Like civilian personnel, civilian buildings and towns normally have a protected status—for example, they are not legitimate targets. Buildings and towns lose their protected status if the appropriate authorities determine that the enemy is using them for military purposes. If doubt exists as to whether a town or building is defended, that doubt should be settled by reconnaissance—not by fire.

British Army *Urban Operations* Field Manual

Urban reconnaissance is an open book. . . . If you haven’t gone out and performed urban reconnaissance . . . you need to go out and perform a series of experiments to determine what is needed.

LtGen G. R. Christmas, USMC (Ret.)

The column moved rapidly down the city avenue, tank battalion leading and two mounted infantry units following. The infantry were unusually equipped, the first of the two units riding in captured BTRs,¹ the next in half-tracks and trucks. It was many days into the war, and some innovative requisitioning had been called for given the distances covered, number of vehicles lost, and ad hoc nature of some units.

The urban area had little tactical value here in the closing days of the conflict, but its strategic value was considerable. The Egyptians’ lines of supply ran from its buildings and through its streets. Deny-

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¹Wheeled personnel carriers from the former Warsaw Pact.
Honing the Keys to the City

ing them the built-up area meant that an entire corps would be stranded in the desert without means of replenishment (Zaken, 2000). Its loss would force their negotiators into the embarrassing situation of having to surrender more at the bargaining table or watching thousands of their soldiers wither under the glare of the desert sun and the international media’s spotlight.

The responsible division commander asked his immediate superior whether he should attack into the urban area. He was directed to do so “provided it does not become a Stalingrad situation” (Adan, 1980, p. 409). In retrospect, the Israeli attack on the objective, Suez City, would be far more akin to that infamous World War II battle than any would have imagined. In a war known as yet another stunning Israeli victory, the Battle for Suez “proved to be a very grave error indeed” (Herzog, 1985, p. 282).

The mission to lead the attack fell to Lt. Col. Nachum Zaken’s armored battalion. The lack of a reconnaissance effort was thought in retrospect to be a, perhaps the, crucial element in the Israeli defeat. The battalion commander himself would observe that “when you are talking about [operations in] cities . . . you must study every street, every situation, every government building. . . . If you study the city, you can maneuver. If not, it is a matter of luck” (Zaken, 2000).² To have gotten a good study of Suez before the operation would have taken five to six hours in Zaken’s estimate, still leaving time to attack before the implied suspense of seven the next morning when a cease-fire was to take effect.

The battalion commander had only a 1:50,000-scale map of the city. No air photography was available. Colonel Zaken therefore lacked information on the width of roads, size of buildings, and other crucial details. He asked if he had artillery and air support. Much of the city’s civilian population had departed in the years before during the exchanges of artillery fire, commando raids, and air strikes that became known as the War of Attrition.³ Nevertheless, political sensitivity caused military leaders to restrict the use of supporting air

²The interview with General Zaken is the primary source for this description of the battle for Suez City.
³For a concise synopsis of the War of Attrition, see Herzog (1975, pp. 7–12).
and ground fires. No significant resistance was expected. The adversary was known to have forces in the city, but they were thought to be scattered, lacking in cohesion, challenged in leadership, and suffering the same collapse of morale as had much of the already defeated army. “But,” Colonel Zaken recalled, “there was a mistake.” The Egyptians had sent a skilled commander into the city with the mission to defend it. “I don’t think they made real preparations. They didn’t have the time . . . but it was enough” (Zaken, 2000).

The Egyptian leader had arrayed many of his defenders along the avenue that Zaken’s force would use to conduct its attack. Concrete walls 80 centimeters high lined both the sides of that road. If a vehicle was hit and rendered immobile, these walls meant it was very likely that none behind could pass until it was moved. The tankers and their trailing infantry would find that it took several efforts and five to ten minutes to breach the walls and bypass immobile vehicles, the men forcing the breach suffering incoming enemy fire for the duration of the frantic efforts. A lack of appropriate maps, overhead imagery, and ground reconnaissance denied the attackers information regarding the foe’s dispositions, conditions along the attack route, and other intelligence that would have had a fundamental influence on the planning and execution of the mission.

The attack axis led from the north of the urban area to its central area, Port Ibrahim. The armored battalion moved out between 0830 and 0900, October 23, 1973, with roughly 40 vehicles. Between 40 and 80 meters separated each member of the long line. The column was roughly two kilometers long by their battalion commander’s estimate. The tankers’ mission was to seize the main street of Suez as far as the port, after which the two trailing infantry battalions would clear the remainder of the built-up area. Looking back, given the size of the city and the level of resistance, Colonel Zaken concluded that “it was impossible” (Zaken, 2000).

There was no resistance as the column passed the buildings on the outskirts of Suez, no sign of the enemy. Such was not the case for long. Small-arms fire began to strike Israeli tanks and their armored

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4 The military situation was further complicated by the fact that it was the third cease-fire that was pending, two earlier having collapsed (Zaken, 2000; Adan, 1980, p. 410).
Honing the Keys to the City

infantry companion vehicles some 500 meters from the city’s outer edge as the density of structures increased. The Israelis continued to advance; Colonel Zaken’s the third vehicle in line, those of a company commander and the company second in command immediately in front of him. Heavy fire from virtually all directions suddenly impacted the column approximately a kilometer past the first building. Zaken, at this time roughly 100 meters behind the lead vehicle, received casualty reports in rapid succession. Within minutes virtually every company, platoon, and tank commander had been killed or wounded. (All had been traveling with their upper bodies out of their tank hatches.) The tank immediately to the front of Zaken’s erupted as it suffered a catastrophic kill, the tank exploding, its turret blown off its chassis. The battalion commander’s vehicle rammed the stricken vehicle from behind, throwing Zaken out of his hatch and onto the street. Aware of the target a stationary tank offered, he frantically signaled his driver to keep moving and climbed aboard as the vehicle managed to force its way past the hulk to its front.

Survivors came on the battalion command net, crying in the clear that their comrades lay dead or wounded in great numbers. Some units had suffered as many as 10 killed in a single vehicle. Colonel Zaken had to make a decision: Should he continue the attack toward Port Ibrahim or pull back along the way his force had come? The latter would be difficult because of the number of vehicles destroyed or immobilized that blocked the road. Yet to continue with sporadic communications, his chain of command in tatters, and no idea of what lay ahead was to risk further casualties and disintegration of the force into many mutually unsupporting fragments. The battalion commander decided to forge ahead, making his intentions known with hand and arm signals for those without radio communications.

The lead elements of the armor battalion reached their destination by early afternoon. The battalion headquarters set up in the city square some four kilometers into the built-up area. Remaining armored vehicles and trailing infantry units were spread out on both sides of the road for nearly the entirety of that distance. Maps were insufficient to support calls for fire. The height of surrounding buildings prevented the sight of artillery spotting rounds. Israeli artillery at one point hit Zaken’s armored force as it sat on its objective. Egyptian units continued their attacks; complete destruction threatened the three Israeli battalions. There were no surviving
medics and no medical supplies beyond those in vehicle aid boxes (which many soldiers did not know how to use effectively). Few men were unwounded. Some tanks had completely exhausted their ammunition. Many knocked out earlier were virtually full, but cross loading was impossible with the continuing incoming fire. Surviving tanks with rounds remaining defended each other by engaging targets on the side of the road opposite themselves, thus taking advantage of the relative standoff distance to achieve greater effect from the elevation of their gun tubes. As most buildings were from four to eight stories high, tanks immediately next to a structure could not raise their main gun barrels sufficiently to engage targets on the upper floors and roofs.

There was still little understanding of the enemy’s strength or capabilities. The Egyptian soldiers employed hand grenades, rocket-propelled grenades (RPGs), and machine guns to continued telling effect. Any vehicle turning down side streets immediately lost radio contact. Without help from comrades, it would fall victim to attacks from all sides and above.

Again using hand and arm signals, Colonel Zaken ordered all survivors to assemble in the city square around him. By 1800 the battalion commander’s only means of collecting coherent situation reports was to send a runner north and west along the main streets to assess the situation. The unit eventually moved out of Suez to the southwest (Zaken, 2000). The survivors of the two supporting infantry battalions exfiltrated on foot, leaving their vehicles behind and returning to Israeli lines north of Suez under the cover of darkness (Hisdai, 2000). Attacking Suez City without conducting a preliminary reconnaissance had indeed “proved to be a very grave error.”

As will be discussed in far greater detail in Chapter Two, a review of current U.S. Marine Corps (USMC) doctrine reveals that it provides very little guidance regarding urban reconnaissance operations. The service is not unique in this regard. Little coverage appears in the nation’s Army manuals or in those for foreign English-speaking militaries. Interestingly, the very limited doctrine that does exist is written for the U.S. Army’s Interim Brigade Combat Team (IBCT) and is in draft form as of this writing.
Generic reconnaissance doctrine, that applying regardless of the terrain, is, fortunately, far better established. It provides a solid base for the future development of the Marine Corps urban-specific guidance. Yet while the foundation is solid, much of what has yet to be built will differ from what is appropriate for reconnaissance operations in rural environments. Villages, towns, and cities; military installations and training facilities; and stand-alone buildings and underground complexes all present very different, perhaps even unique, challenges for the reconnaissance Marine. The discussion and analysis that follow address these formidable tasks with the objective of supporting the adaptation so vital to operational success.

Improvements are possible within the scope of evolution. No general call for revolutionary change has arisen simply because the environment is an urban one. There is therefore no need to contemplate a sea change in operational doctrine and in the acquisition, training, and organizational structures driven, or at least influenced, by that doctrine. That is not to say that improving USMC preparedness to conduct urban reconnaissance operations will not involve difficult decisions. Several "sacred cows" require revalidation if they are to be retained.

The primary focus of this report is USMC tactical urban ground reconnaissance conducted during combat operations. Aviation operations receive attention only as they directly affect ground reconnaissance undertakings. "Tactical" reconnaissance, for the purposes of this report, is that with direct application to tactical operations. The echelons receiving the bulk of consideration are Surveillance and Target Acquisition (STA) teams, units in the divisional reconnaissance battalion, and force reconnaissance assets. Emphasis is on near-term improvements—those attainable within the next half-decade and influenced by technologies either available or very nearly so. Technological enhancements are not ignored, but primacy is given to doctrinal, leadership, organizational, and training issues.

“Reconnaissance” as used herein is

a mission undertaken to obtain, by visual observation or other detection methods, information about the activities and resources of an enemy or potential enemy, or to secure data concerning the
meteorological, hydrographic, or geographic characteristics of a particular area. (JP1-02, 2002, p. 365.)

Further, Marine Corps doctrine recognizes four basic types of reconnaissance: route, area, zone, and force-oriented.\(^5\)

Route reconnaissance is a directed effort to obtain detailed information of a specified route and all terrain which the enemy could influence movement along that route. . . . [It] is focused along a specific line of communication, such as a road, railway, or waterway, to provide new or updated information on route conditions and activities along the route.

An area reconnaissance is a directed effort to obtain detailed information concerning the terrain or enemy activity within a prescribed area, such as town, ridge line, woods, or other features critical to operations. An area reconnaissance can be made of a single point, such as a bridge or installation.

A zone reconnaissance is a directed effort to obtain detailed information concerning all routes, obstacles (to include chemical or radiological contamination), terrain, and enemy forces within a zone defined by boundaries. A zone reconnaissance normally is assigned when the enemy situation is vague or when information concerning cross-country trafficability is desired.

A force-oriented reconnaissance is focused not on a geographic area but on a specific fighting organization, wherever it may be or go.

Reconnaissance and surveillance are separate entities, though surveillance activities can be and often are a part of reconnaissance operations. It is notable that the definition of surveillance (“the systematic observation of aerospace, surface or subsurface areas, places, persons, or things, by visual, aural, electronic, photographic, or other means”) includes a demographic component (“persons”) whereas that for reconnaissance does not.\(^6\) Further, reconnaissance is by definition exclusively related to “the activities and resources of an enemy or potential enemy.” The definition should be revised to

\(^{5}\)Definitions are from MCWP 2-15.3, 2002, pp. 1-1–1-2.

\(^{6}\)The definition for “surveillance” is from JP1-02, 2002, p. 422.
encompass both other-than-combat scenarios and noncombatant considerations. It is noteworthy that Marine reconnaissance units have repeatedly demonstrated their value during stability and support missions in which combat and enemies per se did not exist. Nonetheless, mission requirements mandated collection of information regarding parties with interests that might conflict with or be complementary with those of the United States and its coalition partners.

A final extract from basic Marine ground reconnaissance doctrine serves to emphasize the importance of much of the discussion that follows. Being aware of the “Fundamentals of Ground Reconnaissance” as one considers the analysis presented helps readers to understand how reconnaissance in support of urban operations both demonstrates these basic truths and is at times in tension with other mission demands. These fundamentals are as follows:7

- Ground reconnaissance supports the commander’s intent and his priority intelligence requirements.
- Ground reconnaissance generally provides highly reliable intelligence information.
- Reconnaissance assets are best employed early to support situation development and friendly course of action development and selection.
- Reconnaissance assets are best employed in general support.
- Reconnaissance requires adequate time for detailed planning and preparation.
- Reconnaissance requires adequate time for execution.
- Reconnaissance must be integrated into the overall intelligence operations plan.
- Effective reconnaissance integrates reconnaissance and intelligence-collection planning.

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7The fundamentals of ground reconnaissance can be found in MCWP 2-15.3, 2002, pp. 1-7–1-12.
• Reconnaissance forces should orient on the enemy to gain and maintain contact.
• The best ground reconnaissance asset should be employed for each specific task.
• Reconnaissance relies on stealth, maneuver, and timely and accurate intelligence reporting.
• An evolving tactical situation requires flexible reporting to the supported command.

This analysis seeks to provide better understanding and improve USMC urban ground combat reconnaissance by first identifying relevant areas in which enhancement is called for and, second, by considering how to achieve those improvements. The latter step is organized into four thematic areas that assist in identifying the character of both the challenges confronting the USMC and potential means of overcoming those challenges. These four thematic areas are:

• The urban environment demands almost constant creative adaptation. Its inherent character, compression of space, and related 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 management demands.
• The urban environment makes special demands on equipment and technology. Testing in rural environments does not constitute testing for urban operations.

Chapter Two considers current USMC ground urban reconnaissance deficiencies. These shortfalls appear under one of four headings: doctrine; training; organizational structure, manning, and personnel management; and materiel. Specific shortfalls and observations are the products of a review of pertinent literature, interviews with both retired and active-duty Marines and other persons with relevant experience, and extensive analysis of previous studies regarding mili-
tary urban operations. The reader may occasionally find this chapter a somewhat bumpy ride. By their very nature, the results cover the entirety of the urban reconnaissance subject area. Some findings are related, making their discussion and analysis easy for author and reader alike. Others are less amenable to reader-friendly presentation, not fitting neatly into any one of the above headings and requiring an assist from a literary shoehorn to make their presentation palatable. The authors have made every effort to retain both clarity and a readable style in these sections, but where style and clarity were in tension, the needs of clarity ruled the day.

To help in the identification of specific urban reconnaissance shortcomings, the major component of each shortfall is presented in boldface type. For ease of reference, the Appendix presents a concise summary of the material shown in bold without its accompanying explanatory material.

The bulk of subsequent analysis takes each of the thematic areas in turn as the basis for considering what is needed as the Marine Corps develops urban ground reconnaissance tactics, techniques, and procedures (TTP) for use during combat operations. The consideration attempts to avoid taxing the reader with a recitation of the obvious. It does not address existent TTP with obvious direct application to urban contingencies. Rather, the objective is to identify and investigate needs unique to or notably influenced by the demands of operating in urban environments.

Every insight into the adversary’s dispositions, capabilities, or intent further supports efforts to impose the friendly force’s will on the enemy while bettering the chances that Marines survive the mission unscathed. The men in Colonel Zaken’s attacking column paid the penalty for a failure to conduct effective urban reconnaissance. Alternatively, good urban reconnaissance and the units that perform it can be the keys to battles won and lives saved. The purpose of what follows is to assist in honing the implement that conducts the mission.