The authors would like to thank the following individuals for their contributions to this study.

Lt Gen Norton Schwartz, then–Director of Strategic Planning, Headquarters U.S. Air Force (USAF), was the study sponsor. We very much appreciate his interest, enthusiasm, and helpful guidance as the project evolved. Col Robert Stephan and Maj Jeff Newell were the study action officers. They were extremely helpful on both the substance of the research and administrative support. Bob’s tireless efforts to get this work to key audiences and Jeff’s assistance in setting up a visit to the 16th Special Operations Wing (SOW) are especially appreciated.

We are grateful to GEN John Tilelli, U.S. Army (USA), Commander in Chief, U.S. Forces Korea; Gen Patrick Gamble, USAF, Commander, Pacific Air Forces; MG William Lennox, USA, Director of Operations, U.S. Forces Korea; and Maj Gen Steven Polk, USAF, then–Director of Operations, Pacific Air Forces, for sharing their observations and thoughts on urban operations during a project trip to the Pacific theater in June 1999.

At Air Force Special Operations Command, we want to thank Capt Tyler Sheppard, who helped arrange our visit to the 16th SOW. Within the wing, we want to thank Lt Col Mark Transue, Commander of the 16th Special Operations Squadron (SOS), for hosting our visit. Lt Col Greg McMillan, Director of Operations, 16th SOS, and Maj Greg Jerrell, Assistant Director of Operations, were extremely generous with their time, spending many hours with our team discussing AC-130 operations in the urban setting. Thanks are due to
Capt Smith and the crew of Spectre 62 for taking a project team member along on a 4-hour AC-130 training mission that included a live-fire exercise, as well as a dry-fire urban exercise. Maj Jerrell also kindly acted as escort during this flight. We also want to thank officers and NCOs from both the 16th and 20th Special Operations Squadrons who spoke with us about their real-world flying experiences in Panama, Somalia, and Liberia. Finally, MSgt Tim Wilkinson and TSgt Jeff Bray, veterans of the most ferocious small-unit action the United States has seen since the Vietnam War, shared their insights about “Bloody Sunday” in Mogadishu.

Others in the USAF who provided helpful comments include Lt Col Hank Andrews, Lt Col Mike Condray, Lt Col Phil Smith, and Maj John Hicks. Maj Jeffrey Walker, HQ USAF/JAG (Judge Advocate General), kindly arranged a very informative meeting with other JAG officers to discuss law-of-armed-conflict issues in the urban setting.

We also would like to thank the following individuals for their assistance in providing documentary materials relating to aerospace power’s contribution to past urban operations: Dr. Wayne Thompson and Ms. Yvonne Kinkaid (Air Force History Support Office); Mrs. Essie Roberts and MSgt David A. Byrd (Air Force Historical Research Agency); Drs. Robert K. Wright and Richard Hunt (Army Center for Military History); and SFC Leo Daugherty and Mr. David Crist (Marine Corps Historical Center).

Professor Robert Ellefsen of San Jose State University kindly shared his research on urban terrain zones and provided access to his urban terrain database. Dr. Mark Shulman and Bob Haffa provided very helpful comments on parts or all of the draft report.

We are also indebted to the commanding officer of the Israeli Air Force (IAF), Major General Eitan Ben-Eliahu, for his support of a project delegation visit to Israel in early October 1999 in connection with this research and, in particular, to Brigadier General Shlomo Mashiah, head of the IAF Air Division for Helicopters, for sharing his insights on recent IAF experience with air operations against Hezbollah forces in and around the urban environment of southern Lebanon. Col Bill Clark, defense and air attaché and Lt Cols Joe Nichols and Bart Wohl, assistant air attachés, U.S. Embassy, Tel Aviv, kindly assisted with the administrative arrangements for this visit.
For their help in providing a critical sounding board for our ideas during the earliest phase of this study’s formulation, we also wish to acknowledge Terry Stinson, Chairman and CEO; Dick Spivey, Director of Tiltrotor Business Development; and numerous other executives and senior analysts at Bell Helicopter Textron, Inc.

At RAND, we thank Stephen Hosmer, who acted as a senior adviser to the project. Although other commitments kept him from working formally on the project, Stephen participated in project brainstorming sessions, attended meetings with the USAF, and provided detailed comments on our briefing and written products. Other colleagues who helped improve our briefings and report include Dan Byman, Sean Edwards, Scott Gerwehr, Russell Glenn, John Gordon, Glenn Kent, Tom McNaugher, Rich Moore, Dick Neu, David Ochmanek, Don Palmer, Bruce Pirnie, William Rosenau, and David Shlapak.

Jennifer Casey, the Washington Office reference librarian, located data on land-use patterns, urban demographics, and a host of related subjects, and also discovered urban photos for wargaming exercises. Sandra Petitjean converted our PowerPoint graphics to EPS format. Dionne Sanders and Joanna Alberdeston prepared the manuscript. Their enthusiasm, professionalism, and responsiveness are greatly appreciated.

We acknowledge Randy Steeb and Barry Watts, our technical reviewers, for their thorough and insightful reviews, which greatly strengthened the report.

Finally, we thank Marian Branch, our tireless editor, for clarifying, unifying, and sharpening our prose. Her organizational suggestions also greatly improved the report.