The following analysis was undertaken at the request of the Commanding General, Marine Corps Warfighting Laboratory (MCWL), Quantico, Virginia. The project had three primary components:

- Identify service shortfalls in the area of urban combat ground reconnaissance.
- Evaluate experimental work being conducted by the MCWL in the above area.
- Provide input to assist in the creation of tactics, techniques, and procedures (TTP) for the subject area.

The focal period for the analysis is the immediate future, out to approximately five years from the present. The level of concern is tactical as opposed to operational or strategic, though the three are continuously interdependent, and there will thus be operational and strategic implications of the following discussion. While technological considerations were to be a part of the final product, they were not to dominate.

This report incorporates research and analysis in support of the first and third tasks identified above. The research and analysis involving the second will appear as a separate document.

The methodology employed involved literature searches of pertinent English language publications, including but by no means limited to doctrinal manuals for the U.S. Marine Corps (USMC), U.S. Army, and British Army. An extensive interview program complemented these investigations of written sources. A common characteristic among
most of those to whom the authors spoke was either operational
urban reconnaissance experience or assignments in Marine Corps
reconnaissance units.

Little exists in the way of written guidance for those undertaking
these missions. Training experience is very limited. Fortunately,
lessons can be drawn from several events, including combat in 1968
Hue, 1973 Suez City, and Grozny at the recent turn of the century.
British operations in Northern Ireland, despite their being character-
ized by stability missions, also provided significant insights. The
amount of thought given to the subject by those serving in Marine
reconnaissance units was notable. None felt himself an expert in the
field of urban combat ground reconnaissance, yet the quality of
responses during interviews reflected that the officers and non-
commissioned officers confronted with the potential of commitment
to these contingencies were actively debating the issues among
themselves. Interviewers heard many of the same shortcomings
whether speaking to Marines at Camp Pendleton, California, or men
at Camp Lejeune, North Carolina. Their recommendations found
common ground with those forwarded by men who have led men in
urban combat.

That urban reconnaissance will be an increasingly needed skill is
evident to any who look at the world's population growth trends and
recent U.S. military commitments. That urban operations' demands
differ from many confronted on other terrain is evident with but a
cursory look. First, the density of people—friendly forces of several
nations, enemy personnel, and noncombatants—is greater than is
the norm elsewhere. Cultural awareness is always desirable. In
urban areas, it will be essential. The information provided by recon-
naissance personnel cannot be properly interpreted in ignorance of
local social mores. The opportunity for compromise of teams as they
move about this terrain or even after occupation of well-selected
hides is greater because more people occupy less space. Much
interconnectedness can be found within villages, towns, and cities.
As the size and complexity of the urban area increases, difficulty in
understanding the inanimate physical and social infrastructures
grows dramatically. For example, power distribution, transportation,
and communications systems can be enormous, while medical care,
religious influences, and power relationships take on a new impor-
tance for the combatant. Various military activities will also interact
in ways or to a degree not often confronted on other terrain. Regular and covert forces may find themselves occupying the same terrain. Coordination between responsible headquarters will be essential to minimize fratricide. The task is more difficult if the various elements are from different services or nations.

However, the density of participants has its advantages. More U.S. and multinational coalition personnel mean that more potential sources of information are in a given area. Private volunteer organizations and nongovernmental organizations (PVOs and NGOs) similarly offer means of better understanding the environment, in particular how noncombatant behavior might be influenced to reduce the dangers of inadvertent casualties in that group. This is no small matter. Roughly 100,000 Filipinos lost their lives during the fight to retake Manila during World War II.

These difficulties challenge all Marine Corps reconnaissance units. With a dearth of written doctrine, individual Marines question how they will infiltrate, exfiltrate, and evacuate casualties during combat missions. They ask how they are to communicate information in an environment where buildings block radio transmissions to such an extent that headquarters only five kilometers distant may not be in contact. As training sites lack much in the way of what actual developing nations’ cities present, these men question whether equipment effective elsewhere will be reliable when employed from asphalt and concrete rather than dirt and rock. Shortfalls are extensive—they encompass every aspect of Marine Corps operations. Finding solutions under fire is the least-preferred method of determining the TTP that will bring success.

The complexity of potential solutions matches that of the challenges. An effort to lend some coherence to the discussion of how to address urban reconnaissance led to the formation of four primary themes:

- The urban environment demands almost constant creative adaptation. Its inherent character, compression of space, and related close proximity of participating parties necessitates rapid adjustments in reaction to adversary behavior or to influence that behavior to favor friendly force objectives.
- Tactical ground reconnaissance is a system of systems within a system.
Urban operations impose extraordinary leadership, training, task organization, and personnel management demands.

The urban environment makes special demands on equipment and technology. Testing in rural environments does not constitute testing for urban operations.

The nature of urban competition is such that adaptation can occur more quickly than in environments with lesser densities and slower and fewer means of communicating. Therefore, Marine solutions must have an inherent flexibility. The successful tactic of yesterday will be adroitly countered today. Less important than finding the optimum tactic, technique, or procedure is the creation of individual, groups, or families of TTP that can be molded to meet specific situational needs. These can then be used in combination and various sequences. An obvious requirement also exists for command and control structures that permit both real-time and predictive adaptation.

Urban combat ground reconnaissance’s status at the tactical level as a system within a larger system of reconnaissance activities is readily apparent. Consistently viewing it as such during analysis aids in understanding the extent to which any TTP must be developed in the service of a much larger information-collection and intelligence system. Tactical ground reconnaissance is essential because it provides input to this larger system that either is otherwise unattainable or provides essential redundancy. TTP developments that ignore this larger perspective are of little value. Similarly, the capabilities that together constitute Marine Corps tactical ground reconnaissance must function together for the good of the whole. One aspect of this complementary interaction is the traditional view of Surveillance and Target Acquisition (STA), divisional reconnaissance, and force reconnaissance assets as being the close-in, interim distance, and deep assets, respectively. If one accepts that all three of these elements have a role to play in a Marine Corps reconnaissance system (and not everyone shares that sentiment), then it lends perspective to two long-standing and heated debates: (1) the role of STA teams as primarily reconnaissance versus shooter capabilities and (2) force reconnaissance as fundamentally a direct action organization.
A thorough consideration of Marine Corps urban reconnaissance requirements has fundamental organizational structure, leadership, and training implications. Long-standing assumptions regarding team size are a subject of considerable debate among those in reconnaissance battalions and force reconnaissance units. The difficulty of succeeding during urban infiltration drives some to a belief that smaller teams should be the standard—that one or two men rather than four or more is appropriate. Others recognize the undoubted advantages in stealth that fewer numbers bring, but they are concerned that sacrifices in load-carrying capability, security, and ability to defend the team outweigh the benefits. (Some believed one-man missions were desirable; others felt as many as 12 Marines should be the norm for a reconnaissance team.) What was ultimately apparent was that team size will be mission dependent. That much does not distinguish urban reconnaissance from those on other terrains. It is the greater frequency with which missions could dictate use of other than six-man teams that delineates actions in built-up areas, just as this frequency will influence command and control, munitions and weapons carried, and the time needed for accomplishing assigned tasks.

Density of forces and noncombatants, line-of-sight interruption, reflection of sound off hard surfaces, and other urban characteristics suggest that reconnaissance units operating in urban areas will sometimes require materiel different from that used elsewhere. The manner in which commanders employ complementary systems, such as ground reconnaissance and unmanned aerial vehicles (UAVs), will need reevaluation. The technological inability to see, and to some extent hear, through walls will force constant assessment of risk to reconnaissance personnel: Is the enhancement in situational awareness gained by entering a structure worth the considerable increase in risk to those having to make that entry? Specific technological needs will become increasingly available as the Marine Corps becomes more familiar with the demands of urban operations. Adapting equipment largely designed for other environments will tend to be the rule in the mean time.

Urban operations are manpower-intensive. Their character also makes them casualty-intensive. Much can be done to prepare Marine reconnaissance better for such operations in the roughly half a decade that is of interest for this report. Few of those improve-
ments will permit a significant reduction in the raw numbers of reconnaissance Marines and other Marines committed to city interiors, however. The risk of large numbers of wounded and killed will remain until means are found to perform remotely the tasks that only these men can currently accomplish. Developing urban reconnaissance TTP will have immediate and significant benefits for the force. Linking that initial effort to a more long-range vision that incorporates new technologies allowing fewer Marines to be put in harm’s way will magnify the influence of those initiatives.