

## AN INFANTRYMAN'S GUIDE TO COMBAT IN BUILT-UP AREAS

### CONTENTS

	Page
<b>*Preface</b> .....	v
<b>Chapter 1. INTRODUCTION</b> .....	1-1
<b>Section I. Background</b> .....	1-1
1-1. AirLand Battle.....	1-1
1-2. Definitions.....	1-1
1-3. Cities.....	1-2
1-4. The Threat in Built-Up Areas.....	1-3
<b>Section II. Characteristics and Categories of Built-Up Areas</b> .....	1-4
1-5. Characteristics .....	1-4
1-6. Categories.....	1-5
<b>Section III. Special Considerations</b> .....	1-5
1-7. Battles in Built-Up Areas .....	1-5
1-8. Target Engagement.....	1-5
1-9. Small-Unit Battles .....	1-5
1-10. Munitions and Special Equipment .....	1-6
1-11. Communications.....	1-6
1-12. Stress .....	1-6
1-13. Restrictions.....	1-6
1-14. Fratricide Avoidance .....	1-7

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\*This publication supersedes FM 90-10-1, 30 September 1982.

**Chapter 2. URBAN ANALYSIS**

**Section I. Models of Built-Up Areas** ..... 2-1

    2-1. Regional Urban Characteristics ..... 2-1

    2-2. Specific Characteristics of Urban Areas ..... 2-2

    2-3. Characteristics of Urban Areas ..... 2-2

**Section II. Terrain and Weather Analysis** ..... 2-6

    2-4. Special Terrain Considerations ..... 2-6

    2-5. Special Weather Considerations ..... 2-7

**Section III. Threat Evaluation and Integration** ..... 2-8

    2-6. Operational Factors ..... 2-8

    2-7. Urban Counterinsurgency, Counter guerrilla, and Counterterrorist  
        Operations ..... 2-9

    2-8. Projected Threat Capabilities ..... 2-11

**Chapter 3. OFFENSIVE OPERATIONS**

**Section I. Offensive Considerations** ..... 3-1

    3-1. Reasons for Attacking Built-Up Areas 3-1

    3-2. Reasons for Not Attacking a Built-Up Area 3-1

**Section II. Characteristics of Offensive Operations in a Built-Up Area** ..... 3-2

    3-3. Troop Requirements ..... 3-2

    3-4. Maneuver ..... 3-2

    3-5. Use of Equipment ..... 3-2

**Section III. Types of Offensive Operations** ..... 3-3

    3-6. Hasty Attack ..... 3-3

    3-7. Deliberate Attack ..... 3-3

**Section IV. METT-T Factors** ..... 3-7

    3-8. Mission ..... 3-7

    3-9. Enemy ..... 3-8

    3-10. Terrain ..... 3-8

    3-11. Troops ..... 3-9

    3-12. Time ..... 3-16

**Section V. Command and Control** ..... 3-17

    3-13. Command ..... 3-17

    3-14. Control ..... 3-17

**Section VI. Battalion Task Force Attack on a Built-Up Area** ..... 3-17

    3-15. Conduct of Deliberate Attack ..... 3-17

    3-16. Seizure of Key Objective ..... 3-18

    3-17. Infiltration ..... 3-19

    3-18. Route Security ..... 3-20

	page
<b>Section VII. Company Team Attack of a Built-Up Area</b> . . . . .	3-21
3-19. Attack of a Block . . . . .	3-21
3-20. Attack of an Enemy Outpost . . . . .	3-23
3-21. Seizure of a Traffic Circle . . . . .	3-24
3-22. Seizure of Key Terrain . . . . .	3-26
3-23. Reconnaissance . . . . .	3-27
<b>Section VIII. Platoon Attack of a Built-Up Area</b> . . . . .	3-29
3-24. Attack of a Building . . . . .	3-29
3-25. Movement Down a Street . . . . .	3-29
3-26. Counterattacks . . . . .	3-31
 <b>Chapter 4. DEFENSIVE OPERATIONS</b>	
<b>Section I. Defensive Considerations</b> . . . . .	4-1
4-1. Reasons for Defending Built-Up Areas . . . . .	4-1
4-2. Reasons for Not Defending Built-Up Areas . . . . .	4-2
<b>Section II. Characteristics of Built-Up Areas</b> . . . . .	4-2
4-3. Obstacles . . . . .	4-3
4-4. Avenues of Approach . . . . .	4-4
4-5. Key Terrain . . . . .	4-4
4-6. Observation and Fields of Fire . . . . .	4-4
4-7. Cover and Concealment . . . . .	4-4
4-8. Fire Hazards . . . . .	4-4
4-9. Communications Restrictions . . . . .	4-4
<b>Section III. Factors of METT-T</b> . . . . .	4-5
4-10. Mission . . . . .	4-5
4-11. Enemy . . . . .	4-5
4-12. Terrain . . . . .	4-5
4-13. Troops Available . . . . .	4-9
4-14. Time Available . . . . .	4-13
<b>Section IV. Command and Control</b> . . . . .	4-16
4-15. Command Post Facilities . . . . .	4-16
4-16. Organization of the Defense . . . . .	4-16
4-17. Counterattack . . . . .	4-18
4-18. Defense During Limited Visibility . . . . .	4-18
<b>Section V. Defensive Plan at Battalion Level</b> . . . . .	4-19
4-19. Defense of a Village . . . . .	4-19
4-20. Defense in Sector . . . . .	4-20
4-21. Delay in a Built-Up Area . . . . .	4-21

	page
<b>Section VI. Defensive Plan at Company Level</b> . . . . .	4-23
4-22. Defense of a Village . . . . .	4-23
4-23. Defense of a City Block . . . . .	4-25
4-24. Company Delay . . . . .	4-26
4-25. Defense of a Traffic Circle . . . . .	4-27
<b>Section VII. Defensive Plan at Platoon Level</b> . . . . .	4-27
4-26. Defense of a Strongpoint . . . . .	4-28
4-27. Defense Against Armor . . . . .	4-29
4-28. Conduct of Armored Ambush . . . . .	4-32
 <b>Chapter 5. FUNDAMENTAL COMBAT SKILLS</b>	
<b>Section I. Movement</b> . . . . .	5-1
5-1. Crossing of a Wall . . . . .	5-1
5-2. Movement Around Corners . . . . .	5-1
5-3. Movement Past Windows . . . . .	5-2
5-4. Use of Doorways . . . . .	5-3
5-5. Movement Parallel to Buildings . . . . .	5-4
5-6. Crossing of Open Areas . . . . .	5-6
5-7. Fire Team Employment . . . . .	5-6
5-8. Movement Between Positions . . . . .	5-7
5-9. Movement Inside a Building . . . . .	5-9
<b>Section II. Entry Techniques</b> . . . . .	5-11
5-10. Upper Building Levels . . . . .	5-11
5-11. Use of Ladders . . . . .	5-12
5-12. Use of Grappling Hook . . . . .	5-13
5-13. Scaling of Walls . . . . .	5-14
5-14. Rappelling . . . . .	5-16
5-15. Entry at Lower Levels . . . . .	5-16
5-16. Hand Grenades . . . . .	5-19
<b>Section III. Firing Positions</b> . . . . .	5-23
5-17. Hasty Firing Position . . . . .	5-23
5-18. Prepared Firing Position . . . . .	5-26
5-19. Target Acquisition . . . . .	5-34
5-20. Flame Operations . . . . .	5-37
5-21. Employment of Snipers . . . . .	5-38
<b>Section IV. Navigation in Built-Up Areas</b> . . . . .	5-39
5-22. Military Maps . . . . .	5-39
5-23. Global Positioning Systems . . . . .	5-40
5-24. Aerial Photographs . . . . .	5-40

	page
<b>Section V. Camouflage</b> .....	5-40
5-25. Application .....	5-40
5-26. Use of Shadows .....	5-41
5-27. Color and Texture .....	5-43
<b>Chapter 6. COMBAT SUPPORT</b>	
6-1. Mortars .....	6-1
6-2. Field Artillery .....	6-3
6-3. Naval Gunfire .....	6-4
6-4. Tactical Air .....	6-4
6-5. Air Defense .....	6-5
6-6. Army Aviation .....	6-6
6-7. Helicopters .....	6-6
6-8. Engineers .....	6-8
6-9. Military Police .....	6-8
6-10. Communications .....	6-9
<b>Chapter 7. COMBAT SERVICE SUPPORT AND LEGAL ASPECTS OF COMBAT</b>	
<b>Section I. Combat Service Support</b> .....	7-1
7-1. Guidelines .....	7-1
7-2. Principal Functions .....	7-1
7-3. Supply and Movement Functions .....	7-4
7-4. Medical .....	7-5
7-5. Personnel Services .....	7-7
<b>Section II. Legal Aspects of Combat</b> .....	7-8
7-6. Civilian Impact in the Battle Area .....	7-8
7-7. Command Authority .....	7-8
7-8. Source Utilization .....	7-9
7-9. Health and Welfare .....	7-9
7-10. Law and Order .....	7-9
7-11. Public Affairs Officer and Media Relations .....	7-9
7-12. Civil Affairs Units and Psychological Operations .....	7-9
7-13. Provost Marshall .....	7-10
7-14. Commander's Legal Authority and Responsibilities .....	7-10
<b>Chapter 8. EMPLOYMENT AND EFFECTS OF WEAPONS</b>	
8-1. Effectiveness of Weapons and Demolitions .....	8-1
8-2. M16 Rifle and M249 Squad Automatic Weapon/Machine Gun .....	8-2
8-3. Medium and Heavy Machine Guns (7.62-mm and .50-Caliber) .....	8-4
8-4. Grenade Launchers, 40-mm (M203 and MK 19) .....	8-7
8-5. Light and Medium Recoilless Weapons .....	8-9
8-6. Antitank Guided Missiles .....	8-19
8-7. Flame Weapons .....	8-23
8-8. Hand Grenades .....	8-26
8-9. Mortars .....	8-28

	Page
8-10. 25-mm Automatic Gun.....	8-31
8-11. Tank Cannon .....	8-34
8-12. Combat Engineer Vehicle Demolition Gun .....	8-38
8-13. Artillery and Naval Gunfire.....	8-38
8-14. Aerial Weapons .....	8-40
8-15. Demolitions .....	8-41
<b>Appendix A. NUCLEAR, BIOLOGICAL, AND CHEMICAL CONSIDERATIONS .....</b>	<b>A-1</b>
<b>Appendix B. BRADLEY FIGHTING VEHICLE.....</b>	<b>B-1</b>
<b>Appendix C. OBSTACLES, MINES, AND DEMOLITIONS .....</b>	<b>C-1</b>
<b>Appendix D. SUBTERRANEAN OPERATIONS.....</b>	<b>D-1</b>
<b>Appendix E. FIGHTING POSITIONS .....</b>	<b>E-1</b>
<b>*Appendix F. ATTACKING AND CLEARING BUILDINGS .....</b>	<b>F-1</b>
<b>*Appendix G. MILITARY OPERATIONS ON URBANIZED TERRAIN (MOUT) UNDER RESTRICTIVE CONDITIONS .....</b>	<b>G-1</b>
<b>Appendix H. URBAN BUILDING ANALYSIS .....</b>	<b>H-1</b>
<b>Appendix I. LIMITED VISIBILITY OPERATIONS UNDER MOUT CONDITIONS.....</b>	<b>I-1</b>
<b>*Appendix J. COUNTERING URBAN SNIPERS .....</b>	<b>J-1</b>
<b>*Appendix K. CLOSE QUARTERS COMBAT TECHNIQUES.....</b>	<b>K-1</b>
<b>*Appendix L. EMPLOYMENT OF ARMED HELICOPTERS IN BUILT-UP AREAS .....</b>	<b>L-1</b>
<b>*Appendix M. FIELD-EXPEDIENT BREACHING OF COMMON URBAN BARRIERS.....</b>	<b>K-1</b>
<b>*Appendix N. INFANTRY AND ARMOR SMALL-UNIT ACTIONS DURING MOUT .....</b>	<b>N-1</b>
<b>*Glossary .....</b>	<b>Glossary 1</b>
<b>References .....</b>	<b>References 1</b>
<b>Index.....</b>	<b>Index 1</b>

**CI, FM 90-10-1**

Change 1

HEADQUARTERS  
DEPARTMENT OF THE ARMY  
Washington, DC, 3 October 1995

**AN INFANTRYMAN'S GUIDE TO COMBAT  
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1. Change FM 90-10-1, 12 May 1993, as follows:

**Remove old pages**

i through ii  
v through vii  
F-5 through F-6  
G-1 through G-10

Glossary 1 through Glossary 5

**Insert new pages**

i through ii  
v through vii  
F-5 through F-6  
G-1 through G-7  
J-1 through J-10  
K-1 through K-24  
L-1 through L-4  
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## **\*PREFACE**

The urban growth in all areas of the world has changed the face of the battlefield. Military operations on urbanized terrain (MOUT) constitute the battlefield in the Eurasian continent. It includes all man-made features (cities, towns, villages) as well as natural terrain. Combat in built-up areas focuses on fighting for and in those cities, towns, and villages.

The probability is great that United States forces will become engaged by enemy forces who are intermingled with the civilian population. Therefore, units using the techniques outlined in this manual under these conditions must obey the rules of engagement issued by their headquarters and the laws of land warfare. Infantry commanders and staffs should concentrate on the skills contained in Chapters 3 through 5 as they train their units.

This manual provides the infantryman with guidelines and techniques for fighting against an organized enemy in built-up areas who may or may not be separated from the civilian population. Some techniques for dealing with insurgents, guerrillas, and terrorists are included; however, the manuals which best address these issues are FM 7-98 and FM 90-8. This manual does not address any techniques for missions that require the restoration of order to urban areas. Information and techniques to accomplish this mission are addressed in FM 19-15.

The proponent of this publication is the US Army Infantry School. Send comments and recommendations on DA Form 2028 directly to Commandant, US Army Infantry School, ATTN: ATSH-ATD, Fort Benning, Georgia 31905-5410; E-mail DURANTEA @ Benning-emh2.army.mil; FAX DSN 835-7500; and DSN 835-7114/4539 or commercial 1-706-545-7114/4539.

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



## CHAPTER 1

# INTRODUCTION

*The increased population and accelerated growth of cities have made the problems of combat in built-up areas an urgent requirement for the US Army. This type of combat cannot be avoided. The makeup and distribution of smaller built-up areas as part of an urban complex make the isolation of enemy fires occupying one or more of these smaller enclaves increasingly difficult. MOUT is expected to be the future battlefield in Europe and Asia with brigade- and higher-level commanders focusing on these operations. This manual provides the infantry battalion commander and his subordinates a current doctrinal source for tactics, techniques, and procedures for fighting in built-up areas.*

## Section I. BACKGROUND

Friendly and enemy doctrine reflect the fact that more attention must be given to urban combat. Expanding urban development affects military operations as the terrain is altered. Although the current doctrine still applies, the increasing focus on operations short of war, urban terrorism, and civil disorder emphasizes that combat in built-up areas is unavoidable.

### 1-1. AIRLAND BATTLE

AirLand Battle doctrine describes the Army's approach to generating and applying combat power at the operational and tactical levels. It is based on securing or retaining the initiative and exercising it aggressively to accomplish the mission. The four basic AirLand Battle tenets of initiative, agility, depth, and synchronization are constant. During combat in built-up areas, the principles of AirLand Battle doctrine still apply—only the terrain over which combat operations will be conducted has changed.

### 1-2. DEFINITIONS

MOUT is defined as all military actions that are planned and conducted on terrain where man-made construction affects the tactical options available to the commander. These operations are conducted to defeat an enemy that may be mixed in with civilians. Therefore, the rules of engagement (ROE) and use of combat power are more restrictive than in other conditions of combat. Due to political change, advances in technology, and the Army's role in maintaining world order, MOUT now takes on new dimensions that previously did not exist. These new conditions affect how units will fight or accomplish their assigned missions. The following definitions provide clarity and focus for commanders conducting tactical planning for MOUT. The terms "surgical MOUT operations" and "precision MOUT operations" are descriptive in nature only. These are conditions of MOUT, not doctrinal terms.

a. **Built-Up Area.** A built-up area is a concentration of structures, facilities, and people that forms the economic and cultural focus for the surrounding area. The four categories of built-up areas are large cities, towns and small cities, villages, and strip areas.

b. **Surgical MOUT.** These operations are usually conducted by joint special operation forces. They include missions such as raids, recovery

operations, rescues, and other special operations (for example, hostage rescue).

c. **Precision MOUT.** Conventional forces conduct these operations to defeat an enemy that is mixed with noncombatants. They conduct these operations carefully to limit noncombatant casualties and collateral damage. Precision MOUT requires strict accountability of individual and unit actions through strict ROE. It also requires specific tactics, techniques, and procedures for precise use of combat power (as in Operation Just Cause). (See Appendix G for more detailed information.)

**1-3. CITIES**

Cities are the centers of finance, politics, transportation, communication, industry, and culture. Therefore, they have often been scenes of important battles (Table 1-1).

CITY	YEAR	CITY	YEAR
RIGA	1917	BUDAPEST	1956
MADRID	1936	* BEIRUT	1958
WARSAW	1939	* SANTO DOMINGO	1965
ROTTERDAM	1940	* SAIGON	1968
MOSCOW	1942	* KONTUM	1968
STALINGRAD	1942	* HUE	1968
LENINGRAD	1942	BELFAST	1972
WARSAW	1943	MONTEVIDEO	1972
* PALERMO	1944	QUANGTRI CITY	1972
* BREST	1944	AN LOC	1972
WARSAW	1944	XUAN LOC	1975
* AACHEN	1944	SAIGON	1975
ORTONA	1944	BEIRUT	1975-1978
* CHERBOURG	1944	MANAGUA	1978
BRESLAU	1945	ZAHLE	1981
* WEISSENFELS	1945	TYRE	1982
BERLIN	1945	* BEIRUT	1983
* MANILA	1945	* PANAMA CITY	1989-1990
* SAN MANUEL	1945	* COLON	1989-1990
* SEOUL	1950	* KUWAIT CITY	1991

\*Direct US Troop Involvement

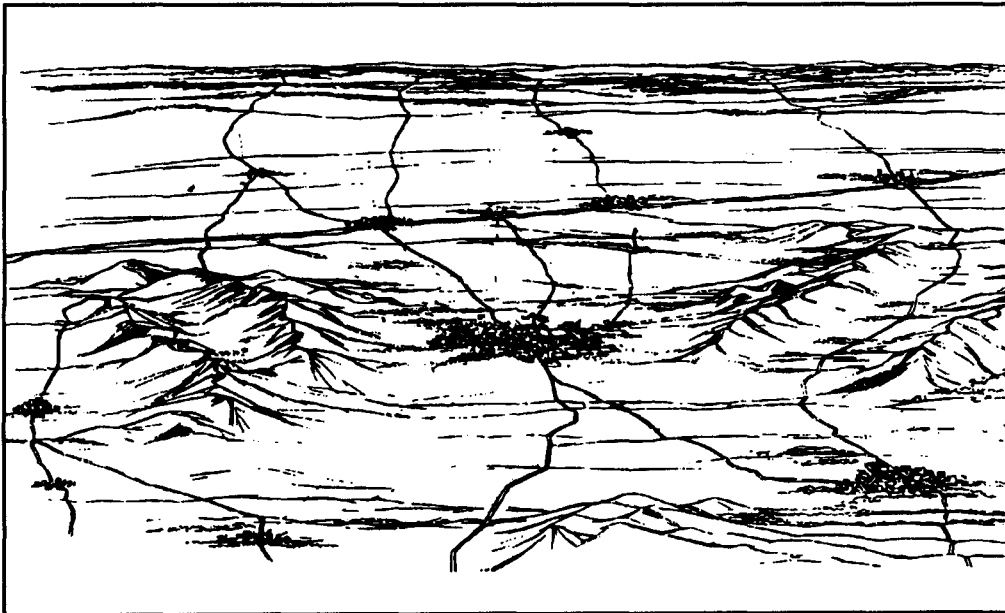
**Table 1-1. Cities contested during twentieth century conflicts.**

a. Operations in built-up areas are conducted to capitalize on the strategic and tactical advantages of the city, and to deny those advantages to the enemy. Often, the side that controls a city has a psychological advantage, which can be enough to significantly affect the outcome of larger conflicts.

b. Even in insurgences, combat occurs in cities. In developing nations, control of only a few cities is often the key to control of national resources. The city riots of the 1960's and the guerrilla and terrorist operations in Santo Domingo, Caracas, Belfast, Managua, and Beirut indicate the many situations that can result in combat operations in built-up areas.

c. Built-up areas also affect military operations because of the way they alter the terrain. In the last 40 years, cities have expanded, losing their well-defined boundaries as they extended into the countryside. New road systems have opened areas to make them passable. Highways, canals, and railroads have been built to connect population centers. Industries have grown along those connectors, creating "strip areas." Rural areas, although retaining much of their farm-like character, are connected to the towns by a network of secondary roads.

d. These trends have occurred in most parts of the world, but they are the most dramatic in Western Europe. European cities tend to grow together to form one vast built-up area. Entire regions assume an unbroken built-up character, as is the case in the Ruhr and Rhein Main complex. Such growth patterns block and dominate the historic armor avenues of approach, or decrease the amount of open maneuver area available to an attacker. It is estimated that a typical brigade sector in a European environment will include 25 small towns, most of which would lie in the more open avenues of approach (Figure 1-1).



**Figure 1-1. Urban areas blocking maneuver areas.**

e. Extensive urbanization provides conditions that a defending force can exploit. Used with mobile forces on the adjacent terrain, antitank forces defending from built-up areas can dominate avenues of approach, greatly improving the overall strength of the defense.

f. Forces operating in such areas may have elements in open terrain, villages, towns, or small and large cities. Each of these areas calls for different tactics, task organization, fire support, and CSS.

#### **1-4. THE THREAT IN BUILT-UP AREAS**

The Commonwealth of Independent States and other nations that use Soviet doctrine have traditionally devoted much of their training to urban combat exercises. Indications are that they believe such combat is unavoidable in

future conflicts. But, the threat of combat in built-up areas cannot be limited to former Soviet doctrine. Throughout many Third World countries, the possibility of combat in built-up areas exists through acts of insurgents, guerrillas, and terrorists. (Information on operations in this environment is found in the reference list.)

## Section II. CHARACTERISTICS AND CATEGORIES OF BUILT-UP AREAS

One of the first requirements for conducting operations in built-up areas is to understand the common characteristics and categories of such areas.

### 1-5. CHARACTERISTICS

Built-up areas consist mainly of man-made features such as buildings. Buildings provide cover and concealment, limit fields of observation and fire, and block movement of troops, especially mechanized troops. Thick-walled buildings provide ready-made, fortified positions. Thin-walled buildings that have fields of observation and fire may also be important. Another important aspect is that built-up areas complicate, confuse and degrade command and control.

a. Streets are usually avenues of approach. However, forces moving along streets are often canalized by the buildings and have little space for off-road maneuver. Thus, obstacles on streets in towns are usually more effective than those on roads in open terrain since they are more difficult to bypass.

b. Subterranean systems found in some built-up areas are easily overlooked but can be important to the outcome of operations. They include subways, sewers, cellars, and utility systems (Figure 1-2).

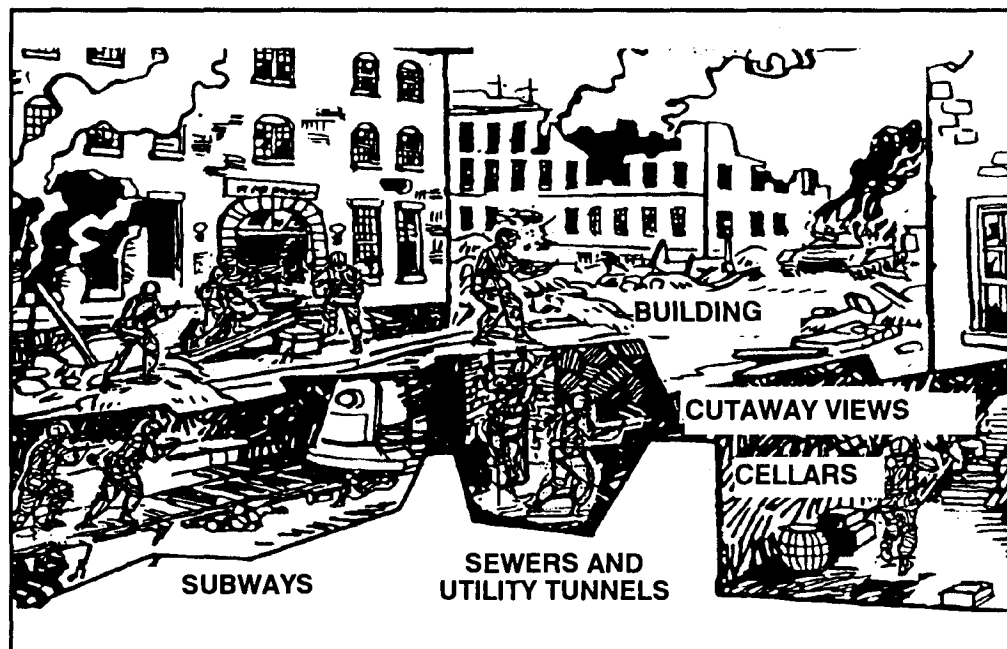


Figure 1-2. Underground systems.

## 1-6. CATEGORIES

Built-up areas are classified into four categories:

- Villages (population of 3,000 or less).
- Strip areas (urban areas built along roads connecting towns or cities).
- Towns or small cities (population up to 100,000 and not part of a major urban complex).
- Large cities with associated urban sprawl (population in the millions, covering hundreds of square kilometers).

Each area affects operations differently. Villages and strip areas are commonly encountered by companies and battalions. Towns and small cities involve operations of entire brigades or divisions. Large cities and major urban complexes involve units up to corps size and above.

## Section III. SPECIAL CONSIDERATIONS

Several considerations are addressed herein concerning combat in built-up areas.

### 1-7. BATTLES IN BUILT-UP AREAS

Battles in built-up areas usually occur when—

- A city is between two natural obstacles and there is no bypass.
- The seizure of a city contributes to the attainment of an overall objective.
- The city is in the path of a general advance and cannot be surrounded or bypassed.
- Political or humanitarian concerns require the seizure or retention of a city.

### 1-8. TARGET ENGAGEMENT

In the city, the ranges of observation and fields of fire are reduced by structures as well as by the dust and smoke of battle. Targets are usually briefly exposed at ranges of 100 meters or less. As a result, combat in built-up areas consists mostly of close, violent combat. Infantry troops will use mostly light and medium antitank weapons, automatic rifles, machine guns, and hand grenades. Opportunities for using antitank guided missiles are rare because of the short ranges involved and the many obstructions that interfere with missile flight.

### 1-9. SMALL-UNIT BATTLES

Units fighting in built-up areas often become isolated, making combat a series of small-unit battles. Soldiers and small-unit leaders must have the initiative, skill, and courage to accomplish their missions while isolated from their parent units. A skilled, well-trained defender has tactical advantages over the attacker in this type of combat. He occupies strong static positions, whereas the attacker must be exposed in order to advance. Greatly reduced line-of-sight ranges, built-in obstacles, and compartmented terrain require the commitment of more troops for a given frontage. The troop density for both an attack and defense in built-up areas can be as much as three to five

times greater than for an attack or defense in open terrain. Individual soldiers must be trained and psychologically ready for this type of operation.

### **1-10. MUNITIONS AND SPECIAL EQUIPMENT**

Forces engaged infighting in built-up areas use large quantities of munitions because of the need for reconnaissance by fire, which is due to short ranges and limited visibility. LAWs or AT-4s, rifle and machine gun ammunition, 40-mm grenades, hand grenades, and explosives are high-usage items in this type of fighting. Units committed to combat in built-up areas also must have special equipment such as grappling hooks, rope, snaplinks, collapsible pole ladders, rope ladders, construction material, axes, and sandbags. When possible, those items should be either stockpiled or brought forward on-call, so they are easily available to the troops.

### **1-11. COMMUNICATIONS**

Urban operations require centralized planning and decentralized execution. Therefore, communications plays an important part. Commanders must trust their subordinates' initiative and skill, which can only occur through training. The state of a unit's training is a vital, decisive factor in the execution of operations in built-up areas.

a. Wire is the primary means of communication for controlling the defense of a city and for enforcing security. However, wire can be compromised if interdicted by the enemy.

b. Radio communication in built-up areas is normally degraded by structures and a high concentration of electrical power lines. Many buildings are constructed so that radio waves will not pass through them. The new family of radios may correct this problem, but all units within the built-up area may not have these radios. Therefore, radio is an alternate means of communication.

c. Visual signals may also be used but are often not effective because of the screening effects of buildings, walls, and so forth. Signals must be planned, widely disseminated, and understood by all assigned and attached units. Increased noise makes the effective use of sound signals difficult.

d. Messengers can be used as another means of communication.

### **1-12. STRESS**

A related problem of combat in built-up areas is stress. Continuous close combat, intense pressure, high casualties, fleeting targets, and fire from a concealed enemy produce psychological strain and physical fatigue for the soldier. Such stress requires consideration for the soldiers' and small-unit leaders' morale and the unit's esprit de corps. Stress can be reduced by rotating units that have been committed to heavy combat for long periods.

### **1-13. RESTRICTIONS**

The law of war prohibits unnecessary injury to noncombatants and needless damage to property. This may restrict the commander's use of certain weapons and tactics. Although a disadvantage at the time, this restriction may be necessary to preserve a nation's cultural institutions and to gain the support of its people. Units must be highly disciplined so that the laws of land warfare and ROE are obeyed. Leaders must strictly enforce orders against looting and expeditiously dispose of violations against the UCMJ.

## 1-14. FRATRICIDE AVOIDANCE

The overriding consideration in any tactical operation is the accomplishment of the mission. Commanders must consider fratricide in their planning process because of the decentralized nature of execution in the MOUT environment. However, they must weigh the risk of fratricide against losses to enemy fire when considering a given course of action. Fratricide is avoided by doctrine; by tactics, techniques, and procedures; and by training.

a. **Doctrine.** Doctrine provides the basic framework for accomplishment of the mission. Commanders must have a thorough understanding of US, joint, and host nation doctrine.

b. **Tactics, Techniques, and Procedures.** TTP provide a “how-to” that everyone understands. TTP are disseminated in doctrinal manuals and SOPs.

(1) **Tactics.** Tactics is the employment of units in combat or the ordered arrangement and maneuver of units in relation to each other and or the enemy in order to use their full potential.

(2) **Techniques.** Techniques are the general and detailed methods used by troops or commanders to perform assigned missions and functions. Specifically, techniques are the methods of using weapons and personnel. Techniques describe a method, but not the only method.

(3) **Procedures.** Procedures are standard, detailed courses of action that describe how to accomplish a task.

(4) **Planning.** A simple, flexible maneuver plan that is disseminated to the lowest level of command will aid in the prevention of fratricide. Plans should make the maximum possible use of SOPs and battle drills at the user level. They should incorporate adequate control measures and fire support planning and coordination to ensure the safety of friendly troops and allow changes after execution begins.

(5) **Execution.** The execution of the plan must be monitored, especially with regard to the location of friendly troops and their relationship to friendly fires. Subordinate units must understand the importance of accurately reporting their position.

c. **Training.** The most important factor in the prevention of fratricide is individual and collective training in the many tasks that support MOUT.

(1) **Situational awareness.** Well-trained soldiers accomplish routine tasks instinctively or automatically. This allows them to focus on what is happening on the battlefield. They can maintain an awareness of the relative location of enemy and friendly forces.

(2) **Rehearsal.** Rehearsal is simply training for the mission at hand. Commanders at every level must allow time for this critical task.

(3) **Train to standard.** Soldiers that are trained to the Army standard are predictable. This predictability will be evident to any NCO or officer who may be required to lead them at a moments notice or who is observing their maneuvers to determine if they are friend or foe.