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Urban Attacks

Military Operations on Urbanized Terrain (MOUT)

Marine Corps Warfighting Laboratory (MCWL)
U.S. Marine Corps

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X-File 3-35.31

Urban Attacks

This X-File discusses tactics, techniques and procedures (TTPS) related to knowledge gained during the series of experiments and assessments that have been conducted by the Marine Corps Warfighting Laboratory since 1996.

Throughout this X-File, we use masculine nouns and pronouns for the sake of simplicity. Except where otherwise noted, these nouns and pronouns apply to either gender.

All of the X-Files can be viewed and downloaded in .PDF format from the Marine Corps Warfighting Laboratory Home Page found at: www.mcwl.quantico.usmc.mil

U.S. Marine Corps

UNITED STATES MARINE CORPS
Commanding General
Marine Corps Warfighting Laboratory (C 52)
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18 January 2001

FOREWORD

1. PURPOSE: This is a republication of an X-File that integrates the results of our experiments with existing doctrine and TTPs to provide an easy-to-use reference for Marines. We changed its publication number to correspond with the Marine Corps doctrinal publication hierarchy used in MCBUL 5600. This X-File retains its original formatting which allows it to be quickly read and easily transported—in the cargo pocket of the utility uniform—so Marines are better prepared to fight and win.

2. SCOPE. Small units, primarily the rifle squad, carry the fight to the enemy in urban combat. This is the focus of this X-File. We have combined current doctrine with what we have learned in more than four years of experimentation to synthesize knowledge that applies primarily to the Marine Rifle Squad.

3. SUPERSESSION. This supersedes X-File 3-35.1 (same title).

4. CHANGES. Recommendations for improvements to this X-File are encouraged from commands and from individuals. We would like to know how you use this X-File and if there is a way to improve its form and content for your specific use. You can do this electronically via this address syncenter@mcwl.quantico.usmc.mil. You can also reproduce and forward the attached User Suggestion Form to the above address.

5. CERTIFICATION. Reviewed and approved this date.

W.D. Catto
Brigadier General, USMC
Commanding General
Marine Corps Warfighting Laboratory
Marine Corps Combat Development Command
Quantico, Virginia

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X-Files

Urban Warrior (UW) was a series of experiments designed to test, validate and refine tactics, techniques and procedures (TTPs)—and some enabling technologies—that can help Marines fight and win battles on urbanized terrain. What you read here is a compilation what we have learned the Urban Warrior series of experiments and Project Metropolis.

X-Files. The information is this X-File is part of the experiment files created by MCWL combining using post training and experiment analysis and feedback from Marines, Sailors and other participants. Figure 1 summarizes where the X-Files fit on the pathway between MCWL and the Operating Forces.

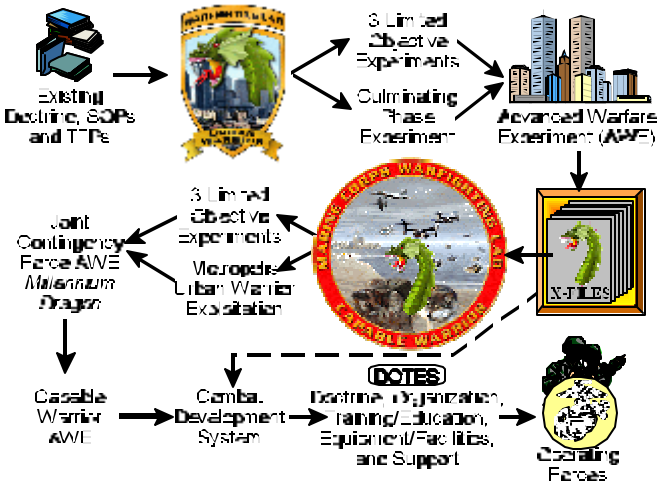


Figure 1 Where the X-Files Fit

The X-Files are not doctrine, nor are they standing operating procedures (SOPs). X-Files are evolving and are refined during further experiments. For example, the information in this X-File will be exploited and refined during Project *Metropolis*, a subset of our next experiments named *Capable Warrior*. While there is knowledge in this X-File that amplifies and expands on current doctrine, there is nothing that contravenes it.

X-File Linkage to the Combat Development System. We have input the necessary information and knowledge on these TTPs, into the Marine Corps Combat Development System to be evaluated relative to doctrine, organization, training and education, equipment and facilities, and support (DOTES). For example, we have carefully coordinated knowledge in this X-File with the Doctrine Division of the Marine Corps Combat Development Command to provide input to the MOUT section of the forthcoming publication of Marine Corps Warfighting Publication (MCWP) 3-11.2 *Marine Rifle Squad* (formerly FMFM 6-5).

Tips on How We Use the Dragon. We use the *dragon* to mark paragraphs that give you the word on lessons learned by Marines and Sailors during our training and experiments. These tips may be entirely new information or they may describe recommended adjustments to more effectively apply current doctrine, SOPs or TTPs.

Tips on the Focus of this X-File. We have gathered, organized and synthesized knowledge that will help Marines plan, organize, and execute attacks in the urban environment. Feedback from the Operating Forces tells us that the contents of this X-File are ideally suited to be used by NCOs for professional military education (PME) of their Marines. We recommend that you download the X-Files from our website. You can easily print paragraphs and graphics to be instant training aids and handouts.

MOUT Doctrine. *Marine Corps Warfighting Publication (MCWP) 3-35.3 Military Operations on Urbanized Terrain* provides doctrinal guidance and detailed information on TTPs. We assume that users of this X-File are familiar with this doctrine.

Introduction

The Challenge. Attacking in urbanized battlespace is a complex and challenging environment. Our experience in Urban Warrior confirms that we can improve our chances for success in this environment if we plan properly, execute decisively and maintain situation awareness so we are able to react quickly and exploit tactical success.

Doctrinal Definition of MOUT. *Marine Corps Reference Publication (MCRP) 5-2A, Operational Terms and Graphics* defines military operations on urbanized terrain (MOUT) as:

> *all military actions planned and conducted on a topographical complex and its adjacent terrain where manmade construction is the dominant feature. It includes combat in cities, which is that portion of MOUT involving house-to-house and street-by-street fighting in towns and cities.*
>
> *The urban battlespace is divided into four basic levels:*
>
> - *building,*
> - *street,*
> - *subterranean, and*
> - *air.*

Rules of Engagement (ROE). Because urban combat extends beyond the violent, house-to-house combat to seize a city, we can expect to have restrictions on how we use the power of the MAGTF in MOUT. Therefore, we can expect ROE that prohibit us from using destructive supporting fires—or perhaps even fragmentation grenades—to prevent needless civilian casualties and damage while also protecting the lives of the Marines who will execute the mission. This can be complicated by the presence of media who could be transmitting live video pictures of ongoing combat. The factors that drive ROE include:

- Guidance from higher HQ.
- Type of mission.

- Nature of the threat.
- Political environment.
- Host nation attitude.

> The right of self defense is inherent in all military operations. Marines should not be placed in a situation where they are not provided the means or authority to protect themselves or others.

MOUT Battlespace. MOUT takes place on, above, and under the ground floor level of buildings. Some operations will include fighting on all levels simultaneously. Beyond that, the range of Marine Corps MOUT activities can be described in terms of a three block war.

Three Block War. Our recent experience in places like Somalia tells us that Marines have to be prepared for a wide range of activity in urban conflict. The Commandant of the Marine Corps describes this potential range in terms of three city blocks as follows:

- In the first city block, Marines provide humanitarian assistance in a permissive environment. This includes security operations associated with force and site protection measures. Marines feed and shelter refugees and other parts of the urban population as necessary.

- In the second block, Marines open lines of communication (LOCs), deal with civil disturbances (e.g., crowd and riot control), dispose of improvised explosive devices (booby traps), and respond to terrorist and saboteur activity. This can often include counter sniper activity.

- In the third city block, Marines are fully engaged in combat with a well armed enemy that cannot be bypassed or isolated. Marines can be involved in firefights and opposed room clearing actions.

Throughout a city, these characteristics can change from block to block and day to day to include all three blocks of activity happening at the same time. Our challenge is to maintain the ability to recognize and operate across this all-encompassing threat spectrum—within the ROE.

Major Factors Affecting Urban Warfare. *MCWP 3-35.3* identifies these major factors that affect the course and outcome of urban combat:

- Intelligence is imperative to success.

- **S** Few tactical changes can overcome a major intelligence error.
- Surprise can substantially reduce the cost of urban warfare.
- MOUT is infantry intensive,
  - **S** focused primarily by small unit action
- Tactical actions can have operational and strategic implications.
- Media interest/presence affects how the battle is fought.
- Rules of engagement (ROE) generally involve:
  - **S** minimizing civilian casualties and collateral damage.
- Attackers almost always win when the defender is totally isolated.
- Regardless of the size or quality of defensive forces, the defender usually extracts large costs in time, resources, and casualties.
- Success can take two to three times longer than conventional battle.
- The use of combined arms is imperative.
- Armor, aviation and artillery are effective at the outer perimeter of built up areas for causing isolation and preventing reinforcement
- Armor must be protected by infantry.
- Artillery has two distinct roles,
  - **S** outside the city to isolate/prevent isolation with indirect fire; and
  - **S** within the built up area to provide support in a direct fire mode.
- The mortar is the most used indirect fire weapon.
- Aviation firepower is focused on isolation and interdiction;
  - **S** it is relatively ineffective if not used with ground forces.
- Logistics must support the ebb and flow of close quarter fighting.
- Mobile aid stations and surgical teams should be
  - **S** positioned as far forward as the tactical situation allows, and
  - **S** provided with dedicated evacuation vehicles.
- You must maintain 360° situation awareness.

Tips on Urban Battlespace. Urban battles can involve fighting on multiple levels and multiple directions simultaneously. Situation awareness of the added dimensions is critical. *You must know—and control—the limits of advance of your troops* to prevent almost certain fratricide. Further, should you fail to clear *all* levels of a multi-story building before moving on, you may have significant enemy forces operating in your rear that can attack from your least protected direction and threaten your logistics support.

Planning Offensive Operations on Urban Terrain

Planning Considerations. Our planing starts with mission analysis. We evaluate the mission, enemy, terrain and weather, troops and support available—and time available (METT-T) and then focus on the essential tasks that accomplish the purpose of the operation. For example, we consider the following:

- Number and type of available units.
- Task organization for urban combat.
- Availability of critical weapons systems.
- State of training and readiness,
  - **S** specialized training for MOUT is imperative.
- Strength (men and materiel) relative to enemy and size of the built up area.
- Availability of fire support (aviation, artillery, etc.).
- State of maintenance and supplies.

Scope of Urban Clearance. An element of planning that is unique to urban combat is establishing the scope of our building clearance effort. For example, planners have to answer these questions:

- Do we need to clear every building?
- What buildings or blocks are key terrain?
  - **S** What are their critical vulnerabilities?
- What defines the area that we have to control?
- How do I maintain effective lines of communication?

Simplicity in Planning. Our plans have to be simple and flexible. We have to plan a clear path to decisive action that is easy-to-understand by the small unit leaders who will do the fighting. In the danger, noise and confusion of urban attack, our best course of action is probably one that concentrates on limited objectives while allowing company and platoon commanders to exercise initiative to rapidly exploit success.

By setting limited objectives, the attacking forces have an opportunity to reorganize and defend against counterattacks while maintaining momentum.

Tips on Effective Planning. Make planning more effective by allowing enough time to *get any plan changes to the lowest level* before we try to execute it. If the shooters don't know the plan has been changed, a deadly mixup is possible.

- S This is essential in the effort to avoid fratricide.

Common Defender Characteristics. Use the intelligence process to analyze the enemy and terrain in detail. Determine whether the threat forces are conventional or unconventional. *MCWP 3-35.3* summarizes the general characteristics of these forces as follows:

Conventional Forces.

- Build their defenses to counter attack from a combined arms force.
- Use prepared strong points to form the perimeter of a larger defense
  - S locating reserves in a separate position within the perimeter.
- Use Ambushes to fill gaps in the perimeter.
- Establish dummy strong points to deceive the attacker.
- Establish positions to secure the entrances and exits to strongpoints.
- Put security positions forward of first echelon defensive positions.

Unconventional Forces.

- Use noncombatants for cover and concealment for themselves.
- Operate in an environment bounded by *friendly* restrictive rules of engagement (ROE) aimed at minimizing:
  - S noncombatant casualties, and
  - S collateral damage.

Tips for Intelligence Preparation. Leaders at all levels have to be aware of the differences in assessing the urban battlespace. Aside from the very complex terrain, there are other unique factors that must also be considered as you prepare to attack or defend. Listed below are some of the factors we saw routinely overlooked during intelligence planning.

- *Political, Religious, Ethnic, boundaries* within the city.
  - S while aware of them outside an urban sprawl, we often neglect them *inside* the city.
  - S For example, in Somalia, it was essential that we knew the boundaries among the various clans so we could develop patrol routes, set up medical assistance programs and distribute food.
- *Boundaries between friendly units.*
  - S Use existing, well defined boundaries, official or unofficial to help eliminate confusion and reduce potential fratricide.
- *City Tempo and Flow*. Knowing the time of day that marketing is done and deliveries are made facilitates development of movement plans, patrols, etc. For example:
  - S A military operation requiring rapid entry into a city during rush hour is futile because it would be brought to a halt by traffic.
  - S On the other hand, rush hour may be the best time to infiltrate recon teams as the police seldom check traffic during rush hour so they can keep traffic moving.
- *Religious Buildings or Areas*. Violating the sanctity of a religious building or area may well cause more problems in the long run than the immediate tactical gain.
- *Key Infrastructure* such as power plants, water pumping stations, radio or TV stations. Controlling these may well allow you to leverage your battle. Destroying them may unnecessarily complicate your mission. For example:
  - S Controlling the electricity may enable you to turn it on and off to meet your tactical requirements just as controlling the flow of water may give you great leverage over both the enemy and the local noncombatants.
- *Key Terrain and Avenues of Approach*. This includes:
  - S tops of buildings to have observation of large areas.
  - S approaches to the city that can be used to escape/reinforce.
  - S approaches within the city that you must control to clear the objective.
- *Danger Areas*. These are locations of gas stations, propane storage and distribution centers, oil refineries, etc., that if hit with high explosives may detonate, or cause uncontrolled fires or both.
- *Key Personnel*. Who are the key political, religious, military, etc. leaders of the city?
  - S break them down into the various areas that you have already considered; e.g.,
    - Who has access to power plants, water pump stations, etc.?
    - Who will the police and fire department respond to?
  - S What is the attitude of these personnel toward our forces?
- *Civilian Population.* What are the demographics of the population, including their customs and attitudes toward U.S. forces?
- *Medical Facilities*. As civilian casualties occur, you may have to transport them to civilian care to avoid over using military sites.

- *Police and Fire department* locations, capabilities and attitudes toward our forces.
  - S Use the local police for noncombatant security issues.
  - S Local firefighters can deal with fires caused by combat to minimize danger to own troops and noncombatants.

Urban Maps. In addition to the normal intelligence input and tactical maps, get maps of intra city road networks, subway systems, mass transit routes and power grids. Although tactical maps are key in controlling fire support missions, simple street maps—that contain street names and building names—assist ground troops to maintain orientation within the city. Where possible, get engineer drawings and/or blueprints of sewer systems, electrical grids, city hall and public works facilities. Even tourist guide books can be useful.

Tips on Maps. Distribute maps and plans to the *lowest level that will do the fighting*. The key is to use anything that can help us attack critical vulnerabilities and also help troops keep track of buildings and areas that have been cleared.

- If you use a numbering system for buildings—make absolutely sure that all the units are using the same numbering system.
- Get *current* aerial photos;
  - S old photos can really mislead you.
  - S overlay grid lines on photos for a common frame of reference.
- Thoroughly question *all* available noncombatants to find out if they are familiar with the area of operations (AO)—to learn about:
  - S enemy disposition,
  - S weak and strong points,
  - S minefields, and
  - S potential booby traps.

Force Ratios. Anticipate potential for high casualty rates due to the defender's advantage. Therefore, strive for attack force ratios of at least 3:1. For example, in the battle for Berlin, the Red Army had an 8:1 force ratio. The usually high casualties can be mitigated by good preparatory training, the use of maneuver tactics, and proper task organization. However, you must recognize the potential for high casualties and be prepared to deal with casualty evacuation and treatment.

Logistics. Urban assault entails greatly increased ammunition usage. This means that Marines will have to carry a lot more ammunition than they normally do. Use cleared buildings for protected staging points to push logistics forward. Additionally:

- Get—and plan how to carry—ladders, sledge hammers, ropes, and other MOUT specific equipment;
  - S e.g., mouse hole charges to blow entry points in buildings.
- Have a simple but effective Medevac plan to deal with the number and type of casualties anticipated in urban combat.

Be innovative in resupply effort. Remember that channeled access roads are easily covered by enemy fire. This greatly complicates the effort to push logistics forward to using units.

Urban Ground Reconnaissance. This is critical in urban battlespace. Well trained, properly employed reconnaissance teams can provide the vital difference between success and failure in the urban battle. Employment of reconnaissance teams and maneuver tactics will be addressed later in this document.

It is hard to gather information against traditional and non-traditional (asymmetrical) foes in the complex urban environment. Overhead imagery can't normally penetrate buildings and underground networks. Electronic systems are negated or degraded by effects of urban structures and the emissions of commercial communications systems within the city. And, the presence of large numbers of noncombatants complicates the information gathering process—just by their presence as well as by their hostile actions. The two type of urban ground reconnaissance are:

- Overt, and
- clandestine.

Overt Reconnaissance is done by units operating in a conventional military mode, with uniforms and generally recognizable military equipment. They do <u>not</u> operate brazenly or in the open, rather they operate in a more stealthy manner than conventional military operations.

Tips on Clandestine Reconnaissance. This mission is done by special units operating so as to "blend in" to the operational environment. This involves wearing of civilian attire, specially

designed equipment, and units composed of personnel who resemble the local population. This is not a mission for Marines, regardless of how tempting it may appear. However, it is one that is very important to success in urban combat.

> Whether clandestine reconnaissance done by national assets or by indigenous personnel, we *must* plan for a way to get access to it so we can significantly increase our effectiveness and reduce risk.

Tips on Mobility. Carefully plan times and routes. Although darkness provides inherent advantages, some areas may be under curfew, making movement during darkness impractical. *Use the ebb and flow of the city to mask your movement*. Team members may have to travel via separate routes to avoid drawing attention to a larger group. Teams may operate in sections of one or two men to gain knowledge of the local area. Plan for primary and several alternate rendezvous points. Select these points carefully to allow the team to assemble without drawing attention to itself.

Tips for Harbor Sites. Carefully select locations for observation, meetings, rest, etc. Harboring up outside of buildings makes you vulnerable to routine police patrols, a suspicious populace, etc. Although abandoned buildings offer a potential for harbor sites, these types of buildings are often occupied by itinerant personnel who offer the potential for compromise. Entering buildings that may provide harbor sites can also be a challenge. Many suitable buildings have guards and security systems. Also, using conventional military communications systems may render the team vulnerable to compromise even though they satisfy communication requirements. Alternatives may be cellular phone systems, or use of existing communications infrastructures—but this has the potential for compromise. Basic techniques such as "drops," etc., may be required for secure intra team communications.

Phases of Urban Attack. Attacks are categorized as either hasty or deliberate. These attacks should take advantage of as much planning, reconnaissance, and coordination as the situation permits. Both hasty and deliberate attacks are conducted in these five phases.

Phase I - Reconnoiter the Objective.
This is critical to the planning and execution of the operation. Use all available resources to gain information—including a commander's personal reconnaissance when possible—to locate such things as:

- avenues of approach,
- observation posts (OPs),
- supply routes,
- direct- and indirect-fire weapon emplacements,
- composition and structure of buildings and roadbeds,
- cover and concealment opportunities,
- location of noncombatants, and
- other information that is not apparent on a map.

Phase II - Isolate the Objective.
The goal here is to prevent reinforcement or withdrawal. Activities include:

- Seize natural and man made features that dominate the area.
- Place observation around the objective to look for surfaces and gaps.
- Coordinate supporting arms to seal off lines of communication.

Phase III - Secure a Foothold.
This is an attack that may be done at the same time as Phase II. As with any attack, using *Recon Pull* to determine the point of attack is important and can be critical to success. Securing a foothold involves the following characteristics.

- Done as soon as possible after isolation of the objective.
- Provides the attacking force with a position from which to continue the assault through the objective.
- Usually done on a narrow frontage to prevent the defender from being able to make best use of his weapon systems.
- Concentrates all available direct and indirect fire on the break-in points to suppress and obscure enemy weapon systems and observation.
- Uses all available combined arms preparation fires to provide the greatest shock just before the main assault.
  - **S** consistent with the ROE.
- Done at night or with covered approaches using smoke.

A DECEPTION OR FEINT COULD BE USED DURING THIS PHASE. FOR EXAMPLE, USING ASSAULT AMPHIBIOUS VEHICLES (AAVS) WITH MINIMUM INFANTRY ABOARD TO PRESENT A

THREAT. ALTHOUGH THIS MAY REDUCE THE STRENGTH OF THE MAIN EFFORT, IT COULD CAUSE THE ENEMY TO COMMIT FORCES AT THE WRONG TIME OR LOCATION. IT DOESN'T HAVE TO BE A MAJOR EFFORT—BUT IT MUST BE CONVINCING.

Phase IV - Clear the Objective.

Once the break-in has been established, attacking units should fight systematically—but not predictably—toward their objectives. These are TTPs used in Phase IV.

- Cover movement across open areas with fire and smoke,
  - **S** varying your routine.
- Use the Squad Multipurpose Assault Weapon (SMAW) to take out hardened positions.
- Advance on parallel streets to allow for mutual support among units.
- Do not to allow any one part of the advance to get too far forward as they will become vulnerable to counterattack and isolation.
- Continue to occupy—or keep under close observation—buildings that have been cleared.
  - **S** to prevent re-infiltration.
- Maintain awareness of adjacent units,
  - **S** to prevent fratricide.
- Use a simple marking system for identifying cleared buildings.
- Once limited objectives have been secured throughout the city, use a "sectoring" approach so areas can be systematically cleared by mutually supporting units.
- Aggressively maintain situation awareness to avoid fratricide.

Phase V - Reorganize.

Tips on Reorganization. Current MOUT doctrine (*MCWP 3-35.3*) includes consolidation of the objective area and reorganization within Phase IV. However, *we break this out as a separate phase* based on our experience during the Urban Warrior experiments. The primary actions during this phase are as follows.

- Immediately deploy a security force to repel any counterattacks.
  - **S** redistribute ammunition and water as soon as possible.
- Evacuate military, civilian, and enemy dead and wounded.
- Organize enemy prisoners of war (EPWs) for evacuation.
- Resupply to sustain follow on operations.
- Establish mutually supporting, in depth, 360° defensive positions.

The long range activities of this phase—not normally associated with small unit TTPs—include the restoration and turnover of city functions; e.g., public works facilities, local police force, government, etc.

Tips on General Control Measures. Give units *easily recognizable* boundaries and control measures. Close quarter fighting in and around buildings makes command and control very difficult. Commanders and small unit leaders can improve their control and direction by doing the following:

  - Divide areas into sectors, w/ phase lines to control the advance.
- Have commanders well forward to control progress,
  - **S** but not so far forward that they inhibit junior leaders.
- Ensure everyone knows unit SOPs for use of runners, linkmen, or visual signals to overcome electronic communication failure.
  - **S** In close-quarter fighting, commanders may have to totally rely on messengers to communicate with their units and higher HQ.
- Develop simple SOPs—that everyone can understand—on how to mark buildings, routes of entry, clearing status, requests for engineer support or Medevac, etc.
  - **S** This is essential to protect against fratricide.

NATO Control Markings are characterized by the following:

- Flag or chemically activated light (chem light) at entry point. This may be the only entry point cleared of enemy and booby traps.
  - **S** Make it easily recognizable for approaching Marines.
- Flag/chem light to mark FLOT as the battle progresses.
- Mark each cleared room as soon as possible,
  - **S** so supporting fires can be shifted two rooms ahead while you clear the next room.
    - This is essential to protect against fratricide
- Colors at entry point can give information, examples:
  - **S** Red—Building not yet clear.
  - **S** Green—Building cleared.
  - **S** Yellow—Casualties present.
  - **S** Blue—Engineer support required.
  - **S** White—Forward Line Of Troops (FLOT).

Doctrinal Control Measures. *MCWP 3-35.3* identifies the following control measures that assist in the maneuver of forces in MOUT:

Objectives. A single building may be an objective for a rifle squad or, if the building is large, for a rifle platoon or company. If the attack is based on speed or when conducting a hasty attack, a unit may be directed to bypass certain positions within its zone. However, bypassing buildings increases the risk of attack from the rear or the flank.

- It may be necessary for the unit to enter, search, and clear every building in its zone of action.
- To seize a foothold, make the first block of buildings the first objective.
- Key buildings or groups of buildings may also be assigned as intermediate objectives.
- Identify buildings along the route of attack by using numbers.
- When an objective extends into the street, include only the near side of the street.

Phase Lines. These are control measures used to report progress or to control the advance of attacking units. In the attack, a unit may have the mission to seize positions in its zone of action up to a particular phase line. Phase lines should be:

- oriented on readily identifiable terrain features,
  - such as principal streets, rivers and railroad lines; and
- placed on the near side of the street or open area.

Boundaries. These are used to define zones of action. They should be:

- set within blocks so that a street is included in the zone; and
- include both sides of the street.

Tips for Using Boundaries. Remember, when setting boundaries, in addition to the tactical considerations, *you must take into account the ethnic, religious and political boundaries*. You must also consider existing police district boundaries, especially if you are operating with these forces.

Checkpoints aid in reporting locations and controlling movement.

- They should be easily identifiable.
- Move them at irregular intervals to avoid establishing a routine.

Make sure all units use the same names for these points.

Contact Points are used to designate specific points where units make contact.

- They must be easily identifiable.

Make sure all units use the same names for these points.

Attack Positions. These are secure positions near the objective that may be occupied by forward units for last-minute preparation and coordination.

- The attack position is often behind or inside the last large building before crossing the Line of Departure (LD).

Line of Departure (LD). This should be located on the near side of an open area running perpendicular to the direction of attack,

- This is often a street or rail line.

Tempo and Momentum. We want to set a pace that the enemy cannot maintain—so that with each action his reactions are increasingly late—until he is eventually overcome by events. Then, we can exploit a decisive opportunity by pressing relentlessly and unhesitatingly. On the other hand, although a fast tempo is necessary for the initial break-in stage, we may have to slow down to allow our attacking force to regain its balance. In the attack there are peaks and valleys, fast violent action during clearance followed by reorganization. This does not mean to stop the momentum—but to control it—even if this means slowing down to do so.

As squads move, it is important to prevent one unit from getting out of communications with the others to reduce the chances of fratricide.

Tips to Avoid a Bunker Mentality. Commanders and leaders at all levels must be aware of the tendency of attacking forces to develop a "bunker mentality" upon seizing a building. The most deadly area in the urban battle is the open space between buildings that provides excellent fields of fire for flanking weapons and wide open unhindered shooting for all defenders.

There is a tendency for attacking forces to feel a sense of security and relief upon successfully crossing the danger area and clearing the enemy from a building. There is also a tendency to want to avoid exposing ones self again to pursue another battle. *This tendency to slow down and enjoy being alive is only providing the enemy more time to establish his new defensive position, making your next attack even harder*.
We have to maintain an aggressive posture, keeping the enemy under pressure. In short, following the principles of maneuver warfare, we must exploit the initiative we have gained, and keep the enemy

responding to us.

Tips to Avoid Single Focus. Experiments in the lab have shown repeatedly that attacking units tend to focus on the building that a retreating enemy enters. We also see the retreating force focus its defense on the direction from which they just withdrew. This generally results in two things. One, a defense that is focused in one direction, and two, frontal attacks. Attacking units must avoid this tendency, and *use maneuver*, e.g., flanking attacks, etc. If we are defending, we must *develop an all round defense* in order to avoid being flanked or attacked from the rear.

General MOUT Weapons Characteristics. Hard, smooth, flat surfaces are characteristic of urban targets. Rounds rarely impact perpendicular to these flat surfaces, but rather tend to impact at some angle. This reduces the effect of a round and increases the threat of ricochets and produces shards that will cause injuries.

Tips on Weapons Effects in MOUT. The tendency of rounds to strike glancing blows against hard surfaces means some impact-fuzed explosive rounds may not detonate when fired into rubbled areas. Other important considerations include:

- Engagement ranges are close—almost always less than 50 meters.
- Engagement times are short—almost always with fleeting targets.
- Weapon depression and elevation limits can create dead space.
- Smoke, dust and shadows greatly reduce visibility of targets.
- Confused melees among small units increase potential for fratricide.
- Weapon's signature effect—blast or backblast—must be considered,
  - Weapons with backblast generally cannot be used inside buildings.
- Use heavy weapons/demolitions against masonry and concrete.
- Modern buildings are resilient to blast effects—they burn but retain their structural integrity.
- 12-to 24-inch brick is the most common worldwide building type.

Infantry Weapon MOUT Considerations. Here is a summary of the infantry unit's weapons used in MOUT.

M16A2 Rifle. When fighting and engaging targets inside buildings, handling and firing techniques MAY have to be modified due to its stock and barrel length. (See Appendix A of MCWP 3-35.3.)

M-4 Carbine. This shortened, lighter version of the M16 has been modified with a "flat top" upper receiver. This makes it easier to handle in close combat inside buildings. It also facilitates addition of optics that will enhance the Marine's ability to operate in an urban environment.

M240G Machine Gun. The M240G significantly increases the firepower available to the assaulting units. Place it with the support element providing cover fire. If used with the assaulting units, use the long sling to support the weapon and its ammunition.

M2 Heavy Machine Gun (.50 caliber). In addition to its vehicular mount, it can be mounted on the M3 tripod for use in the ground role or in the upper level of buildings. When mounted on a tripod, the .50 caliber machine gun can be used as an accurate long range weapon and supplement sniper fires.

M249 Squad Automatic Weapon (SAW). The SAW is lightweight and is easily carried. It gives the squad an excellent base of fire. However, it is an open bolt weapon, so be aware of the potential for it to jam.

Tips for Use of the SAW. Use it in the support role to cover the movement of the assault element. However, you can use it to add additional firepower to the assault element in the attack. If you use it in this mode, *never clear or lead with a SAW.* During our experiments, we saw it jam many times due to its open bolt.

MK-153, 83-mm SMAW. The SMAW is a lightweight assault weapon that is easily carried and placed into action by one man. It is essential for use against fortified positions and light armored vehicles. The minimum arming distance of 10 meters is perfect for the limited engagement ranges associated with urban combat. *You must plan for back blast*.

AT-4. It is heavier and has greater penetration than the SMAW. AT-4's minimum arming distance of 10 meters is perfect for the limited engagement ranges associated with urban combat. Effective as an isolation tool. If used in the city, think about back blast. You cannot use this weapon inside a building.

Grenade Launchers (M203 and Mk19). Both the M203 dual-purpose weapon and the MK-19 grenade machine gun fire the 40-mm HE and HE dual-purpose (HEDP) ammunition. Their ammunition is not interchangeable. Both provide point and area destructive fires as well as suppression. The MK-19 has a high rate of fire and longer range—the M203 is lighter and more maneuverable.

Sniper Rifles. The M-40A1 sniper rifle (7.62-mm) and the M-82A1A special application sniper rifle (.50 caliber) are a significant asset for the isolation and break-in, and can be used as fire support for crossing open spaces. Both weapons are organic to the Marine infantry battalion.

Standard TOW Missiles. They all can defeat triple sandbag walls, double layers of earth-filled 55-gallon drums and 18-inch log walls.

TOW 2B. It flies over the target and fires an explosively formed penetrator down onto the top armor. Because of this design feature, it cannot be used to attack nonmetallic targets—and—gunners must avoid firing directly over friendly vehicles, disabled vehicles, or large metal objects such as water or oil tanks.

Hand Grenades.

Smoke: Used for screening and signaling.

- AN-M8 HC produces slowly building screen of dense white or grey smoke for about 60 seconds.
  - **S** It can inhibit your supporting fires if not planned for.
- M18 Series produces different colors of smoke; used for signaling.
- M34 White Phosperous (WP) used to ignite or destroy flammable objects. Throws WP fragments up to 35 meters from detonation.

Riot Control: Used to drive enemy troops out of fortifications when civilian casualties or collateral damage are considerations.

- M7A3 CS burns intensely and can ignite flammable structures. Even rudimentary chemical protective masks can withstand intense concentrations of CS gas.

Concussion: Preferred hand grenade for use during offensive MOUT. Produces casualties in close combat while minimizing danger to friendly personnel.

- MK3A2 produces severe concussion effects in enclosed areas. Can be used for light blasting and demolitions and for creating breach holes in interior walls. It is very effective against enemy within

bunkers, buildings, and underground passages.

Fragmentation. Provides suppression during room-to-room or house-to-house fighting, and may sometimes be used for clearing rooms of enemy depending on the ROE and the presence of noncombatants.

Support Weapon MOUT Considerations. Here is a summary of the general characteristics of support weapons available during MOUT. Tanks, LAVs, and AAVs play an important role inside the city by using their firepower and armor protection. They all can suppress and destroy enemy forces within buildings and strongpoints, using machinegun fire as well as main armament to breach obstacles. Their weapons are aimed accurately because they all have thermal sights—eliminating the problems for passive night sights created by lights found in the typical urban clutter. Tanks are superb fire support on the initial break-in. However, because of the elevation restrictions on a tank's main gun, it may not be able to engage high or low windows at close range. Also, all armor will be channelized along the roads and are vulnerable to anti-armor weapons.

- LAV-25 Automatic Gun provides suppressive fire and breaches exterior walls and fortifications.
  - **S** Personnel not under cover forward of the 25-mm gun's muzzle and within the danger zone (10 degrees below muzzle out to at least 100 meters, and about 17 degrees left and right of the muzzle) could be injured or killed by discarded sabots of the APDS-T round.
- M1A1 120-mm tank cannon provides heavy direct fire against buildings and strongpoints that are identified as targets by the infantry. Wall and breaching effects are major assets.
  - **S** Cannon has limited elevation/depression and short arming distances.
  - **S** Tank has extremely hot turbine exhaust.
  - **S** Overpressure of cannon can kill personnel within 90 degrees of muzzle out to 200 meters.
  - **S** Discarding sabot petals can kill or injure personnel within 1000 meters of line of fire, on a frontage of 400 meters.

Tips on Tanks in Urban Combat.

- Because of the tank's extremely hot turbine exhaust, *install the heat deflector part of the deep water fording kit* on the tank so dismounted infantry can walk behind it. The

deflector vents the exhaust upward and away from the dismounted troops.

- Use simple field expediency to *rig field phones to the rear of the tank* so dismounted infantry can communicate with the tank crew. This is important when operating as a combined arms team in the urban battlespace, where limitations of one arm are supplemented by another. Just as the tank provides protection for dismounted infantry from small arms fire, the infantry must provide protection for the tank from such things as anti-tank teams. Quick, reliable communications will enable this teamwork.
- Infantry personnel should not ride on the cupola of the tank whenever main gun firing is a possibility. Its back blast will incapacitate them.
- Use the tank's two 7.62mm machine guns or the M2 .50 caliber heavy machine gun to suppress the enemy.
- Use the tank's machine gun to lay a base of fire, rather than expending the infantry's rounds. The tank carries over 10,000 rounds of 7.62mm ammunition.
  - **S** The tank's machine gun accuracy is enhanced through thermal sights, 3x and 10x power magnification scopes and gyro stabilization for shooting on the move.

Assault Amphibious Vehicles (AAVs). The AAV, with its enhanced applique armor and organic weapons systems to give covering fire for infantry, provides an excellent vehicle for maneuver and patrolling in the urban environment. When task organized with tanks and infantry, this combination presents a formidable attacking force.

- This will be discussed in detail in the section on Task Organization.

Mortars. Due to their high trajectory of fire, mortars have a distinct advantage over artillery in MOUT. Dead space for mortars is only about one-half the height of a building. They have a high rate of fire but seldom penetrate more than the upper stories of light buildings. Because of their weight, mortars can be hand-carried to firing positions that may not be accessible to vehicles. They can be useful for clearing roof tops and preventing enemy retreat from buildings.

Tips for using Mortars. These weapons can be fired from concrete and asphalt surfaces when their baseplates are adequately buffered. We saw *sandbags and automobile tires*

effectively used to do this. These can also be used to buffer the mortar's baseplate on a building rooftop if the roof construction is strong enough.

Artillery. Although artillery has a great penetration capability, its low angle of fire is much less effective than mortars in an urban environment. For example, its dead space is normally equal to 5-times the height of the building. All Marine artillery is towed so it is more difficult to employ as a direct fire weapon—and needs close security and target designation. Artillery is most effective when used to isolate a city and provide counter battery fires.

Aerial Weapons. Both rotary- and fixed-wing aircraft can quickly put large volumes of firepower on MOUT targets. However, point targets are hard to distinguish—and hit—from the air. Good ground-to-air communications are vital. Close air support can be very effective during the isolation phase as well as destroying targets in depth. Helicopters can also be used in assault support, Medevac and resupply. The anti-air threat may considerably limit freedom of air movement.

Air Defense. If the enemy has an air threat, air defense is essential. Air defense is particularly well suited to the urban environment. The best method of creating an air defense umbrella is an integrated, rural fringe and urban air defense network.

Demolitions. All Marines, not just engineers, should be trained to employ demolitions in MOUT.

- *Demolitions* include TNT and C4. Used effectively, both can blow holes in walls that are big enough for a man to walk through.
- *Detonation Cord (DC)* can also be an effective standalone demolition.
  - **S** Maximum effect with minimum standoff distance can be achieved by using detonation cord; e.g., in a doughnut shape—especially against doors.
  - **S** DC is light and easily transportable in urban attacks.
- *Shaped charges* come in two sizes: a 15 pound M2A3 and a 40 pound M3A3 (most likely size to be used in MOUT). It creates a small hole with a large amount of spawl thrown behind the target wall. It creates a large safety hazard for friendly forces.
- *Satchel charges* come in two standard sizes; the M183 and the M37. Each weighs 20 pounds. They are very powerful, and throw

debris great distances, so friendly forces must take cover before detonation.

- *Cratering charges.* The standard cratering charge is a 43 pound cylinder of ammonium nitrate. It does not have the shattering effect of bulk TNT or C4, and is best used in deliberate demolitions.
- *Mouse hole charges*.

Tips on MOUT Specific Equipment. Marines should plan to use special assault kits to get inside of buildings, sewers, etc. These include ropes, sledge hammers, and mouse hole charges. Make sure that you have tested this equipment and have carefully rehearsed the drills for using it under less than ideal conditions.

Nonlethals. This is the subject of another MCWL X-File.

Nuclear, Biological, and Chemical (NBC) Considerations. Current U.S. policy regarding lethal or incapacitating agents is that their use against an armed enemy requires approval at the National Command Authority (NCA) level. Potential enemies may not operate under the same restrictions. Commanders must be prepared to assume an adequate NBC defensive posture when engaged in urban fighting.

Generally, the lowest floor or basement of a reinforced concrete or steel-formed building offers good protection from nuclear hazards and initial liquid chemical contamination—although some chemical agents tend to collect in lower areas. Armored vehicles also provide some protection.

> Although buildings and shelters provide some protection against spraying, they provide little protection against biological agents.

We have to plan our mission oriented protective posture (MOPP) with the realization that increased logistics demands in urban areas also apply to NBC equipment. Protective clothing, detection and decontamination equipment, and sealed containers of food and water have to be moved forward the same as other critical supplies. When operating in protective clothing, we have to make allowances for the strenuous physical and psychological effects normally associated with combat in urban areas. For example, fatigue factors greatly increase due to the effort expended to execute urban combat TTPs.

Task Organization and Movement

Organization. The basic infantry organizational structure does not change for urban combat. Within the ground combat element (GCE) of the MAGTF, forces may be task organized because of the way they have to fight within buildings across the urban terrain.

Platoon Organization. The platoon may be reinforced or have heavy weapons and/or armored vehicles in direct support or attached to them. The exact number of Marines in assault forces and the weapons they will use are based on the factors of METT-T. Typically, each of the three squads form assault, support and security forces with these responsibilities:

- *Assault Force*. The assault force closes with and destroys the enemy by fire and maneuver. It is also responsible for creating entry points and breaching obstacles when engineers are not available.
- *Support Force*. The support force provides accurate supporting fire for the assault force. It normally consists of several crew served weapons, special equipment and additional infantry.
- *Security Force*. The security force provides security for the assault force's movement. They also have the on order mission of becoming a second assault force.

Squad Organization of the Assault Force.

- *Assault Element*. The assault element assaults enemy positions. They are also responsible for creating entry points and breaching obstacles when engineers are not available.
- *Support Element*. The support element provides accurate supporting fire for the assault on an enemy position. They are task organized and may consist of all the SAWs (M249) in the squad.
- *Security Element*. The security element provides security for the assault element's movement. They also have the on order mission of becoming a second assault element.

Assault Element Organization.

- *Clearing Team*. This team consists of a rifleman and assistant automatic rifleman. They are the initial team in the building. Their mission is to clear the room of enemy threat.

- *Covering Team*. This team consists of the fire team leader and the automatic rifleman. They provide covering fire and local security for the clearing team who will make the initial entry.

Tips on Task Organization. In most instances, the most effective means of operating in the urban battlespace is task organization into a *combined arms team*. This allows each arm of combat to supplement the other, as well as cover any deficiencies that may exist. For example, tanks combined with infantry can provide near instantaneous direct fire support, as well as breaching capability. The Warfighting laboratory, working with elements of II MEF, experimented with various combinations of combined arms teams. Here is one we found to be most effective. This formation will not fit *all* situations. Commanders and leaders must assess each situation and determine the best task organization from the assets available. For example, the smallest, most combat effective way to employ Tank, AAV, or LAV units is by platoon. However, in the urban environment, the close nature of terrain does not allow this optimum employment. So we task organized into smaller elements such as the section.

- A section of tanks is two (2) vehicles.
- A section of LAVs is two (2) vehicles.
- A section of AAVs is four (4) vehicles.

Tips on Effective Organization. The task organization we tested is built upon an infantry platoon, supported by a tank section, LAV section, and AAV section. We tested this force in both low- and mid- intensity situations, against an opposing force of equal strength, less the armor. These units are formed into *three maneuver elements, under the command of the infantry platoon commander*, who is advised by the senior supporting commanders or leaders. This advisory role is important because no one individual can know everything. The tank, AAV or LAV commander, be he a Lieutenant or a Sergeant will have a more intimate knowledge of the capabilities and limitations of his equipment than the infantry leader. Seek the advice of these experts and listen to what they have to say. As the commander you always have the duty to make the final decision, and that includes ignoring advice, but you are a fool if you do not ask. The three maneuver elements are:

- infantry squad, one tank and one AAV;
- infantry squad, and two LAVs;

- infantry squad, one tank, and one AAV.

Although the tanks prefer to work in platoons, we found that using sections in MOUT allowed us to combine the strengths of the various components and negate some of the limitations.

Tips on Effective Employment. Broken into these three maneuver elements, the platoon patrolled through the city in the formation shown in figure 2. A tank in the lead, followed at approximately 20 meters by an AAV with infantry embarked. The AAV had one of the cargo hatches open with infantrymen scanning assigned sectors to the front, rear and flanks. The ramp of the AAV was open to the horizontal in order for troops to deploy immediately in the event of ambush. We found that *if the ramp was not open, a delay of up to 10 seconds occurred during the most critical point of an ambush*, the immediate action. Also, this configuration allowed use of the AAV in this mode without incurring the delay in resetting its ramp when the emergency "combat drop" was used. (Please note that the ramp of the AAV requires some strengthening in order to remain in the horizontal position.) The infantry platoon leader normally, but not always, traveled in the first element.

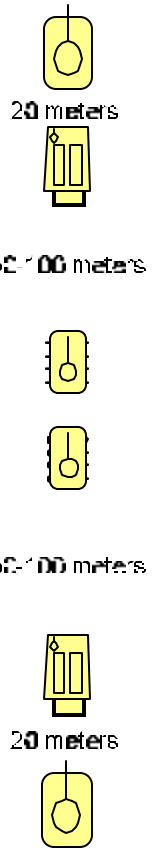


Figure 2 MOUT Experimental Formation

The second element in the formation was the infantry embarked aboard the LAVs. This unit moves approximately 50 to 100 meters behind the lead element, and is the rapid reaction force of the platoon. The LAV section was prepared to move quickly to the flanks of any contact and engage with organic weapons, as well as deploying embarked infantry.

The third element in the platoon, organized the same as the first element, brought up the rear, except in this case, the AAV was in the lead, and the tank covered the rear. This element moved approximately 50 to 100 meters behind the LAVs. *Note that we only use two AAVs. If using a full section (4 AAVs), then the other AAVs would operate as dictated by METT-T and the tactical situation.*

This results in a platoon formation with armor at the most vulnerable points, the front and rear. We have infantry in close proximity to provide cover for the tanks, with infantry receiving some protection from small arms and fragmentation by the AAVs. We also have a highly maneuverable and potent reaction force. By mounting the infantry, in addition to the protection, we also increase the speed and tempo of operations. By having armor at the front and rear, we have a very potent direct fire weapon to deal with any situation. Commanders can adjust their task organization to best meet the conditions under which they are operating, and the enemy they are fighting.

Tips for an Ambush Immediate Action (IA) Drill. We found the following IA drill to be very effective upon making contact with enemy or encountering an ambush. You may be faced with small formations of enemy, snipers, and small ambushes. They will often attempt to inflict maximum casualties with a brief firefight, then withdraw. Your first problem is to contain the enemy in order to defeat him. If your assessment as the commander is that this is the type of situation you will most likely encounter, then the following IA drill was found to be very effective.

Moving in the formation described above, when contact was made by the lead element, the tank would immediately begin engaging the enemy with its machine guns, if the enemy location is known. Remember, we are dealing with an urban situation, with many civilians, and usually restrictive ROE. You must use your firepower carefully. Due to the presence of many civilians, the tank main gun may *not* be the weapon of choice.

Tips for Optimizing Firepower. Remember, the tank has three machine guns with *over 10,000 rounds of ammunition*, thermal sights and laser range finders.

With the tank providing covering fire, the infantry in the following AAV immediately deploy and seal the local area. They engage the enemy if his precise location is known. If not, they begin the process of locating him. As the infantry deploys from the AAV, throw a smoke grenade (color is designated in the patrol order) to provide a visual focal point for all the elements of the platoon. We found that if you relied upon the radios to do this, some elements would not get the word on the general location of the enemy contact due to lots of talk, jamming, etc. *Knowing this location is critical to surrounding and*

containing the enemy. The AAV provides supporting fires from its .50 caliber machine gun machine gun and MK-19 grenade machine gun as needed, subject to ROE considerations.

The second element of the platoon, the LAVs and embarked infantry, upon being informed or hearing the contact immediately begin maneuvering to get to the flanks and rear of the enemy. The direction they move is coordinated in advance in the patrol order. Knowing the general location of the contact is important for orienting the maneuver force. Once again, throwing the smoke grenade is of critical importance.

Remember, the smoke does not give you the location of the enemy, it just marks the location that the fire was received.

You must adjust for this as you maneuver to contain and flank the enemy. Upon arriving in the location that the maneuver section commander determines will contain the enemy, the infantry dismount and begin the search. The LAVs provide supporting fire if needed.

Meanwhile, the last element of the platoon, the rear, maneuvers in the opposite direction of the reaction force, and closes the loop around the enemy. This element also dismounts the infantry when the element commander directs, and provides supporting fires if needed. Remember that you have lots of friendly forces maneuvering, so there is potential for firefights between your own units. You must engage targets carefully, and keep the other elements informed of your position and movements.

Once the platoon has closed the loop around the enemy, the commander then can maneuver his forces with deliberate speed, as hopefully you have contained the enemy within the cordon. You must <u>not</u> assume that you have contained the enemy, so you must maintain a 360 degree posture. In this type of conflict, there are no fronts, rears or flanks.

The above IA description was predicated on a contact with the lead element of the platoon. Contact can be made with any of the elements, and you should have drills and reaction plans for these.

Tips for Deliberate Defense IA Drill. If you are in the type of engagement where the enemy is conducting a more deliberate defense, then your reaction will be different. In this case your

initial problem is not to fix the enemy, but to *quickly gain the advantage, and seize the initiative.* Remember, in maneuver warfare, we want the enemy reacting to us, not the other way around. Once contact is made with the enemy (assume that the lead element has made the contact), the lead tank immediately begins laying a base of fire and maneuvering to a protected position from which to fight. The following AAV dismounts its embarked infantry and adds its firepower to the fight. The tank must rapidly maneuver due to the high likelihood that the enemy will use anti-tank weapons. Ensure the AAV travels at sufficient distance from the tank to allow time for the tank to back up while the infantry is disembarking. The AAV cannot maneuver while the infantry are dismounting. The infantry once dismounted, immediately begin to engage the enemy and lay a base of fire. Throw smoke to provide a visible marker. This smoke can also be used to cover your movement.

The trailing elements of the platoon await orders from the infantry commander on the direction he wants them to maneuver in order to flank the enemy who are being engaged by the lead element. Use flanking maneuver in order to get to the flanks or rear of the enemy and avoid the focus of his defense.

Weapons Handling and Firing Techniques. In the close, violent MOUT environment, Marines often have to effectively engage targets at very close range—and at irregular intervals. The best way to prepare for this is to handle and fire the service rifle as described below.

<u>Tactical Carry</u>. Used when no immediate threat is present. It permits control of the rifle while moving and still allows quick engagement of the enemy.

- PUT THE BUTT STOCK OF THE RIFLE ALONG SIDE OF THE BODY AT HIP LEVEL AND ANGLE THE BARREL UPWARD ABOUT 45 DEGREES IN THE GENERAL DIRECTION OF THE ENEMY.

<u>Alert Carry</u>. The alert carry is used when enemy contact is likely.

- PUT THE BUTT STOCK OF THE RIFLE IN THE SHOULDER WITH THE MUZZLE ANGLED DOWN ABOUT 45 DEGREES AND POINTED IN THE LIKELY DIRECTION OF THE ENEMY. IN THE ALERT, KEEP BOTH EYES OPEN AND SCAN FOR ANY THREAT WITH THE WEAPON ALWAYS IN LINE WITH THE LINE OF SIGHT. THIS IS CALLED "GUNS AND EYEBALLS."
- WHEN A THREAT IS SPOTTED, QUICKLY SNAP THE WEAPON INTO A FIRING POSITION, LOOK OVER THE REAR SIGHT APERTURE, AND

ALIGN THE TIP OF THE FRONT SIGHT POST CENTER MASS ON THE TARGET. ACCURACY IS THE PRIMARY GOAL.

Ready Carry. The ready carry is used when contact with the enemy is imminent. It allows for immediate target engagement.

- PUT THE BUTT STOCK OF THE RIFLE IN THE SHOULDER WITH THE MUZZLE OF THE RIFLE POINTED IN THE DIRECTION OF THE ENEMY. ALWAYS STRIVE TO ACQUIRE THE FRONT SIGHT POST IN THE REAR SIGHT FOR PROPER AIM. PUT THE CLEAR TIP OF THE FRONT SIGHT POST ON YOUR TARGET FOR A CENTER MASS SHOT.

Pieing. Although the preferred technique is to bypass an opening (i.e., under, over, or pass it quickly) there may be an instance where you cannot bypass. This is when pieing is an effective technique in clearing dead space inside rooms and buildings to gain security on hallways, stairwells, mouse holes, etc. Pieing is conducted using the ready carry position or short stock technique, ensuring that your strong side arm elbow is tucked in to reduce exposure.

- AIM THE WEAPON AT A SECTOR OF A WINDOW, DOORWAY, CORNER, HALLWAY, ETC., ENSURING THAT THE MUZZLE DOES NOT BREAK THE PLANE OF THE OPENING. THUS THE AREA IS "PIED OFF" UNTIL THE SECTOR IS CLEARED OF ANY THREAT.

Aimed Quick Fire. Strive for this type of firing technique at all times. Otherwise, the accuracy of your shots will be reduced.

- YOUR INITIAL FOCUS IS ON THE TARGET. AS YOU BRING UP THE RIFLE, LOOK THROUGH THE SIGHT WITH THE FIRING EYE, MAINTAINING SIGHT ALIGNMENT AND SIGHT PICTURE—ENGAGE THE TARGET. IMMEDIATELY AFTER TARGET ENGAGEMENT, LOWER THE WEAPON, LOOK OVER THE SIGHTS AND SCAN FOR ADDITIONAL TARGETS ("GUNS AND EYEBALLS").

Tips for Unit Movement. Studies done on casualties sustained in the urban environment tell us that the vast majority come from falling debris. This affects unit movement in these three very important ways:

- *Firepower employment*. If the situation dictates, and the ROE allow, we can use heavy weapons to create showers of debris to defeat enemy strongpoints or deny him the use of certain areas.
- *Use of cover without overhead protection*. We need to stay aware of the necessity for overhead protection when creating

support or logistic areas. For example, using a wall to protect against frontal fire may be inadequate if we are near an overhang that can create lethal falling debris if exploited by the enemy.
- *Patrol or movement to contact route selection*. Wherever possible, we need to plan to avoid routes that have significant potential for falling debris that will cause casualties to us. And, if the ROE permit, we can have our fire support create lethal falling debris showers for the enemy in advance of our movement along the route.

Tips for Individual Movement. You must master movement techniques to reduce your exposure to enemy fire. In Urban Warrior, squad or platoon sized crossing of a danger areas resulted in a situation where the first ones across had to fight their way into the limited access points of the building, leaving the rest of the unit out in the open to be easily destroyed. Although it is situationally dependent, our experiments indicate that the optimum size unit to move across a danger area is the *fire team—using fire team crossing tactics*. The fundamentals of these are:

- avoid silhouetting yourself,
- avoid open areas, and
- select your next covered and concealed position before you move.

Do not get channelized by the enemy into killing zones.

- When attacking, the squad can become channelized by wire obstacles into killing zones if it does not plan for—or use—hasty breaching methods.
- This can be avoided with proper visual reconnaissance prior to moving across an open area to the squad's next objective

Do proper visual reconnaissance.

- Squad leaders must conduct a proper visual reconnaissance prior to moving to the next objective building.
- Decide where their entry point will be and what equipment will aid in breaching the building.

- As a general rule, when crossing danger areas, you should not move unless you are screened by smoke or low-light conditions and supported by covering fire. Then, move as quickly as possible from covered position to covered position.

Proven Movement Techniques. Here are proven movement techniques.

Combat Glide. Normally used once inside the building because you must slow your momentum and support each other by fire.

- IN THE COMBAT GLIDE, HAVE YOUR WEAPON AT THE READY, SCAN FOR TARGETS (GUNS AND EYEBALLS), KEEP YOUR SHOOTING ELBOW TUCKED TO REDUCE EXPOSURE, STAY SLIGHTLY CROUCHED AND BENT AT THE KNEES AND MOVE QUICKLY AND SILENTLY IN A HEEL-TOE FASHION. BE AWARE THAT THIS TECHNIQUE WILL NOT WORK IN A BUILDING THAT HAS SIGNIFICANT RUBBLE ON THE FLOOR.

Traversing a Wall. This is the correct method of traversing a wall.

- AFTER CHECKING FOR BOOBY TRAPS AND THE PRESENCE OF ENEMY, QUICKLY ROLL OVER THE WALL, KEEPING A LOW SILHOUETTE. THE SPEED OF THIS MOVE AND A LOW SILHOUETTE DENY THE ENEMY A GOOD TARGET.

Observing Around Corners. Whenever possible, use a mirror on a stick, or a hand held mirror to look for enemy presence without exposing yourself to his fire. If this is not possible, you may have to use a technique called "Popping the Corner" to reduce the exposure time. Here are two methods to accomplish this

Prone Popping.

- GET IN THE PRONE POSITION NEAR THE CORNER OF A BUILDING OR OBSTACLE YOU NEED TO OBSERVE AROUND. SHORT STOCK THE WEAPON WITH THE MUZZLE POINTED IN THE DIRECTION OF MOVEMENT.
- CRAWL TO THE CORNER, RAISE YOUR UPPER BODY ON THE ELBOWS, THEN PUSH YOUR BODY FORWARD WITH THE FEET AND LEGS WITHOUT MOVING YOUR ELBOWS. THE FINAL POSITION WILL EXPOSE YOUR WEAPON, A SECTION OF YOUR HELMET AND A MINIMAL AMOUNT OF YOUR FACE. THIS GIVES YOU A LOW PROFILE, THE ABILITY TO OBSERVE AROUND THE CORNER AND THE IMMEDIATE CAPABILITY TO ENGAGE TARGETS WITH YOUR WEAPON. HAVE A MARINE STAND DIRECTLY OVER YOU—WITHOUT EXPOSING HIS BODY AROUND THE CORNER—TO PROVIDE SECURITY TO THE FLANK. THIS METHOD IS SLOW AND DIFFICULT TO GET INTO. IF SPEED IS OF THE ESSENCE THEN YOU SHOULD PERFORM KNEELING POPPING.

Kneeling Popping.

- TWO MARINES MOVE UP TO THE CORNER OF THE WALL. THE FIRST MARINE ASSUMES A KNEELING POSITION AND THE MARINE BEHIND HIM PROVIDES SECURITY TO THE FLANK. WHEN THE FIRST MARINE IS IN POSITION, HE WILL "POP" AROUND THE CORNER EXPOSING HIS WEAPON, A SECTION OF HIS HELMET AND A MINIMAL AMOUNT OF HIS FACE.

Movement Outside of Buildings. When forced to move outside buildings, use smoke, covering fire, and cover and concealment. Hug the sides of buildings unless someone is shooting at you. If this is the case, try to stay about one foot off the wall to avoid bullets and bullet fragments that may roll along the walls. Stay in the shadows, move rapidly, and present a low silhouette.

Tips on Movement Outside of Buildings. Do not stack outside of buildings. This technique is effective for police forces, or hostage rescue situations where the surrounding area is clear and under the control of friendly forces. In urban combat, this is not the case because we are normally fighting for the entire area. Stacking to prepare for entering a building exposes those personnel in the most deadly killing zone in urban combat—the open street.

Movement Past Windows. If you cannot avoid the danger area (window opening) completely use the following technique:

- STAY BELOW THE WINDOW LEVEL. DO NOT SILHOUETTE YOURSELF IN THE WINDOW. ADJUST YOUR DISTANCE FROM THE WALL TO ACCOUNT FOR RICOCHETS OR "HUG" THE SIDE OF THE BUILDING AS TACTICALLY APPROPRIATE. AN ENEMY GUNNER INSIDE THE BUILDING WOULD HAVE TO EXPOSE HIMSELF TO COVERING FIRE IF HE TRIES TO ENGAGE YOU. THIS SAME TECHNIQUE IS USED FOR LOWER WINDOWS OR SMALL OPENINGS. AN ALTERNATE TECHNIQUE IS TO PIE OFF THE WINDOW OR OPENING.

Tips on Crossing Open Areas. Avoid open areas, such as streets, alleys, and parks. They are natural kill zones for enemy crew served weapons. If you have to cross, use these fundamental TTPs to help you eliminate fatal mistakes:

- Anticipate. Before moving, make a visual reconnaissance

and select the next position for the best cover and concealment. Identify and run the shortest distance to the next position.

- Conceal. Use smoke or low light conditions to conceal movement.
  - Balance the use of smoke with the possibility that you may alert the enemy that you are about to move across the area.
- Apply Firepower. Shoot supporting fires prior to, and during movement to keep the enemy from engaging the moving forces.
  - Use machine guns to place large volumes of suppressive fire to cover the movement.
  - When moving from position to position, be careful not to mask your supporting fires.
  - When reaching the next position, be prepared to cover the movement of other members of your assault force or element.
- Move in Appropriate Groups. The assault element moves together—fast and tight—keeping muzzles pointed in direction of probable enemy locations at their next covered position. The support force provides the base of fire and security for the element moving.

Remember, falling debris is the primary cause of MOUT casualties.

- The general rule is to move as an assault element—a fireteam—but it is the squad leader's decision based on METT-T, as to how to move the unit. The reason for a fireteam assault element is that a fireteam has enough firepower to make initial entry that a pair normally lack. Additionally they present a smaller target than a squad assault.
- At a large distance between covered positions, leapfrogging the cover and the clearing team (pairs) between covered positions may be more viable.

Tips on Assault Equipment Movement. Bring proper assault equipment forward. As squads assault buildings they often have to leave the assault equipment (e.g., ladders) for follow on forces to bring up. Many times the follow on squads did not bring the equipment forward for use in assaulting the next building. They must bring this equipment forward so you can maintain the tempo of maneuver operations.

Doorways. Attempt to avoid doorways as entrances or exits. They are

normally covered by enemy fire or booby traps. If you have to use a doorway as an exit, move quickly through it to the next position, staying as low as possible to avoid silhouetting yourself. You should not move unless you have covering fire and smoke. Move past a doorway quickly if it is closed. Use the pieing technique if it is open.

Ensure a comprehensive team leader brief on building entry point. If *everyone* does not have the plan, the entire unit is in jeopardy.

Movement Inside a Building. When moving inside a building, avoid silhouetting in doors and windows. When forced to use a hallway, move 6- 8 inches off of the wall. Studies show that small arms tend to ricochet when they hit walls and travel one to five inches along the line of a wall.

Wall-Body-Weapon Technique. This technique minimizes exposure as you move around corners. As you look down the passageway or wall, keep the wall to your back, and your body and weapon to the outside. To do this, you may have to switch the weapon to your weak side depending on the direction of travel and side of the wall you are on.

Tips for Weapon Techniques. There are some fundamental problems with the technique described above. Although this technique allows minimal body exposure, it may put you in a situation where you have to engage an enemy with your weak side. This can dramatically decrease your on-target accuracy—putting you in greater danger. When you move into a room to clear, you must expose yourself anyway, so it *may be better to be able to hit your target than to have better cover* when initially moving into the room.

Tips for Marking Buildings. Mark forward line of troops (FLOT).

- When moving through a building, mark the FLOT using a visible, easily understood system that extends out the flanks of the buildings. For example, chemical lights or engineer tape. This lets the supporting forces know that they should shift fire two rooms ahead.
- If this is not done or not done well, fratricide is likely.
- Mark entry point(s) and route of movement for follow-on forces.
  - Properly marked entry points signal if the building is cleared or not cleared and if medevec and/or engineer support is needed.
- Mark which rooms have been cleared.

S Use your unit SOP so everyone knows what the marks mean.

Remember to change your marking SOP at irregular intervals or the enemy will use it against you.

Tips for Movement Inside a Building. Once a building has been cleared or a section has been cleared, squad leaders must reposition Marines to cover 360 degree security. Counterattack is always likely. A common habit for Marines, especially HQ elements, is to bunch together in a room.

- Carry Night Vision Goggles (NVGs) or flashlights.

S Once inside the buildings and subterranean areas, these items become critical.

Tips for Dealing with Casualties. In our experiments, squad leaders quickly lost track of casualties and failed to signal supporting forces to evacuate casualties. Once a building was taken, squad leaders must locate casualties and evacuate them if necessary. They also must routinely signal or radio casualty reports and identify their casualty collection point within the building. Do this carefully so you can maintain the tempo of your attack.

Assaulting a Building

The Challenge. Assaulting a building is the most difficult challenge facing a rifle squad in urban combat. In a MOUT environment there are no uncontested front doors or easy access routes. In order to establish a foothold in a building, the small unit leader must use every available means to gain entry. The assault is the first phase of a successful attack.

Requirements. There are five interrelated requirements for attacking a defended building. They are:

- fire support,
- movement,
- assault,
- clearing and
- reorganization.

Proper application and integration of these requirements—determined by METT-T—hasten mission accomplishment. For example, large cities may have high-rise apartment buildings and industrial complexes that are separated by parking areas or parks. This increases the fire support required to suppress and obscure enemy gunners covering the open spaces between buildings. Conversely, a built up area with few open areas can provide numerous covered routes that may decrease fire support requirements.

Assault Drill. This is designed to give the squad leader a technique for assaulting a building. The technique used must be based on METT-T and generally follows this sequence:

- Suppress enemy position with a base of fire.
- Provide smoke for concealment.
  S Balance this with the possibility that you alert the enemy that you are about to rush.
- Assault Element approaches building and makes entry.
- Support Element enters building on order.

Methods of Entry. Enter a building with minimum exposure. Select an entry point *before* moving toward the building. When approaching the building, avoid windows and doors as much as possible. Use smoke to conceal your advance toward the building, and covering fire to support

the advance. Use demolitions or direct fire weapons to make new entrances. Precede the entry of the clearing team with a grenade (if ROE and building construction allow). Enter immediately after the grenade explodes to clear the room of all threat.

Upper Level Entry. Clearing a building from the top-down is the preferred method. This makes gravity an ally when throwing grenades and eases the fatigue of moving from floor to floor.

An enemy forced to the top of a building is cornered. He must either fight desperately or escape over the roof. But an enemy who is forced down to the ground level may withdraw from the building, thus exposing himself to friendly fires from the outside.

Use helicopter lift to get to the top of a building if the anti-air threat makes this possible. There are various other means, such as ladders, drainpipes, vines, ropes, or the roofs and windows of adjoining buildings that can be used to reach the top floor or roof of a building.

While clearing from the top-down is preferred, upper level entry in a mid to high intensity environment may present a greater risk than lower level entry—because you spend much more time exposed in the outside danger area while attempting to ascend a ladder or rope. Often it may be better to take a chance at clearing from the bottom up than risk an upper level entry.

Lower Level Entry. When you have to enter at the lower level, use demolitions, artillery, tanks, or similar means to create a new entrance to avoid booby traps. Then use a quick entry to follow up the blast effects. When the only entry to a building is through a window or door, direct your supporting fire at that entry point. It is very difficult to throw a grenade from the ground to an upper window so use an M203 round fired from a supporting unit prior to your assault. Firing M203 rounds into the breach point to clear it of possible booby traps and any enemy threat can be very effective. Before entering, throw a hand grenade (if ROE allow) into the new entrance to ensure the effects of the original blast. If the building is on the verge of collapse or on fire, be alert so your own forces don't become casualties.

Use of Ladders. Ladders offer the quickest method to gain access to

the upper levels of a building. Units can get ladders from local civilians, stores, or obtain material to build ladders through supply channels or from materials present in the local area.

- The ladder entry consists of number 1 and 2 man providing security. Number 3 man places and holds the ladder while Number 4 climbs the ladder and gains entry. The rest follow as 2, 1 and finally 3.

Follow on forces must remember to bring the ladder and additional gear forward (not leave it behind) so it can be used for the next entry.

Use of Grappling Hooks. This technique is the *least preferred method* of entry due to extended outside exposure. The grappling hook has to be sturdy, portable, easily thrown, and equipped with 4 or 5 hooks that can hold inside a window. Use **e** to 1-inch diameter rope that is long enough to reach the objective window—at least 20 feet—with knots tied at 1-foot intervals. Stand as close to the building as possible when throwing the grappling hook to minimize your exposure to enemy fire. Aim for the highest part of the window. Once the grappling hook is inside the window, pull the hook to one corner to increase the chances of a good "bite" and to reduce the climber's exposure to lower windows during the climb. These are significant considerations for this method:

- Must be rehearsed/practiced often.
- Requires significant upper body strength.
- Entails extended exposure time/vulnerability while climbing.
- Requires security at the bottom of the rope.

Tips on Mouse Hole Charges. These are used to breach holes in walls to create entrances to building as an alternative to existing openings. Also, the fragmentation effects of the charge could aid the team in clearing the room. The most important thing to remember when using a mouse hole charge is that it *must be braced firmly against the wall*. Breaching a wall is extremely difficult. Good target intelligence is key so you can know in advance about the building construction, pipes, electric wires, etc.

Scaling Walls. When forced to scale a wall, use smoke and diversionary measures to improve your chances of success. Plan for wind direction to optimize smoke for concealment. Support teams can use fire, noise and false movement to distract the enemy. When scaling the wall, avoid silhouetting yourself in windows of uncleared rooms or exposing yourself to fires from lower windows. Climb with your weapon slung over the

firing shoulder to quickly acquire a firing position.

Rappelling can be used to descend from the roof top into a window if the environment is semi-permissive or the situation dictates. However, you will be exposed and vulnerable during the descent

Buddy Lifts. These are six techniques that can be used if ladders are not available. Buddy lifts can be done with or without extra gear, and should be done as quickly as possible with minimum outside exposure.

Two Man Supported Lift.

- Two men stand facing one another holding a support bar or board. A third Marine gets on the support with weapon ready and is lifted to a point where he can get into the entrance.

Heel Lift.

- One man standing with palms flat against the building; feet out from the building with heels raised, is lifted by two men by grasping the heel of the third man.

One-man Lift.

- One man, with his back or side against the building, cups his hands and bends at the knee. The second man steps onto the cup and is lifted up/into the entrance using his shoulder as a step if necessary.

Tips for a Buddy Pull. In some instances, personnel may already be in the building and can assist another Marine who is trying to enter.

If possible, use something other than the entering Marines arms and hands to assist him. If you pull him by his hands and/or arms, you limit his ability to assist you, as well as limit his ability to use his weapon if needed. A simple field expedient to help this technique is to *loop a web belt through the back of the arm holes of the flak jacket* and use it as a pull "handle." Another expedient is to *sew a strap across the top of the flak jacket* to provide a good lift point—if the capability for strong stitching is available. In fact, MCWL is recommending this as a *potential equipment modification for evaluation by the Marine Corps Combat Development System (CDS)*.

Two-Man Pull.

- The first two Marines inside the building pull the other Marines up into the building with or without the aid of rifles.

Knee Lift. Is used to gain access to a lower level window.

- A Marine kneels down with the inboard leg closest to the wall resting on the knee. The outboard leg rests on the foot with the knee raised. The other members of the team will use the upper portion of the outboard leg to step off of and into the window.

Two-Man Unsupported Lift.

- The first two Marines place their backs to the walls and get shoulder to shoulder in a squatting position and place hands together forming a cup. The Marine entering the window uses the cups for foot holds and will be raised to the window by the other two Marines.

Tips for Carrying Weapons. When climbing, or buddy lifting through windows of buildings, there are several options for carrying and passing of individual weapons. Although *each unit should develop and teach an SOP for this*, here are techniques that we have seen work in our experiments.

- When climbing or doing a buddy lift, the weapon can be passed to personnel already in the building. In this case, the weapon should be *placed in a designated location so the individual who is entering the building will know where it is upon entering the building*. This is as simple as having all weapons placed to the left of the window. If a firefight occurs while climbing, knowing the precise location of your weapon will be important in the confusion.
- A second—and less desirable—option is to sling the weapon across your back. This option has problems, as many windows are narrow, and you may become stuck in the window, jammed by your weapon.
- A third option is to sling your weapon on your shoulder. The problem with this is the potential for your weapon falling off of your shoulder. But this is effective if it is secured in some fashion that holds fast but can be easily unsecured after window entry.

The biggest Danger Area in MOUT is open space. The less time outside of a building, the smaller the risk of sustaining casualties.

Clearing Techniques: Squad Tactics

Introduction. Combat within an urban environment exposes combat units to the realization of how easily they can be eliminated due to lack of proper preparation. This has been proven in past battles: Hue City, Gronzy, and Mogadishu. Battles are won or lost based on a force's training prior to conflict. Continuous training does pay off in combat. By studying how to effectively fight within a building, one can learn some valuable lessons on how to clear rooms and floors of a building.

Organization. Before a squad can begin clearing a building, it must be properly task organized for combat as follows:
Assault Element. One fireteam organized with:

- Clearing Team—rifleman and the assistant automatic rifleman
- Cover Team—automatic rifleman and team leader.

Support and Security.

- Two fireteams, the squad leader, and attached weapons.
  NOTE: ALL THREE FIRETEAMS MUST BE ORGANIZED TO CONDUCT THE ASSAULT, AS CASUALTIES MAY CREATE THIS NEED.

General Principles. These are guidelines for clearing techniques.

- *Clear from the top down*. Whenever the situation allows, a team should enter a building from an upper deck and clear down to the last floor.
- Avoid the use of ground floor windows or doors, as they are the most likely places for the enemy to place booby traps.
- *When entering low*, clear a foothold, move up (if possible) and clear down. This technique is similar to the first principle. All rooms on the floor of entry are cleared and then secured. Then, a path to the top is cleared and secured. As subsequent rooms and floors within the building are cleared on the top floor, the avenue and the floor of entry act as "no man's land" within the building as the enemy tries to fight his way back down to his only route of escape.
- *Avoid silhouetting* yourself in doorways, windows, and any other openings that may be found in a building. For example, closing a window shutter may not eliminate this potential, especially at night.
- *Use grenades when available*. Considering both ROE and building construction, use *concussion* grenades for precision engagement. Remember, the blast will kick up secondary missiles and dust.
- *Get in fast*. Do not hesitate outside the building. Cross the threshold rapidly because all team members will be silhouetted at this point. Take advantage of the shock effect by entering immediately after a grenade blast. Be prepared to immediately engage targets.
- *Avoid clearing patterns*. Vary your room clearing techniques. The enemy behind the next door may be the one you flushed out of a room earlier. But, do not sacrifice tactically sound procedures in order to avoid patterns.

Planning Considerations for Combat Within a Building.

- Determine the point of entry.
  - This could be a building roof, side wall, or subsurface. Marines may blow a mouse hole, blow a door open, kick a door open or break a window.
- Identify—and promulgate—verbal and visual signals to be used.
  - These include code words for employment of shotguns, demolitions, hand grenades, etc. Also, consider hand and arm signals for entry methods. They may be adjusted and adapted to the situation. Darkened areas and night combat will affect visual signal procedures. *Make use of SOPs.*
- Anticipate use of hand grenades and demolitions.
  - ROE and building construction dictates how they are used.
  - Avoid the tendency to use them indiscriminately—because resupply will be difficult as streets and road are "no man's land."
- Spread load ammunition and special equipment.
  - The assault team normally has priority of ammunition and equipment, but all teams must be prepared to assume the assault.
- Determine the order that rooms will be cleared.
  - Rooms must be cleared in one direction.
  - OK to clear two rooms simultaneously.
  - Avoid establishing a pattern.
  - Change direction from floor to floor.
- Determine the technique for moving through hallways.
  - Wall construction material (concrete, wood, etc.) will dictate if you move in the center of the hallway or along the walls.
- Define the method of clearing rooms. Choose between one, two, three, and four man clears—avoid establishing patterns.
- Arrange the means for reinforcing and relieving assault elements and

clearing teams.

- Establish the means for marking cleared rooms and secured buildings. This may be dictated by HHQ, but consider
  - different colored paint, chalk,
  - chemlights for night, and
  - panels for outside the building.
- Decide the means for handling friendly casualties. Considering that the streets are prime fire zones, establish a Medevac plan.
  - Assign aid and litter teams within the support element.
- Determine the method of handling enemy casualties.
  - Enforce the "Five S's and a T, (Search, Silence, Segregate, Speed, Safeguard, and Tag)."
- Plan for consolidation and reorganization.
  - The casualty intensive MOUT environment makes this phase critical as key leaders are replaced and weapons and ammunition are redistributed and resupplied.

Room Clearing. The only way to clear a building while leaving the building intact is to clear it room by room. There are three factors to consider for clearing a room:

- Method of entry. How we actually cross the threshold.
- The number of men clearing the room;
  - e.g., there are normally four men in the assault team.
- Positioning of men with respect to the opening and assumed room characteristics ("reading a room").

Room Entry Positions. Split Position. This is the preferred method, as it may not always be possible to have men positioned on both sides of the opening. In this position, more of the room and its contents can be seen prior to entry. This method is normally used when door is closed. Figure 3 illustrates this position.

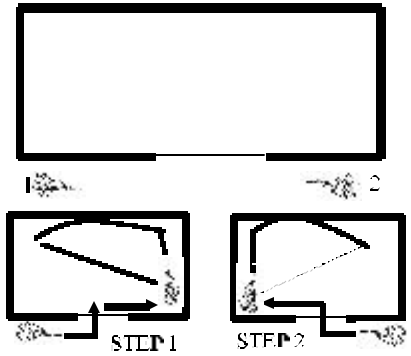


Figure 3 Split Position

Stacked Position. When moving down a hallway with open doors, it is not tactically sound to cross an opening to get into the split position. In this situation, the clearing team can assume the "stacked" position as shown in Figure 4.

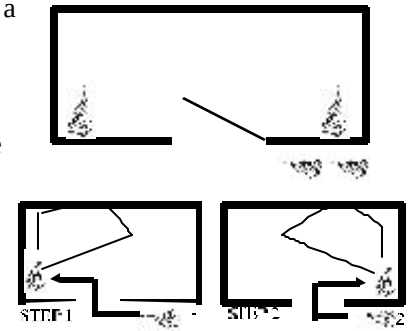


Figure 4 Stacked Position

Methods of Crossing the Threshold. Here are four ways to cross the threshold—the point of entry—to clear room.

Buttonhook. As soon as the grenade goes off or you get the command to go, quickly move across the threshold using the combat glide "guns and eyeballs." First cover your "fatal frontal" by looking at the forward area, double tapping any targets you find. Then quickly turn in the direction of the wall you were originally stacked along, keep your weapon aimed into the corner, and move crisply into the room to check it. Do not depend on your peripheral vision for this. Now move to your point of domination in the corner and scan the rest of the room for targets. This all takes place in a couple of seconds. Figure 5 shows this technique.

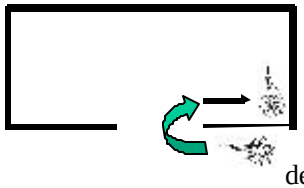
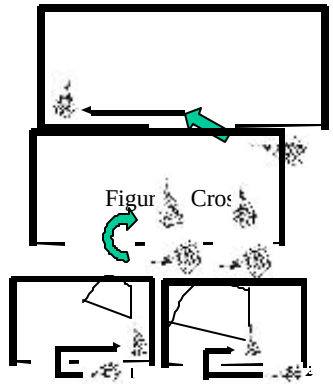


Figure 5 Buttonhook

Cross. As soon as the grenade goes off or you get the command to go, use the combat glide "guns and eyeballs" to quickly move. Cover your "fatal frontal" by looking at the forward area and double tap any targets you find. Then turn in the opposite direction of the wall you were originally stacked along, with your weapon aimed into the corner, move into the room and check it. Do not depend on your peripheral vision for this. Move to your point of domination in the corner and scan the rest of the room for targets. Figure 6 shows this technique.

Limited Penetration. Use this method when both people will move along the same



Figur Cros

Figure 7 Limited Penetration

sidewall. Either of the above methods can be used to enter, but the second or third Marine entering the room does not check their corner because the first Marine who entered is already in that corner. Move next to the Marine scanning the room and remain semi-dispersed as shown in Figure 7.

Straight Entry. Sometimes the situation will dictate that one of the follow-on Marines moves straight in the room to a point of domination specified by the senior Marine already in the room. This may be, for example, to cover a doorway in another part of the room. Figure 8 summarizes this technique.

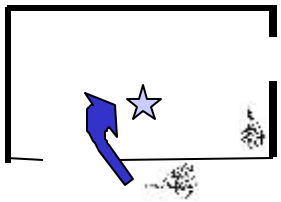


Figure 8 Straight Entry

Detailed Room Clearing. Each of these techniques is effective when employed in the appropriate situation.

One Man Room Clear. The *least* preferred method of clearing a room is with one man. However, there will be times when this is the only method available, such as when gaining access to an upper story window. Figure 9 illustrates this technique. The steps to this method are:

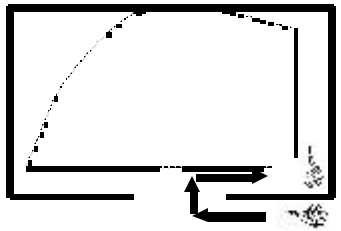


Figure 9 One Man Clear

- Move to a position near the opening.
- If necessary, throw a grenade.
- Immediately after the grenade explodes, cross the threshold scanning the room for targets and double tap any enemy;
  - **S** preferably enter using a buttonhook technique.
- Search the room once all targets have been eliminated
  - **S** or if available, the next man in will search.
- Once cleared, mark the room.
- Post security.

Two Man Room Clear. When clearing a room with two men, try to limit the methods of entry to the Cross and Buttonhook. These two methods put Marines in the room corners with interlocking fields of fire and security to their rear. For all multiple entry room clearing, the first two men into the room should do the same. Figure 10 illustrates this

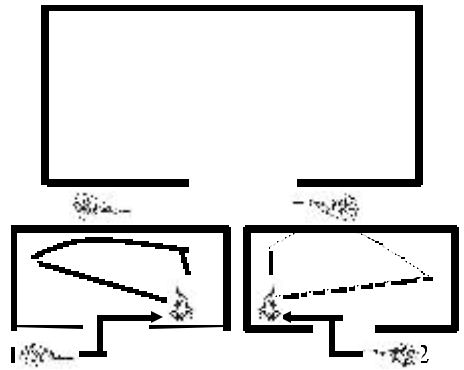


Figure 10 Two Man Clear

Note: If the door or opening is open and allows the Marines to see into the room from a covered position, the Cross entry is preferred, as they will be entering into an area they have already seen.

Three Man Room Clear. As shown in Figure 11, clearing a room with three men is the same as the two man method, with a third man following immediately behind using either the Limited Penetration or Straight Entry methods. Again, the initial two men into the room will use either the Buttonhook, Cross, or both.

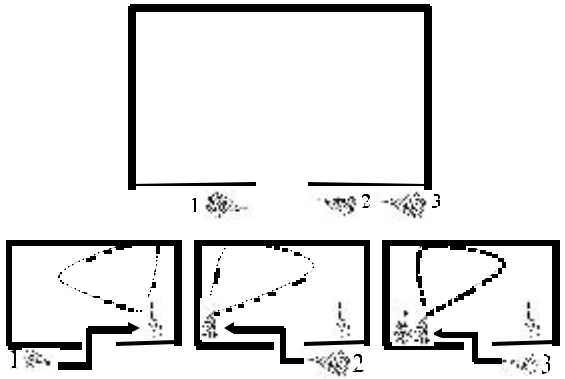


Figure 11 Three Man Clear

Four Man Room Clear.
As with the other multiple entry room clearing techniques, the first two men of a four man clear will Buttonhook, Cross, or both in order to gain the corners of the room. This limits the third and fourth man to Limited Penetration or a Straight Entry. Only one may conduct a Straight Entry, limiting the other to a Limited Penetration. However, both may conduct Limited Penetrations with one moving left of the opening and one moving to the right. One crosses into a Limited Penetration and the other will

Buttonhook. Figure 12 illustrates this technique.

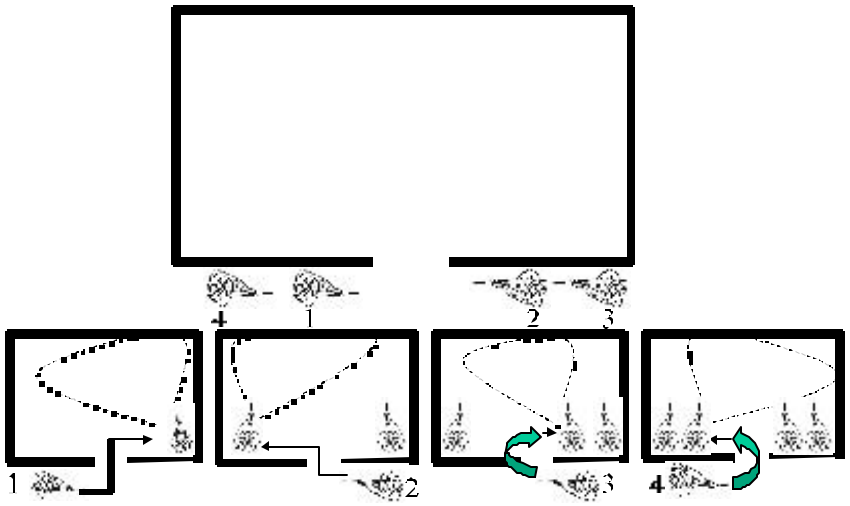


Figure 12 Four Man Clear

Multiple Entry. Keeping these four methods of entry in mind, consider that there are four men in the base assault team. The team leader may direct that only one enters the room, but preferably he will conduct a Multiple Entry using two, three, or even all four team members. The advantages of a multiple entry are:

- More searching eyes and fire power in the room.
- Increases shock effect when grenades are not available or building construction does not allow use of grenades.
- Makes the enemy choose among multiple targets.
  - **S** This can create time to let us seize the advantage.
- Increases sense of security - Marines don't have to enter alone.
- Enables the team to effectively clear larger rooms.
- Allows us to eliminate multiple targets quickly within a room.
- Lets us respond quickly to enemy who engages the first Marine entering the room; i.e., the other Marines know where the threat came from, and can therefore eliminate it.

Tips for Group Room Clearing Techniques.

- Do not spray the room with rifle fire, unless absolutely necessary.
- Consider room size and expected number of enemy targets.
- Throw the grenade *hard*, so it bounces around the room, reducing the chances that it could be tossed back at you.

- Maintain communication among members of the assault team.
- Designate the order of entry of all personnel.
- Thoroughly search the *entire* room before declaring it "clear."
- Mark the room a *predesignated signal*, once it is cleared.

Tips for Individual Room Clearing Techniques.

Maintain "guns and eyeballs."

- It is <u>not</u> necessary to look at someone to talk to him, nor is it necessary to look at a speaker to hear what is said.
- Maintain "guns and eyeballs" focus on possible avenues of approach rather than each other.

Danger Area Clearance Techniques.

<u>Clearing a Room Through an Open Doorway</u>. In most circumstances, you clear an open door from the stacked position. Do not expose yourself to an open door until actually crossing the threshold into the room. These are the steps in this procedure:

- Check the doorway for booby traps without exposing anyone.
  - **S** Do it with the man nearest the door.
- If you are going to use a grenade, show it to all Marines in the immediate area to warn them of its use.
  - **S** Do this silently if possible; if not, use a code word.
  - **S** Do not use the word "grenade" to avoid warning the enemy.
- Throw it *vigorously* into the room as the clearing team takes appropriate cover.
- Rapidly enter the room immediately after the grenade explodes.
  - – Designate which Marines will do this.
- Sound off, describing the room to those outside.
- Systematically search every section of room
  - – Designate which Marines will do this.
- When clear, leave enough security personnel to adequately cover all possible means of entry into the room.
- Mark the room.
- Move the assault team on to clear the next room.

– Maintain tempo consistent with controlling fatigue.

Tips for Clearing Through a Locked Door. *Never kick a locked door*. It could be booby trapped or the enemy could be waiting to hear the noise and shoot you through the door. Use demolitions if possible. If this is not possible consider use of a SAW as follows:

- ‘ Use a split position if possible.
- ‘ Place the SAW 1 to 2 inches from the door knob/lock plate. Hit between the door knob and lock plate.
- ‘ Fire long bursts.
- ‘ Move the SAW up and down the side of the door to defeat deadbolts.
  - S This has the potential to produce lethal ricochets.
  - S You may be more vulnerable to fire from other areas because the length of the SAW forces you to stand back from the door.

Clearing a room through mouse holes. The best way to enter a room is through an opening we have made ourselves.

- S The size of the mouse hole dictates the clearing technique.
- S If the mouse hole already exists, check it for booby traps.
- S If possible, use a mirror to observe the room first while another maintains security on the mouse hole.
- S Clear it using the same methods as an open doorway clear.

Tips for Clearing a Passageway/Hallway. Passageways are Danger Areas—they can become “Fatal Funnels of Fire.” Before moving down a hallway, provide security against any enemy coming out of an uncleared room or from another entrance. Maintain frontal security. If you use the SAW for this, *Ensure that the teams do not mask the SAW as they move down the hallway*. Use only the minimum number of Marines to move down the hallway to clear the next room. Other Marines remain in the cleared rooms until called or needed. Maintain security on all openings. Adjust your movement according to the wall construction. Walls made of wood, sheet rock, or any other material that will absorb a round are considered “soft construction.” Walls made of concrete, brick, or other material that will not be penetrated by rounds are “hard construction.”

- ‘ Be alert. Keep your head and eyes up while moving down a hallway so you can immediately recognize and react to danger.

- ‘ Control your movement. When moving down a hallway, pick up your feet and be aware of your foot placement.
  - S This enables you to avoid any obstacles on the deck and helps you keep your balance.
- ‘ Regulate your speed. You cannot rush. Move only fast as you can effectively clear and eliminate all threats.
  - S “SLOW IS SMOOTH. SMOOTH IS FAST.”
- ‘ Maintain security. While moving down a hallway, designate one Marine to be point security to protect the rest of the team.

Floor to Floor Movement. There are two methods for floor to floor movement: clearing existing stairwells and creating mousetraps.

Clearing Stairwells. Stairwells are the most difficult areas in which to operate within a building. Knowing building construction plays an important role in determining which technique to use when clearing a stairwell.

- Continuing stairwells(switchback) are normally on the ends or at the corners of buildings close to elevators. They normally have thicker walls and fire proof doors. Continuing stairwells should be cleared in segments—by “bounding” rapidly between landings—while maintaining security under landings, overhead, and to the front and rear. Teams move progressively up the stairway levels.
  - S Once a flight of stairs has been cleared, the clearing team stops to maintain security on the door and to the front. The next team then assumes the assault team role and clears the next flight of stairs. This is repeated until the top or bottom floor is reached.
- Non-continuing stairwells are more open and have two or less landings. They are usually found near the center of building close to large lobbies.
  - S Non-continuing stairwells should be cleared by continuous movement by the original clearing team. If you pause anywhere on the stairs as in a continuing stairwell, you become easy targets. Because these stairwells are open, security is very difficult to establish and maintain. Once security is established, one team will move to the next landing and set security on the hallway. The next team then becomes the assault team to gain a foothold on that floor. Fatigue is a major factor in this action.

Tips for a Stairwell Rush. This is the most effective way of

attacking up a defended stairwell. However, these shooting techniques can *only* be used when the ROE allow and there are known hostiles in the stairwell—and no noncombatants in target areas. The stairwell rush is a *coordinated assault up the stairwell using two to four Marines* depending on the width of the stairwell. The stairwell rush technique relies on placing an overwhelming amount of direct fire on targets or potential targets and getting up the stairwell as fast as possible. This is not a school book technique, however, our Urban Warrior experiments showed that this is the method that produces the fewest casualties when attacking a defended stairwell. There are two types, the four man rush and the three man rush.

Four Man Rush

- Left and right outside positions covered by a SAW.
- Inside positions are two M16s
- Entire team rushes up the stairwell while placing maximum volume of fire to the front overhead and to the rear (when going up a stairwell with landings that over hang the flights of stairs.)

Three man Rush

- Left and right outside positions covered by a SAW.
- Inside position is the single M16.

Tips for Immediate Action for Hand Grenade. Again, these shooting techniques can *only* be used when the ROE allow and there are no noncombatants in target areas.

If the enemy rolls a hand grenade down the stairs:

- run up the stairs *toward where the grenade came from*, firing as fast as you can through the wall in front of you at floor to hip level.
- Remember run *toward* where the hand grenade came from.
- If the enemy throws a hand grenade from a room into the hall way (or any other room) rush toward the room where the grenade came from rather than trying to scoop up the grenade, rush toward the room where the hand grenade was thrown from.
  - **S** This is a last resort option.
- Fire a few shots through the wall while you are moving and come through the door shooting.

Tips for Immediate Action When Being Engaged Through Walls. These shooting techniques can *only* be used when the

ROE allow and there are known hostiles in the area—and no noncombatants in target areas. There are times when an enemy will hear or suspect movement outside their room and will fire through the walls at you.

- Immediately after their initial bust, *return fire through the wall*.
- Enter the room where the fire came from as fast as possible.

Tips for Use of Enemy RPG-7s.

- Use these weapons aggressively from relatively confined spaces.
- The RPG 7 may be fired from indoors as opposed to an AT-4 or SMAW which can almost never be fired from indoors.
- Make sure you have a large room and open all doors and windows.

Tips on use of Hand and Arm Signals, Bumps or Squeezes.

- *Never use your firing hand* to send hand and arm, bump or squeeze signals.
- Use a cross chest sling carry for your weapon if possible, so your hand/arm can be used for signaling.
- Do not use your trigger hand for signaling.

Creating Mousetraps. A mousetrap is a hole that has been blown or cut into a floor or ceiling. Security and initial entry through a mousetrap is most difficult, but once an entry is made movement becomes easier. When using grenades during upward movement, remember that they can be kicked back down through a mousetrap.

- Mousetrap size dictates the clearing technique to be used.
- Check existing mousetraps for booby traps before using it.
- Use a mirror to check inside the room before climbing into it;
  - **S** while another maintains security on the mousetrap.
- After throwing a grenade, if feasible, buddy-lift a Marine up through the hole. This Marine has to conduct a one man clear of the room, because there is not enough time to get more than one man up through the hole.

Security Within a Building. The basic concept of security within a building entails sealing off every room from enemy reentry, either from the hallway or from outside the building

- *Sealing off rooms*. All points of entry into rooms—doorways,

windows and mouse holes—must be covered by observation and fields of fire.

- *Sealing off floors*. The points of entry to a floor are doorways, windows and mouse holes. We must also consider hallways, stairways, and mousetraps. Each of these must be covered by observation and fields of fire.

Clearing an Elevator Shaft. Use these seven steps for clearing an elevator shaft. <u>These assume the availability of electric power</u>.

- Locate the elevator control room.
  - S Most buildings have an elevator control room or elevator control panel somewhere near the elevator.
- Clear the elevator control room. Clear it (as any other room) and advise the assault team leader of its location and status.
- Descend the elevator to the lowest level that has been cleared.
  - S Assume enemy are inside—do <u>not</u> open the elevator door until the objective has been secured and security is posted on each elevator door.
- Use cross coverage when you open the door.
- Clear the elevator enclosure.
- Notify all team members covering on all elevator doors you are about to begin clearing the elevator. This ensures that all of the elevator shaft doors on each floor are covered when they open. When all teams are ready, open the doors and clear the inside of the elevator using the two man clear.
- Raise the elevator to the next higher level. Clear the shaft under the elevator starting from the time you see the bottom of the elevator. Use a downward pieing technique to clear the shaft underneath. Continue to raise the elevator until it has reached the highest level where two Marines will be positioned waiting to clear the top of the elevator and the space above the elevator.
- Clear the space above the elevator. The team on the top floor begins by clearing the shaft from the center to the ceiling cutting the pie. As the elevator begins to reach the highest level both Marines should clear the top of the elevator.
- Clear the elevator shaft. Once the bottom and the top of the elevator shaft have been cleared, lower the elevator to the lowest level. The Marines at the lowest level must be prepared in case someone has slipped onto the top of the elevator. Once at the lowest level a two man team will get on top of the elevator with a spotlight and ride the

elevator to the highest level clearing the inner shaft.

Clearing an L-Shaped Enclosure. An L-Shaped *room* is a single room with a partial wall or partition on one side and an opening on the other side. The corner created by the wall makes up the L-shape.

- Clear this type of room as two different rooms. Dominate and clear each room separately before moving to the next one.

An L-shaped *hallway* ends and then turns off to either the left or the right. The corner where the hallway changes direction is the L-shape.

- Clear each section as a separate enclosure.

These are the two basic techniques for clearing this type enclosure:

- High/Low Technique, and
- Rabbit Technique.

<u>High/Low Technique</u>. This is the least preferred method. It is slow, very uncomfortable to maintain for any length of time, difficult to engage targets in, and runs a risk of being unsafe for the Marines.

- Two Marines stack up at the L-shape. Using either a bump or verbal command to move, the number one man buttonhooks around the corner and drops to one knee as a barricade shooter—clearing his corner sector of fire.
- The number two also buttonhooks, bringing his weapon over the top of the number one man while clearing his sector of fire. The partition or wall is being used as a barricade, so the Marines want to expose as little of their bodies as possible.
  - S The number two man who brings his weapon over the top of the number one man must be extremely aware at all times in case his muzzle drops or the man in front stands up without warning.

<u>Rabbit Technique</u>. This is the most commonly used of the two L-shaped techniques. It is faster—and much safer—because the Marines are separated while clearing their sectors of fire. We can also initiate this technique either verbally or using a bump.

- After initial entry, the Marine closest to the L-shape covers as much area into the second enclosure as he can by “cutting the pie” without exposing himself too far into the second enclosure.
- The second Marine moves up the wall with his weapon fixed on the L-shape, being extremely muzzle conscious of the other Marine.

- The first Marine then tells the second Marine, "I'm the rabbit." Upon receiving the reply, "I'm with you . . . go. " from the second Marine, the first Marine will move quickly across the L-shape into the next enclosure while clearing his sector of fire. His movement should not be a sprint, but an "accelerated combat glide" that is under control despite its sense of urgency. The rabbit must maintain his ability to engage threats on the move.
- When the rabbit is approximately two steps into the open area, the second Marine buttonhooks and barricade shoots around the wall, clearing his sector of fire. In his new point of domination, the rabbit stays at least two steps off of the walls.
  - The barricade shooter must exercise good timing and wait until the rabbit has covered his lead distance of the two steps into the room before barricading and clearing his sector fire

Tips for Individual Techniques. Here is a summary of individual activities that must be used in Urban attacks.

- Focus outward immediately after clearing a room or building.
  - With observation outside the room and the building
  - It is <u>not</u> safe to simply close the doors and windows and lean with your back on the wall.
- Do not silhouette yourself in doors, windows or around corners.
  - Avoid tendency to extend a weapon out a window to fire from a cleared building. Set up proper observation and/or firing positions.
  - For example, Marines can be against the back wall of a room—or even in the next room—and still observe through and fire out a window.
  - Stay low to the deck when moving around inside the building.
- Keep track of ammunition consumption.
  - Know how much ammunition is available to individuals and units.
  - Even in the difficult MOUT environment, take advantage of brief breaks in the action to reload and redistribute as necessary.
- Use weapon sights during close range engagements.
  - When the fight in close quarters battle becomes fast and furious, avoid the tendency to use pointing quick fire techniques to engage the enemy.
  - When this was done in live fire experiments, the Marines that took the extra second to use their sights attained more killing shots than those who used "pointing quick fire" or "instinctive shooting techniques."

- Control noise where possible.
  - Despite the clamor of battle, we must control the noise we make once inside the building.
    - During Urban Warrior experiments, Marines that used hand and arm signals in the building effectively reduced their noise level and had far fewer casualties.
- Practice/use casualty aid procedures.
  - Avoid falling into the trap of not giving buddy aid during training exercises. To keep the skills for individual and buddy aid, Marines must force themselves to execute these procedures.
- Clear overheads, corners, staircases and behind furniture.
  - Do not overlook the fact that detailed clearing of these areas is critical to the ability to fight and win in this environment.
  - Failure to clear hard-to-get-at places was almost always fatal in our experiments.

Tips on Urban Camouflage. Figure 13 illustrates the experimental camouflage patterns that were evaluated during the Urban Warrior Advanced Warfighting Experiment. This pattern is designed to optimize use of shadows in and along side of buildings. The blotches within the dark background have sharp angles to blend with urban construction. This is the opposite of the smoothed and rounded edges found in our woodland pattern.

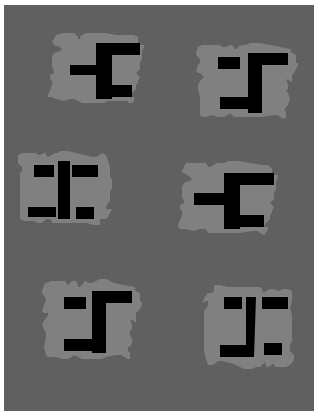


Figure 13 Urban Camouflage

Camouflage Reflectivity. This design was developed by the SPMAGTF(X) in concert with the *Multifunctional Materials Team* at the U.S. Army's *Soldier and Biological Chemical Command*, Natick, MA. In addition to the pattern and colors that provide low contrast against an urban background, the visual and near infrared (NIR) properties of the colors in the design approximate the reflectance of most terrain elements. This means that Marines should blend fairly well in most dark, urban scenarios. Wearers should also blend well in shadowy and *inside-out* fighting—and possibly even outside. This applies to nighttime as well, when being viewed through passive night vision devices, image intensifiers, and the like. MCWL and Natick engineers are working

closely with the manufacturer to maintain the proper reflectance properties of the colors used in this design.

Listing of X-Files

Status of all X-Files		
Title	**X-File**	**Publication Status**
Enhanced Human Physical Performance	3-02.1	March 2001
Combined Arms	3-1.1	Published
Combat Squad Leader	3-11.21	Published
Designated Marksman	3-15.31	Published
Directed Energy Weapons	3-15.81	Published (Draft)
Urban Attacks	3-35.31	Published
HA/DR Assessment	3-33.61	Published
HA/DR Operations	3-33.62	Published
Small Unit Support Vehicle[1]	3-35.11	Published
Cliff Assault[1]	3-35.21	Published
Water Procurement[1]	3-35.22	Published
Animal Packers Manual[1]	3-35.23	Published
Urban Defense	3-35.32	Published
Urban Patrolling	3-35.33	Published
Security Operations	3-35.34	Published
Intra Squad Radio	3-35.35	Published
Urban Vertical Mobility	3-35.36	April 2001
Urban Sustainability	4-11.71	Published
Tactical Instrumentation	6-2.1	Published

Status of all X-Files		
Title	**X-File**	**Publication Status**
Experimentation Procedures	5-12x	Published
Digitization of the Battlespace	6-2.2	May 2001
Observer/Controller Handbook	N/A	Published
Project Metropolis Interim Report	3-35.37	Published
Project Metropolis Final Report	3-35.xx	March 2001

1 - Mountain Warfare Training Center is the source of subject matter.