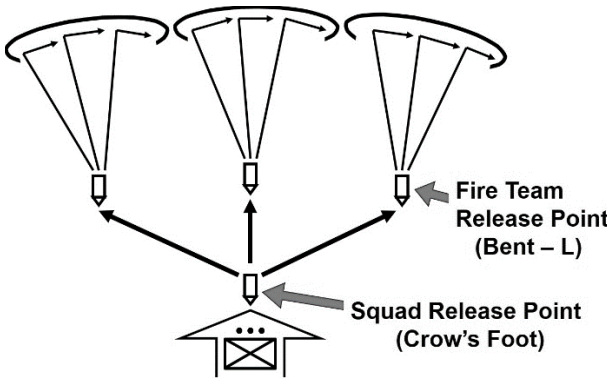


Figure 7-20. Combination Occupation.

any attached assets, and ensuring fighting positions maximize cover and concealment. The squad leaders begin to develop their sector sketches and fire plans based on the basic fire plan developed during the leader's reconnaissance. Aiming stakes are installed, delineating the left and right lateral limits, as well as PDFs. Fields of fire are cleared, and dead space is identified.

Once each rifle squad has occupied its position, the platoon commander personally walks the positions to ensure that squads and any attached assets can cover their sectors, that they are mutually supporting. and that all hands understand the plan. If obstacles are to be emplaced, they are sighted at this time, and the ability of units to cover them by fire and observation is confirmed. Fighting positions are improved once the direct fire plan is finalized and proofed.

Once the positions have been inspected, subordinate leaders finalize their fire plan sketches and supervise the squad in its assigned tasks, in accordance with the priorities of work. Each squad leader ensures they know the location of the platoon commander, platoon sergeant, and casualty collection point.

The platoon may be required to construct or assist engineers in the construction of protective or tactical obstacles in their sector. Platoon commanders closely supervise the installation of obstacles to ensure they support the direct fire plan.

Range Cards. A range card is a sketch of a sector that a direct fire weapon system is assigned to cover. Range cards aid in planning and controlling fires. They also assist crews in acquiring targets during limited visibility and orient replacement personnel, platoons, or squads that are moving into position.

Sector Sketches. Detailed sketches aid in the planning, distribution, and control of the platoon's fires. Gunners prepare range cards, squad leaders prepare squad sector sketches, section leaders prepare section sketches, and the platoon commander integrates the squad leader and section leader (if assigned) sector sketches to create a platoon sector sketch, a copy of which is forwarded to the company executive officer for integration into the company sector sketch. An example of a platoon sector sketch is shown in figure 7-21.

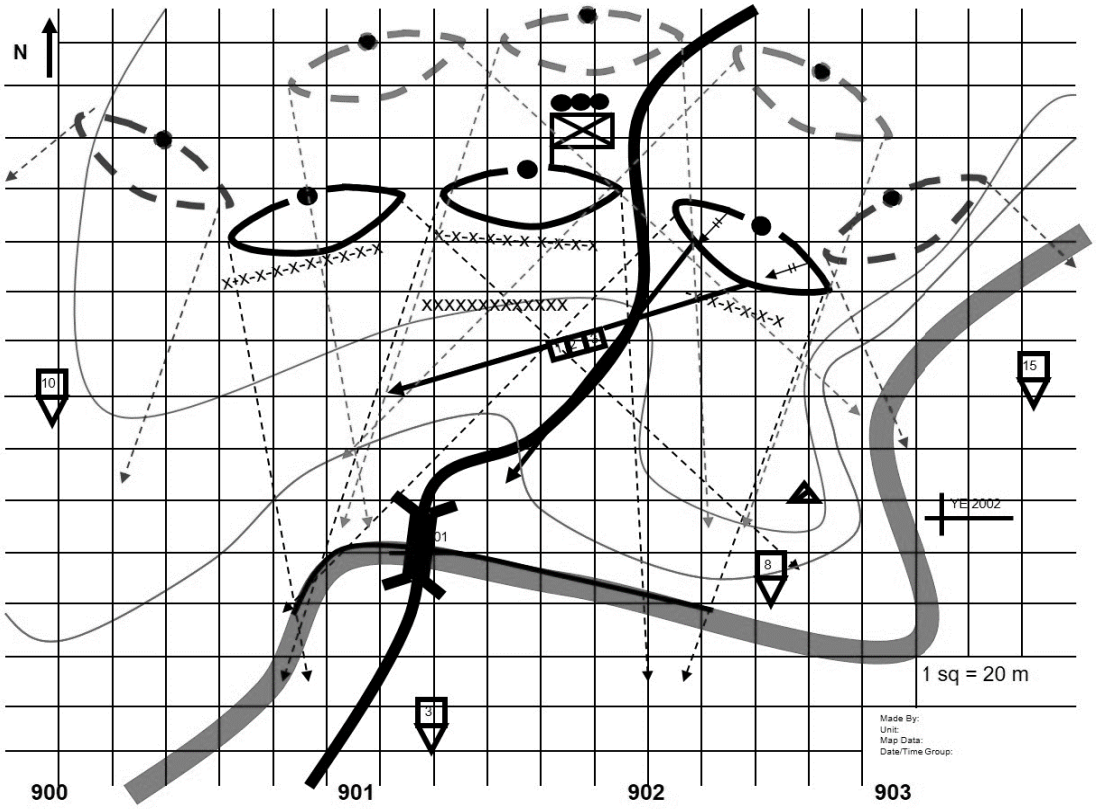


Figure 7-21. Platoon Fire Plan Sketch Example.

Priorities of Work in the Defense. Leaders must ensure that Marines 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. Priorities of work are typically found in unit SOPs. Commanders may modify them based on METT-T considerations. Several actions are usually being accomplished at the same. Leaders must constantly supervise the preparation of fighting positions for both tactical usefulness and proper construction. Basic considerations for priorities of work include the following:

- Establish local security.
- Position and assign sectors of fire for key weapons systems (e.g., antiarmor weapons and machine gun squads).
- Install aiming stakes, clear fields of fire, identify dead space, and prepare range cards.
- Prepare sector sketches.
- Site fighting positions, confirm their fields of fire, and start digging them.
- Emplace claymores and trip flares to cover dead space, then install wires and other obstacles.
- Mark or improve marking for TRPs and other fire control measures.
- Improve primary fighting positions and add overhead cover.
- Prepare supplementary and then alternate positions (using the same procedures as for the primary positions).
- Establish sleep and rest plans.

- Distribute and stockpile ammunition, food, and water.
- Dig trenches to connect positions.
- Continue to improve both primary and alternate positions—construct revetments, replace camouflage, and add to overhead cover.

Development of Alternate, Supplementary, and Subsequent Positions. The company commander's order may direct, or a platoon commander may determine, that a platoon establish alternate or supplementary positions. Guidance should be provided on the amount of effort to be employed on developing the supplementary and alternate positions vice the primary position. Subsequent positions are usually prepared only during retrograde operations. Time permitting, platoons rehearse displacement and occupation of the various positions under both day and night conditions.

Alternate Positions. The following characteristics and considerations apply to alternate positions:

- They should cover the same avenue of approach or sector of fire as the primary positions.
- They should be located to the front, flank, or rear of the primary positions.
- They may be positioned forward of the primary defensive positions during limited visibility operations.
- They are also used as alternate positions to fall back to if the original positions are rendered ineffective, or as positions for Marines to rest or perform maintenance.
- Figure 7-22 depicts a primary position on the forward slope of a hill blocking enemy movement along a road that is an enemy high-speed avenue of approach. The alternate position is a reverse slope defense, from which the platoon can also block the enemy's advance down the road.

Supplementary Positions. Supplementary positions allow a unit to accomplish a task that cannot be accomplished from the primary or alternate position and are occupied based on specific enemy actions. Supplementary positions typically cover an avenue of approach or sector of fire different

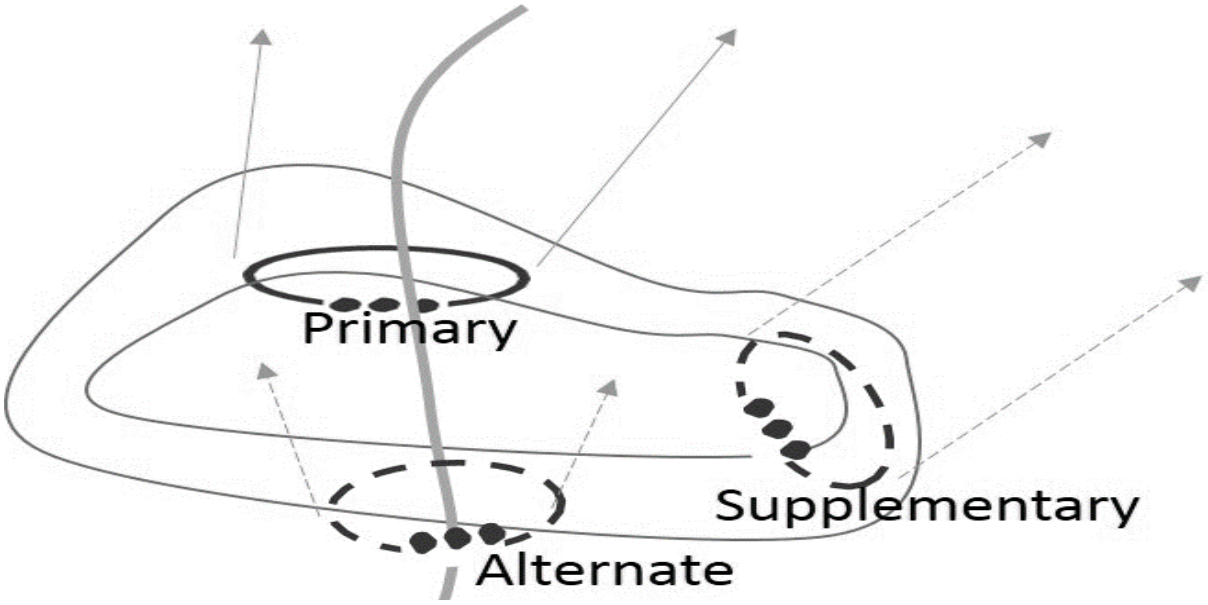


Figure 7-22. Primary, Alternate, and Supplementary Positions.

from those covered by the primary position. In figure 7-22, the supplementary position would be used to engage an enemy attempting to flank the primary positions.

Subsequent Positions. A subsequent position is one that a unit expects to move to during the course of battle. They are usually established when a unit is conducting a delay or by a unit serving as a rear guard during a withdrawal. The following characteristics and considerations apply to subsequent positions:

- They typically cover the same avenue of approach as the primary positions.
- They may be located in depth through the defensive area.
- They are occupied based on specific enemy actions or as part of the HHQ's scheme of maneuver.
- They are only prepared when the scheme of maneuver requires them.
- Developing subsequent positions is not a typical task for a rifle platoon. They will typically be laid out by the company advance party.

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. Passive measures include enforcing standards relating to field craft. Two active measures available to the platoon commander are OPs and patrols. In planning for security in the defense, the platoon commander utilizes terrain to protect the platoon from enemy observation and fires while providing observation and fires into the engagement area. Commanders at all levels actively seek to gather intelligence to increase their situational understanding while denying the same to the enemy. At the battalion level, active security measures often take the form of a security force which is tasked to screen or guard the main body's actions.

Camouflage and Noise and Light Discipline. These are basic field craft measures enforced by small unit leaders. Proper execution prevents the enemy from gaining information about our defensive positions.

Listening and Observation Posts. Listening and observation posts are typically the platoon's first echelon of security in the defense, providing early warning of impending enemy contact by detecting the enemy early and sending accurate reports to the platoon. The platoon commander establishes OPs that can maintain observation on the most likely enemy avenues of approach into the position. Leaders ensure that OP/LPs have communications with the platoon.

Observation posts are usually positioned close enough that the platoon can support their withdrawal with organic weapons if required.

To 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 commander submits OPs' locations to the company commander to ensure a no-fire area is established around each one. Company commanders send their operational overlays with OP positions to the battalion and adjacent units and receive overlays from adjacent units to assist in better command and control and fratricide avoidance.

Patrols. Marines actively patrol in the defense. Patrols enhance a unit's security by adding depth to the security effort, patrolling beyond the OPs. Suspected enemy OPs can be reconnoitered and ambush patrols executed on concealed avenues of approach. This type of activity in front of a defense disrupts and threatens the enemy reconnaissance effort, adding depth to the defense and protecting the force. Patrols can be used to cover gaps in the defense and shape the enemy's approach to engagement areas. Ambush patrols add depth to the defense.

Platoon commanders forward tentative patrol routes to the company commander for approval and deconfliction, then the commander forwards the entire company's patrol routes to the battalion. This allows the battalion staff to ensure all routes are coordinated for fratricide prevention, and that the company and platoons are conforming to the battalion ISR plan.

Reconnaissance and Security Operations. Throughout operations, commanders maintain a security force forward to maintain contact with the enemy and challenge the enemy's ability to determine or affect friendly actions. Security forces protect friendly main battle area forces, counter the enemy's reconnaissance plan, and allow defensive preparations to continue undetected and unmolested by the enemy. The use of screen, guard, or cover in a security force's mission statement determines the amount of resistance the security force will offer. Screen and guard missions may be tasked to CAAT platoons or other units which have been task-organized with the required weapons and mobility assets. In this mission, screen and guard units conduct ambushes and employ supporting arms to defeat enemy reconnaissance efforts and delay, disrupt, and deceive enemy forward detachments and advance guard elements. See chapter 10 for more discussion on security operations.

Rearward Passage of Lines

When security forces are operating forward of the platoon's positions, all hands must be aware of it. When the security force is going to pass back through friendly lines, there must be detailed planning for a rearward passage of lines. This planning should be reflected in the platoon's order and all hands must understand the plan. Since the enemy often dictates the time and place of the attack, planning for the rearward passage of lines begins as the security force moves forward, because the passage of lines could happen at any time. Planning and preparation include liaison, route assignment, reconnaissance, passage point control measures, guides, and battle handover criteria.

In the example illustrated in figure 7-23, the platoon has been tasked to conduct a rearward passage of lines as the stationary unit. The security force in this example, a CAAT platoon, will make radio contact as it approaches the platoon's sector. As it enters the platoon's sector from the start point on Route East, it will move along the route, passing through the platoon's obstacles at the passage point, and moving to the RP behind the platoon's defensive positions. The platoon may provide guides or mark the obstacle lanes as required by METT-T. Again, based on METT-T, a unit of the platoon may be tasked to close the lane and/or remove markings.

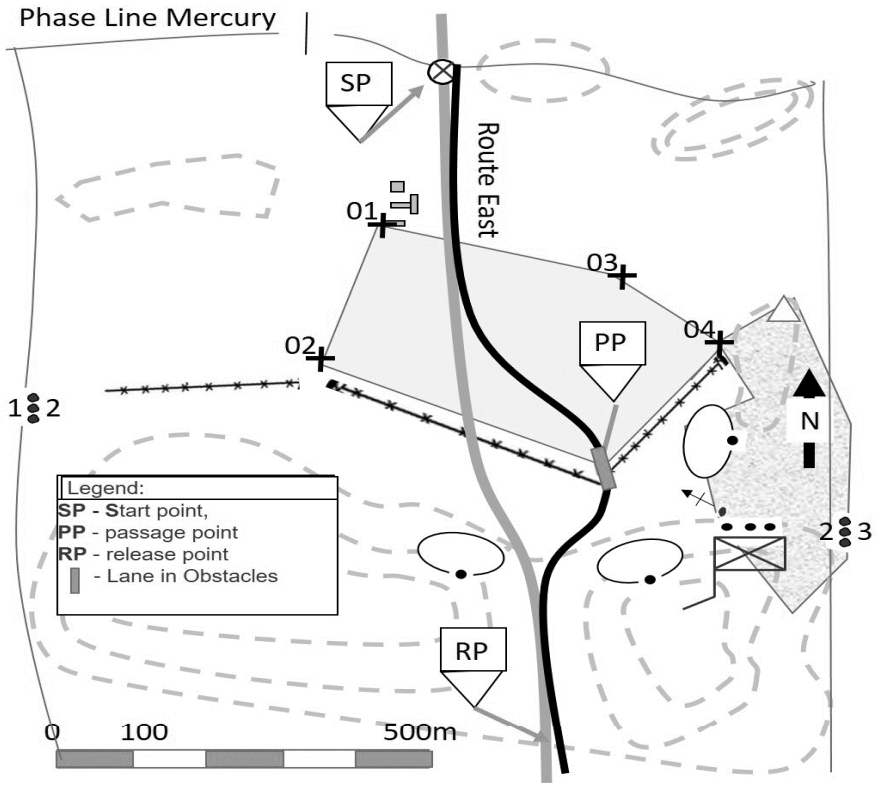


Figure 7-23. Rearward Passage of Lines.

DEFENSE OF AN URBAN AREA

The fundamentals of defense do not change in an urban environment. The development of engagement areas and occupation of the defensive positions discussed previously is equally relevant to the urban defense. Commanders need to recognize both the advantages and disadvantages of defensive operations in an urban environment. The defenders of an urban area usually have detailed knowledge of the terrain coupled with interior lines. This allows them to establish a defense, exploiting the cover and concealment and three-dimensional aspects of the urban environment.

There are a host of additional factors to be considered, the most obvious of which are the civil factors. Civil considerations in an urban area can be a great advantage or a vulnerability, depending on a host of factors, most important of which may be the support or opposition of the population. Depending on the METT-T factors, civil considerations can restrict maneuver, fires, and the employment of obstacles. Conversely, civilians, including civilian host nation security elements, can provide key support for units conducting defensive operations.

Based on commander's guidance and METT-T factors, platoon commanders must ensure that they understand and that their orders address the authorities and methods of dealing with civilians and their property in their assigned sectors and fighting positions.

Rifle Platoon in the Urban Defense

In an urban defense, an infantry company is typically assigned a sector. However, depending on METT-T, it may be assigned to defend from a battle position or to retain a strong point. The company will usually assign its platoons a battle position, strong point, or sector focused on enemy avenues of approach. Companies will often be employed in depth in a series of mutually supporting battle positions and/or strong points in the core of a city or town.

A rifle platoon typically operates as part of a company during urban operations. Platoons may be tasked to defend critical infrastructure instrumental to the higher mission such as an embassy, bridge, or host nation governmental building.

Once a platoon commander has received the battle position or sector, they select positions for the squads and crew-served weapons. Depending on the size and composition of structures, an entire platoon may defend from a single building, with squad deployed in separate rooms or wings of structures, or they may be deployed in different buildings. Squad positions must be mutually supporting and allow for overlapping sectors of fire, as depicted in figure 7-24. Just as in other defenses, companies and platoons develop alternate and supplementary positions. Mobility is crucial in a defense in an urban area; reconnaissance, marking, and improving routes adds to the defender's ability to maneuver. When selecting positions, the platoon looks for—

- Primary, alternate, and supplementary positions allowing mutual support.
- Solidly constructed buildings that provide cover and concealment.
- Covered and concealed routes for friendly forces to use to move between positions.
- Structures that dominate large areas.

The forward edge of an urban area is the obvious position for the defender and should therefore generally be avoided. However, platoons or subordinate squads may be tasked to occupy initial

Figure 7-24. Sectors of Fire in an Urban Defense.

positions on the edge of an urban area. The mission of such a force would be to provide early warning of the enemy's advance, engage the enemy at long range, and ambush enemy reconnaissance elements. This force would delay the enemy until certain criteria are met before withdrawing to planned subsequent positions deeper in the urban area.

Occupation and Improvement of Fighting Positions

When occupying defensive positions in buildings, the unit must search the structure and identify and deal with anyone in the structure. This most likely means escorting them out of the building. Units operating in this environment must establish and maintain 360-degree security, as the close terrain may enable enemies to infiltrate friendly positions. The defenders also—

- Make minimum changes to the outside appearance of buildings to prevent targeting.
- Screen or block windows and other openings to prevent the enemy from looking and throwing in grenades.
- Remove combustible material to limit the danger of fire.
- Turn off electricity and gas; they should be shut off at the main distribution nodes.
- Create loopholes to allow units to fire without exposing themselves at windows.
- Rehearse movements between positions.
- Reinforce fighting positions inside the structure using immediately available materials.
- Block stairwells and doors with wire or other material to prevent or delay enemy movement.
- Create holes between floors and rooms to allow for covered movement within a building.
- Emplace machine guns in basement windows, where the guns can provide grazing fires. When basements are not used, access to them should be sealed to prevent enemy entry.
- Stockpile food, water, ammunition, and medical supplies.
- Employ claymores to deny the enemy covered and concealed positions.
- Clear fields of fire just as they do in other environments by moving vehicles off of roads and removing signs and other obstructions.
- May employ engineer support to destroy buildings in order to improve fields of fire.
- Create tactical obstacles using rubble, vehicles (i.e., flipped over and tires removed), and other urban material.

CHAPTER 8
PATROLLING

PURPOSE OF PATROLLING

This chapter discusses the aspects of patrolling as they pertain to platoon commanders and squad leaders. It describes how patrols are employed as integral components of offensive, defensive, and stability actions. This chapter provides guidance and addresses patrolling roles and responsibilities for planning, preparing, conducting, and debriefing a patrol at the platoon level. For more information on patrolling than what is contained in this publication, see MCTP 3-01A.

A patrol is a detachment sent out to gather information and/or carry out a destructive, harassing, or security mission. Patrols provide commanders organic means to gather information and shape their battlespace. Patrols are employed across the range of military operations and during offensive, defensive, and stability actions.

In general, platoons conduct patrolling in one of the following ways:

- As a platoon supporting a company-sized patrol.
- Conducting platoon-sized patrols.
- Occupying a patrol base from which squad-sized patrols operate.
- Providing squad-sized patrols as part of the company patrol plan.
- Conducting leader's reconnaissance patrols.

TENETS OF PATROLLING

Patrols must have clearly defined objectives; with each objective comes a specific focus. Patrols may focus on the enemy, the security of the unit, or on the security of the population. Regardless of the objective and focus of individual patrols, the following tenets of patrolling apply across the range of military operations. The tenets of patrolling include the following:

- Detailed planning.
- Productive rehearsals.
- Thorough reconnaissance.
- Positive control.
- All-around security.
- Every Marine a collector.

For more on the tenets of patrolling, see MCTP 3-01A.

PATROL PLANNING AND PREPARATION

Detailed planning is the first tenet of patrolling. Based on warning and operations orders received from HHQ, the platoon commander assesses the situation and begins planning and preparation. The METT-T factors influence the platoon commander's decisions on patrol size, composition, and equipment. Integration with the company's patrol plan may dictate how many patrols are to be executed and how often. Patrol plans are often designed to be sustained over a period of time, with units rotating through patrolling, security, and rest/reserve functions. When conducting operations from a patrol base or other combat outpost over a period of time, the commander is conscious of the requirement not to set patterns in routes or times of departure, making the patrols vulnerable to enemy targeting.

The company's patrol plan focuses patrolling priorities on specific areas and/or CCIRs. The platoon commander considers the number, frequency, and composition of patrols. After establishing the scope of the patrol requirements, the platoon commander task-organizes the platoon and any attached or supporting assets. Depending on task and purpose, the platoon commander may consider requesting additional personnel and enabler support, such as combat engineers, military working dog teams, scout-sniper teams, forward observers, civil affairs teams, interpreters, and/or human intelligence teams.

The platoon commander typically leads platoon-level and leader's reconnaissance patrols. When a platoon commander is the patrol leader, they conduct all the tactical planning. When squads are assigned to conduct squad-level patrols, the platoon commander assists the patrol leader in planning, friendly unit coordination, and support. The platoon assists squad leaders in identifying resource shortfalls and seeks augmentation or support as required. Patrol leaders should follow tactical SOPs and checklists to preclude overlooking any items vital to the accomplishment of the mission; SOPs are particularly useful when the unit has been conducting sustained high-tempo operations.

Route Planning

The following are considerations in maneuver planning:

- The enemy situation and expected actions.
- The mission and threat may require that mission specific equipment be carried and employed, such as biometric systems, metal detectors, and EW equipment.
- Detainee handling and evacuation plans and procedures must be considered.
- The patrol leader coordinates with the company COC to understand their priority of fires, the status and response time of the reserve, and the methods and response times of casualty evacuation assets.
- The patrol plan accounts for potential contingencies. The patrol leader rehearses battle drills with the patrol and works through procedures for calling for support through the company HQ.
- Well-rehearsed immediate action drills and battle drills from the unit SOP are an effective means of addressing actions upon contact with the enemy.
- Uniform and equipment. Patrols comply with SOPs on uniform, equipment, and armor to be worn and/or carried on various types of patrols.

- Reconnaissance patrols, which specifically seek not to make contact with the enemy, can be more maneuverable and stealthier if traveling light.
- Armor protection level is usually established by battalion commanders based on the threat.
- Heavy loads on patrol tend to decrease the alertness and situational awareness of patrol members.
- Mission essential equipment should be spread loaded among the patrol members. The location of mission essential or unique equipment should be known by all members of the patrol.
- All patrols should carry NVDs and plenty of water, as events may delay their return.
- Use of terrain for routes, rally points, and patrol bases.
- Terrain is considered in conjunction with weather and light data.
- Distances involved and terrain allow leaders to estimate the time required to cover the patrol route and return to friendly lines.
- Primary and alternate routes to and from the objective should be planned. Patrols should return on a different route than they take to the objective.
- In areas with significant civilian populations, patrol planners should consider the civilian patterns of life. Depending on the situation, the patrol may want to engage with or avoid the population.
- Patrol leaders consider METT-T in selecting routes. Covered and concealed routes improve force protection and the opportunity to detect the enemy. More trafficable routes allow faster movement. Patrols may consider moving quickly in more secure areas, then moving into concealed areas as they approach expected enemy positions.
- Most infantry patrols are conducted on foot. Based on the tactical situations and the mission, infantry units may conduct motorized patrols (see appendix D) or use motor transport or aviation units to insert or extract the patrol.
- Time should be allocated for planning and preparations such as back-briefs, rehearsals, and pre-combat inspections.
- Time should also be allocated for post-patrol requirements, such as debriefs, after action reviews (AARs), and rest/reconstitution.

Fires Planning

Fire support for patrols includes delivering not only supporting arms, but IO, in accordance with the company IO plan (chapter 5 contains more information on fires planning). The following are planning considerations for fires in support of patrols:

- Determine potential fire support assets by analyzing and assessing fire support assets in terms of fire support range fans, fire support procedures, priority of support, and FSCMs.
- Determine fires limitations in the battlespace, including ROE, risk estimate distances, potential collateral damage, the impact of physical terrain, and the human environment.
- Coordinate with the company FST to plan fires to cover movement along the entire patrol route, to cover gaps in organic fires with external agencies, and to establish trigger lines and a list of targets that assist the company COC in tracking what fire support agencies are available at any given time as a patrol moves along its route.
- Request that the patrol have priority of fires from the company mortars.
- Rehearse fire control procedures and contact with supporting agencies.

- Consider task-organizing individual patrols with fires enablers, such as mortar or artillery scouts or a JTAC.
- Request a trained JFO to accompany the patrol.
- Consider response to a small UAS attack.

Reconnaissance, Observation, and Surveillance Planning

When tasked to collect against information requirements, the platoon must plan the patrols accordingly. Information requirements may require the patrol to determine information on the terrain, the enemy, or the civil situation. The platoon commander will determine appropriate ways to collect information and to integrate with other intelligence assets employed by or supporting the company.

As required, patrols may move through an area along a route conducting reconnaissance. The patrol may move to an ORP, where select elements of the patrol move to a vantage point and establish one or more OPs from which the patrol can maintain surveillance. The patrol may carry a variety of sensors. Long-range thermal sights and UASs can be invaluable for observation and surveillance. The reactions of both enemy forces and the local population to friendly patrols provide information. The platoon commander can coordinate with the company COC for support from sensors, including UAS and signals intelligence assets.

Task Organization of Patrols

The platoon commander task-organizes patrols to accomplish the assigned mission(s). The size of each patrol is determined by the mission and situation. Each patrol must be able to provide for organic security, navigate and communicate, and conduct reconnaissance or combat tasks as required. The platoon commander serves as the patrol leader for platoon-level patrols and leader's reconnaissance patrols. If the patrol is to be squad sized, it is normally assigned to one of the squads. Attachments and enablers are requested, and integrated into the patrol as required/available.

PATROL TYPES

Although mission requirements determine the type of patrol conducted, every patrol has the secondary mission of collecting information about the enemy, the operational environment, the human environment, and the physical terrain. The two main types of patrols are reconnaissance and combat. The patrolling unit requires a clear task and purpose, and the patrol's mission must support the overall company patrol plan.

Reconnaissance Patrols

A reconnaissance patrol collects information and can either confirm or disprove the accuracy of information previously gained. The purpose of a reconnaissance patrol is to gather information, and these patrols seek to avoid enemy contact and close combat. Platoons are often tasked to conduct reconnaissance patrols as part of the company and battalion intelligence collection plan. After coordination, the platoon may conduct a leader's reconnaissance patrol to address its own information requirements.

Depending on the mission and the operational environment, reconnaissance patrols may be covert or overt. When facing a substantial enemy threat, covert reconnaissance patrols use as few personnel and as little equipment as possible with regard to survivability. In other operational environments, overt reconnaissance patrols serve secondary purposes, such as security and presence. There are three types of reconnaissance patrols—route, zone, and area. For more on the types of reconnaissance patrols, see MCTP 3-01A.

Leader's Reconnaissance Patrols. Leader's reconnaissance patrols are conducted as area reconnaissance patrols. A leader's reconnaissance allows the platoon commander to confirm intelligence and assumptions made during planning. A leader's reconnaissance patrol is kept as small as possible to prevent detection. Care is taken not to alert the enemy. It often consists of the platoon commander and squad leaders; the platoon sergeant and senior fire team leaders lead and prepare the platoon while the patrol is out.

Combat Patrols

Combat patrols provide security to both friendly forces and local populations; maintain contact with friendly and enemy forces; and harass, destroy, or capture enemy troops, equipment, or installations. Depending on the mission and the operational environment, combat patrols may be covert or overt. Covert combat patrols are usually preferred when seeking an enemy and engaging in close combat. Overt patrols tend to be more appropriate when conducting operations in permissive environments where contact with the local population is mission critical. Combat patrols may carry specialized munitions specific to the mission, such as demolitions and explosives. Since all patrols by their nature serve as the company commander's intelligence collection assets, combat patrols also collect and report any information gathered during the mission, whether related to the combat task or not. The four types of combat patrols are raid, contact, ambush, and security. For more on the four types of combat patrols see, MCTP 3-01A.

COORDINATION AND COMMAND AND CONTROL ACTIONS IN SUPPORT OF PATROLS

Patrol leaders establish and rehearse immediate action drills and battle drills to prepare the patrol to respond to contingencies and enemy contact. During planning, the patrol leader conducts required friendly unit coordination, which is normally done through the company COC. The patrol leader checks for updates on enemy activity; submits the patrol overlay; and verifies the routes, active tactical control measures, FSCMs, signal plan, call signs, frequencies, hop sets, code words, pyrotechnics, and challenge and password. The patrol leader should be mindful of any friendly units, such as OP/LPs, logistics convoys, or host nation security force checkpoints that they may encounter during the patrol. The patrol leader ensures that all patrol members understand the process for departure and re-entry of friendly lines, including lanes to be used through any obstacles.

Manual Control Procedures

The patrol leader physically checks out with the company COC, speaking to the watch officer prior to requesting approval to exit friendly lines. They mutually verify patrol routes/overlays, reporting procedures, fire support plans, and contingency plans. Understanding the patrol route,

the COC is able to track and support the patrol and coordinate with higher, adjacent, and supporting units as required. Immediately prior to departing friendly lines, the patrol leader contacts the company COC on the designated net and confirms that the watch officer is aware of the patrol's route and information requirements, and requests permission to exit friendly lines.

Technical Control Procedures

Technical means, such as GPS-enabled positioning and locating systems (e.g., blue force tracker) assist in reporting, control, and the dissemination of the CTP. Technical control procedures can be invaluable in ensuring that units do not set patterns by comparing previous patrol routes (i.e., honesty traces) with submitted patrol overlays.

Information Provided to the Company Combat Operations Center

The patrol reports as required by the signals plan, normally reporting the passage of checkpoints or phase lines. Contact with or sightings of the enemy, or evidence of enemy activity, is always reported expeditiously, as is any information that would answer a PIR or CCIR. The patrol leader coordinates for the company mortars to shift to new priority targets. As the situation dictates, the patrol may request UAS support, such as during the crossing of a danger area.

Information Provided to the Patrol by the Company Combat Operations Center

The watch officer in the company COC monitors the progress of all patrols, and the COC informs the patrol(s) of updated intelligence relevant to their operations.

PATROL BASES

A patrol base is a temporary defensive position set up when the patrol unit halts for a period longer than a security halt, but shorter than what is necessary for a permanent position, such as a combat outpost or forward operating base. The patrol base is effectively a perimeter defense, as detailed in chapter 7. The ORP may be a patrol base if the unit plans to occupy it for several hours.

The mission and enemy capabilities determine whether a patrol base is overt or covert. The default preference is covert patrol bases, which are occupied by stealth, located in areas that are difficult to access, provide no tactical value to the enemy, are easily defendable, and from which hasty egress can occur if compromised. Conversely, overt patrol bases are readily visible. Their visibility is often a portion of the mission, such as an overt patrol base established among the population. Patrol bases are occupied only as long as necessary, but not for more than 24 hours, except in an emergency. The unit should not use the same patrol base more than once. The patrol leader enforces strict discipline while occupying the patrol base; noise and light is kept to a minimum, and all trash is carried out.

Many of the planning considerations for a patrol base are similar to an ORP. Assuming the patrol base is intended to be covert, it is established in a concealed area, off of any routes likely to be used or patrolled by the enemy. The patrol will usually occupy the patrol base by patrolling into it, then each element assumes a sector. A fairly standard method for deploying from a column is for the lead element to cover (using the clock system) 10 to 2 o'clock, the middle element to cover 2 to 6 o'clock, and the rear element to cover 6 to 10 o'clock. This is illustrated in figure 8-1.

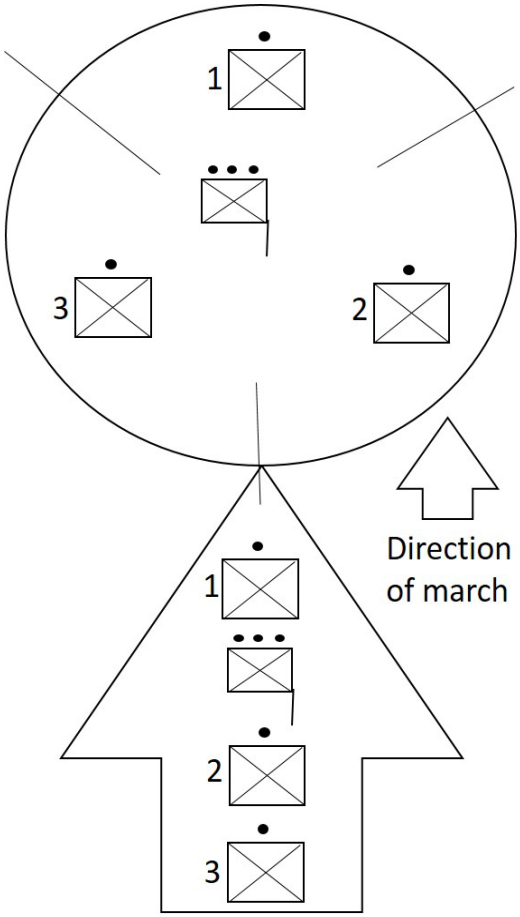


Figure 8-1. Loading the Patrol Base.

Security in the Patrol Base. The patrol establishes a perimeter defense in the patrol base, assigning sectors of fire. Initial sectors based on the clock system are used to occupy the patrol base.This is refined based on METT-T factors once the unit has occupied the position.

Listening and Observation Posts. The patrol may establish an OP on likely avenues of approach to prevent being surprised in the patrol base. The patrol may establish OP/LPs on nearby vantage points that allow them to surveil the nearby area.

Actions in the Patrol Base. The situation dictates the actions in the patrol base. The patrol may use it as a harbor site to remain concealed during daylight hours prior to conducting operations at night, such as an ambush. A platoon may establish a patrol base for the main body to conduct final preparations and rest while a leader's reconnaissance patrol is conducted, and send out a squad-level patrol.

Contact in the Patrol Base. The patrol does not fight to retain the patrol base, and withdraws if compromised. The situation dictates actions on contact. This should be a planned and rehearsed battle drill. If pressed, the patrol uses fires and command-detonated ordnance to assist in breaking contact.

RE-ENTRY INTO FRIENDLY LINES AND POST-PATROL ACTIONS

Upon approaching friendly lines, the patrol leader stops at a re-entry rally point to conduct coordination with the forward unit. The patrol leader provides the forward unit commander with the unit identification, patrol size, and any other necessary information the forward unit may need to know. The patrol will make contact with friendly guides at the contact point and follow them back through the passage point.

After the patrol has been completed, leadership must account for all personnel and equipment, debrief patrol members, and conduct an AAR. The patrol does not return to its billeting or similar facilities until accountability and debriefs are conducted.

Accountability

Accountability is an important component of force protection. Leadership at all levels must know the location and status of their personnel and equipment. Pre-combat checks ensure that Marines have the necessary equipment and have properly secured their gear. Pre-combat inspections allow the platoon commander and/or small unit leaders to verify that Marines understand their roles and responsibilities. Throughout the patrol, element leaders maintain accountability of all personnel, including attachments and enablers. Upon returning from a patrol, the patrol leader verifies the location and status of all patrol members, attachments, and detainees. In the case of missing personnel, the company immediately institutes its missing personnel procedures.

Debrief

Part of the plan for the patrol is the debrief. The patrol leader, commander, and a representative of the CLIC typically conduct the debrief with all members of the patrol. Checklists of the material to be covered in debriefs are important and should align with the pre-patrol brief and assigned PIRs. To conduct a meaningful and detailed debrief, platoon commanders—

- Follow the debriefing procedures in company SOPs.
- Isolate the patrol from distraction so members can be debriefed without interruption.
- Establish a “no rank” debrief atmosphere and avoid discouraging patrol member input.
- Ensure that all relevant billet holders, such as the platoon commander, platoon sergeant, platoon/squad intelligence representative, element leaders, and recorder are present.
- Ensure that all items of interest collected by the patrol are present and displayed, such as pictures, recordings, sketches, and map improvements.
- Avoid a “story telling” atmosphere (i.e., objective versus subjective) and maintain the focus on drawing information from the individual or group being debriefed. Focus on the information requirements that formed the patrol’s tasking.
- Track all “atmospheric” changes in the AO from the previous baseline, such as new construction, new signs, things no longer present, and population traffic pattern changes.
- Save after action comments (i.e., critiques of the patrol) for the AAR.

Patrol Reports

Immediately after the debrief, the patrol leader submits a patrol report to the company watch officer. This report may be verbal or written and simple or elaborate, depending on the situation and the commander's requirements. See figure 8-2 for an example patrol report. If not equipped with a position locating and reporting system, the patrol leader ensures that the COC knows the actual route taken by the patrol, as opposed to the planned route, including any halt locations. Tracking the route the patrol took is important for planning future patrol routes and actions.

Patrol Report (Example)

To: (Commander of unit ordering the patrol)
From: (Rank an name of the patrol leader)
Title: PATROL SITREP for Patrol# (Patrol designation or number per unit tactical SOP)
DTG Patrol Departed and DTG Patrol Returned: {All dates and times per the unit tactical SOP)

Mission: (Restatement of original mission, noting any modifications or FRAGOs received during the patrol's duration.)

Friendly forces (Only specify details on patrol composition that have changed.)

Situation: (The patrol leader's evaluation of mission accomplishment with a general description of any significant patrol sightings.)

Specific Incidents

-Time of incident
-Location of incident {grid/name)
-Type/description of incident
-Persons involved or witnesses to the incident
-Number and types of casualties
-Location of casualties
-Actions taken by friendly forces
-Details of hostile persons/terrorists/insurgents
-General comments/additional info

Figure 8-2. Example Patrol Report.

After-Action Reviews

No operation ever occurs perfectly. There is always room for improvement. An important component of post-patrol actions is a meaningful AAR, particularly after patrols involving enemy contact or other significant events. The AAR typically occurs after completion of formal post-patrol requirements, such as debriefs, but before patrol members become absorbed in post-combat checks and equipment maintenance. Unit leadership should supervise AARs to ensure that appropriate information is incorporated into SOPs, lessons learned, and sustainment training plans.

CHAPTER 9
STABILITY

PURPOSE OF STABILITY

Stability is an overarching term encompassing various military missions, tasks, and activities conducted outside the United States in coordination with other instruments of National power to maintain or reestablish a safe and secure environment, provide essential governmental services, emergency infrastructure reconstruction, and humanitarian relief.

This chapter discusses the infantry platoon's roles and responsibilities in supporting stability actions. Planning considerations for stability activities are outlined in MCRP 3-10A.2, *Infantry Company Operations*. This chapter focuses on the TTP of common tasks assigned to the infantry platoon in support of stability missions.

Marine Corps infantry platoons conduct stability activities in support of operations spanning the range of military operations, including military engagement, security cooperation, and deterrence; crisis response and limited contingency operations; and large-scale combat operations. Supporting stability activities is a mission essential task for the infantry, and infantry platoons must be as competent in the execution of stability tasks as they are in tasks and activities associated with the offense and defense.

Marine Corps forces conduct stability actions in the complex joint, interagency, intergovernmental, and multinational environment. More so than offensive and defensive combat operations, stability actions often require coordination with other US Government agencies, host nation and foreign governments, multinational forces, NGOs, and private volunteer organizations.

Combat forces may have to lead and organize these efforts when host nation civil agencies, NGOs, or international actors do not initially exist or are incapable of assuming responsibility. Normally, as progress is made, military forces decrease their leadership role and focus on supporting the efforts of host nation authorities, interagency partners, and/or NGOs.

Stability During Military Engagement, Security Cooperation, and Deterrence

During periods of peacetime engagement, the MAGTF and its assigned infantry forces routinely conduct stability activities in support of our National strategy of engagement. This aspect of our National strategy assists in building host nation capacities, promoting democracy and the rule of law, and building understanding of our culture. Deployed infantry platoons are routinely tasked to execute and support these operations. The operations are often conducted under the term *theater security cooperation* or *security cooperation*.

Stability in Crisis Response and Limited Contingency Operations

Beyond peacetime engagement, Marine Corps infantry units participate in stability actions through limited contingency and crisis response operations. The expeditionary nature of the Marine Corps and its role as the Nation's force in readiness demand that Marines be prepared to plan and conduct stability actions. The ground combat element (GCE) of the MAGTF may participate in operations where stability tasks are either a supporting effort or the main effort, such as foreign humanitarian assistance operations following a natural disaster.

Stability in Large-Scale Combat Operations

Marines may execute stability actions in support of a transition to civil authority following large-scale combat operations. Marine ground combat forces may be called on to safeguard the populace, enable or reestablish civil law and order, protect or rebuild key infrastructure, and/or restore public services.

For more information on core stability tasks and associated subtasks, see Joint Publication (JP) 3-07, *Stability*. For more information on civil affairs and civil-military affairs activities related to these tasks, see MCTP 3-03A, *Marine Air-Ground Task Force Civil-Military Operations*.

CATEGORIES OF STABILITY ACTION

Regardless of duration, there are three broad categories of stability, which may or may not occur as sequential phases and may or may not include military operations in the US Government's overall actions. An infantry platoon may find itself participating in only one particular aspect, such as initial response, before transitioning to civil authorities. The categories are: initial response, transformation, and fostering stability.

Initial Response

First responders provide a safe, secure environment and attend to the immediate essential service needs of the local population. The MAGTF's expeditionary capabilities make it likely that Marines will execute and support an initial response.

Transformation

Longer-term efforts develop or reestablish enduring capability and capacity in the host nation government.

Fostering Stability

Long-term efforts capitalize on capacity-building and reconstruction activities to enable sustainable development.

STABILITY TASKS

The execution of stability missions depends on small units executing tactical tasks that enable their accomplishment. There are six stability tasks. Actions pursuant to any one task inevitably create related effects in another. When planned and executed appropriately, carefully sequenced activities complement and reinforce these effects. These tasks apply across the range of military operations. The following subparagraphs discuss the six stability tasks.

Establish Civil Security

Establishing civil security involves providing security for state entities and indigenous populations and institutions, including protection from both internal and external threats. It is an activity fundamental to the success of the other stability functions and tasks, and the most likely stability task for an infantry unit. Subtasks include—

- Enforce cessation of hostilities, peace agreements, and other arrangements.
- Determine the disposition and composition of national armed and intelligence services.
- Support disarmament, demobilization, and reintegration.
- Conduct border control, boundary security, and freedom of movement.
- Protect key personnel and facilities.
- Clear explosives.
- Advise, mentor, and train host nation security forces.
- Establish and support identification programs.

Provide Humanitarian Assistance

Conflict and natural disasters often result in acute shortages of water, food, shelter, clothing, bedding, and medical aid. Forward-deployed infantry units are often the first response forces on scene and support efforts by providing command and control, forces, and security. Depending on the situation, providing humanitarian assistance may include—

- Providing local security.
- Distributing relief supplies.
- Assisting in determining needs and assessments.

Support and/or Enable Restoration of Essential Services

Restoring services essential to local expectations of normalcy allows a population to return to their routine daily activities and prevents further destabilization. Infantry units lack the organic capability to execute this task on their own and most often contribute security, command and control, and forces related activities. Most likely, a platoon will provide security for enablers attached or supporting at the battalion level or higher. Subtasks include—

- Provision of essential civil services.
- Assistance to dislocated civilians.
- Famine prevention and emergency food relief programs.

- Non-food relief programs.
- Human rights initiatives.
- Public health programs.
- Education programs.

Support Establishment of Civil Control

Civil control fosters the rule of law by enabling sanctioned local leadership to effectively manage the disputes and conflicts within the population. The infantry contributes to this task by providing the command and control and security frameworks to enable civil control activities to occur, and in some cases supporting the training of host nation law enforcement. Establishing civil control includes the following six subtasks:

- Support establishment of public order and safety.
- Support law enforcement and police reform.
- Support justice system reform.
- Support corrections reform.
- Support war crimes courts and tribunals.
- Support public outreach and community rebuilding programs.

Support Economic and Infrastructure Development

Long-term peace and stability require sustainable economic and infrastructure development. The infantry battalion contributes to this task by providing the command and control and security frameworks necessary for related activities to occur and by preserving important assets such as production facilities, hospitals, universities, existing companies, and markets. The infantry platoon provides security and serves as a sensor in providing data to determine the economic and infrastructure development needs in the AO. This core task includes the following five subtasks:

- Support the protection of natural resources and the environment.
- Support economic generation and enterprise creation.
- Support agricultural development programs.
- Support restoration of transportation infrastructure.
- Support general infrastructure reconstruction programs.

Support to Governance

Governance is the set of activities conducted by a government or community organization to maintain societal order, define and enforce rights and obligations, and fairly allocate goods and services. When confronted with a dysfunctional or absent government, international law obligates military forces to provide military governance until a transition to civil authority can occur. Most often, the military conducts stability tasks that support the efforts of other agencies to assist the host nation in building capability and capacity. The infantry most often provides the security and command and control frameworks necessary for governance activities to occur. Support to governance includes the following four subtasks:

- Support transitional administrations.
- Support development of local governance.

- Support elections.
- Support anticorruption initiatives.

POPULATION-ORIENTED TACTICAL TASKS

During the conduct of operations, the platoon may be tasked to conduct population-oriented tactical tasks which focus friendly efforts on achieving some sort of condition related to the population within the AO. An infantry platoon will often receive additional training and/or augmentation, such as cultural experts and/or translators, when assigned to execute population-oriented tactical tasks. The following are population-oriented tactical tasks:

- *Assess the population*. To evaluate the nature, situation, and attitudes of a designated population, or elements of a population, inhabiting the AO.
- *Assist*. To provide designated support or sustainment capabilities to host nation security forces to enable them to accomplish their objectives.
- *Build/restore infrastructure*. To construct, rebuild, or repair local infrastructure to support the host nation and gain or maintain the cooperation of the local population.
- *Contain*. To prevent or halt elements of a population or designated party from departing or projecting physical influence beyond a defined area.
- *Control*. To use physical control measures and information-related capabilities to influence elements of a population or designated actors to respond as desired.
- *Coordinate with civil authorities*. To interact with, maintain communication, and harmonize friendly military activities with those of other interorganizational agencies and coalition partners to achieve unity of effort.
- *Cordon*. To temporarily prevent movement to or from a prescribed area, such as a neighborhood, city block, series of buildings, or another feature. This may also be a terrain-oriented tactical task.
- *Enable civil authorities*. To support or assist the host nation government and designated interorganizational agencies in providing effective governance.
- *Influence*. To persuade the local population within the operational area, including potential and known adversaries, to support, cooperate with, or at least accept the friendly force presence, and dissuade the local population from interfering with operations. This may be either a population or enemy-oriented tactical task.
- *Train*. To teach designated skills or behaviors to improve the individual and unit capabilities and capacities of host nation security forces.
- *Transfer to civil control*. The handover of civil government and security responsibilities from friendly force military authorities to legitimate civil authorities.

CIVIL-MILITARY OPERATIONS

Civil-military operations (CMO) are activities conducted to establish, maintain, influence, or exploit relations between military forces, governmental and nongovernmental civilian organizations and authorities, and the civilian populace in a friendly, neutral, or hostile operational area in order to facilitate military operations to consolidate and achieve operational US objectives. Civil-military operations may include military forces' performance of activities and functions that are normally the responsibility of the local, regional, or national government.

These activities are a responsibility of maneuver unit commanders who are assigned battlespace. Ideally, they are performed by specially trained civil affairs personnel.

Operational realities often require infantry units to conduct or support CMO. Normally, the infantry platoon operates as a component of an infantry company during stability activities. The platoon may be tasked to engage and coordinate with a range of civic, governmental, and religious leadership, as well as with the populace itself. Civil-military operations build and use relationships with people, governments, and NGOs to facilitate tactical tasks and military objectives. Civil- military operations are not the realm of civil affairs personnel alone. Civil affairs personnel may support infantry companies, but most likely work at the battalion level and above. Therefore, CMO remains a commander's responsibility and, similarly to IO, all members of the company can execute CMO efforts.

Civilian populations, organizations, and leadership add considerable variables to the already chaotic and uncertain battlefield environment. Since the actions of many of these elements can only be influenced rather than controlled, company commanders seek to mitigate this unpredictability through well-thought-out CMO plans. When planning CMO actions, company commanders should consider the following:

- Actions that generate and further stability.
- Actions that minimize population interference with company operations while enhancing the legitimacy of friendly forces.
- Actions that isolate the enemy from the population and put additional pressure on their operations.
- Actions that identify and coordinate the acquisition of local resources.
- Actions that assist the company in meeting legal obligations to the local population.
- Actions that analyze the CMO aspects and implications of current or planned operations.
- Actions that gain and maintain situational awareness of the civil environment.

Unified Action

Unified action is the synchronization, coordination, and/or integration of the activities of governmental and nongovernmental entities with military operations to achieve unity of effort. (JP 1, *Doctrine for the Armed Forces of the United States*) During stability activities, the infantry platoon executes orders as directed by the infantry company commander. During planning, the platoon commander considers opportunities to engage and support host nation, international, and US civilian partners. The ideal is to execute a unified plan with support and agreement from all partners.

Fostering Legitimacy

The end state of every stability mission, from humanitarian assistance to counterinsurgency, is a transition to civil authority. Small units work with the host nation to create conditions to allow this transition. At the platoon level, this often means establishing a security environment that allows the host nation to establish or reestablish the required capability and capacity.

Marines consciously endeavor to enhance host nation credibility and legitimacy. They demonstrate the proper respect for host nation government, police, and military forces. Host nation military and police forces are integrated in all aspects of every operation. The civil population closely watch Marines' actions. Disrespect toward host nation officials or lack of confidence in host nation capabilities by US forces will discredit the host nation and damage the stability effort.

PLANNING AND THREAT ASSESSMENT IN STABILITY

Understand the Operational Environment

Platoons involved in stability actions must be cognizant of the cultural, political, social, and economic factors that influence the objectives and behavior of key actors. This allows planning to consider the effects of operations on the operational environment and how to generate the effects desired. At the tactical level, they must understand the pattern of life in the region to which they are deployed. This is the how people and vehicular traffic move through neighborhoods and how cultural events, religious holidays, sporting events, rush hours, and market times can affect friendly and enemy force operations. As part of developing their situational awareness, Marines must learn the timing, rhythms, or patterns of the local population. Variations in this can give them an early warning when something feels wrong in the area.

Understand the Importance of Information Operations

Stability activities and CMO are often dependent on the effective employment of IO. Every CMO action has potential IO impacts and vice versa. The platoon must understand how the actions of their unit will be perceived by the population. Information operations are used to counter threat narratives and/or meet the information needs of the population. The coordination and synchronization of IO and CMO actions is critical, as is mutual feedback and assessment. Information operations can be used to modify the behavior, influence the decisions, or support the actions of friendly, neutral, and hostile actors. During stability activities on the lower end of the conflict continuum, IO is often the primary means of generating effects in the operational environment.

Marines should expect that enemies or adversaries will endeavor to turn every minor misstep into a controversy to advance their own agendas. Modern information technologies allow for the rapid creation of video and still imagery, and dissemination on a global scale. This may be done by the enemy, local nationals, outside agitators, members of the media, or even US or partner nation government or military personnel. Well-disciplined Marines conducting operations in accordance with the ROE, engaging in honest communications with the media, and proactively informing local populations are a potent and effective defense against enemy IO.

Permissive, Uncertain, and Hostile Environments

When planning and preparing for stability actions, the platoon must understand the operational environment in which it will be operating, and the implications on mission accomplishment.

One of the most fundamental factors of the operational environment is the threat. Operations are planned and executed based on one of three operational conditions.

Permissive Environment. A permissive environment is the operational environment in which host country military and law enforcement agencies have control, as well as the intent and capability to assist operations that a unit intends to conduct. (JP 3-0, Joint Operations) Marines routinely conduct a variety of operations in permissive environments. Examples include the GCE conducting training with host nation forces as part of theater security cooperation plans, and the deployment of forces to support disaster relief in friendly countries. While operating in permissive environments, GCE commanders exercise routine force protection measures to protect the force, but rely on host nation security forces.

Uncertain Environment. An uncertain environment is the operational environment in which host government forces, whether opposed to or receptive to operations that a unit intends to conduct, do not have effective control of the territory and population in the intended operational area. (JP 3-0) Forward-deployed GCEs are frequently called on to conduct crisis response operations, such as noncombatant evacuation or embassy reinforcement, in an uncertain environment. This environment may be that in which expeditionary crisis response forces are most valuable; the ability to conduct a range of missions professionally, with the credible capability of conducting decisive combat operations, may deescalate situations. When operating in an uncertain environment, the GCE cooperates with the host nation to the extent possible, but retains primary responsibility for the security of the forces and the accomplishment of the mission. The GCE operates in a manner to present a hard target for any potential threat.

Hostile Environment. In a hostile environment, hostile forces have the intent and capability to oppose or react to operations. Friendly host nation forces may still be present in a hostile environment, but they do not have effective control of the situation. In this environment, the GCE conducts combat operations as required to achieve assigned objectives.

Restraint and Use of Force

The MAGTF establishes policies on the use of force based on the senior commander's assessment of the operational environment. Excessive or arbitrary use of force is never justified, and is often counterproductive in stability actions. Conversely, using inadequate force jeopardizes the credibility of the force by emboldening potential enemies and raising doubts in the minds of protected groups. Operational commanders issue ROE to guide the tactical application of combat power. Ordinarily, the commander on the ground is best qualified to determine the required degree of force consistent with the ROE. When available, nonlethal capabilities can provide additional tools to augment the traditional means of deadly force. Nonlethal means expand the number of options for confronting situations where deadly force is not warranted. However, each Marine must retain the capability to immediately apply deadly force for self-defense.

Rules of Engagement. The ROE defines the commander's authorities for the use of force. They take into account both practical and political considerations. Platoon commanders must ensure that all hands understand the ROE.

Use of force procedures are often established by HHQ, in accordance with ROE, directing a series of sequential responses to a potential threat. The use of force begins with nonlethal force measures. The use of force could escalate to lethal force as required to protect the force.

Nonlethal Capabilities. As required by the situation, the platoon should be prepared to employ nonlethal weapons, including (but not limited to) riot control equipment, laser dazzlers, pepper spray, tasers, and nonlethal munitions (e.g., beanbag rounds). Marines well trained in the Marine Corps Martial Arts Program also contribute to the protection of the force and allow commanders to use an appropriate level of force, to include controlling detainees.

LOCAL NATIONAL AND KEY LEADER ENGAGEMENT

During stability actions, small unit leaders are often the visible face of the Marine Corps. Through their actions and words, they convey a wealth of information to host nation personnel, both military and civilian. The actions of junior Marines who are actually in contact with the local populace normally have more of an impact in shaping the attitude of the local populace toward friendly forces than IO messages developed by HHQ. Whether it is a conversation with the locals or a key leader engagement with village elders, individual Marines' actions and words can be the best weapons or the worst liabilities during a stability mission.

Effective leadership is required to ensure that every Marine and Sailor treat the local population with dignity and respect. This simple act can minimize potential adverse cultural and political impacts. Small unit leaders conducting stability activities must not tolerate the abuse of locals or the use of derogatory terms for them. They must remind Marines and Sailors that US forces are working to support affected populations because we respect and protect those who are caught in the middle of a conflict or disaster.

Company and battalion commanders normally provide talking points for units engaging with locals. A fundamental task is to convince the population that the success of friendly forces is in their long-term best interest. The platoon commander must ensure that all hands engaging local nationals understand the talking points provided for the operation.

A platoon commander conducting stability activities actively works to identify, establish, and maintain consistent and effective personal relationships with key leaders in their AO. The intent is to promote trust and confidence that eventually can lead to cooperative engagements. Key leader engagement is not about engaging key leaders as a response when a crisis arises, it is about building relationships over time with enough strength and depth so that we can be mutually supportive during times of crisis.

CHAPTER 10
OTHER TACTICAL OPERATIONS

This chapter discusses actions that enable other offensive, defensive, and stability actions. Like all tactical operations, they may be main or supporting efforts. Other operations include mobility, countermobility, cordons, relief in place, passage of lines, linkup, reconnaissance, security, and population control measures.

MOBILITY OPERATIONS

Mobility operations are activities that enhance the ability of friendly forces to maneuver in the operational environment. Throughout history, combatants have found methods of blocking roads, creating barriers, and limiting the movement of advancing forces. Competent enemies evaluate the terrain, including existing natural and constructed obstacles, and emplace their forces accordingly. Reinforcing obstacles are employed to disrupt, fix, turn, or block our movement. The enemy will cover obstacles by fire and observation, increasing the lethality of their fires. In addition to tactical employment, mines, booby traps, and IEDs can be employed to cause casualties, damage equipment, and disrupt timelines.

During operations, Marine infantry units should expect to encounter a wide variety of obstacles, which may include wire entanglements, rivers, individual IEDs, and complex minefields covered by effective fire. Small unit leaders must understand how adversaries are likely to employ obstacles and ensure that their Marines are trained to overcome those obstacles using a range of organic and nonorganic assets. Breaching battle drills are essential components of infantry unit battle drills.

Infantry platoons may or may not be supported by assault Marines or combat engineers, based on the tactical situation. Infantry platoons must have an organic capability to identify and bypass or breach obstacles to achieve assigned missions. Identifying obstacles prior to contact with them prevents Marines from entering kill zones and allows commanders to decide on the appropriate COA and prepare the unit to execute necessary actions. The assured mobility framework is intended to help commanders at various levels deal with obstacles. For additional information, refer to MCWP 3-34 or MCTP 3-34A, *Combined Arms Mobility*.

Assured Mobility

Assured mobility is a planning framework which guides commanders in the proactive application of reconnaissance assets, combat power, and engineer assets to assure the freedom of movement and maneuver. The framework of assured mobility follows the continuous cycle of the operations process. Assured mobility rests on applying six fundamentals that enable friendly maneuver and

protect the force. The fundamentals of assured mobility are—prediction, detection, prevention, avoidance, neutralization, and protection.

Prediction. Analyzing the enemy's TTP and capabilities allow commanders to predict where enemy forces and their obstacles will be employed. Platoon commanders must predict potential obstacles accurately and continuously. If a threat is identified or suspected, the platoon commander may request an analysis of enemy mobility and countermobility capabilities. Similar assessments on the effects of the population (e.g., people, traffic patterns, events), terrain, and weather may be sent to the platoon or requested if one of these elements may have a tactical impact. This prediction occurs as part of the assigned platoon intelligence collection effort and estimate of the situation, which are continuous activities.

Detection. Commanders use ISR assets to identify indicators for the location of natural and manmade obstacles, preparations to create/emplace obstacles, and potential means for obstacle construction. Verifying obstacles often provides excellent information about enemy actions and intent. The information collection plan sent down from the battalion links acquisition (i.e., detection) assets to specific requirements needed to support higher-echelon decision making. The platoon reconnaissance plan (think BAMCIS) is developed during the planning process. Answering the CCIRs is the focal point for the information collection plan.

Prevention. Commanders prevent the employment of obstacles on tactically relevant terrain to deny the enemy's ability to influence our mobility. This includes denying the enemy the ability and opportunity to attack critical transportation infrastructure that supports mobility (e.g., airfields, roads, and bridges) and other manmade structures (e.g., dams, chemical production, or storage facilities) with the potential for catastrophic effects. This also includes proactive action taken to prevent the enemy from emplacing obstacles. It may include aggressive action to destroy enemy assets/capabilities before they can be used to create obstacles. For example, neutralizing a bomb-making facility to prevent weapons from being made is far more effective than hunting for explosive hazards that have already been emplaced. Political considerations and the ROE may hinder the ability to apply this fundamental early in a contingency. Mitigating the effects of civilian populations residing in or traversing the AO are an additional consideration the platoon may have to deal with and plan for.

Avoidance. If prevention fails, the commander maneuvers forces to avoid impediments to mobility, if this is viable within the scheme of maneuver. The major consideration is not letting enemy obstacles or other countermobility measures impact the platoon's operations.

Neutralization. Commanders plan to ensure that maneuvering elements have the capabilities to neutralize, reduce, or overcome obstacles to enable unrestricted maneuver. The breaching tenets and fundamentals apply to the fundamental of neutralize. Combat engineers may be requested to conduct limited reduction or clearing of mines and other explosive hazards as part of route and area clearance. The platoon commander may request EOD capabilities to remove hazards. Similarly, the employment of military police, civil affairs, and other assets and capabilities can be requested to deal with human obstacles (e.g., traffic congestion, crowds, and dislocated civilians).

Protection. Maneuver forces plan and implement survivability and other force protection measures that deny the enemy the ability to inflict damage. These measures should be aligned with the

protection/force protection warfighting function. These measures will prevent detection and reduce the enemy ability to inflict damage or otherwise interfere with friendly forces as they move and maneuver. This may mean the platoon is directed to conduct countermobility missions to deny the enemy maneuver and provide protection/force protection to friendly maneuvering forces.

Obstacle Intelligence

At the platoon level, the platoon commander attempts to predict where the enemy is likely to employ obstacles to accomplish their mission. Reconnaissance and patrols confirm or deny the prediction. An obstacle on the ground means something. It often provides key information on the enemy disposition. Obstacles are usually employed inside the effective range of enemy weapons, giving good clues to the location and disposition of the enemy. Once obstacles are detected or confirmed, the commander faces a decision on how they are dealt with. It is generally preferred to avoid or bypass obstacles and associated engagement areas and kill zones. However, commanders must be conscious that bypasses may be intended to turn and channelize the force. Obstacles are breached when the mission requires it and the unit has the required training and organic and/or supporting assets.

Obstacle intelligence is an integral component of a unit's understanding of a tactical situation. Small unit leaders must remember that the enemy employs obstacles to disrupt, turn, fix, or block our movement. Intelligence on obstacles' location and composition and the enemy forces overwatching them are essential to the successful defeat of the enemy's defense. Information requirements for mobility operations require at a minimum—

- Obstacle location and orientation; these affect the ability to bypass or approach the breach and the scheme of maneuver that supports the breach.
- The size and composition of the enemy force overwatching the breach.
- Identification of weak areas in the defense where the fire plan and the barrier plan do not complement one another well.
- Obstacle composition and depth; these determine the required breaching resources; the time required; the amount of exposure friendly forces will experience while passing through the breach; and the combat power required to emplace, maintain, and exploit the breach. Further considerations include the location of enemy direct fire weapons and the topography and soil composition.

Bypassing Obstacles

Avoiding enemy obstacles is a component of assured mobility, and in general it is preferable to bypass obstacles to maintain the momentum of attack. Schemes of maneuver are designed to avoid enemy obstacles and their associated kill zones and engagement areas. Platoon commanders decide to bypass obstacles when it provides a tactical advantage without exposing the unit to unnecessary danger. Issues to consider include—

- Does the bypass route allow the unit to accomplish the mission, without being led into possible engagements areas or kill zones?
- What is the cost to breach (i.e., ammunition, casualties, and time)?
- What amount of time is required to bypass versus the time required to breach?

When a platoon encounters an unexpected obstacle, unit leaders must be conscious that the obstacle is most likely covered by fire and observation. Once the unit submits an obstacle report to HHQ, its next step is to search for bypasses, which allow the unit to maintain momentum by going around the obstacle. If the platoon bypasses an obstacle, it must report the location of the bypass. If the situation permits, they will mark both the obstacle and the bypass to prevent follow-on forces from entering the kill zone and allow them to follow the bypass.

Breaching Obstacles

Breaching is a fundamental component of maneuver warfare. While the preference is to bypass, units must be capable of breaching obstacles. Breaching is typically a combined arms operation requiring close coordination. Marine infantry units must be capable of conducting both in-stride breaches, which are executed as battle drills against lightly defended obstacles, and deliberate breaches of complex obstacles, which require detailed intelligence and coordination. In the planning and execution of operations, the platoon commander applies the five tenets of breaching:

- Intelligence.
- Breaching fundamentals.
- Breaching organization.
- Mass.
- Synchronization.

Breaching Fundamentals. The breaching fundamentals—suppress, obscure, secure, reduce, and assault (known by the acronym SOSRA)—must be applied to ensure success when breaching against a defending enemy. These obstacle reduction fundamentals always apply, but they may vary based on the specific METT-T situation. The breaching fundamentals are illustrated in figure 10-1, figure 10-2, and figure 10-3.

Suppress. The key to a successful breach is effective and sustained suppression. The support force employs and coordinates direct and/or indirect fires and electronic attack on enemy personnel, weapons, and equipment to prevent or degrade enemy fires and observation of friendly forces. The purpose of suppression during breaching operations is to protect forces approaching, reducing, and assaulting through an obstacle. Effective suppression is a mission critical task performed during any breaching operation, and must be sustained through the duration of the breach and the passage of the assault force. Successful suppression generally triggers the movement of the breach force to the obstacle. Fire control measures ensure that all fires are synchronized with other actions at the obstacle. Suppressing the enemy overwatching the obstacle and isolating the breach sites against enemy maneuver and fire support assets is the mission of the support force. When the situation permits, EW and counterbattery radar assets are coordinated by the support force as part of the suppression mission.

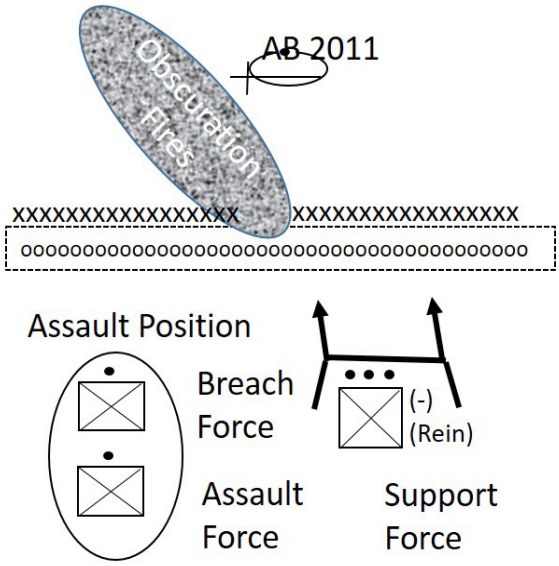


Figure 10-1. Suppression and Obscuration During Breaching.

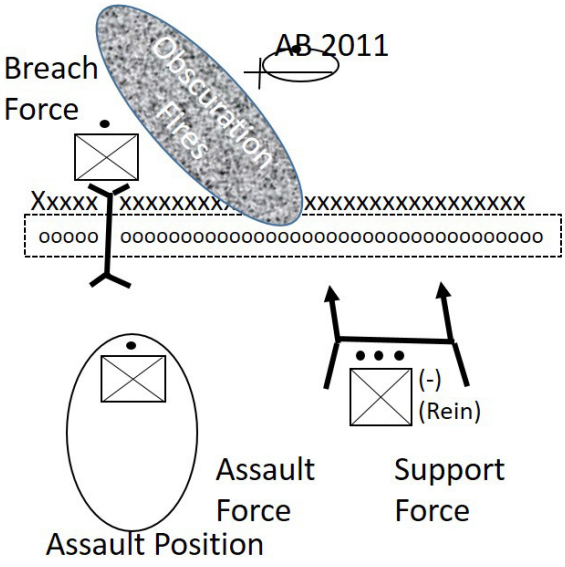


Figure 10-2. Securing Breach Site and Reduction During Breaching.

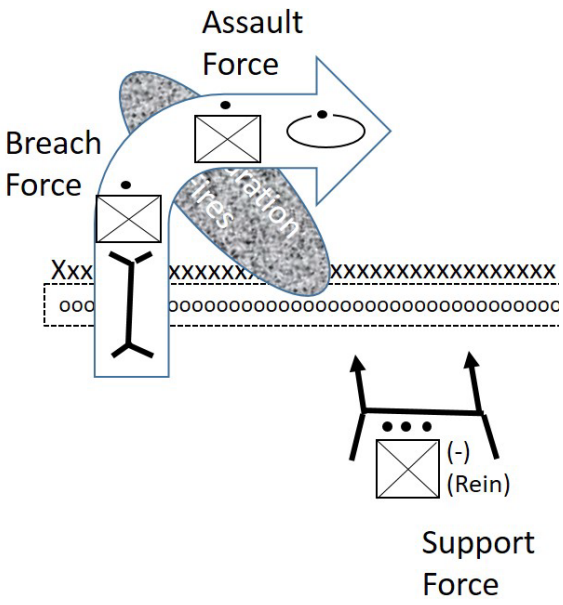


Figure 10-3. Assault During Breaching.

Obscure. Obscuration protects the force conducting obstacle reduction and the passage of the assault force. It hampers enemy observation and target acquisition by concealing friendly activities and movement. The selection of the breach site and utilization of terrain contribute greatly to the obscuration, as do decisions on the times and light conditions for the conduct of the breach. Artillery and/or mortar smoke missions are often fired on or near the enemy's position, minimizing their vision. Obscuration must be carefully planned to provide maximum degradation of enemy observation and fires, but it must not significantly degrade friendly fires and control. A combination of indirect fire assets (i.e., mortars and artillery) and emplaced assets (i.e., amphibious assault vehicle [AAV] smoke generators, smoke grenades, and smoke pots) are used for obscuration. Figure 10-1 illustrates the support force engaging the enemy and employing obscuration smoke to support the breach.

Secure. Friendly forces secure breach sites to prevent the enemy from interfering with obstacle reduction and the passage of the assault force through the lanes created during the reduction. Security includes the destruction of outposts located on the friendly side of the breach site and the ability to prevent counterattack against the breach force. The breach force must be resourced with enough combat power to provide local security in the area of the breach sites. The breach force first establishes local security on the friendly side. The far side of the obstacle is secured by fires before attempting any effort to reduce the obstacle. After a lane is cleared, the breach force establishes security on the far side to protect the assault force's movement.

Reduce. Reduction is the creation of lanes through or over an obstacle to allow an attacking force to pass. Generally, a dismounted platoon or company creates one breach lane that is one meter wide. The lanes must allow the assault force to rapidly pass through the obstacle. The breach force reduces, proofs (if required), marks, and reports the lane locations. Lanes are marked in accordance with the unit SOP. Follow-on units may further reduce or clear the obstacle when required. Figure 10-2 illustrates the continuation of the breach sequence. In this figure, the breach force has moved from the assault position and breached and marked a lane.

Assault. The final phase of the breaching operation involves maneuver forces exploiting the breach by passing combat power through it that assaults the objective, destroys enemy forces capable of bringing direct or indirect fires on the breach, and sets the conditions for further exploitation and pursuit. Figure 10-3 illustrates the assault portion of a breach. While the breach force secures the breach, the assault force attacks, reaching the flank of the enemy position before communicating with the support force to shift and/or cease fire on the objective. The battlespace geometry of the assault force closing on the objective is critical. The assault force typically uses redundant signals (e.g. radio and pyrotechnics) to shift and/or cease fires.

Breaching Organization. To conduct a breach, units are typically task-organized into three elements—the support force, the breach force, and the assault force. The senior commander maintains control of all elements and selects the breach site. A platoon may conduct a platoon-level breach or serve as one of the elements of a company-level breach. Figure 10-4 illustrates a reinforced platoon organized for breaching operations.

Support Force. The support force's primary responsibility is to eliminate the enemy's ability to interfere with the breaching operations. It establishes necessary support by fire and observation positions to suppress the enemy with direct and indirect fires to prevent effective fires against friendly forces. It employs obscuration to screen the breach and assault forces.

Breach Force. The breach force's mission is to create or find a lane that enables the assault force to pass through the obstacle and continue the attack. It establishes breach site security, reduces the obstacle, and marks the lanes. The breach force is a tasked organized force whose composition will vary depending on conclusions drawn from the commander's METT-T analysis. The breach force often includes assault Marines and combat engineers. Combat engineer squad leaders and platoon commanders may be assigned as breach force commanders.

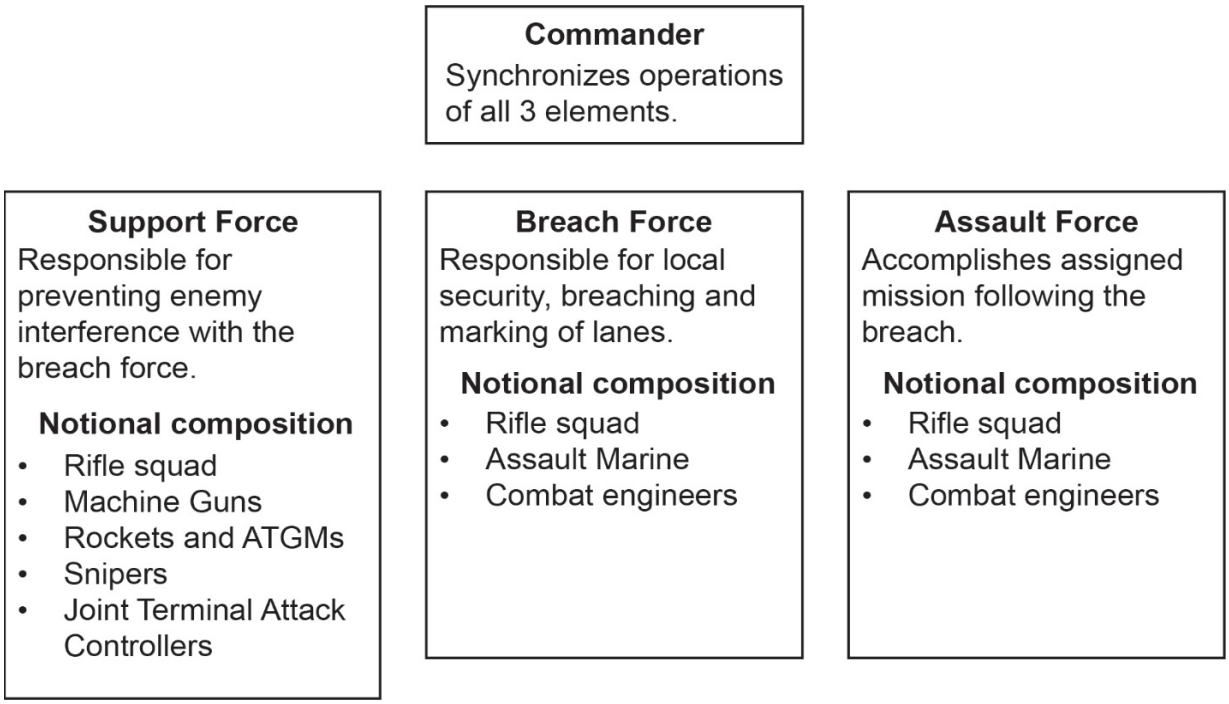


Figure 10-4. Notional Platoon Task Organization for Breaching.

Assault Force. The assault force exploits the breach to assault the objective and sets conditions for follow-on actions. It is prepared to assist the support force in suppressing the enemy, assist the breach force in securing the far side of the breach site, and conduct assault breaches of protective obstacles.

Mass. Commanders mass combat power at the breach site by focusing all resources and assets on isolating and fixing the enemy in position.

Synchronization. Breaching operations are one of the most complex operations conducted by infantry units. The commander synchronizes complex breaching operations through detailed reverse planning, clear instructions to subordinate elements, effective command and control, and extensive rehearsals. Using reverse planning methodology, commanders consider the following factors.

Actions on the Objective. The planned actions on the objective influence the size and composition of the assault force and the number and location of lanes required from the breach force.

Breach Requirements. Lane requirements, topography, and the types of obstacles are factors in determining the type and number of reduction assets required by the breach force.

Breach Site Security. The ability of the enemy to interfere with the breach determines whether fires, force, or both secure the breach site.

Suppression Requirements. The enemy's ability to mass fires at the breach site dictates the nature and length of required suppressive fires.

Types of Breaches. There are three general types of breaches: deliberate, hasty, and covert.

Deliberate Breach. A deliberate breach is the creation of a lane through an obstacle or a clear route through a barrier or fortification which is systematically planned and carried out. A deliberate breach is used against a strong defense or complex obstacle system. It is similar to a deliberate attack, requiring detailed knowledge of the defense and obstacle systems. It is characterized by the highest degree of planning, preparation, and buildup of combat power on the near side of the obstacle system. Subordinate units are task-organized to accomplish the breach.

Hasty Breach. A hasty breach is an adaptation of the deliberate breach and is conducted when less time is available for planning and preparation. It may be conducted during a deliberate or hasty attack due to a lack of clarity on enemy obstacles or the changing enemy situation, to include the emplacement of scatterable mines. An in-stride breach is a type of hasty breach when a subordinate unit task-organizes to be able to conduct a hasty breach using pre-established SOPs without affecting the HHQs scheme of maneuver or commander's intent. An in-stride breach is generally not used below the company level since a platoon is unable to form effective support, breach, and assault forces with its squads.

Covert Breach. A covert breach is the creation of lanes through minefields or other obstacles that is planned and intended to be executed without detection by the enemy. Its primary purpose is to reduce obstacles to facilitate the passage of maneuver forces without being detected. A covert

breach is conducted when surprise is necessary or desirable and when limited visibility and terrain present the opportunity to reduce enemy obstacles without being detected. It uses elements of deliberate and hasty breaching, as required. A covert breach uses stealth to reduce obstacles, with the support and assault forces executing their missions only if reduction is detected. Through surprise, the commander conceals their capabilities and intentions and creates the opportunity to position support and assault forces to strike the enemy while unaware or unprepared. The support force does not usually provide suppressive fire until the initiation of the assault or in the event that the breach force is detected. Covert breaches are usually conducted during periods of limited visibility. A battalion is the principal unit to conduct a covert breach. The covert breach requires a level of detailed planning, intelligence collection, and command and control that is typically beyond the capability of a company. The covert breach is ideally suited for foot-mobile forces. Figure 10-5 shows securing and reduction during a covert breach.

Urban Breaching. Infantry platoons conducting operations in urban environments must be trained and equipped to effectively maneuver in the complex urban environment. The ability to breach common obstacles—such as chain link fences and compound walls—and gain entry to buildings and rooms is essential.

Units conducting operations in urban environments must be aware of the potential for collateral damage. This is especially true of an urban environment where the enemy is hiding among

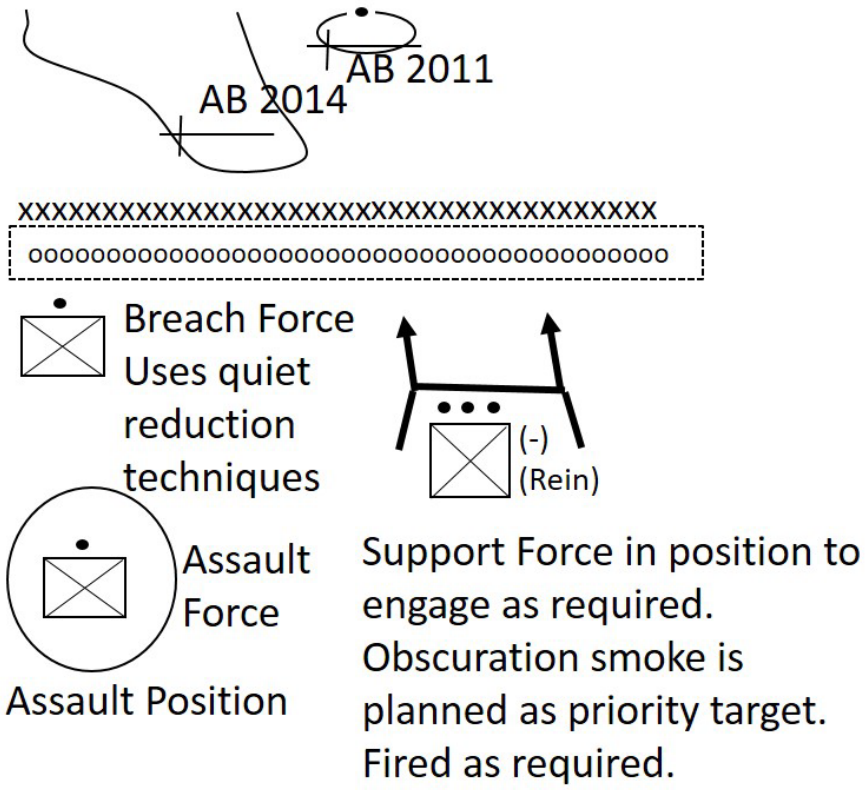


Figure 10-5. Securing Breach Site and Reduction During Covert Breach.

civilians. The presence of civilians may restrict the use of suppressive fires and explosives for breaching. The ROE may also prohibit the use of certain weapons until a specific hostile action takes place.

Units conducting urban operations are task-organized into support, breaching, and assault forces. In the urban environment, the breach force may move immediately ahead of the assault force. The support force isolates and suppresses target buildings. Once conditions are set, the breach force moves to the entry point under obscuration. In urban environments, obscuration is often provided by smoke grenades or smoke pots. The breach force executes the breach and secures a foothold, allowing the assault force to continue the attack.

Assault Marines and combat engineers are specially trained in urban breaching. Their small unit leaders should be consulted on selecting potential primary and alternate entry points and primary and secondary breaching methods. Depending on METT-T factors, they may employ mechanical breaching (i.e., using tools such as bolt cutters, assault ladders, and Halligan bar tools), ballistic breaching (i.e., using shotguns), or explosive breaching techniques (i.e., using explosive charges). In high intensity operations, rockets and armored vehicles may be employed to create breaches.

The goal of urban breaching is to provide the assault force with rapid, positive, and dynamic access to an objective. The point of entry is selected by the supported small unit leader based on the tactical situation, building construction, and covered and concealed approaches. Entry is typically initiated through a door or window. When conditions warrant, the breach may be made through blank sections of walls or roofs, which are less likely to be strongly defended.

Countering Explosive Hazards

Explosive hazards include IEDs, landmines, unexploded ordnance, and many types of booby traps. Infantry units must be prepared to encounter these during any type of operations, regardless of whether they are conducting high intensity combat, counterinsurgency, or even foreign humanitarian assistance operations. Infantry platoon commanders must be able to plan to avoid these hazards and prevent their employment against their platoons. Failing that, all hands must know how to identify, avoid, and react to these hazards properly.

The principles of assured mobility are the basis for countering explosive hazards. When dealing with explosive hazards in a counterinsurgency or stability environment, exploitation is added to the principles of assured mobility. Exploitation of explosive hazards and associated captured enemy materials is an important component of the intelligence process, by which enemy capabilities and support infrastructures can be identified and countered.

Explosive Hazard Planning Considerations. The operational environment, the mission, and the ROE have huge implications for how Marines counter explosive hazards. In offensive and defensive operations, explosive hazards are usually treated as obstacles, and are bypassed or breached as required by the tactical situation. During stability actions, explosive hazards must be dealt with in a more cautious manner to protect civilians, protect and collect intelligence, and minimize casualties. In reaction to explosive hazards, maneuver units should be capable of breaching, marking, bypassing, or cordoning and controlling the hazard until EOD arrives to exploit the device for intelligence value.

During any deployment, intelligence on the enemy should include their use of explosive hazards. Deploying leaders and Marines should be briefed on local threats and rehearse their countermeasures, in accordance with unit SOP and guidance on theater-specific training and capabilities. The unit must become familiar with the enemy TTP, including surveillance and planning cycles, methods of employment, methods and timing of emplacement, types and placement of initiators, and types of main charges. We must expect that adversaries will employ a wide range of explosive hazards to target our Marines and attempt to create asymmetric effects. We must understand that adversaries will target our Marines, observing us and exploiting any observed vulnerabilities, including setting patterns and lax OPSEC.

Explosives are often used in conjunction with direct and indirect fires. A common example is to use directional fragmentation mines (i.e., improvised claymore mines) or IEDs in support of an ambush employing small arms, RPGs, and mortars.

From Vietnam to Iraq and Afghanistan, history has proven that the best defense against explosive hazards is well-trained Marines conducting aggressive and unpredictable operations. Marines must watch where they step and avoid using the same trail twice.

Based on the threat, the platoon is equipped with the appropriate equipment to detect, jam, and protect against the effects of explosive hazards. Small unit leaders must ensure during pre-combat inspections that their Marines are trained in employing their equipment and that is serviceable. Examples of equipment might include explosive detection dogs, metal detectors, and counter radio-controlled improvised explosive device electronic warfare (CREW) systems. When employed intelligently, optics also greatly increase the chance of detecting explosive hazards.

Predicting and Preventing Explosive Employment. Commanders incorporate prediction fundamentals in their operations, such as enemy and friendly pattern analysis. Operating at a high tempo denies adversaries opportunities to emplace explosive hazards. In every case, it is preferable to defeat an enemy's emplacement teams then to detect each individual device. Commanders may consider employing sensors or OP/LPs to overwatch key terrain that may contain different types of explosive hazards, such as—

- Frequently traveled and predictable routes.
- Choke points, sharp turns, and blind spots.
- Culverts and bridges.
- Unattended vehicles.
- Abandoned buildings.

Explosive Hazard Detection. Despite our best efforts, we must be prepared to detect emplaced explosive hazards. During stability actions, units must understand the patterns of life in their AOs. This situational awareness is invaluable in recognizing variations from the baseline environment that provide indicators to the emplacement of explosive hazards. There are numerous indicators of explosive hazard employment and means to detect them; however, the best means of detection is to maintain situational awareness and detect changes in the baseline conditions.

Ground Sign Awareness. Several years of combat experience in Iraq and Afghanistan have driven home the fact that well-trained and aware Marines are our best tool to identify explosive hazards. Commanders should train Marines to seek out explosive hazard indicators using ground signs. These include the following:

- *Disturbance*. Noticeable signs existing in the texture of the ground and soil near the IED emplacement.
- *Discarded items*. Items the enemy may intentionally or unintentionally leave behind at the emplacement site of an IED.
- *Color change*. Different moisture content and/or the presence of chemicals on the ground.
- *Regularity*. Straight lines rarely exist in nature.
- *Flattening*. The general leveling or depression caused by pressure on an area, such as boot prints on grass or marks left where someone has sat down.
- *Transference*. Often, transferred material does not naturally blend with the surrounding area.
- *Markers*. The enemy often marks explosive hazards to prevent their personnel and/or civilians from detonating them.

Detection and Confirmation Tools. A range of tools may be available to infantry units to counter explosive hazards, such as the following:

- Unmanned aerial systems can aid in the confirmation of suspected IEDs and possible ambush locations.
- Optics (i.e., binoculars, rifle combat optics, thermals, and NVDs) can be used from various angles from a tactically safe position.
- Robots are on the tables of equipment for combat engineer and EOD units. Reconnaissance robots are frequently available for infantry units during contingency operations.
- Military working dog support should be requested from the law enforcement battalion by infantry units.
- Sickle sticks have proven to be effective devices to confirm or deny the presence of explosive hazards, though they have reduced standoff.
- Handheld metal detectors are a last choice, as they bring Marines into close proximity with suspected devices.

Actions on Contact in a Stability Environment. Every explosive hazard discovered, whether it detonates or not, must be treated as an enemy attack. The actions taken upon contact are dictated by the situation. The "5-C's" have proven to be a good technique in stability missions where the exploitation of explosive hazards for intelligence value is critical. The "5-Cs" are—

- *Confirm*. When a suspected explosive hazard is identified, the unit confirms the presence of a suspected explosive hazard. The unit attempts to confirm the suspected device from a safe distance, maximizing the use of hard cover and spotting equipment. It is preferable that infantry Marines not approach a potential explosive device. Safety should never be compromised for positive identification of the item. Once confirmed, an EOD 9-line report should be made to HHQ (see MCRP 10-10D.2, *Multi-Service Tactics, Techniques, and Procedures for Explosive Ordnance Disposal [EOD]*.

- *Clear*. All personnel should be cleared from the area to a tactically safe distance. Five and 25-meter checks of the area should be conducted for secondary hazards, as a secondary detonation may be imminent. The minimum safe distance from explosive ordnance for exposed personnel is 300 meters.
- *Cordon*. The danger area should be cordoned off to all vehicles and foot traffic, and an incident control point established to prevent the entry of unauthorized personnel. The size of the cordon is determined based on METT-T considerations.
- *Check*. The immediate area should be checked for secondary devices using 5- and 25-meter checks. The search area can be expanded as time and the hazard permit.
- *Control*. The area inside the cordon should be controlled to ensure only authorized personnel (e.g., EOD, medical, and intelligence collection teams) have access. Security should be maintained at the established safe distance while maximizing available cover to afford protection from the hazard.

Route Security and Clearance Operations. In certain operational environments, an infantry platoon may be tasked to conduct route security and clearance. Platoons may be responsible for securing routes required for mission accomplishment. This may be done by establishing strong points, which can overwatch key terrain and/or infrastructure, such as bridges. A platoon may be reinforced with combat engineer and/or other assets to conduct route clearance operation. As such, they require the same detailed synchronization typically found in breaching operations.

COUNTERMOBILITY

Countermobility operations involve the use of obstacles integrated with fires and information to disrupt, fix, turn, or block enemy movement. Based on METT-T considerations, infantry commanders develop a scheme of maneuver which maximizes the effects of terrain, including existing natural and constructed obstacles. Countermobility is used not only in the defense, but also during offensive (e.g., supporting an economy of force effort) and stability activities.

Obstacle planning is integral to the scheme of maneuver; the fire support plan and barrier plan must complement one another. Obstacles must be covered by fire and observation to be effective. The estimate of the situation dictates what obstacles are required where, and what can be built in a given period of time. Obstacle plans must take into account the requirement for movement and maneuver; lanes and gaps may be left in the obstacles. Obstacle planning in support of engagement areas is covered in chapter 7.

Countermobility requires a good appreciation of existing terrain. Reinforcing obstacles are planned to take advantage of natural and existing obstacles. Obstacles support weapon systems by slowing the enemy within the maximum effective ranges of our weapons systems, increasing time for target acquisition and increasing friendly weapon effectiveness. In stability and counterinsurgency operations, obstacles can be used to increase the security of the population and support population control measures, such as checkpoints.

Infantry platoons may build obstacles using available tools and materiel (e.g. vehicles can be flipped over and used to block bridges). Engineer and logistics support greatly increase the effectiveness of a countermobility plan. Combat engineers plan and emplace obstacles to enable GCE defensive operations and allow the GCE to determine engagement areas by turning, fixing, blocking, or disrupting enemy maneuver. Infantry platoon commanders should be aggressive in requesting engineer support as early as possible. If the platoon is to be augmented by engineer support, the platoon will usually provide guides for the engineers and physically lead them to the locations for emplacing obstacles, ensuring they understand the overall scheme of maneuver and the fire support plan.

CORDON

A cordon is conducted against one or more objectives; they involve first establishing an outer cordon of Marines and/or physical barriers around the target area so that there is no interference from the outside of the cordon, followed by an inner cordon around the target area so that the inside ring of the target area remains sanitized and the Marines conducting actions on the objective can operate freely, without interference. Actions on the objective commence after both cordons have been established, and are conducted by a designated search or assault element, depending on the mission profile. Entry to the objective can involve dynamic entry or a simple knock on the front door of the objective site.

Cordons typically focus on capturing or killing suspected enemy personnel, although the primary purpose of the mission can be to gain intelligence or act as a deception for another operation. A cordon requires precise, timely intelligence. This intelligence is the product of information gained from local patrols, various ISR collections, and a variety of external sources. In preparation for conducting a cordon, leaders must always consider the importance of surprise, speed, flexibility, and IO.

Additional information on cordon and search operations can be found in MCWP 3-01.

Cordon Principles

A unit's success conducting a cordon depends heavily on the training of the Marines, paired with accurate and timely intelligence. Commanders must ensure that their Marines understand and rehearse cordons, and that they can conduct them rapidly. The following are the principles of successful cordons:

- Reconnoiter the objective.
- Rapidly exploit actionable intelligence.
- Surprise is essential; take advantage of the night when possible.
- Patrol to the objective in a deceptive manner—randomness is key.
- Isolate the objective.
- Integrate host nation security forces into the operation; they should lead as much as possible.

- Integrate female Marines into the force and employ them to search and gain information from local women in accordance with Department of Defense regulations.
- Systematically search, document, tag, photograph, and seize all things of potential intelligence value. Expect the enemy to hide weapons caches and other items of intelligence value in hidden compartments in and around the objective.
- Have an immediate action planned for in advance if the objective is empty or the targeted individual is not present.
- Plan the withdrawal and strive to secure an egress route during the mission.
- Be prepared to move leadership and elements from one location to another during mission execution.
- Inform the local populace of the purpose for the operation.
- Execute the operation with limited inconvenience to the population and maximum respect for local culture.
- Do not compromise intelligence sources.

Cordon Purposes

Cordons may be conducted for a variety of purposes, including to—

- Capture or kill targeted persons.
- Seize and/or destroy arms, explosives, supplies, and/or documents.
- Build information and/or the intelligence picture.
- Deprive the enemy sanctuary.
- Disrupt enemy activity (e.g., logistics, bomb making, planning, staging).
- Reduce/eliminate enemy influence on the population (i.e., civic action).
- Gain and maintain initiative—force the enemy to react.

Task Organization

A unit conducting a cordon is typically organized into a command element, a security element, a search or assault element, and a support element. A platoon conducting a cordon is often reinforced. A platoon commander preparing to conduct a cordon might consider requesting host nation security forces, civil affairs personnel, EOD technicians, human intelligence teams, snipers, military working dogs, and/or interpreters. Commanders must include any attachments in the planning process and ensure that rehearsals are conducted with the entire force.

Command Element. The command element provides command and control for the operation, coordinating the elements of the force. Should the cordon operation prove successful and obtain actionable intelligence, the commander must be prepared to quickly exploit this intelligence.

Security Element. The security element is responsible for establishing the cordon and isolating the objective. This element is typically divided into two separate groups—the outer cordon and the inner cordon. The security element prevents possible outside influence from affecting the mission of the search/assault element and prevents ingress/egress of enemy and civilians from the target and objective area.

The outer cordon is typically oriented outboard on the avenues of approach, and is responsible for preventing anyone from entering the objective area. As required, they assist the inner cordon with preventing the enemy from escaping the objective area. The outer cordon usually moves into position first.

The inner cordon accomplishes a similar task as the outer cordon but is focused on isolating the specific objective. The inner cordon prevents enemy movement within a specific area and prevents enemy ingress into and egress from the target area. The inner cordon should establish overwatch positions overlooking the objective area in order to protect the search/assault element, and also to provide early warning of enemy movement within the objective. Security element positioning must consider the three-dimensional aspect of the battlespace and prevent the enemy from using underground tunnels to hide/escape or cache weapons.

Search/Assault Element. The search/assault element conducts the search, capturing or killing the enemy and seizing weapons caches and any other documents or other items of intelligence value. The search/assault element initiates action once the outer and inner cordons are in place. Failure to isolate the objective prior to the search/assault element entering the target area may result in the enemy escaping. It is imperative that every member of the search/assault element understands and complies with the ROE.

Based on the situation and ROE, the search/assault element might conduct an explosive breach, or it might simply knock on the door and tell the homeowner that their house is being searched. Whenever possible, commanders should seek to integrate indigenous security forces with the search/assault element, as this can mitigate problems created by language barriers and cultural differences/sensitivities. Interpreters assigned to the platoon may be used if local national security forces are not available. This element must be prepared to detain enemy personnel, both male and female, and must also have a site exploitation capability.

Support Element. A support element may be assigned to support a cordon and search operation as required. Tasks assigned to this element depend on the likely threat from the objective area, the possibility of enemy reinforcements, and the likelihood of the enemy establishing ambushes along potential egress routes. In situations where the search/assault element is likely to be engaged by the enemy from the objective, the support element might be tasked to establish a support by fire position, similar to the support element's role in a deliberate attack. If contact is not likely from the immediate objective but the enemy has shown the capability to attack the outer cordon, the support element might be tasked as a quick reaction force (QRF) in order to respond to such instances. If the enemy has demonstrated the ability to rapidly prepare ambushes along potential friendly egress routes, the support element might be tasked to patrol/establish overwatch at likely enemy ambush locations along this route.

Equipment

Unit and theater requirements dictate the specific equipment for operations. While not an inclusive list, the following items have proven extremely helpful for units conducting cordon and search operations: mine detectors, flex-cuffs, shovels, explosive charges for assault breaching, bolt cutters, battering rams, Halligan tools, surgical gloves, evidence collection bags and tags, evidence record sheets, gunpowder residue kits, money/gifts to pay for damages, biometrics identification devices, digital and video cameras (never forget the importance of IO), high power flashlights, and checkpoint kits. For lower intensity operations, units should consider carrying

candy, food, pencils/pens, notebooks, stuffed animals, soccer balls, and other community relations items. Providing small gifts to children can lower tensions.

Cordon and Search Execution

The process for executing a cordon and search is to set the conditions, make entry, conduct the search, and make a planned withdrawal.

Set the Conditions. The following steps are considered in setting the conditions:

- ISR assets should be focused on the objective and its approaches. This surveillance should begin prior to the unit moving to the objective, and continue through the withdrawal.
- Inner and outer cordons are set.
- Considering the multiple elements involved, proximity to one another, and the fact that friendly forces and civilians will be moving inside a 360-degree perimeter, it is essential commanders assign sectors and azimuths and supervise the geometry of fires throughout the operation.
- Overwatch positions must be established in the vicinity of the target location to protect the inner/outer cordons, and along the planned egress route.
- Attack or utility helicopters can enhance the unit's security, provide a deterrence effect, and enhance a unit's ability to detect anyone trying to escape the cordon.
- Egress route should be secured. Typically, this is done by patrols or overwatch positions covering danger areas along egress route.
- Once cordons are established, the commander, possibly with assistance from the local police and/or translators, should do the following:
  - Inform the locals that a building is about to be searched.
  - Request all occupants stay indoors.
  - Move the search/assault element into position.
  - Coordinate efforts, while constantly thinking through immediate action drills. The commander should remain mobile, while the search/assault element searches and clears the objective.

Make Entry. The method of entry may vary greatly based on the situation. In a high threat environment with excellent intelligence, the entry may be a dynamic breach followed by an assault to seize the objective. In other environments the unit may conduct a cordon and knock, where the search team contacts the people in the building and instructs them to gather at a central location to facilitate the search. Whenever possible, the head of household should accompany the search/assault element while going through the building. Also, units should consider allowing a prominent member of the local community to witness the search in order to prevent the enemy from making false allegations. Female Marines should be used when searching females. If female searchers are not available, a corpsman should be used, supervised by both a squad leader and the head of household. Everyone should be treated with dignity and respect. The following is a general scheme of maneuver describing mission execution:

- A cordon and search that uses a dynamic entry may establish the cordon at the same time the door or entry into a structure is breached in order to maintain the element of surprise.
- Friendly IO efforts will suffer tremendously and the enemy will benefit greatly if heavy-handed tactics are used where intelligence proves inaccurate.

- Running and screaming Marines make locals nervous. Calm Marines help keep the locals calm.
- Unnecessary force or damage to property should be avoided. When appropriate, the owner of a residence should be given reasonable time to answer the door or gate rather than forcing entry.
- If an unoccupied house containing property is searched and the occupants are nowhere to be found, security for the structure should attempt to be arranged until its occupants return, using either local police or military forces.
- Situation permitting, the head of the household should be used to facilitate the operation.
- The occupants should be controlled, gathering them in a central location inside structure and treating everyone with dignity.
- Depending on the situation, all personnel in the objective/building should be searched and biometrically screened (see personnel search section below).
- The search element searches the objective.
- Personnel to be detained are segregated and searched:
  - Based on the situation, they may be secured by flex-cuffs, gagged, or have blackout goggles placed over their eyes.
  - Materiel (e.g., currency, weapons, or phones) taken from detainees is tagged so it may be associated with the detainee it was taken from.
- Items of intelligence value are collected:
  - Search teams wear gloves to preserve fingerprints and other evidence.
  - Any captured weapons are cleared and tagged.
  - Ammunition, including potentially explosive devices or components, are inspected by an EOD technician prior to being handled.
  - Electronic devices and media (e.g., cellphones, laptops, and hard drives) are secured.
  - Search logs are maintained, supported by photo and video evidence.
  - Captured enemy materiel is tagged and transported back when the unit withdraws.
  - Detainees and captured enemy materiel are turned over to the CLIC.
  - The unit maintains a chain of custody as materials are evacuated.

Building Search. Building searches are usually intelligence driven based on information received about enemy activities or safe houses. The level of detail of the search is METT-T dependent. An infantry platoon may conduct a search, or it may be tasked to provide security while specialists (e.g., military police, engineers, or EOD technicians) conduct more detailed searches.

Building occupancy affects the threat assessment and planning for the search. Planning considerations include—

- For occupied buildings, the unit must plan to control—and when appropriate, detain—the occupants of the building.
- Occupied buildings are less likely to have IEDs.
- Unoccupied buildings are more likely to contain explosive hazards. An unoccupied building should never be entered without a specific purpose.

Search equipment can include—

- Biometric enrollment system.
- Multi-tool.
- Hand shovel.
- Door wedges.
- Wrecking bar.
- Bolt cutters.
- Extendable mirrors.
- Hand held metal detectors.
- Flashlights.
- Marking equipment.
- GPS.
- Laser ruler.
- Digital camera.
- Digital recorder.
- Gloves.
- Explosive residue test kits.

The general procedures for conducting a systematic search include the following actions:

- Assemble the occupants, preferably outside of the structure or away from the search area, and segregate them. Designated personnel conduct tactical questioning and biometrics enrollment.
- Designated search personnel enter the building to clear each room of immediate threats, hazards, or occupants that may be hiding.
- Conduct a pre-search damage assessment with the head of household, team leader, scribe, interpreter, and photographer.
- The unit leader conducts a rapid overview, numbers the rooms for reference, and directs detailed searches.
- An evidence collection point is established.
- A designated scribe creates a diagram of the building and annotates where evidence is found.

The procedures for exiting the building include the following:

- If no evidence is collected or persons detained, the search team leader should complete a post-search damage check, secure the building, complete required documentation, and notify the cordon commander.
- If evidence was collected, the search team leader should ensure it has been photographed and consolidated in the evidence collection point, a “mother photo” is taken (i.e., a photograph of the occupant with all of the evidence seized), complete a post-search damage check, secure the building, prepare the evidence and any detainees for transportation, and notify the cordon commander.

Conduct Planned Withdrawal. The method of withdrawal also varies greatly based on the situation. The commander should plan to transport detainees and captured materiel. Generally, the search/assault force withdraws through the cordon with any detainees and captured enemy materiel. Then the cordon collapses, usually with the outer cordon being maintained until the inner cordon has withdrawn. The support force and/or attack helicopters may cover the withdrawal of the cordon. Marines should be mindful that an enemy is more likely to attack when the unit has loitered on the objective too long and starts to appear static and complacent. Throughout the operation, Marines should maintain dispersion to avoid presenting a lucrative target to the enemy and to minimize potential damage from explosive hazards.

RELIEF IN PLACE

A relief in place is an operation in which, by direction of higher authority, all or part of a unit is replaced in an area by an incoming unit, and the responsibilities of the relieved unit for the mission and the assigned zone of operations are transferred to the incoming unit. An infantry platoon typically conducts a relief in place as part of a larger force. The relieved unit is typically in a defensive posture during the relief, even if the purpose of the relief is to resume offensive operations. Orders direct the linkup procedures, required planning and liaison, and either a time or condition for the battle handover.

Units concentrate on security throughout the operation. The goal is to complete the relief without discovery by the enemy. The units conceal the relief from the enemy to deny them the opportunity to exploit it.

Reliefs in place are relatively easy if conducted between two like units, such as a Marine infantry platoon replacing another Marine infantry platoon. They require more planning and preparation when the relief in place is between two dissimilar units, such as a Marine infantry platoon being replaced by a host nation company.

Liaison Plan

Upon notification of the relief in place, plans are developed for the relieving force to send an advance party to conduct detailed coordination and preparations. The composition of the advance party is up to the commanders, and may or may not include representatives at the platoon level. The advance party should arrive early enough to allow sufficient time to develop the understanding of the tactical situation; conduct necessary reconnaissance; and conduct planning for the reception, staging, onward movement, and integration of the incoming unit. Infantry platoons may send guides to escort the advance party, or select members and guide them to the existing unit's defensive positions. The outgoing unit orients the advance party to the terrain and the tactical situation. The unit being relieved develops a plan to develop the situational awareness of the relieving unit, and plans to document and transfer vital information such as a defensive plan, including fire plan sketches, barrier plans, fire support plans, routes of previous patrols, counterattack plans, and friendly and enemy activities.

Command Relationships

The incoming unit typically enters the outgoing unit's AO at a contact point guided by members of the unit being relieved. The incoming unit comes under the tactical control of the unit being relieved until the battle handover is complete. The incoming unit generally defers to the recommendations of the unit being relieved because the outgoing unit possesses the best understanding and knowledge of the AO, the operational environment, and the enemy.

Fire Support

The authority for the control of fire support, including indirect fires, direct fires, and information related capabilities, rests with the outgoing unit until the battle handover, at which time responsibility for fire support resides with the incoming unit.

Schedule and Control Measures

Depending on the tactical situation, a relief in place at the platoon level may be conducted over a period of a few hours or over a period of a week or more. Depending on the timeline set forth in the HHQ order, the incoming unit moves forward to a contact point and is brought forward to collocate with the outgoing unit. The units may move forward or backward, as a platoon or by squad.

While the units are collocated, information is exchanged and the outgoing unit briefs the incoming unit to raise their situational awareness. During the relief in place, the incoming unit adopts and assume all boundaries, control points, battle positions, FSCMs, RPs, start points, and routes of the outgoing unit until after the relief in place is complete, even if a change is inevitable, in order to prevent possible fratricide.

The relief in place occurs either at a specific time or on the accomplishment of certain criteria. The outgoing unit moves from the position into designated assembly areas, as directed by the order. The incoming platoon HQ is usually the first element to arrive, while the outgoing platoon HQ is usually the last element to leave.

When conducted over a short period of time, commanders typically plan reliefs for execution during periods of reduced visibility. When reliefs in place are executed over a short period, the relieving platoon approaches the contact point and makes contact with guides from the outgoing unit, who lead them into position. The incoming platoon moves forward and collocates with the outgoing unit, exchanging information and sector sketches. The outgoing unit moves out of the fighting positions after a short turnover, withdrawing to the contact point.

When several days or more are allocated for the execution of a relief in place, which is often done in a stability or counterinsurgency environment, then collaborative operations are planned by the outgoing unit to develop the incoming unit's situational awareness. These operations typically include patrols and potentially key leader engagements so that the incoming unit can learn its new AO. Care is taken to pass relevant information about friendly, enemy and neutral actors in the AO and previous engagements with the locals.

Once the designated time or criteria for the relief in place is achieved, the units notify HHQ of the battle handover, placing the incoming unit in charge of the AO, and the outgoing platoon departs the AO. For more information on relief in place, refer to MCWP 3-01.

PASSAGE OF LINES

Passage of lines occurs when a stationary unit allows and supports another unit in moving through their lines and/or AO. The passage can be either forward or rearward, depending upon the situation. Infantry platoons and their squads may be called on to perform roles as either the moving unit or stationary unit. A passage of lines is not merely an administrative movement between two units, it is an operation involving units moving past one another and executing a battle handover. For more on conducting a passage of lines, see MCWP 3-01.

Infantry platoons execute a passage of lines in accordance with company-level orders, which should establish tactical control measures and set the times and/or conditions for the passage. The commanders of the two units conduct detailed planning, liaison, and coordination. The essential element of a passage of lines is to maintain the momentum of the moving unit.

A platoon may be tasked to conduct or allow a passage of lines to accomplish the following:

- Pass a unit through to continue the attack.
- Retrograde main battle area or security forces.
- Pass counterattack forces forward.

Types

There are two types of passages—forward passage (see figure 10-6) and rearward passage (see figure 10-7). Regardless of whether the unit is conducting a forward or rearward passage of lines,

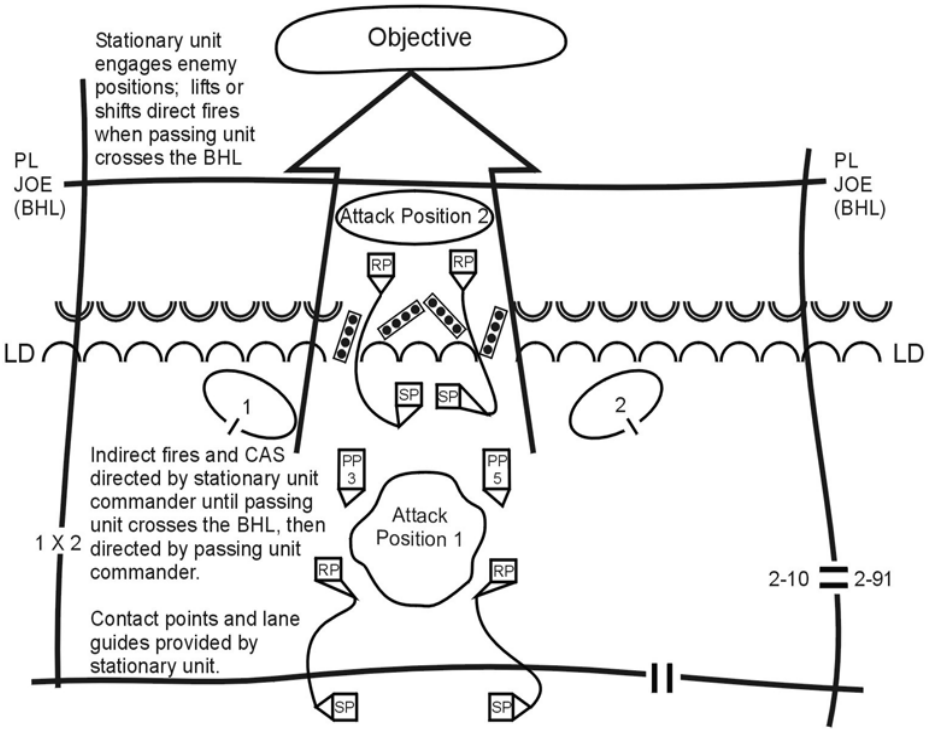


Figure 10-6. Forward Passage of Lines.

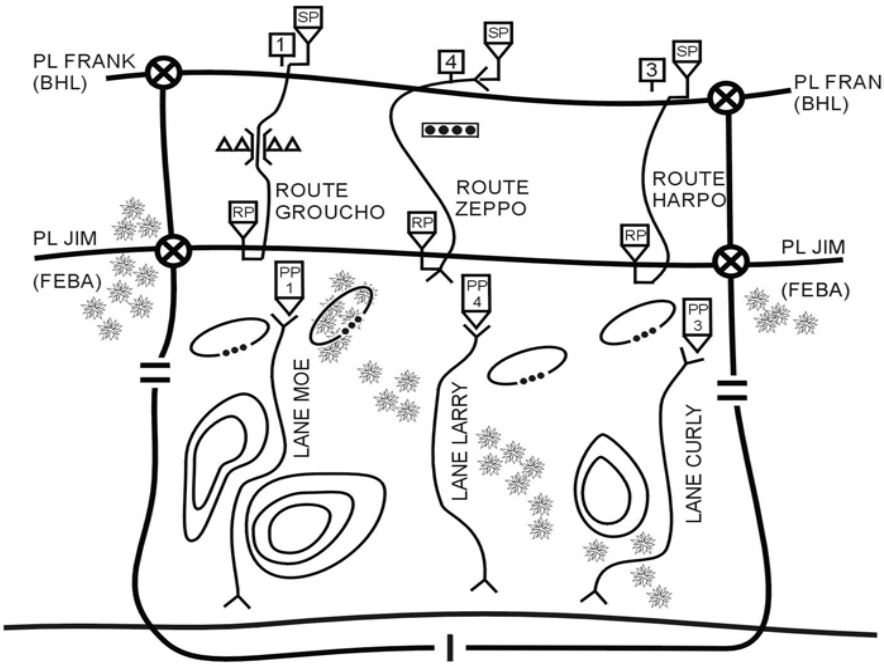


Figure 10-7. Rearward Passage of Lines.

the characteristics and sequencing of each are very similar. Two units are occupying the same battlespace; one unit is usually stationary, while one unit conducts the movement (i.e., passage) and maintains momentum. Passages of lines may be conducted hastily based on unit SOPs, or deliberately with detailed planning specific to the situation.

Forward Passage of Lines. In a forward passage of lines, the moving unit typically occupies an assembly area while an advance party moves to the contact point to conducts final coordination. The stationary unit provides guides at the contact point. At the designated time, the moving unit departs the assembly area and moves tactically through designated passage lanes. Movement occurs expediently, with the moving unit seeking to minimize its vulnerability in the passage. The moving unit holds its fire until forward of the BHL. Once forward of passage lane restrictions, the moving unit deploys as necessary and conducts its designated mission.

Rearward Passage of Lines. During a rearward passage of lines, the moving unit may or may not be under enemy pressure. Further, the moving unit either is conducting a planned movement as part of the defensive scheme of maneuver or is conducting an unplanned or earlier than expected movement. The conditions of the movement affect the amount of planning time available and the risk of fratricide, which is always significantly higher in a rearward passage of lines. The passing unit contacts the stationary unit while it is still beyond direct fire range and conducts coordination, liaison, and reconnaissance. It creates the battle handover checklist. Coordination emphasizes far and near recognition signals as well as the location of the BHL, which is typically established at the limit of the stationary unit's direct fire capabilities. The units use additional control measures, such as restrictive fire areas or RFLs, as necessary to minimize the risk of fratricide. Following coordination, the passing unit continues tactical movement toward the passage lanes. Weapons remain oriented in the direction of the enemy and the passing unit is responsible for its own security until it passes the BHL. The passing unit minimizes vulnerability in the passage lanes by moving quickly through them toward some designated location well to the rear of the stationary unit.

Battle Handover

Regardless of the direction of movement, the responsibility for fighting the battle transfers from one unit to another. In the case of a forward passage of lines, the stationary unit passes control to the advancing unit, usually as it passes a phase line designated as the BHL. In the case of a rearward passage of lines, the retrograding unit passes control to the stationary unit. Both units rely upon clearly defined battle handover criteria and procedures from HHQ, to include the roles of both the passing unit and the stationary unit, as well as the use of direct and indirect fires. If necessary, HHQ specifies a BHL, usually the LD for a forward passage of lines and the limit of the stationary unit's direct fire weapons for a rearward passage of lines. A forward passage of lines is complete when the passing unit deploys and crosses the BHL. A rearward passage of lines is generally complete when the passing unit is clear and the stationary unit is ready to engage the enemy. The unit in control of the fight maintains contact with and/or ISR coverage of the enemy. Both units must maintain awareness of the changing battlespace geometry and employ or restrict direct and indirect fires as required.

Passage Lanes

The passage lanes must facilitate transition to follow-on missions using multiple lanes or lanes wide enough to support doctrinal formations for the passing units. The stationary unit marks passage lanes and provides guides, to include briefing and coordinating obstacles. Units should coordinate passage times, the number of elements, and the number of troops and vehicles per element. These are especially critical for rearward passages of lines, where accountability of friendly forces is essential to avoid fratricide or enemy infiltration.

LINKUP

A linkup is an operation that entails the meeting of friendly ground forces. Infantry platoons can conduct linkups semi-independently, or as part of a company operation. When conducting a linkup, one of the units must be stationary. If both are moving, one occupies temporary stationary positions to conduct the linkup. The HHQ directing the linkup dictates command relationships. Regardless of the size of the units conducting a linkup, all require communication, coordination, and planning. They begin with contact at the smallest unit levels—two patrols making contact at a linkup point. Linkup operations may be conducted for the following reasons:

- Advancing forces reach an objective area previously secured by air assault or infiltrating forces.
- Units conduct coordination for a relief in place.
- Cross-attached units move to join their new organization.
- A unit moves forward to conduct a follow and support or follow and assume mission.
- A unit moves to assist an encircled force.
- Units converge on the same objective during an attack.
- Units conduct a passage of lines.

Linkup Planning

Linkups occur for many reasons and under many different conditions. Not every planning consideration applies to every possible linkup. The direct fire control planning required by two units approaching each other from different directions is entirely different from those that need consideration during a relief in place. Planners should review the following conditions when planning a linkup:

- Primary and alternate linkup sites should be selected that can be identified during the day and night, that provide both access and escape routes, is defensible, provides cover and concealment, and is away from natural lines of drift.
- Both elements should be provided with task and purpose, and the coordination and subsequent actions to take during and after the linkup.
- The fire support plan should address in detail all direct and indirect fire weapons.
- Units should be provided with recognition signals, relying on visual and voice rather than radio communications. Primary, alternate, and tertiary means should be designated.

Follow-On Actions. Since linkups are a precursor to further actions, the HHQ ordering the linkup should provide both units the task, purpose, coordination, and subsequent actions of the operation. While devoting significant effort to the mechanics of approaching and linking up, planners cannot forget to adequately plan for follow-on actions. For example, if two companies are conducting a linkup as part of a double envelopment, then both companies will have follow-on missions that require them to coordinate actions to prevent enemy efforts to break out or relieve the encirclement. To maintain momentum, the units cannot wait until the linkup occurs to plan their follow-on missions.

Direct and Indirect Fires. Direct and indirect fires must be planned in detail before a linkup. Lack of planning could lead to fratricide or hesitation in the face of enemy action, resulting in casualties. The stationary unit controls fires near the linkup point. While the moving unit does not give up control of fires in its battlespace, it does near the linkup point and the stationary unit. Both units use restrictive fire areas, RFLs, and phase lines to shift and control fires as the moving unit approaches the stationary unit.

Contingency Plans. Unit tactical SOPs, or the linkup annex of the operation order, should address what to do if enemy contact occurs before, during, or after the linkup. Orders should also provide guidance on alternate linkup and rally points and actions if units fail to linkup.

Within the company, one or more of the infantry platoons leads the linkup force. Regardless of size, all linkups require communication, coordination, and planning, beginning with contact at the smallest unit levels (e.g., two patrols making contact at a linkup point). Depending on the situation, more coordination and caution may be required when conducting linkups with allied and/or host nation forces.

Linkup Execution

As an operation, the linkup generally consists of an approach, the preliminary linkup of the units, and the transition to subsequent operations. Refer to figure 10-8. As units approach one another, leaders should ensure that relevant information gets to all hands. The linkup procedure begins as

the stationary unit halts, unless already in position. At a designated time, the stationary unit sends an element to occupy the linkup point. The moving unit halts at the designated contact point, which should be far enough from the stationary unit to allow it to defend itself without risking fratricide. Once halted, the moving unit sends an element to affect a linkup at the linkup point.

The linkup elements conduct standard small unit near and far recognition procedures. Once both elements make physical contact, the units rapidly execute planned actions, such as confirming positions, deconflicting battlespace, exchanging liaison officers and guides, conducting joint reconnaissance, and fulfilling other requirements to transition to subsequent operations.

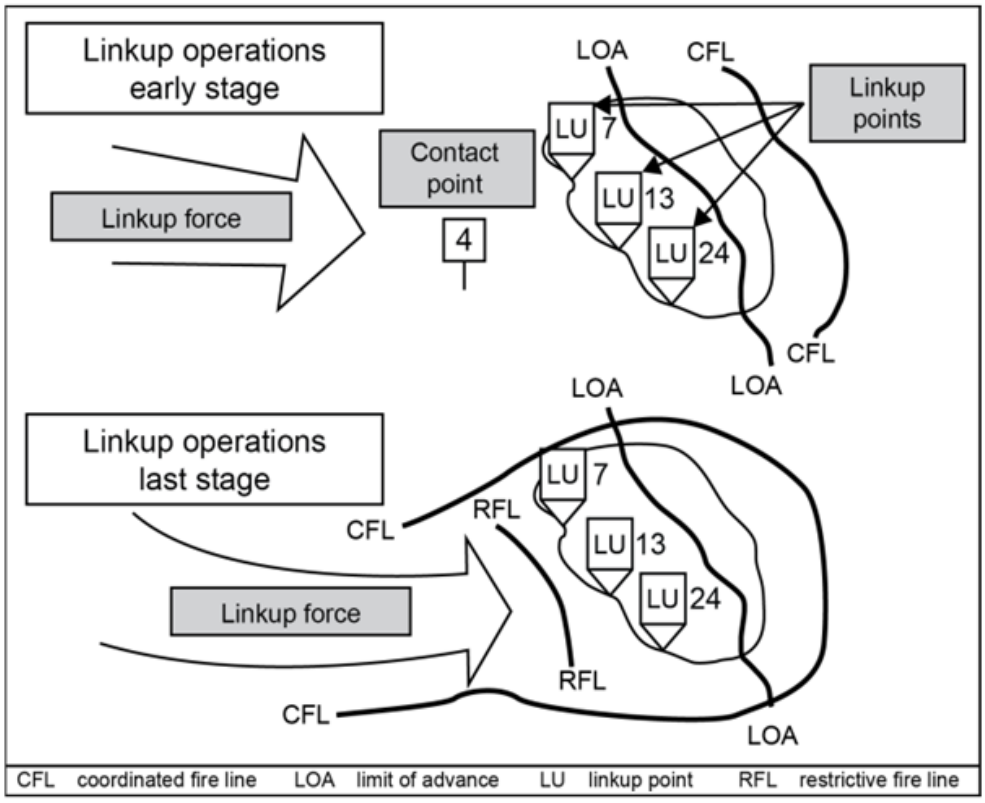


Figure 10-8. Linkup with a Moving and Stationary Force.

RECONNAISSANCE OPERATIONS

Reconnaissance is performed before, during, and after other operations to identify terrain characteristics, enemy and friendly obstacles to movement, and the disposition of enemy forces and the civilian population. It enables commanders to develop the situational understanding to execute operations freely and rapidly. Reconnaissance supports and protects the force during movement and prior to occupying assembly areas. Reconnaissance supports maneuver by keeping units free from contact as long as possible and allowing the concentration of combat power at the decisive point in offensive and defensive activities. Reconnaissance enables commanders to understand the environment and potential adversaries when conducting stability activities.

Reconnaissance is a continuous effort, integral to the conduct of operations. The MAGTF employs a wide array of reconnaissance capabilities, both airborne and terrestrial. Infantry units play a vital role in the reconnaissance capabilities of the MAGTF. Every tactical operation serves a secondary purpose of reconnaissance. As previously covered in chapter 9, platoons and companies maintain patrolling schedules that are integral components of the intelligence collection plan. A platoon may conduct route, zone, area or force-oriented patrols.

Platoons may be tasked to conduct or participate in a higher echelon movement to contact or reconnaissance in force. Both of these are executed as attacks at the platoon level.

SECURITY OPERATIONS

Security operations are undertaken to provide early warning of enemy operations, providing the force being protected time and maneuver space to develop the situation. A commander may conduct security operations to the front, flanks, or rear of their force. The main difference between security operations and reconnaissance operations is that security operations orient on the force or facility being protected, while reconnaissance operations orient on the enemy and terrain. Depending on the situation, security operations may be conducted to protect the civilian population, civil institutions, and civilian infrastructure within the unit's AO. Security operations may also be employed for economy of force, enabling effective use of the protected force. There are five security tasks—screen, guard, cover, rear area security, and local security.

Screen

A screen is a friendly-oriented tactical task to observe, identify, and report information, and to only fight in self-protection. A screen provides early warning to the protected force and prevents surprise. A platoon-level force may be tasked to provide a screen for a battalion. That force would most likely be comprised of a CAAT platoon reinforced by elements of the scout-sniper platoon. This force may employ MAGTF fires and deception to engage and delay the enemy, but cannot allow itself to become decisively engaged.

Guard

A guard is a friendly-oriented tactical task to protect the main force by fighting to gain time while also observing and reporting information. A guard force provides early warning, but is task-organized with enough combat power to allow it to fight and delay the enemy for a specified period of time, while also observing and reporting information. The guard force must prevent enemy ground observation of and direct fire against the main body. The unit assigned a guard mission may employ a combination of reconnaissance, offensive, and defensive techniques as required by the situation. The guard force often uses delaying tactics. An infantry platoon can be employed to conduct a flank guard mission for a battalion during either offensive or defensive operations.

Cover

Cover is a friendly-oriented tactical task to conduct offensive and defensive actions independent of the main body to protect the covered force and develop the situation. A cover force is task-organized to conduct independent combat operations. The cover force's primary purpose is to intercept,

engage, delay, disorganize, and deceive the enemy to protect the covered force and develop the situation. Infantry platoons cannot conduct independent cover missions. As part of a company-level cover mission, a platoon could conduct some mixture of offensive and defensive tasks.

Rear Area Security

Rear area security consists of the measures taken before, during, and/or after an enemy airborne attack, sabotage action, infiltration, guerrilla action, and/or initiation of psychological or propaganda warfare to minimize the effects thereof. Provisional infantry platoons are often assigned rear area security tasks. Actual infantry units are not typically assigned to rear area security missions, but may be assigned as a QRF. In this role, the platoon may conduct attacks or movements to contact to gain contact with and destroy threats in the rear area.

Local Security

Local security consists of the continuous activities established and conducted by a unit to prevent surprise and mitigate enemy actions. It is an inherent responsibility of command. It includes all measure taken to prevent surprise and mitigate enemy actions, and it involves avoiding enemy detection or deceiving the enemy about friendly positions and intentions.

Platoons use both active and passive measures to provide local security. Active measures include establishing OP/LPs, establishing specific levels of alert within the unit, and conducting "stand-to." Passive local security measures include using camouflage, movement control, noise and light discipline, and proper communications procedures.

Organization of the Security Area

As discussed in chapter 7, battalion and higher-level commanders typically organize their battlespaces into security, main battle, and rear areas. The depth of the security area provides the main body with time to react to approaching enemy ground units. Occupying a deep security area allows the security force to engage enemy reconnaissance assets well forward of the main battle area. The security force must have mobility equal to or greater than the expected enemy.

The security force commander's AO is the security area. They conduct a detailed METT-T analysis and deploy available ISR assets and units to conduct the assigned mission. The security force typically establishes a screen line as far forward as possible on terrain that provides good observation of avenues of approach. Depending on the situation, the commander may assign subordinate elements responsibility for observing identified avenues of approach and designated NAIs. The screen line is ideally established within the range of supporting artillery units.

COMBAT OUTPOSTS

A combat outpost is a reinforced and deliberately defended OP capable of limited offensive operations. In a stability environment, a platoon combat outpost serves as a strong point and a patrol base. First, it is a strong point that denies terrain and freedom of movement to the enemy. Second, it is a secure area from which to sustain the platoon conducting stability activities. This section focuses on establishing a combat outpost to support continuous operations.

Platoons may be tasked to establish a combat outpost to accomplish one of the following tasks:

- Secure key LOCs, logistics, and infrastructure.
- Secure an area.
- Secure and co-opt the local populace.
- Gather intelligence.
- Assist the government in restoring essential services.
- Deny an area to insurgent operations.

Planning Considerations

Planning to establish a combat outpost begins with a METT-T analysis. Within this estimate of the situation, the commander considers the fundamentals and considerations for establishing a strong point defense before selecting a site. Combat outposts are often small and unsupported by adjacent units. Therefore, the commander must closely coordinate with reserve and supporting fire support agencies, as well as plan and execute offensive actions to enhance security in depth.

Observation Post vs. Patrol Base. Critical to site selection is recognizing the function that the outpost will serve. If the primary purpose is to secure or overwatch a route or an area, then site selection is focused on selecting a location that can observe and influence the area. If the purpose of the outpost is to serve as a patrol base from which units will patrol to achieve objectives, the commander chooses a location offering the best freedom of movement. The selection of the site is also influenced by the ability of supporting units to support the combat outpost and as required reinforcements. The requirement to resupply and reinforce the combat outpost often requires trafficable routes and landing zones nearby.

Troop to Task. Combat outposts allow units to secure the immediate area. The force assigned to the combat outpost must be task-organized with sufficient forces to address the force protection and sustainment requirements and conduct the primary mission the outpost was created for. The platoon commander must choose a location that allows economy of force in defending and maintaining the base in order to retain combat power for offensive actions. A particular site may have great advantages based on terrain and in regards to the enemy, but may require too many personnel dedicated to security for the platoon to conduct additional offensive operations. The platoon commander should identify requirements and request additional personnel from the company.

Construction of a combat outpost may be supported by engineer units and heavy equipment, increasing the ability to protect and sustain the unit. Engineer units will assist in planning and sourcing construction and obstacle materials.

The platoon will typically establish a rotation of forces to conduct sustained operations, with squads rotating through interior guard, patrolling effort, and QRF. Equipment maintenance, facility maintenance/cleanliness, position improvement, and sustainment of small unit skills through reset training are continuous. The platoon commander organizes these actions into a battle rhythm, striking the right balance to maintain a high operational tempo and high operational readiness for the platoon, their weapons, and equipment.

Terrain Considerations. When assigned a mission, the platoon commander conducts a thorough estimate of the situation. Terrain analysis can be used to identify the best terrain for a combat

outpost. Structures provide pre-existing cover, as well as (potentially) observation over key terrain. The platoon commander must strike a careful balance between the ability to observe and influence the area and the standoff necessary to provide security. Care must be taken to not site a combat outpost under enemy observation and fires.

Civil Considerations. Some of the most suitable terrain carries both military considerations and significant civil considerations as well. When buildings such as hospitals, government centers, and schools are found to be key terrain, commanders must balance the military utility of occupying it against its utility to the community. Although occupation of the terrain might be highly advantageous to the platoon, it may adversely affect the overall stability mission. Even selecting a single residence displaces a local family.

Sustainment. The platoon commander must consider sustainment when choosing locations. Combat outposts can be located near water sources such as wells or streams, near lines of communication for ease of ground resupply, or on high ground with suitable landing zones for aerial resupply. Platoon commanders should also consider the ability to reinforce or evacuate casualties and the ability of fire support agencies to provide support when choosing a location. If the position is untenable, it fails to function as a base for continuous operations.

Elements of a Combat Outpost

If a platoon needs to function independently for a period of time, the platoon commander works with supporting agencies to design and resource a combat outpost. There are many variables to be considered, and specific plans are developed based on the situation. Some key functional areas are discussed below. The combat outpost is organized as a strong point with a 360-degree perimeter. Refer to figure 10-9 for a notional layout of a combat outpost.

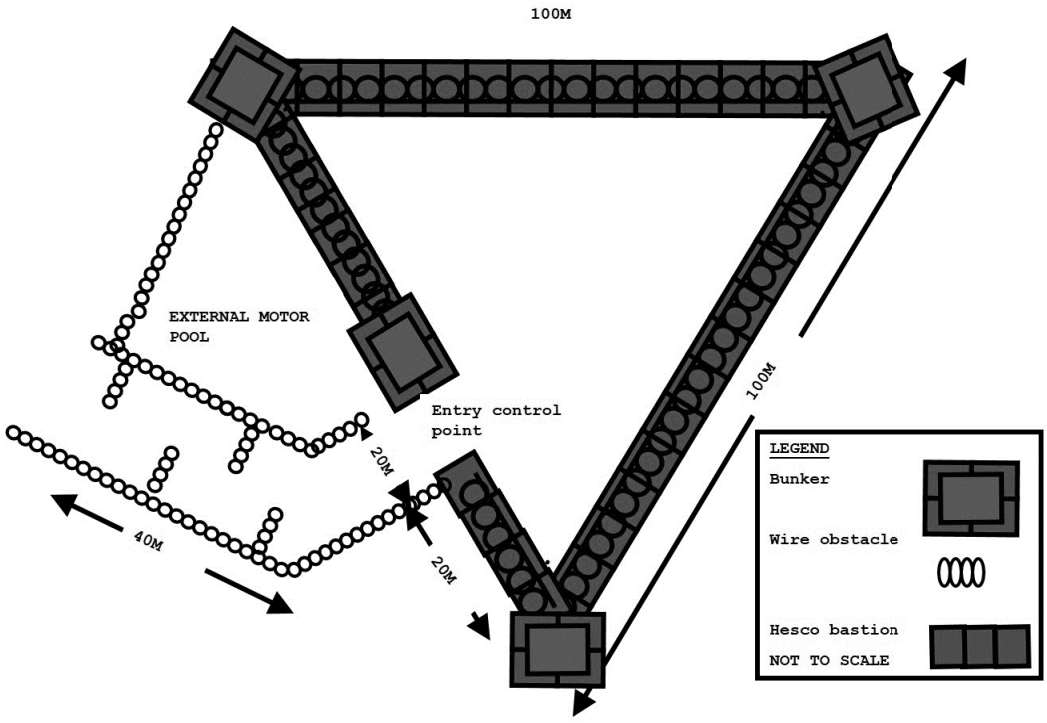


Figure 10-9. Notional Layout of a Combat Outpost.

Perimeter Defense. The perimeter is organized for 360-degree security and is designed to be defended by a minimum number of Marines to maximize the number available to conduct operations. A security area around the combat outpost provides standoff and is organized as an engagement area with TRPs and sectors of fire assigned. This area should be clearly marked to alert the local populace and prevent them from entering. This standoff provides the defenders the ability to employ nonlethal or lethal fires as required in accordance with the ROE. The security area has tactical and protective obstacles employed to maximize the effect of friendly fires and protect the position from direct assault. Obstacles could include wire entanglements, anti-vehicle ditches, bollards (i.e., vertical posts embedded in the ground and wired together as an anti-vehicle obstacle), or other obstacles. Care is taken to control access to any high-speed avenues of approach to the entry control point (ECP) through the construction of serpentines or other obstacles.

Within the perimeter, mutually supporting fighting positions and bunkers are built. Fighting positions are assigned sectors of fire and detailed range cards are developed. Based on a host of factors, the combat outpost could be protected by some type of perimeter wall. The wall could take advantage of existing structures, be an earthen berm, Hesco walls, concrete barriers, or other options. Fighting positions are built to withstand a deliberate and well-planned attack within the enemy's capabilities. Chain-link fences may be constructed around the position to pre-detonate RPGs. Observation posts or ground-based observation systems can be employed to extend lines of sight. The fire support plan utilizes long-range fires, close defensive fires, and FPFs in support of the defensive plan. In addition to primary fighting positions, alternate and supplementary positions are established, allowing the platoon to reinforce the interior guard in the event of a decisive engagement. If the platoon is motorized, positions for vehicles and their crew-served weapons are integrated into the outpost defense with prepared positions and sectors of fire.

Entry Control Point. The ECP controls movement in and out of the combat outpost. As the platoon may allow specific host nation personnel to access the combat outpost, the ECP must be capable of searching personnel and vehicles. Generally, the combat outpost will have two ECPs, a primary and an alternate. The alternate ECP may only support the movement of dismounted patrols, offering another avenue of ingress and egress for the platoon.

Command Post. At minimum, the command post is designed to maintain communications, coordinate with HHQ, and enable command and control of the defense of the outpost. The command post helps the commander coordinate and control all activities in the AO, and tracks and records historic activities as a reference for future operations. The command post should have a mission tracker, CTP, fire support tracker, and fire plan sketch, at a minimum. The fire plan sketch allows the commander to control the defense. It must be accurate and updated as the outpost is improved. It is a reference for controlling fires. It is also used to record observations made by watch standers and patrols. The CTP allows the commander to track all friendly units in the platoon's AO, including patrols and their routes, convoys, available aviation assets, etc. The mission tracker supports the CTP, providing details of the friendly units operating outside the combat outpost. It includes manifests, weapons and equipment, the time of departure/return, mission, routes, call signs/frequencies, etc. The platoon commander uses the fire support tracker to track the available fire support assets and the platoon's current target list worksheet for rapid coordination and employment of fire support in the platoon's AO. The fire support tracker may include nonlethal fires or IO, as well. Past and future operations areas allow the commander to reference historic operations in the AO and to track upcoming operations.

The platoon typically establishes a watch rotation, with a sergeant of the guard responsible for command and control of the combat outpost during routine operations. This allows the platoon commander and platoon sergeant to best position themselves to conduct operations, plan future operations, and get required rest while being able to respond quickly to unexpected situations. The squad leader of the squad assigned to interior guard is often assigned as the sergeant of the guard. They must be trained to conduct the duties, and a formal watch turnover is established to ensure that critical information is passed to the oncoming watch.

Living Spaces. Living spaces are established to provide berthing, feeding, and hygiene facilities in support of the platoon's continued operations. The spaces should account for temporary lodging for additional personnel transiting through the combat outpost. If partnered with host nation security forces, living spaces for these forces should be included. Force protection is a consideration; living spaces are hardened to protect personnel from the expected threat.

Additional Spaces. In addition to these functional elements, other requirements must be established. The platoon designates a casualty collection point, allowing for triage and treatment of casualties prior to evacuation. The outpost may need an area to detain individuals while coordinating movement to a rear area. If motorized, the outpost should have a motor pool that supports vehicle staging and maintenance. Ammunition supply points and fuel storage areas must be carefully located and hardened. The outpost may have a meeting area, generally adjacent to the ECP, to receive local nationals and conduct civil engagement or questioning. It may also have a planning space for operations and a designated area to stage an internal QRF. An area should also be designated and separated for disposal of garbage and other waste, usually by burning contents in a controlled manner. Marines also need a space to exercise and a field expedient gym.

Austerity. The combat outpost cannot be made too comfortable; its austerity is essential to enabling expeditionary operations. The platoon commander designs the outpost based on what is essential for combat. Comforts and extraneous equipment can quickly become a drain on logistics. As an example, electronic equipment requires batteries and fuel to operate. Excessive consumption of these supply items increases troop-to-task ratios, requiring excessive logistics patrols, and burdening the platoon with sustainment. The platoon commander strives for austerity to retain combat power and self-sufficiency.

Defense of a Combat Outpost

The platoon establishes a defense in depth around the combat outpost. The primary security of the force is based on units patrolling outside the combat outpost, supported by ISR and fire support assets. The area beyond the perimeter of the combat outpost is an engagement area covered by direct fires. The platoon incorporates obstacles in the defense for countermobility. Specifically, the ECP should have an obstacle plan that reduces the speed of approaching vehicles and allows for assessment of the threat based on the ROE. The platoon blocks other avenues of approach using obstacles that are under observation and fire.

The platoon commander typically task-organizes the squads and any attachments, and rotates them through serving as the interior guard, patrolling, and the reserve. The interior guard is tasked with occupying the designated fighting positions, usually equipped with crew-served weapons. Each position should be mutually supporting. The platoon commander may establish a reaction

force internal to the platoon, as well. The internal reaction force reinforces the defense in the event of attack and supports platoon missions in the AO.

The platoon commander plans and rehearses battle drills for the defense of the combat outpost. At a minimum, these plans address actions conducted in response to direct fire, indirect fire, vehicle-borne IED, and mass casualty scenarios. These drills cover the specific actions taken by the platoon and any additional occupants of the combat outpost in each event. The defensive plan should cover alternate and supplementary positions occupied to reinforce interior guard posts. Other immediate action drills may cover procedures for lost or missing Marines, loss of communications with subordinate units, stand-to, or fires within the outpost.

The commander maintains an offensive mindset while planning, establishing, and operating a combat outpost, and ensures it maintains a visibly strong defensive posture. The platoon takes care to avoid patterns, conceal movements, deceive the enemy, and generally reduce its vulnerability to attack. The platoon utilizes many techniques to present a hard target, including rotating the interior guard between occupying its primary or alternate posts to deceive enemy observers. The timeline for post turnover, patrol departures and reentries, and other daily events should change regularly to avoid setting predictable patterns. Last, positions are continuously improved and hardened.

Sustainment of a Combat Outpost

The design of the combat outpost must allow for the sustainment of the force over a period of time. Its austerity reduces the logistical sustainment requirements. The more elaborate the combat outpost is, the more resources are required to operate it, to the detriment of the actual tactical mission. Planning should incorporate recommendations and input from the company and the combat service support unit which is supporting the platoon.

Tactical units have electrical power requirements to power radios, sensors, and lights, and to recharge batteries for use outside the perimeter. Squad or platoon-level combat outposts can be powered by solar systems, which can be requested through the supporting CSS unit. Tactical generators sourced from the CSS unit can power a combat outpost, but tactical generators have fuel and maintenance requirements. In many situations, the combat outpost may utilize local electrical power. However; local power should not be relied on for mission essential power. Also, a backup system must be available; this may be provided by batteries, solar power systems, or a generator.

Marines must have spaces to prepare and eat meals outside the billeting areas. Care should be taken not to allow food in the billeting areas, as this often attracts vermin.

Hygiene requirements must be addressed during planning and discipline maintained to prevent unsanitary conditions and sickness. Water supplies must account for both drinking and hygiene. Water use varies greatly based on climate and activity. Not including drinking water, at least one gallon per person per day should be available to provide minimum acceptable hygiene. Washing clothes requires additional water. The platoon also must plan for the disposal of human waste. The use of burnout heads or a combination of urine tubes and wag bags are examples. The unit also has to plan to deal with trash. Trash can be burned, with the burn pit situated downwind from the living areas of the combat outpost. Some types of trash (e.g., radio batteries, other hazardous wastes) may have to be evacuated by returning combat logistics patrols.

Space must be allocated to stow and secure required stockpiles, including food and water, ammunition, fuel, mission essential equipment, and batteries. The amount of supplies to be stockpiled will vary based on the expected resupply frequency and the need to maintain a contingency stockpile. The platoon sergeant monitors the platoon's stock of supplies and reorders supplies as required to maintain them at acceptable levels.

POPULATION CONTROL MEASURES

Commanders may enforce population control measures to conduct operations, maintain security, or ensure the safety and well-being of the civilians. The law of land warfare lets the commander control the civil population under the conditions already described using organic resources. However, for operational, linguistic, and cultural reasons, it is good practice to use host nation authorities such as local police for such purposes. Use of the police does not relieve a commander of the responsibility to safeguard civilians in the area.

Curfew

A commander with the mission to defend a town could establish a curfew to maintain security or help control military traffic. However, a curfew would be illegal if imposed strictly as a punishment.

Evacuation

A commander can require civilians to evacuate towns or buildings if the purpose of the evacuation is to use the town or building for essential military purposes, enhance security, or safeguard those civilians. The commander must specify and provide security for those being evacuated. Food, clothing, and sanitary facilities should be provided at the destination.

Protection of Property

Like civilian personnel, civilian property and buildings have a protected status. In general, Marines do not use civilian property and buildings without authority or justifiable necessity. Units must be cognizant of the second and third-order effects of seizing civilian property and/or occupying buildings. During stability actions, a platoon commander should attain approval from the company commander prior to seizing property or occupying a building. If seizing property or utilizing buildings, the platoon commander should document the reasons, the disposition, and any supplies used or damage done. Religious, historical, and cultural objects and buildings are generally not used by Marines during stability missions unless they are offered by appropriate authority.

Checkpoint Operations

Checkpoints are a common part of military operations, providing a commander a way to control the movement of people and vehicles. They can be established either to ensure the security of vehicles entering an area, to deny access and movement, or to control personnel movement. During stability missions, checkpoints are often used to control the movement of the general public and deny the enemy freedom of movement. Checkpoints are used as a tool to check vehicular or pedestrian traffic in order to enforce movement control measures and other laws, orders, or regulations. When applied to combat operations, it typically involves a detailed search

of people and vehicles in a safe area covered by observation and fires. A checkpoint can be hardened if it is to be more permanent, or can be hastily established for temporary operations. An established checkpoint is an efficient way to display a show of force in areas habitually targeted by enemy forces.

Checkpoint Planning. Any unit may be called upon to establish permanent or temporary checkpoints at road junctions, bridges, trails, borders, outskirts of cities, or on the edge of controlled areas. These can be set up to optimize force protection and still be effective. However, while such checkpoints can be valuable for checking identifications and serving as a deterrent, there is only a small likelihood that a sophisticated threat will stumble into one of them. On the other hand, a hasty or temporary checkpoint can be used for spot checks.

It can consist of two or more vehicles placed diagonally across a road, a coil of barbed wire, or just traffic cones. Its strength is the element of surprise. Thus, it is most effective within the first half hour of being in position. When possible, a hasty checkpoint should be put where it cannot be seen from more than a short distance away, such as a sharp bend or dip in the road, or over a hill or prominent terrain feature. Once knowledge of its presence spreads through the local population, its tactical value goes down while its force protection requirements go up.

Commander's guidance, unit SOP, and theater ROE provide additional guidance that may be required to plan checkpoints, such as the use of female searchers, interpreters, use of force, and appropriate signs to convey instructions in the native language of the inhabitants.

Biometrics identification devices can be used to register inhabitants or confirm the identities of suspect individuals. See MCRP 10-10F.1 for more information on using biometrics.

Checkpoint Documentation. In accordance with the procedures established by HHQ, Marines document people and vehicles passing through checkpoints. This is ideally done in a biometric identification system. If one is not present, the unit may establish a computer-based database application to keep track of people coming through the checkpoint. Marines document detentions and any seizure of contraband, in concert with local officials whenever possible.

Checkpoint Missions. Checkpoints can be established for a variety of short and long-term mission requirements. These missions typically include—

- Controlling the movement of vehicles and people.
- Separating different demographic groups.
- Assisting in locating persons of interest for either detention, capture, or questioning.
- Assisting host nation security forces in enforcing their laws and legitimizing their government.
- Dominating the area around the checkpoint. A checkpoint with local patrolling is a show of force and assists in maintaining law and order.
- Preventing the movement of contraband by enemy forces, such as weapons and explosives.

Vehicle Checkpoints. Vehicle checkpoints are often established to control movement between natural or logical divisions between different ethnic, political, and/or religious factions. They are also used to control entry to forward operating bases. The construction standards, intent, and

execution of vehicle checkpoints may vary considerably across the range of military operations based on the threats and missions. Commanders develop vehicle checkpoints that meet the requirements of their mission and protect their Marines. Whenever possible, host nation security forces are integrated with the vehicle checkpoints. Vehicle checkpoints are typically—

- Set up at crossroads to deny the enemy freedom of movement in multiple directions.
- Set up at least 100 meters away from sensitive buildings, denying intelligence gathering on the building to any potential threat and reducing the effects of a bomb detonated at the checkpoint.
- Set up as dedicated entry and exit checkpoints for two-way traffic. In this case, they are typically established side by side.

Vehicle checkpoints can be permanent or semi-permanent, and are established in a deliberate manner. Deliberate vehicle checkpoints will be known by the enemy and can have a deterrent effect. Tactical units may also establish short-term vehicle checkpoints, often called "snap vehicle checkpoints," to support a cordon, conduct random vehicle inspections, or act on intelligence. These are typically established without warning and are operated for a period of hours before being withdrawn. Infantry units conducting snap vehicle checkpoints are typically reinforced with armored vehicles and heavy weapons. The unit should embark signs, interpreters, and obstacle material.

Siting the Checkpoint. The vehicle checkpoint should be established much like a defensive position in that the platoon can control the movement of vehicles and personnel along designated routes and defend itself from attacks from direct and indirect fire, as well as car bombs. Signs and speed bumps (rows of sandbags) can be used to alert the drivers of approaching vehicles. They can be very useful in determining a driver's intent. Signs should advise drivers of the checkpoint approximately 100 meters prior to the vehicle checkpoint. These signs should be in both English and the local language, and include visual symbols similar to local traffic signs. Signs can increase the safety of both Marines and the local populace by reducing misunderstandings. Some general set-up guidelines include the following:

- Establish and maintain communication with the COC; have a full-time radio watch.
- Each checkpoint should establish a security team (i.e., guardian angel) whose job is to focus outboard and protect the Marines and local police searching vehicles.
- A squad or platoon vehicle checkpoint will typically be supported by a QRF or company reserve. The Marine in charge of the vehicle checkpoint should know how to contact them, how long they will take to arrive, and from which direction they will arrive to support the vehicle checkpoint.
- Site the vehicle checkpoint in restricted terrain exploiting existing obstacles. Use reinforcing obstacles to prevent vehicles from bypassing or running through the vehicle checkpoint.
- Marines working the vehicle checkpoint should have appropriate survivability positions to protect them. Armored vehicles may be used for this purpose during snap vehicle checkpoints.
- Minimize the number of Marines exposed to search a vehicle.
- When appropriate, request and integrate technology to gain standoff and increase the effectiveness of vehicle searches. Examples could include—
  - Explosive detection dogs can interrogate a vehicle while the handler remains covered.

  - Biometric identification systems.
  - Robotic systems allow standoff inspection.
  - Closed circuit television and intercom systems can allow remote initial contact.
  - For deliberate vehicle checkpoints, trailer-mounted scanners that can "x-ray" vehicles and their cargos.
- Isolate the vehicle being checked from other cars by a barrier of some type, or by regulating the flow of traffic.
- Emplace suitable weapons (i.e., .50 caliber or M240, but not Mk-19) in a position to engage the driver and other occupants. The Marines behind the weapon and the Marine conducting the search should develop an SOP for the conduct of the search, including an easy-to-understand signal that directs the immediate employment of the weapon when necessary.
- The vehicle checkpoint is built with consideration of geometry of fires to avoid fratricide and collateral damage.
- The overwatch and reaction positions should not be obvious to people passing through the vehicle checkpoint. This allows the commander to retain functional surprise and provide effective maneuver options.

When establishing vehicle checkpoints or checkpoints, leaders must ensure Marines are well-versed in the current ROE and use of force procedures, such as:

- Use visual aids (e.g., signs, lights, flares, colored flags).
- Use an audible warning to alert persons to the presence of Marines (e.g., horn, air horn, loudspeaker, flash/bang, siren).
- Attempt nonlethal means to halt the people or vehicles (e.g., stop strips, physical barrier, vehicle, visual/audio signal, signs).
- In the event vehicles refuse to stop or appear intent on "running" the checkpoint, use spike strips to puncture tires. These can be deployed on a road as a nonlethal deterrence device. If these are not available, Marines can fabricate them using nails driven through lumber.
- Fire warning shots at a safe target using tracer rounds.
- Use disabling fire (i.e., fire at the tires and engine block). Typically, a designated Marine will be assigned this job. Fire commands are used to ensure that only the designated Marine engages with the specific weapon and intent.
- Use deadly force (i.e., proportional to the threat).
- When there is a significant threat of car bombs, the commander usually establishes a "red line." The uncontrolled crossing of a red line (which may be literally painted on the deck) is a signal to all hands to use lethal force to stop the vehicle.

The ROE and use of force procedures can change and may vary from area to area. Marines should review them before every mission or duty shift. After an incident when force is used, and when back at the combat outpost, Marines should be debriefed on what happened and what went well or poorly. Use of force procedures do not pertain to just checkpoints; they can be used with convoys, patrols, cordons, etc. The procedures are important to know and understand in order to save both friendly and civilian lives.

Verifying Procedures. Vehicle checkpoints can be established for a variety of reasons and have a variety of tasks. The intent of the vehicle checkpoint dictates the level of search conducted. To the extent possible, specifically selected and trained Marines or host nation police should be used to initially engage approaching vehicles. They then—

- Count the number of persons in the car before approaching it.
- From a covered position, signal the driver to open their window and shut off the vehicle engine.
- Have the driver release the hood and trunk, if it can be done from inside the car.
- Request the driver's identification or papers.
- Use a signal for the searcher to alert the rest of the security team (without alerting the occupants of the car) if the driver or any occupant is identified as a suspect or there is suspicion of the existence of contraband.
- Direct vehicles to a previously established search area for a detailed search when deemed necessary.
- Have the driver get out of the car to open the hood/trunk fully.
- Ensure that Marines stand where they can clearly observe the driver.
- Order the driver to kneel with raised hands. This procedure should be repeated one at a time with all occupants of the vehicle until it is empty.
- Search the occupants individually once they exit the vehicle.
- Enroll individuals in the biometric enrollment system and/or check them against the authoritative biometric system.
- Detain the vehicle and other occupants as well if any occupants are detained.
- Process the detainees and any materiel found on them or in the vehicle, and turn it over to the appropriate authority, maintaining a chain of custody.

Vehicle Searches. To ensure an effective search, a vehicle search card should be employed for general reference. Search teams should remember to—

- Include vehicle search information in the brief for setting up roadblocks and conducting personnel searches.
- Always have someone covering the searchers and those being searched.
- Make the vehicle occupants open all doors and compartments.
- Use explosive detectors or dogs in searches whenever possible.
- Remove occupants from vehicles and search drivers, all passengers, and any loose baggage in the passenger area.
- Direct the driver to open the trunk or cargo area and identify the contents. This helps avoid misunderstanding regarding any irregular objects and threatens the driver with the effects of any possible IED or booby trap.
- Remain alert for any IED or booby trap and search—
  - Tool boxes.
  - Luggage.
  - The partition between the trunk and rear seat.

  - Under and around the spare tire.
  - The spare tire and housing (test for air in the spare tire).
- Direct the driver to open the hood to check for—
  - Items taped to the bulkhead or hood.
  - All containers, including oil and air.
  - Filters.
  - Behind sound proofing.
  - The front grill and heater.
- With all passengers disembarked, check the vehicle interior from front to rear. Be suspicious of strong-smelling perfume that could be used to cover the smell of an explosive mix. Check—
  - Behind the dash.
  - The glove compartment.
  - Behind panels, noting whether screws have recently been removed.
  - Under the floor mats.
  - Fittings, such as a radio/cassette player.
  - In, under, and behind seats and cushions.
  - Ashtrays.

- For the vehicle exterior, search—
  - Wheel wells.
  - Behind pumpers.
  - Headlights.
  - Hubcaps.
  - Exhaust.
  - Underside (use a mirror affixed to poles to view this area).

- For commercial vehicles, search—
  - Vehicle cab.
  - The space between the cab and the body of the vehicle.
  - External stowage area/bins.
  - Wooden bodies or false doors.
  - The space between rear double tires.
  - Wheel chocks.

Personnel Checkpoint. Personnel checkpoints are used to regulate foot traffic. They can be used on a systematic or random basis. While these do not involve checking vehicles, they are used for the same purposes as the vehicle checkpoint.

Systematic Personnel Checkpoint. These are permanent or semi-permanent positions. They are established to conduct routine, methodical checks of persons as required. For example, a systematic checkpoint is used to control access to a food site. It is also used to ensure the security

of potentially vulnerable areas such as HQ and bivouac areas. The following procedures for this type of checkpoint have been effective:

- Use signs and media announcements so people know what to expect.
- Inform all personnel what papers are needed to cross the line and what material will not be allowed across (e.g., weapons, drugs).
- Use obstacles rather than signs to regulate the flow of people.
- A squad is the minimum force required for a personnel checkpoint—one fire team conducting checks, another fire team in overwatch, and the third in reserve.
- Minimize the number of people immediately in front of the checkpoint.
- Keep at least 10 meters between the checkpoint and the line waiting to enter. Similar to vehicle checkpoints, Marines should establish easily understood signals between the squad leader and the overwatch team so they can respond quickly to an emergency.

Random Personnel Checkpoint. The "random" nature of the checkpoint refers to the places that the checkpoints are established in. They are often established based on intelligence indicators. It can also refer to the way that personnel are screened. In a randomly placed checkpoint, procedures can be just as thorough as the permanent checkpoint described previously. On the other hand, it can be used to screen some—but not all—of the people passing through a point for weapons, drugs, and the like. Its characteristics are as follows:

- Marines must have guidance on how to select those to be checked (for example, only military age males may be checked).
- Marines should be allowed to use their intuition and combat hunter skills to identify the personnel to search.
- The location should be selected so that a person cannot escape the checkpoint if confronted.
- An interpreter should be on hand to support the checkpoint.

Personnel Search Guidelines. Personnel searches are conducted by at least two people – one conducts the search and one provides overwatch. Searchers focus their full attention on the subject. The threat level and intent of the checkpoint dictate the method and depth of the search. Ideally, Marines or Sailors do not conduct a detailed search on a member of the opposite sex, though this may be required based on the situation. When no female military or local police force members are available to search a female, a corpsman or mature Marine may be assigned to conduct the search. A member of either sex can search items that can be easily removed, such as luggage, packages, shoes, hat, or coat. Similarly, a member of either sex may employ a military working dog, metal detector, or other search method that does not involve body contact or exposure.

Personnel Search Method. The person being searched should be made to stand with legs apart in a leaning position, placing their hands against a wall or vehicle. This position prohibits movement without falling down and allows the subject to be knocked over easily if required. Two searchers should be used, one to conduct the search and the other to provide cover.

Procedures include—

- The searcher always works from behind the individual being searched.
- The searcher may employ a metal detector to assist with the search.
- A quick body search should be used as a preliminary search to detect weapons that might be used against the searcher, or as the usual form of search in a low threat area. The search team may randomly select people for a more thorough search (e.g., every seventh or eighth person). Search team leaders may also select individuals for more thorough searches based on their judgment.
- A meticulous, detailed body search should be used to check for concealed weapons or other contraband.
- A logical sequence should be followed from head to toe.
- Clothing should not be "patted;" a stroking movement should be used to ensure no areas are missed.
- Both hands should be used to carefully check hair (including in or under hats), armpits, inside legs, shoes/boots, half-clenched hands, any medical dressings, carry bags or cases, and walking sticks.

CHAPTER 11
FORCE PROTECTION

Platoon commanders use operational risk management and a range of TTP to protect the force and mitigate the effects of the environment and the enemy's ability to locate, target, and engage friendly forces. Marines counter enemy actions through fire and maneuver and active and passive security measures, including camouflage, dispersion, fortifying positions, conducting security and reconnaissance activities, and enforcing strict OPSEC standards. Force protection measures are an integral component of all operations. They consist of internal measures taken to protect the force from its own actions, and external measures taken to protect the force from threats, which can include the environment, disease, or enemy action.

The platoon and company plan for and enforce safety and field hygiene procedures in training and operations to reduce the inherent risk of nonbattle deaths, injuries, and disease. Similarly, commanders avoid fratricide through operational planning, which takes into account battlespace geometry and establishes required control measures and identification of friend or foe procedures. Intelligence supports force protection by reducing uncertainty for the commander and providing force protection through counterintelligence.

OPERATIONS SECURITY

Operations security includes controls and processes employed to thwart an enemy from collecting information on friendly forces, whether that collection is done through reconnaissance and surveillance or through the gathering of documents or electronic data. The battalion commander normally implements overarching OPSEC measures (i.e. both passive and active). Platoon commanders should consider specific threats and implement appropriate OPSEC measures into operations as required.

Operations security is a five-step process that begins during mission planning. The five steps of OPSEC are: identification of critical information, analysis of threats, analysis of vulnerabilities, assessment of risk, and application of OPSEC measures. For more information on OPSEC, refer to Marine Corps Order (MCO) 3070.2, *Marine Corps Operations Security Program*.

Critical Information

Commanders identify critical information during the planning process (e.g. date /time of attack, H-hour, unit positions). Subordinate units must make every attempt to deny enemy access to this information.

Threat Analysis

The perceived collection capabilities of the enemy directly influence the countermeasures that a unit implements. Identifying capabilities enables the unit to evaluate themselves from the enemy's point of view and adjust accordingly. If in doubt about the enemy capabilities, it is better to assume that the enemy has access to capabilities than to assume that they do not.

Analysis of Vulnerabilities

- Unit leaders analyze their vulnerabilities and establish measures to mitigate them. Some considerations in regards to vulnerabilities at the platoon level include—
- How is sensitive information being received, displayed, and disposed of?
- Are patterns being established in regards to daily operations?
- Are friendly unit activities visible to the enemy forces?
- Are host nation security forces and the civilians likely to pass information to adversaries?
- What is being posted to social media or sent through the internet?

Risk Assessment

The platoon commander should identify possible vulnerabilities and implement OPSEC measures to eliminate or mitigate those vulnerabilities. An example of a vulnerability might be setting patterns that make the platoon vulnerable to effective attacks. An example of an OPSEC measure might be sequencing operations to specifically deny the enemy opportunities to identify patterns and conduct effective planning against the unit.

Application of Operations Security Measures

The platoon mitigates and controls risk through—

- Coordination with host nation security forces.
- Siting and hardening of facilities.
- Physical security actions designed to prevent unauthorized access or approach to facilities.
- Physical security actions that prevent theft of weapons, munitions, equipment, identification cards, and other materials.
- Policies regarding travel, size of convoys, interaction with HN, breaking or routines, and off-duty restrictions.

EMISSIONS CONTROL

Depending on the operational environment and the EW capabilities of the threat, the battalion will establish guidance on the use of communications systems. Generally, units are conservative and disciplined in the use of radio communications. When units are facing enemies with EW capabilities, they may be tasked to conduct some or all of their operations under emission control restrictions. This requires units to develop and employ a signal plan that relies on alternate means of communications, such as visual signals and satellite communications.

CHEMICAL, BIOLOGICAL, RADIOLOGICAL, AND NUCLEAR DEFENSE

The platoon incorporates chemical, biological, radiological, and nuclear (CBRN) defense training to develop the required skills to accomplish its assigned missions in a CBRN environment.

Avoidance

The principle protection from CBRN attacks are the same techniques that mitigate the enemy's ability to locate, target, and engage friendly forces. Marines deny the enemy opportunities to target our forces through active and passive security measures, including camouflage, dispersion, fortifying positions, conducting security and reconnaissance activities, and enforcing strict OPSEC standards.

Protection

When a CBRN threat exists, the battalion directs the employment of chemical sensors and systems to detect CBRN agents. Combat units assume the directed mission-oriented protective posture (MOPP), and small unit leaders should inspect and supervise to ensure that required continuing actions are conducted. In general, when establishing MOPP levels, commanders take into account the mission, the level of threat, the environment, temperature, work/rest rate, performance degradation, and physical conditioning of personnel. As with other force protection methods, platoon commanders may not lessen a minimal MOPP level dictated by HHQ, but may adopt a more protective posture if local conditions require. Table 11-1 describes the MOPP levels. If CBRN agents are detected, units utilize alarms and signals (usually found in unit SOPs) to alert their own personnel, then report in accordance with SOP to allow HHQ to warn other units.

Table 11-1. Mission-Oriented Protective Posture Levels.

MOPP Equipment	MOPP Levels						
	MOPP Ready	MOPP 0	MOPP 1	MOPP 2	MOPP 3	MOPP 4	Mask Only
Mask	Carried	Carried	Carried	Carried	Worn[1]	Worn	Worn
Overgarment	Ready[2]	Available[3]	Worn[1]	Worn[1]	Worn[1]	Worn	
Boots	Ready[2]	Available[3]	Available[3]	Worn	Worn	Worn	
Gloves	Ready[2]	Available[3]	Available[3]	Available[3]	Available[3]	Worn	

Notes
1 In hot weather, coat or hood can be left open for ventilation.
2 Must be available within two hours. Second set available in 6 hours.
3 Within arm's reach.

Decontamination

There are three types of decontamination—immediate, operational, and thorough. Immediate decontamination is usually done by small units on individuals and mission essential equipment to minimize casualties and mitigate the possible spread of contamination. The objective is to keep the maximum amount of combat power engaged in operations. Operational and thorough decontamination is normally conducted by battalion-level assets. If a platoon is contaminated beyond its ability to operate with immediate decontamination procedures, the unit will be directed to move to decontamination stations. The movement of contaminated units is closely controlled to prevent the spread of contamination.

COUNTER RADIO-CONTROLLED IMPROVISED EXPLOSIVE DEVICE ELECTRONIC WARFARE

The Marine Corps has fielded CREW devices to combat the threat from radio-controlled improvised explosive devices (RCIEDs). These systems detect and jam electronic signals, targeting the receiver and preventing it from "hearing" a detonation command. They also collect intelligence information which can allow the MAGTF to gain dominance of the electromagnetic spectrum through EW. There are two basic types of CREW systems—vehicle mounted and packable systems used for dismounted operations. For further information on CREW systems, refer to Marine Corps Interim Publication 10-10C.1i, Marine Corps Counter RC-IED Electronic Warfare (CREW) and Communications Systems Compatibility TTP.

The platoon commander will receive briefings on the threat and employ CREW devices based on the estimate of the situation. The Marine Corps expects that enemies will continue to employ radio controlled IEDs, and has made the employment of CREW a standard capability. Like any capability, the CREW employment must be trained for. Marine infantry platoons should incorporate CREW into every training evolution in order to maintain proficiency and build confidence in the capability.

Capabilities and Limitations

There are four factors that affect CREW—frequency, power, line of site/masking, and the environment.

Frequency. In order for CREW to jam a RCIED, the CREW system must target the frequency of the transmission and deliver more power than the transmitter. The company and battalion will provide a load set for CREW devices, which must be periodically updated based on the threat.

Power. When a CREW system jams, it broadcasts a signal that interrupts the receipt of the RCIED's detonation signal. The size of the area protected by the jamming is determined largely by the power of the system. The area of protection (i.e., the "cloud") radiates a certain distance from the vehicle or person carrying the CREW system. The exact distances for each specific system vary, are classified, and are briefed on a need to know basis.

Line of Sight Masking. The signals from a CREW device are strongest when direct line of site between the CREW and the receiver exists. Units should consider this when selecting the location of CREW devices in formations and maneuvering.

Environment. Many environmental factors such as barometric pressure, terrain, humidity, rain, fog, snow, and hail can affect CREW systems. These conditions affect the effective range of the CREW system, as well as enemy transmitters.

Employment

The following considerations apply to the employment of CREW systems.

Simultaneous Employment of CREW and Communications Systems. The company and battalion will establish SOPs for integrating CREW devices and C2 systems. The battalion should have a designated CREW officer who has been trained to provide recommendations and guidance on the employment of CREW systems and their compatibility with unit communications. Common timing protocol is a technique that synchronizes CREW and communication systems using GPS time to minimize interference between jamming and communication.

Pre-Mission Planning. The following actions should be considered for all missions when an IED threat exists:

- Study the intended route and its history of IED and RCIED attacks.
- Consider the placement of CREW systems in formations and the positioning of them in overwatch positions at likely IED spots and choke points along the route.
- Be unpredictable in the times and routes the unit uses.

There are four basic steps to integrating CREW systems into a combat formation or patrol when a mission is being planned. The CREW officer can provide training and recommendations. The four basic steps are—

- Identify potential area threats based on trend analysis, networking, and reporting.
- Determine CREW system requirements and vehicle and/or personnel placement.
- Determine the minimum required separation of the CREW systems available.
- Check the existing communication plan against the CREW plan.

Pre-Combat Inspections. Small unit leaders must ensure that CREW systems have been maintained, have up-to-date load sets, and sufficient batteries for the duration of the mission.

Considerations for Joint, Interagency, and Combined Operations

The Joint force (i.e., separate military services and US Special Operations Command) should employ CREW devices and load sets which are coordinated and interoperable. Very often, allied and/or host nation units have different communications systems, and either lack CREW systems or have noncompatible systems. In many instances, these communications and CREW systems may not be interoperable or compatible with Marine Corps systems. As a result, it is important to consider their capabilities when conducting METT-T analysis.

Post-Mission Operations

The CREW devices collect intelligence about the signals received and jammed. Designated individuals, often the platoon radio operator, should conduct post-mission procedures to ensure systems are fully functional when they are needed for the next mission. Downloading CREW post-mission data files and sending them to the battalion CREW officer can provide vital intelligence.

MUTUAL SUPPORT

A key element of Marine Corps maneuver warfare is mutual support between elements. Mutual support is support that units render to each other; it is essential at all levels. At the lowest levels, an attacker approaching a fire team or squad sector is engaged from mutually supporting positions, while aviation and indirect fires engages them and EW assets render their C2 assets nonmission capable. Similarly, an enemy defense which engages an advancing squad will be brought under effective fires by other elements of the platoon using organic and supporting arms from one or more overwatch positions. The degree of mutual support is influenced by terrain, the range of weapons, and visibility.

At higher levels, the MAGTF is a combat proven task organization which is designed to provide mutual support to each element. The infantry relies on Marine aviators and artillery for essential fire support capabilities. Reconnaissance, armored, and engineer units similarly provide essential combat support. The logistics combat element provides essential logistics supplies and services. Elements of the MAGTF command element provide essential C2 and ISR capabilities. Mutual support creates problems for the attacker—the attacker cannot focus strength against one position without coming under fire from multiple directions, or a reserve force; thus, forcing them to disperse their forces and preventing them from massing firepower.

Mutual support allows a unit to mass combat power and create dilemmas for the attacker, and is inherent in combined arms operations. Infantry schemes of maneuver are developed to take maximum advantage of the full range of organic and support capabilities to overmatch the enemy at critical points and times. Employing combined arms and mutual support protects the infantry by creating vulnerabilities in the enemy defense that the infantry platoon or squad can assault.

OVERWATCH

Overwatch is a tactical movement technique in which one element is positioned to support the movement of another element with immediate fire; the tactical role of an element positioned to support the movement of another element with immediate fire. While conducting operations, platoons task units to overwatch their fellow Marines. Assigning units overwatch responsibility mitigates the risk of units becoming so fixed on the task that they are surprised by enemy action from an unexpected source. During operations, whether it is tactical movement, constructing fighting positions, or conducting key leader engagement with village elders, the need to assign units or individual Marines to overwatch cannot be dismissed. Based on METT-T, the size of an overwatch element can be a single Marine, a two-person OP, or the employment of a platoon or more. The following guidelines should apply to overwatch employment:

- Personnel and equipment remain tactically alert to provide security, protection, and early warning.
- Overwatch elements should be given guidance and training regarding the use of deadly force, local ROE, and use of force continuum procedures.

- Overwatch elements rehearse the immediate actions required of them.
- Units employ the appropriate communications equipment to ensure that overwatch elements can provide proper early warning of a threat.
- Overwatch elements remain vigilant and alert to potentially hostile activities and actions near their units.
- Overwatch elements should be rotated in order to maintain the highest levels of awareness.
- Overwatch elements should be employed at all unit evolutions, regardless of size or operational environment.

PERSONAL PROTECTIVE EQUIPMENT AND ARMOR PROTECTION LEVEL

Marine Corps battalion commanders are authorized to establish armor protection levels for operations based on their estimate of the situation. Increased armor protection equates to increased weight, heat retention, and reduced mobility, thus degrading mobility and unit performance. Commanders designate the wear of helmets, ballistic glasses and goggles, and groin, neck, and throat protection as required by their units' mission, threat, and local environmental conditions. Normally, guidance allows variation for specific situations such as patrolling, constructing fighting positions, or when units are in patrol bases or relatively secure areas. Small unit leaders should supervise and enforce established standards. Pre-combat inspections are one method of enforcing standards, as is personal example. Marine Corps personal protective equipment is deliberately scalable to allow commanders flexibility in armor protective level posture, as illustrated in table 11-2.

Table 11-2. Armor Protective Level Chart.

APL	Description
Level 0	No body armor worn
Level 1	Vest/plate carrier with soft armor only
Level 2	Vest/plate carrier with front and back hard armor plates
Level 3	Vest/plate carrier with front, back and side hard armor plates

AIR DEFENSE

The use of camouflage, cover, concealment, and dispersion are standard practices which minimize the threat of enemy air activities, including UASs. It is increasingly likely for threats or adversaries to employ drones to conduct reconnaissance and surveillance of friendly positions. It is also possible that armed drones and/or explosive laden drones may be employed offensively. The most effective method of defeating or deterring a threat's use of UASs is monitoring and jamming their control signals. Signals intelligence units can use control signals to identify and target enemy positions.

Platoon commanders are normally briefed by HHQ when UASs or other air threats are a likely threat. Commanders should also consider the possibility that non-governmental agencies or news agencies may employ drones in conflict areas as well.

Depending on the situation and the ROE, the platoon may engage drones with organic weapons systems. However, the commander must consider the likelihood of hitting the target and any potential collateral damage from rounds falling back to earth. Enemy aviation activities, including the use of drones, should be reported immediately.

RISK MANAGEMENT

Risk management is a process that helps identify and control internal and external hazards to protect the force. Risk management is one of the best means available to reduce the senseless and needless loss of life, injury, and materiel; it must not be an afterthought. It is applicable to actions during combat, in training, and in garrison. Risk management serves to help identify and control risk, not necessarily to eliminate it. For more information than is contained here, see MCO 3500.27C, *Risk Management*.

Risk management is a decision-making tool that assists unit leadership to identify hazards and develop controls to mitigate them. In garrison and training operations, units normally employ formal risk management worksheets and briefings. Table 11-3 provides an example risk management worksheet. This is part of the leadership training program which develops the necessary thought processes and judgment to employ risk management in a tactical environment. In an operational environment, it is an integral component of the METT-T analysis and development of the concept of operations. Considerations include—

- Anticipate and manage risk by planning.
- Accept risk when benefits outweigh the cost.
- Accept no unnecessary risks.
- Make risk decisions at the right level.

The five steps in the risk management process are applied to each hazard identified, whether internal or external. The five steps are—

- Identify the hazard to the force.
- Assess the impact of the hazard.
- Develop controls and make a risk decision.
- Implement controls.
- Supervise and evaluate.

Table 11-3. Risk Management Worksheet.

Mission/Task:				DTG Begin: DTG End:	Date Prepared: Prepared By: Position:	
Phase of Mission or Task:						
Step 1: Identify Hazards	Step 2: Assess Hazards (Initial RAC)	Step 3: Develop Controls	Step 3B: Residual Risk (Residual RAC)	Step 4: How to Implement	Step 5: Supervise	Step 5B: Evaluate
Overall Risk Level After Control(s) Implemented: (Circle One) LOW MODERATE HIGH EXTREMELY HIGH				Accept Risks: YES NO Comm w/Higher: YES NO	Risk Decision Authority: Sign/Rank/Last Name/Position	

FRATRICIDE AVOIDANCE

The modern battlefield is more lethal than any in history. The high tempo of operations, the nonlinear nature of the battlefield, and the range and lethality of modern weapons create the possibility of fratricide. Leadership addresses this threat through training, planning, and the establishment of required tactical control measures and signals. Reduction of fratricide risk begins during the planning phase of an operation and continues through preparation and execution.

An accurate CTP is essential to operational success and fratricide avoidance. Commanders and their subordinates must understand where friendly forces are, not just those of the platoon, but adjacent and supporting forces, and often those traveling through a unit's assigned battlespace.

Battlespace Geometry

In the combined arms warfare, battlespace geometry requires awareness of eight elements of information. If individual members of the battalion understand how battlespace geometry works for both small arms and supporting arms, and if they understand how the different combined arms platforms such as air support or artillery operate, then they are much more likely to recognize unsafe situations and act accordingly. As a backstop for the maneuver units, the company FST

serves as a fail-safe measure, maintaining awareness of unit positions and intervening when fratricide appears inevitable. The eight elements of battlespace geometry are—

- Friendly positions and associated surface danger zones.
- Enemy positions.
- Enemy threat rings.
- Ordnance minimum safe distances (training) or risk estimate distances (combat).
- Artillery gun-target lines.
- Mortar gun-target lines.
- Fixed-wing close air support attack cones.
- Rotary-wing close air support battle positions.

Planning Phase

The platoon commander remains conscious of the possibility for fratricide while developing schemes of maneuver and fire support plans, identifying risks and establishing preventive measures. The locations of units and directions of fire (i.e., battlespace geometry) are considered. The training, cohesion, proficiency level, and physical and mental condition of units and individuals are considered as well. Cooperative planning between supported and supporting commanders and the integration of recommendations and knowledge from specialists (such as assault Marines, engineers, forward air controllers, and forward observers) can be invaluable in reducing fratricide risks.

Preparation Phase

Clearly communicating a simple plan that accounts for battlespace geometry is a vital step in minimizing fratricide. Confirmation briefs and rehearsals prepare units to conduct operations. They are also opportunities to reduce fratricide by identifying risks and allowing the development of required controls and signals. Confirmation briefings and rehearsals ensure subordinates know where fratricide risks exist and what to do to reduce or eliminate them. Attached and supporting units must be included in rehearsals to ensure they understand the concept of operations and build understanding between units. As stated previously, maintaining an accurate CTP is a key measure in reducing risk to the force. This must be done prior to the commencement of operations.

Execution Phase

Throughout execution, small unit leaders monitor the situation and share their situational awareness up and down the chain of command. This cross-talk between units increases shared situational awareness and enables the continual assessment of risks, to include fratricide. The following factors should be considered when assessing fratricide risks:

- Inter-visibility between units.
- Visibility, including both light conditions and battlefield obscuration.
- Similarities and differences in equipment, vehicles, and uniforms of friendly and enemy forces.
- Accuracy of position reporting and navigation.
- Tempo of operations.
- Civilians on the battlefield.
- ROE.

FIELD HYGIENE

Historically, disease and non-battle injuries account for more casualties than combat injuries. Disease or extremes of heat and cold can render improperly prepared units nonmission capable. Leaders consider the environmental conditions and their units' preparation to operate in prevalent conditions as part of the threat. Battalion and company commanders ensure that units are trained and equipped to operate in the environment. It is the small unit leader's duty to enforce the field discipline and field hygiene required to mitigate threats from disease and non-battle injuries. Unit leaders must allow time for hygiene, sleeping, and messing. During deployments, time is set aside for physical training. See MCRP 3-40A.4, *Field Hygiene and Sanitation*, for more information.

Drinking Water Planning

In all environments, commanders must plan how they will carry and resupply water. In many hot weather environments, water is a major constraint for dismounted units. While consumption changes based on the environment and exertion, Marines and Sailors may require up to three gallons of water per day in hot weather environments. Short of combat operations, lack of water is the quickest way to render a unit combat ineffective. During combat operations, platoons should plan for resupply of water on the objective. Personnel should drink only from approved sources or purify water using approved water purification methods.

Water Filtration Planning

Joint Publication 4-03, *Joint Bulk Petroleum and Water Doctrine*, describes distribution as the "weak link" of the water support system in most cases, since moving water from the production and storage sites to the user can be both equipment and personnel intensive. Due to these factors, the maximum use of local water filtration is an important additional planning consideration for the platoon leadership. This fact means water filtration takes on even greater importance in the defense when access to water supplies can be cut off.

The following is a list of questions the platoon leadership should ask to ensure they are planning adequately for the critical water needs of the Marines in the platoon, based on the critical water support planning elements found in JP 4-03:

- How does the platoon link into the detailed water distribution plan?
- Have the platoon's water support requirements been identified to HHQ?
- Has the water filtration equipment been tested and is it operational?
- Are filtered water quality procedures identified?
- Are there adequate sources of local water?

Heat and Cold Injuries

Unit leaders consider the climate and terrain of an assigned AO and how that will impact operations. Pre-deployment inspections and pre-combat inspections ensure that Marines and Sailors have required, well-fitting, and serviceable equipment.

Heat injuries are reduced by scheduling heavy work periods to occur during the coolest part of the day, which may mean moving at night. Unit leaders must remain conscious of heat casualties and

provide access to water and shade. Acclimatization periods may be required when deploying into hot weather environments. See MCTP 12-10D, *Desert Operations*, for more information on hot weather operations and acclimatization.

Cold injuries are reduced by ensuring proper equipment wear and maintenance. Establish and rotate OPs and guard posts considering potential exposure of the Marines standing those positions. Keeping uniforms dry is essential, as is changing socks. See MCRP 12-10A.1, *Small Unit Leader's Guide to Mountain Warfare Operations*, for more information on cold weather operations.

Disease Prevention

Poor field hygiene, sanitation, and improper waste disposal greatly increase the risk of disease. Poor hygiene and sanitation have often rendered combat units nonmission capable. This threat is even greater in urban areas converted to temporary or semi-permanent military use. A dangerous temptation during deployment is to ignore field sanitation standards; yielding to that temptation can quickly render a unit nonmission capable.

Depending on the environment, the unit may be exposed to a range of pests from mosquitoes, ticks, and biting flies to rats and other rodents (which are often hosts to fleas). These pests often carry disease. Prior to deployment, the unit should establish procedures to mitigate pests. These often include treating uniforms with long-lasting insecticides and issuing mosquito nets. Small unit leaders enforce proper wear of uniforms and enforce established standards.

Field Sanitation Planning

On the march, individuals may dig cat holes, or waste collection bags may be provided by the unit. The platoon or squad corpsman normally recommends or establishes the location of heads in any location to be occupied for a significant period of time. For assembly areas, patrol bases, and combat outposts, the methods of waste disposal must be planned depending on the mission, length of stay in the area, terrain, and weather conditions. Chemical toilets are preferred, but often unavailable. Burn-out heads, waste collection bags, or straddle trenches may be used. Urinal tubes are often used for liquid waste. The corpsman normally supervises the establishment of heads, freeing small unit leaders to conduct tactical tasks. As required, they may be augmented by a working party to construct the heads. Heads should be situated as far from the billeting area as possible, downwind and down slope, if possible. Wastes should not flow into open water sources and must be maintained, which—depending on the type of heads established—may require burning or covering with lime.

While the tactical situation may require it, in general it is bad practice to allow eating in billeting areas, fighting positions, or work spaces to avoid drawing rodents. A designated messing area also has the benefit of being a place where unit leaders can interact with their Marines and Sailors.

Commanders plan for water and areas to shave, shower, and wash clothing when establishing combat outposts and defensive positions that they expect to occupy for more than a few days. All personnel must bathe at least once a week and have opportunities to wash their clothing. Commercially available solar showers may be used, or field expedients can be built. At the minimum, individuals can wash with soap and water. Care is taken to ensure that used wash water is disposed of properly so that it does not become standing water, which provides ideal breeding locations for mosquitoes and flies.

COMBAT AND OPERATIONAL STRESS CONTROL

Commanders enhance the readiness of their units and promote the long-term health and well-being of their Marines and Sailors by preventing, identifying, and managing the impacts of combat and operational stress. The intent is to promote psychological resilience and the long-term health of Marines, Sailors, and their families. For more information, see MCO 5351.1, *Combat and Operational Stress Control Program*.

An enduring component of military operations is combat and operational stress. Combat and operational stress control has always been a small unit leader's responsibility. It is a reality that combat and operational stress affects everyone engaged in combat operations; no Marine or Sailor will remain unchanged. The continuum of possible outcomes that each person experiences ranges from positive growth behaviors to negative and sometimes disruptive reactions.

Effective leadership shapes the experience that they and their Marines and Sailors go through in an effort to accomplish the mission, build resilience, and prevent post-traumatic stress. Unit leaders have a primary responsibility for combat and operational stress control. They are assisted in executing their responsibilities by medical and mental health professionals, religious ministry teams, Marine and family programs personnel, and others.

Commanders and small unit leaders employ the five core leader functions of combat and operational stress control—strengthen, mitigate, identify, treat, and reintegrate to increase individual and unit readiness. This is a core leadership function which provides the basis for the Marine Corps framework for understanding, recognizing, and dealing with combat and operational stress. Small unit leaders' responsibilities for incorporating the core functions of combat and operational stress control are described in the following subparagraphs.

Strengthen

Individuals enter military service with a set of pre-existing strengths and vulnerabilities based on prior life experiences, personality, family history, and other factors. Commanders can do much to enhance the psychological resilience of individual unit members and the unit. Strengthening falls into three main categories—training, social/unit cohesion, and leadership aligned to physical, mental, social, and spiritual domains.

Training. Realistic training not only builds tactical and technical proficiency, but individual and unit confidence and cohesion. These are effective protective factors against stress injuries and illness. Intense surprise can be detrimental to psychological health. Realistic training is critical preparation for combat. Realistic training includes replicating the anticipated tasks, stressors, and environment of the operation as closely as possible. Creating opportunities for critical thinking and decision making creates a sense of accomplishment, along with a more skilled Marine. While skill building may be the most obvious benefit, it is worth emphasizing the process of skill building itself as a strengthening and team-building product.

Unit Cohesion. Unit cohesion is the mutual trust and support of a social group seen in the *esprit de corps* of a well-functioning unit. It is developed through the sharing of adversity over time and

team building activities, and is an important protective factor against the relative effects of combat and operational stress. This process benefits from time and unit stability, but can be challenging in the face of personnel rotations or in the case of replacements or attachments. Peer-to-peer support is a key factor in engaging stress reactions early and preventing stress injuries and illness.

Leadership. Leadership is a critical factor in strengthening units. Unit members are strengthened by leaders who teach, inspire, provide positive examples, keep them focused on mission essentials, instill confidence, provide a model of ethical and moral behavior, and provide an example of courage and fortitude on which unit members can draw during times of adversity and challenge. Leaders are not immune to stress and are responsible for addressing stress reactions in themselves as well as their Marines.

Promoting Ethics and Protecting Core Values. Resilience in the face of hardship is enhanced by a sense of purpose and belonging—that they are contributing to a greater good. Leaders convey this sense of purpose to unit members by clearly communicating the meaning and value of the unit's activities. Another method of communicating meaning is by ensuring that all decisions made, and all actions taken by unit members, are consistent with core values, the law of war, the ROE, and other ethical standards. Leaders make ethical decision in accordance with America's core values. Deviations from ethical standards, if they occur, must be openly acknowledged and corrected before unit members mistakenly take such deviations as proof that the standards are not to be trusted. The following are protective factors leaders should incorporate into their personal leadership programs:

- Promote and encourage the four cords of Marine total fitness—mind, body, spirit, and social.
- Provide structure, limits, rules, monitoring, and predictability with clear expectations for behavior and values.
- Provide opportunities for social and professional engagement within the Marine community.
- While using risk management, provide acceptable levels of physical and psychological safety. Educate Marines, as specifically as possible, about the realistic risks connected to their duties.
- Encourage Marines to develop a sense of themselves as Marines and American citizens by encouraging the study of subjects that develop a world view; these include professional military education, current affairs, and history.

Mitigate

Mitigation is the use of techniques to minimize the impact of stressors that cannot be removed. Leaders remain aware of risk factors for stress injuries and encourage Marines to address them promptly. As the operational environment permits, ensuring sufficient sleep, hydration, and nutrition can greatly contribute to minimizing stress issues and preventing injuries. Potential risk factors during routine operations include family issues and deployment. During operations, the intensity of combat and seeing displaced, wounded, or killed civilians, enemy, or friendly personnel are major factors. After action reviews serve a tactical purpose; however, they can also be a method to talk through stressful events. Leaders should address errors in a manner that allow Marines to retain their honor. Required corrections are used as an opportunity to mentor.

Adequate sleep, rest, recreation, and spiritual renewal are valuable for stress mitigation in the face of operational challenges. Leaders mitigate stressors in combat/operational deployments by

maintaining unit cohesion, communicating the mission's value, rewarding accomplishments, keeping Marines active, and exhibiting courageous, ethical behavior.

Identify

Since even the best preventive efforts cannot eliminate all stress reactions and injuries that might affect occupational functioning or health, leaders continuously monitor stressors and stress outcomes. Leaders must know the individuals in their units, including their specific strengths and weaknesses, and must observe their behavior to recognize changes that may indicate a stress reaction. Identifying Marines who may be at risk early enough allows leadership to address issues may prevent larger problems from developing.

Leaders must recognize when a Marine's confidence in themselves, their peers, or their leaders is shaken, or when units have lost effectiveness because of challenges to the unit (e.g., casualties or changes in leadership). Identifying Marines who may be at risk at a point in time is part of involved leadership, and may be critical for that Marine asking for and receiving help at a point before larger problems develop. Nothing replaces talking with and listening to Marines.

Treat

Small unit leaders are responsible for required leadership interventions, including facilitating discussions and knowing appropriate resources. It is better, both for the individual and the unit, to deal with stress reactions at the lowest possible level. This keeps unit cohesion and combat strength for the unit and prevents stigma and isolation of the individual. The treatment of stress reactions includes: self-aid, peer-to-peer, support from a Marine leader, and support from a chaplain or corpsman. As required, they may be sent to a medical officer or chaplain.

Individuals might improve when basic needs and comforts are met, such as warm food, rest, and an opportunity to share one's feelings with comrades or a small unit leader. Talking and social interaction among small units, be it the squad or platoon, is a powerful tool to deal with stress.

Specialized training is not required to recognize severe stress reactions. Unit leaders can usually determine if the individual is not performing their duties normally, not taking care of themselves, behaving in an unusual fashion, or acting out of character. If symptoms endanger the individual, others, or the mission, or if they do not improve within a day or two or seem to worsen, the individual may be directed to talk to the company first sergeant, battalion sergeant major, the chaplain, or a senior corpsman. Based on their recommendations, they may be evacuated and referred to a mental health specialist, if available. Care must be taken not to stigmatize the Marine's or Sailor's actions.

Reintegrate

Commanders support Marines and Sailors during reintegration back into the force following formal mental health treatment. Reintegration is aligned to the maintenance of all Marines, but includes two important factors: addressing the command climate regarding any stigma and establishing confidence. This includes continually monitoring the Marine's fitness for duty and mentoring them during their recovery process by restoring the confidence of the stress-injured Marine, their peers, and the unit.

APPENDIX A
TACTICAL MOVEMENT

GENERAL

Tactical movement is conducted under combat conditions. Commanders use formations and techniques consistent with the mission, required speed of movement, security requirements, and the likelihood of enemy contact. The goal of tactical movement is to arrive at the objective in a tactically effective manner while avoiding surprise.

This appendix addresses formations and movement techniques used to move to an assembly area, attack position, or defensive position. If the unit makes contact with the enemy, the goal is to make contact with as small an element as possible and to quickly develop the situation. When making unexpected contact with the enemy, commanders remain focused on accomplishing the mission in accordance with the commander's intent.

BASIC PRINCIPLES OF TACTICAL MOVEMENT

The platoon considers METT-T factors while planning tactical movements. Planning considerations must strike an effective balance relative to the five principles of tactical movement: security, speed, control, deployability, and maneuverability. These principles are interrelated to a platoon's movement formation, technique, and route selection, and are often competing. Understanding these relationships is important in planning a tactical movement in accordance with the specific tactical problem.

Security

To avoid surprise, leaders maximize security through their movement formations, techniques, route selections, and actions at danger areas. Additionally, platoon commanders employ individual and small unit techniques to enhance overall security. Security comes at the expense of speed. Dispersion contributes to security by making the unit hard to target, and reducing the effect of fire if delivered.

Speed

Time and space are important considerations in planning tactical movements. To be decisive, units must not only move to the right place, but must also arrive at the right time. Formations and movement techniques have associated speed considerations, as do route selections and security. Generally, increased speed degrades security and control. Movement on roads and trails generally increases the speed and control of a movement, but makes the unit more vulnerable.

Control

Communication is the critical link to effective control. Leaders must assess the available methods to communicate between units. These directly impact the movement formations and techniques that they might utilize. Terrain and visibility are often limiting factors in control. Speed also influences command and control.

Deployability

Deployability is a unit's ability to develop the situation. Formations and movement techniques allow a platoon to deploy its organic weapon systems based on the expectation of contact. If engaged, the unit immediately engages the enemy based on individual and unit positioning within a formation. Deployability is relative to the probability of contact and the direction from which it is expected. Speed decreases as deployability increases in the direction of movement. Deployability in a specific direction limits overall security.

Maneuverability

Platoon commanders select formations and movement techniques that allow their platoons to maneuver. The platoon commander selects formations and movement techniques that enable the unit to make contact with the enemy with the smallest possible element. This does not mean that other elements are unaffected by enemy fire, but in order to engage the enemy, they must maneuver out of their formation's original position. If the element that makes initial contact can sufficiently suppress the enemy, other elements can maneuver into a position of advantage. Formations and techniques can be applied to movement in order to increase elements' maneuverability relative to an anticipated enemy threat. Increasing maneuverability in a specific location limits deployability of the force upon contact.

MOVEMENT FORMATIONS

Movement formations are the ordered arrangement of forces that describe a general configuration of a unit on the ground. Each formation has inherent advantages and disadvantages related to speed, security, and control. Commanders choose formations based not only on their missions and intent, but also on their expectations and expected directions of contact relative to their routes. Subordinate unit leaders also choose formations consistent with their situations.

This section discusses basic movement formations for infantry platoons conducting foot-mobile operations. Mounted formations are discussed in appendices B and D, but are very similar. Formations are SOPs that establish the basic distribution of Marines and units in relation to one another. They are foundational to the execution of immediate action and battle drills.

When operating within a company formation, a platoon commander selects the platoon's formation and dispersion based on METT-T. For example, the platoon may use a platoon wedge within a company vee formation. Similarly, squad leaders can choose their formations within the platoon's formation.

The location of key personnel within a formation may vary, with leaders positioning themselves within a formation to facilitate command and control. Attachments and enablers (e. g., corpsmen, interpreters, machine gun squads) are assigned positions in the formation based on METT-T factors.

The most common platoon formations are column, line, wedge, vee, and echelon left or right. Each has advantages and disadvantages related to security, speed, and control. A platoon commander often utilizes multiple formations during a single movement based on METT-T considerations. Formations may change based on terrain, weather, and illumination, as well as the expectation of enemy contact. The advantages and disadvantages of each are discussed in figure A-1. The formations are illustrated in figure A-2, figure A-3, figure A-4, figure A-5, figure A-6, and figure A-7.

Distribution of Key Leaders and Squad Formations within the Platoon

Figure A-8 shows one example of the formations a platoon's squads might adopt for movement within a platoon formation. The platoon commander has decided to utilize a platoon column. This graphic depicts a method for distributing subordinate leaders and squads to increase all-around security and deployability.

The lead squad in this example has good deployability and maneuverability to the front and flanks. The center squad is in a line formation, increasing flank security and the platoon's maneuverability to the flanks. The rear squad is in column, maximizing speed and control, which allows them to maneuver quickly at the platoon commander's direction. The formation of the lead and center squads reduce the speed and control associated with a platoon in column, squad in column. Leaders must balance the speed of relocation with the level of security required to counter an enemy threat.

MOVEMENT TECHNIQUES

Movement techniques describe the positions of units relative to each other during movement. The three primary movement techniques are traveling, traveling overwatch, and bounding overwatch. While formations are generally fixed in their basic configurations, movement techniques not only adjust the locations of elements to provide security, but also the distances between them in order to account for terrain and the expectation of contact. Likewise, where formations allow platoons to maximize their firepower in an expected direction of contact, movement techniques allow platoons to increase security and to immediately engage and maneuver against enemy threats.

Platoon commanders select movement technique based on the expectation of enemy contact. This often changes along the route a platoon is traveling. The various movement techniques affect a platoon's overall speed, as well as a platoon's speed of deployment and maneuver in support of the element that makes contact.

Formation	Expectation of Enemy Contact	Security	Control	Speed	Deployability /Maneuver
COLUMN	• Low	• Front of the column presents a smaller signature to the enemy located to the front • Column has reduced warning time of enemy approaching the flanks	• Easy to command and control because all units follow the same route	• Provides the greatest speed and ease of movement	• Easy to deploy to the flanks • Difficult to deploy and maneuver if contact is made to the front and rear
WEDGE	• Uncertain	• Provides good all around security	• Command and control is more difficult than the column	• Slower than the column; speed is compro-mised for better security	• Easy to deploy in all directions • Can maneuver if contact is made to the front or to the flanks
VEE	• Probable to the front	• Provides good all around security; best security to the front	• Command and control is more difficult than the wedge • Difficult to maintain direction of movement and control spatial relation between elements traveling on independent routes	• Slower than the wedge	• Can deploy in all directions; easiest to the front • Less maneuver to the front; good to the flanks
ECHELON LEFT	• To the left or front; contact may be imminent	• Provides good all around security to the left and front	• Command and control is difficult; harder to control spatial relation between elements traveling on independent routes elements traveling on independent routes	• Slower than wedge or column	• Easy to deploy to the front and left • Offers good maneuver to the front if the expectation of contact is to the front; less sure of location than a vee formation
ECHELON RIGHT	• To the right or front; contact may be imminent	• Provides good all around security to the right and front	• Command and control is difficult; harder to control spatial relation between elements traveling on independent routes	• Slower than wedge or column	• Easy to deploy to the front and right • Offers good maneuver to the front if the expectation of contact is to the front; less sure of location than a vee formation
LINE	• To the front; contact is imminent	• Provides best security to the front; poor security to the flanks	• Command and control is difficult in restrictive terrain; difficult to control direction of movement	• Generally the slowest formation because all units follow independent routes	• Easiest to deploy to the front; most difficult to deploy to the flanks • Can maneuver to the flanks; least chance of maneuver if contact is made to the front

Figure A-1. Infantry Platoon Primary Formations.

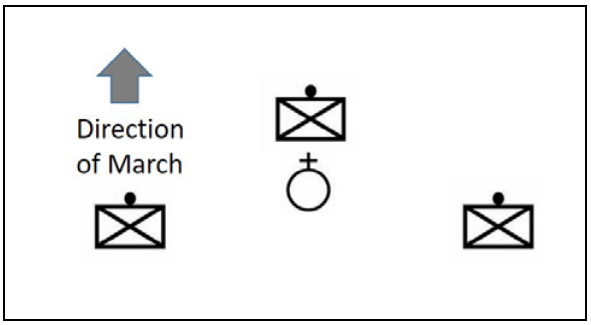


Figure A-2. Platoon Wedge.

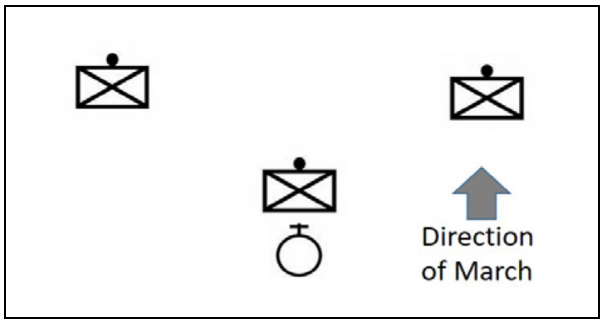


Figure A-3. Platoon Vee.

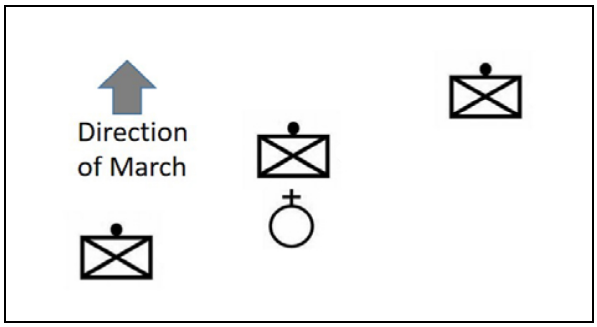


Figure A-4. Echelon Left.

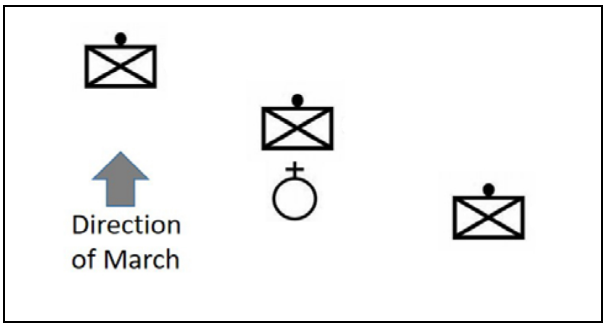


Figure A-5. Echelon Right.

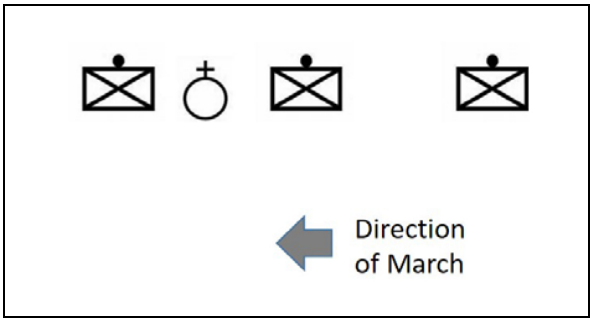


Figure A-6. Column Formation.

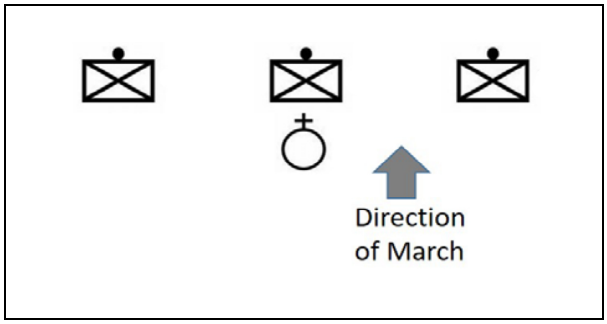


Figure A-7. Line Formation.

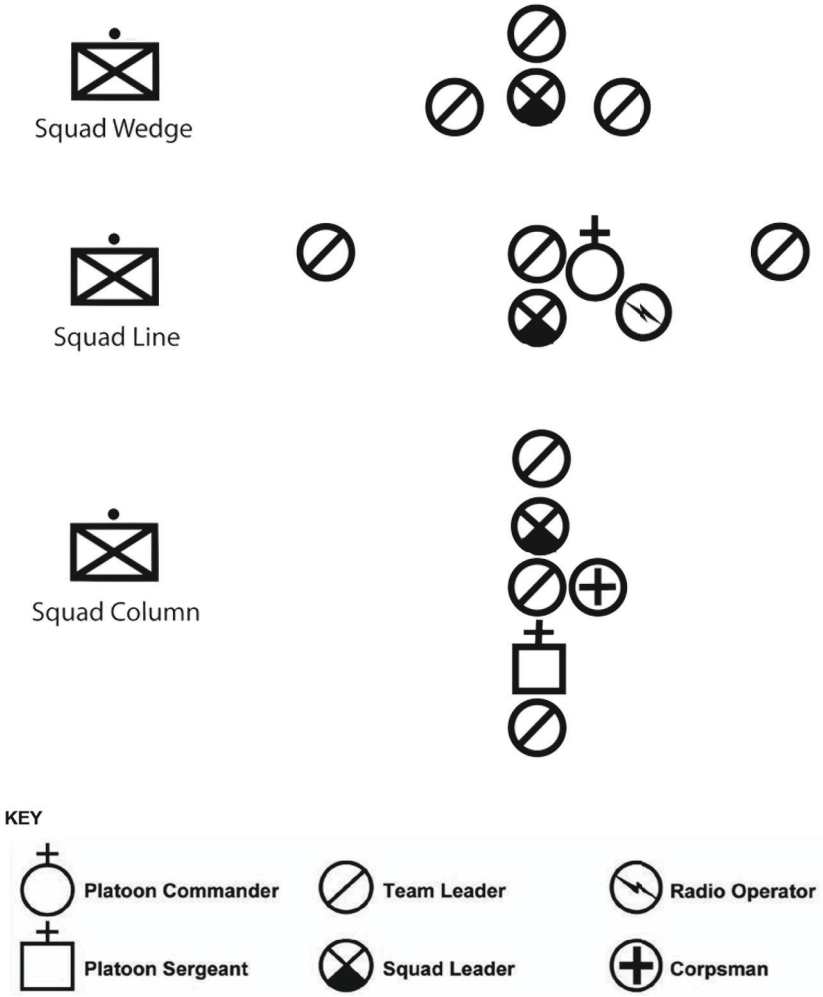


Figure A-8. Platoon Column Example.

Traveling

Traveling is used when speed is necessary and contact with an enemy is not likely. Figure A-9 illustrates a platoon movement with all elements moving simultaneously, and the platoon commander located where they can best control the unit. The only security measure taken is the formation of a platoon and squads. Due to the remote expectation of contact, a platoon can maximize its speed and control to complete a movement. The dispersion between elements is such that an entire platoon would be engaged with an enemy if contact were made in any direction, although deployability and maneuver would vary based on the formations selected.

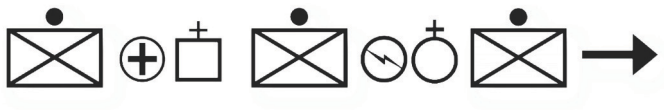


Figure A-9. Traveling.

Traveling Overwatch

Traveling overwatch is a movement technique used when contact with enemy forces is possible. As illustrated in figure A-10, the platoon has a squad moving ahead of the main body. The distance between the lead element and the trail element is dictated by METT-T factors, with terrain and visibility being primary. The trail element may pause for short periods to overwatch the lead element. It keys its movements to the terrain and the lead element. The trailing element overwatches at such a distance that should an enemy engage the lead element, the trail element can support the lead element.

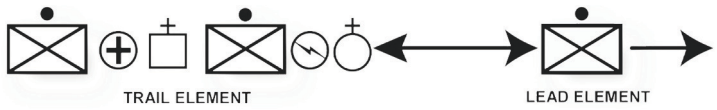


Figure A-10. Traveling Overwatch.

Separating lead and trail elements allows a platoon commander to maneuver unengaged forces on contact. A platoon commander determines the distance separating elements based on the terrain and the enemy threat. Regarding the enemy threat, a platoon commander must consider two factors to effectively overwatch a lead element. First, the trail element must be separated sufficiently from the lead element so that they are not decisively engaged on initial contact. This allows a platoon commander to maneuver and deploy weapons in support of a lead element. Second, a trail element must be capable of rapidly supporting a lead element. If the distance is too great, then a trail element will not be able to support a lead element, consequently failing to provide overwatch.

Compartmentalized terrain allows elements to close the distance between them. If a lead element is separated from a trail element by significant terrain, then this terrain allows a trail element to maneuver in defilade. Their distance is irrelevant, as the terrain prevents the enemy from engaging the trail element.

In open terrain, a trail element may have to assess an enemy threat in order to determine a proper distance from a lead element. The intent is twofold. They must be far enough away to be unengaged on initial contact with an enemy, and must be close enough to quickly support a lead element through either deploying organic weapons or maneuvering.

Figure A-11 displays an alternative method of providing traveling overwatch. The fire teams to the flanks are lead elements, understanding the definition of a lead element as a unit that makes

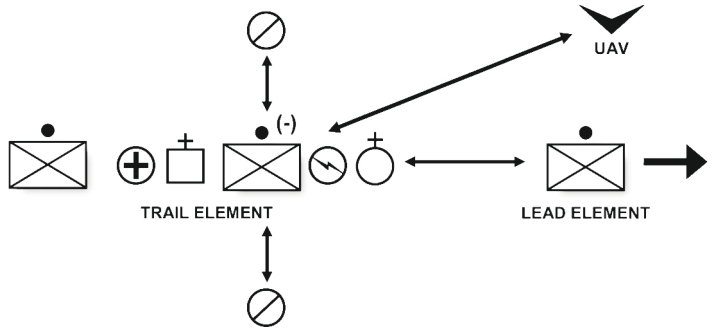


Figure A-11. Alternate Method of Traveling Overwatch.

initial contact with an enemy. Like the lead element ahead of the platoon in the direction of movement, flank fire teams perform the same functions if contact is made to the flanks. Leaders determine the distance between elements by the same factors of terrain and enemy threat. On initial contact with an enemy, the trail element retains the ability to maneuver unengaged.

Bounding Overwatch

Bounding overwatch is a movement technique used when contact with enemy forces is expected. The unit moves by bounds. One or more elements are always halted, overwatching the other elements during their movement.

The overwatching element is stationary and in a position to support the movement of the traveling unit by fire. An overwatching element positions itself on terrain that allows it to support a traveling unit along its entire bound. The bounding unit does not move beyond where the overwatch element can cover it. It halts on favorable terrain to provide overwatch for the movement of other elements along the route. The two methods of bounding overwatch are successive and alternating bounds.

Successive Bounds

When conducting successive bounds, a lead element moves under the cover of a trail element to a support by fire position. Once this support by fire position is established, a trail element moves to a position abreast of a lead element's position and establishes a support by fire position to cover a lead element's movement. The lead element then moves forward to a new support by fire position. This is illustrated in figure A-12. This process repeats until the commander transitions to a new movement technique, contact with the enemy is made, or the platoon arrives at its destination.

The method of successive bounds has both advantages and disadvantages related to movement. It is the more deliberate of the two methods, and forward progress is slower than with alternate

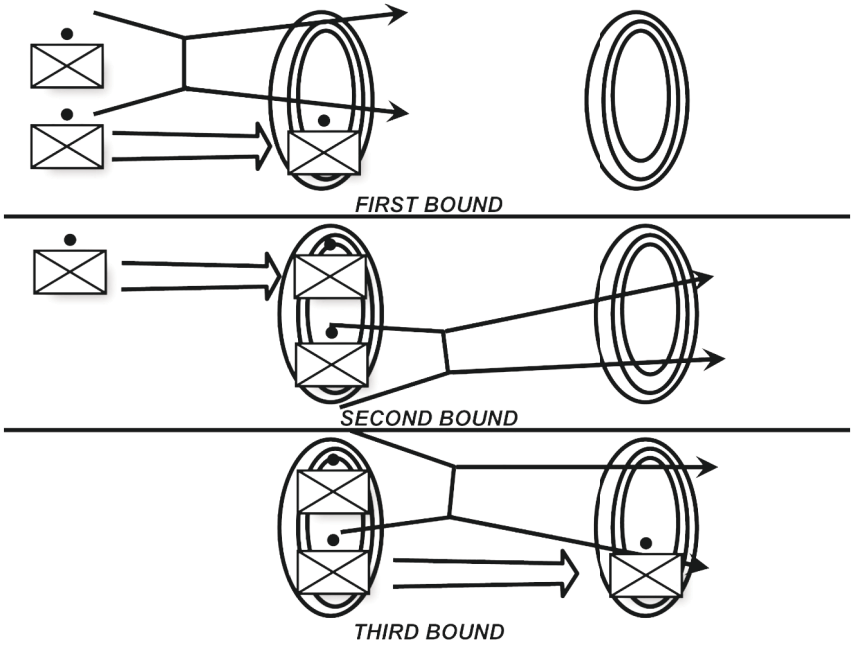


Figure A-12. Successive Bounds.

bounds. The advantage is command and control. A platoon commander is able to coordinate between bounding elements with each bound as they move successively to the same position.

Alternate Bounds

When conducting alternate bounds, a lead element moves under the cover of a trail element to a support by fire position. Once this support by fire position is established, a trail element moves past a lead element to establish a support by fire position forward of the lead element, but under overwatch from its position, to cover the lead element's movement. A lead element then moves forward to a new support by fire position. This process is illustrated in figure A-13. This repeats until the commander transitions to a new movement technique, contact with the enemy is made, or the platoon arrives at its destination. The advantage of this method over successive bounds is speed. A disadvantage is lack of control. Elements are never collocated, and coordination between elements is more difficult.

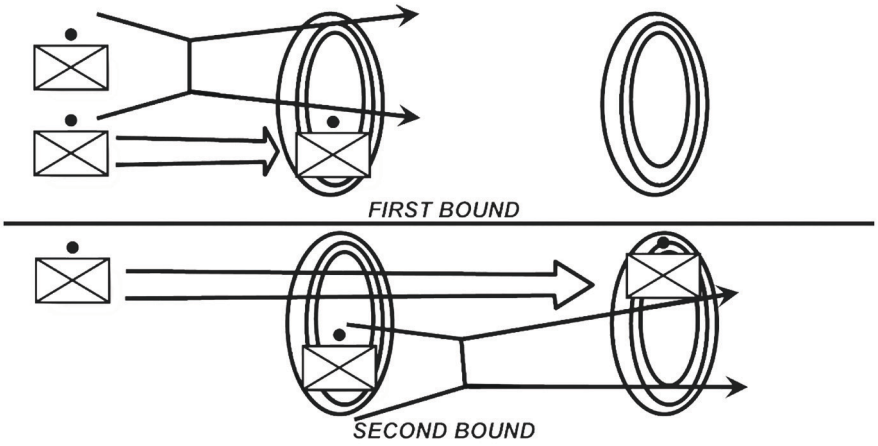


Figure A-13. Alternate Bounds.

Control of Bounding Overwatch

A platoon commander must provide direction to subordinate leaders to effectively employ bounding overwatch. Subordinate leaders should be informed of suspected or known enemy locations, the position of the overwatching element, the route of the bounding element, the location where the bounding element will establish overwatch, and the signal to be employed when they are in position. In addition, the platoon commander should coordinate the plan, give additional orders after the initial bound, and consider the bound's length and the deployability of organic weapons in support of the bounding element.

The movement of the platoon's third squad in this movement should be considered. The platoon commander can decide to have the third squad move with the lead or trail element, or they can be removed from the rotation in order to utilize them in maneuver on contact with the enemy.

ROUTE SELECTION AND NAVIGATION

Route selection is vital to a movement's success. Leaders select routes to maximize security, provide ease of movement, and accomplish their missions within allotted times. During planning, the platoon considers danger areas along the route where the terrain and possible enemy OPs increase a platoon's exposure to enemy observation, fires, or both. The platoon commander selects routes that minimize the unit's exposure to danger areas. The platoon commander may coordinate for a UAS or other ISR asset to reconnoiter danger areas prior to approaching them. Platoons should be well-rehearsed in the immediate action drills used when crossing danger areas.

Mission

When selecting routes, the platoon commander must consider the tasks, timelines, and tactical control measures established by the company. The company may designate the times and/or routes for movement, and may require a passage of lines or a linkup at a contact point, assembly area, or ORP. The location and time for crossing the LD and the locations of phase lines, boundaries, and LOAs all contribute to the company's plan, and may restrict or constrain tactical movement.

Guidance from HHQ on whether to avoid or seek contact with the enemy is essential. If the movement is to avoid contact with the enemy (such as during an infiltration), the platoon commander selects a route that conceals the platoon's movement and avoids detection. If the mission is to seek enemy contact (such as during a movement to contact), a route is chosen that will increase observation and place the platoon in a favorable position relative to known or suspected enemy positions.

Enemy

Enemy capabilities and TTP are major considerations in the platoon commander's route planning. Specifically, for a tactical movement, a focus may be placed on the enemy's ability to observe the platoon, including their use of optics (i. e., both day and night), suspected or known enemy positions, and activities that allow the enemy to interdict the platoon, such as patrolling and available fire support. Enemy employment of mines and IEDs affect route planning. The platoon commander should be aware of previous movements in the area and strive to avoid setting patterns that allow the enemy to target the unit.

Terrain and Weather

For route selection, the platoon commander conducts an extensive analysis of terrain. The priority is developing a route which utilizes terrain to put the platoon in a position of advantage. Second, a route is determined that facilitates ease of movement to the destination. At a minimum, a platoon commander conducts a map reconnaissance and reviews intelligence products. As time permits, the platoon commander seeks out intelligence products and/or requests that UASs are employed to reconnoiter the route. Weather and illumination are critical factors in route selection.

Troops and Support Available

A platoon commander should specifically consider the unit's size, physical condition, and load. Route selection must allow the unit to arrive at the destination on time and mission capable. Halts may be planned along a route to ensure a platoon is capable of conducting operations at the

movement's completion. The load carried by individual Marines affects the speed and security of a unit conducting a movement.

Time

Route selection and the time required to conduct movement are closely interrelated. Movement after dark may increase security, but usually slows movement, even with NVDs. The quickest route is rarely a straight line. A platoon commander must account for the effect of restrictive terrain and changes in elevation that will slow the platoon's movement. The formations and techniques required to travel through high threat areas may reduce speed, whereas longer routes around these areas might be faster because another formation allows for greater speed. Table A-1 provides some general rules of thumb for estimating unopposed movement rates for dismounted infantry.

Table A-1. Unopposed Movement Rates.

Unopposed Movement Rates		
Type of Terrain	Dismounted Infantry	
	Day	Night
Unrestricted	4 kmph	3.2 kmph
Restricted	2.4 kmph	1.6 kmph
Severely Restricted	1.0 kmph	0.1 to 0.5 kmph

The platoon commander should plan to conduct halts during the movement to preserve the platoon's physical condition and increase security. A 10-minute halt for every 50 minutes of movement is a good planning tool. The platoon commander designates this along the route, selecting terrain that is advantageous for a halt.

ACTIONS AT DANGER AREAS

When conducting METT-T analysis, a platoon commander identifies and marks on the map all danger areas that expose the platoon to enemy observation and fires or explosive hazards. To the extent possible, route selection should minimize crossing danger areas. When crossing a danger area is unavoidable, the platoon must cross it with the greatest possible degree of speed and security. A platoon commander conducts well-rehearsed immediate action drills to ensure the platoon can negotiate both planned and unplanned danger areas. When determining a method for crossing danger areas, a platoon commander considers the available time, the terrain, and the expectation of enemy contact. The following are examples of common danger areas:

- Open areas expose a platoon's movements to possible enemy forces at a great distance.
- Roads, trails, and streams offer enemy forces a greater degree of observation along the axis of the terrain feature and a greater degree of observation from the far side of the crossing site.
- Obstacles, minefields, and enemy positions are covered by enemy observation and fires.
- Built-up areas; local inhabitants may observe and report a platoon's movement to enemy forces.

Crossing a Danger Area

A platoon follows the same basic sequence when crossing a danger area, regardless of the method used. The intent is to establish sufficient security to allow the platoon to move quickly and efficiently through the danger area to continue along its route. Successful negotiation of a danger area requires well-rehearsed immediate action drills. It is preferable for a platoon commander to anticipate danger areas through a map reconnaissance. Any delays in coordinating and executing a danger area crossing further expose the platoon to the likelihood of enemy observation and fires.

Table A-2 lists steps a platoon should take to cross a danger area, either independently or as the lead element of a larger force. The types of danger areas are—

- Linear (e. g. roads, water features, large trails, draws, washes, and valleys).
- Open areas (e. g. meadows and fields).

For additional information, refer to MCTP 3-01A.

Table A-2. Steps for Crossing a Danger Area.

STEPS	ACTIONS
1	The lead element reports the danger area, and the platoon halts.
2	The platoon commander confirms the danger area and determines the technique the platoon will use for crossing.
3	The platoon commander designates near side and far side rally points.
4	The platoon establishes near side security, generally performed by the trail squad. The platoon commander reconnoiters the danger area and selects the best location for the platoon to cross.
5	The platoon commander reconnoiters the danger area and selects the best location for the platoon to cross.
6	Once near side security is established, the far side security clement crosses.
7	The far side security element clears the far side and then establishes far side security.
8	The platoon quickly crosses the danger area.
9	The far side security element begins their movement along the route.
10	The main body follows in trace of far side security.
11	The near side security element crosses last and joins the platoon.
12	Unit leaders take personnel accountability in stride.
13	The platoon resumes their movement along the route.

Crossing a Linear Danger Area

A linear danger area is an area that exposes a platoon to enemy observation and fire along the axis of a terrain feature. These may include roads, trails, and streams. Figure A-14 displays a deliberate method for crossing a linear danger area.

If a platoon commander determines that a situation does not permit use of this technique, they may change the formation into a column to limit the platoon's exposure, increase speed, and disperse the lead element in order to provide traveling overwatch. All of these adjustments enhance speed and security. In addition, a platoon commander should select the most covered and concealed location to conduct a crossing. A good example would be a bend in the road that limits exposure to the flanks.

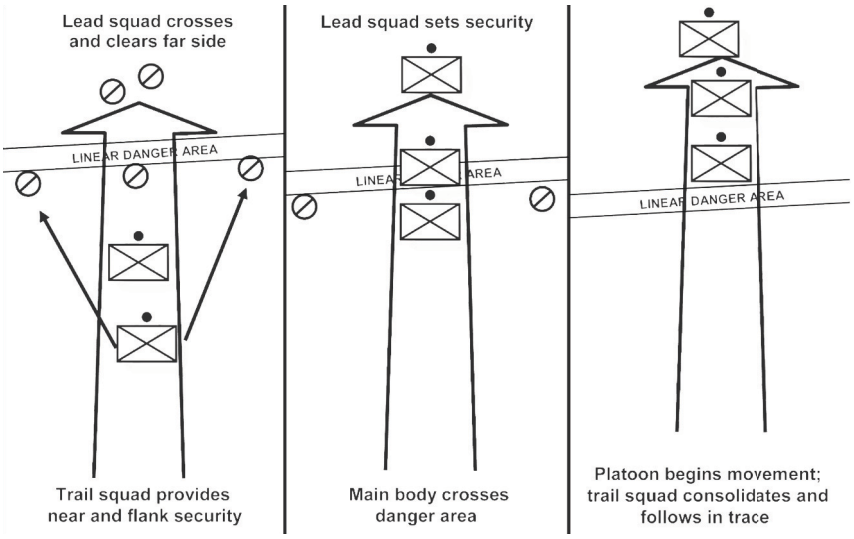


Figure A-14. Technique for Crossing a Linear Danger Area.

Crossing an Open Danger Area

Open danger areas do not have a standard shape, but include any open area that exposes a platoon to enemy observation and fires in multiple directions. A platoon commander employs different crossing methods depending on whether or not the platoon can bypass the open danger area. If the platoon cannot bypass it, it employs traveling overwatch, bounding overwatch, or a combination of both to cross the danger area. The platoon commander uses traveling overwatch if contact is unlikely or if speed is a concern. Bounding overwatch should be used if the platoon expects contact. Figure A-15 shows examples of employing traveling and bounding overwatch to negotiate an open danger area.

Enemy Contact at Danger Areas

The immediate action drills associated with danger area crossings increase the deployability of weapons systems if enemy contact occurs. The platoon commander designates near and far side rally points to facilitate command and control in case of contact. They designate a rally point based on the direction of enemy contact and the disposition of squads when the platoon makes contact. For instance, if the lead squad and main body have crossed to the far side and then make contact, a platoon commander may decide to consolidate on the far side because the majority of their forces are already across. A platoon commander should give subordinates guidance on appropriate actions in the event of contact while conducting a danger area crossing, including the discovery or detonation of explosive hazards.

Security During Halts

Halts may be planned or unplanned, and range from brief to extended periods. When possible, the platoon commander selects defensible terrain suitable to serve as a rally point when conducting a halt. If a platoon commander does not anticipate remaining at a halt for an extended period, a cigar-shaped defense is employed. When the platoon is to remain halted for an extended period, it assumes a perimeter defense.

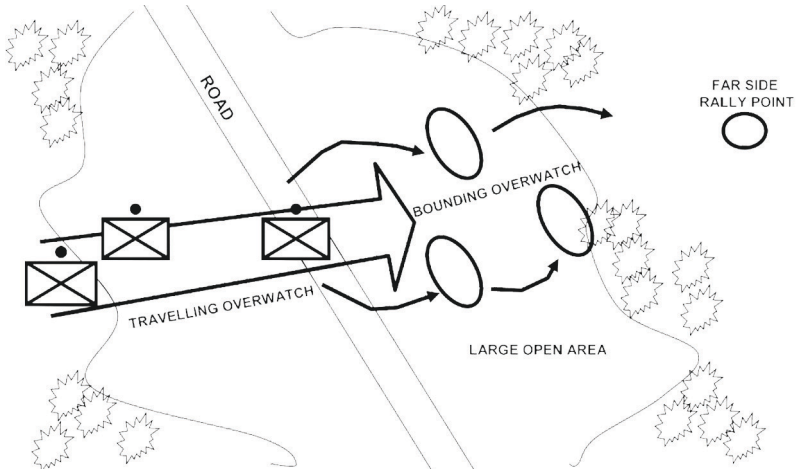


Figure A-15. Employing Traveling and Bounding Overwatch to Cross an Open Danger Area.

Cigar-Shaped Defense. When a platoon commander calls a short halt, individuals within the platoon move outboard to covered and concealed positions while maintaining the same sectors of fire that their unit leader assigned them in formation. The platoon retains its basic shape within the formation, allowing the platoon to quickly resume movement.

Perimeter Defense. When a platoon commander expects a halt to be of significant length or extends a halt, the unit establishes a perimeter defense. Each squad covers a sector of fire integrated with adjacent squads to provide 360-degree security. Depending on the duration of the halt, the platoon may begin entrenching their positions.

APPENDIX B
MECHANIZED OPERATIONS

The Marine Corps does not maintain permanent mechanized infantry units; instead, it maintains well-trained general-purpose infantry units capable of task-organizing to execute a myriad of ground combat missions. For the Marine Corps, the term *mechanized infantry* refers to a task-organized force of Marine infantry mounted in AAVs. The GCE commander creates mechanized forces by task-organizing infantry, assault amphibian, engineer, and tank units. These mechanized forces are supported by the full range of MAGTF capabilities.

This appendix describes how an infantry platoon plans for, task-organizes for, and conducts mechanized operations. Mechanized operations demand effective coordination between infantry units and attached or supporting assault amphibian units. Tank units are very often attached or in direct support of infantry units during mechanized operations. Combat engineers may be attached or in direct support for mobility (e.g., breaching). Therefore, a "company-level" mechanized breach often includes Marines and units drawn from four separate battalions.

Effective coordination between the elements of a mechanized force requires training and rehearsals. The infantry platoon commander must have a thorough tactical and technical knowledge of assigned or supporting tanks and AAVs. In addition to understanding the vehicles' capabilities and limitations, the infantry platoon commander must understand the disparate capabilities and limitations of the components of the mechanized force. In general, the infantry platoon commanders should seek out recommendations from attached or supporting assault amphibian, tank, and engineer small unit leaders on the employment of their capabilities. For information in addition to what is contained in this appendix, refer to MCTP 3-10B, *Marine Corps Tank Employment*; MCTP 3-10C, *Employment of Amphibious Assault Vehicles*; or MCTP 3-34A.

TASK ORGANIZATION

Marine infantry units must be task-organized in AAVs to conduct mechanized operations to maximize the mobility, force protection, and firepower of the force based on the tactical situation.

Assault Amphibian Units

An assault amphibian platoon consists of 12 amphibious assault vehicles—personnel variant (AAVP7s) and is designed to lift an infantry company. A platoon is organized into four sections of three AAVP7s, with three sections assigned to the rifle platoons and one section assigned to the company, which includes one vehicle to carry the company commander and FST, one to carry the mortar section, and one to be used as required by the company gunnery sergeant or weapons platoon. The assault amphibian platoon commander directs the employment of the assault

amphibian platoon according to the supported unit commander's concept of operations. The assault amphibian platoon employs AAVs to—

- Achieve mechanized mobility.
- Negotiate obstacles.
- Support the commander's plan of fires.
- Enhance the commander's communications capability.

An assault amphibian section consists of three AAVP7s, and is capable of transporting a reinforced rifle platoon. The section leader may be a staff noncommissioned officer or a sergeant. They provide expertise and recommendations on mechanized operations to the infantry platoon commander. The section leader is also responsible for supervising employment of the assault amphibian section's weapons systems as part of the platoon's fire support plan. If the platoon dismounts, the assault amphibian section leader can maneuver the section or control the unit's fires independently.

Figure B-1 illustrates the characteristics of the AAVP7. The basic AAV armor is proof against 7.62mm fire at 300 meters, as well as mortar and artillery fragments. When equipped with the enhanced appliqué armor kit, the vehicle provides protection against 14.5mm fire at all but point-blank range, and significantly decreases the effectiveness of the shaped charges commonly found on RPGs and ATGMs. The armor is not proof against cannon and the ATGMs commonly found on tanks and infantry fighting vehicles (IFVs). As a general rule, AAVs exploit the cover and concealment provided by terrain to reduce the risk from antiarmor fires. To increase the security of the AAVs, particularly in limited visibility and close terrain, the vehicles operate with cargo

Crew	3, vehicle commander, driver, crew chief
Weapons	M2 .50 cal (200 ready rounds, 1000 stowed) MK-19 40mm grenade launcher (96 ready rounds, 768 stowed)
Boatspaces	21 Marines
Cruising range	200 miles at 25 MPH on land
Speed	45 MPH on land 8 MPH afloat
Obstacle crossing	Can cross 8 foot ditch and climb over 3 foot wall

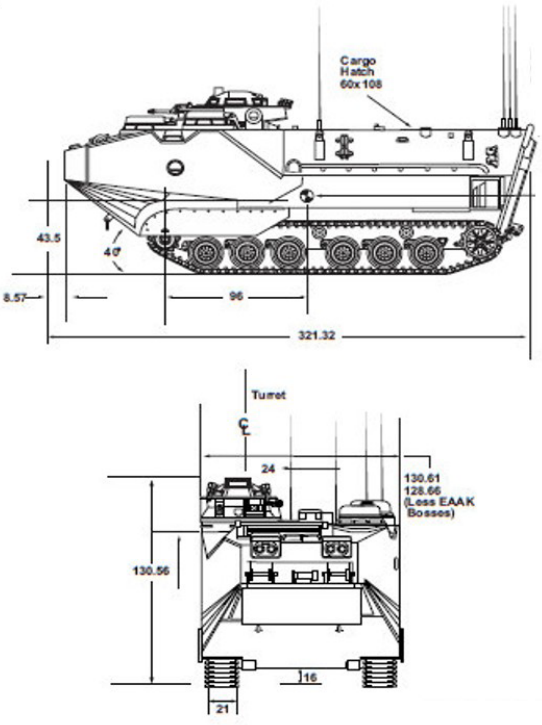


Figure B-1. AAVP7 Characteristics.

hatches in the open-and-locked position to enable the embarked infantry to provide added observation and direct fires.

The infantry platoon commander will assign the platoon to the vehicles as required by the situation. The infantry platoon commander normally rides in the troop commander's hatch of the AAV, commanded by the assault amphibian section leader. Tactical integrity of the unit is maintained by assigning reinforced squads to each vehicle. Tactical spread loading ensures that the loss of one vehicle does not render the platoon nonmission capable, for example the platoon sergeant normally rides in the troop commander's hatch of a vehicle separate from the platoon commanders.

Tank Units

A tank company consists of 14 M-1 Abrams main battle tanks organized into three platoons of four tanks each and a company HQ of two tanks, one assigned to the commander and one to the executive officer. The tank platoon is organized into two, 2-vehicle sections, one lead by the platoon commander and one by the platoon sergeant.

Tanks typically train, operate, and fight as platoons. In the urban fight, Marine Corps tank units comfortably operate down to the section level. A tank section should never be separated. Like an infantry fire team, the section is the lowest operating echelon for tanks. A tank section may support an infantry platoon during urban operations.

Figure B-2 illustrates the characteristics of the M1A1 main battle tank. The frontal armor of the tank is proof against most tank and ATGM fires. The flanks and rear will protect against RPGs, mortar and artillery fragments, and the auto-cannon found on IFVs. The M-1 tank has a very effective set of night vision and thermal vision systems. When the crew has the hatches secured (i.e., being "buttoned up"), the crew of the M-1 has limited close-in visibility. Visibility is

Crew	4 – commander, gunner, loader, driver
Weapons	120-mm cannon (40rounds) M2 .50 cal (900 rounds) M240 coaxial M240 loaders (total of 10,400 7.62-mm rounds))
Cruising range	275 miles at 35 mph
Speed	45 mph
Obstacle crossing	Can cross 9-foot ditch and climb over 4-foot wall

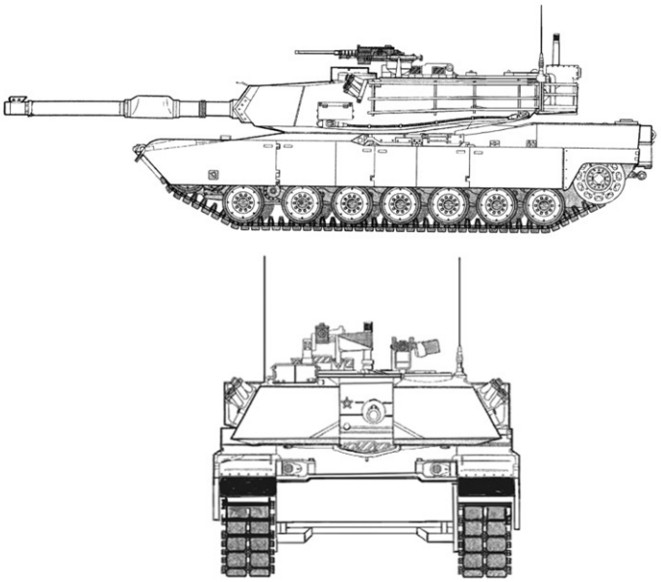


Figure B-2. M1A1 Tank Characteristics.

restricted based on the orientation of the turret and chassis. The driver has no visibility to the sides or rear. In close terrain such as woods or urban areas, the crew is challenged to maintain 360-degree security, and often requires support from infantry units. Likewise, the tank may be unable to locate or engage targets that are close to it on the ground, as illustrated in figure B-3. Tanks also cannot elevate their main guns sufficiently to engage all targets. The standoff required to engage certain floors of buildings with the main gun is illustrated in figure B-4. To increase the security of tanks, particularly in limited visibility and close terrain, infantry units may operate in proximity.

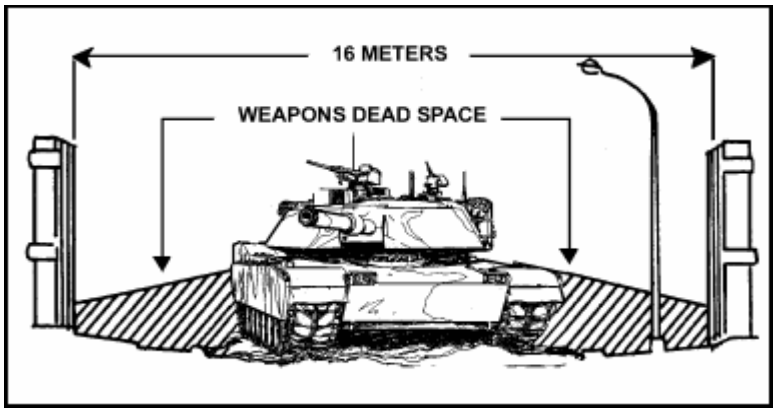


Figure B-3. Weapons Dead Space on a Tank.

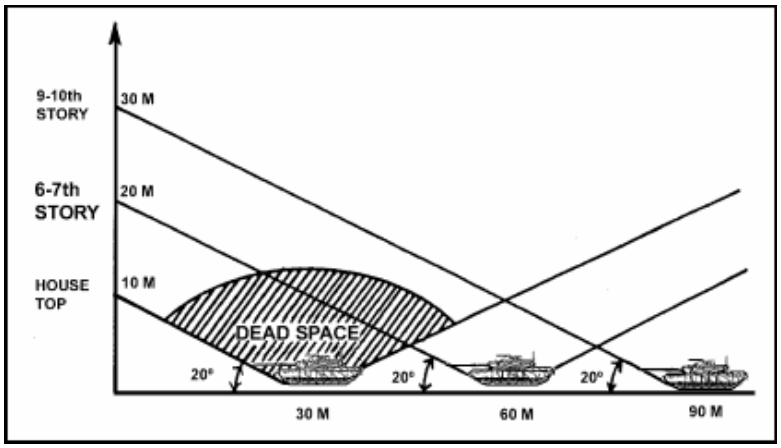


Figure B-4. Tank's Ability to Engage Vertical Targets.

Both the tanks and the infantry platoons must understand the dangers to the infantry of working in close proximity to tanks, which include—

- The tank driver is often not able to see prone Marines in front of the tank.
- Dismounted Marines should assume that a moving tank cannot see them, and stay clear.
- Overpressure from the main gun firing can kill or injure Marines up to 200 meters away (see figure B-5).
- Sabot petals are a hazard up to 1,000 meters from the gun (see figure B-5).

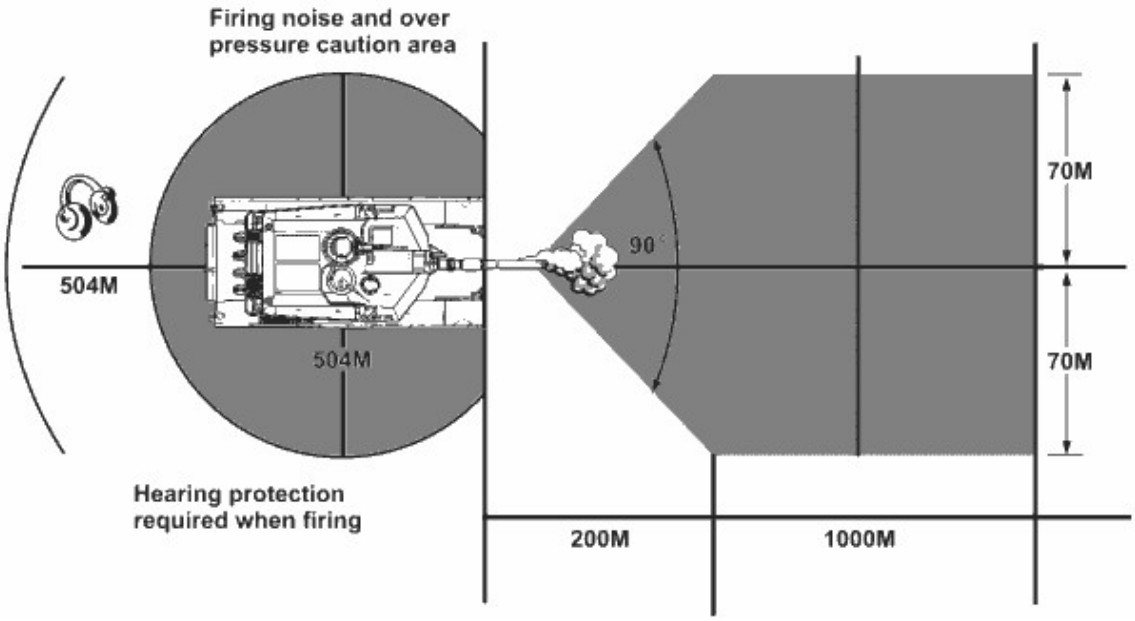


Figure B-5. Danger Area Associated with Overpressure and Sabot Petals.

Communications between tank crews and infantry is critical to prevent fratricide. During urban operations, a supporting tank section should have one of its radios set to the infantry platoon frequency.

Combat Engineer Units

For mechanized operations, combat engineer units are normally organized into obstacle clearing detachments. A reinforced combat engineer platoon normally supports a reinforced infantry battalion. For mechanized operations, that combat engineer platoon is often reinforced with AAVs and assault breacher vehicles, and task-organized into obstacle clearing detachments. Each obstacle clearing detachment is equipped to create a breach lane in expected obstacles. A notional obstacle clearing detachment might include a combat engineer squad mounted in an AAVP7 towing a line charge trailer, an assault breacher vehicle with full-width mine plow, and two M9 armored combat excavators. The obstacle clearing detachment is likely to be commanded by the platoon commander or platoon sergeant from the combat engineer platoon. A reinforced combat engineer platoon in support of a mechanized infantry battalion typically has sufficient assets to form two obstacle clearing detachments.

Company Landing Teams and Task Forces

Company landing teams and task forces are organized by cross-attaching tank platoons and infantry platoons mechanized in AAVs. An infantry company reinforced with an assault amphibian platoon would detach an infantry platoon mounted in an assault amphibian section and attach a tank platoon, forming a mechanized company landing team, often referred to as “team mech.” A tank company would detach a tank platoon and attach the mechanized infantry platoon, forming a tank company task force, often referred to as “team tank.” On Marine expeditionary unit deployments, one rifle company is normally reinforced with both an assault amphibian and a tank platoon, giving it three mechanized rifle platoons, a weapons platoon, and a tank platoon. For more information on landing teams and task forces, refer to MCWP 3-10.

EMPLOYMENT

Like any other operation, the scheme of maneuver for a mechanized operation is developed based on METT-T. Mechanized movement benefits from the speed, firepower and armor protection provided by the vehicles. While the AAVP7 provides infantry with mobility, firepower, and armor protection, the vehicle is neither a tank nor an IFV. Infantry unit leaders must develop schemes of maneuver that capitalize on the advantages and minimize the vulnerabilities of the mechanized force.

The capabilities and limitations of the various units must be understood. Including supporting small unit leaders in the planning allows infantry unit leaders to understand those capabilities and limitations. Units that understand one another's SOPs and have worked together before are much more effective. If the units are not well integrated, then extensive preparation and rehearsals are required to conduct effective mechanized operations.

Based on METT-T, a mechanized force's combination of tanks, AAVs, and infantry provides the commander with the options of—

- Mounted maneuver with AAVs.
- Mounted maneuver with tanks and AAVs.
- Dismounted maneuver supported by direct fires from tanks and AAVs.
- Dismounted maneuver supported by tanks in direct support (used in urban areas).
- Dismounted maneuver.

Mutual Support

To best exploit the mechanized force's offensive capabilities, infantry, tanks, and AAVs are employed to provide mutual support to one another. Assault amphibian and tank units support the infantry by—

- Providing mobile protected firepower.
- Neutralizing or destroying hostile weapons by fire and movement.
- Clearing paths through wire obstacles for dismounted infantry.
- Neutralizing fortified positions with direct fire.
- Supporting dismounted infantry by direct fire.
- Providing protection against long-range antiarmor fires.
- Leading the attack whenever possible.
- Assisting in consolidating the objective.

Infantry support assault amphibian and tank units by—

- Breaching or removing antiarmor obstacles.
- Assisting in neutralizing or destroying enemy antiarmor weapons.
- Designating targets for tanks and AAVs.
- Protecting tanks and AAVs from enemy infantry and antiarmor weapons.

- Leading the attack dismounted when necessary.
- Clearing bridges and fording areas.
- Clearing restrictive terrain such as urban, swamp, or woodland areas.
- Conducting dismounted security patrols.

Tanks and Mechanized Infantry Attack Together

This method is used when enemy resistance is weak or has been rendered ineffective by supporting arms, or their defensive positions are overextended. A mounted assault is best used when the enemy is occupying hasty fighting positions, antiarmor fires can be suppressed, and terrain near the objective allows for rapid movement onto and across the objective. Tanks and mechanized infantry advance together in integrated formations. Tanks typically lead the formation, while the infantry remains mounted in AAVs until the forward defensive positions of the enemy have been breached. The assault must be carried out rapidly. Movement across the objective must be fast and continuous. A heavy volume of suppressive fires is maintained to keep enemy soldiers down in their positions. Stabilized turrets allow tanks to continue moving while conducting fire and movement. Once the tanks and AAVs reach the far side of the objective, they occupy hull-down positions, if possible. Employing tanks and mechanized infantry to attack together—

- Exploits the mobility, speed, armor-protected firepower, and shock of the mechanized force.
- Reduces enemy reaction time.
- Disorganizes the enemy's defense (i.e. their positions have normally been breached before the infantry dismounts).
- Conserves the energy of the mechanized infantry (i.e., they are carried by AAVs to dismount points short of, on, or behind the objective).
- Reduces the amount of time that the infantry is exposed to enemy fires.

When employing tanks and mechanized infantry to attack together, there is a greater potential for casualties if enemy antiarmor fires cannot be bypassed or effectively reduced by suppressive fires. Amphibious assault vehicles are vulnerable to antiarmor weapons, and may be destroyed if employed as a tank. The AAVs' armor can provide protection against hand grenades, shell fragments, and some small arms fire. However, even when enhanced applique armor kits are installed, the AAV is vulnerable to the fires of tank and antitank guns, ATGMs, and rockets.

Tanks and Amphibious Assault Vehicles Support by Fire

Based on the threat, the commander may decide to attack using tanks and AAVs in a support-by-fire position. If antiarmor fires cannot be suppressed, the mechanized force moves to a dismount point in covered and concealed terrain. The tanks and AAVs would then move to support by fire positions. The tank and AAV support-by-fire-only method should be used when—

- Obstacles prevent mounted movement and cannot be quickly breached or bypassed.
- The enemy antiarmor capability poses a significant threat to both tanks and AAVs.
- Terrain canalizes mounted movement into likely enemy ambush sites and minefields.
- Visibility is limited.

The support by fire element can deliver the following types of direct fires to support the dismounted infantry:

- Point fire is directed against a specific identified target (e.g. machine gun or ATGM position).
- Area fire is distributed over an area where enemy positions are more numerous and less obvious. Fire is distributed in width and depth to keep parts of the target under fire.

Positive control of supporting fires between the dismounted infantry and base of fire elements must be maintained throughout the attack. The assault force uses radio communication, prearranged visual signals (i.e., pyrotechnic), and/or messengers to designate targets and coordinate supporting fires. Tanks, AAVs, and other available direct fire support assets may displace forward to new support by fire positions as it becomes feasible. The base of fire element ideally supports from concealed positions (i.e., hull-down or turret defilade). To avoid presenting the enemy with easily acquired stationary targets, units comprising the base of fire element constantly reposition themselves to different support by fire positions. This often serves to confuse the enemy.

The assault force should advance on a route that provides cover and concealment and prevents or minimizes masking the base of fire element's fires. If available, engineers or assault Marines should accompany the assault force to breach obstacles and destroy fortified positions.

Multi-Axis Attack

A multi-axis attack is a combination of the two general methods of employment, based on METT-T. A primary consideration is the availability of suitable avenues of approach for the tanks, AAVs, and infantry. The multi-axis attack is often used to exploit the amphibious capability of the AAV in crossing streams, rivers, lakes, and marshes. In addition, a multi-axis attack may be used when a single avenue of approach is too narrow to accommodate the entire mechanized force.

The tanks typically follow the more open terrain, while the infantry advances on an axis offering cover and concealment. Tanks initially support the infantry advance by fire and join the infantry as soon as practical. The tanks' movement is normally timed so that the tanks assault the objective slightly in advance of the infantry to take maximum advantage of their shock effect. The greatest challenges to employing this method are achieving proper timing among the various elements and coordinating fires during the attack.

Mechanized Movement and Movement Techniques

Tanks usually lead the mechanized unit because they have better target acquisition, firepower (including shoot-on-the-move capability), and armor protection than AAVs. When the situation permits, AAVs can support the mechanized force by following the tanks close enough to fire around the tanks and deliver suppressive fire against enemy infantry and antiarmor weapons encountered on exposed flanks. The order of movement is generally based on the following criteria:

- Tanks lead in open areas or when faced with a significant armor threat.
- Mechanized infantry leads when tanks are employed in overwatch positions.
- In close terrain, the infantry may dismount and move through or around potential danger areas, supported by the overwatching tanks and AAVs.

The desired distance between tanks and AAVs should be determined before starting the attack based on the following METT-T situations:

- *Mission*. If the mission requires rapid, closely controlled movement and closely coordinated dismounted infantry action, the AAVs may closely follow the tanks.
- *Enemy*. The capabilities of the enemy force influence the location of the tanks and AAVs in the assault. If the enemy force possesses a substantial antiarmor capability, both the tanks and AAVs may be better employed in providing direct fire support to dismounted infantry.
- *Terrain and weather*. When visibility is poor and/or terrain provides numerous defilade positions and short fields of fire, AAVs closely follow tanks. However, in some situations, mechanized infantry may lead tanks. For example, mechanized infantry mounted in AAVs may lead across an unfordable body of water or a marshy area that tanks cannot ford to seize an objective from a more favorable direction (e.g., a bridge or other key terrain). When the mechanized force is confronted with close terrain (e.g., woodland or urban areas), dismounted infantry should clear this terrain before AAVs and tanks move through it. This facilitates frequent and rapid dismounting and protects the AAVs and tanks from enemy infantry and antiarmor fires.
- *Troops and support available*. Task organization also influences the formations and relative positions of the AAVs. Few or no tanks, other available direct fire weapons, and supporting arms may require that AAVs lead the assault.
- *Time available*. The less time there is, the closer the AAVs typically are to the tanks. This cuts down reaction and response times, and may permit faster reorganization.

The movement techniques discussed in Appendix A can be adapted for mechanized movement. For additional information, refer to MCTP 3-10B and MCTP 3-10C.

Dismounted Infantry Attack

Infantry typically assaults on foot if the enemy is in well-prepared defensive positions, if antiarmor fires cannot be suppressed, or if the terrain restricts vehicle movement onto the objective. If the attack begins mounted, the infantry should be dismounted in a covered and concealed position that is as close to the objective as possible. The base of fire elements delivers supporting fires, while the dismounted infantry deploys. The infantry uses radio, prearranged visual signals (e.g., pyrotechnic), and/or messengers to direct the base of fire elements to shift and cease supporting fires. The dismounted infantry then employs fire and movement through the objective. Subordinate elements of the base of fire element usually displace to subsequent support by fire positions. When tanks and AAVs from the base of fire element rejoin the dismounted infantry, the infantry—

- Suppresses any remaining enemy position as the tanks and AAVs move to the objective.
- Reconnoiters initial support by fire positions and guides tanks and AAVs into the positions when necessary.
- Provides flank and rear security for the AAVs and tanks.

Infantry small unit leaders may designate targets for overwatching AAVs and tanks using prearranged signals that might include marking with 40mm smoke grenades, laser designators, or other means. Infantry units protect the flanks and rear of the tank unit and employs organic weapons, directs fires from the base of fire element, and supporting arms against enemy positions.

Infantry may conduct dismounted maneuver in coordination with tanks, normally moving behind the tanks. This technique permits close coordination and maximum mutual support. Infantry may lead dismounted when—

- Terrain and vegetation are restrictive. For example, when terrain and vegetation canalize movement into likely enemy ambush sites and minefields (e.g., urban areas or woodland terrain).
- Visibility is limited.
- Antiarmor fire cannot be bypassed or suppressed by fire.
- Significant obstacles or fortified positions are encountered that may prevent mounted movement and cannot be bypassed.

Infantry commanders must decide when to dismount their units to maximize the combat power of their forces while protecting them from casualties. Infantry normally dismounts before entering into the final assault. Dismount points are selected to offer the dismounting force covered and concealed locations to orient the Marines coming out of the AAVP7s. Ideally, the dismount location allows the AAVs to occupy hull defilade positions. Depending on the threat, the AAV section may remain at the dismount point and support by fire or maneuver as directed by the platoon commander.

Platoon commanders use their judgment and situational awareness to make an appropriate decision of whether or not to change the dismount point. Timing is critical; dismounting too early will slow down the force's momentum and unnecessarily expose the infantry to hostile fire. Speed can provide for the security of a mechanized force already committed to the final assault. Ideally, the infantry is dismounted after forward defensive positions have been breached.

Rapid dismount and good vehicle dispersion reduce the force's vulnerability to enemy fires. Well-understood SOPs and well-rehearsed battle enable rapid dismount and good vehicle dispersion. Dismount points may be short of the objective, on the objective, or after passing through the objective.

Dismount Short of the Objective. Tactical conditions may require seeking a dismount point short of the objective, usually outside of the effective fires of small arms and hand-held antiarmor weapons. Ideally, the dismount point should be located on easily recognizable terrain that provides cover from enemy direct fires. Dismounting short of the objective has advantages and disadvantages.

The advantages include—

- Dismounting infantry Marines are protected from small arms and observed indirect fires.
- Infantry can be oriented as they approach the objective.
- Control can be established at the dismount point.
- Organic and supporting fires can suppress the enemy while the infantry is dismounting.

The disadvantages include—

- Dismounted infantry Marines are exposed longer to enemy small arms and indirect fire as they move forward in the assault.
- Suitable dismount points forward of enemy positions may be targeted by enemy direct or indirect fires.

Dismount on the Objective. The dismount point may be on the objective when the force has achieved surprise or the enemy antiarmor defense is weak. Dismounting on the objective has both advantages and disadvantages.

The advantages include—

- Greater speed and shock effect are achieved.
- Mechanized infantry is protected longer by AAV armor from the fires of enemy small arms.
- Supporting fires can continue while the mechanized force approaches its objective, since mounted forces have protection against shell fragments and ricochets.

The disadvantages include—

- Troops dismounting on the objective may be disoriented to specific objectives.
- Control is difficult to establish at the dismount point due to potentially close enemy fires.
- AAVs and the infantry units embarked on them are vulnerable to short-range antiarmor weapons.
- A high volume of suppressive fire is required to support dismounted infantry.

Dismount After Passing Through the Objective. Dismounting after passing through the objective is employed when a mounted attack has been effective. The capabilities of the enemy antiarmor defense will dictate whether or not this is feasible. Dismounting after passing through the objective has both advantages and disadvantages.

The advantages include—

- Dismounted infantry fights from an area and direction unexpected by the enemy.
- Control is usually more easily established when not on the objective.
- The enemy is likely to have been shocked by being overrun.

The disadvantages include—

- This method may conflict with enemy positions in depth.
- Enemy indirect and direct fires may target suitable dismount points.
- Turning AAVs around in close proximity to enemy fires can make the AAVs more vulnerable to flank shots and may reverse the relative positions of the tanks, AAVs, and infantry.

Formations

The most common mechanized and motorized formations are the line, wedge, echelon, column, coil, and herringbone. The line, wedge, echelon, and column formations serve essentially the same purposes as their dismounted equivalents. The coil and herringbone are formations used during short halts. Figures B-6 through B-10 are not to scale, as distances between vehicles may vary from 25 meters in close terrain to 100 meters between vehicles in open terrain. For additional flag, light, and hand and arm signals used in mechanized operations, refer to MCTP 3-10C.

Line

Figure B-6 is an example of a line formation, which is used when a unit or element is crossing a danger area or otherwise needs to maximize firepower to the front. In a mechanized line, elements move abreast of one another and are dispersed laterally. The advantages of the line formation are that it—

- Permits maximum fires to the front or rear.
- May be used in an assault to maximize the firepower and shock effects of the heavy mechanized unit—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.

The disadvantages of the line formation are that it—

- Is difficult to control over long distances, at night, and during periods of limited visibility.
- Is less secure than other formations because of the lack of depth.
- Permits minimum fires to the flanks.
- Is vulnerable to fire from the flanks.
- Requires large frontages.
- Is the most difficult formation from which to transition to other formations.

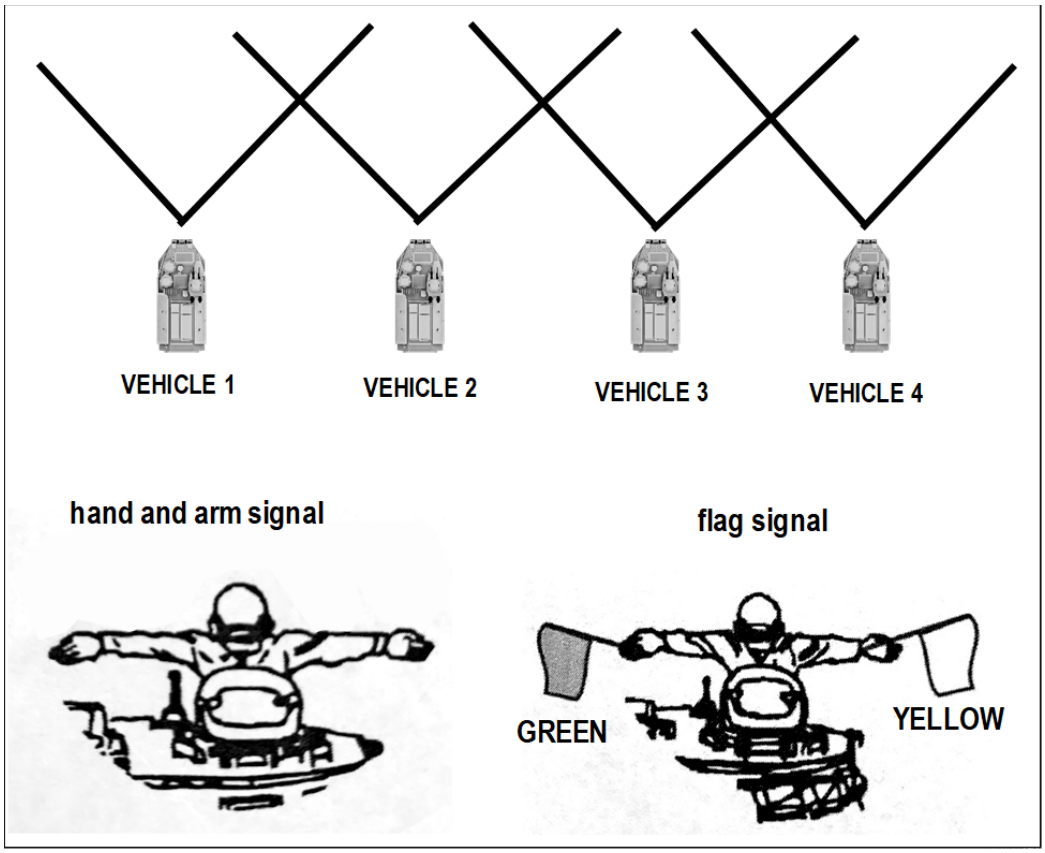


Figure B-6. Line Formation.

Wedge

Figure B-7 is an example of a wedge formation. The wedge formation is flexible, enabling firepower to the front and flanks, and is therefore used most often with the enemy situation is unclear or when contact is possible. It is easier to control over distances, as the trail vehicles maintain formation on the lead vehicle. The advantages of the wedge formation are that it—

- Provides security and firepower to the flanks and front.
- Is easy to control.
- Can be used with the traveling and traveling overwatch techniques.
- Allows for rapid transition to bounding overwatch.

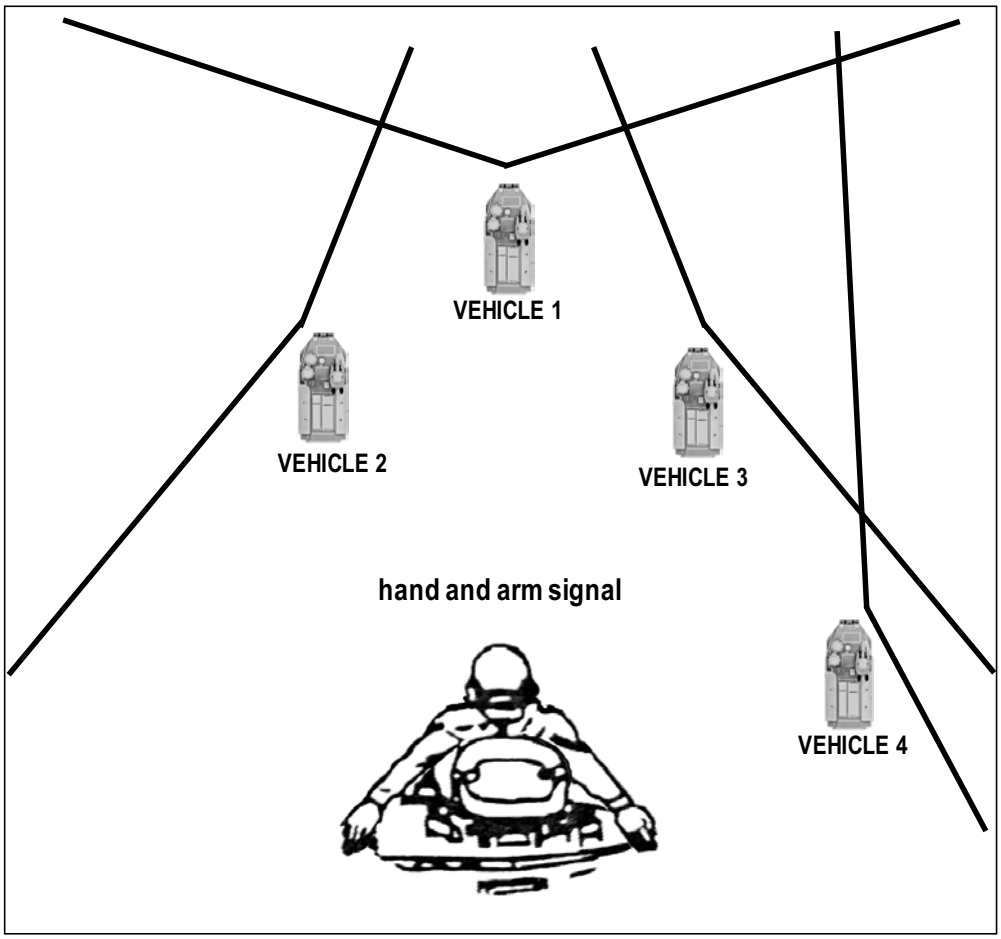


Figure B-7. Wedge Formation.

Echelon

Figure B-8 is an example of an echelon formation. The platoon uses the echelon formation to protect the flank of a company movement, or when the threat is suspected on a flank. The unit depicted is best able to engage targets to the unit's front and flank (i.e., in figure B-12, the right flank). The advantages of the echelon formation are that it—

- Affords excellent security for the parent unit in the direction of the echelon.
- Facilitates deployment toward the echeloned flank.

Echelon left or right can be used to protect an exposed flank; however, the disadvantages of the echelon formation are that it is—

- Difficult to control.
- Difficult to use over long distances or in poor visibility.

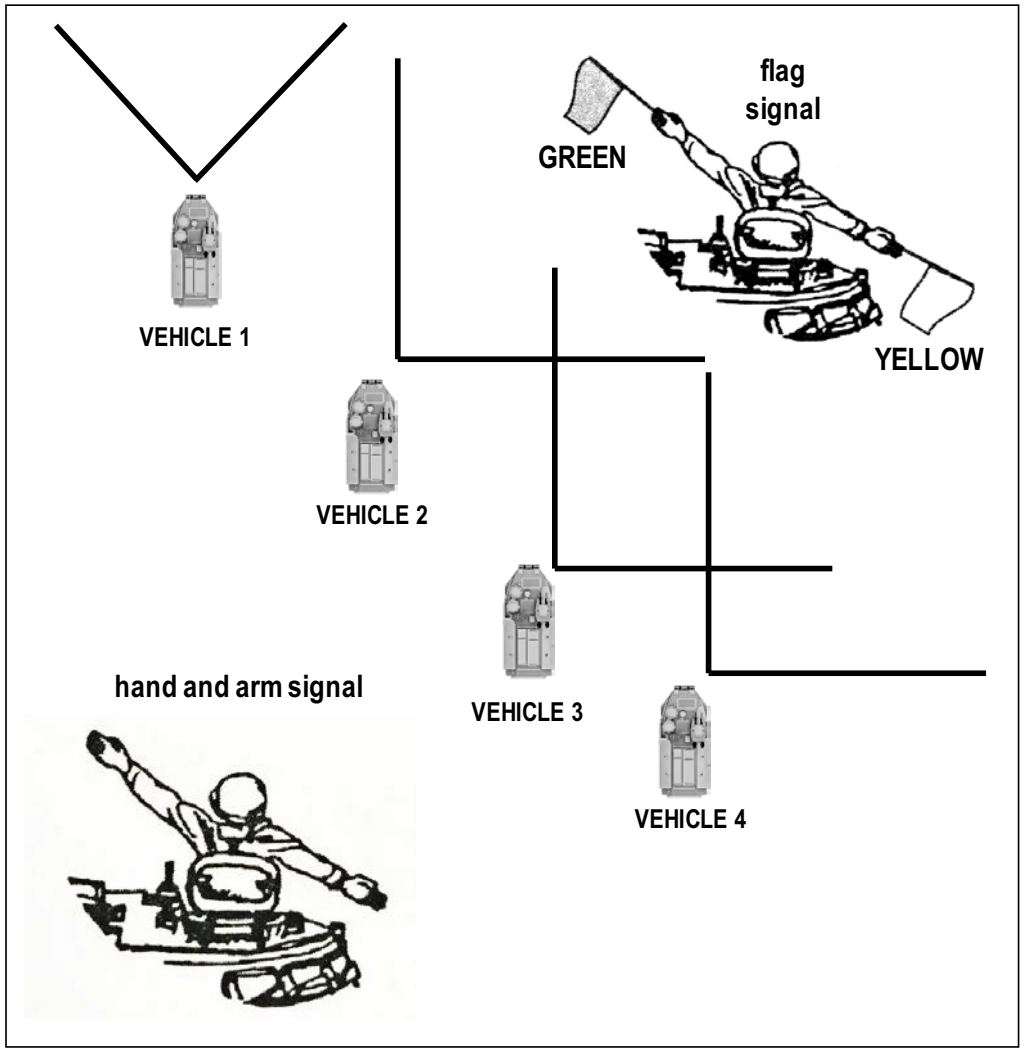


Figure B-8. Echelon Formation.

Column

Figure B-9, is an example of a column formation. The platoon uses the column formation when speed is essential and contact is unlikely, or when moving through constricted terrain on a specific route. Column formations can be closed or open, depending on the visibility, the terrain, and the enemy TTP. Vehicle spacing in closed column is between 25 and 50 meters. In open column, vehicles are spaced between 75 to 150 meters, depending on the terrain. Closed column is used primarily in limited visibility and close terrain, such as in urban areas. It is easy to control and allows mutual support. When possible, vehicles should be staggered during movement for increased dispersion. The advantages of the column formation are that it—

- Is easy to control over long distances, at night, or during periods of limited visibility.
- Provides excellent control and fires to the flanks.
- Increases firepower to the flanks.
- Adapts to restrictive terrain or lanes.

The disadvantages of the column formation are that it—

- Provides extremely limited overall security.
- Limits firepower to the front and rear.

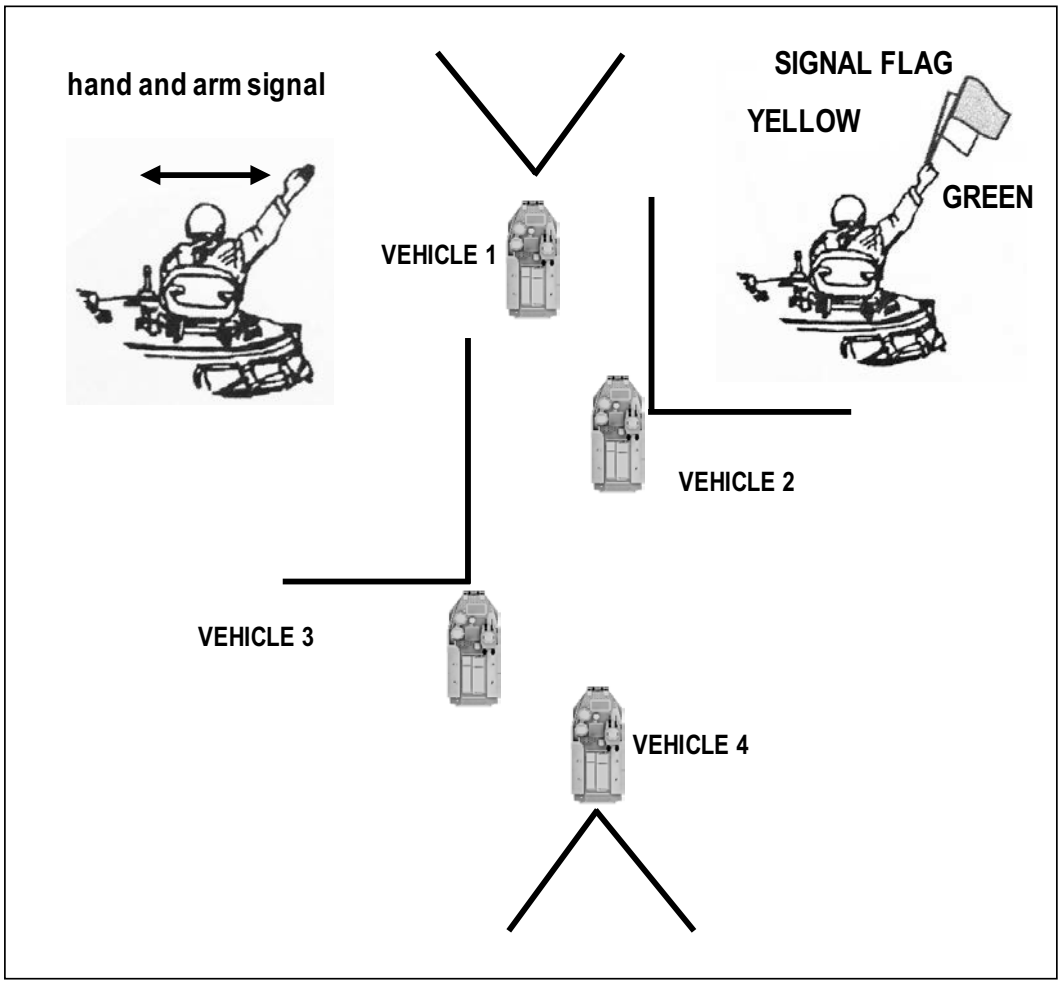


Figure B-9. Column Formation.

Herringbone

Figure B-10 illustrates how a unit moving in column deploys into a herringbone formation. The herringbone formation provides security when a unit temporary halts from a column while remaining ready to resume movement in the direction of travel. The lead vehicle stops, oriented on the direction of march. Subsequent vehicles stop, orienting their vehicles and weapons toward alternate flanks. Depending on how long the halt is expected, embarked Marines may provide local security from the cargo hatches, or they may dismount to improve security and force protection.

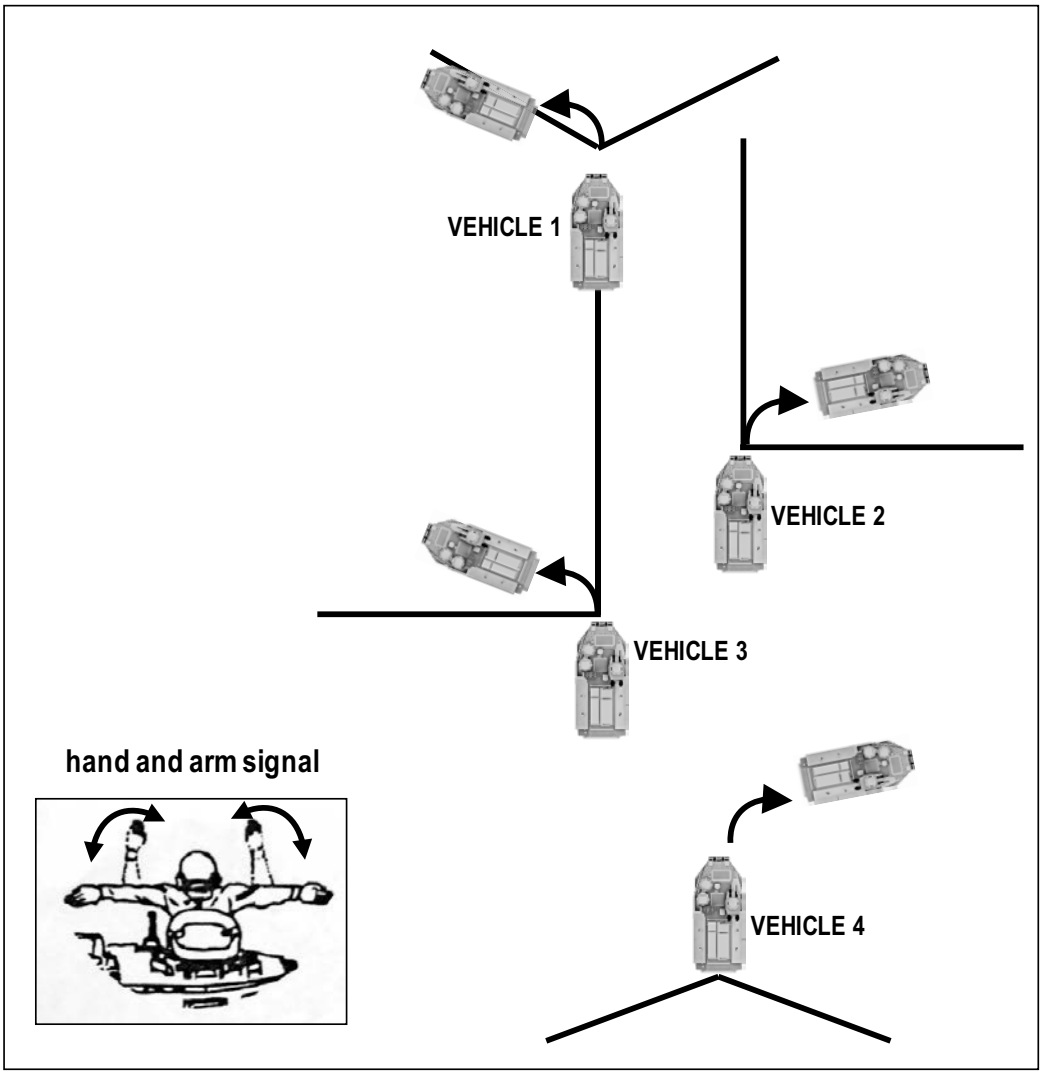


Figure B-10. Deploying From a Column into Herringbone Formation.

APPENDIX C
COUNTERMECHANIZED OPERATIONS

GENERAL

The destruction of enemy armored formations is achieved through the use of combined arms executed at the MAGTF-level. Marine infantry units hold critical roles in these operations. They must be capable of utilizing terrain and concentrating fires to defeat armored vehicles. Marines must be trained and psychologically conditioned to defeat enemy armored forces. The greatest tactical effect of armored vehicles is often the shock effect. Well-trained and well-led infantry units can defeat enemy armor, a fact which has often been proven in combat.

Effective use of ISR prevents surprise, while effective use of terrain and combined arms can mitigate the advantages of enemy armor, making enemy armored formations vulnerable to infantry. The MAGTF uses the full range of ISR and lethal and nonlethal fires to detect and shape enemy armor formations. The MAGTF and its GCE consider the enemy employment of armor in their situation estimates and plans.

To effectively defeat armored forces, an infantry platoon must exploit terrain and combined arms. Generally, the infantry uses mortars and artillery to force enemy armor to button-up and to separate enemy armor from their infantry support. Obstacles (i.e., both existing and reinforcing) are used to stop or slow enemy armor in engagement areas where Marines can concentrate ATGM and rocket fires.

THE THREAT

Deployed Marines may face a huge range of armored threats. These threats may range from improvised armored vehicles through platoon and company-sized formations of armored fighting vehicles operating in support of infantry units, to heavily mechanized forces consisting of tank and mechanized infantry regiments well supported by self-propelled artillery. Infantry platoons receive information on the threat in specific areas through their battalion intelligence sections. Due to this range of potential threats, a fundamental understanding of antiarmor operations is essential. Refer to MCTP 3-01F for a more in-depth discussion of antiarmor operations, threat doctrine, and potential threat armored vehicles.

The Marine Corps expects the enemies we will most often fight in the near future will be insurgent groups and non-state actors. These forces may be equipped with small numbers of armored vehicles captured from host nation security forces or improvised armored vehicles, which may be

employed as suicide bombs vice traditionally. They rarely employ the armored fighting vehicles well, but they often attempt to employ them to gain surprise.

Many potential enemies are trained and equipped with armored vehicles from the former Soviet Union. Many of these adversaries are not completely effective at employing combined arms, and are equipped with older and less capable armored vehicles.

A few potential state enemies possess the ability to employ regimental-sized armored formations effectively supported by both lethal fires and EW capabilities. These adversaries are most likely to employ modern armored vehicles in an effective combined arms manner.

STRENGTHS AND LIMITATIONS OF ARMORED FORMATIONS

Most enemies employing armor attempt to capitalize on the strengths of armored forces, mobility, firepower, and armor protection. Armored formations often include a mixture of armored reconnaissance forces, tanks, and mechanized infantry, supported by self-propelled artillery. These formations are powerful and can have a psychological effect on their opponents. Armored formations offer the enemy an array of capabilities; they are most effective when employed offensively, exploiting their speed, shock, and firepower.

Armored units can move rapidly, either on or off the road. Tracked vehicles have the ability to move cross-country; ford streams and shallow rivers; and push through small trees (up to 12 inches in diameter), vegetation, and wire obstacles. Compared to foot-mobile infantry, they can move very fast. A cautious advance rate for mechanized forces is 15 miles per hour (mph) or 24 kilometers per hour (kph). Main body elements often travel at 30 mph or 48 kph. On roads, many mechanized forces can sustain 50 mph or 80 kph.

Modern tanks, such as the T-90, have stabilized gun systems which are capable of putting effective fires on targets 2000 m away, even when the tank is moving cross-country. Many armored vehicles are equipped with ATGMs capable of engaging point targets up to 4,000 m away. Self-propelled howitzers often support tank and mechanized infantry formations, providing dedicated fire support. Last, many armored vehicles have machine guns which can provide a high volume of fires.

While armored formations are powerful, they have limitations. Collectively, armored formations are complex systems of systems. They are hard to control, require reliable logistics, and are vulnerable in close terrain. Armored vehicles require extensive maintenance, proficient operators, and skilled mechanics, as well as daily resupply of large quantities of fuel and other supplies. While armored formations are not road-bound, the logistics units that are required to keep them on the attack often are. Armored formations have large signatures which make them comparatively easy to detect and target with MAGTF and joint assets. Aviation has proven to be lethal against armored formations, particularly if they try to maneuver along expected avenues of approach.

In general, armored formations are very effective in open terrain, but vulnerable in close terrain. Skillful use of terrain allows infantry to maximize their advantages and minimize those of the enemy in woods, hills, and particularly urban areas.

Modern armored vehicles usually have effective optical and night vision sights. However, crew members inside armored vehicles have poor all-round vision through their vision blocks, and are easily blinded by smoke or dust. Due to the construction of the vehicles, their crews' vision has visual and weapons dead space that they cannot observe or engage with weapons. Visual dead space refers to the areas surrounding an armored vehicle that the tank crew cannot see through their vision blocks due to the design of the vehicle and/or orientation of the turret.

Any discussion of visual dead space involves the issue of if and when an enemy vehicle crew buttons up, or closes all hatches. Generally, armored vehicle crews travel with their hatches open and at least the vehicle commander's head out, as this improves situational awareness. They button up when they receive or expect to receive small arms fires or high explosive fires. However, fighting with closed hatches reduces the crew's ability to see, acquire, and engage targets.

Marines can force enemy armored forces to button up by the use of mortar, artillery, or sniper fires. Armored fighting vehicles are not blind when buttoned up, but they lack constant 360-degree visibility. Figure C-1 illustrates the visual dead space (out to 10 m) and the weapons dead space (out to 20 m) on a representative armored vehicle. When the turret is oriented forward, the vehicle crew has very poor visibility to its sides and rear. The shaded area illustrates the area that cannot be observed by a buttoned-up crew. This is the preferred angle of engagement due to both the visibility restriction and the fact that armor is generally thinner in the flanks and rear. Weapon dead space refers to areas surrounding the tank that cannot be fired upon with the tank's armament due to the elevation and depression of the guns. Enemy tanks may try and run over personnel with their tracks.

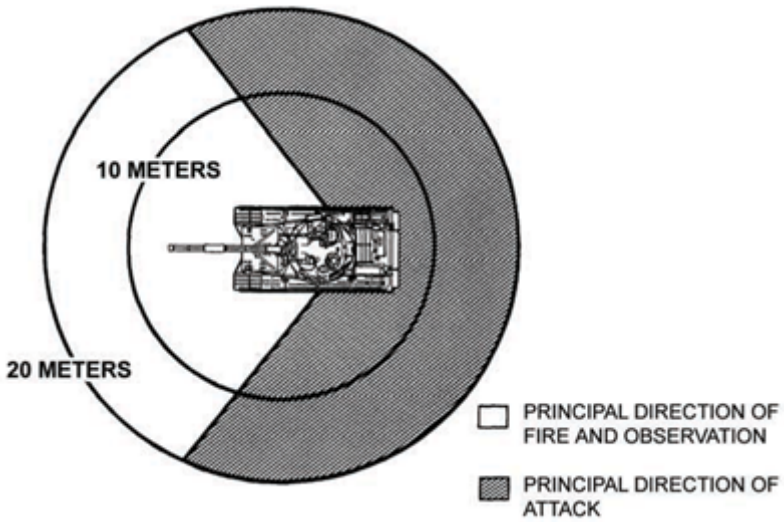


Figure C-1. Visual and Weapons Dead Space on an Armored Vehicle.

In the confines of an urban area, armored forces are extremely vulnerable. Because of the abundance of cover and concealment in urban terrain, armored vehicle gunners are often challenged to identify targets unless the vehicle commanders expose themselves to fire by opening their hatches or dismounted infantry direct the gunner to the target. Dust, fires, and thick smoke significantly degrade their sights, including thermal sights. Armored forces often lack sufficient infantry forces to establish a suitable defense against infantry in close terrain.

The Russian offensive into Chechnya in 1995 saw two reinforced armored regiments destroyed in detail in Grozny by guerrilla fighters armed primarily with RPGs and machine guns. The Russians failed to dismount the vehicles and clear danger areas or dominant terrain. Instead, the Russian assault relied solely on the mobility, firepower, and armor of their vehicles.

Armored formations typically employ a range of radio systems to command and control their operations. This makes them vulnerable to MAGTF and joint EW. Denying use of the electromagnetic spectrum degrades armored formations' capabilities. Visual signals may be used to coordinate company-level operations, but this greatly reduces their flexibility.

TANKS

Tanks are typically the backbone of mechanized forces. Tanks are used to close with and destroy the enemy using armor-protected firepower, shock, and maneuver. The tank is an integrated weapons system capable of defeating most targets on the battlefield.

Tanks mount powerful stabilized high velocity main guns capable of defeating most targets on the battlefield out to around 2,000 m. Modern tank main guns ranging from 90mm to 125mm, and are primarily used against other tanks and hard targets. Tanks usually carry a fairly limited number of high explosive shells, which are most effective against infantry. Some tanks can fire ATGMs through their main guns, extending their effective range. In addition to the main gun, tanks have a coaxial machine gun (usually 7.62mm) mounted next to the main gun which is typically the principle weapon employed against dismounted infantry. Many tanks mount HMGs (usually .50 caliber or 14.5mm) for antiaircraft defense, though these are often used against ground targets as well.

Tanks are generally very well protected over their frontal arch, protecting them from all weapons except aviation fires, ATGMs (i.e., Javelin and TOW), or the main gun of US tanks. When fighting with the hatches closed, the crew is safe from all small arms fire, artillery fragmentation, and antipersonnel mines. Tanks generally have smoke grenade launchers and/or on-board smoke generators which provide fast concealment from observation (other than by thermals).

The armor protection of tanks is generally thinner on the rear, sides, top, and undercarriage. This general rule applies to all types or models of armored vehicles. Flank, rear, or top attack shots increase the probability of a kill. A tank's engine compartment is a relatively vulnerable area, and tanks can often be stopped by targeting the engine. The suspension system (i.e., including the track) is also a vulnerable area. Hits on either the engine or suspension may result in a mobility kill, leaving the tank immobile but able to use its weapons systems.

Some tanks are equipped with reactive or active armor systems. Reactive armor uses explosives mounted on the hull and turret to protect against shaped charge warheads. Active armor systems detect incoming rockets and missiles and fire an explosive charge which intercepts the rocket or missile with fragmentation. While these protect the tank, they are lethal to any unprotected friendly forces near them, making coordination between tanks and infantry challenging.

Due to their layout, tanks are limited on how high they can elevate or depress their main guns, which makes it impossible to engage targets very close to the vehicle or high up in tall buildings, as illustrated in figure C-2. Due to the length of the tank main gun, the turret cannot rotate if a solid object is encountered. For example, trees, a wall, or telephone poles may prevent a tank from traversing its turret. Tank cannons also create an overpressure and noise hazard to exposed infantry.

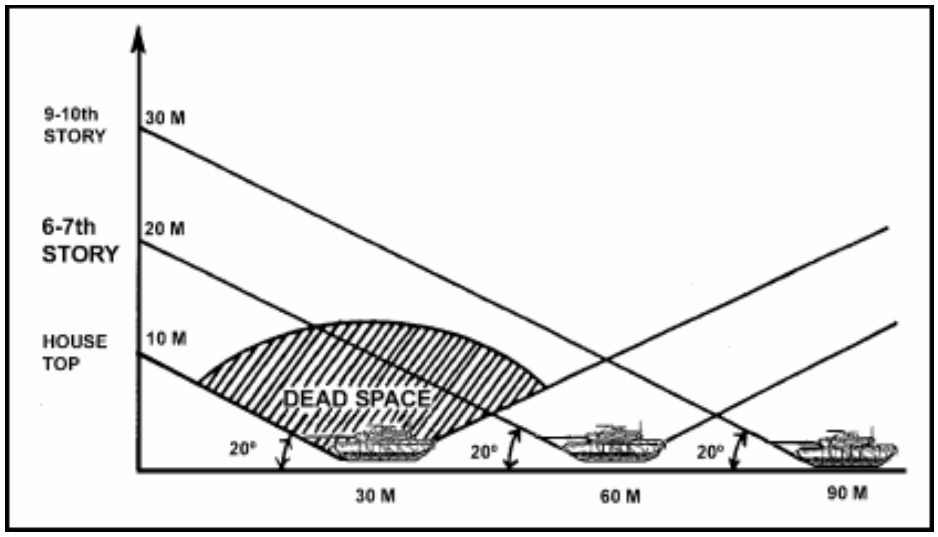


Figure C-2. Elevation Limitations of Tank Main Gun and Coaxial Weapons.

There are numerous types of tanks that Marines may encounter during operations; the battalion intelligence section should provide information on the types of tanks likely to be encountered, as well as their capabilities and limitations. The T-72 and T-55 illustrated in figures C-3 and C-4 were widely exported by the Soviet Union, remain in service with many nations today, and are probably the most likely tanks Marines will face.

The T-55 is a 40-ton, 1960s era main battle tank manufactured by the Soviet Union and exported in great numbers to over 70 countries. Copies were built and exported by China and North Korea. It remains the main battle tank in many nations as of the publication date. They are relatively cheap and easy to maintain. They are often the most numerous tanks in poorer nations, and have been captured and used by insurgent groups. They have a 4-person crew and mount a 100mm main gun (for which an ATGM round is available but uncommon) and a 7.62mm coaxial machine gun. They may mount a 12.7mm antiaircraft gun at the commander's hatch. Their armor is vulnerable to all Marine Corps antiarmor weapons, though the M72 light antiarmor weapon (LAW) rocket will only penetrate them from the sides or rear. Some T-55s have been updated with more modern engines, fire control systems, guns, and add-on armor packages.

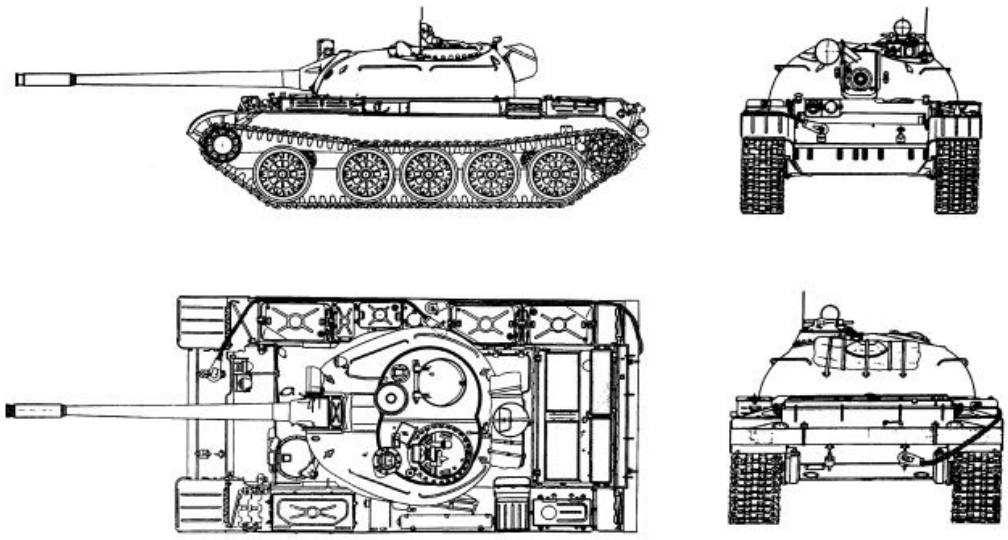


Figure C-3. T-55 Main Battle Tank.

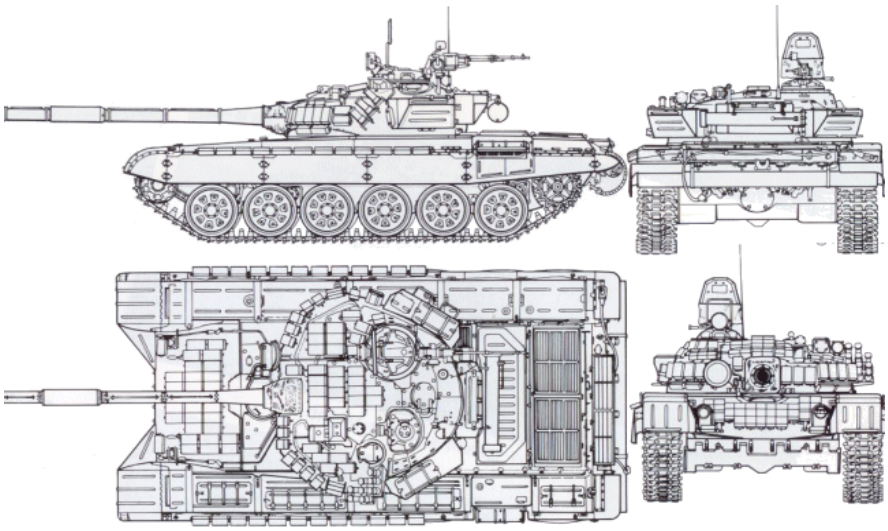


Figure C-4. T-72 Tank Fitted with Reactive Armor.

The T-72 is a 42-ton, late 1970s- era main battle tank originally manufactured by the Soviet Union, and still manufactured and exported by Russia. It is a significant improvement over the T-55. Many nations' forces are equipped with the T-72 or its variants. It has a three-member crew and mounts a stabilized 125mm smooth-bore main gun (which can fire an ATGM), a 7.62mm coaxial machine gun, and usually a 12.7mm antiaircraft gun at the commander's hatch. Many T-72s are equipped with reactive armor, as displayed in figure C-4.

ARMORED PERSONNEL CARRIERS

Armored personnel carriers provide mobility and limited armor protection for a squad or more of infantry. The AAVP7 and the BTR [*Bronetransportyor*] series of vehicles are two armored personnel carriers familiar to Marines. They are typically used to transport infantry from one point on the battlefield to another and are not primarily intended to fight other armored vehicles. They are typically armed with medium (7.62- mm) or heavy (12.7mm or 14.5mm) machine guns. They protect their occupants against shell fragments and small arms, but also put them at greater risk from mines and antiarmor rockets and missiles due to the troop density inside the vehicles, and because armor has a tendency to contain and increase the effect of explosions. After the infantry dismounts, the empty armored personnel carriers are often used as a base of fire for maneuvering infantry.

The side and rear armor of many armored personnel carriers can be penetrated by 5.56mm and 7.62mm fire at ranges of 100 m or less. The .50 caliber and 40mm high explosive dual purpose (HEDP) rounds from either the M203 or Mk-19 will penetrate armored personnel carrier armor from all aspects, though flank and top hits are preferred. Armored personnel carriers will be destroyed by squad or platoon light and medium antiarmor weapons from specific angles.

Figure C-5 depicts a BTR-70, a common armored personnel carrier developed by the former Soviet Union and still produced by Russia and others. The BTR-70 has a 2-person crew and carries an 8-member squad. It mounts a 14.5mm HMG and a 7.62mm coaxial gun in a one-person turret.

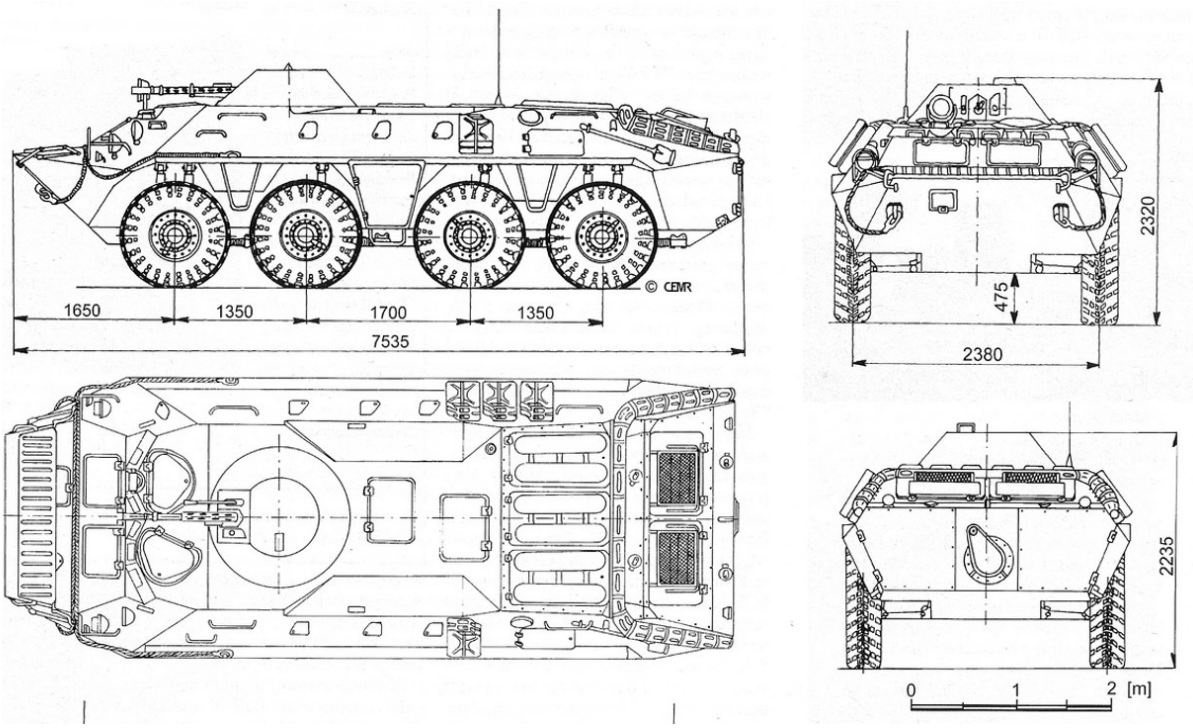


Figure C-5. BTR-70 Armored Personnel Carrier.

INFANTRY FIGHTING VEHICLES

The Soviet-developed BMP [*Boyevaya Mashina Pekhota*] and the US Army's Bradley fighting vehicle are the two most familiar examples of IFVs. Infantry fighting vehicles carry a small caliber (i.e., 25 to 35mm) high velocity or medium caliber (i.e., approximately 73mm) low velocity gun, as well as a small squad (four to eight soldiers) of infantry. Many IFVs are equipped with ATGMs. They tend to have marginally better armor protection than armored personnel carriers and have many of their same vulnerabilities. Their main guns have the same or worse vulnerabilities due to dead spots. Some IFVs are much more heavily armored then armored personnel carriers, though they are rare.

Figure C-6 illustrates a BMP-2 IFV, another Soviet era vehicle, which is used by more than 30 countries today. The BMP-2 has a 3-member crew and carries a 7-soldier squad. It mounts a 30mm automatic cannon with a 7.62mm coaxial gun in a two-person turret. An AT-5 ATGM is mounted on top of the turret. The BMP-2 has firing ports which allow the squad to fire their personal weapons from inside the vehicles (though they are not very accurate in this mode) against targets to the side or rear of the vehicle.

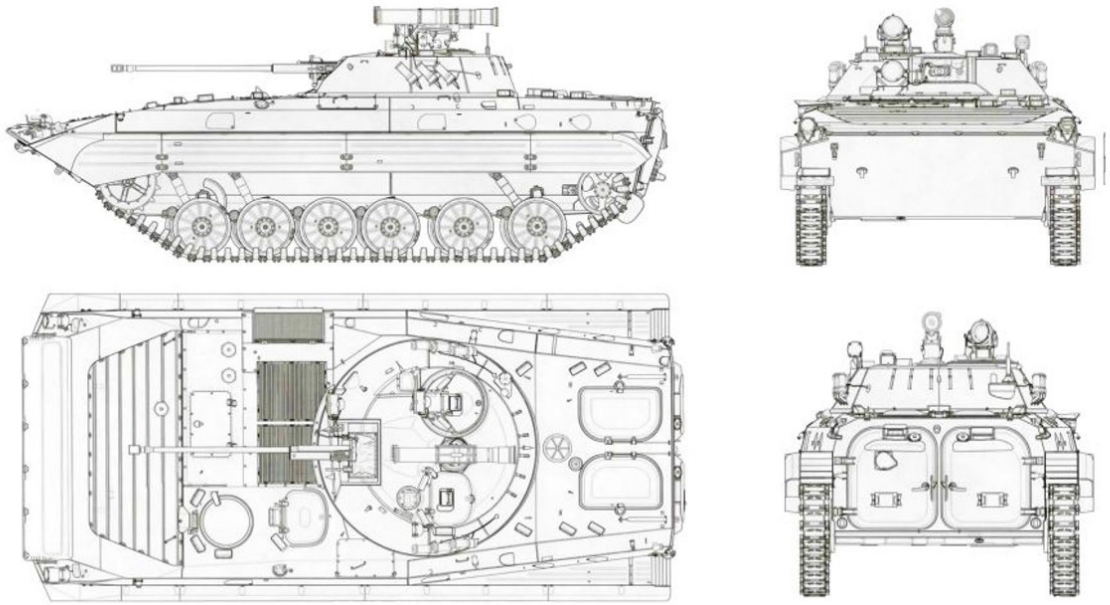


Figure C-6. BMP-2 Infantry Fighting Vehicle.

Fire Support Vehicle

Fire support vehicles are lightly armored vehicles equipped with a direct fire gun. Their purpose is to provide a base of fire for maneuvering infantry and lightly armored vehicles to attack bunkers and other point targets, and to engage enemy lightly armored vehicles. Because of their thin armor relative to tanks and the fact that their guns are rarely able to penetrate the frontal armor of modern main battle tanks, fire support vehicles cannot effectively fight long-range duels against tanks. They can use their weapons to fire through or destroy the cover and

concealment found in close terrain such as urban or woodland terrain. While fire support vehicles have roughly the same weapon dead space vulnerability as tanks, they are vulnerable to a wider variety of weapon systems.

Figure C-7 illustrates a 2S23 fire support vehicle. The 2S23 is a BTR equipped with a 120mm mortar turret. The mortar is capable of both indirect and direct fire, and can fire automatically up to 10-round bursts. A 7.62mm machine gun is mounted on the turret. It has a 4-member crew and can fire the entire range of Russian 120mm rounds, including high explosive; fragmentation, high explosive; antitank; illumination; smoke; and laser guided high explosive, fragmentation. As of the writing of this publication, it is used by Russia, several other former Soviet republics, and Venezuela. The turret can also be used on other armored vehicles. A 6x6 variant is used by China, and tracked variants are used by Russia and others.

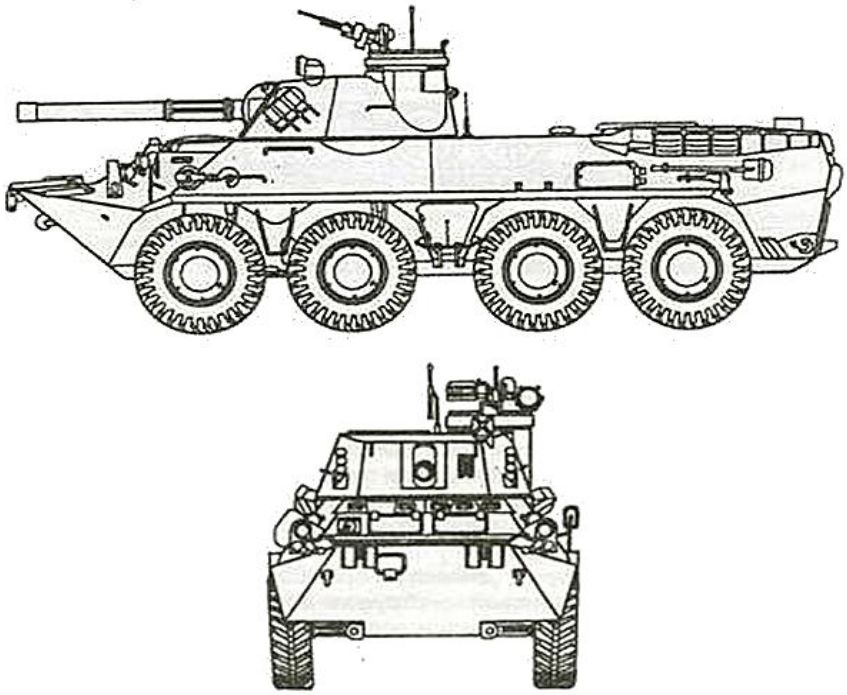


Figure C-7. 2S23 Fire Support Vehicle.

RECONNAISSANCE VEHICLES

These tend to be smaller and less well protected than armored personnel carriers and IFVs. They are typically amphibious and are armed with a machine gun or a light (i.e., 25mm to 35mm) cannon. They are dangerous to infantry in the open and to other lightly armored vehicles.

Figure C-8 illustrates a BRDM [*Boyevaya Razvedyvatelnaya Dozornaya Mashina*]-2 reconnaissance vehicle. The BRDM-2 is an amphibious Soviet era reconnaissance vehicle that was exported to more than 45 countries. It has a four-member crew and mounts a turret with a 14.5mm HMG and a coaxial 7.62mm machine gun. The chassis is used to carry a variety of

weapons and sensors, and variants exist carrying ATGMs, surface-to-air missiles, and chemical and radiological detection equipment.

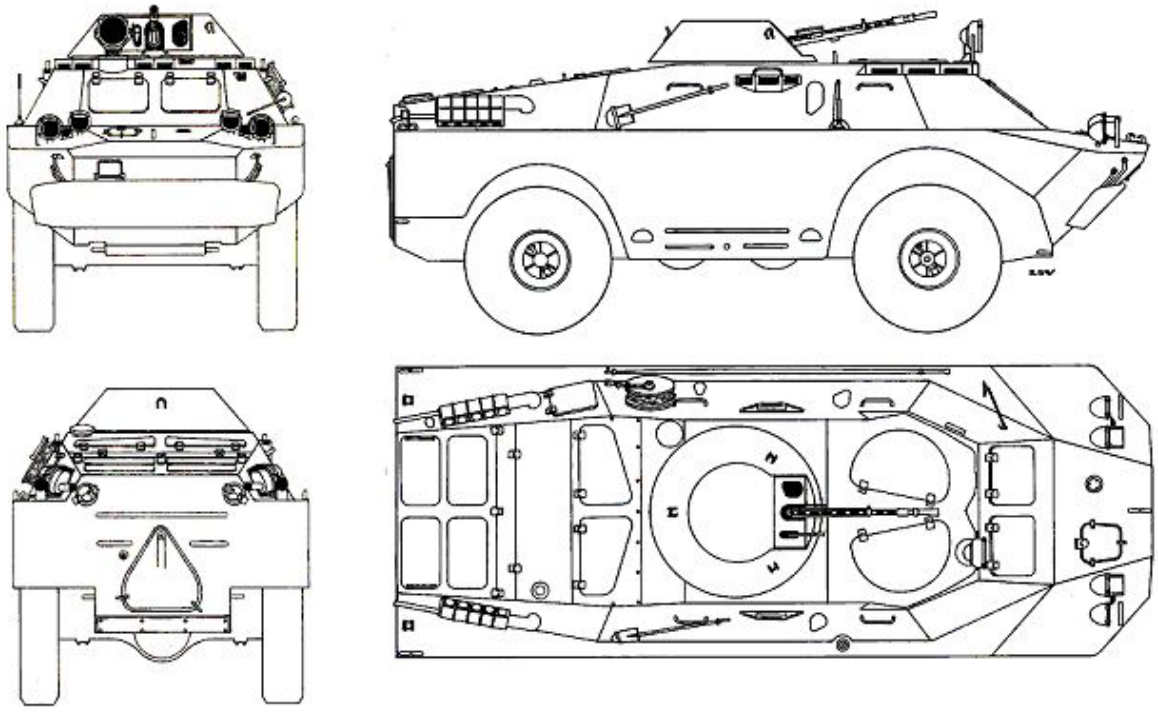


Figure C-8. BRDM-2 Armored Reconnaissance Vehicle.

Figure C-9 illustrates a French made AMX-10RC armored reconnaissance vehicle. It is used by the French in both the armored reconnaissance and fire support vehicle roles. It has been widely exported, with other nations using it primarily in a fire support role. It is amphibious, and has a four-person crew. It mounts a 90mm cannon with a coaxial 7.62mm machine gun.

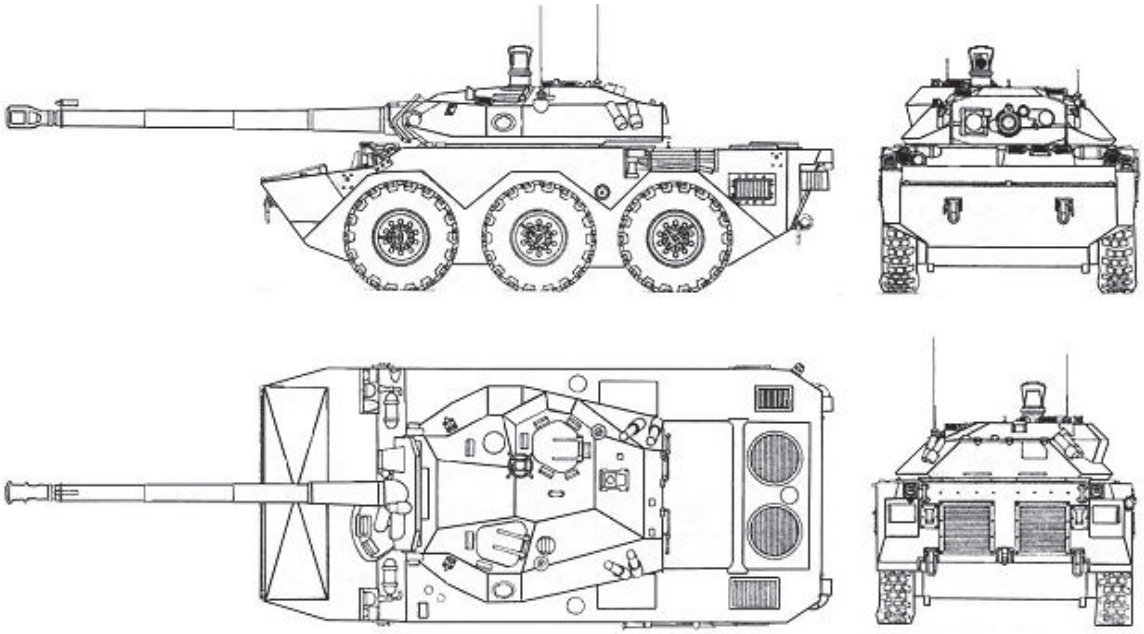


Figure C-9. AMX-10RC.

IMPROVISED ARMORED VEHICLES

Dating back at least to the First World War, combatants have converted trucks, bulldozers, and other vehicles into improvised armored vehicles. These vehicles have been used as armored personnel carriers or improvised fighting vehicles. Insurgent and criminal groups frequently modify these vehicles, often using standard truck or heavy equipment chassis or components and adding steel, concrete, or other types of improvised armor. They may be equipped with a wide range of small arms, machine guns, and rocket systems. Some improvised armored vehicles have been equipped as car bombs. These have been used as "guided munitions" to drive into protected areas prior to detonation.

While it is impossible to give an example of an average improvised armored vehicle, figure C-10 illustrates an improvised armored vehicle built on a common Ford truck chassis armored with steel plate. This vehicle was built and employed by a drug cartel. It could carry up to 10 personnel, who could use personal weapons from the turrets or the firing slits in the side and rear of the vehicle.

Improvised armored vehicles are unlikely to challenge Marine Corps tanks or combat formations. At the same time, Marines cannot rule out the possibility that insurgent forces may construct and employ improvised armored vehicles.

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Figure C-10. Improvised Armored Vehicle used by Drug Cartel.

METHODS OF ENGAGEMENT IN THE DEFENSE

There are three general methods of antiarmor engagement in the defense: heavy antiarmor weapon (HAW), medium antiarmor weapon (MAW), and LAW and massed surprise fire. These two methods of engagement are not types of defenses; rather, they define the range at which friendly antiarmor weapons engage enemy armor. In practice, a defense usually employs techniques reflecting both methods of engagement.

HAW/MAW/LAW

The term HAW/MAW/LAW refers to a technique where each weapon system begins to engage enemy targets at the extent of their maximum ranges, in accordance with target priority. The commander typically employs artillery and aviation fires early to force the enemy to button up. Heavy antiarmor weapons (i.e., TOWs and tanks) begin engaging at their maximum engagement ranges. As the enemy approaches, MAWs engage. As the enemy continues to approach, they are engaged by volleys from platoon and squad medium and light antiarmor weapons. The idea is to destroy enemy armor as far forward of the friendly positions as possible. This method of engagement is typically employed against large armored formations. Figure C-11 illustrates the HAW/MAW/LAW concept with a reinforced rifle company.

The major disadvantages of HAW/MAW/LAW are an increased likelihood of early detection of friendly positions and longer exposure to enemy direct and indirect fire. Additionally, flank shots may be more difficult to obtain at longer ranges. The advantage is that friendly weapons engage enemy armor for a longer period of time, usually allowing for greater attrition of enemy armored forces forward of the friendly positions.

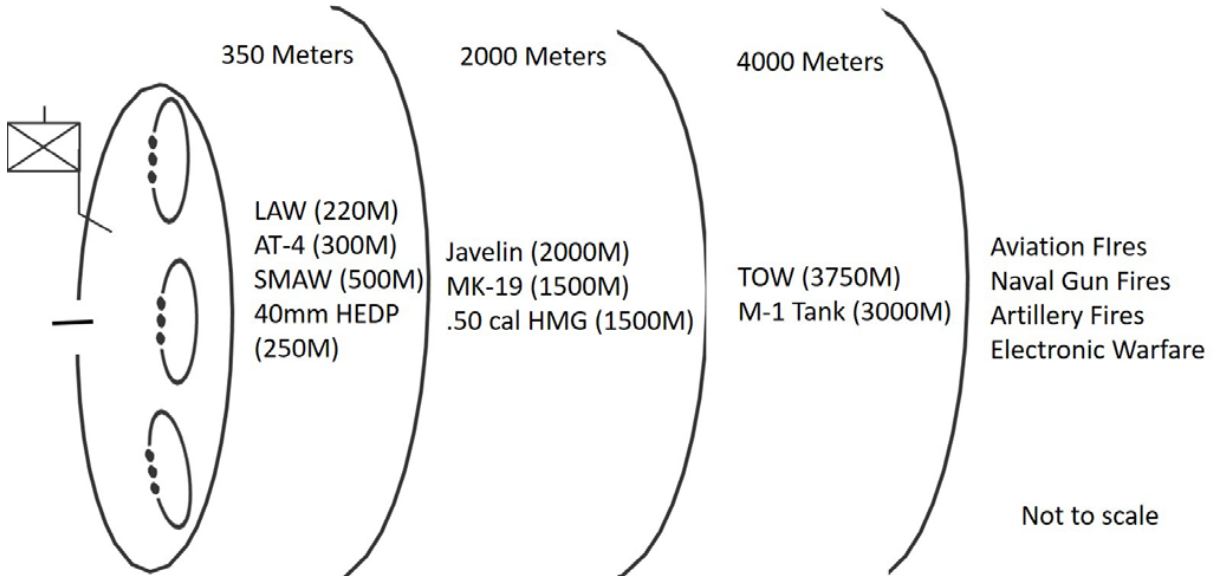


Figure C-11. HAW-MAW-LAW Concept.

Massed Surprise Fire

This method of engagement concentrates all direct fire weapons on the enemy force simultaneously. Massed surprise fires are delivered into an engagement area which is built as discussed in chapter 7. A platoon may employ massed surprise fires to defeat an enemy platoon sized formation of three or four vehicles, typically directing the fires of the squads against the vehicles. Selection of terrain is critical. Infantry platoons should exploit micro-terrain and intervisibility lines to prevent early detection of the defense by the enemy. Detection of well-positioned dismounted forces from moving armored vehicles is difficult; it is made more difficult if they are forced to button up through the use of artillery, mortar, and/or aviation fires prior to gaining line of sight. Units may utilize artillery and aviation fires to force the enemy to button up and shape enemy actions as they approach the engagement area. If heavier weapons (such as Javelins) are attached or supporting, they are integrated into massed surprise fires. They are used to attack the enemy in depth, engaging high priority vehicles (e.g., C2 or air defense vehicles). Figure C-12 illustrates a rifle platoon engagement area designed to employ massed surprise fires. The artillery target would be used to force the enemy to button up, making them more vulnerable.

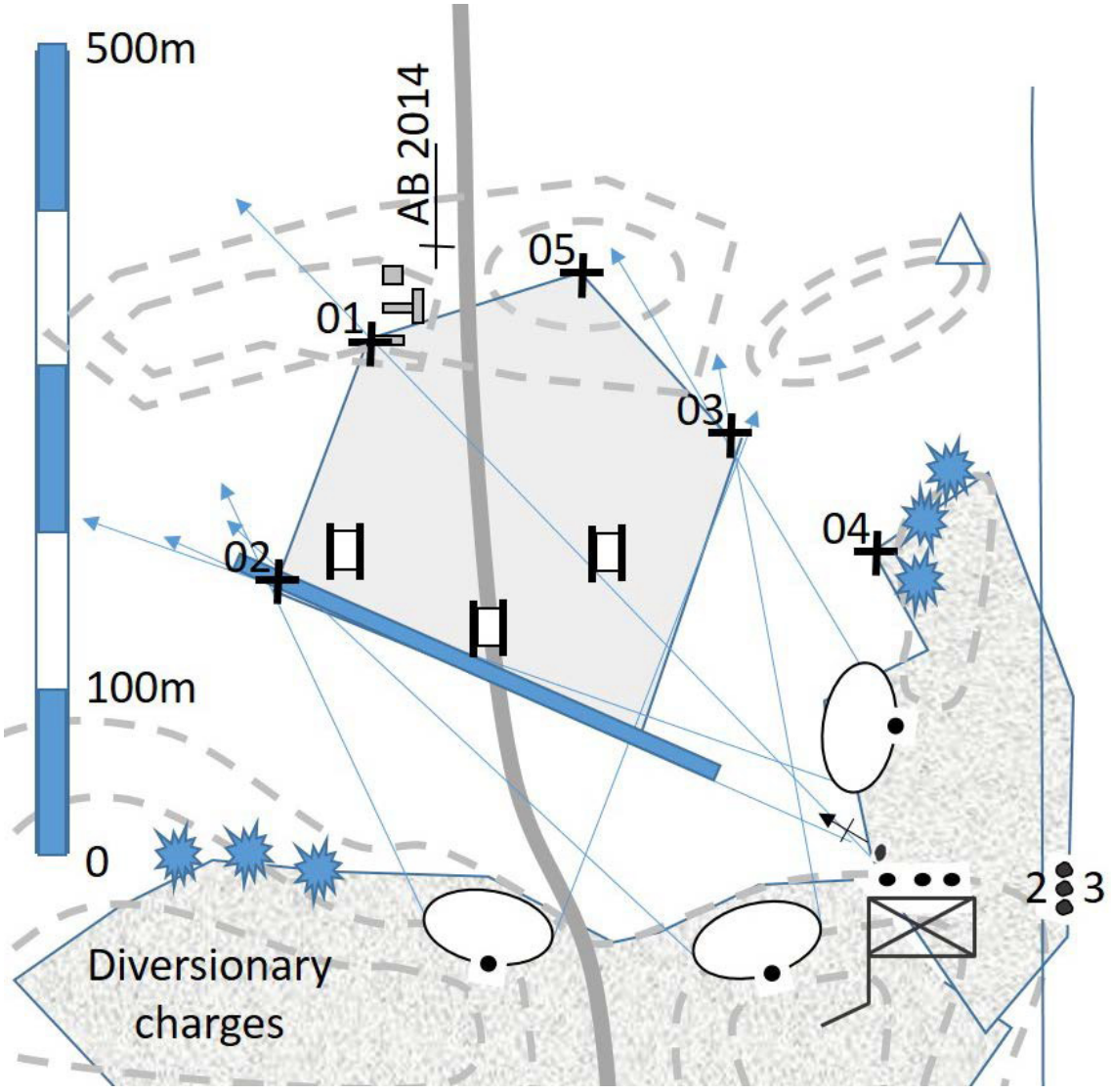


Figure C-12. Platoon Engagement Area Utilizing Massed Surprise Fires.

Diversionary charges are depicted being employed on the flanks of the unit to draw fire away from the unit's actual battle positions.

The primary advantage of massed surprise fires is psychological. The first notice the enemy should receive of massed surprise fires is a volley of missiles, rockets, and 40mm grenades. This method usually achieves more initial "kills" on first engagement and can have a much larger psychological impact. The disadvantages of this method are that it allows enemy forces much closer to friendly defensive positions and it does not allow the defender to take advantage of each weapon's maximum effective range. Another disadvantage is that the mass and momentum of an enemy armored attack may still carry the force into friendly positions.

Antiarmor Ambushes

A platoon may be tasked to conduct an antiarmor ambush to destroy small groups of armored vehicles (such as a combat reconnaissance patrol or advanced guard), to force the enemy to move more slowly and cautiously, or to force the enemy into a choke point. Units conducting an antiarmor ambush may use Javelins or TOWs for this purpose at long range, or they may use shorter range weapons in closer terrain.

Long-Range Antiarmor Ambushes. The Javelin's 2,000-m range and the TOW's 3,750-m range allow antiarmor ambushes to be established in depth, engaging targets moving on high-speed avenues of approach. Javelin teams and/or CAATs typically have several firing positions assigned. The units make one or more survivability moves after firing one or more volleys of rounds. The initial position is likely located away from infantry battle positions and may fire into a separate engagement area which combines only indirect fires and ATGMs. Subsequent positions would more likely reinforce the direct fires of unit engagement areas.

The CAATs may execute antiarmor ambushes, which are established as engagement areas. They typically employ indirect fires and ATGMs to ambush enemy reconnaissance elements. This tactic is often used in the battalion security area to add depth to the fight and deceive the enemy as to the location of the main battle area. The CAAT would employ terrain to find turret defilade positions or hot and cold positions.

Short-Range Antiarmor Ambushes. When rifle platoons are assigned antiarmor ambushes, they are more likely to select restrictive terrain that allows the rifle platoon to remain concealed until the enemy is in the range of light and medium antitank weapons, including organic and attached small arms. The platoon would stock up on extra antiarmor weapons. Depending on the level of threat, a rifle platoon may issue one or two light and medium antitank weapons to each Marine, including organic and attached small arms. It should be remembered that the M203 is effective against many light armored vehicles. When javelin teams are attached or supporting, Marines from the rifle platoon may be tasked to carry extra rockets.

Usually two Marines from each fire team, the rifleman and assistant automatic rifleman, are designated to employ antiarmor rockets. Thus, a squad may fire a volley of up to six antiarmor rockets easily, with the fire team leaders and automatic riflemen free to control fires and engage dismounted personnel. If required, every Marine can employ a rocket, with 12 rockets being fired in the initial volley under the squad leader's fire commands. An alternate technique is to have a fire team fire two rockets in the initial volley aiming at a single armored vehicle. The other two Marines in the fire team hold their fires and reengage the target if required.

As in all other operation, fire commands are used to distribute fires, ensuring that targets are engaged in accordance with target priority, and that fires are distributed properly to engage all targets effectively. When possible, antiarmor ambushes should be designed to engage targets when they are stopped. Even a short pause improves the probability of a hit.

Use of Diversionary Charges. When setting a deliberate defense facing armor threats, units may use electrically-initiated explosive charges set to the flank or short of the unit battle positions to simulate the backblast of rockets or ATGMs. The intent is to divert attention away from the actual battle positions. The charges are command-detonated and usually established as a ring main with several half-pound charges being placed in positions that should be perceived by the enemy as likely battle positions. They are typically fired by a unit leader after a unit fires a volley of rockets. These charges may be used to simulate ATGM fires or light and medium antiarmor fires.

ANTIARMOR CLOSE COMBAT TRAINING

Training infantry Marines to understand the strengths and weaknesses of armored vehicles is a vital step in enabling Marine Corps units to take on and defeat enemy armored forces. An excellent reference is the antiarmor close combat course found in appendix A of MCTP 3-01F. This course is best conducted at the battalion-level due to the availability of training areas and the efficiencies of conducting the course. If a unit is preparing for a deployment, the course would be focused on the tactics and the capabilities and limitations of threat armored forces that might be encountered during the deployment.

The course should address and discuss the following:

- The characteristics and limitations of threat armored vehicles, including vision dead space, weapons dead space, and vulnerable areas of tanks, IFVs, and armored personnel carriers.
- The capabilities and limitations of threat vehicle optics, including night vision and/or thermals.
- Threat TTP and the capabilities and limitations of threat weapons systems should be discussed in the context of Marine Corps capabilities.
- The effects of obstacles on threat armored vehicles, including natural, existing construction, and reinforcing obstacles, such as log posts, log cribs, antitank ditches, mines, and wire obstacles.
- The use of standard antiarmor weapons such as the AT-4, LAW, and M203, including the recommended point of aim.
- The use of expedient antiarmor weapons.
- Methods to defeat enemy armor using explosives (such as command-detonated charges) and flame weapons (such as Molotov cocktails and flame fougasses).

The unit may conduct a confidence course where Marines prepare and occupy fighting positions while tanks are driven over them. This is very useful in combating “tank fright,” which has resulted in unprepared units being routed by enemy armored forces in the past.

APPENDIX D
MOTORIZED OPERATIONS

Marine infantry platoons may be tasked to conduct motorized operations in a variety of ways. Marine infantry may be motorized in medium tactical vehicle replacements (likely provided and driven by the logistics combat element of the MAGTF); mine-resistant, ambush-protected (MRAP) vehicles; or some variant of armored or unarmored high-mobility multi-purpose wheeled vehicles (HMMWVs) or their replacement. This appendix provides the platoon commander planning considerations for training for, task-organizing for, and conducting motorized operations.

Though the missions and basic tactics of a unit conducting motorized operations are the same as for dismounted infantry operations, there are also significant differences. Motorized operations are characterized by—

- Speed and mobility.
- Increased firepower enabled by vehicle-mounted crew-served weapons.
- Increased C2 capabilities via a robust vehicle-mounted communications suite.
- Enhanced force protection via vehicle armor.
- Increased lift capacity for self-sustainment.
- Increased vulnerabilities due to units being densely loaded into vehicles.
- Increased C2 challenges and vulnerabilities due to dispersion.
- Decreased situational awareness and ability to acquire targets when moving at speed.
- Increased training, maintenance, and logistics requirements.
- Reaction to Small UAS attack.

COMMAND AND CONTROL

The tempo and dispersion of motorized operations may challenge units used to conducting dismounted operations. Motorized units can cover great distances quickly. While doing so, a platoon is likely to be dispersed over hundreds of meters or even several kilometers. As in all operations, task organization, established SOPs, and planning set the conditions for mounted operations. Effective use of communications, standardized and rehearsed procedures, unity of command, and mission tactics are essential to the command and control of motorized operations.

Due to the tempo and distances covered, motorized operations are more likely to require coordination with external HQ, and to be supported by ISR and fire support assets that are not organic to the platoon or company.

There are many variables in mounted communications that must be taken into account during training and operational planning. Many vehicles have mounted radios which usually have more powerful broadcast capabilities then portable radios. It may sometimes be necessary to employ portable radios from inside the vehicle. Some vehicles may be equipped with C2 systems with position location information capabilities (such as the blue force tracker).

Individual vehicle crews must practice internal vehicle communication to enable effective navigation, weapons employment, and communication with and protection of dismounting elements. Drivers and troop commanders can communicate by voice in most wheeled vehicles, but might not be able to do so if in contact. Passengers and gunners have a hard time communicating with the driver and troop commander under normal operating conditions, and most likely cannot do so during contact. Once passengers dismount, voice communications are nearly impossible. Units should establish redundant hand and arm signals, flags, and pyrotechnics for basic critical signals, such as mount, dismount, shift and cease fire, and target designation.

Collectively, the unit must train to move in mounted formations. Mounted sections usually employ the base unit method to control movement. The unit leader directs the base vehicle, and other vehicles maintain their positions in formations (discussed below). As required, units may use traveling overwatch or bounding overwatch. Commanders must consider command and control and communications with both mounted elements and any subelements that dismount.

Fires Employing Vehicle-Mounted Weapons

Motorized operations usually increase the firepower of a unit. Marine Corps vehicles assigned to infantry units often have the ability to mount the full range of machine guns, and the supply of ammunition is often plentiful compared to dismounted operations. In certain situations, the gunner may also employ a personal weapon in addition to the machine gun to prevent unnecessary collateral damage. A M203 in the turret gives the option of either using a HEDP round or a star cluster as a signal flare. The AT-4 and LAW rockets may be employed from the turret, though the gunner must be well-trained and remain conscious to ensure that the backblast clears the rear armor of the turret.

The vehicles most likely to be used by the infantry usually do not have stabilized guns and cannot fire effectively on the move. Firing on the move may be done for suppressive fire or to engage a close target, but it will not be accurate; vehicles must stop to fire effectively. Communication between the vehicle commander, driver, and gunner is essential in coordinating movement between firing positions. Short stops that allow the gunner to engage before moving to the next position are preferred to extended stops, which may allow the enemy to bring artillery or mortars to bear.

Whenever possible, the driver should seek positions that provide cover and concealment. Hull down and hide positions are illustrated in figure D-1. Hide positions allow the gunner to observe over the top of cover, keeping the vehicle concealed without the ability to fire. A hull down position places the vehicle behind cover, while the turret is high enough to allow the gunner to engage targets over cover. These positions are used both in defensive and offensive maneuver, and drivers should utilize micro-terrain to select good firing positions. As always, selection of cover and concealment is done considering the weapons and optics employed by the enemy.

Small unit leaders should remember that machine guns employed from motorized vehicles are not as accurate as machine guns mounted on tripods on the ground.

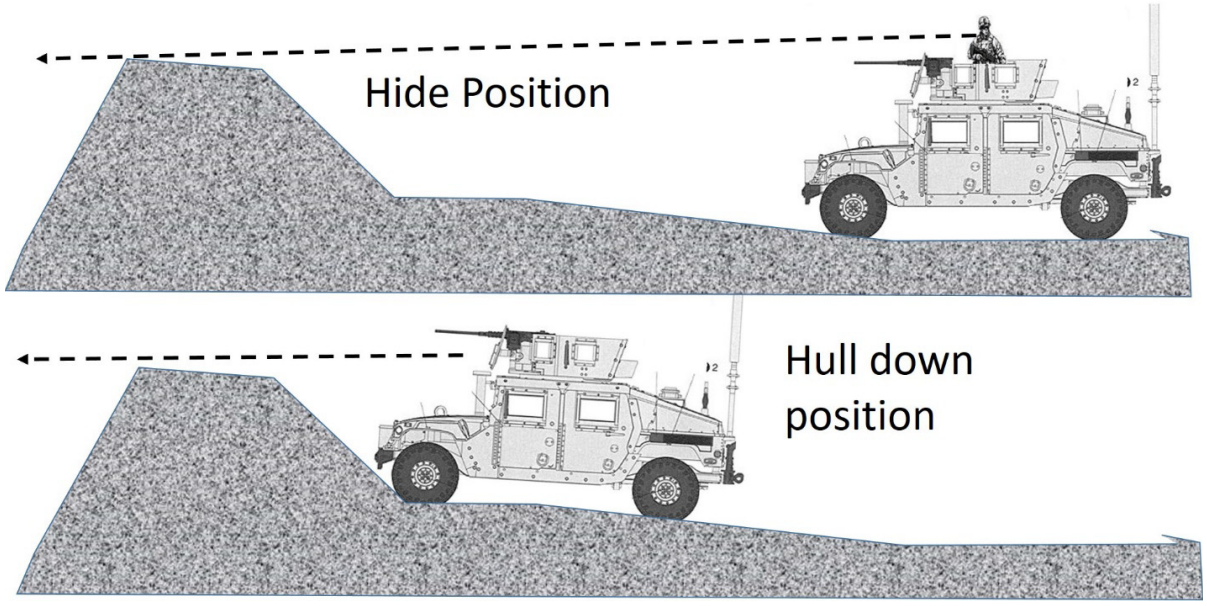


Figure D-1. Hide and Hull Down Positions.

While not currently fielded to the Marine Corps, the common remotely operated weapon station and other similar systems are available. These are remote turrets that allow common machine guns to be employed from inside armor with both day and night sights. Some of these systems are stabilized and can be fired on the move.

Force Protection During Motorized Operations

Small unit leaders should consider the armor protection of their vehicles relative to likely enemy weapons. Many vehicles provide armor protection against small arms fire and fragments, but remain vulnerable to tank guns, automatic cannons, RPGs, ATGMs, mines, IEDs, and some indirect fire weapons. While armor protects vehicles and crews, it can restrict observation and maneuverability. Reduced observation limits situational awareness and weapons employment. Dependency on heavily armored vehicles to conduct patrols often prevents effective communication with host nation populations.

If a unit sets patterns, they provide the enemy an opportunity to plan for and employ antiarmor ambushes which could use mines, IEDs, ATGMs, RPGs, or a combination of these to overmatch the armor protection. During counterinsurgency operations, insurgents are far more likely to target road-bound forces which set patterns and have poor tactical discipline.

Mine rollers are very effective tools employed by motorized units to protect the force from mines and IEDs. The drivers of vehicles equipped with mine rollers require additional training. Small unit leaders conducting planning for motorized movement integrate mine rollers into the route of march. Vehicles equipped with mine rollers are typically employed to lead motorized movements, with subsequent vehicles following in trace of those lead vehicles.

Marine motorized infantry units must be able and willing to conduct effective dismounted maneuver, supported by the vehicle weapons systems. Dismounts are critical to the platoon's effective employment and security. They clear danger areas, secure key terrain, and provide close-in security for vehicles, particularly in urban environments.

Small unit leaders must be vigilant in enforcing tactical discipline. Mounted units can quickly develop bad habits, such as disinclination to dismount, tactical discipline laziness, and the tendency to leave mission critical gear on vehicles when dismounting.

Mounted Maneuver and Use of Terrain

A motorized unit can easily cover 50 kilometers (31 miles) in an hour. This allows commanders to mass combat power quickly. A mounted patrol can cover much more ground then a dismounted patrol, but is not as effective in conducting reconnaissance and acquiring targets. Units should frequently dismount Marines to scout out danger areas or other areas of interest.

Units assigned motorized assets should not allow them to become road-bound, which makes them predictable and vulnerable to enemy attack. As required by METT-T, units should not hesitate to move cross-country and/or dismount some or all of the unit. For example, mounted units should consider halting short of danger areas and sending dismounted units forward to reconnoiter the danger area, ideally under the protection of vehicle-mounted weapons.

Mounted operations should take advantage of the speed, firepower, mobility, and survivability of vehicles. Dismounted movement is stealthier, provides better situational awareness, is more effective in complex terrain, and allows effective contact with the local population. Combining mounted and dismounted methods within an operation is appropriate; vehicles may deliver Marines to dismount locations (which are planned and serve as ORPs), enabling dismounted maneuver to the objective.

Task Organization and Vehicle Load Planning

The organization of the platoon varies depending on the mission, the number and type of vehicles assigned, the number of Marines available, and their skill sets. Some vehicles may be provided with organic crews. It is also possible the infantry platoon or company must provide the drivers and gunners. Rifle platoons assigned to conduct motorized operations will require significant training, and should consider the company commander's guidance, as well as recommendations from subject matter experts such as CAAT platoon commanders and motor transport officers and staff noncommissioned officers. A platoon assigned to conduct motorized operations may be reinforced with personnel from the company weapons platoon, the battalion motor transport platoon, or other units.

The task organization depends on the types of vehicles and associated weapons assigned, and the number of seats available to embark Marines. When task-organizing, the platoon maintains fire team and squad integrity whenever feasible. Based on the types of vehicles, the platoon may maintain fire team and squad integrity within vehicles and vehicle sections. Alternatively, they may assign one element to provide the vehicle crews, maintaining squad and team integrity for dismounted operations. Squad leaders and platoon sergeants typically serve as vehicle (and often section) commanders; they should not be assigned as drivers or gunners. Typically, the gunner becomes the vehicle commander when the unit dismounts.

Based on METT-T, the platoon will typically be organized into two or three vehicle sections. As an example, a squad assigned three HMMWVs or similar vehicles could assign one HMMWV to each fire team and operate as a three-vehicle section. The platoon might maneuver together or separately. A platoon mounted in 7-tons would be more likely to mount one squad in each truck and move as a single section.

Based on METT-T, the drivers and gunners are often left with the vehicles if the unit has to dismount and conduct operations. This protects the vehicles and allows them to maneuver independently or provide support by fire and/or overwatch. An NCO should be assigned to control the section's vehicles and weapons if the unit is conducting dismounted operations. Alternatively, one element may be assigned to drive and employ the weapons while a separate element is assigned as the dismounted element.

Training

Platoon commanders must ensure that their Marines are properly trained to conduct motorized operations. The unit may either be passengers or they may be tasked to drive, maintain, and operate vehicles and necessary equipment, to include additional crew-served weapons, associated optics, and communication assets. This requires the platoon commander to work with motor transport, crew-served-weapons, and communications experts in developing and delivering required training.

If assigned to drive and maintain the vehicles, the platoon must schedule time for driver training and licensing. If deploying to an area where mines and IEDs are a threat, additional time is required to train to employ mine rollers and CREW systems. After the driver training is conducted, the unit needs to conduct training where the unit collectively employs the vehicles to conduct missions, during both day and night conditions, in both urban and rural areas. Mounted movement at night requires extensive training and familiarity both with the vehicles and with the NVDs.

MOTORIZED OPERATIONS USING 7-TON TRUCKS

Each Marine division includes a truck company with three platoons, and the transportation services companies of combat logistics regiments of the Marine logistics group maintain truck platoons. These are standing units that provide crewed 7-ton medium trucks, illustrated in figure D-2. The 7-ton trucks are usually armored, and some or all of them may have machine guns mounted on ring mounts.

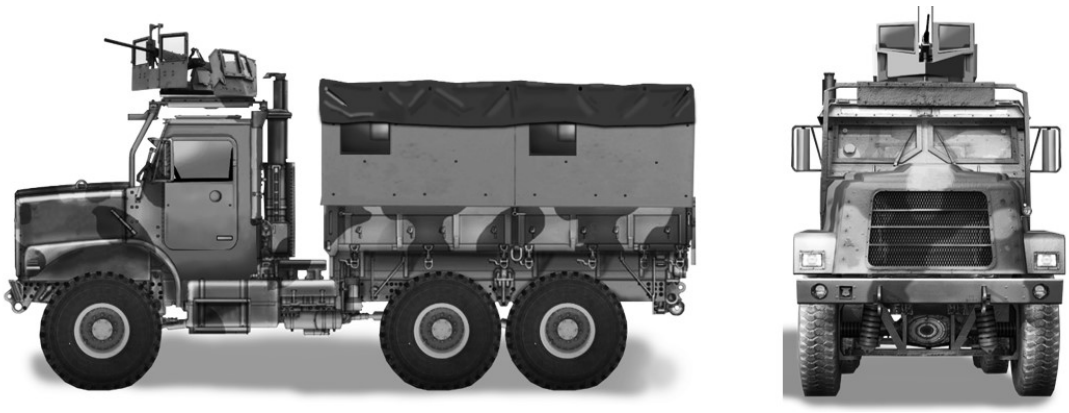


Figure D-2. Armed and Armored Medium Tactical Vehicle Replacement.

Each truck should have a driver and an assistant driver or vehicle commander; if the vehicle is equipped with a machine gun, the assistant driver or vehicle commander operates the weapon unless a separate gunner is present. The drivers should be qualified to drive the vehicles employing NVDs, and the assistant gunners should be qualified on employing mounted machine guns in both day and night conditions.

When assigned motor transport assets, the senior infantry Marine in each truck will typically ride in the front of the vehicle and navigate. The unit leader of the truck platoon, section, or squad will usually be embarked in the same vehicle as the infantry unit leader to facilitate communications. As required, the senior Marine directs the employment of any mounted weapons and/or selects the dismount location for embarked Marines. When conducting a tactical movement, a platoon should be provided three 7-ton trucks, mounting a squad and its attachments in each truck. The platoon HQ will be dispersed to prevent both the platoon commander and platoon sergeant from being casualties at the same time.

Truck units may be attached for an extended period, or they may transport units in a general or direct support role. It is vital that command and control and communications procedures be worked out to enable the units to function effectively if engaged by the enemy.

If the motor transport unit is assigned a general support motor transport mission, then the infantry unit conducts movement under the direction of the convoy commander. Pick-up locations and dismount locations are typically assigned by HHQ. The infantry commander retains tactical control of the infantry unit and may select dismount locations and maneuver as required by the tactical situation.

When the motor transport unit is placed in a direct support role or attached, the unit conducts movement under the direction of the infantry commander. The unit should conduct training and rehearsals with the supporting truck platoons to ensure that communications, command and control, and fire support procedures are understood and complied with. The truck units typically have SOPs. In general, Marine infantry units mounted in trucks use the trucks for transportation, but dismount well short of expected enemy engagement areas and fight on foot. The weapons of trucks may be integrated into the support by fire position if conditions permit.

MOTORIZED OPERATIONS WHEN ASSIGNED VEHICLES

Based on the METT-T conditions, infantry units may be provided with motorized assets that they have to drive and maintain with organic and attached personnel. This should be identified as early as possible to allow the required time to task-organize, train drivers, and allow units to develop tactical SOPs incorporating the vehicles and their associated heavy weapons.

The platoon may or may not be augmented with motor transport Marines to drive and/or maintain the vehicles.

HMMWVs or MRAP All-Terrain Vehicles

Both HMMWVs and MRAP all-terrain vehicles (known as M-ATVs), illustrated in figure D-3 and figure D-4, have four seats and a gunner position. Four Marines are typically assigned to each vehicle, with the fifth seat being available to carry passengers as needed. A full-strength squad is most likely to be assigned three vehicles. A fire team is typically assigned to each vehicle, with the squad leader riding with one of the fire teams. With one Marine in each vehicle assigned as a driver and another as a gunner, this means only one or two Marines are available to conduct dismounted operations. The platoon HQ would likely have two additional vehicles, one for the platoon commander and one for the platoon sergeant, giving a platoon 11 vehicles. Additional drivers and gunners may be drawn from the weapons platoon.

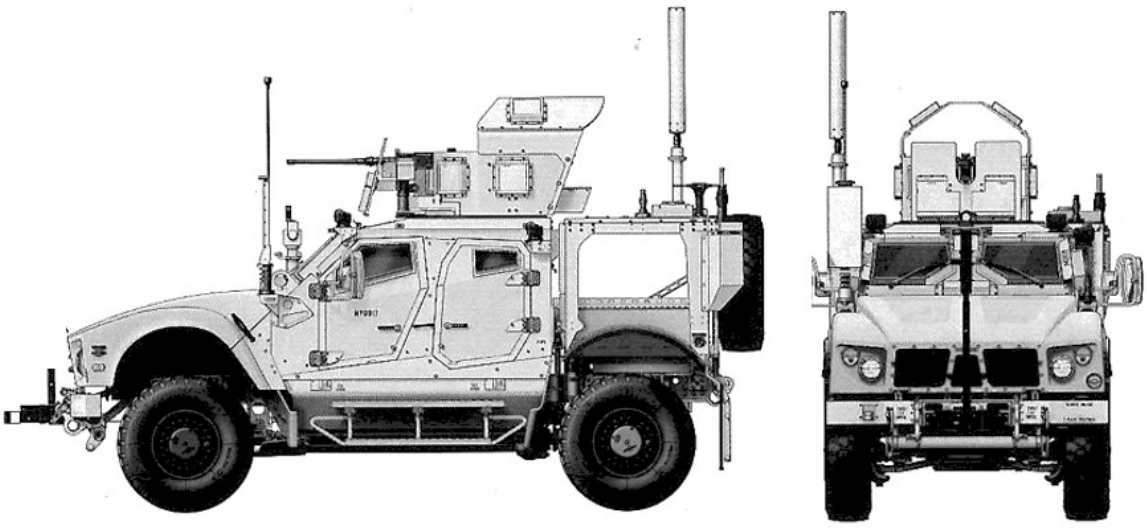


Figure D-3. MRAP All-Terrain Vehicle.

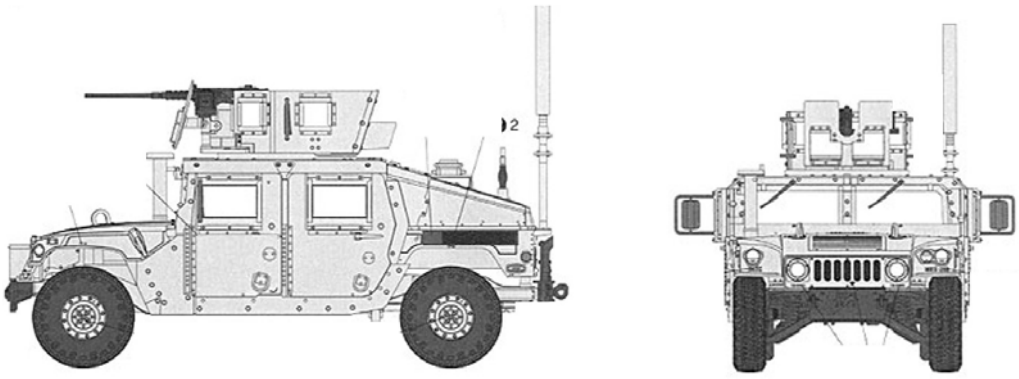


Figure D-4. Armored HMMWV.

Mine Protected Ambush Resistant Vehicles

The MRAP vehicles are very survivable compared to HMMWVs. Their mobility is limited by the vehicles' weight and size. There are two main types of MRAP vehicles—a four-wheeled variant (i.e., 4 x 4) and a six-wheeled variant (i.e., 6 x 6). The 4 x 4 variant has six seats plus a gunner position, while the 6 x 6 variant has 10 seats plus a gunner position. As with the other vehicles discussed, the drivers and gunners typically stay with the vehicles. A squad may be assigned two 4 x 4 vehicles. In this case, one fire team might be assigned to drive and gun both vehicles, and the squad minus would have two fire teams to conduct dismounted maneuver. Figure D-5 shows a 6 x 6 MRAP variant.

Figure D-5. 6x6 Mine-Resistant, Ambush-Protected Vehicle.

PLANNING CONSIDERATIONS

The general process of METT-T analysis remains the same for motorized operations. The following are considerations relative to the capabilities and limitations of motorized operations

Mission

A motorized infantry platoon can execute all of the types of offensive, defensive, or stability actions included in this publication. Motorized units are often assigned QRF missions. They are more likely to be assigned delay or screen missions than dismounted forces are.

Enemy

Enemy capabilities and limitations are considered relative to the motorized force. Vehicle armor typically offers decent protection to Marines from small arms and mortar and artillery fragments. Conversely, mines, IEDs, RPGs, and ATGMs may kill or injure many Marines at one strike. Motorized movement is usually more canalized than dismounted movement; as such, the actions of motorized units are easier to predict. Care must be taken to avoid setting patterns, which provide the enemy targeting information.

Troops and Fire Support Available

The unit's training level and familiarity with motorized operations is a prime consideration. Well-drilled units can benefit greatly from the armor, firepower, speed, and communications capabilities offered by vehicles. The speed of movement, the tendency to become road-bound, maintenance requirements, and reduced situational awareness can make a poorly prepared unit very vulnerable.

Units conducting motorized operations must take into account the fact that a unit may quickly maneuver beyond the range of indirect fire support. If the unit is or may be required to travel through multiple units' areas of operations, as is often the case for a convoy or QRF, the platoon must know how to contact the battlespace owners' COCs. The platoon commander is responsible for command and control of both mounted and dismounted elements. Robust communications, rehearsed procedures, unity of command, and mission tactics allow the platoon commander to effectively execute command and control.

Terrain and Weather

Vehicle movement is more restricted for motorized forces than for dismounted forces. During motorized operations, the platoon commander focuses analysis on identifying maneuver corridors that allow maximum flexibility. One of the most critical aspects of the terrain and weather analysis is the road network that makes up the route options. The composition and condition of the roads and the presence of bridges and overpasses are important considerations. Discussion of terrain and weather must take into consideration the types of vehicles and their ability to travel in certain terrain. Platoon commanders must select covered and concealed dismount locations and dismounted approaches to objectives. Limited visibility will slow the rate of march. Additionally, adverse weather, such as soaking rain, snow, or sandstorms, can degrade trafficability and make movement hazardous.

Time

Motorized operations allow the platoon to cover great distances quickly. However, the quicker the unit moves, the less likely it will be to acquire targets effectively. Speed can either improve security or decrease it, based on the tactical situation. Rates of march for motorized operations change according to the threat, terrain, and weather. When contact is expected, units often advance using bounding overwatch, which slows the rate of march but increases security.

Table D-1 is a time-distance table illustrating how fast a mounted unit can cover varying distances.

Table D-1. Motorized Operations Time-Distance Table.

	Distance							
Rate of Movement		1km	2km	3km	4km	5km	6km	7km
	5km/hr	12 min	24 min	36 min	48 min	60 min	72 min	84 min
	10km/hr	6 min	12 min	18 min	24 min	30 min	36 min	42 min
	15km/hr	4 min	8 min	12 min	16 min	20 min	24 min	28 min
	20km/hr	3 min	6 min	9 min	12 min	15 min	18 min	21 min
	25km/hr	2.4 min	4.8 min	7.2 min	9.6 min	12 min	14.4 min	16 min
	30km/hr	2 min	4 min	6 min	8 min	10 min	12 min	14 min

Space

As previously mentioned, the distance a platoon can cover is increased when motorized. Motorized units are more likely to need to cross unit boundaries, which requires coordination. Detailed route analysis and considerations and coordination for fire support are characteristics of motorized operations planning. While conducting motorized operations, vehicle spacing typically ranges from 50 to 100 meters. A motorized platoon can easily exceed several hundred meters in total length, depending on formation and movement technique.

Logistics/Maintenance

Compared to dismounted operations, motorized operations require more maintenance and supply. Preventive maintenance is an essential pre-combat and post-combat action. Units must conduct daily maintenance inspections. Fuel, lubricants, spare parts, and tires are just a few of the items to consider when operating in vehicles. While vehicle recovery and repair are not typical tasks for an infantry platoon, vehicles should be equipped with tow bars, and crews should be well-drilled in vehicle recovery. Extensive training and preparation are required to prepare them to maintain and recover vehicles.

Civil Considerations

Motorized unit commanders must determine the appropriate speed and formations to employ in populated areas to balance security and danger to civilians. The timing of patrols and movement should consider the pattern of life in the local area (e.g., avoiding the most congested travel hours). Commanders must decide how to move through or around civilian traffic and what to do at traffic signals.

FORMATIONS

Motorized formations are used for the same reasons as dismounted formations. The correct formation provides flexibility while allowing for mutual support. Vehicle formations are intended to be flexible and adapted according to the situation, terrain, and combat or mechanical losses. The six most common motorized formations are the line, wedge, column, staggered column, herringbone, and coil. The V-sweep is used to clear danger areas. All vehicles in the following figures represent up-armored HMMWVs.

Line

Figure D-6 is an example of a line formation. This formation is used in open terrain, and allows the platoon to cover the most ground systematically with maximum firepower to the front when advancing forward.

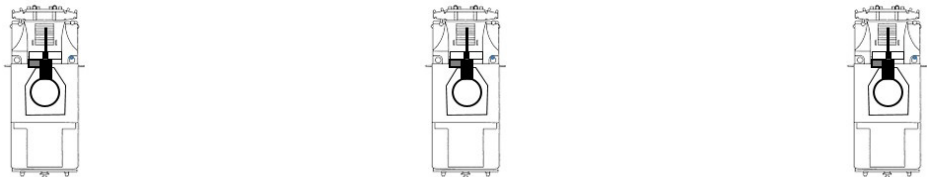


Figure D-6. Line Formation.

Wedge

Figure D-7 is an example of a wedge formation with a two-section organization consisting of two vehicles per section. The platoon maintains relative positioning based on terrain. The wedge lends itself to immediate mutual support, provides depth, and is very flexible. Using any of the techniques of movement, the two forward vehicles perform all of the information gathering and reporting. The rear vehicles provide overwatch and command and control.

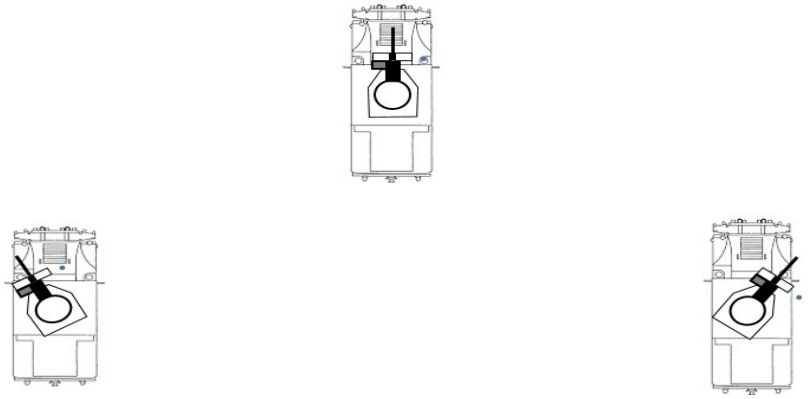


Figure D-7. Wedge Formation.

Column

Figure D-8 is an example of a column formation. The platoon uses the column formation when speed is essential as it moves on a designated route. The column offers protection to the flanks, but little to the front and rear. Typically, the platoon commander briefs the section leaders on the route and speed, then allows the lead section to control the column movement. This frees the platoon commander to concentrate on the subsequent mission, thus enhancing command and control. It does not relieve them of the responsibility to track the movement of the patrol on a map. The order of movement in the column may depend on which organization the platoon will use at the end of

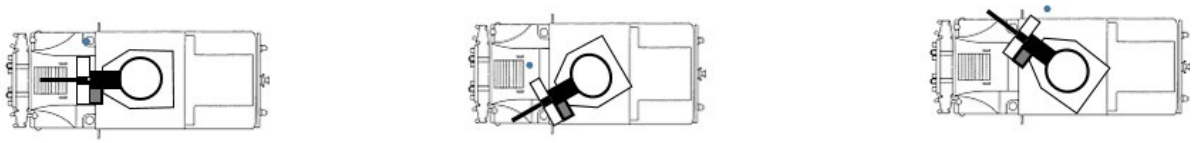


Figure D-8. Column Formation.

the movement. In addition, the lead section may vary based on METT-T considerations. Column formations can be closed or open, depending on visibility, the terrain, and enemy TTP.

Closed Column. The closed column is typically used for movement during limited visibility conditions or in urban areas. Under these conditions, vehicles are spaced about 25 to 50 meters apart so the driver can see the two lights in the blackout marker of the vehicle ahead. Closed column marching takes advantage of the traffic capacity of the route, but provides little dispersion.

Open Column. The open column is generally used during daylight. The distance between vehicles is increased to provide greater dispersion; it varies from 50 meters to several hundred meters as the situation requires. Open column may also be used at night with infrared lights, blackout lights, or passive night vision equipment. The increased dispersion of the vehicles in open column movement enhances security, but makes control of the column more difficult.

Herringbone

Figure D-9 is an example of how a squad transitions from a march column into a herringbone formation. The herringbone formation provides 360-degree security during a short halt from a column. Marines other than drivers and gunners dismount and establish security. If the threat from IEDs is high, the unit conducts a check referred to as "5s and 25s" to provide greater security. As the vehicle comes to a rolling stop, the vehicle occupants and turret gunner scan five meters around the vehicle looking for possible IEDs. When the vehicle comes to a stop, they continue to scan out to 25 meters. Once this area has been visually cleared, the troops dismount and conduct a physical check of the area out to 25 meters. The formation may be widened to permit the passage of vehicles down the center of the column. All vehicles should move completely off the road if the terrain and enemy situation allow.

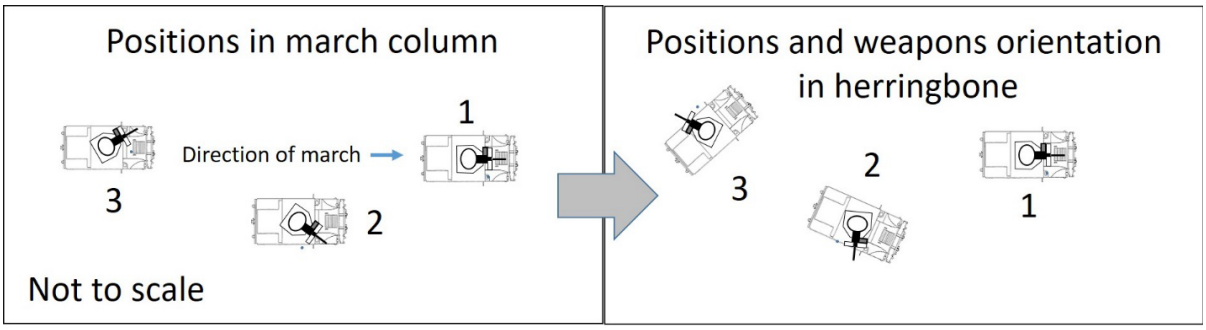


Figure D-9. Herringbone Formation.

Coil

Figure D-10 is an example of a coil formation for a motorized infantry platoon. The coil formation provides all-around security and is used for long halts. Unit SOPs typically establish how units transition from the march to the coil, but it is usually accomplished by assigning units to occupy sections of the perimeter and cover corresponding sectors of fire. The platoon commander designates the orientation of the coil using a cardinal direction. In the absence of orders, the direction of travel becomes 12 o'clock. The coil may be used as a modified patrol base.

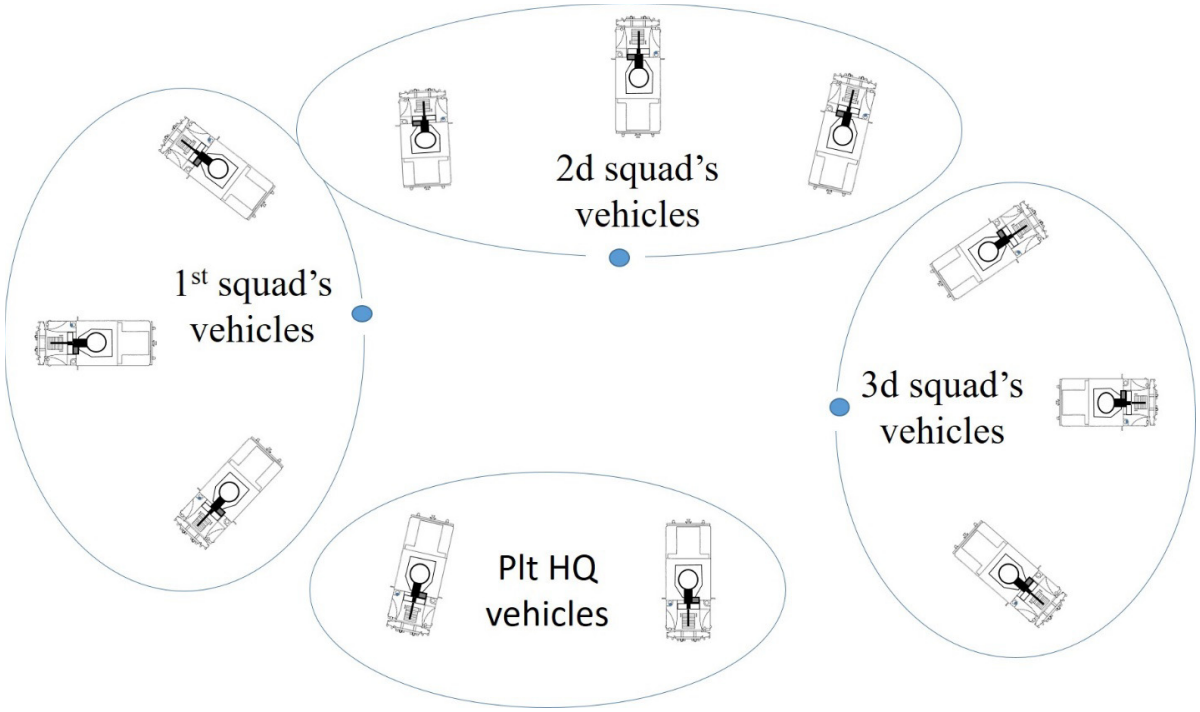


Figure D-10. Coil Formation.

V-Sweep

While conducting motorized operation, and approaching potential mines or IED locations, the unit may employ a V-sweep formation. The unit dismounts personnel who advance in a V formation forward of the lead vehicle, while the vehicles cover the movement. This method is commonly referred to as a V-sweep, as shown in figure D-11.

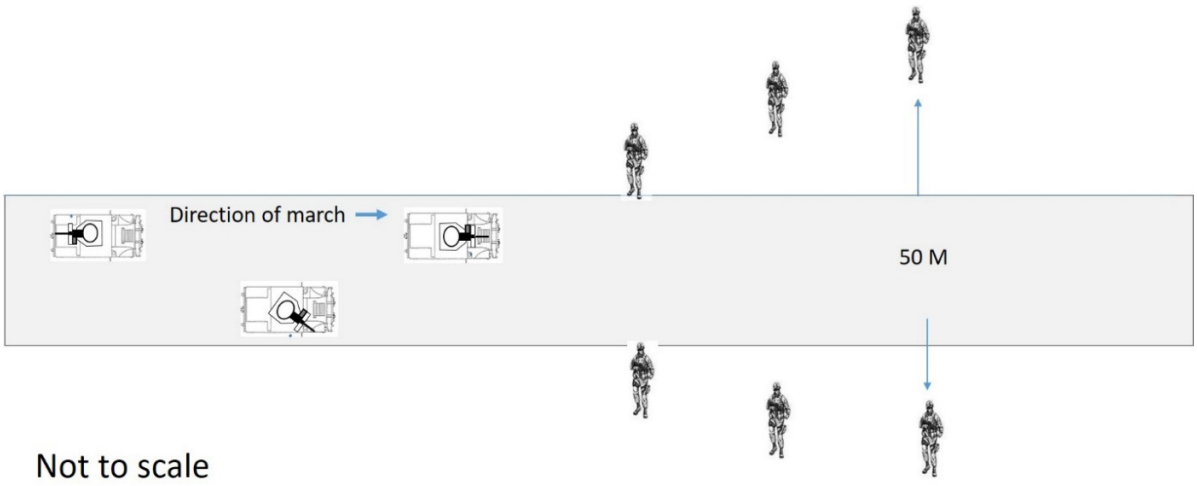


Figure D-11. V-Sweep.

APPENDIX E
ROCKET AND MISSILE EMPLOYMENT

GENERAL

Rockets and missiles are employed to engage tanks and other vehicles, fortifications, and material objects in support of both offensive and defensive operations. Infantry platoons may draw and employ rockets based on METT-T considerations, and must be well-trained in their employment. The platoon may be reinforced with assault Marines and/or ATGM teams. The platoon must also understand the capabilities and limitations of ATGMs and be able to integrate them into the scheme of maneuver.

Rockets

The two rocket systems organic to the infantry battalion are the 66mm M72 series LAW and the 84mm M136 AT-4.

Missiles

Missiles are rocket-powered munitions whose paths can be controlled by internal or external guidance systems. The operator may provide terminal guidance to the target. The two missile systems organic to the infantry battalion are the M220A1 TOW weapon system and the M98A1 Javelin system.

BASIC EMPLOYMENT CONSIDERATIONS

The following are general considerations for employing rockets and missiles. When employing rockets and missiles, Marines must ensure that the rocket's path is clear of obstructions, as they may cause pre-detonation or alter the direction of the rocket. Marines must also understand the dangers from backblast, and sight and employ the weapons properly, ensuring the safety of fellow Marines.

Methods of Engagement

The four engagement methods include single, pair, sequence, and volley fire. The platoon commander or weapons crew determines the method of engagement based on the situation.

Single Firing. Although not the preferred method of engagement, a single Marine with a single weapon system may engage a target. Depending on the munitions fired, several weapon systems may be required to achieve the desired destruction criteria. A single Marine firing one round must hit a vital part of the target to accomplish the task.

Pair Firing. Two or more Marines, equipped with two or more weapon systems prepared for firing, engage a single target. Before firing, the first shooter informs the others of the estimated speed and distance to the target. If the impact of the round proves the first shooter's estimate to be correct, the other shooters engage the target until it is destroyed. If the impact of the round proves the estimate incorrect, the second shooter informs the others of their own estimate, and then engages the target. This continues until the target is destroyed or all rounds are expended.

Sequence Firing. A single Marine, equipped with two or more weapons or rounds prepared for firing, engages the target. After engaging with the first round and observing the impact, the Marine adjusts the point of aim, engages with another round, and continues until the target is destroyed or all rounds are expended.

Volley Firing. When the range to a single target is known, two or more shooters engage it at one time on a prearranged signal. This is the best method of engagement against an armored vehicle because it places multiple rounds on one target at one time, increasing the possibility of a kill. Initiating an attack with a volley of LAW rockets is an effective technique to rapidly gain fire superiority.

Fire Commands

The platoon commander or unit leader tasking the firing unit must communicate pertinent information to control fires. Marines or crews operating the weapon system must know—

- Who the designated shooters are.
- The target priority.
- The method of engagement.
- The range and lead to target (if known).
- The command or signal to fire.
- The command or signal to cease fire.

Hot and Cold Positions

Unit leaders often designate hot and cold positions for the missile and rocket teams. A cold, or hide position, is a covered and concealed position, generally in defilade, where the Marine or crew moves to prepare the weapon system and/or await orders to engage targets. A hot position is the designated firing point where the Marine or crew engages the target. This location is generally under the enemy's observation and fires. Teams may have two or more previously prepared hot positions. The platoon commander must carefully select this location to ensure that geometries of fire are deconflicted with other friendly units; backblast must be considered for rocket and ATGM systems. Further, the platoon commander must ensure that the occupation of the hot position and target engagement is supported by fires and suppresses enemy threats to the Marines or crews.

ANTIARMOR OPERATIONS

Different weapon systems have varying effects against different types of vehicles. The angle of engagement is significant, as most armored vehicles are better armored on the front than on the sides and rear. The platoon commander makes antiarmor weaponeering decisions based on

METT-T considerations. Rocket systems can defeat unarmored or light armored vehicles (e.g., BMPs or BTRs) or older series of tanks (e.g., the T-54). Modern main battle tanks may survive LAW and AT-4 fire, but the weapons may still generate effects if multiple rounds are used or a vulnerable area is targeted. Both missile systems are designed to destroy most modern battle tanks. When conducting antiarmor operations, the platoon commander generally selects one of two methods for employing antiarmor weapons—HAW/MAW/LAW or massed surprise fires.

HAW/MAW/LAW

The term, HAW/MAW/LAW, refers to the sequence of engagement based on the ranges of weapons systems available. Heavy antiarmor weapons such as TOWs, Javelins, and artillery begin to engage targets once vehicles enter the maximum effective range of the weapon systems. As the enemy continues the advance, medium and light antiarmor weapons begin to engage within their maximum effective ranges. The intent of this method is to maximize each weapon system to attrit the enemy as they advance and provide the greatest degree of standoff from the enemy.

Massed Surprise Fires

This method of engagement uses all direct fire weapons to engage the enemy simultaneously. This method is ideal to ambush individual or small armored units. When utilizing massed surprise fires, the platoon does not have to locate all the weapon systems together.

In addition to these two methods, the platoon commander should select firing positions that give the Marines or crews the best possible chance for destroying the target. Flanking, top, or rear shots on armored vehicles are preferred because they are generally less protected in these areas. The platoon commander should consider employing weapon systems in pairs and to the flanks of their engagement area to increase the probability of engaging advancing armor with a flank shot (see figure E-1).

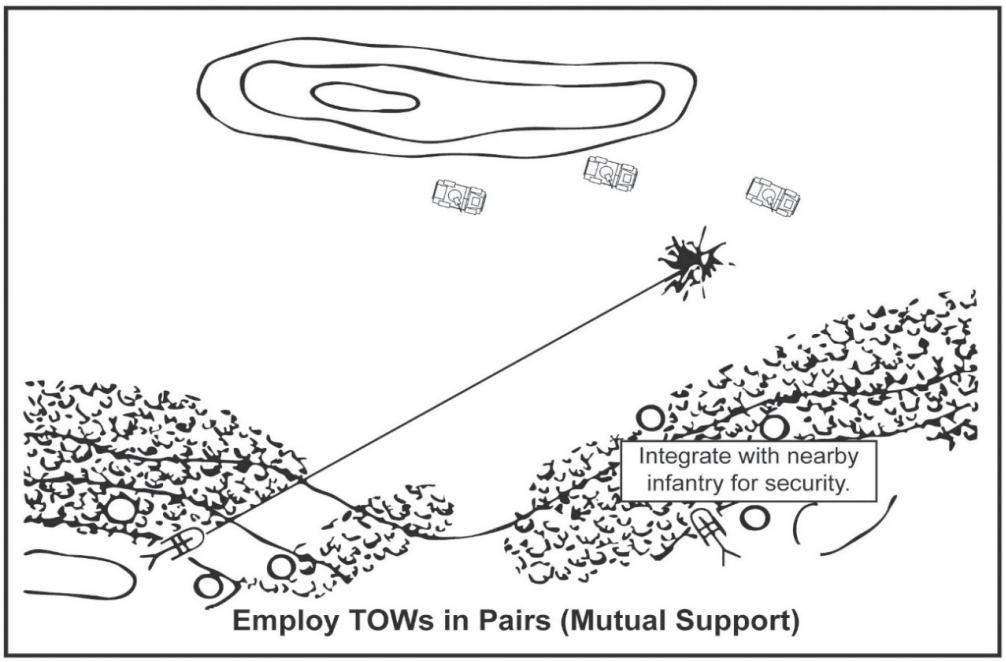


Figure E-1. Mutually Supporting Positions.

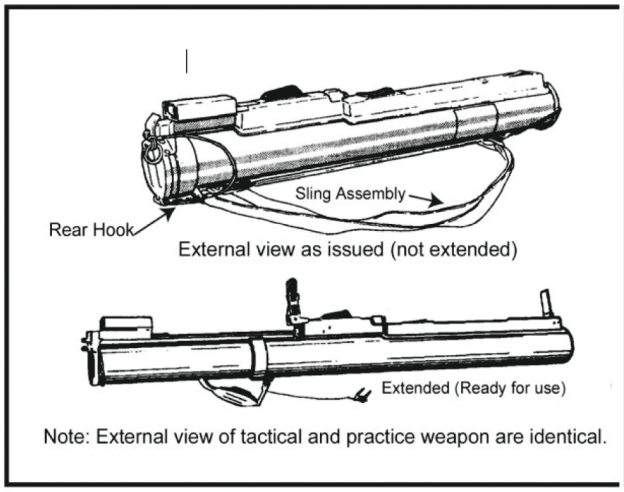
Fortifications

Effectiveness against fortifications and structures vary given the size and type of ordnance fired. To increase effectiveness, the Marine or crew should target a surface between 6 and 12 inches from an aperture to increase lethality and ensure detonation. Depending on the weapon system and type of ordnance, a single round may have minimal effects on target. The platoon commander should seek guidance regarding the type of weapon and the number of rounds required to achieve desired results.

COMMON MARINE CORPS ROCKET AND MISSILE SYSTEMS

M72 Series 66mm Light Antitank Weapon

The M72 LAW is a lightweight (2.5 pounds), self-contained, antiarmor rocket packed in a disposable launcher. See figure E-2 for an illustration of the weapon and its characteristics. It is a short-range, lightweight portable rocket system. The LAW is an ammunition item and issued to the infantry platoon/squad as required. Current versions of the LAW rocket are effective in engaging unarmored vehicles, light armored vehicles (e.g., BMPs and BTRs), bunkers, and strongpoints. It cannot be relied on to defeat the armor of modern main battle tanks. Depending on the threat, an infantry unit may carry a large number of LAW rockets.



M72 Series 66mm Light Anti-Tank Weapon (LAW) Characteristics

M72A2/3 LAW.

- Length: 50.8 centimeters (20 inches)
- Weight: 1.8 kilograms (2.2 pounds)
- Muzzle velocity: 144.8 meters per second (475 feet per second)
- Minimum range (combat): 10 meters (33 feet)
- Minimum arming range: 10 meters (33 feet)
- Maximum range: 1,000 meters (3,300 feet)
- Maximum effective range for a stationary target: 200 meters (660 feet)
- Maximum effective range for a moving target: 165 meters (541 feet)

M72A4/5/6/7 LAW

- Length: 50.8 centimeters (20 inches)
- Weight: 1.8 kilograms (2.2 pounds)
- Muzzle velocity: 200 meters per second (656 feet per second)
- Maximum range: 1,400 meters
- Maximum altitude: 950 meters
- Maximum range: 350 meters
- Maximum effective range: 220 meters
- Minimum range: 25 meters

Figure E-2. M72A1 LAW.

Figure E-3 illustrates the LAW backblast areas and its danger zones. Any personnel in danger zone A could be injured or killed as a result of overpressure, heat, or flying debris. Personnel in danger zone B may be injured by flying debris. The LAW is rated safe for enclosed spaces, as long as the space is not completely enclosed, and the structure is sturdy and flame resistant.

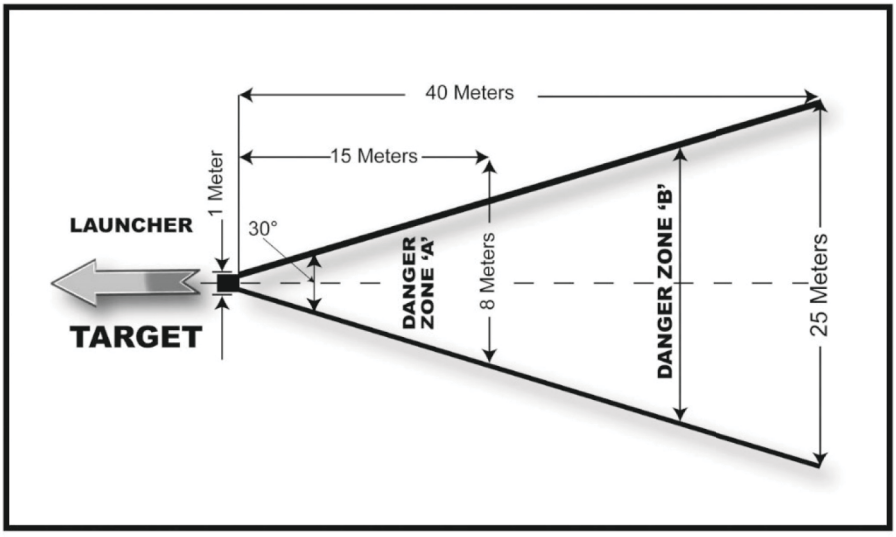
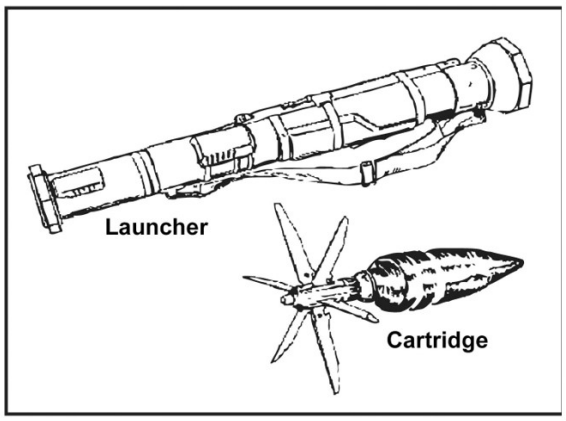


Figure E-3. Back Blast Area of the M72 Series LAW.

M136 84mm AT-4

The M136 AT-4, illustrated in figure E-4, is a 15-pound disposable antiarmor weapon. It is an expendable recoilless rifle, and is employed as a rocket. The AT-4 is an ammunition item and is issued to the infantry platoon and squad as required. The AT-4 is a more powerful antiarmor weapon than the LAW. The system will defeat light armored vehicles and most tanks, if the point of impact strikes a vulnerable area. Tanks equipped with reactive armor, active countermeasures, and/or composite armor will not be destroyed by AT-4s. The AT-4's warhead is designed for penetrating armor and has minimal effects against bunkers and fortifications. The AT-4 is not rated safe to fire from enclosures. It should not be fired in front of a barrier within the danger or caution areas of the weapon system. Walls or structures surrounding the firing point may amplify the damage caused by noise and overpressure, and may injure personnel.



M136 84mm AT-4 Characteristics

Launcher

- Length: 1,020 millimeters (40 inches)
- Weight: (complete system): 6.7 kilograms (14.8 pounds)
- Rear sight: range indicator, graduated in 50-meter increments

Rocket

- Caliber: 84 millimeters
- Muzzle velocity: 290 meters per second (950 feet per second)
- Length: 460 millimeters (18 inches)
- Weight: 1.8 kilograms (4 pounds)
- Minimum range for training: 30 meters (100 feet)
- Minimum range for combat: 15 meters (49 feet)
- Minimum arming range: 15 meters (49 feet)
- Maximum range: 2,100 meters (6,890 feet)
- Maximum effective range: 300 meters (985 feet)

Figure E-4. M136 AT-4.

Figure E-5 displays the danger and caution zones for the AT-4 backblast area.

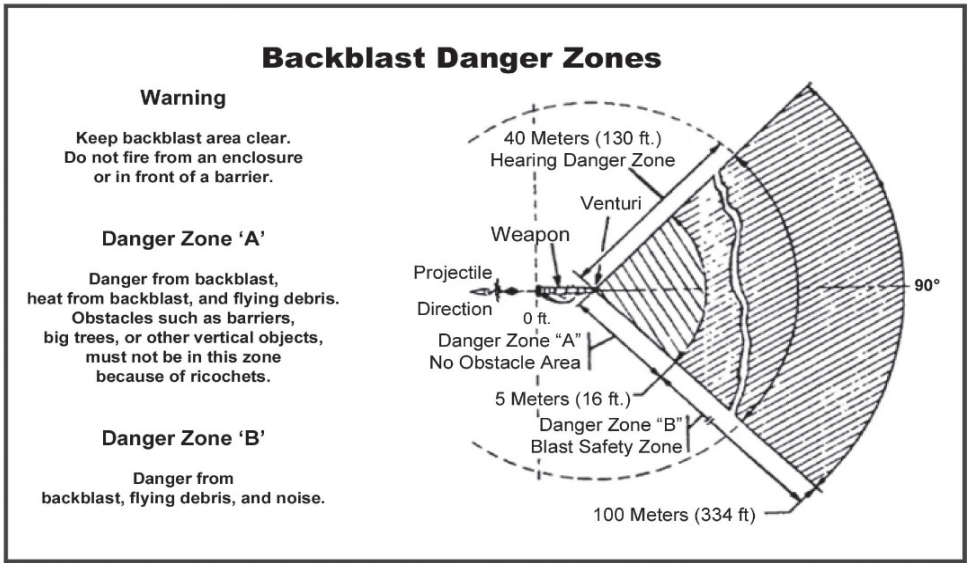


Figure E-5. Backblast Area of M136 AT-4.

Mk 153 83mm Shoulder Launched Multi-Purpose Assault Weapon

The SMAW is a lightweight, reusable crew-served weapon rocket launcher. See figure E-6 for an illustration and its characteristics. It is designed to destroy fortified positions and has proven very effective at destroying targets located in buildings, bunkers, and field fortifications, as well as armored vehicles. The SMAW is equipped with a spotting rifle which fires tracer rounds. The spotting rifle is used to confirm the point of aim prior to firing the rocket, and greatly increases the chance of a first-round hit with the rocket. The SMAW is primarily assigned to the 0351 assault Marines assigned to the assault section of the rifle companies. The SMAW is also used by combat engineers and Marines assigned to the light armored reconnaissance battalion. The assault section of the weapons platoon is thirteen Marines in size, consisting of a section leader and six 2-person teams.

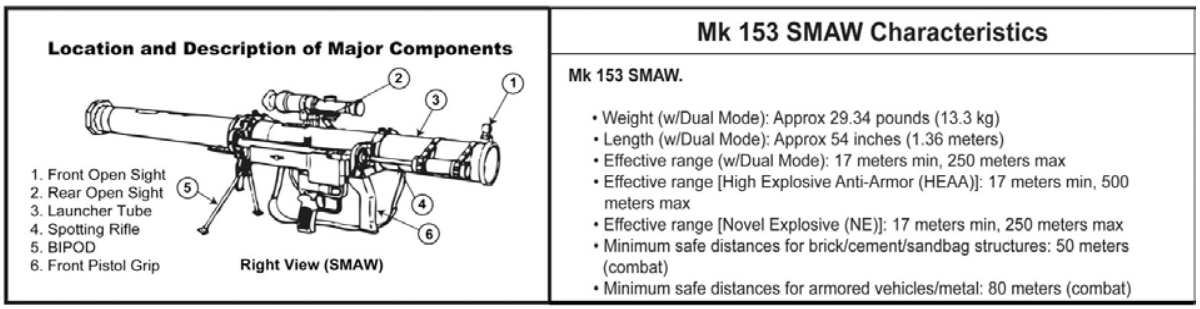


Figure E-6. Mk 153 SMAW.

The SMAW has three types of rockets—

- The dual mode rocket is primarily used to neutralize bunkers and fortifications.
- The high explosive antiarmor rocket is used to neutralize armored vehicles.
- The novel explosive rocket is used in urban environments and caves, where its enhanced blast lethality has proven highly effective.

The SMAW is designed for the gunner and assistant gunner to employ the spotting rifle, adjusting the point of aim before firing the rocket. This process relies on the team's proficiency and enhances the accuracy of the rocket. However, the platoon commander must plan to suppress the enemy while spotting and adjustments are made. The dual mode round is more effective than a LAW or AT-4 in neutralizing bunkers. The novel explosive round is capable of enhanced effects against masonry or cement structures and caves, and is the preferred round for these types of targets. For maximum effectiveness, the rocket should be fired into an aperture facing the long axis of the structure to ensure detonation inside the structure without the chance of the rocket passing completely through the structure prior to detonation. If the structure has no apertures, then additional weapons or dual mode rounds may be required to penetrate the wall, followed by firing the novel explosive round into that opening. The novel explosive round has negligible effects if it detonates on the exterior of the structure. Additionally, the novel explosive round requires additional steps to spot and adjust the aim point; the additional time required should be considered when supporting its employment.

The SMAW is not safe to fire from enclosures. It must not be fired in front of a barrier within the danger or caution areas of the weapon system. Walls or structures surrounding the firing point may amplify the damage caused by noise and overpressure and may injure personnel.

Figure E-7 displays the danger and caution zones of the Mk 153 SMAW. No personnel are allowed in *danger area 1*, as death or severe injury may occur from blast and flying debris. Marines in *caution area 2* must wear helmet, body armor, ballistic goggles, and hearing protection. Marines should remain clear of *caution area 3* as injury may be sustained from flying debris and excessive sound pressure levels (i.e., 140 decibels or more).

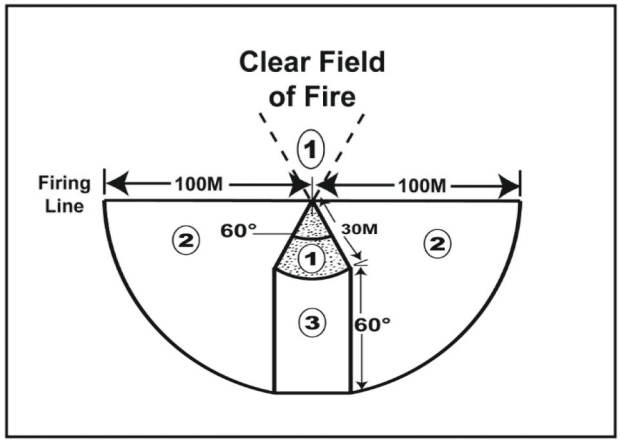


Figure E-7. Backblast Area of Mk153 SMAW.

M220A2 Tube Launched, Optically Tracked, Wire Guided Weapon System

The M220A2 TOW-2 is a long-range antiarmor guided missile. See figure E-8 for an illustration and its capabilities. The TOW may also be used as long-range precision fires to destroy heavily fortified positions and other high value targets. The TOW has an excellent thermal sight which is highly effective in long-range surveillance. The TOW can be ground-mounted on a tripod or employed from vehicles or aircraft. The TOW and the Javelin are the primary weapon systems of 0352 antitank missile gunner. In the infantry battalion, the TOW is employed by the antiarmor platoon, normally mounted on HMMWVs. They are often employed as components of CAAT platoons. The TOW squads (consisting of two weapons systems, typically mounted on HMMWVs) may be attached or placed in direct support of a rifle platoon. Alternately, individual TOW teams may be attached or tasked in support of a platoon.

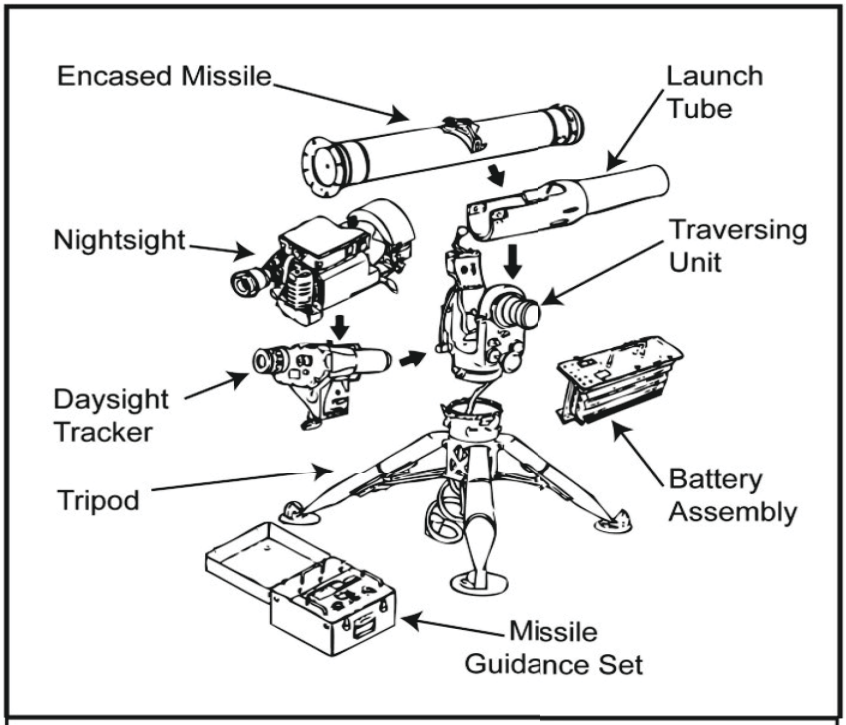


Figure E-8. M220A2 TOW-2.

There are several variants of the TOW missile. The current standard missile, as of publication, is the TOW-2B missile. The TOW-2B is a top attack missile designed to defeat main battle tanks equipped with reactive armor. Earlier versions of the TOW missile remain in service and are capable of defeating the vast majority of tanks likely to be encountered.

Due to its weight, the TOW is usually vehicle-mounted. It may be employed on a tripod in the defense or when the situation dictates. Specific considerations must be made for firing over bodies of water, power lines, during gusting winds, or if the gunner's line of sight to the target is obscured. The time of flight for the TOW missile to its maximum effective range (3,750 m) is

approximately 22 seconds. The platoon commander must consider this when planning to support the TOW crew, as they remain in a static position to control the missile's flight to the target. The TOW is not rated safe for firing from enclosures, and injury may occur if fired with structures and vertical walls within 100 m of the backblast.

Figure E-9 displays the danger and caution areas associated with the backblast of the TOW, as it relates to the direction the TOW is being fired. The primary danger area is a 90-degree cone with a 50-m radius. The apex of the cone is centered at the rear of the missile launcher. Serious injuries or fatalities are likely to result from anyone being in the area during firing. Hazards include launch motor blast, high noise levels, overpressure, and debris. *Caution area 1* extends radially from each side of the primary danger area to the firing line, with a radius of 50 m. Permanent hearing damage could occur to personnel without adequate hearing protection in this area during firing. *Caution area 2* is an extension of the primary danger area with the same associated hazards and personnel protection required. The radius of this area is 75 m.

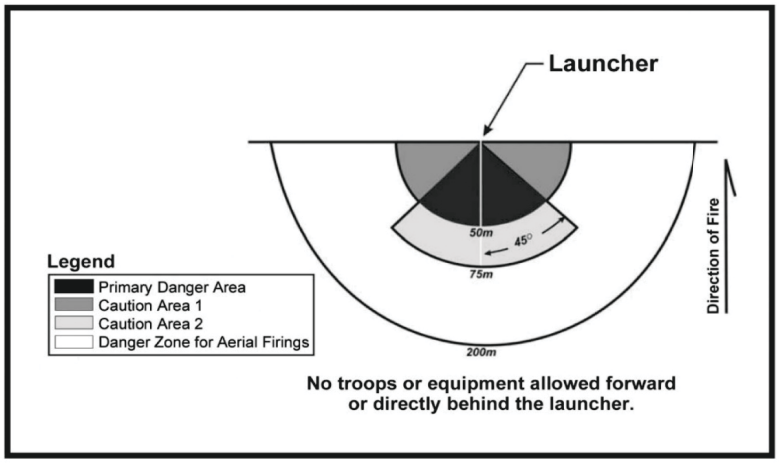
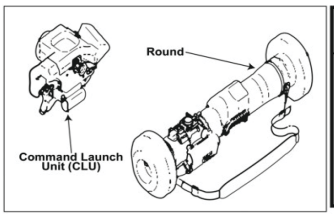


Figure E-9. Backblast Area of TOW.

M98A1 Javelin Weapon System

The M98A1 Javelin is a medium-range, portable, recoilless antitank assault weapon capable of defeating current and projected enemy armor and hovering enemy helicopters. It is illustrated in figure E-10. The Javelin can be used during day, night, or in degraded weather conditions, including electronic and electro-optical countermeasures. The Javelin consists of a one-time expendable round and a command launch unit. The command launch unit is the gunner's interface with the round. The command launch unit provides passive day/night surveillance, target detection, classification and recognition, and battle damage assessment. When a round is connected, the command launch unit provides missile status indication, missile software download, and launch capabilities.



M98A1 Javelin Characteristics

- Weight: 45.60 pounds
- Length: 47.60 inches
- Top attack mode minimum range: 150 meters (492 ft)
- Direct attack mode minimum range: 65 meters (213 ft)
- Maximum effective range: 2000 meters (6562 ft)

Figure E-10. M98A1 Javelin.

The 0352 antitank missile gunner is the primary operator of this weapon system. The crew is a team of two Marines, with four teams per squad, and a total of two squads in the Javelin section. The Javelin section is part of the antiarmor platoon of the weapons company in an infantry battalion. Javelin sections may be attached or tasked to support an infantry platoon.

A Javelin missile round weighs 26 pounds. It is common for each team to be allocated three missiles. Marines from a rifle platoon may be assigned to carry extra rounds as required by METT-T.

The Javelin is a fire-and-forget weapon; the missile is capable of self-guidance once the target is acquired. The Javelin will destroy main battle tanks and can be used to engage hovering helicopters. It can also be used to neutralize bunkers and fortifications. The command launch unit provides a 9x day and night optic for use in long-range observation, and has additional features for battle damage assessment. The platoon commander must exercise caution when firing over friendly personnel, even when the weapon is employed in top attack mode. The Javelin is rated safe for firing from enclosures, but the enclosure must be ventilated and of sufficient dimensions. The platoon commander should seek recommendations from the crew when considering firing from enclosures.

Figure E-11 displays the backblast areas of the M98A1 Javelin. The primary danger zone is a 60-degree sector extending 25 m from the rear of the missile launcher. Serious injury or fatality is likely for personnel in the primary danger zone during firing. A portion of the primary danger zone has been extended forward to the firing line. This portion is within the range of one to five meters left and right of the launch tube centerline. This extended portion is an area affected by activation of the flight motor relief system. *Caution area 1* extends 25 m (82 feet) from each side of the primary danger zone to the firing line. Serious hearing impairment or damage from frequent exposure could occur to personnel in this area during firing. Hearing and eye protection should be worn by personnel in this area. *Caution area 2* is an extension to the rear of the primary danger zone and is identified as a 10-m (32.9 feet) radius aft of the launcher and within a 60-degree sector. Approved hearing protection and eye protection should be worn by personnel who are positioned in this area. *Caution area 3* is an additional extension to the rear of the primary danger zone, and is identified as a 100-m (329 feet) radius aft of the launcher and within a 60-degree sector. This is the area affected by activation of the flight motor pressure relief system. Approved hearing protection and eye protection should be worn in this area.

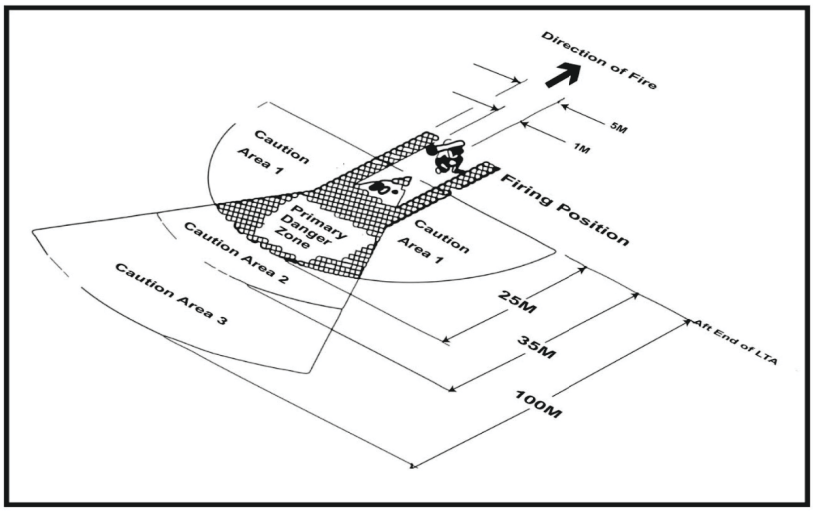


Figure E-11. Backblast Area of an M98A1 Javelin.

APPENDIX F
MORTAR EMPLOYMENT

ROLE OF MORTARS

The primary role of mortars is to provide immediate, responsive indirect fires that support the maneuver of the company or battalion, and that reinforce direct fires during close combat.

This appendix identifies offensive and defensive employment considerations for platoon commanders supported by mortars. For more information, see MCTP 3-01D. Company weapons platoon and battalion mortar platoon commanders should reference that publication for detailed information on employing mortar gunnery.

Mortar sections and platoons provide the commander with—

- An organic indirect fire capability that is always present and always responsive to the maneuver commander, regardless of the changing demands placed on any supporting field artillery.
- Supporting fire that is immediately at hand and close to the company and battalion fight. The mortar section or platoon is aware of the local situation and ready to respond quickly without lengthy coordination.
- Unique plunging fires that complement (but do not replace) the heavier fires of supporting field artillery, close air support, and naval gunfire.
- Weapons whose high rate of fire and lethality fill the gap between the time field artillery fires shift to deeper targets, and the assault elements close onto the objective.
- A solid base of fire upon which to anchor maneuver to the critical point of enemy weakness.

Mortars allow the maneuver commander to quickly place killing indirect fires on the enemy, independent of whether artillery support has been allocated. The infantry battalion mortar platoons are normally employed mounted on wheeled vehicles, though they may carry mortars into firing positions. Rifle companies are equipped with mortars that can be carried across all terrain.

Effects of Fire

The method of attacking a target is governed by the effects desired—suppression, neutralization, or destruction.

Suppression. Suppressive fires limit the ability of enemy troops in the target area to be an effective force. High explosive rounds with proximity fuses inflict casualties, create apprehension, and causes tanks to button up. Smoke can be used to conceal maneuver or confuse the enemy. The effects of suppression last only as long as fires are continued.

Neutralization. Neutralization takes the target out of the battle temporarily. The unit becomes effective again when casualties are replaced and equipment is repaired.

Destruction. Destructive fires put the target out of action permanently. Direct hits are required on hard materiel targets.

Types of Mortar Rounds

The three primary types of mortar fires are as follows.

High Explosive. High explosive rounds are used for destruction, harassing, interdiction, and neutralization fires. They can suppress or kill enemy infantry and other supporting weapons, and interdict the movement of personnel, vehicles, and supplies in the enemy's forward area. White phosphorous (WP) rounds may be mixed with high explosive rounds to enhance their suppressive and destructive effects. The lethal bursting radius of a single high explosive round of 60mm, 81mm, and 120mm mortars is 28 m, 38 m, and 70 m respectively. The suppression effects are illustrated in figure F-1.

Obscuration. White phosphorous rounds provide screening, incendiary, marking, and casualty producing effects. They produce localized, instantaneous smoke clouds by scattering burning WP particles. The WP round is used mainly to produce immediate, close point obscuration to conceal friendly forces as they maneuver or assault, and to blind enemy supporting weapons. White phosphorous rounds can be used to mark targets, especially for attack by aircraft.

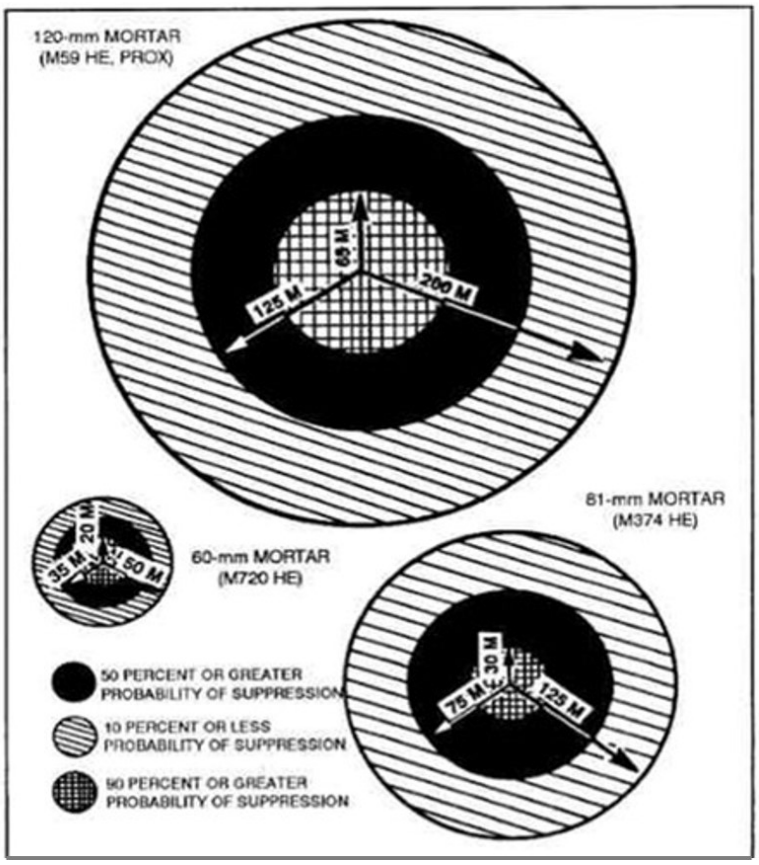


Figure F-1. Suppression Effects of High Explosive Mortar Rounds.

Illumination. Illumination rounds can be used to disclose enemy formations, to signal, or to mark targets. They allow the commander to confirm or deny the presence of the enemy without revealing the location of friendly direct fire weapons. Illumination fires are often coordinated with high explosive fires to both expose the enemy and to kill or suppress them. Illumination rounds are available for all mortars. Illumination rounds use a time fuse that can give an air burst, depending on the time setting. The height of burst can be adjusted to give the best illumination on the desired location. It can also be set to zero for a round intended to burn on the deck for the purpose of marking. Along with the normal illumination round, an infrared illumination round is also available, improving the performance of NVDs.

EFFECTIVE EMPLOYMENT OF MORTAR FIRES

Mortars provide timely and accurate delivery of indirect, high-angle fire to meet the needs of supported units. To be effective, mortar fire must be dense enough and must hit the target at the right time and with the right projectile and fuse combination. The platoon commander must understand the capabilities, relevant employment, and planning considerations for the indirect fire assets supporting the platoon's maneuver prior to any operation. This includes understanding how the mortar impacts will be observed and adjusted, the capabilities and limitations of the mortars in support, and the risk estimate distances. The platoon commander must also consider the acceptance of risk associated with overhead fire from mortars and how close maneuver elements can get to mortar impacts. These items are discussed in further detail in chapter 5.

Observation and Adjustment

Effective target acquisition and surveillance is necessary for effectively employing mortar fires. The platoon commander must have a plan for observing targets, calling fires and observing and adjusting fires. Ideally, the observer is stationary for the majority of the operation, especially when adjusting rounds is necessary. Every Marine in the platoon should be trained to call and adjust mortar fire. The platoon will often be supported by one or more Marines trained to standard as a JTAC or JFO.

The mortar observer should have the ability to accurately observe targets with a magnified optic (with a mil measurement reticle), assess position locating information, estimate ranges, determine azimuths, and communicate information to the supporting agency.

Positioning Mortars

The positioning of mortars must be considered in conjunction with the scheme of maneuver. Mortars are relatively short-range weapons and must be capable of quickly displacing and establishing new firing positions. Company mortar sections maneuver as part of the company scheme of maneuver. During planning, platoon commanders coordinate with the company FST to ensure that the mortar section is emplaced and ready to deliver timely and accurate fires at the time required. The same is true of the battalion mortar platoon at the battalion level.

In the defense, the mortars should be positioned so that they can fire from defilade and at least two thirds of their range projects forward of the unit's defensive positions. In the offense,

company mortars often move in trace of the lead maneuver platoon, establishing firing positions from the march.

Employing mortars in defilade protects them from enemy direct fire and observation, and does not prevent their employment. Use of defilade precludes sighting the weapons directly at the target, but increases the survivability of the mortar position.

Volume of Fires and Sustainment

Mortars can deliver a large volume of fire rapidly. The 60mm mortar is capable of firing up to 30 rounds per minute. This allows them to inflict a large number of casualties quickly on the enemy. It also makes it possible to quickly expend the unit's basic load of ammunition. Units that are moving on foot most carefully consider their ammunition on hand and how they will resupply the weapons. During foot-mobile operations, rifle platoons may be tasked to carry extra mortar ammunition. The unit must have a plan to turn those rounds over to the mortar section.

Combined Arms

Because mortar sections and platoons are organic parts of the battalion, their fires are easily synchronized with the actions of the other members of the combined arms team to destroy the enemy. The synchronization of mortar fires with small arms, rocket, and ATGM fires of the infantry platoons produces a greater combined effect on the enemy than the simple total of these fires.

Mortar fires are a critical and irreplaceable element of the rifle company's maneuver. They either kill the enemy or suppress their fire, and thus allow the assaulting infantry to close and kill them. Mortar obscuration rounds can be critical to allowing maneuver.

In the defense, long-range high explosive fires called and adjusted from concealed OPs can engage the enemy without giving away the positions of defending forces. Mortar fires can also support patrols and ambushes. Targets can be planned on suspected enemy support by fire positions. Mortar fires alone will not destroy enemy armor, but they can contribute to its destruction by forcing the enemy to button up. High explosive and WP fires separate tanks from their dismounted infantry support, leaving them isolated and vulnerable to antitank weapons.

Finally, mortar illumination can improve the effectiveness of a unit's direct fire weapons, and contribute to the combined arms fight by providing marking rounds for close air support.

Weaponeering

When developing the concept of operations and fire support plan, the commander must make weaponeering decisions to focus the right weapons systems against targets. This effort must be coordinated with the company FST, considering the available fire support assets, target description, size of the attack area, and ammunition availability.

Target Description. The method of attacking a target depends largely on its description, which includes the type, size, density, cover, mobility, and importance. Those factors are weighed against the guidelines established by the commander. Based on the target description, the FDC will decides the type of projectile, fuse, fuse setting, and ammunition to be used.

Size of Attack Area. The size of the attack area is determined by the size of the target or by the size of the area in which the target is known or suspected to be located. That information is usually an estimate based on intelligence and experience in similar situations. The size of the attack area is limited when considering units to fire. Mortars are the best weapons for engaging targets in depth due to their versatility in making range changes and maintaining high rates of fire. All mortars can fire traversing fires with only minor manipulations.

Amount and Type of Ammunition. The platoon commander must consider the amount and type of ammunition available when planning mortar fires. The maneuver commander who intends to use the fires must understand what ammunition types are available prior to beginning an operation.

MARINE CORPS MORTAR SYSTEMS

Figure F-2 depicts the various types of mortars and rounds commonly used by the Marine Corps.

Lightweight Mortar System

The lightweight mortar system is a smooth-bore, muzzle-loaded, high angle of fire weapon. Ten Marines and three lightweight mortar systems comprise the mortar section assigned to the rifle company's weapons platoon. It can be fired from either a conventional drop-fire mode or be

WPN	AMMUNITION		METERS			RATES OF FIRE/NOTES
	MODEL	TYPE	MIN RANGE	MAX RANGE	DIA OF ILL	
60-mm M224	M720/M889	HE*	70	3,500(1)		30 rounds per minute for 4 minutes(2) then 20 rounds per minute, sustained
	M722	WP**	70	3,500		
	M721	ILLUM***	200	3,500	500	
	M302A1	WP	35	1,830		
	M83A3	ILLUM	725	950	300	
	M49A4	HE	45	1,830		
81-mm M252	M821/M889	HE	80	5,800		30 rounds per minute for 2 minutes, then 15 rounds per minute, sustained
	M374A3	HE	73	4,790		
	M819	RP****	300	4,800		
	M375A2	WP	73	4,595		
	M853A1	ILLUM	300	5,060	650	
	M301A3	ILLUM	100	3.950		
120-mm M120	M57	HE	200	7,200		15 rounds per minute for 1 minute, then 4 rounds per minute, sustained
	M68	WP	200	7,200		
	M91	ILLUM	200	7,100		
	M933	HE (PD)	200	7,200		
	M934	HE(MOF)	200	7,200		
	M929	WP	200	7,200		
	M930	ILLUM	200	7,200	1,500	

* HIGH EXPLOSIVE
** WHITE PHOSPHORUS
*** ILLUMINATION
**** RED PHOSPHORUS

(1) BIPOD-MOUNTED, CHARGE 4 (MAXIMUM RANGE HANDHELD IS 1,300 METERS)
(2) CHARGE 2 AND OVER, 30 ROUNDS PER MINUTE CAN BE SUSTAINED WITH CHARGE 0 OR 1

Figure F-2. Characteristics of Mortars and Their Rounds.

trigger fired. A lightweight auxiliary base plate is used when firing the mortar in the hand-held mode. It can be fired in a direct-lay mode or through the use of an FDC. The lightweight mortar system can be employed in several different configurations. The lightest weighs about 18 pounds, and the heaviest weighs about 45 pounds. Each round weighs about four pounds.

M252 81mm Mortar

The M252 81mm mortar illustrated in figure F-3 is a crew-served, smooth bore, muzzle loaded, high angle of fire weapon system. It is designed to be fired in the indirect fire mode, cannot be fired hand-held, and normally utilizes an FDC. The M252 range and explosive power is greater than the M224, yet they are still light enough to be individually carried over long distances. The M252 weighs about 95 pounds. It can be broken down into several smaller loads for easier carrying. Rounds for these mortars weigh about 15 pounds each.

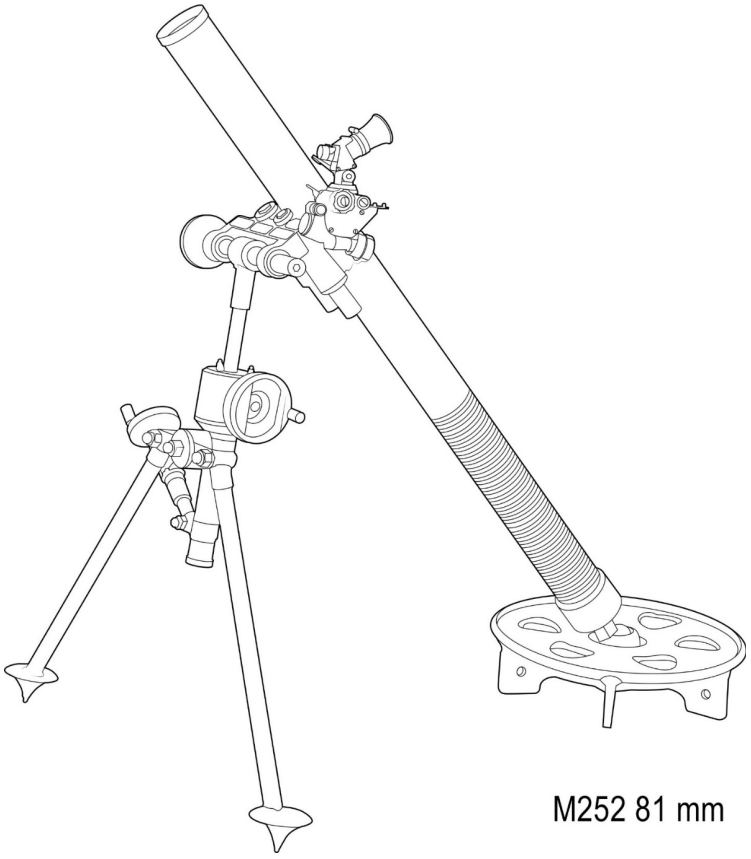


Figure F-3. M252 81mm Mortar.

APPENDIX G
MACHINE GUN EMPLOYMENT

Machine guns provide high volumes of accurate direct fire in support of the infantry in both the offense and defense. In the offense, the machine gun can add firepower to the assault, but it is often best employed to suppress or neutralize the objective from a base of fire. The long-range, close defensive, and FPFs of the machine gun provide an integral part of the defense. Heavy machine guns may be used to destroy lightly armored vehicles or as defensive measures against slow-moving, low-flying aircraft. In addition, the machine gun is used effectively in convoy security, point defense of rear area facilities, and other rear area security missions.

This appendix identifies employment considerations for the platoon commander, addressing the characteristics of machine guns and ammunition, the fundamentals of machine gunnery, and offensive and defensive employment considerations. Marine Corps Tactical Publication 3-01C, *Machine Guns and Machine Gunnery,* is a comprehensive publication that addresses all aspects of machine gunnery and employment.

Based on METT-T considerations, infantry platoons may draw and employ the light machine gun. They may be reinforced with machine gun squads or sections from either the company machine gun section or the battalion HMG platoon.

PRINCIPLES OF MACHINE GUN EMPLOYMENT

Maximum efficiency in the tactical employment of all types of machine guns can be reached by applying the eight principles of machine gun employment listed below during planning. Most tactical situations would benefit from the employment of all eight principles simultaneously. However, in actuality, these principles are prioritized according to the tactical situation; some may be abandoned in favor of others that are more crucial. These principles are not meant to serve as absolutes. However, they are sound ideas proven in combat which should be understood and considered by all personnel involved in the employment of machine guns. The easiest way to remember these principles is by the acronym “PICMDEEP.”

Pairs

Machine guns are employed in pairs assigned to the same mission. This gives the gun teams the ability to efficiently engage targets of larger width or depth than one machine gun could effectively engage alone. Employment in pairs provides the opportunity for continued fire from one machine gun while the other machine gun is reloading, correcting a malfunction, or reducing a stoppage. Another critical aspect of pairs is that it allows for better command and control from the machine gun unit leader.

Interlocking Fires

When in the defense, ensuring that fire from one machine gun position interlocks with the fires of other machine gun positions prevents gaps through which the enemy can easily close with and attack friendly positions.

Coordination of Fire

Machine guns are employed as part of combined arms operations. Leaders ensure that machine gun fire is coordinated with the fires of adjacent machine guns and other weapon systems.

Coordination in the Offense. In the offense, coordination of fire means integrating supporting fires (both indirect and direct) and maneuvering infantry. Fires should be coordinated with maneuver so that as a maneuver element closes with an objective, the enemy is suppressed by munitions that continually decrease in bursting lethality, starting with artillery, then mortars, and finally machine guns. Close supporting fire from machine guns is, therefore, the final means of suppressing an enemy position before the maneuvering infantry resort to organic small arms.

Coordination in the Defense. In the defense, machine guns form the backbone around which other infantry weapons are organized. The leader must prioritize the machine gun fire plan, then plan other fires to complement it. Other indirect and/or direct fire weapons cover dead space in a machine gun's FPL. Indirect fire should be planned to concentrate along the line where the machine gun's FPL is expected to stop the enemy, hitting them when they seek cover.

Mutual Support

Mutual support is achieved by positioning pairs of machine guns in relation to one another so that if one pair is attacked by the enemy, the enemy will be subject to direct fire from the other pair.

Defilade

Whenever possible, machine guns should be positioned in defilade, as the enemy will quickly target gun positions to neutralize or destroy them. Setting the machine guns in defilade provides them with substantial cover from the enemy's direct fire weapons.

Enfilade

To achieve the greatest effect from a machine gun, it should be sited to produce enfilade fire. This is done to ensure that the long axis of the beaten zone coincides with the long axis of the target. Enfilade fire causes the maximum number of rounds to be concentrated on the maximum number of targets, significantly increasing the chances of hitting targets. In a defensive scenario, machine guns sited to fire a PDF usually achieve frontal enfilade fire, while those sited to fire an FPL produce flanking enfilade fire.

Economy

The high rate of fire of a machine gun makes excessive ammunition consumption a concern for both machine gunners and infantry leaders alike. The wasteful use of ammunition can severely jeopardize the success of an operation. Therefore, a detailed, accurate mission analysis should be conducted to plan for those types and amounts of ammunition that could effectively cripple or destroy the enemy. Balancing rates of fire, durations of fire, and ammunition supplies are essential when conducting a mission analysis.

Protection

Protection for machine guns, whether attached or supporting, should be a major concern. The platoon commander protects machine guns by integrating the rifle squads and the machine guns. The commander also assigns engagement priorities and engagement criteria for machine guns that prevents them from engaging too early and allowing them to be targeted and engaged. Where possible, the commander seeks to employ machine guns from positions where they can engage effectively while remaining outside the maximum effective range of the enemy's weapons.

GUNNERY

Machine guns form the backbone of anti-infantry defenses and provide essential support to infantry assaults. Effective employment of machine gunnery starts with an understanding of the weapon's employment by unit leaders.

Classifications of Machine Gun Fire

Machine gun fire can be classified in relation to the ground, the target, and the gun. Understanding these classifications helps leaders plan and direct machine gun fire.

Classes of Fire with Respect to the Ground

Grazing fire and plunging fire are illustrated in figure G-1.

Grazing Fire. Grazing fire is delivered so that the center of the cone of fire does not rise more than one meter above the ground. Grazing fire is the primary consideration when assigning the mission of an FPL to a machine gun in the defense. The ground must be flat or uniformly sloping for grazing fire. The maximum ranges that grazing fire can be maintained with the M240 and M2A1.50 caliber machine guns are 600 m and 700 m, respectively.

Plunging Fire. Plunging fire is the class of fire where the danger zone is practically confined to the beaten zone. Firing against a steep slope, from high ground to low ground, from low ground to high ground, or at very long ranges produce plunging fire. This type of fire requires more adjustments to the machine gun than grazing fire.

Figure G-1. Types of Fire in Relation to the Ground.

Classes of Fire With Respect to the Target

Platoons commanders employ machine guns to maximize the effects of fires. A critical way of doing this is to position them in such a way that the beaten zone of fires intersects with likely

enemy formations. Figure G-2 illustrates classes of fire with respect to the enemy. When possible, machine guns are positioned to achieve enfilade fire against targets.

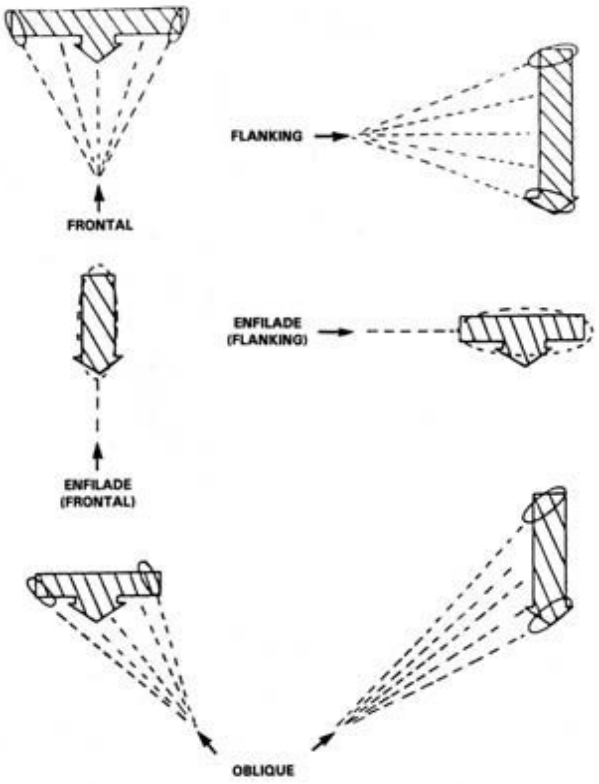


Figure G-2. Classes of Fire with Respect to the Target.

Frontal Fire. Frontal fire is fire delivered against the front of a target.

Flanking Fire. Flanking fire is fire delivered against the flank of a target. Flanking fire may be directed at the side or rear of an enemy formation.

Oblique Fire. Oblique fire is fire delivered so that the long axis of the beaten zone at an oblique angle to the long axis of the target.

Enfilade Fire. Enfilade fire is delivered so that the long axis of the beaten zone coincides with the long axis of the target. This is the most desirable and most efficient class of fire with respect to the target because it makes maximum use of the danger space/beaten zone. Additionally, enfilade fire can be further classified according to the first two classes of fire with respect to the target.

Frontal Enfilade. The long axis of the beaten zone coincides with the long axis of the target. In the defense, this class of fire is usually achieved when setting a machine gun to fire a PDF, as the enemy will most likely be in an approach column, moving along an avenue of approach.

Flanking Enfilade. The long axis of the beaten zone coincides with the long axis of the target. Defenders position machine guns on flanks of positions to establish FPLs, employing this class of fire against enemy units deployed in assault formations.

Classes of Fire Relative to the Weapon

Figure G-3 illustrates the various types of fire used by machine gunners with weapons mounted on tripods.

Figure G-3. Classes of Fire with Respect to the Gun.

OFFENSIVE EMPLOYMENT

In the attack, machine guns are best suited for a fire support role. They are capable of delivering accurate fires long after artillery and mortars are required to cease. This support is best utilized during the final stages of the assault when the maneuver element is most exposed to the enemy. The positioning of the machine guns relative to the maneuvering unit affects how close the maneuvering unit can get to the enemy before machine gun fire needs to cease to avoid fratricide. The separation between the maneuver element and the active gun-target line should not be less than 15 degrees or 50 meters (whichever is less) off the gun-target line for fixed fires and 45 degrees or 100 meters off the gun-target line for nonfixed fires. If this is not adhered to, there is an increased probability of fratricide. The degree of offset between a support by fire element and a maneuver element is generally 90 degrees or less, depending on the distance from the target, terrain, and tactical control measures.

Machine guns should be employed in accordance with the four roles of the machine gun in the offense. If the machine gun section cannot engage the entire objective, it will focus its fires on the portion of the objective that provides the greatest threat to the maneuver element. The commander determines the appropriate rates of fire during the attack with the advice of the machine gun unit leader, who takes into account the ammunition available and the effectiveness of fires in accomplishing the assigned task and purpose.

The Four Roles of Machine Guns in the Offense

The four roles of machine guns in the offense are easily learned and remembered by relating them to the sequence in which they are likely to be performed, starting with the initial movement of a maneuver element into an enemy-held zone. Therefore, they are presented in the sequence identified in the following subparagraphs.

Flank Protective Fires. Flank protective fires are delivered against targets that pose a threat to the flank of a maneuvering unit. Flank protective fires are usually planned for when it is expected that the advancing unit will create an open or exposed flank, but are only delivered if the unit is actually threatened.

Close Supporting Fires. Close supporting fires are delivered against enemy units that either oppose the advance of a maneuver unit or present the most immediate and serious threat to a supported unit. Close supporting fires are best employed from a support by fire position.

Long-Range Fires. Long-range fires are delivered against targets in the rear of enemy forward positions. Long-range fires are usually assigned to machine guns when they can no longer provide close supporting fires. They are most useful against enemy units that pose a threat of reinforcing or counterattacking.

Fires in Support of Consolidation. Fires in support of consolidation are delivered against targets that threaten a friendly unit's consolidation on an objective. Fires in support of consolidation are employed because units are most vulnerable to enemy counterattack following the seizure of an objective. These fires are best delivered from the same support by fire position that supported the unit's attack, because displacing the guns to the objective puts them out of action until they actually reach the objective. However, if the guns cannot provide the support necessary from their position, they should displace to the objective or to another support by fire position.

DEFENSIVE EMPLOYMENT

Sectors of Fire in the Defense

In the defense, machine gun squads are assigned sectors of fire which are coordinated with and mutually support the rifle squads. One of the lateral limits of the sectors of fire is usually the FPL, designed to place grazing fire in front of the unit's defensive positions. The sector of fire should not exceed 800 mils (i.e., 45 degrees). The machine gun unit is responsible for engaging the enemy within its sector, subjecting them to fire as they approach, and finally forcing them to pass through coordinated bands of grazing fire before they can assault. When the sector of fire does not include an FPL, a PDF is used. It is desirable that the PDF approximately bisect the sector and that it points toward a clearly defined landmark in the area.

The Three Roles of Machine Guns in the Defense

Like the offensive roles, the three defensive roles of machine guns are easily remembered by the sequence in which they are likely to be performed: from long range to short range.

Long-Range Fires. Long-range fires are delivered against enemy units for the purpose of interdicting and disrupting them before they are deployed in the attack. Long-range fires can be employed to harass the enemy in an assembly area, preempt their attack, disrupt their formations, or cause them to unmask covered units or deploy them early, which exposes them to other fires. Commanders weigh the effects of long-range fires against the advantages of keeping machine gun positions concealed until initiation of close defensive fires. Often, mortars and other indirect fire weapons can shape the battle, allowing machine guns to remain concealed.

Close Defensive Fires. Close defensive fires are delivered against targets that present an immediate threat to the defense. Close defensive fires are employed in conjunction with other direct and indirect fires in the defense in order to create an impenetrable network of fires in a unit's defensive

engagement area. Tactical obstacles may be employed to improve the effectiveness of close defensive fires.

Final Protective Fires. Final protective fires are an immediately available, pre-arranged barrier of fire designed to impede enemy movement across defensive lines or areas. For machine gun crews, the FPF entails the firing of either an FPL or a PDF. Final protective fires are employed only when the close defensive fires have failed. If employed, obstacles are constructed so that FPLs are delivered along the enemy side of protective wire obstacles. When the attacking enemy encounters the wire and slows or stops to negotiate it, flanking enfilade fire from machine guns effectively engages them. Artillery or mortar FPFs are sited to cover dead space in machine gun FPLs.

Final Protective Line. An FPL is a predetermined barrier of grazing fire designed to break up an enemy assault. It is the basis of a unit's defensive fires, is optimally as close and as parallel to the defensive lines as possible, and ideally produces flanking enfilade fire. The three characteristics of effective FPLs are flanking fire, interlocking fire, and grazing fire. When an FPL is assigned, it should be walked whenever practical. Walking the FPL allows the team to determine the extent of the grazing fire and danger space available and to locate and mark any dead space in the FPL.

Principal Direction of Fire. A PDF is a predetermined line of machine gun fire covering the most dangerous avenue of approach to a defensive position with either plunging or grazing fire. It is employed when terrain does not allow an FPL. It usually produces frontal enfilade fire.

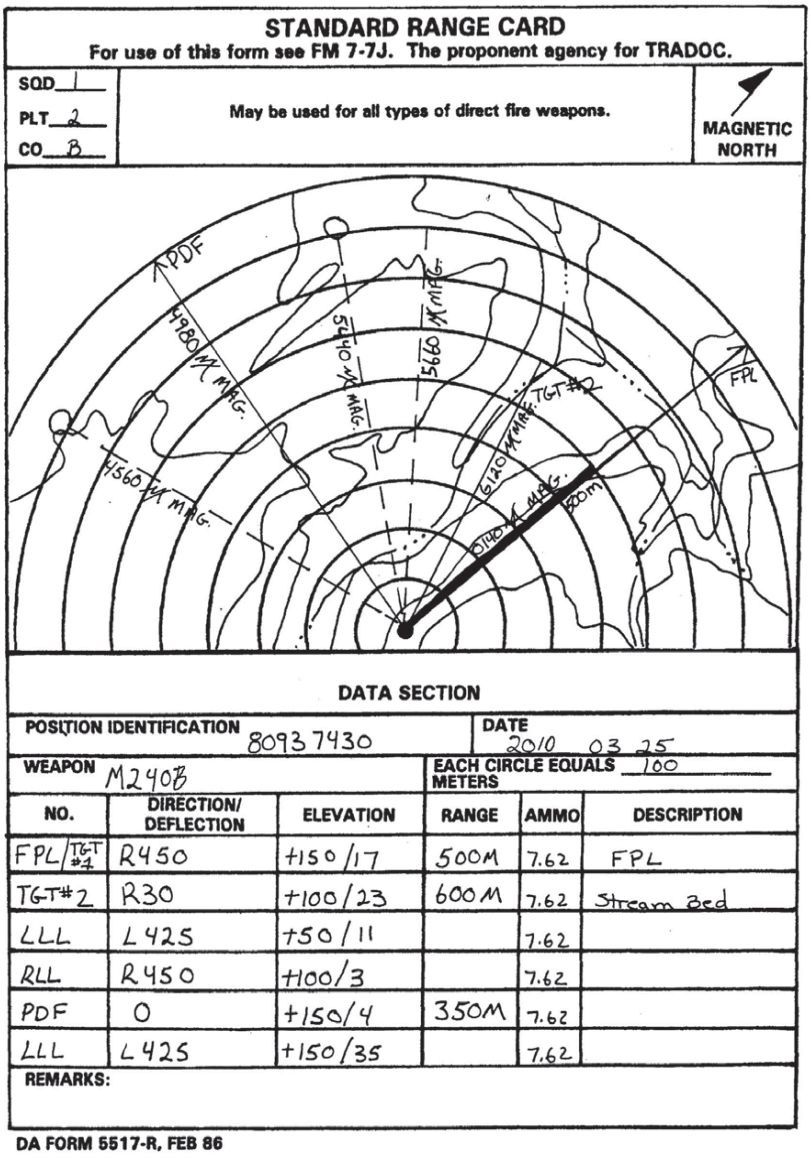
Dead Space. Those areas that machine guns cannot engage due to micro-terrain is called dead space. Identifying dead space in the engagement area and along the FPL is critical. Dead space indicates areas that cannot be adequately engaged by machine gun's fires, and it requires the assignment of other weapons systems to cover the space. This is important in determining the type of weapon that will be used to cover the dead space. Grenade launchers may be assigned to engage dead space when the FPL is fired.

Siting of Machine Guns in the Defense

Once the machine gun unit leader has ensured that positions are occupied properly, machine guns are immediately set in firing positions to cover assigned sectors of fire and are laid on PDFs or FPLs. The squad leader points out definitive terrain features to each machine gun team when prescribing sectors of fire, PDFs, and FPLs.

Preparation of Range Cards

Each team leader prepares two range cards. These should contain information on TRPs, the extent of dead space and grazing fire along the FPL, and the locations of likely targets. Figure G-4 is an example of a machine gun range card. Typically, both teams of a machine gun squad are assigned the same sector of fire and fire the same PDF or FPL. Thus, each FPL is a double band of machine gun fire. If both teams of the squad are positioned properly (approximately 35 to 50 meters apart), both teams' range cards will be similar. One copy of the range card is given to the squad leader, who determines the amount of dead space within each team's FPL from the information provided.



STANDARD RANGE CARD

For use of this form see FM 7-7J. The proponent agency for TRADOC.

SQD 1
PLT 2
CO B

May be used for all types of direct fire weapons.

MAGNETIC NORTH

DATA SECTION

POSITION IDENTIFICATION 80937430 DATE 2010 03 25

WEAPON M240B EACH CIRCLE EQUALS METERS 100

NO.	DIRECTION/ DEFLECTION	ELEVATION	RANGE	AMMO	DESCRIPTION
FPL/TGT #1	R450	+150/17	500M	7.62	FPL
TGT#2	R30	+100/23	600M	7.62	Stream Bed
LLL	L425	+50/11		7.62	
RLL	R450	+100/3		7.62	
PDF	0	+150/4	350M	7.62	
LLL	L425	+150/35		7.62	

REMARKS:

DA FORM 5517-R, FEB 86

Figure G-4. Example of Completed Range Card.

The squad leader provides the second copy of the range card to the platoon commander and coordinates for other weapons to cover dead space.

Machine Gun Fighting Positions

Machine guns draw enemy fire. The construction of fighting position is based upon both the mission assigned to the machine gun team and the time available to prepare the position. The three types of basic machine gun fighting positions are the L-shaped, T-shaped, and U-shaped positions, as illustrated in figure G-5.

L-Shaped. The L-shaped position is the basic machine gun fighting position. It can be used for either an FPL or a PDF, but can only support a single sector of fire. This position can accommodate only two crew members, but it can be improved to become either a T-shaped or U-shaped position.

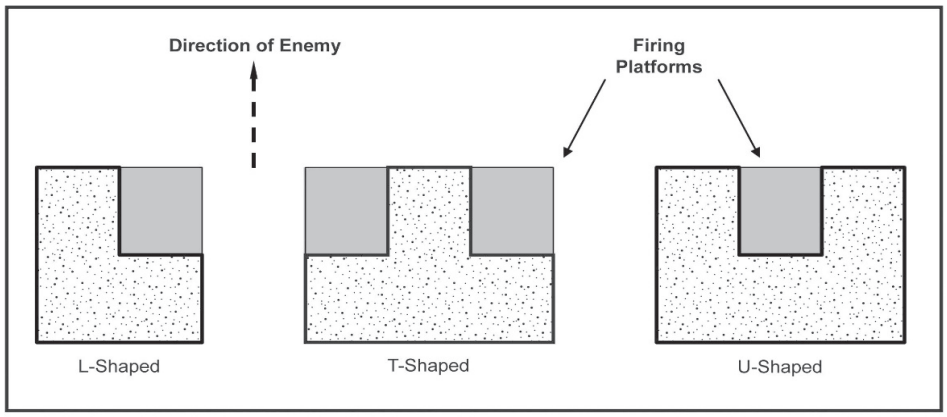


Figure G-5. Types of Machine Gun Positions.

T-Shaped. The T-shaped position is simply an extension of the basic L-shaped position. It is used when a gun crew is assigned both a primary and a secondary sector of fire, and is the preferred type of machine gun fighting position.

U-Shaped. The U-shaped position is also an extension of the basic L-shaped position. Though it can only support a single sector of fire, it has room for all three members of the gun crew. This type of position allows for good visibility to the front, but provides less frontal cover than the T-shaped position and less protection against indirect fire than the L-shaped position. It can be used for either an FPL or a PDF.

MACHINE GUN CHARACTERISTICS

Machine guns are most effectively employed in concert with other weapons in an attempt to achieve a combined arms effect. This section focuses on the unique employment considerations for the light, medium, and heavy machine guns. The characteristics of these systems are illustrated in table G-1.

Light Machine Gun

The light machine gun is assigned to the rifle companies. As required by METT-T, these light machine guns may be used to equip the machine gun sections or the automatic riflemen in the rifle platoons. Platoons may arm their automatic riflemen with either a light machine gun or the infantry automatic rifle. The light machine gun may be employed using the bipod, mounted on a tripod, or mounted on a vehicle.

In the offense, the light machine gun can be used by units (i.e., squads or platoons) assigned as a base of fire. It adds a high volume of fire to help suppress and destroy enemy personnel on an objective. The infantry automatic rifle is more likely to be used by assault elements. In the defense, light machine guns can augment the FPLs and PDFs of the medium machine guns. Light machine guns can also be assigned their own PDFs to cover likely avenues of approach or other priority target areas.

Table G-1. Characteristics of Machine Guns and Ammunition.

M240B Medium MG	M2A1 Heavy MG	MK 19 Grenade MG
Employment • Maximum Effective Range: point target: 800m, • area target: 1,800m • Grazing fire: 600m • Tracer burnout: 900m • Battlesight setting: 500m	**Employment** • Maximum effective range • Ground mount: ♦ Point target: 1,500m ♦ (Area target: 2,000m (2,185 yards) • Maximum effective range vehicle mounted: ♦ Point target: 1,000m (1,094 yards) • Area target: 1,500m • (1,640 yards) • Grazing fire: 700m (766 yards) • Tracer burnout: 1,450m • (1,585 yards) • Battlesight setting: 550m (600 yards)	**Employment** • Maximum effective • Range • Point target: 1,500m • Area target: 2,045m • Minimum arming • Distance for HEDP 18 • To 60m (60-200 ft) • Minimum safe • Engagement range for HEDP: ♦ Training: 310m ♦ Combat: 75m ♦ Lethality radius of M340A1HEDP: 5m ♦ Effective Casualty radius of M340A1 HEDP: 15m
Weight • M240B: 24.2 lbs • M122 tripod, with Flex-mount and T&E Mechanism: 20 lbs • Total system weight: 44.2 lbs • Complete spare barrel case: 12.9 lbs • 100-round bandoleer: 7 lbs • 200-round ammunition can (two 100-round) bandoleers: (15 lbs)	**Weight** • Total gun weight: 84 lbs • M3 Tripod: (w/T&E mechanism • & pintle) 44 lbs • Total system weight (gun and Tripod): 128 lbs • 100-round ammunition can: 35 lbs • 200-round ammunition crate: 70 lbs	**Weight** • Mk 19: 75.6 lbs • M3 tripod: 40 lbs • Mk 64 cradle w/T&E Mechanism: 25 lbs • Total system weight: 140.6 lbs • 48-round ammunition can (M340): 42 lbs
Armor Penetration • Ball (M80): 3.5m (.14") at 600m at 0°, 4mm (.157") at 300m at 45° • Armor Piercing (M993): 20mm (.78") at 100m, 15mm (.6") at 300m, 7mm (.28") • Armor Piercing (M993): 120mm (4.7") of plexi-glass, 200mm (8") of Brick, 200mm (8") of concrete	**Armor Penetration** • Ball (M33): 8mm (.315") at 500m, 4mm (.157") at 1200m • API (M8): 25mm (1") at 200m, 19mm (.75") at 600m, 13mm (.5") at 1,000m, 8mm (.315") At 1,500m • SLAP (M903): 32mm (1.25") at 300m at 0°, 19mm (.75") at 1,600m at 0°	**Armor Penetration** • HEDP (M340A1): 3" at 0° - 45° obliquity • HEDP (M430): 2" at 0° - 45° obliquity
	Penetration of Other Materials • API (M8) sandbags (dry): 14" at 200m • API (M8) clay (dry): 28" at 200m, 26" at 600m, 21" at 1,500m • SLAP (M903): 1/2" of rolled Homogeneous armor and 8" of concrete at 200m	**Penetration of Other Materials** • HEDP (M340A1): 30" Sandbags, 24" sand-filled cinderblocks, 18" pine logs • HEDP (M430): 20" Sandbags, 16" sand-filled cinderblocks, 12" pine logs

The machine gun's light weight and portability make it well-suited for ambush patrols. The light machine gun can provide a high volume of accurate fire to squad and platoon-sized ambushes.

Medium Machine Gun

The Marine Corps' medium machine gun, the M240, provides a high volume of accurate fire. It is capable of accurate fire at ranges beyond the other small arms found in the infantry company. It is

best employed at long range from the tripod. It is employed from the bipod only as a last resort. Machine guns are typically employed in squads placed in direct support of a unit or attached to it. The M240 can be employed from defilade firing positions.

In the offense, the preferred method for employing the M240 is by section or squad from a support by fire position from which the guns can mass their fires. The goal is to mass the fires of the guns, not to mass the guns themselves. The principles of dispersion, employment in pairs, and cover and concealment need not be violated to achieve massed machine gun fire. An observer should be used to direct and adjust the fires whenever possible so that the guns can be positioned in defilade for greater protection.

During movement to contact, the guns can be used to overwatch a unit's movement, particularly when negotiating terrain that impedes mobility, such as crossing streams or steep draws. In difficult terrain, guns can also overwatch from a moving unit's flank, advancing by bounds with one squad always in position to fire. Security for the guns must be a matter of priority in these instances. In chance contact, the force that establishes fire superiority first and exploits it with a rapid assault often prevails. When contact is initiated, machine gunners must move rapidly in the direction of enemy contact, searching for positions that allow them to quickly add the weight of their fires against the enemy.

In the defense, the guns should generally be positioned on the flanks, with interlocking FPLs and sectors of fire across the unit's front. Whenever grazing fire can be attained, the M240 should be assigned an FPL. All dead space in an FPL should be covered by other weapons systems. When terrain or mission prevents the effective use of an FPL, a PDF is assigned. These are typically designed to cover likely avenues of approach or areas where the enemy might mass. Often a mix of FPLs and PDFs are assigned to a section of guns in the defense in order to best cover the frontage; however, only one mission (i.e., either an FPL or PDF) should be assigned per gun.

Heavy Machine Gun

The M2A1.50 caliber HMG and Mk19 grenade machine gun provide high volumes of accurate fire at ranges beyond the capabilities of small arms and medium machine guns. The lethality of their ammunition makes them ideal for engaging troop concentrations, lightly armored vehicles, unarmored vehicles, fortified positions, aircraft, and other equipment. The M2A1 and Mk19 are both located in the HMG platoon of the weapons company in the infantry battalion. Both of these weapons are most often employed on vehicles for both offensive and defensive operations. When mounted on a tripod, long range accuracy is greatly increased. Either of them can and should be employed on the M3 tripod for use in the ground role or in the upper levels of buildings.

The HMG platoon does not have sufficient personnel to simultaneously operate both weapons provided by tables of equipment. Consequently, the commander decides what mix of HMGs to employ. The high angle of fire of the Mk19 and the flatter trajectory of the M2A1 can be employed effectively in tandem in many situations, with the characteristics of one complementing the other. For example, the M2A1 can be used to pin down enemy troops while the Mk19 uses HEDP to create the fragmentation effects of a mortar barrage.

Mk19 40mm Heavy Machine Gun. The Mk19's HEDP round makes it very effective against personnel, with an effective casualty radius of 15 m. The HEDP round will penetrate two inches of

steel with zero degrees obliquity out to maximum range. The HEDP's arming range is 18 to 60 m; this must be kept in mind during urban operations.

While it is very effective against stationary light armor, it is difficult to effectively engage moving vehicles with the Mk19 because its low-velocity warhead has a high angle of trajectory. The 40mm grenade causes reactive armor to detonate.

M2A1.50 caliber Heavy Machine Gun. The M2A1 has a maximum effective range of 1,830 m. It can deliver effective grazing fire for 700 m. Its sustained rate of fire is 40 rounds per minute and its rapid rate is anything over 40 rounds per minute. The M2A1 weighs 128 pounds when complete with tripod and gun. Ammunition is packed in 100-round cans that weigh 35 pounds each.

When firing the saboted light armor penetrator (i.e., SLAP) round, the M2A1 is highly effective against light armor targets out to ranges up to 1600 m. At that range, the saboted light armor penetrator round will penetrate 3/4 inches of rolled homogeneous steel at zero degrees obliquity, or 3/4 inches at 300 m at 57 degrees obliquity. Therefore, it is effective against lightly armored vehicles such as BTR-90 armored personnel carriers, BRDM-2 reconnaissance vehicles, BMP-2 IFVs, 2S3 self-propelled howitzers, and ZSU 23-4 air defense vehicles within 2000 meters. It is also effective against compounds and structures built with concentrated masonry that might not allow for penetration from light or medium machine guns. The M2A1 can be effectively employed against moving vehicles.

MACHINE GUN EMPLOYMENT IN THE URBAN ENVIRONMENT

The primary consideration that impacts the employment of machine guns in urban areas is the limited availability of long-range fields of fire. Machine guns may be positioned to take advantage of straight streets that allow firing lanes to isolate buildings and blocks. When possible, machine guns should be emplaced at ground level to obtain grazing fire along streets. Street level fires may be obstructed by vehicles or rubble.

Light Machine Guns

As required by METT-T, infantry squads may be equipped with a light machine gun. The light machine gun is not a preferred weapon for clearing rooms, but can be useful in defending recently captured buildings and preventing counterattacks.

Medium Machine Guns

Machine gun squads or sections may be employed to suppress and isolate enemy defenders. The weapons may be employed at ground level to get grazing fire down straight streets. Medium machine guns are not effective in clearing buildings. If the gunner is unable to engage targets from the tripod, they may fire the M240 from the bipod. In the defense, they are likely to be used to fire grazing fire down streets as either PDFs or FPLs.

Heavy Machine Guns

Sections of HMG platoons and/or CAAT platoons may be employed as mobile fire support assets. If necessary, either the Mk19 or the M2A1 can be mounted on the M3 tripod. It may be emplaced close to the ground or in the upper levels of buildings. When mounted on a tripod, the M2A1 can be used as an accurate long-range weapon, and can supplement sniper fires.

Penetration of Machine Guns in Urban Environments

The ability of the machine gun fires to penetrate cover is affected by the range to the target and the type of cover fired against. At 50 meters, the 7.62mm ball round cannot reliably penetrate a single layer of well-packed sandbags. It can penetrate a single sandbag layer at 200 m, but not a double layer. The armor-piercing round does only slightly better against sandbags. It cannot penetrate a double layer, but can penetrate up to 10 inches at 600 m. The penetration of the 7.62mm round is best at 600 meters. However, most urban targets are closer, and are often 200 meters or less.

The.50 caliber round is also optimized for penetration at long ranges (about 800 meters). Both armor-piercing and ball ammunition penetrate 14 inches of sand or 28 inches of packed earth at 200 m if the rounds impact perpendicular to the flat face of the target.

Continued and concentrated machine gun fire can breach most typical urban walls. However, such fire cannot breach thick reinforced concrete structures or dense natural stone walls. Internal walls, partitions, plaster, floors, ceilings, common office furniture, home appliances, and bedding can be easily penetrated by both 7.62mm and .50 caliber rounds, as illustrated in table G-2 and table G-3.

Table G-2. Number of 7.62mm Ball Rounds Required to Penetrate Typical Walls at 25 Meters.

Type	Thickness (Inches)	Hole Diameter (Inches)	Rounds Required
Reinforced concrete	8	7	100
Triple brick wall	14	7	170
Concrete block with single brick veneer	12	6 and 24	30 and 200
Cinderblock (filled)	12	*	18
Double brick wall	9	*	45
Double sandbag wall	24	*	110
Log wall	16	*	1
Mild steel door	3/8	*	1
* Penetration only; no loophole			

Both the M203 dual-purpose weapon and the Mk19 grenade machine gun fire 40mm high explosive and HEDP ammunition. Ammunition for these weapons is not interchangeable, but the grenade and fuse assembly hitting the target is identical. Both weapons provide point and area destructive fires, as well as suppression. The Mk19 has a much higher rate of fire and a longer range; the M203 is much lighter and more maneuverable.

If projected into an interior room, the 40mm HEDP round can penetrate all interior partition-type walls. It splinters plywood and plaster walls, making a hole large enough to fire a rifle through. It is better to have HEDP rounds pass into a room and explode on a far wall, even though much of

the round's energy is wasted penetrating the back wall. Figure G-6 illustrates the point of aim for a 40mm HEDP round in an urban environment. The fragmentation produced in the room causes more casualties than the high explosive jet formed by the shaped charge.

Table G-3. Number of .50 Caliber Ball Rounds Required to Penetrate Typical Urban Targets at 35 Meters.

Type	Thickness (inches)	Hole Diameter (inches)	Rounds Required
Reinforced concrete	10 18	12 24 7	50 100 140
Triple brick wall	12	8 26	15 50
Concrete block with single brick veneer	12	10 33	25 45
Armor plate	1	*	1
Double sandbag wall	24	*	5
Log wall	16	*	1
* Penetration only, no loophole.			

Overhead Fire

When developing the scheme of maneuver, platoon commanders consider the battlespace geometry and the location of guns and maneuvering forces. The desire is to maneuver assault units as close to the enemy as possible before shifting or ceasing machine gun fires. By understanding lateral separation and overhead fire, the commander can plan to shift and cease fires so that the maneuver element receives maximum suppression without being subjected to fratricide.

Only the M240 firing Department of Defense Identification Code (i.e. DODIC) A151 or M2 machine guns may fire over the heads of friendly troops. The gunner's rule and leader's rule apply to machine guns delivering overhead fire when mounted on tripods with traversing and elevation mechanisms. Overhead fire can be used from bipod-mounted weapons; however, doing so bears a larger risk. In all cases, the machine gun crew must determine the overhead safety limit in order to safely fire over the heads of friendly troops. Refer to MCTP 3-01C for detailed information on overhead fire procedures.

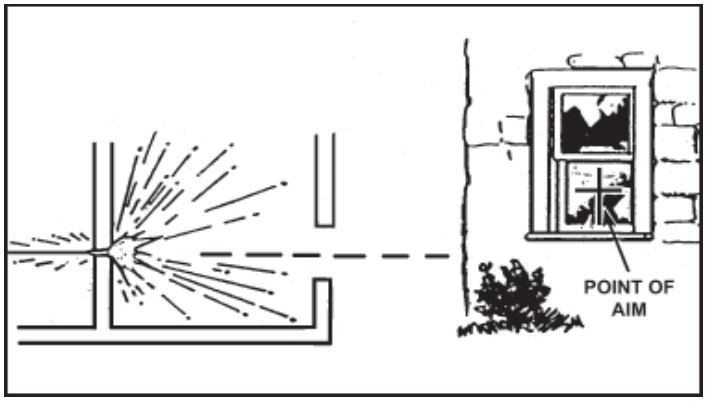


Figure G-6. Aiming Point for 40mm HEDP.

APPENDIX H
FOREIGN WEAPONS

This appendix addresses the general characteristics and capabilities of the most common non-US infantry weapon systems used around the world today. These weapons may be found in the hands of our allies or enemies. This appendix is not all-inclusive; for more information, refer to ST-7-100, *OPFOR Battle Book for the Operational Environment*. A small sampling of foreign armored fighting vehicles is addressed in appendix C.

AK SERIES RIFLES

The AK-47 entered Soviet service in 1951. The AKM [*Avtomat Kalashnikova Modernizirovanniy*] variant, which is easier to manufacture, began to replace it in 1959. The AKM, depicted in figure H-1, was the standard rifle of the Warsaw Pact. It was produced under license and/or exported to many nations and supplied to numerous communist insurgent groups. More than 100 million AK series rifles have been produced. They are respected as simple reliable weapons. Many countries still manufacture the AKM today. There are many variations, including folding stocks, integral bayonets, and grenade launchers. The maximum effective range is 300 m.

Figure H-1. AKM.

AK-74

The AK-74, shown in figure H-2, is an improved AKM chambered for a 5.45mm round. It is used by Russia and other former Soviet states, and has been exported extensively. Its maximum effective range is 400 m.

Figure H-2. AK-74.

RPK

The RPK [*Ruchnoy Pulemyot Kalashnikova*], shown in figure H-3, is a heavy barrel version of the AKM or AK-74 equipped with a longer heavier barrel and bipod. It is designed to fill a squad automatic weapon or light machine gun role. RPKs can be found in either 7.62x39 or 5.45mm variants. They are typically equipped with 40-round magazines or 75-round drums, though they can use the standard 30-round rifle magazines as well. The maximum effective range is 800 m against an area target.

Figure H-3. RPK Light Machine Gun with 75-round Drum.

AKS-74U

The AKS [Avtomat Kalashnikova Skladnoy]-74U, shown in figure H-4, is a short-barreled version of the AK-74. It is often issued to vehicle crews, and serves in a carbine and sub-machine gun role. Its maximum effective range is 200 m.

Figure H-4. AKS-74U Sub-Machine Gun.

SVD

The SVD [Dragunov], shown in figure H-5, often fills the role of a sniper or designated marksman rifle. The SVD fires the Russian 7.62 x 54mm rimmed round, including an armor-piercing round. It is equipped with a 10-round detachable box magazine, and its maximum effective range is 900 m.

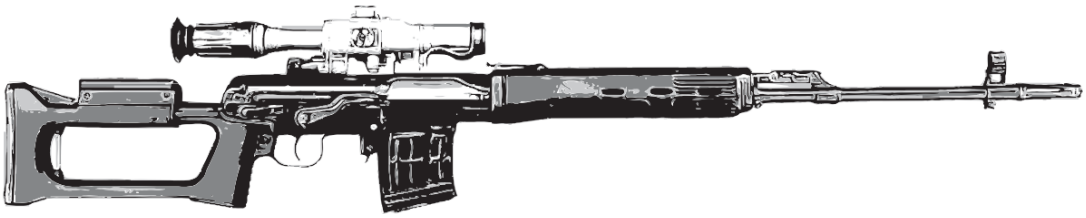


Figure H-5. SVD Sniper Rifle.

PKM Machine Gun

The PKM [Pulemyot Kalashnikova], shown in figure H-6, is a general-purpose machine gun which fires the same 7.62 x 54mm rimmed cartridge as the SVD. It is fed from 100-, 200-, or 250-round drums. Its maximum effective range is 1,500 m. The PKM can be employed from its bipod or from a tripod. A variant of the PKM is used as the coaxial machine gun on many Soviet and/or Russian armored vehicles.

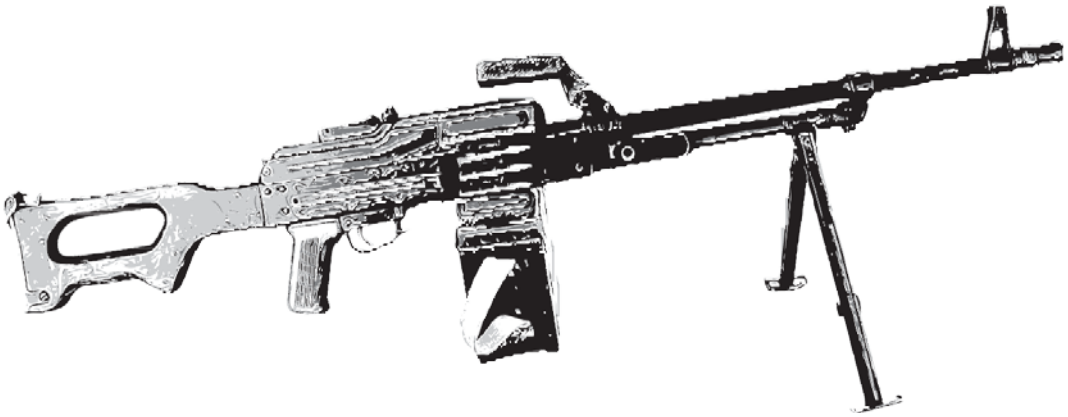


Figure H-6. PKM Machine Gun.

ROCKET PROPELLED GRENADES

The RPG-7 is a 40mm smooth bore launcher which can fire a variety of spin-stabilized rockets. The launcher with optical sights weighs 15 pounds (6.9 kilograms). It uses a recoilless launch, with a rocket booster igniting soon after firing. The maximum range of the weapon is 950 m. The maximum effective range varies between 200 to 500 m, depending on the grenade type.

The high-explosive antitank round self-destructs at approximately 200 m. The warheads arm 3 to 15m after being fired.

Both the launcher and the rounds are widely proliferated, and there are a large number of variants and rounds produced by many nations. The PG-7V rocket has the capability to penetrate 330mm of steel armor (see figure H-7). The PG-7VL antitank grenade can penetrate up to 600mm of rolled homogeneous steel (see figure H-8). The PG-7VR (see figure H-9) is a tandem warhead designed to penetrate reactive armor. The OG-7 (see figure H-10) is a high-explosive antipersonnel grenade with a 2-kg, 40mm fragmentation warhead that has an effective range of 350 m and an effective casualty radius of 15 m. The TBG-7V (see figure H-11) has a 4.5-kg 105mm thermobaric warhead. Its effective range is 200 m (maximum range is 700 m), with an effective casualty radius of 10 meters.

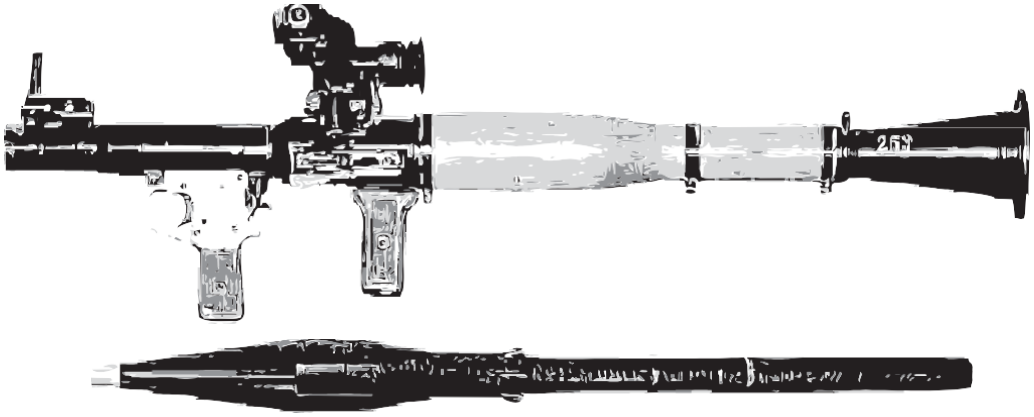


Figure H-7. RPG-7 Launcher with PG-7 Grenade and Booster Element.

Figure H-8. PG-7VL Heat Grenade.

Figure H-9. PG-7VR (Anti-Active Armor).

Figure H-10. OG-7V Fragmentation Grenade.

Figure H-11. TBG-7V Thermobaric.

BG-15 GRENADE LAUNCHER

The BG-15 grenade launcher, shown in figure H-12, is a 40mm muzzle loaded smooth bore weapon which can be mounted on AKMs and AK-74s. The launcher adds three pounds to the weapon. It fires 40mm high explosive, smoke, and tear gas rounds. The high explosive round has a 6-m casualty radius. The minimum range is 40 m (the rounds arm 20 to 40 m after firing) and the maximum range of the weapon is 400 m.

Figure H-12. BG-15 Grenade Launcher Mounted on AK-74.

NSV HEAVY MACHINE GUN

The NSV, shown in figure H-13, is an HMG which fires the Russian 12.7x108mm round. It is used on armored vehicles or mounted on a tripod. It normally fires armor-piercing incendiary rounds. Its maximum effective range is 2,000 m.

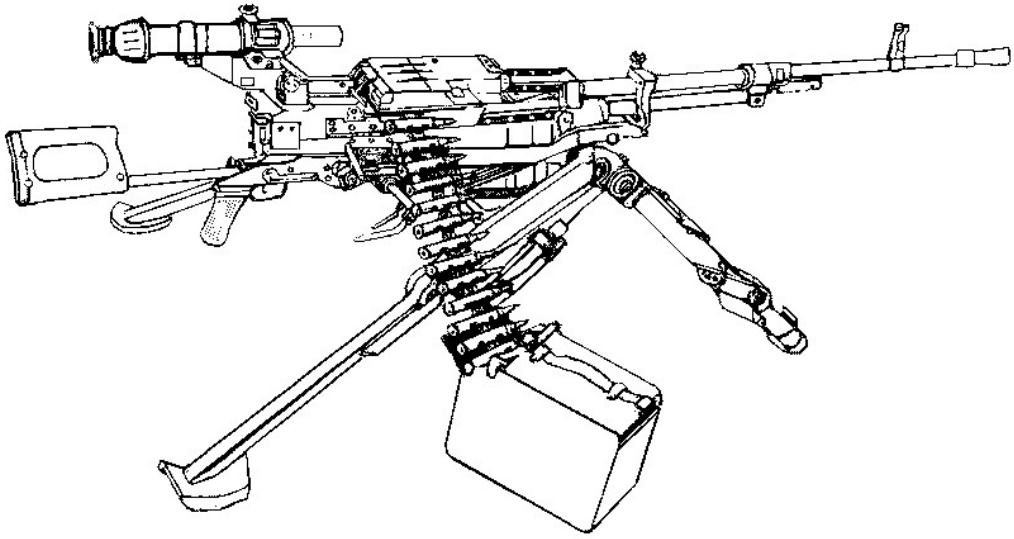


Figure H-13. NSV Heavy Machine Gun Mounted on Tripod.

AGS-17 Automatic Grenade Launcher

The AGS-17, shown in figure H-14, is a blowback-operated 30mm automatic grenade launcher which can be mounted on a tripod or vehicle. A prominent drum magazine mounted on the right side holds 29 belted grenade rounds. The nondisintegrating metallic link belt exits from the left side. Its minimum range is 50 m, its maximum effective range is 1,200 m., and its maximum range is 1,730 m. It can be used as an area suppression weapon by the infantry in indirect fire mode. The rounds have a 6-m casualty radius. It is primarily for use against personnel and has a limited capability against light armored vehicles.

Figure H-14. AGS-17 30mm Grenade Launcher with Rounds and Ammunition Drum.

SAXHORN ATGM, AT-7, and AT-13

The Saxhorn, shown in figure H-15, is a portable, wire-guided ATGM system used by dismounted forces. It is a Soviet-era system still used by Russia and other former Soviet states that has been

Figure H-15. Saxhorn ATGM System on Tripod with AT-13 Missile.

exported. The launcher can fire either AT-7 missiles (high explosive antitank warhead with a 1,000-m range) or improved AT-13 missiles (1,500-m range) with an improved tandem warhead. A high explosive-thermobaric round exists, but is rare. The three-person crew carry personal weapons and an ammunition load of five missiles. This system has a thermal sight and has been mounted on light vehicles.

M1937 82MM MORTAR

The M1937, shown in figure H-16, is a conventional Russian 82mm mortar which has been exported to many countries. Its minimum range is 90 m and its maximum effective range is 3,040 m. The complete system weighs 92 pounds. The 82mm mortar has high explosive, smoke, and illumination rounds. Each high explosive round weighs seven pounds and has a 25-m effective casualty radius. It can maintain a sustained rate of fire of 25 rounds per minute.

Figure H-16. M1937 82mm Mortar with Rounds.

2B9 82MM AUTOMATIC MORTAR

The 2B9, shown in figure H-17, is a newer Russian mortar which fires the same series of 82mm mortar ammunition as the M1937 and is used by many former Soviet clients. It is mounted on a wheeled carriage and looks more like a small artillery piece than a mortar. It is breech-loaded with ammunition fed from four-round ammunition clips, and can also be hand-loaded. The 2B9 has a maximum range of 5,000 m, a minimum range of 100 m, and a 10-degree traverse in either direction. It fires high explosive-fragmentation, illumination, and smoke rounds. The weapon has a cyclic rate of fire of 120 rounds per minute. However, the practical rate of fire is approximately 40 to 60 rounds per minute; a four-round burst leaves the tube in as little as 2 seconds. This volume of fire considerably increases the shock effect of the first burst of fire.

Figure H-17. 2B9 82mm Automatic Mortar.

2B11 120MM MORTAR

The 2B11, shown in figure H-18, is a modern Russian 120mm mortar. Its minimum range is 450 m and its maximum range is 7,000 m firing conventional high explosive rounds. High explosive fragmentation, smoke, and illumination rounds are common. A rocket assisted high explosive round with a maximum range of 9000 m exists. A laser-guided round is also available.

Figure H-18. 2B911 120mm Mortar in Travel and Firing.

APPENDIX I
FRIENDLY AND THREAT WEAPON RANGE COMPARISONS

Weapon	Max Effective Range	Ammo	Rapid ROF	Sustained ROF	ECR	Remarks
Infantry Company Weapons						
M16/M4	550 m point target, 800 m area target		30 RPM	10 RPM		M16 rifle and M4 carbine
M27	550 m point target, 800 m area target			36 RPM		infantry automatic rifle
M249 LMG	600 m grazing fire, 800 m vs area target	4+1 ball and tracer	200 RPM	100 RPM		Held by rifle company. Issued as required. May be tripod mounted.
M203 grenade launcher	HEDP 150 m point target, 350 m area target. Buckshot 50 m	HEDP, buckshot			HEDP 15 m	Colored smoke, star parachute, and star cluster rounds used for signaling and illumination. Riot control round exists.
M240 MMG	600 m grazing fire, 800 m vs point target, 1,800 m vs area target	4+1 ball and tracer	200 RPM	100 RPM		
SMAW, 83 mm	250 m point target, 400 m area target, 500 m HEAA	HEDP, HEAA, novel explosive				9-mm spotting rifle ballistically matched to rockets. Arming range for rockets is 17 m.
M224 60mm mortar	HE 3,500 m, WP 3,500 m, Illum 3,200 m	HE, WP, Illum	30 RPM	20 RPM	HE 27 m WP 10 m	FPF for section is 30 x 90 m, illum will illuminate 500-m radius for 40 seconds
AT-4 rocket	300 m	HEAT				Minimum range is 15 m. Issued as round of ammo.
M72 LAW	220 m	HEAT				Minimum range is 25 m. Issued as round of ammo.
M67 grenade	40 m	NA			15 m	4-5 second delay. Issued as round of ammo.
M18 claymore	50 m	NA	The claymore ECR extends in a 60' arc covering a 50-m frontage at 50 m.			Issued as round of ammo. 30 m range.

LEGEND

APDS = armor piercing, discarding sabot	APFSDS = armor piercing fin stabilized discarding sabot
API = armor piercing - incendiary	ECR = effective casualty radius
HE = high explosive	HE-Frag = high explosive - fragmentation
HEAA = high explosive, antiarmor	HEAT = high explosive, anti-tank
HEDP = high explosive dual purpose	HE-I = high explosive - incendiary
illum = illumination	IR-illum = infrared - illumination
LMG= light machine gun	MMG= medium machine gun
ROF = rate of fire	RPM = rounds per minute
SLAP = saboted light armor penetrator	WP = white phosphorous

Weapon	Max Effective Range	Ammo	Rapid ROF	Sustained ROF	ECR	Remarks
Infantry Battalion Weapons						
MK19 HMG	1,500 m pt target, 2,045 m area target	HEDP	60 RPM	40 RPM	15 m	Arming distance is 18-36 m. Minimum safe range is 75 m.
M2 HMG	700 m grazing fire, 1,500 m point target, 2,000 m area target	Ball, API, SLAP	40+ RPM	40 RPM		
M252 81-mm mortar	HE 5,700M, WP 4,500 m, Illum 5,100 m	HE, WP, Illum	33 RPM	16 RPM	HE 35m, WP 15m	FPF for section is 140M x 35 m, Illum will illuminate 500 m radius for 60 seconds, IR-Illum round exists
Javelin ATGM	2,000 m	HEAT	NA	NA		minimum range is 65 m
TOW ATGM	3,750 m	HEAT	NA	NA		minimum range is 65 m
Other GCE Weapons						
25-mm cannon	2,000 m	HE-I, APFSDS	200 RPM	100 RPM		Mounted on LAV-25. Will penetrate BMP at 2,200 m
120-mm M-1 tank	3,000 m	APFSDS, HEAT, cannister	10 (crew dependent).	3 RPM		Mounted on M-1 tank. APDS will defeat all types of armor at 2,200 m.
120-mm, M327 mortar	HE 7,200 m, WP 7,200 m, Illum 7,100 m	HE, WP, Illum	10 RPM	4 RPM	HE 70m, WP 30m	Precision Extended Range Munition round is GPS- guided with maximum range of 16,000 m
155-mm, M777 Howitzer	HE 14,700 m, HE-RAP 30,000 m	HE, Illum, WP, DPICM, and guided	4 RPM	2 RPM	50 m	FPF for battery is 300 m x 50 m. Rocket assisted, GPS, and laser guided rounds are available, as are scatterable mines.
Naval Gunfire Support						
USN 5"/54	21,887 m	HE, Illum, WP	20 RPM	16 RPM	45 m	

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illum = illumination	IR-illum = infrared - illumination
LMG= light machine gun	MMG= medium machine gun
ROF = rate of fire	RPM = rounds per minute
SLAP = saboted light armor penetrator	WP = white phosphorous

Weapon	Max Effective Range	Ammo	Rapid ROF	Sustained ROF	ECR	Remarks
Common Foreign and Threat Weapons						
AKM, 7.62mm	300 m point target					Many variants
AK-74, 5.45mm	400 m point target					
RPK, 7.62mm	800 m area target					
RPK-74, 5.45-mm	800 m area target					
BG-15 40mm grenade launcher	400 m area target	HE, smoke, and tear gas			10 m	Muzzle loading grenade launcher mounted under AKM or AK-74 rifle. Arming range is 40 m.
FN FAL, 7.62mm	650 m					The Fabrique National FAL is a 7.62-mm rifle widely used by many nations.
SVD, 7.62mm	800 m point target	Ball, AP				
PK GPMG 7.62-mm	1,500 m area target		200 RPM	100 RPM		
RPG-7	300 - 500 m	HEAT, HE-Frag, thermobaric			HE-Frag round 15 m, thermobaric 10 m	Widely proliferated. Used by at least 40 countries, many producing their own rounds.
AGS-17 30mm auto grenade	1,200 m point target, 1,730 m area target	HE-Frag and smoke			6 m	Minimum range is 50 m. Uses 29-round belts. Can be used in direct fire or indirect suppressive role.
NSV 12.7mm HMG	2,000 m area target					Used as anti-aircraft machine gun on tanks and on tripod
KPV 14.5mm HMG	2,000 m area target					Mounted in BTR series and BRDM-2
M-37 82mm Mortar	3,040 m area target	HE, smoke, and illum	25 RPM	10 RPM	25 m	Conventional portable mortar
82mm auto-mortar	5,000 m area target	HE, smoke, and illum	40 RPM	10 RPM	25 m	Russian nomenclature is 2B9. It can fire direct or indirect. Minimum range is 50 m.
84mm Carl Gustaf	700 m	HE, HEAT, smoke, illum, flacette				Used by more than 25 countries. 2-member crew. Used for antiarmor, illumination, smoke, and bunker busting.
AT-5 ATGM	4,000 m	HEAT				Roughly equivalent to older TOW. Mountd on BMP-2 and other armored vehicles.

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LMG= light machine gun	MMG= medium machine gun
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Weapon	Max Effective Range	Ammo	Rapid ROF	Sustained ROF	ECR	Remarks
Common Foreign and Threat Weapons						
Saxhorn AT-7/ 13 ATGM	Min 80 m AT-7 1,000 m, AT-13 1,500 m	AT-7 HEAT, AT-13 tandem HEAT				Portable wire-guided ATGM. Used by dismounted forces. Launcher can fire either AT-7 or improved AT- 13 missiles. A HE-thermobaric round exists.
Kornet, AT-14 ATGM	Min 100 m, Max 5,500 m	Tandem HEAT warhead				Advanced fire and forget ATGM, includes thermal sight. HE-Frag and HE-thermobaric missiles exist.
ZSU-23	2,500 m area target					23-mm automatic anti-aircraft gun. Used in towed ground mounts and on the ZSU-23-4 and other vehicles.
30mm cannon	1,000m point target 1,800m area target	HE-I, APFSDS	200 RPM	100 RPM		Auto cannon mounted on BMP-2 and other vehicles
100mm tank gun	1,500 m for gun, AT-10 ATGM is 4,000 m	APFSDS, HEAT, HE-Frag, ATGM	7 RPM	3 RPM		Tank gun mounted on T-54 and T-55 series tanks. Some upgraded to fire laser guided AT-10 ATGM.
125mm tank gun	2,100 m for gun, AT-11 ATGM 5,000m	APFSDS, HEAT, HE-Frag, ATGM	7 RPM	3 RPM		Tank gun mounted on T-64, T-72, T-80, T-90 tanks. May fire AT-11 ATGM.
2B11 120mm mortar	7,000 m area target, rocket assisted HE 9,000 m	HE, smoke, and illum			50 m	A laser guided round exists.
122mm howitzer D30	15,400 m	HE, smoke, and illum are most common.	8 RPM	4 RPM	40 m	The 122-mm howitzer is used by at least 30 countries. Towed version is D-30. 2S1 self-propelled version is mounted on tracked chasis. HEAT, chemical, laser guided, and flacette rounds exist.
152mm howitzer	28,000 m	HE, smoke, and illum are common			50 m	The D-20 is the towed version. The same gun is used on 2S3 self-propelled howitzer. Improved conventional munitions, HEAT, chemical, and laser guided rounds exist.
BM-21,122mm Multiple Rocket Launcher	minimum 5,000 m, maximum 20,400 m	HE-Frag is normal	40 RPM	NA	40 m, rockets are fired in volleys	The BM-21 is used by 50 nations, mounting 40 x 122- mm rockets on a 6x6 truck. Smoke, chemical, scatterable mine, and expendable radio jammer rounds also exist.

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illum = illumination	IR-illum = infrared - illumination
LMG= light machine gun	MMG= medium machine gun
ROF = rate of fire	RPM = rounds per minute
SLAP = saboted light armor penetrator	WP = white phosphorous

APPENDIX J
ORDER FORMAT

OPERATION ORDER FORMAT

1. Situation
   - A. Enemy Situation:
     1. Composition, disposition, and strength
     2. Capabilities and limitations
     3. Enemy's most likely course of action
   - B. Friendly situation:
     1. Higher mission and intent
     2. Adjacent units
     3. Supporting units
   - C. Attachments and Detachments: Including effective time.
2. Mission
3. Execution
   - A. Commander's intent
     1. Purpose of the mission
     2. Method of exploiting enemy vulnerabilities
     3. End state
   - B. Concept of operations
     1. Scheme of maneuver
     2. Fire support plan
   - C. Tasks
   - D. Coordinating instructions
4. Administration and logistics
   - A. Administration
   - B. Logistics
     1. Supply - including water, rations, and equipment to be drawn or carried
     2. Ammunition to be drawn and/or carried
     3. Casualty evacuation procedures
     4. Detainee handling plan
5. Command and signal
   - A. Signals plan
   - B. Location of key leaders and succession of command

APPENDIX K
PRE-COMBAT CHECKS, PRE-COMBAT INSPECTIONS, AND POST-COMBAT ACTIONS

Pre-Combat Checks

- *Weapon*. Optic mounted correctly and BZO/LBS complete, iron sight BZO'd and accessible, K-Bar/bayonet, cleaning gear, sling, magazines clean and properly lubricated (test fire/function check), able to employ.
- *Ammo/High Explosive*. Magazines loaded per SOP (tracers), fragmentation grenade(s) stowed properly, AT-4/LAW checked, optic BZO'd, able to employ.
- *NVDs*. Op checked, mounting harness serviceable/complete, batteries, secured, focused, able to employ.
- *Additional Optics*. Op checked, batteries, secured, BZO'd if required, able to employ.
- *Helmet*. NVD plate secured and serviceable, chin strap serviceable, MARPAT cover, cat eyes, pads securely installed.
- *Body Armor*. SAPI plates inserted, collar, groin protector, first aid kit, ammo pouches, fragmentation grenade pouches, drop pouch, canteens, canteen cup, canteen pouches, Camelbak, utility pouch, name tag, compass, MOLLE attachments fully threaded.
- *Uniform*. Cammies, watch, socks, serviceable boots w/ dog tag, ID card, eye protection (clear/dark), gloves, EDL, map, protractor, notebook, map pens/pencils, CEOI, GPS, buzz saw.
- *Assault Pack*. Specialized gear, order overlays, warming/drying layers as required, socks, hygiene gear, tarp, 550 cord, cammie paint, E-tool, ear protection, flashlight, electric tape, MREs.
- *ILBE Pack*. Mission dependent, ammo, rockets, mortars, fragmentation grenades, rope, breaching equipment, etc.

Pre-Combat Inspections

- Does the Marine understand the sequence of events within the scheme of maneuver?
- Does the Marine know the task?
- Does the Marine know the commander's intent?
- Does the Marine know the desired end state?
- Does the Marine know the casualty evacuation plan?
- Does the Marine know the SOPs associated with the mission?
- Does the Marine know how to operate their equipment?
- Does the Marine know who is adjacent to them?
- Does the Marine know the ROE and use of force criteria?
- Does the Marine understand the enemy situation/threat?

- Does the Marine understand their collateral duty (e.g., combat life saver, breach team, litter team, tactical site exploitation team, overwatch)?
- Does the Marine know the challenge/password?
- Does the Marine know the SOP brevity codes?
- Does the Marine know the communications plan?
- Does the Marine know the lost Marine plan?
- Does the Marine know the detainee plan?
- Is the Marine mentally prepared for the mission (e.g., rest, food, mindset)?

Post-Combat Actions

- Personnel and equipment accountability.
- Debrief.
- After action report.
- Weapon/communications/equipment preventative maintenance.
- Timeline and warning order established for next mission.
- Rest, hydrate, and prepare for next mission as required.

GLOSSARY

Section I. Abbreviations and Acronyms

AAR ..... after action review
AAV ..... amphibious assault vehicle
AAVP7 ..... amphibious assault vehicle—personnel variant
AO ..... area of operations
ATGM ..... antitank guided missile

BHL ..... battle handover line

C2 ..... command and control
CAAT ..... combined antiarmor team
CBRN ..... chemical, biological, radiological, and nuclear
CCIR ..... commander's critical information requirement
CLIC ..... company level intelligence cell
CMO ..... civil-military operations
COA ..... course of action
COC ..... combat operations center
CREW ..... counter radio-controlled improvised explosive device electronic warfare
CTP ..... common tactical picture

ECP ..... entry control point
EFST ..... essential fire support task
EOD ..... explosive ordnance disposal
EW ..... electronic warfare

FDC ..... fire direction center
FPF ..... final protective fire
FPL ..... final protective line
FSCC ..... fire support coordination center
FSCM ..... fire support coordination measure
FST ..... fire support team

GCE ..... ground combat element
GPS ..... Global Positioning System

HAW ..... heavy antiarmor weapon
HEDP ..... high explosive dual purpose
HHQ ..... higher headquarters
HMG ..... heavy machine gun
HMMWV ..... high mobility multipurpose wheeled vehicle

HQ ..... headquarters

IED ..... improvised explosive device
IFV ..... infantry fighting vehicle
IO ..... information operations
ISR ..... intelligence, surveillance, and reconnaissance

JFO ..... joint fires observer
JP ..... joint publication
JTAC ..... joint terminal attack controller

kph ..... kilometers per hour

LAW ..... light antiarmor weapon
LD ..... line of departure (*land warfare*)
LOA ..... limit of advance
LP ..... listening post

m ..... meters
MAGTF ..... Marine air-ground task force
MAW ..... medium antiarmor weapon
MCDP ..... Marine Corps doctrinal publication
MCO ..... Marine Corps order
MCRP ..... Marine Corps reference publication
MCTP ..... Marine Corps tactical publication
MCWP ..... Marine Corps warfighting publication
METT-T ..... mission, enemy, terrain and weather, troops and support available—time available
mm ..... millimeters
MOPP ..... mission-oriented protective posture
mph ..... miles per hour
MRAP ..... mine-resistant, ambush-protected

NAI ..... named area of interest
NCO ..... noncommissioned officer
net ..... network
NGO ..... nongovernmental organization
NVD ..... night vision device

OP ..... observation post
OPSEC ..... operations security
ORP ..... objective rally point

PDF ..... principal direction of fire
PIR ..... priority intelligence requirement
PLD ..... probable line of deployment

QRF.....quick reaction force

RCIED ..... radio-controlled improvised explosive device
RFL ..... restrictive fire line
ROE ..... rules of engagement
RP..... release point
RPG.....rocket propelled grenade

SOP ..... standing operating procedure

TOT..... time on target
TOW .....tube-launched, optically tracked, wire-command link guided missile
TRP ..... target reference point
TTP ..... tactics, techniques, and procedures

UAS ..... unmanned aircraft system
US ..... United States

WP ..... white phosphorous

Section II. Definitions

area of operations—An operational area defined by a commander for land and maritime forces that should be large enough to accomplish their missions and protect their forces. Also called **AO**. (DOD Dictionary)

attack by fire —Fires (direct and indirect) in the physical domains and/or through the information environment to engage the enemy from a distance to destroy, fix, neutralize, or suppress. (USMC Dictionary)

block—To deny the enemy access to an area or prevent enemy advance in a direction or along an avenue of approach. It may be for a specified time. (USMC Dictionary, part 1 of a 2-part definition.)

civil-military operations—Activities of a commander performed by designated military forces that establish, maintain, influence, or exploit relations between military forces and indigenous populations and institutions by directly supporting the achievement of objectives relating to the reestablishment or maintenance of stability within a region or host nation. Also called **CMO**. (DOD Dictionary)

combined arms—The full integration of combat arms in such a way that to counteract one, the enemy must become more vulnerable to another. (USMC Dictionary, part 1 of a 2-part definition.)

command and control—(See DOD Dictionary for core definition. Marine Corps amplification follows.) The means by which a commander recognizes what needs to be done and see to it that appropriate actions are taken. Command and control is one of the seven warfighting functions. Also called **C2**. (USMC Dictionary)

control—To maintain physical influence by occupation or range of weapon systems over the activities or access in a defined area. (USMC Dictionary)

destroy—To physically render an enemy force combat ineffective unless it can be reconstituted. (USMC Dictionary, part 1 of a 2-part definition)

disrupt—To preclude efficient interaction of enemy combat or combat support systems. (USMC Dictionary, part 1 of a 2-part definition)

distributed operations—In ground operations, subordinate units are separated by distance and/or time, usually beyond mutually supporting range, to better support the achievement of an objective and mission accomplishment. These operations require coherent planning and decentralized execution due to the separation of the units. (USMC Dictionary)

fires—(See DOD Dictionary for core definition. Marine Corps amplification follows) Those means used to delay, disrupt, degrade, or destroy enemy capabilities, forces, or facilities as well as affect the enemy's will to fight. Fires is one of the seven warfighting functions. (USMC Dictionary)

fix—To prevent the enemy from moving any part of the enemy's forces, either from a specific location or for a specific period of time, by holding or surrounding them to prevent their withdrawal for use elsewhere. (USMC Dictionary, part 1 of a 2-part definition)

force protection—(See DOD Dictionary for core definition. Marine Corps amplification follows.) Actions or efforts used to safeguard own centers of gravity while protecting, concealing, reducing, or eliminating friendly critical vulnerabilities. Force protection is one of the seven warfighting functions. (USMC Dictionary)

information operations—(See DOD Dictionary for core definition. Marine Corps amplification follows.) The integration, coordination, and synchronization of actions taken to affect a relevant decision maker in order to create an operational advantage for the commander. (USMC Dictionary)

main effort—The designated subordinate unit whose mission at a given point in time is most critical to overall mission success. It is usually weighted with the preponderance of combat power and is directed against a center of gravity through a critical vulnerability. (USMC Dictionary)

maneuver—(See DOD Dictionary for core definition. Marine Corps amplification follows) The movement of forces for the purpose of gaining an advantage over the enemy. Maneuver is one of the seven warfighting functions. (USMC Dictionary)

maneuver warfare—A warfighting philosophy that seeks to shatter the enemy's cohesion through a variety of rapid, focused, and unexpected actions that create a turbulent and rapidly deteriorating situation with which the enemy cannot cope. (USMC Dictionary)

Marine air-ground task force—The Marine Corps' principal organization for all missions across the range of military operations, composed of forces task-organized under a single commander capable of responding rapidly to a contingency anywhere in the world. The types of forces in the Marine air-ground task force (MAGTF) are functionally grouped into four core elements: a command element, an aviation combat element, a ground combat element, and a logistics combat element. The four core elements are categories of forces, not formal commands. The basic structure of the MAGTF never varies, though the number, size, and type of Marine Corps units comprising each of its four elements will always be mission dependent. The flexibility of the organizational structure allows for one or more subordinate MAGTFs to be assigned. In a joint or multinational environment, other Service or multinational forces may be assigned or attached. Also called **MAGTF**. (USMC Dictionary)

nongovernmental organization—A private, self-governing, not-for-profit organization dedicated to alleviating human suffering; and/or promoting education, health care, economic development, environmental protection, human rights, and conflict resolution; and/or encouraging the establishment of democratic institutions and civil society. Also called **NGO.** (DOD Dictionary)

operational environment—A composite of the conditions, circumstances, and influences that affect the employment of capabilities and bear on the decision of the commander. Also called **OE.** (DOD Dictionary)

permissive environment—Operational environment in which host country military and law enforcement agencies have control, as well as the intent and capability to assist operations that a unit intends to conduct. (DOD Dictionary)

protect—To prevent observation, engagement, or interference with a force or location. (USMC Dictionary)

reserve—Portion of a body of troops that is kept to the rear or withheld from action at the beginning of an engagement to be available for a decisive movement. (DOD Dictionary, part 1 of a 3-part definition.)

retain—To occupy and hold a terrain feature to ensure it is free of enemy occupation or use. (USMC Dictionary)

rules of engagement—Directives issued by competent military authority that delineate the circumstances and limitations under which United States forces will initiate and/or continue combat engagement with other forces encountered. Also called **ROE**. (DOD Dictionary)

supporting effort—Designated subordinate unit(s) whose mission is designed to directly contribute to the success of the main effort. (USMC Dictionary)

uncertain environment—Operational environment in which host government forces, whether opposed to or receptive to operations that a unit intends to conduct, do not have totally effective control of the territory and population in the intended operational area. (DOD Dictionary)

Section III: Nomenclature

AAV-P7 ..... amphibious assault vehicle—personnel variant
AGS-17 ..... *Plamya* (Russian automatic grenade launcher)
AK..... *Avtomat Kalashnikova* assault rifle
AKM ..... *Avtomat Kalashnikova Modernizirovanniy* (Russian assault rifle)
AKS ..... *Avtomat Kalashnikova Skladnoy* (Russian assault rifle)
BMP ..... *boyevaya mashina pekhota* (Russian tracked infantry fighting vehicle)
BRDM..... *Boyevaya Razvedyvatelnaya Dozornaya Mashina* ..... (Russian armored combat reconnaissance patrol vehicle)
BTR..... *Bronetransportyor* (Russian armored personnel carrier)
PKM..... *Pulemyot Kalashnikova* (Russian machine gun)
RPK..... *Ruchnoy Pulemyot Kalashnikova* (Russian light machine gun)
SVD ..... *Dragunov* (Russian sniper rifle)

REFERENCES AND RELATED PUBLICATIONS

Joint Publications (JPs)

1	Doctrine for the Armed Forces of the United States
3-0	Joint Operations
3-07	Stability
4-03	Joint Bulk Petroleum and Water Doctrine

Army Publications

Army Techniques Publication (ATP)

3-90.15	Site Exploitation

Student Text (ST-)

7-100	OPFOR Battle Book for the Operational Environment

Marine Corps Publications

Marine Corps Doctrinal Publications (MCDPs)

1-3	Tactics
6	Command and Control

Marine Corps Warfighting Publications (MCWPs)

2-10	Intelligence Operations
3-01	Offensive and Defensive Tactics
3-10	MAGTF Ground Operations
3-34	Engineering Operations

Marine Corps Tactical Publications (MCTPs)

3-01A	Scouting and Patrolling
3-01C	Machine Guns and Machine Gunnery
3-01D	Tactical Employment of Mortars
3-01E	Sniping
3-01F	MAGTF Antiarmor Operations
3-03A	Marine Air-Ground Task Force Civil-Military Operations
3-10B	Marine Corps Tank Employment
3-10C	Employment of Amphibious Assault Vehicles

3-10F	Fire Support Coordination in the Ground Combat Element
3-34A	Combined Arms Mobility
3-34B	Combined Arms Countermobility Operations
12-10D	Desert Operations

Marine Corps Reference Publications (MCRPs)

3-10A.2	Infantry Company Operations
3-10A.4	Marine Rifle Squad
3-31.6	Multi-Service Tactics, Techniques, and Procedures for the Joint Application of Firepower (JFIRE)
3-40A.4	Field Hygiene and Sanitation
10-10D.2	Multi-Service Tactics, Techniques, and Procedures for Explosive Ordnance Disposal (EOD)
10-10F.1	Multi-Service Tactics, Techniques, and Procedures for Tactical Employment of Biometrics in Support of Operations
12-10A.1	Small Unit Leader's Guide to Mountain Warfare Operations
12-10B.1	Military Operations on Urbanized Terrain (MOUT)

Marine Corps Interim Publication (MCIP)

10-10C.1i	Marine Corps Counter RC-IED Electronic Warfare (REW) and Communications Systems Capability TTP

Marine Corps Orders

3070.2A	Marine Corps Operations Security Program
3500.27C	Risk Management
5351.1	Combat and Operational Stress Control Program

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