

THE URBAN WARRIOR: WHAT ARE THE DISMOUNTED
INFANTRY SKILLS NECESSARY TO SURVIVE
IN TODAY'S URBAN FIGHTING?

A thesis presented to the Faculty of the U.S. Army
Command and General Staff College in partial
fulfillment of the requirements for the
degree

MASTER OF MILITARY ART AND SCIENCE
General Studies

by

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B.S., United States Military Academy, New York, 1987

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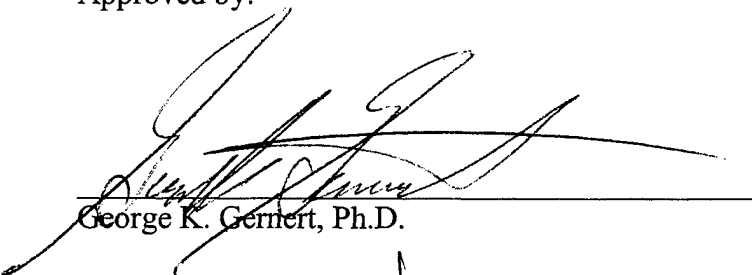
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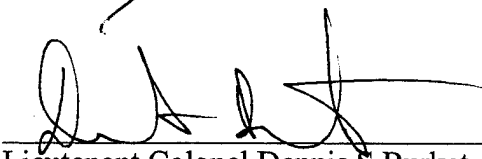
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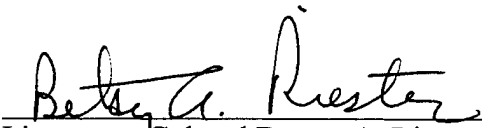
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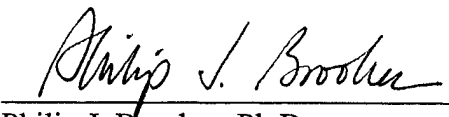
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The opinions and conclusions expressed herein are those of the student author and do not necessarily represent the views of the U.S. Army Command and General Staff College or any other governmental agency. (References to this study should include the foregoing statement.)

ABSTRACT

THE INFANTRY SOLDIER IN THE URBAN FIGHT by MAJ George A. Glaze, USA, 49 pages.

The topic of this thesis is Military Operations on Urbanized Terrain (MOUT). Specifically, certain essential skills for the dismounted infantry soldier are lacking in today's training, doctrine, and skills.

This is a study of MOUT training in the U.S. Army. It reviews the recent history of urban operations in the world. It will compare performance in actual operations with training initiatives to substantiate the necessity for improved MOUT training. The examination of current MOUT training will include the Joint Readiness Training Center at Fort Polk, Louisiana, and the British Army training facility at Cope Hill Downs near the town of Warminster, England. The study shows how the U.S. Army is struggling to train the soldiers in the urban environment. It will include possible solutions to overcome the gap in readiness. In a downsized Army, scarce resources mandate effective training resource management. Cost effective, yet demanding, training must be identified, resourced, and executed to prepare the soldier for tomorrow's battlefield conditions.

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Above all, my deepest respect and thanks for the soldiers with which I have served. Dedicated soldiers like SFC Tony Husen and SFC Darrin Griffin provide the world's best live fire training at the Shughart-Gordon MOUT Complex at Fort Polk, Louisiana. The employees of the TRW Corporation and the civilian personnel of the Fort Polk G-3 shop that facilitate this urban training are also unsurpassed. Their efforts train the soldier for tomorrow.

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LIST OF ABBREVIATIONS

AAR	After Action Review
ACTD	Advanced Concept Technology Demonstration
AMC	Army Materiel Command
BOS	Battlefield Operating System
C4I	Communication, Command and Control, Computers and Information
CMTC	Combat Maneuver Training Center
COTS	Commercial-off-the-shelf
CQC	Close Quarters Combat
CSS	Combat Service Support
DARPA	Defense Advanced Research Projects Agency
DISCOM	Division Support Command
DOD	Department of Defense
FIBUA	Fighting in Built-Up Areas
GOTS	Government-off-the-shelf
IMT	Individual Movement Techniques
JRTC	Joint Readiness Training Center
MOUT	Military Operations on Urbanized Terrain
NCOPD	Noncommissioned Officer Development
OOTW	Operations Other Than War
OPD	Officer Professional Development
OPTEMPO	Operational Tempo

STX	Situational Training Exercise
TTPs	Tactics, Techniques, and Procedures
USAREUR	United States Army Europe

CHAPTER 1

INTRODUCTION

Overview

Experts estimate that 60 percent of the world's population will live either in or around urban environments by the year 2025.¹ Recent operations by the military forces of the United States place military personnel directly in the shadows of buildings, both hostile and peaceful. As operational deployments increase, the exposure of these soldiers, sailors, airmen, and Marines to operations on urbanized terrain will also increase.

Military operations on urbanized terrain (MOUT) are nothing new. History is full of significant military operations conducted within the confines of towns and cities. Memories of Stalingrad and Hue are painful for those surviving participants. Recent operations in Mogidishu by the U.S. forces and Grozny by the Russian forces attest to the lethality of the close quarters combat associated with the urban environment.

Background

One of the most significant changes in urban combat was the evolution of the machinegun. It changed many aspects of combat. But the most drastic change must be attributed to the rate of destruction in human life that it produces. Climbing out of a trench that offered relative cover exposed the soldier to devastating rapid-fire death. The machinegun rendered everyone in its range helpless. There were only two solutions:

1. Move away from and around the machinegun (flank)

2. Make sure you provide your own mobile cover (e.g., a tank) while attacking to neutralize the machinegun fire (frontal assault).

Imagine this same combat scenario but in a confined area that not only limits your ability to maneuver (flank) but also your ability to provide mobile cover. Once again, the inherent lethality of machineguns becomes overwhelming.

The soldiers who fought out of the landing craft with the lowering ramps at Normandy and those who were involved in the bloody conflicts along the hedgerows of France had several things in common: The presence of cover, the sudden, unexpected removal of cover, and the subsequent brief, intense exposure to prepared enemy machinegun positions.

A machinegun at 100 meters is truly devastating. When combined, its capability with restricted terrain such as an exposed landing craft, a sudden hedgerow break, an alley, a doorway or tunnel, the effects of the machinegun significantly increase. Field Manual 90-10 defines MOUT as those military actions planned and conducted on a terrain complex where manmade construction impacts on the tactical options available to commanders.²

Two other factors play a significant role in the history of the urban combat fight:

1. The increasing availability of machineguns
2. A population's resolve to not accept casualties.

These factors further complicate military operations on urbanized terrain.

Assumptions

1. Military operations on urban terrain will increase in frequency.

2. They will range in scale from the hedgerows of France to Grozny.
3. The infantryman will be called on to close with and destroy the enemy.
4. Future technologies will help mitigate some risks and exposures, but the infantryman will continue to close with and destroy the enemy at some point in the battle.
5. Future technologies should not inhibit or detract on today's training in anticipation of their development.

Scope

Although MOUT is a Department of Defense-wide issue, this study will address its effects only on the U.S. Army. In fact, the focus of this study is very narrow: the dismounted infantry soldier and what skills he needs in order to effectively clear specific objectives within an urban environment. This study does not address the effects of other combat arms as combat multipliers even though the urban fight is truly a combined arms fight. Fighting in the city without the benefit of armored vehicles and indirect fires is hazardous. The infantryman must know the basic critical tasks required of himself and his squad, before adding the mayhem that the other combat arms will provide.

Securing versus clearing. The current military capabilities readily assist the soldier in securing an area or town. Many of the weapon systems deliver effects that do this well. But this study aims at the basics--the gap in fundamental actions that occurs just after the soldier is told to clear the street or building. Clearing is a more specific and inherently more dangerous tactical task. Clearing calls for the removal of all enemy forces and the elimination of all organized resistance in an assigned zone. Positioned

outside the objective and overwatching by fires may be considered securing, but not clearing.

Timeframe and References. For historical analysis, the study looks at the last three years at the U.S. Army's Joint Readiness Training Center and the British Army's Infantry Training Center in Warminster, England. Historical perspectives are considered beginning with World War II. It is worthy of note that two sources exist that are were unavailable for this report. The first is an extensive ongoing study by the Combined Arms MOUT Task Force (CAMTF) at Fort Benning. Several reports like the one in Appendix A are due in the near future. The second missing research materials are from the Berlin Brigade. These training records could possibly provide the most complete and up-to-date documentation of MOUT. These documents would add considerably to this study. Unfortunately, the National Archives and Record Administration has as yet been unable to locate them.

Key Definitions

The following definitions are essential to this study:

Base of fire. A continuous and active suppression from a support-by-fire position of an objective (even though the enemy has not shown himself) to reduce or eliminate the enemy's ability to interfere by fire and movement with an assaulting unit. It may be provided by a single weapon or a grouping of weapon systems (FM101-5-1, P1-17).

Battle Drill. Defines battle drill as standardized actions made in response to common battlefield occurrences. They are designed for rapid reaction situations (FM 101-5-1, P1-17).

Booby trap. A device designed to kill or maim an unsuspecting person who disturbs an apparently harmless object or performs a normally safe act (FM 101-5-1, P1-20).

Breach . A breach as a tactical task where any means available are employed to break through or secure a passage through an enemy defense, obstacle, minefield, or fortification (FM 101-5-1, P1-21).

Built-up area. A concentration of structures, facilities and population, such as villages, cities, and towns (FM 101-5-1,P1-22).

Centers of gravity. The hub of all power and movement on which everything depends (FM 101-5-1,P1-24).

Clear. A tactical task to remove all enemy forces and eliminate organized resistance in an assigned zone, area or location by destroying, capturing, or forcing the withdrawal of enemy forces such that they cannot interfere with the friendly unit's ability to accomplish its mission (FM 101-5-1,P1-28).

Collateral damage. Unintended and undesirable civilian personnel injuries or material damage adjacent to a target produced by the effects of friendly weapons (FM 101-5-1,P1-29).

Contain. A tactical task to restrict enemy movement (FM 101-5-1,P1-37).

Combat load. Those quantities of all classes of supplies kept by a unit to sustain operation in combat for a prescribed number of days. Combat loads must be capable of being moved into combat in one lift using organic transportation (FM 101-5-1,P1-31).

Cover. Shelter or protection from enemy observation that reduces the effects of enemy direct and indirect fires (FM 101-5-1,P1-41).

Covering fire. Fire used to protect troops when they are within range of enemy small arms (FM 101-5-1,P1-41).

Fire and movement. The concept of applying fires from all sources to suppress, neutralize, or destroy the enemy, and the tactical movement of combat forces in relation to the enemy (as components of maneuver is applicable at all echelons). At the squad level, it entails a team placing suppressive fire on the enemy as another team moves against or around the enemy (FM 101-5-1,P1-66).

High-Intensity MOUT. Combat operations against a determined enemy occupying prepared positions or conducting planned attacks (FM 90-10-1,P G-1).

MOUT. All military actions planned and conducted on a topographical complex and its adjacent natural terrain where man-made 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 (FM 101-5-1,P1-100).

Noncombatant. An individual, in an area of combat operations, who is not armed and is not participating in any activity in support of any of the factions or forces involved in combat (FM 101-5-1,P1-109).

Obscuring smoke. Smoke placed between enemy forces and friendly forces or directly on enemy positions to confuse and disorient enemy direct-fire gunners and artillery forward observers (FM 101-5-1,P1-112).

Occupy. A tactical task in which a force moves onto an objective, key terrain, or other man-made or natural terrain area without opposition, and controls that entire area. To remain in an area and retain control of that area (FM 101-5-1,P1-113).

Overwatch. A tactical technique in which one element is positioned to support by fire the movement of another element by observing known or suspected enemy locations and engaging the enemy if he is visible or tries to fire on the friendly element (FM 101-5-1,P1-117).

Precision MOUT. MOUT conducted by all types of infantry units on a routine basis, especially during OOTW. Under precision MOUT conditions, either the enemy is thoroughly mixed with the noncombatants or political considerations require that the ROE be significantly more restrictive than under high-intensity MOUT conditions (FM 90-10-1w/C1,P G-1).

Secure. A tactical task to gain possession of a position or terrain feature, with or without force, and to deploy in a manner which prevents its destruction or loss to enemy action. The attacking force may or may not have to physically occupy the area (FM 101-5-1,P1-138).

Seize. A tactical task to clear a designated area and obtain control of it (FM 101-5-1,P1-138).

Signature. The visible or audible effects produced when a weapon is fired or a piece of equipment operated, such as a noise, smoke, flame, heat, or debris; also, an electronic emission subject to detection and traceable to the equipment producing it (FM 101-5-1,P1-140).

Suppression. A tactical task to employ direct or indirect fires, electronic attack, or smoke on enemy personnel, weapons, or equipment to prevent or degrade enemy fires and observation of the friendly forces (FM 101-5-1,P1-148).

Surgical MOUT. Operations usually conducted by joint special operation forces that include missions like raids, recovery operations, rescues, and other special operations (FM 90-10-1,P1-1 and P1-2).

Target acquisition. The detection, identification, and location of a target in sufficient detail to permit the effective employment of weapons (FM 101-5-1,P1-151).

All other terms peculiar to this study will be explained in the text.

Thesis Question

What are the dismounted infantry skills necessary to survive in today's urban fighting?

Subordinate Questions

What is the current status of urban doctrine in the U.S. Army?

What is the current training to support the doctrine?

How are we developing industry to build MOUT training facilities?

How are other countries training MOUT?

What are some possible training solutions?

Delimitations

While the scope of this study is intentionally focused on the U.S. Army in fiscal year 2000, it may be applicable to the other armed services and other DOD agencies. Seeing no significant change to the urban dilemma, it may be used beyond fiscal year 2000. Leaders at all levels, battalion through corps, should find this study applicable for MOUT training at their level, in terms of how they can impact the system.

Significance of the Study

History clearly shows the lethality of urban fighting. Military leaders must prepare their soldiers to fight and win their nation's wars under every conceivable condition and in all types of terrain. To fight and win, soldiers must have clear and concise doctrine that provides the guidelines for training. They must train on tasks that reflect the doctrine. And, finally, the training facility must reinforce the training.

¹S. M. Birrell, S. J. R. Browne, P. J. Evans, N. J. Lock, and S. C. Thomsett, *Urban Warfare to 2020 (Improving UK Military Capability in the Future Urban Environment)* (The Royal Military College of Science, United Kingdom: Department of Defence, May 1999), 1-1.

²Field Manual 90-10, *Military Operations on Urbanized Terrain (MOUT)*, (Washington, D.C: HQ Department of the Army, August 1979), 1-1.

CHAPTER II

LITERATURE REVIEW

The study of future MOUT training must address the past and current doctrine and training. Recent military operations worldwide have called attention to urban conflicts. A review of historical accounts is an essential element in determining not only how the doctrine developed but also in tracing the evolution of current urban fighting trends.

Numerous apparently conflicting sources for MOUT literature exist. An examination of the sources leads one toward the understanding of the divergent perspectives. For example, Fort Benning is the home of the infantry. Fort Knox is the home of armor. Between these two homes there are three distinct types of combat mind-sets. The armor demands decisive action as the “Combined Arms of Decision” maneuver warfare paramount. The dismounted infantry may not move as fast and the slow methodical clearing of urban environments may not fit the armor paradigm. Tempo, not speed, better describes the maneuver warfare of the dismounted infantry.

The literature reviewed falls into four general categories: doctrinal manuals; historical publications; unpublished monographs and theses; and published articles.

The foundational Field Manual 7-8, *Infantry Rifle Platoon and Squad*, provides the soldier with conceptual framework on how to fight at squad and platoon level. Written in 1992, the five chapters cover a breadth of infantry skills. Doctrinal terms and precepts are discussed in chapter one. Operations that include many of the battlefield operating systems are addressed in chapter two. Chapter three provides the foundations for infantry dismount patrolling. The eight infantry battle drills are given in chapter four.

And lastly, chapter five provides an example standard operating procedure (SOP) for the infantry platoon. The manual provides a solid basis for training, but may need rewriting to address the discrepancies discovered in this thesis.

FM 90-10, *MOUT*, has not been updated since 1979. It is oriented almost exclusively on general war with the Warsaw Pact in Europe. Although outdated, this manual still contains some useful information for the urban combat leader. The publication explains Army MOUT on a large scale and the roles of combat arms, combat support, and combat service support units. All staff and key leaders down to squad leader should familiarize themselves with the contents of this manual and focus primary attention on follow-on manual FM 90-10-1.

Numerous sections provide the framework for discussion on urban operations. Chapter 1 highlights building and street patterns. Chapter 2 covers the fundamentals of the MOUT offense, attack zone widths, and a checklist for offensive MOUT planning. Chapter 3 lays out the fundamentals of the MOUT defense, defensive sector widths, limited visibility considerations, and a checklist for defensive MOUT planning. Chapters 4 and 5 address the battlefield operating systems with the employment of artillery, engineers, and logistics. The manual also covers noncombatant/refugee considerations but only in general terms.

The appendices also contain useful information. Appendix A provides a useful and more detailed look at urban terrain analysis. Today's weapons employment and effects make Appendix B almost obsolete. Appendix C contains useful information on fighting positions. Appendices D and E give a general overview of obstacles and very basic demolitions. Armor employment is addressed in appendix F. Appendix G provides

some useful how-to guidance for the conduct of a company attack in a built-up area. The sections on room clearing also must be re-examined.

FM 90-10-1, *An Infantryman's Guide to Combat in Built-up Areas, with Change 1*, is a good MOUT manual that every staff officer and leader down to squad leader should read. The Training and Doctrine Command (TRADOC) published this manual in 1993 with change 1 published in late 1995. This manual focuses on the Infantry fight in MOUT from individual to battalion level.

The manual covers many areas overlooked in FM 90-10. Interestingly, FM 90-10-1 does not mention FM 90-10 at all. Chapter 1 contains detailed information on special considerations and fratricide avoidance. Terrain analysis in the urban environment is covered in chapter 2. Chapter 3 discusses offensive operations to include seizure of key terrain (traffic circles, bridges, etc.) and movement techniques. Chapter 4 addresses defensive operations to include key terrain. Chapter 5 covers individual combat skills to include movement, entry, grenades, fighting positions, target acquisition, navigation, and camouflage. Chapter 6 focuses on combat support with attention given to mortars, artillery, naval gunfire, tactical air, and army aviation. This chapter also addresses engineers, military police, air defense artillery, and communications. Chapter 7 covers all of the combat service support functions and legal considerations. Chapter 8 provides excellent and up-to-date information on weapons employment and effects with emphasis on penetration, backblast, deadspace, and wall breaching capabilities.

The appendices are also useful. Appendix A provides general NBC considerations. Appendix B addresses Bradley employment. Appendices C and D

provide good basic information on obstacles, mines, demolitions, and subterranean operations. Appendix E provides additional information on fighting positions not covered in Chapter 5. Appendix F provides a good basic guide to attacking and clearing buildings. Appendix G (rewritten with change 1) addresses MOUT under restrictive conditions by defining high intensity, precision, and surgical conditions. Appendix G also provides examples of ROE, addresses the impact of civilians on the battlefield and briefly mentions nonlethal weapons. Appendix H provides a more current guide for urban building analysis. Appendix I discusses urban operations during limited visibility.

Change 1 reflects lessons learned from Panama and Somalia. Change 1 added appendices J through N. Appendix J defines types of snipers and provides detailed information on counter-sniper techniques. Appendix K establishes CQC room clearing techniques an Army standard. Appendix L provides excellent information on the employment of attack helicopters in MOUT and contains the lessons learned during Panama and Somalia. Appendix M addresses field-expedient breaching. Appendix N addresses the combined employment of Infantry and armored vehicles in MOUT.

Published in 1994, ARTEP 7-8-MTP, *Mission Training Plan for the Infantry Rifle Platoon and Squad*, provides training plans and evaluation outlines. An important section links operations to collective tasks. Another section links the battle drills from FM 7-8 to the collective tasks. Overall, this publication is crucial to the training of infantry soldiers on dismounted skills, both collective and individual.

Several shortfalls detract from the training in the urban environment. If recent studies by the MOUT Advanced Concept Technology Demonstration (ACTD) and the RAND Corporation state approximately 90 percent of the casualties occur outside the

buildings, then why isn't the subject addressed more openly? The tactical task of Move Tactically includes twelve steps with the preponderance on movement through open and wooded terrain. The twelfth step, however, calls for movement through a built-up area. The details included in the steps that follow are important. They are examined later in this study. Why is such a crucial portion of the dismounted fight buried in the back of a task without urban emphasis? If 90 percent of the urban casualties occur in this twelfth step, then assume 10 percent occur as the soldiers enter and clear a building. But a battle drill was created for something that we take only 10 percent of the casualties and not for a task that consumes 90%. Additionally, the obscurity created by the grouping the built-up area movement is compounded by not including the collective task of Move tactically as linked with FM 90-10-1 in the Publication Reference-to-Collective Task Matrix on page 2-8. Bottomline, where does a soldier go to find out the task, conditions, and standards to move through the urban environment?

The Infantry training circular ,TC 90-1, *Training for MOUT*, provides tactics, techniques and procedures (TTPs) for training on the standard Army MOUT live-fire facility or MOUT Assault Course (MAC) and in a collective training facility or MOUT site. It also provides some MOUT lessons learned from various conflicts. The appendices provide a list of MOUT audiovisual training materials available through the training aids support center (TASC) and an incomplete listing of MOUT training complexes in the Army. Other appendices provide MOUT training tips, sample Situational Training exercises (STXs) and Field Training exercises (FTXs) scenarios with OPORDs, and example MOUT training plans. The fundament training approach to MOUT and the construction of training facilities is not witnessed in the United States

Army. Currently, this publication is under review for update with a preliminary draft due in August 2000.

JFKSWC ST 31-20-6-1, *Close Quarters Combat*, is a useful guide to Close Quarters Combat (CQC) and its training that provides some different Tactics, Techniques, and Procedures (TTPs) and a slightly different focus on common TTPs. The ST provides illustrations and discussions of ballistic breaching and barrier penetration focused on fences and doors. Finally, the ST provides train-the-trainer tips, teaching points, safety tips, range and medical checklists, and information on safe target arrays and target placement.

FM 5-250, *Explosives and Demolitions* is an excellent guide to standard Army basic and advanced demolitions. Master breachers from squad, platoon, company and battalion should read and understand this publication. Key leaders and staff should be familiar with its contents. This FM provides the foundation on which MOUT demolitions is built.

FM 21-150, *Combatives* is a good basic guide to unarmed and bayonet combat. Close Quarters Combat (CQC) is, by its very name and nature, combat at arms length which can quickly turn into a hand-to-hand struggle. Combatives provide the individual soldier with the training, confidence, and conditioning to engage an opponent using his hands and expedient weapons. During CQC, urban warriors routinely must dominate and control enemy prisoners, noncombatants, and unknowns with less than lethal force. Training in submission and restraint holds provides the soldier the tools to do this with confidence.

The very informative and successful Ranger Training Circular 350-1-2, *Advanced MOUT Training* outlines how the 75th Ranger Regiment trains to the highest of standards in the demanding urban arena. The 18 August 1997 version pertains to the training and tactics, techniques, and procedures (TTPs) the regiment employs during MOUT. The circular demonstrates how the Regiment employs Advanced MOUT Techniques (AMT) that combine standard Army TTP and equipment with TTP and equipment specially developed and peculiar to Special Operations Forces (SOF).

Marching Under Darkening Skies is a National Defense Research Institute publication by the RAND Corporation. Author Russell W. Glenn conducts research sponsored by the Office of the Assistant Secretary of the Army for Research, Development, and Acquisition and by the Deputy Chief of Staff for Operations and Plans. Published in 1998, the booklet covers the status of U.S. Army and Marine Corps doctrine, training, and numerous technological projects. The concluding chapter cites a 1994 Defense Science Board call for MOUT improvements:

Our current(MOUT) capability was developed in large part for a massive, rural war in Central Europe. Since the future looks much different, new capabilities will need to be developed. To do less risks highly visible casualties and a corresponding loss of military credibility and national prestige.¹

Denying the Widow-Maker, is a summary of proceedings on the RAND-DBBL Conference on Military Operations on Urbanized Terrain held 24-25 February, 1998. Items included are assessing the current state of U.S. MOUT readiness and viable approaches of future changes, providing a forum for debate on MOUT issues, and determining what technologies are worthy of consideration and high-acquisition priority under the auspices of Advanced Concept Technology Demonstration(ACTD), Force XXI

and the Army After Next (AAN). The informative booklet contains the slides and notes from the conference. Of interest are the slides from the January 1995 Russian Battle of Grozny. The closing line from the concluding chapter states the findings best: "It is essential that movement toward improving MOUT readiness begin as soon as possible."²

RAND's third MOUT publication, *We Band of Brothers* provides 'The Call for Joint Urban Operations Doctrine'. This is a study conducted by the National Defense Research Institute highlighting the need for joint doctrine in the urban fight. This document contains a highly useful discussion of current MOUT doctrine and the need for considerable work to be done. The findings are similar to the previous two publications from RAND: "One manual, well conceived and written, can effectively provide the U.S. armed services with MOUT guidance for both levels without inappropriately impinging on individual service doctrines."³

The informative project, *Urban Warfare to 2020 (Improving UK Military Capability in the Future Urban Environment)* reflects the work completed by several students at Britain's Royal Military College of Science. The study examines the impact of global urbanization and future military operations. As always, the British take fighting in built up areas (FIBUA) seriously, and this document highlights future considerations.

¹Russell W. Glenn, *Marching Under Darkening Skies* (Washington, D.C.: RAND, 1998), 25.

²Russell W. Glenn, *Denying the Widow-Maker* (Washington, D.C.: RAND, 1998), 27.

³Russell W. Glenn, *We Band of Brothers* (Washington, D.C.: RAND, 1998), 55.

CHAPTER III

METHODOLOGY

The ultimate purpose of this study is to provide soldiers with tactical tasks to ensure success in the urban environment. This thesis will examine current MOUT doctrine and training. The author will validate the thesis position by citing examples of successful training programs and his own personal experiences as the Senior MOUT observer/controller at the Joint Readiness training Center.

This study will not address combined arms training necessary for the complete success of the urban warrior. It will only take into account the assumption made in Chapter I that the dismounted soldier must first master his individual skills before moving to more advanced skills such as incorporating combined arms into the assault.

In order to assess current MOUT training, historical urban fights will be examined to track the evolution and the training demands to be met. An understanding of the challenges that previous dismounted soldiers faced will identify lessons learned that must be considered in future training.

Current training for urban operations is undergoing a revolution. The capstone U.S. Army doctrine, FM 100-5, as well as the MOUT manual, FM 90-10, are being rewritten. The supplementary MOUT doctrine in FM 90-10-1 is also undergoing scrutiny at the Fort Benning-based Infantry Center. Even the important Training Circular 90-1, *Training for Military Operations on Urbanized Terrain*, is undergoing revision. Numerous efforts such as the Combined Arms MOUT Task Force (CAMTF) at Fort Benning and the RAND Corporation for the Secretary of Defense deliberate the future of MOUT.

The analysis of the historical urban combat vignettes provides many lessons learned. Numerous studies have already been conducted and are summated in this work. More recently, the training trends gathered from the Joint Readiness Training Center will expose tasks that are in need of improvement. This study will focus on the MOUT dismounted attack at small unit levels and those tactical tasks that usually are concurrent with or subsequent to seizing an important objective in the city.

In addition to identifying those tasks necessary for urban combat, certain models that currently train urban tasks will be reviewed. These programs must have identified critical infantryman tasks for the training model foundation. An examination of these programs will illuminate those tasks and how to train the skills necessary for success of the dismounted infantry soldier in an urban environment.

CHAPTER IV

ANALYSIS OF PAST AND PRESENT ACTIONS

This study uses combat scenarios and examples of current training approaches to illustrate the gaps in current MOUT training philosophy. Numerous sources have documented the shortfalls from previous urban fights. Addressing these scenarios will acknowledge the lessons learned, yet not bore the reader with the traditional listings of MOUT fights the Army has undergone.

The Past

Peter Newell addresses historical perspectives in his Master of Military Art and Science MMAS thesis about marksmanship training for MOUT. Written in 1997, Newell summarizes the lessons learned from Somalia in 1993 and the Battle of Hue in 1968 as similar. “The lessons learned and tactics developed by Special Operations Forces are completely sound even when applied by conventional units.”¹ A very telling conclusion from past operations.

Charles Preysler’s Master of Military Art and Science MMAS thesis “Going Downtown: the Need for Precision MOUT,” also found significant lessons learned from past urban conflicts. The battles of Aachen in World War II, Hue in Vietnam, and Panama in Operation Just Cause “highlight the terrible cost and complexity of urban warfare.” The most profound finding by Preysler is “One key thread running through all these battles is the necessity to have solid doctrine and to train soldiers in that doctrine.”² The United States Army doctrine for urban operations has been under revision for several years. What message does that send to the soldiers?

A very interesting pamphlet may be found at the Combat Studies Institute at Fort Leavenworth, Kansas. The previous MOUT MMAS authors chose the traditional city fights to provide the historical backdrop. The following review of combat operations in World War II during 1944 provides insight into the elements that make the urban fight so lethal. The vignette comes from the hedgerows of France in a form of combat not unlike the city.

This operation was chosen for numerous reasons. It highlights how far doctrine and technology have advanced since 1944 and how little the basic principles of MOUT have changed. The Allies advance into Normandy found the soldiers face with restrictive terrain. The north of France is covered with small fields surrounded by hedgerows and divided by sunken roads. The roads were comparable to the alleyways of more recent areas of operation, and the small fields were the buildings. The restricted terrain made for a close-in, machine-gun lethal fight not unlike the city.

The doctrine was also quite similar. But the execution of this doctrine has advanced far beyond WWII. The lessons learned in France are being implemented today. For example, the MOUT Advanced Concept Technology Demonstration (ACTD), the 1st Infantry Division (Big Red One) MOUT experience, the JRTC MOUT live-fires, and the British Army's Cope Hill Downs Training Complex all attempt similar remedies in training MOUT. Even the 75th Ranger Regiment attempts to overcome the lethality of the city fight in their training. The lessons from the past provide the foundation for tomorrow's training. So this thesis begins with an examination of a past operation with similar characteristics to the city.

Busting the Bocage: American Combined Arms Operations in France
6 June--31 July 1944

The urban fight deals a lethal card because of the terrain inherent in the city environment. The closed-in, restricted fight is similar to other lethal fights the American Army has faced: "The hedgerows in each field provide excellent cover and concealment to the defender and present a formidable obstacle to the attacker."³ The sequential and mutually supporting prepared positions gave the Germans distinct advantage.

"American infantry commanders soon realized that normal tactical maneuvers were impossible in the Bocage."⁴ The casualties were mounting. The commanders knew they must do something to better prepare each assault. The commanders were grappling with setting the conditions in the Allies favor.

"Unable to use normal techniques of fire and maneuver, American commanders were also powerless to influence the battle with increased firepower."⁵ The firepower had to be effective. It had to suppress if not destroy the German positions. The assaulting units must be broken down into different elements with specialized tasks. When synchronized, each task sets the conditions for the next, giving the Allies the initiative.

But this ability did not happen overnight. The units were pulled back off the front line to train and rehearse a new battle drill involving combined arms. The infantry provided security, and the engineers set the demolitions to make a violent entry. The tanks overwatched to isolate the breachpoint. Once the breach was made, predetermined suppressive fires and quick, violent movement assisted in the assault and domination of

the subsequent field. The tanks were moved up after the threat of antitank fires was suppressed. This specialized, yet synchronized, combined arms fight is exactly the battle drill needed for today's city fight.

The description of the Bocage fighting sounds as familiar as Somalia and Gronzy. "Hemmed in on all sides by the hedgerows, platoons lost their sense of direction and without a fixed reference point often became disoriented"⁶ The urban fight is extremely compartmentalized and lethal. "As leading attack elements emerged from the hedgerows, they found themselves exposed to the open in the middle of a well-prepared kill zone, infantrymen were unable to maneuver and continue the attack."⁷ Training must reflect this environment and overcome the challenges.

The Present

MOUT ACTD

The Fort Benning MOUT Advanced Concept Technology Demonstration (ACTD) attempts to find the most useful technology combined with the most effective tactics, techniques, and procedures for the MOUT environment. The program started in October 1997 as a joint Army and Marine program with TRADOC as the program lead.

As a requirements-driven ACTD, the MOUT ACTD has developed and prioritized thirty-two operational requirements to improve deficiencies experienced by soldiers and Marines in operations like Grenada, Panama, Somalia, and Haiti. The requirements are arrayed in accordance with four functional areas: C4I (command, control, communications, computers, and intelligence), engagement, force protection, and mobility.

The C4I arena is working to provide the soldier enhanced situational awareness.

Devices that assist in the position location, providing a common operation picture and nonlinear communications are sought after. These include:

- R1: Identification of Friendly, enemy, noncombatants
- R2: Powered optics
- R6: Night Vision/Light Source
- R7: Through wall sensor
- R33: Sniper detection
- R36: Hand Held Target Designator
- R3: Hands-free nonlinear of sight communication
- R4: Produce/Update Maps
- R5: Intelligence Collection/Dissemination
- R41: Position/location in buildings

The engagement category seeks clarity in target identification and designation.

This will result in more precision fires and increases the small unit's lethality. These requirements include:

- R8: Remote marking
- R16: Detect/Disarm Booby Traps
- R21: Hands-free sling
- R24: Soft Round
- R25: Nonlethal tools/munitions
- R27: Blow man-sized hole in concrete
- R29: Precision Mortar
- R30: Nonexplosive Breach
- R31: Nonlethal blunt trauma training round
- R34: Nonlethal grenade
- R37: Point Munitions

The force protection requirements center on the individual, small units, and survivability. These requirements include:

- R10: Man-portable Shield
- R11: Clearly mark all friendlies
- R12: Joint Protection
- R13: Lightweight mask
- R14: Personal protection kit
- R15: Hearing Protection

R26: Improved Obscurant
R42: Telemedicine/casualty evacuation
R35: Flexible cuffs

The mobility requirements aim at providing easier movement in the city. The requirements include:

R28: Get on top of Building

The MOUT ACTD leverages commercial-off-the-shelf (COTS), Government-off-the-shelf (GOTS) and emerging technological developments in the services, DARPA, and other government agencies and industry for candidate technologies.

The operational effectiveness and military utility of technologies and supporting tactics, techniques and procedures (TTPs) are determined through a series of Army and Marine Corps experiments ranging from squad to platoon level. Products that best meet the thirty-two operational requirements will be integrated into the MOUT ACTD "System of Systems" and undergo further experimentation at the company level. A culminating demonstration of these MOUT ACTD products takes place in September 2000 at the JRTC with forces from the 10th Mountain Division and the 2d Marine Division.

Early winners from experimentation will be pushed through the system with the most expeditious and effective acquisition method to get into the hands of warfighters as quickly as possible. The MOUT ACTD is designed to demonstrate the military utility of new and emerging technologies which when placed in the hands of soldiers and marines will increase their lethality, survivability, mobility, and command and control capabilities in a MOUT environment.

A briefing by Colonel Poodry of the Dismounted Battlespace Battle Lab (DBBL) at the 1999 Infantry Commander's Conference at Fort Benning published the following lessons learned. The first area, C4I, finds squad intercoms increasing situational awareness. Additionally, it is apparent that everyone does not need to talk, but all need to listen. Commercial ultra high frequency (UHF) radios provide an inexpensive and dependable means of short-range communications in MOUT.

The consensus in C4I is that the squad intercom or radio is a viable alternative to the current squad radio and allows the squad and platoon to communicate more effectively. Secure radios are not necessary at the squad and platoon level because of rapidly changing situations and nature of information transmitted.

Another C4I observation is the distinct advantage of using night observation devices (NODs). Soldiers must maximize the use of NODs to maintain momentum. Soldiers must also prepare to use NODs during hours of daylight in a MOUT environment because of darkened interiors in buildings, stairwells, and subterranean areas. The conclusion was to attack at night whenever possible to take advantage of the night vision capabilities. Training at night is essential.

The engagement lessons learned include the use of blunt impact munitions in all close quarters combat (CQC) and MOUT training to supplement live-fire training. The blunt impact munitions provide direct feedback to the soldiers involved in the training with small amounts of pain as negative reinforcements for not seeking cover. The soldier's weapon is fitted with an upper receiver that allows similar 5.56-millimeter ammunition to be fired. This blunt impact munitions produces a small "soap ball" projectile that absorbs impact and hits the soldiers with little more than the feeling of a

rubber band strike. Additionally, there are two different colors of “soap” so the issue of fratricide avoidance may be trained.

ACTD finds close quarters marksmanship training essential with no substitute for accurate, controlled firing. The soldier that fires first with accuracy has a marked advantage. Reflexive firing techniques with NODs is also essential. Blunt impact munitions reinforce proper TTPs and add realism to training in close quarters.

The only limitation in the blunt munitions is the short range of the projectile. The “soap” round’s 25-meter maximum effective range limits the utility to indoor CQC. To have soldiers in overwatch for a bounding element not receive positive feedback for effective fires would produce negative effects. Instead, soldiers would want to close within 25 meters to receive suppression effects. This goes against the principles of overwatch and standoff.

The force protection lessons learned included the necessity to use smoke and explosive breaching to gain quick, violent entry into buildings and maintain momentum. The 75 to 80 percent of casualties occurring outside the building drove this conclusion. Once entry is gained, far fewer casualties were sustained. The mobility lessons learned center around breaching to maintain momentum. The equipment and type of breach demand consideration. The standoff breach is preferred. Explosive breaching should be used whenever possible. Mechanical breaching can be used inside or as a last resort. The use of the rifle launched entry munition (RLEM) or other direct fire weapon to create a breach if the situation and ROE allows. Once inside use mechanical breaching tools.

Equipment considerations in the ACTD mobility conclusion determined that infantry units need portable ladders that will give them a minimum of second story

access. The ACTD found ladders are better than ropes. Additionally, multiple breaches at two levels decreases casualties.

Another mobility lesson learned area deals with training on the breach. One issue that the ACTD identified was that there are too few sappers. This leads into the next lesson: all infantrymen need training on mechanical and explosive breaching to include target analysis. The concluding point states that infantry units need to train more often with their supporting engineers to understand their capabilities and limitations. Another conclusion to draw is the standardization of charges. The training of the infantry may be streamlined if the charges were standardized for understanding and training. Current charges used by infantry result in non-standard charges utilized only under the strict oversight of a trained engineer.

The Big Red One MOUT Experience

During the Combined Arms MOUT Task Force Conference held at Fort Benning, Georgia, in March of 1999 the 1st Infantry Division briefed its MOUT training strategy. The situation in Europe caused Major General Grange to begin an aggressive MOUT train-up for his division. The concept of training included a combat leader's course, officer professional development (OPDs) and noncommissioned officer development (NCOPDs) programs, division conferences, company collective training, and Combat Maneuver Training Center (CMTC) rotations with dedicated MOUT training.

The Combat Leaders Course provides instruction to squad and team leaders that culminates in a MOUT Situational Training Exercise (STX) and allows them to practice what they have learned in a realistic environment to take back to their units. The

instruction covers movement techniques, close quarter combat with room clearing, reaction to snipers, countersniper operations, and establishing a foothold with mechanized vehicles. The goal is well-trained, small unit leaders. This training enables company level leadership (infantry, armor, engineer) to maintain MOUT proficiency through round-robin training in preparation for possible contingency deployments.

The OPDs and NCOPDs provide a forum to demonstrate and discuss the battlefield operating system capabilities, limitations, and planning in the MOUT environment. Historical perspectives are examined and reinforced with trips to Aachen and the Twin Villages. The Big Red One leaders become familiar to combat operations and MOUT TTPs.

Division level conferences examined the MOUT missions, terrain, and troop considerations. The missions included hasty and deliberate attacks into the urban environment. The terrain discussions covered building construction and familiarization. Panels examined the effects of weather on the mission. The use of Bradley fighting vehicles and M1 Abrams tanks and the common tactics associated in their employment was also an important topic for discussion. Other issues included measures of safety, markings, movement and communications.

Fire support considerations encompassed munitions and effects such as collateral damage, high explosive (HE) time fuses, improved conventional munitions (ICM), and smoke. Target acquisition and observation considerations included limited observation, dead space, and counterfire. Targeting concerns included the absence of verified enemy locations and call for fire zone (CFFZ) locations. The limited soil space in MOUT environments caused considerable discussion regarding positioning.

Platoon and company collective training consists of many phases. It begins with the isolation of the objective and moves on to a rapid advance complete with route clearing tasks. Next, a portion of the unit attacks to seize a foothold. Follow-on forces seize a key objective. The remaining forces then conduct a systematic clearance.

The Big Red One (BRO) companies conduct semiannual MOUT collective training at Kitzigen and Bamberg, Germany, MOUT sites prior to the BRO MOUT program's capstone event-- the annual CMTC rotation. The CMTC experience gives commanders an excellent opportunity to execute a company attack against an urban strongpoint. Commanders practice isolating the objective, securing a foothold, and clearing the objective at CMTC's primary MOUT site or at one or more of the four alternate sites.

Live-Fire

At the Chief of Staff of the Army's direction, the Army's premier MOUT complex was constructed at the Joint Readiness Training Center (JRTC), Fort Polk, Louisiana. The concept incorporated the latest in design and technology to provide the best possible training for participating units. The facility incorporates both live-fire exercises and MILES-assisted force on force training based on lessons from JUST CAUSE and RESTORE HOPE.

The United States Army Infantry School designed the original village, a thirty-two-building force-on-force area, an eight-building live-fire area, and an airfield. JRTC modified the design to its present state. Today it more closely resembles a village in South America than a town in Central Europe. For example, the majority of the roofs are

flat, rather than pitched. This architectural feature allows a unit to clear buildings in the preferred manner, from the top down.

JRTC conducts the world's most realistic live-fire exercises. The company-level and platoon-level live-fire exercises encompass all combined arms with infantry, artillery, aviation, and engineer's participation. The JRTC live-fire experience includes attacking into an urban environment under limited visibility conditions.

The Shughart-Gordon MOUT Complex provides a twenty-nine multistory cinderblock village with an actual airstrip and military compound in close proximity. It is located in the northwest corner of the Fort Polk maneuver box. The complex extends eight kilometers east and seven kilometers south. The complex consists of three distinct sites:

1. Self Airfield with seven buildings and a hard packed dirt airfield
2. Word Military Compound with five buildings, a security fence, and four guard towers.
3. Shughart-Gordon with twenty-nine buildings, complete with all the essential elements normally associated with a small growing town.

The three sites are designed to accommodate both live-fire and force-on-force operations. The building complexes that can accommodate live-fire exercises are called precision engagement areas.

The JRTC scenario portrays the village of Shughart-Gordon (figure 1) as a town in an emerging nation. A village square acts as the hub of municipality with a city hall, police station, fire station, and radio station. An open air market is often portrayed in the square. Additionally, town facilities include a school, bank, service station, store,

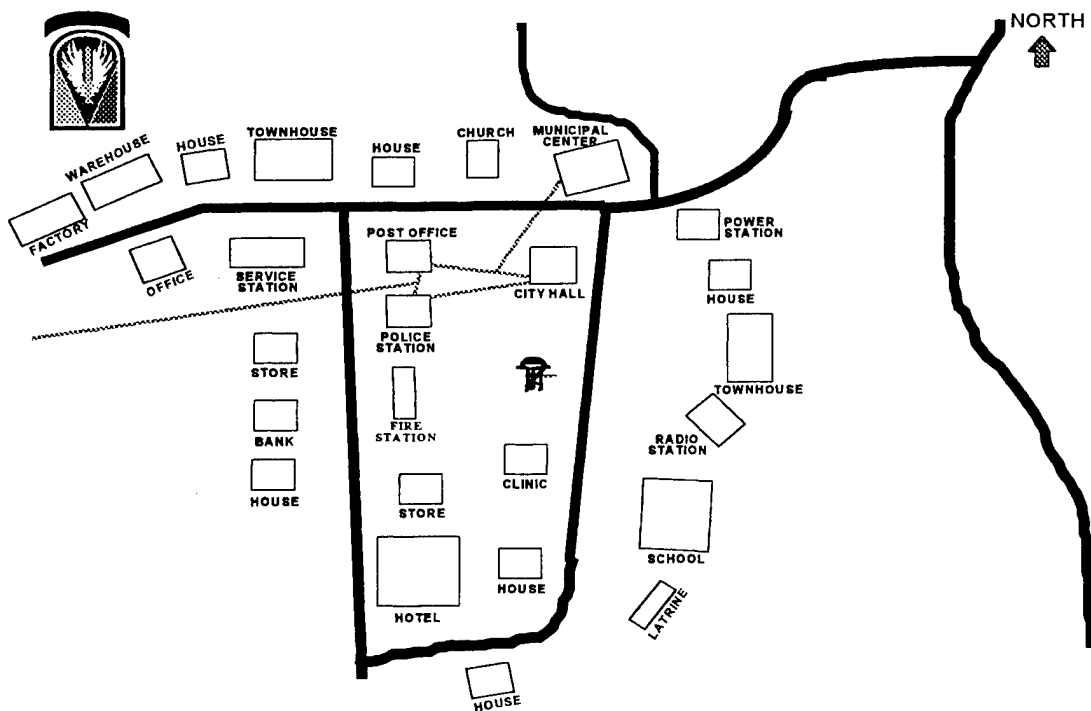


Figure 1 JRTC's Shughart-Gordon MOUT Village

hospital, cantina, power station, factory, and a warehouse. The town also contains several multistory and single-story dwellings. A water tower is located in the center of town and contains a viewing area with 360 coverage for observing the training. The site is complete with a soccer field lies on the outskirts of town which can accommodate helicopter assaults.

Most conventional live-fires occur in the Shughart-Gordon MOUT Precision Engagement Area. The buildings are single story, concrete block structures with basements and a connecting underground tunnel system. The walls are framed with two by fours and covered with $\frac{3}{4}$ -inch thick sheets of plywood. This additional feature provides safety while maintaining the most realistic conditions. The plywood absorbs the

bullets to minimize structural damage with repetitive use while minimizing the ricocheting of rounds along concrete surfaces. The complex has an audio-visual network that will capture all training events that occur in and around most buildings. The precision engagement buildings have locking doors, movement sensors, battlefield effects devices with sounds, targetry, nontoxic smoke and explosions. For safety, realism, and command and control of the exercises, all buildings have running water and electricity.

The ammunition for MOUT Live-fire Short Range Training Ammunition (SRTA Plastic). The 5.56-millimeter plastic performs comparably to ball ammunition at close range. Within a building it must be treated with the same respect. The round loses its velocity at about 100 meters. SRTA ammunition calls for a specific bolt operating system. This bolt is similar to the original. It is easily installed. Ball ammunition cannot be fired with the SRTA bolt. The M60/M240B machine guns fire 7.62-millimeter SRTA without any modification to the weapon with sufficient effects for 300 meters.

Safety is paramount at the JRTC and safety aspects for all MOUT live-fire operations evolve around detailed risk assessments, common sense, and emergency shutdown switches constructed into the precision engagement buildings.

Lessons learned from the MOUT live-fires at Shughart Gordon are numerous. Records are kept from each live-fire and the "sustains and improves" from 40 of the past lives fires from September 1996 until May 1999 are portrayed in table 1. The numbers show trends. For instance, 26 live-fires found the soldiers sustaining their 'enter and clear a building' tasks. In the author's opinion, that means most soldiers are getting the four man stack and room clearing training at home station.

TABLE 1. JRTC MOUT LIVE-FIRE LESSONS LEARNED

SUSTAIN		IMPROVE	
TASK	LIVE-FIRES	TASK	LIVE-FIRES
Enter/Clear a Building	26	React To Contact	24
Overwatch/Support By Fire	17	Consolidate/Reorganize	23
Assault	17	Overwatch/Support By Fire	18
Prepare For Combat	12	Enter/Clear A Building	10
Consolidate/Reorganize	9	Assault	10
Casualty Evacuation	8	Conduct a Search	9
Planning/Troop Leading Procedures	6	Move Tactically	5
Discriminating Fire Techniques	4	Command and Control	5
Move Tactically	2	Prepare For Combat	1

The improve column tells more. Twenty-four live-fires found “react to contact” as an improve. The next task is “consolidate and reorganize” with twenty-three live-fires needing improvement. The task of “provide overwatch/support by fire” rounds out the top three. Again, the author witnessed time and time again the assaults on Shughart-Gordon come to a screeching halt with a target outside the building as the soldiers move.

Just as the MOUT ACTD program has found, 75 percent of the casualties occur outside. The soldiers as well as the leaders are not getting enough of the MOUT training. For example, before the soldier moves, conditions must be set to ensure success. This is true for the individual, the team, the squad, and the platoon. Each leader in the chain of command sets the condition for his subordinates. The brigade commander isolates the objective, secures a foothold, moves to subobjectives and subsequently clears the objectives. The team leader and squad leader must conduct similar mental dynamics before assaulting in the next building.

Bottomline: If the troops are concentrating on just executing their battle drills, then they will never make it to the door or wall breach. The fight, as illustrated by the casualty count, occurs outside. Before crossing the street to set the four-man stack on the side of the building not exposed to enemy fire, numerous tasks must be accomplished. If alpha team is to assault the police station, then bravo team must first move to a location to provide overwatching fires.

The squad leader must instruct the bravo team leader on the sectors of fire: "Watch the church steeple." "Place the M203 on that factory door." The team leader must then move to each man and designate the sectors of fire (a laser works very well). The soldiers need to know whether suppression or just overwatch is needed. This means am I firing at the steeple without receiving fire first?

Now considering obscuration, the bravo team should have the smoke. Each designated thrower already knows the wind and where the squad leader wants the smoke. Throwing smoke to provide effective obscuration is an art form obtained from repetitive training. Each soldier must know how to do this. Will the ammo requirements for MOUT training be increased for smokes to ensure the training occurs? The time to figure out how to throw a smoke grenade and how long it lasts is not on the battlefield.

Bravo team is now set. Alpha team has already worked the method of crossing the street (wedge, file, on-line, low-crawl). The alpha team leader has designated his route (with a laser), the location of the stack site (miniassault position) and the proposed entry location. The demolitions have been prepared. First Squad Leader calls back to the platoon leader that he is ready. The platoon leader has Second Squad covering First Squad's actions. The company commander has second platoon covering first platoon's

moves. The battalion commander has bravo company isolating the southern half of the town for alpha's assault on the police station. All this conceptualization is important to the Private First Class that is the number one man in the stack for alpha team about to assault the police station. It only comes with practice. Not on a sterile one room building, but a complex of several building that provoke the elementary concept of "Cover Me," "Got ya covered," "Moving," that the private learns in individual movement techniques (IMT). Somehow this mutually supporting emphasis is lost as the soldier leaves the wood line and hits the concrete.

Fight in Built-Up Areas

The British Army conducts a semi-annual MOUT training session at the Cope Hill Downs Training Center outside of Warminster, England. The small, but competent cadre from the Infantry School provides a curriculum of classroom instruction and practical exercises that attempt to establish standardized urban mindset for NATO members. The classroom lessons range from simple to complex and the practical exercises cover rudimentary skills and culminate in a full blown assault on the 89 building site (figure 2). The fundamentals of the offense (investment, break-in, securing of the objective, clearance, and reorganization) are similar to the considerations in FM 90-10-1 and the Big Red One training plan.



Figure 2. British FIBUA Site at Cope Hill Downs

Classroom instruction is detailed. It begins with slide shows detailing the characteristics of the urban environment. Participants discuss the density and complexity of the structures, low visibility, NBC, logistical support, and leadership. Principles covered include simple planning, control, thoroughness, movement, and covering fire.

Considerable time is devoted to the basic skills required for fighting in built-up areas (FIBUA) operations. The FIBUA course is geared to train the trainer. Table 2 displays the Infantry and Engineer tasks that are trained. Actual lesson plans are provided for homestation training. The skills taught at Cope Hill Downs are those deemed essential for British Army units. The British NCOs that attend the course receive

an instructor skill identifier that allows them to train their respective units. In doing so, the British Infantry Center has direct impact as to the FIBUA training readiness of the British Army.

TABLE 2. FIBUA SKILLS

Lesson 1	Assault a Building
Lesson 2	Section-Room Clearing Drills
Lesson 3	Minor Tactic in the Attack
Lesson 4	Sewer Patrols
Lesson 5	Grenade Throwing
Lesson 6	Minor Tactics in the Defense
Lesson 7	Casualty Evacuation
Lesson 8	Ammunition Resupply and Prisoner of War Handling
Lesson 9	Propping (Shoring up the Floors)
Lesson 10	Defending House
Lesson 11	Wiring
Lesson 12	Mines
Lesson 13	Booby Traps

The basic skills include grenade throwing, mines, and methods of entry. The methods of entry classes provided detailed and physically challenging methods of entering buildings, such as the grappling hook, various ladders, and numerous soldier assist lifts. The culminating exercise on individual skills is the confidence course where the students gain experience in the urban environment at combat speed. The course aims to demonstrate the types of constraints and challenges inherent in the urban environment. It builds a soldier's confidence as his abilities strengthen. It is designed to identify shortcomings for future training, for example, it is easy to recognize a claustrophobic soldier when he starts screaming down in the fifty-meter crawl space that wanders around

the foundation of a crumbling building. The passage shrinks down to thirty-six inches in places. There is no light. Movement is conducted by feel and the soldier's own confidence. Other obstacles include moving across a twenty-foot balance beam from a second story window to another building's second floor where a soldier's fear of height will become obvious.

It makes sense to challenge the soldiers in this way because an individual's fear may become a unit's liability. The soldiers who are weak swimmers or susceptible to bee stings are noted. Why not a soldier that is afraid of heights? And just as the nonswimmer receives additional training to overcome this inability, the claustrophobic soldier may be able to do exercises that will enable him to manage his fear.

Additional classroom instruction consists of combined arms training with engineers, tanks, and army aviation. The course stresses the combined arms effect emphasizing the use of the strengths of one battlefield operating system (BOS) to compensate for the weaknesses of another.

Classroom instruction and practical exercises cover small unit tactics such as assaulting a building, fighting inside a building, clearance of a small house, and movement techniques. So are crossing streets and open areas under potential sniper fire. FIBUA also covers such small details as looking around corners. The course examines the terrain of the urban environment through both the eyes of the attacker and defender in excruciating detail. Neither the placement of smoke nor the application of fire and movement with the choice of cover considered are overlooked. There is a lot to learn from the method the British train urban operations.

The 75th Ranger Regiment

The Ranger Regiment received first-hand knowledge of the urban fight with operations conducted in Somalia in October 1993. Author Mark Bowden covers the events well in his book *Blackhawk Down: A Story of Modern War*. There were many lessons learned from the operation and the Ranger Training Circular 350-1-2 articulates an advanced MOUT training program to overcome the difficulties in urban fighting.

The Ranger Training Circular (RTC) 350-1-2 provides information, prescribes procedures, and assigns responsibility for the planning, execution, and assessment of training in Advanced MOUT Techniques (AMT) in the 75th Ranger Regiment. The manual has been through several revisions and combines standard Army TTP and equipment with TTP and equipment specially developed and peculiar to Special Operations Forces (SOF).

The Regiment prepares to conduct MOUT, in the accomplishment of its METL tasks, across the spectrum of warfare. This spectrum ranges from high-intensity MOUT during general war with a well-armed and trained combined arms enemy force to precision MOUT during more politically sensitive operations when restrictive rules of engagement are in place to limit collateral damage and casualties to noncombatants. The regiment always trains to maintain proficiency at precision MOUT.

The RTC 350-1-2 defines the five major components of advanced MOUT techniques: individual close quarter skills (armed and unarmed combat and movement techniques), standard Army MOUT TTP, close quarters combat (room and building clearing procedures), breaching, and training and safety TTPs.

Chapter two covers the close quarters marksmanship (COM). Most engagements are within ten meters because of the urban emphasis. Reflexive fire training, target discrimination, marksmanship qualification, and shotgun familiarization is described in detail. Topics, such as stance, aim, and automatic fire, are discussed. Additionally, tasks, conditions, and standards are stated with charts and diagrams covering all assigned criteria.

Chapter three covers breaching. The regiment utilizes numerous breaching techniques to include ballistic, explosive, and mechanical. An important aspect of the individual ranger's training is the hands-on portion. Each ranger is cross-trained to know how to perform the breaches to standards listed in the RTC 350-1-2.

Chapter four describes close quarters combat (CQC). Room clearing is covered in detail in addition to employing handgrenades. The clearing of stairwells and hallways completes the CQC training. It is important to note the Regiment's emphasis on these choke points and their attempts to deal with them.

RTC 350-1-2 provides important insight in the training of MOUT. The circular covers individual and collective initial train-up as well as sustainment training. Example training modules are provided for commanders to use or modify based on their assessment of unit proficiency.

¹Peter A. Newell, "United States Army Marksmanship Training for Infantry Rifle Engagements During Military Operations on Urban Terrain: A Study of Instinctive Behavioral Requirements" (Master of Military Art and Science Thesis, United States Army Command and General Staff College, June 1997), 35.

²Charles A. Preysler, "Going Downtown: The Need for Precision MOUT" (Advanced Military Studies Program Monograph, United States Army Command and General Staff College, August 1994), 22.

³Michael D. Doubler, *Busting the Bocage: American Combined Arms Operations in France, 6 June-21 July 1944* (Fort Leavenworth, Kansas: Combat Studies Institute, 1988), 15.

⁴*Ibid.*, 22.

⁵*Ibid.*, 25.

⁶*Ibid.*, 25.

⁷*Ibid.*, 25.

CHAPTER V

CONCLUSIONS

This paper looks at how the U.S. Army attempts to train, fight, and win in the urban environment. Numerous shortfalls are noted from historical examples. Those deficiencies appear to be targeted in several organizational attempts to train in the MOUT arena. The MOUT ACTD is attempting to provide off-the-shelf technology to mitigate the lethality the city presents. The 1st Infantry Division has instituted an aggressive MOUT training program for real-world contingencies in areas like Kosovo. The Ranger Regiment has taken the best of the conventional army and the special operations community to develop an advanced MOUT training program. But the Joint Readiness Training Center continues to track the same trends in the Shughart-Gordon MOUT Live Fires. Are the lessons getting filtered out? What are the top seven things that a soldier must do to successfully negotiate the urban battlefield?

The lessons learned in figure 1 state the top seven tasks which need improvement. Reaction to contact, consolidation and reorganization, overwatch and support by fire, enter and clear a building, assault, conduct a search, and move tactically.

React to contact is actual Battle Drill #2 from FM 7-8. Analysis of the ten-step battle drill provides illumination to the discrepancies noted at the Shughart-Gordon Live Fires. Naturally, the first step is where the controversy begins.

1. Soldiers immediately take up the nearest covered positions and return fire in the direction of contact.
2. Team/squad leaders locate and engage known or suspected enemy positions with well-aimed fire, and pass information to the squad/platoon leader.
3. Fire team leaders control fire using standard fire commands (initial and supplemental) containing the following elements:
 - a. Alert.
 - b. Direction.

- c. Description of target.
- d. Range.
- e. Method of fire (manipulation, and rate of fire).
- f. Command to commence firing.
- 4. Soldiers maintain contact with the soldiers on their left and right.
- 5. Soldiers maintain contact with their team leaders and report the location of enemy positions.
- 6. Leaders check the status of their personnel.
- 7. The team/squad leaders maintain contact with the squad/platoon leader.
- 8. The squad/platoon leader-
 - a. Moves up to the fire team/squad in contact and links up with its leader.
 - b. Determines whether or not his squad/platoon must move out of an engagement area.
 - c. Determines whether or not he can gain and maintain suppressive fires with his element already in contact (based on the volume and accuracy of enemy fires against the element in contact).
 - d. Makes an assessment of the situation. He identifies-
 - 1) The location of the enemy position and obstacles.
 - 2) The size of the enemy force.
 - 3) Vulnerable flanks.
 - 4) Covered and concealed flanking routes to the enemy position.
 - e. Determines the next course of action
 - f. Reports the situation to the platoon leader/company commander and begins maneuver.
 - g. Calls for and adjusts indirect fire.
- 9. Team Leaders lead their teams by example; for example, "Follow me, do as I do."
- 10. Leaders relay all commands and signals from the platoon chain of command.¹

Step 1 deserves careful scrutiny. Interestingly, the 1988 version of ARTEP 7-8 *Battle Drills for the Infantry Rifle Platoon and Squad*, lists "react to contact" as the first battle drill. Additionally, the first standard in the 1988 version says "The unit returns fire in no more than three seconds."² Today's soldier must interpret the word "immediate" in the updated first step of the battle drill listed above.

Below are the task, conditions, and standards from ARTEP 7-8 MTP for the infantry squad and platoon to move tactically. Steps one through eleven deal with the movement through the woods and open terrain. Step Twelve discusses urban movement.

ARTEP 7-8 MTP

TASK: MOVE TACTICALLY (7-3/4-1134)(FM 7-8)

CONDITIONS: The platoon must move along a prescribed route or to a destination specified in the OPORD. This route can include movement through a built-up area. The platoon is operating separately or as part of a company. Both friendly and enemy forces have indirect fire and CAS available. Some iterations should be performed in MOPP4. Civilians, government organizations, NGOs, PVOs, and the international press are present on the battlefield. The US forces are operating under a restrictive ROE.

TASK STANDARDS: The platoon moves on the specified route or arrives at the specified destination at the time specified in the order. The platoon main body is not surprised by the enemy. The platoon employs the movement formation and technique ordered by the leader. The platoon leader can show the location of adjacent units during movement. The US forces comply with the ROE. Collateral damage is limited.

TASK STEPS AND PERFORMANCE MEASURES:

1-11. (Omitted for brevity)

12. The platoon moves in a built-up area.

- a. Halts in a covered and concealed position outside of the urban area.
 - ❑ The platoon seeks cover and concealed position outside of the urban area.
 - ❑ The platoon leader scans the urban area and determines the route through the urban area.
 - ❑ The platoon leader designates movement element and overwatch element.
- b. Moves as two elements: a movement element and an overwatch element. When necessary, these elements or parts of them exchange roles.
 - ❑ The movement element (one or two squads/teams if terrain is open [for example, a wide street]) moves forward, scouts danger areas, and closes with the enemy.
 - ❑ The overwatch element (rest of the platoon and supporting weapons) moves behind the lead element and secures the flanks and rear. It also provides fire support.
- c. Uses a covered and concealed route whenever possible.
 - ❑ The platoon moves along underground passages, through or behind buildings, along walls, and over rooftops.
 - ❑ The platoon avoids streets, alleys, and other open areas unless necessary.
- d. Makes the best use of cover and concealment when moving.
 - ❑ Personnel move in single file along the side of the street, staying close to the buildings.
 - ❑ Personnel move quickly and remain dispersed 3 to 5 meters apart.
 - ❑ Each soldier is assigned an area to observe on the opposite side of the street.
 - ❑ When moving with two squads abreast, each squad overwatches the buildings across the street, observing the stories above the opposite squad.
- e. Crosses the MOUT danger areas, using the greatest cover, concealment, speed, and overwatch.
 - ❑ Personnel use smoke, rubble, and debris for protection.
 - ❑ An element crosses as a dispersed group at the same time-not soldier by soldier.

- f. Moves while maintaining security.
 - ❑ Clears buildings as necessary to continue movement.
 - ❑ Identifies, reports, marks, and bypasses enemy obstacles and mines.
 - g. Clears the urban area. The platoon leader reports that the platoon is through the urban area.
 - h. Continues the mission
 - ❑ Reestablishes movement formation; assumes proper intervals.
- OR**
- ❑ Takes up hasty defensive positions.³

This listing of tasks to be accomplished by the squad and platoon upon entering the built-up area demands notice. Again, the MOUT ACTD has determined that over 75 percent of the casualties result from units properly conducting the elements listing in this tactical movement. The JRTC Live Fire lessons learned demonstrate that twenty live-fires out of forty found the unit needing to improve the “react to contact.” It is my judgement as the senior MOUT live fire Observer Controller from 1998 to 1999 that if the soldiers are conducting the built-up area movement in the “move tactically” task correctly, the soldiers are better able to respond. The soldiers “set the conditions” for success. The soldiers will be able to implement the most important first step of Battle Drill 2, React to Contact, “Soldiers immediately take up the nearest covered positions and return fire in the direction of contact.”

The 75th Ranger Regiment spends maximum marksmanship time in their urban training with quick fire drills and reflexive fire techniques. The obvious emphasis on this skill is to enhance the soldier’s ability to return fire in the direction of contact. In the Ranger’s case, well-aimed fire through very thorough firing tables and scenarios to make the muscles necessary for firing actually “remember” the position of the weapon when brought from the ready to fire. Muscle memory is the advanced marksmanship

terminology that Peter Newell illuminates in his 1997 MMAS "United States Army Marksmanship Training for Infantry rifle Engagements During MOUT."

The Big Red One stationed in Germany and the FIBUA Course in England do not have the ammunition accounts and minimal training distracters that the Ranger Regiment enjoys, but they accomplish the next best thing: train the leaders to train the soldiers on the urban environment. The team and squad leaders that are better prepared by the knowledge gained in MOUT training are able to move to step two of the react to contact battle drill: Team/squad leaders locate and engage known or suspected enemy positions with well-aimed fire, and pass information to the squad and platoon leader. Better still, the leader trained in urban operations ensures his unit is correctly "Moving Tactically" and setting the conditions with bounding overwatch of his elements in anticipation of enemy contact at suspected locations. The leader is much more situationally aware with the ability to process information relevant to the problem at hand because of the familiarization training; he is not as anxious about crossing that street.

In closing, the urban fight is the fight of tomorrow. The U.S. Armed Forces must be able to effectively fight in the city. The skills necessary for success in MOUT must be articulated, placed in doctrine, and reinforced at every training opportunity.

This thesis covers some history in MOUT, the current training attempts, and an exploration into what the urban environment demands of the soldier. The skills needed in the MOUT fight are already in circulation. The Battle Drills 6: Enter a Building/Clear a Room is in FM 7-8. The movement in MOUT is covered in ARTEP MTP 7-8. The principles in Battle Drill 2: React to Contact still apply in the urban environment.

Consider all the above the next time a company training calendar says “MOUT Training”. The city fight is much more than a room clearing drill. If the leaders do not set the conditions prior to entering the city, then the soldiers are set up for failure.

¹Field Manual 7-8, *Infantry Rifle Platoon and Squad* (Washington, D.C.: HQ Department of the Army, 1992), 4-12.

²Army Training and Evaluation Program 7-8 Drill, *Battle Drills for the Infantry Rifle Platoon and Squad* (Washington, D.C.: HQ Department of the Army, 1988), 2-3.

³Army Training and Evaluation Program 7-8, *Mission Training Plan for the Infantry Rifle Platoon and Squad* (Washington, D.C.: HQ Department of the Army, 1994), 5-71.

CHAPTER VI

TOPICS FOR FUTURE STUDY

While the thesis conclusion mandates the training of the basic skills for the dismounted urban warrior, the implementation strategy needs more research.

The following questions are still in need of research:

1. With doctrine already being rewritten, should it include a basic skills MOUT manual?
2. The education on MOUT must increase. The entire enlisted education system from Basic Training to the Sergeant Major's Academy as well as the officer's educational system from Advance camp to the War college needs more attention on the training of individual and collective tasks from grassroots levels. How to incorporate this training and what must be sacrificed in its place needs addressed.
3. Is there a need for a MOUT Leaders Course similar to the Light Leaders Course held at Fort Benning in the 1980s? The British Army believes in the necessity. The 1st Infantry Division and the 75th Ranger Regiment also train their version on a MOUT Leader's Course.
4. Can proper MOUT training be the focus of infantry training and other situations are merely a scaled back versions of the demanding conditions of MOUT? The small unit leadership demanded in the MOUT fight stresses the majority of the infantry battle drills in FM 7-8. Is the soldier trained in the urban environment better able to transfer the skills to the rural environment than vice versa?
5. Is an increase in ammunition allocation needed at homestation to enable soldier training on skills like smoke grenade emplacement and M203 illumination?

APPENDIX A

CAMTF DOCTRINE STATUS REPORT

ATSH-UT

2 May 2000

MEMORANDUM THROUGH: Randy Sullivan, Chief, CAMTF Study Group

FOR: LTC Thomas A. Cole, Deputy Director, CAMTF

Subject: Doctrine Status Report

1. Reference:

- a. Doctrine Status Report, 2 Feb 00.
- b. CAMTF Doctrinal Update Plan, Enclosure 1.

2. The following status is submitted for each manual described at Enclosure 1.

- *FM 7-30, The Infantry Brigade*. The coordinating draft was staffed on 1 Mar 00. Comments have been received from the field and are being incorporated. A Final Draft is expected to be sent to the AC for approval via FB Form 26-R-E, Transmittal, Action and Control o/a 31 May 00.
- *FM 90-10-1, An Infantryman's Guide to Combat in Built-Up Areas*. A separate contractor working for CATD, prior to the CAMTF Study Group's activation, performed a general update. The general update includes one new chapter, four new appendices, and generally updated information. Coordination between the CAMTF Study Group and CATD Doc Div determined that the best course of action was to staff the coordinating draft of the update. The projected date for releasing the coordinating draft of FM 90-10-1 is Jun 00, IAW Encl 1. Current thinking in the CAMTF Doctrine Team is that this manual will become a reference manual containing common information such as weapons effects, building analysis, etc. common to combat, CS, and CSS units. It will also become the repository for any TTP not covered in the 7 and 71 Series drafts currently being staffed. Offense and Defense doctrine and TTP will be in the 7 and 71 Series drafts.
- *FM 71-3, The Armored and Mechanized Infantry Brigade*. The undersigned reviewed Appendix E, Military Operations on Urbanized Terrain of the manual's final draft. Portions of Appendix E and Chapter 6, Defensive Actions were used to write Appendix J, FM 7-30. Based on their review of the preliminary draft of Appendix J, FM 7-30 and results of the visit from USAARMS personnel to the CAMTF Study Group during 18-20 Jan 00, it

was determined that a new coordinating draft FM 71-3 will be released in Jul 00.

- *FM 90-10-X, Combined Arms TTP for Urban Operations.* A detailed draft outline for Chapter 1, Introduction; Chapter 2, IPB; Chapter 3, Command and Control; Chapter 4, Offense; Chapter 5, Defense; Appendix A, Stability and Support; Appendix B, Unified Action Operations has been written. It is being used for internal staffing. The outline was sent out to proponents on 1 Dec 99 in order to solicit comment and additional detail for Chapter 6, Fire Support; Chapter 7, ADA; Chapter 8, Mobility and Survivability; and Chapter 9 Combat Service Support. Input was received and incorporated from the CASCOM, the MI School, Engineer School, and MP School. Preliminary input has already been received from the Aviation School for inclusion in this manual.
- *FM 7-10, The Infantry Rifle Company.* The coordinating draft of Appendix L, Urban Operations was staffed on 17 Apr 00. Extensive and substantive input was received from the USAIS as a result of the preliminary draft and was incorporated in the coordinating draft. The final draft to be sent to the AC o/a 30 Jun 00.
- *FM 7-20, The Infantry Battalion.* The preliminary draft of Appendix G, Urban Operations was staffed on 13 Apr 00 within the USAIS. The coordinating draft will be staffed between 30 Jun and 15 Jul 00. There has been about a two week to one month delay on this manual specifically not to overwhelm the USAIS and field with drafts.
- *FM 71-2, The Tank and Mechanized Infantry Battalion Task Force.* The preliminary draft of Appendix I, Urban Operations is complete it will be released for internal USAIS staffing o/a 1 Jun 00.
- *FM 7-8, The Infantry Rifle Platoon and Squad.* The preliminary drafts of Chapter 6, Urban Operations and Battle Drill 6, Enter Building/Clear a Room are complete. They will be released for internal USAIS staffing o/a 15 May 00. Again, there has been a two week to one month delay on this manual specifically not to overwhelm the USAIS and the field with drafts.
- *FM 7-7J, The Mechanized Infantry Platoon and Squad (BFV).* The preliminary draft of Chapter 5, Urban Operations is 50% complete. It will be staffed within the USAIS o/a 30 Jun 00.
- *FM 71-1, The Tank and Mechanized Infantry Company Team.* This manual has a current MOUT appendix and is not programmed for revision. The USAARMS is the proponent for this manual.

- *FM 7-92, The Infantry Reconnaissance Platoon and Squad.* This manual has been added to the CAMTF Doctrinal Update Plan and will be revised to include Urban Operations IAW Encl 1.

3. Summary. Manuals are being concurrently revised for the inclusion of urban operations information. The doctrinal update plan outlined at Enclosure 1 has been modified to account for allowing time between drafts to coordinating agencies. All Statement of Work (SOW) deliverables will be met and coordination internal to USAIS and TRADOC is being performed as necessary.

1 Enclosure
CAMTF Doctrinal Update Plan

/s/ *John J. Bastone*
JOHN J. BASTONE
Doctrine Team Leader
CAMTF Study Group

Enclosure 1 (CAMTF Doctrinal Update Plan) to Doctrine Status Report, 2 May 00.

Manual	Title	Priority	Proposed Revision	Preliminary Draft	Coordinating Draft	Final Approved Draft
FM 7-30	The Infantry Bde	1	Appendix	1-Feb-00	31-Mar-00	31-May-00
FM 71-3	The Armored and Mec Inf Bde	2	Appendix		<i>1-Jul-00</i>	<i>1-Oct-00</i>
FM 7-10	The Infantry Rifle Company	3	Appendix	1-Mar-00	30-Apr-00	30-Jun-00
FM 7-20	The Infantry Battalion	4	Appendix	<i>15-Apr-00</i>	<i>30-Jun-00</i>	<i>31-Jul-00</i>
FM 71-2	The Tank and Mec Inf Bn TF	5	Appendix	1-Jun-00	31-Jul-00	30-Nov-00
FM 7-8	The Inf Rifle Plt and Sqd	6	Chapter	<i>1 Jun 00</i>	<i>31-Jul-00</i>	<i>31 Aug 00</i>
FM 7-7J	The Mech Inf Plt & Sqd (BFV)	7	Chapter	<i>30 Jun 00</i>	<i>31 Aug 00</i>	30 Nov 00
FM 90-10-1	The Infantryman's Guide to Combat in Built-Up Areas	8	Update		30-Jun-00	30-Oct-00
<i>FM 7-92</i>	<i>The Inf Recon Plt & Sqd</i>	<i>9</i>	<i>Chapter</i>	<i>30 Dec 00</i>	<i>31 Mar 01</i>	<i>30 Jun 01</i>
FM 90-10-X	Combined Arms TTP for Urban Opns	10	New Manual	30-Dec-00	31-Mar-01	30-Jun-01
FM 71-1	The Tank & Mech Inf Co Tm	11	None			

NOTES:

- 1- FMs 71-1/2/3 must be coordinated with Ft. Knox. Any changes to FMs 71-1/3 must be printed by Ft. Knox.
- 2 – FM 90-10-1 will be retitled The Infantryman's Guide to Modern Urban Combat.
- 3 – FM 90-10-X, Combined Arms TTP for Urban Operations will be focused on the brigade.
- 4 – ***Bold italics indicate modifications to the Doctrinal Update Plan.***

CAMTF Doctrinal Update Plan, a/o 2 May 00.

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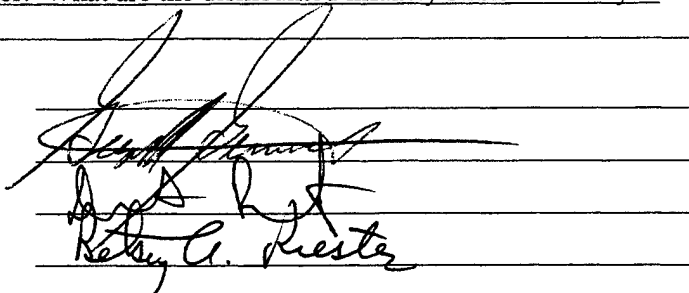
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