

## Preface

Between the spring of 1979 and the summer of 1982, the U.S. Army Corps of Engineers managed a remarkable construction project in Israel's Negev Desert. This effort, carried out in a highly inflationary period and with a supply line thousands of miles long, produced two ultramodern Israeli air bases in a remarkably short time and at a cost that only exceeded original estimates by less than 3 percent. It also contributed directly to peace between Israel and Egypt.

The political stakes were high. At Camp David in 1978, Israel had agreed to relinquish the Sinai peninsula to Egypt, provided that the bases in the Negev were ready to accept the aircraft of the Israeli Air Force before the withdrawal took place. When the time came for the Israelis to leave the Sinai, the bases were in fact operational. The Israelis did withdraw, Egyptian sovereignty was restored to the peninsula, and for the first time in nearly half a century Israel was at peace with its largest and most formidable neighbor. In terms of its objectives, the air base program was a great success.

Demanding conditions, among which the political ramifications were foremost, surrounded the project. The unprecedented withdrawal to which Israel had committed itself awaited completion of the bases. Moreover, at the time, the Camp David accords held some promise as the basis for an enduring settlement of the hostility between Israel and its neighbors—the even thornier problem of a Palestinian homeland and nationality.

Aside from diplomatic considerations, there were other complicating factors. The demands of a tight schedule were magnified by the need to work at remote desert sites. Moreover, the organizational structure divided management between the Corps, the U.S. Air Force, and the Israeli Air Force; and the program had a complex budgetary arrangement in which the United States paid the bulk of the costs but Israel also contributed. The organization—with the Corps working under two program managers, one Israeli and one American—created an interesting and challenging situa-

tion that was unique in the annals of Corps military construction and offered ample opportunity for tension, misunderstanding, and hostility. Of interest for its impact on this program, this arrangement does not provide many lessons that might be useful in subsequent programs, except perhaps that it should not be emulated.

The construction itself did not make this project unique. To be sure, some unusual methods were employed, notably in the aircraft shelter complexes, and Israeli construction practices differed from those normally used by the Americans. However, with few exceptions, construction was largely routine. "It is not a complicated job," Otis Grafa, a civilian manager for the Corps, observed while the work progressed, "it's just a hell of a lot of it."<sup>1</sup> Or, as Lt. Gen. Max Noah rhetorically asked, "How the hell couldn't you make an airfield out there?"<sup>2</sup>

In any case, from a construction standpoint the project has already received considerable study within the Corps of Engineers. Early in the 1980s, when the work in Israel was still in progress and the Corps was active in Saudi Arabia, four documents purporting to convey the lessons of construction in the Middle East appeared. Using different techniques and a wide range of data, they looked at a number of projects with an eye toward what they could teach about military construction in the region. Unfortunately, these by now obscure compilations took a more or less cookbook approach to the projects and put little emphasis on the human dimension of construction management.<sup>3</sup>

In Israel it became clear that the program's most challenging problems involved that very aspect. In any project, whether public or private, foreign or domestic, management theory, constructor organization, computerized information systems, and building technology create the reality of structures only through application by human beings. Their actions, judgments, and choices represent the critical variables. This was certainly true on the air base program: personality conflicts, institutional loyalties, and the tense relations between managers representing different organizations and levels of management within organizations greatly affected the work. Their influence went far beyond what might have been expected for a construction project that seemed so suited to a logical, straightforward approach. Much time and energy were consumed in defending and expanding agency turf and in resolving clashes among competing interests. Overall, the program suffered due to the lack of clear-cut organizational arrangements and also because of the personalities of the individuals involved.

These problems were widely regarded as substantial. Lt. Gen. Bennett L. Lewis, reflecting on an effort that based on the usual

criteria—the job was well done, completed within the tight schedule, and very nearly finished within the budget—was a major success, concluded that “It was a great success, at terrible human cost.”<sup>4</sup> Maj. Gen. William Wray made the same point, albeit less dramatically. Commenting on a draft of this history, he observed that “although management problems, failures and successes make up a large part of the story [as written], the area of interpersonal relationships played a critical part in the difficulties of getting the job done.”<sup>5</sup> In fact, he concluded in retrospect, “I think there is no question but what the relationships among individuals and management personnel was the major problem. That was, without question, the key factor that influenced the execution of the program.”<sup>6</sup>

The problems in the program illustrate the need to consider carefully institutional and individual roles, relationships, and responsibilities. They also show the importance of selecting leaders based on the ability to interact effectively with others as well as for technical qualifications. Choosing the wrong people hinders execution of a mission; selecting the right people helps. As the program raced toward completion and grappled with diverse stresses and strains, it showed substantial doses of both.

While the program faced both help and hindrance, I was luckier. My good fortune started at the top in the Corps of Engineers. Government agencies do not habitually display the foresight to assign a historian to a major project while the work is under way. That the Corps of Engineers took this unusual step in this case was due to the vision of one man. Lt. Gen. John W. Morris, who was the Chief of Engineers when the work in Israel started, insisted that a historian from his Office of History document this important and unusual construction project. With his support, I was able to watch the evolution of the project from the early planning stages until the end of construction in Israel and finally through closeout at Fort Belvoir, Virginia. This proximity to the project gave me the opportunity to meet and talk with many participants, watch the bases themselves actually develop, and make sure that the written record survived.

This narrative and the extensive research collections on which it is based, including the nearly one hundred oral history interviews conducted as part of the research, all result directly from the decision of General Morris. So do the personal and professional gratifications that I derived from the opportunity to do this study. So to him I am particularly grateful.

Once I got started, many people in the Corps of Engineers provided important assistance, whether with making contacts with oth-

ers, locating documents, or just keeping up with what was happening on the project in Israel. At the headquarters, in what was then called the Directorate of Military Programs, these included Bill Augustine, Carl Damico, Tom Koonce, Fred McNeely, Barbara Myerchin, John Reimer, Paul Theuer, and Jim Wharry. Bob Blakeley, then chief of the Office of Administrative Services, to whom my own office reported, was supportive and encouraging. In the New York offices of North Atlantic Division and New York District, I also found help whenever I asked for it from Paul Basilwich, Paul Cherie, Lou Fioto, George Grimes, Ozzie Hewitt, Mike Jezior, David Lipsky, and Al Vinitzky.

On my four research visits to Israel, I also received ample aid. In Tel Aviv, those who helped included Bob Amick, Moshe Bar-Tov, John Brown, Joe Chapla, Lee Graw, Gene Gamble, Jack Gilkey, Paul Hartung, Ailene Jacques, Shirley Jacobson, Tom Kahlert, Karni Kav, Ken Keener, Carol Koplik, Karson Kosowski, Mike Maloney, Harry McGinness, Ed Moore, Jackie Partridge, Janet Sales, Ray Shaw, Alan Shepherd, George Snoddy, Charlie Thomas, Steve West, and Donald Wong. At Ramon, Ann Avenell, Fred Butler, Bud Griffis, Jon Jacobsen, Glenn Lloyd, Bill Parkes, and Paul Taylor were especially helpful; at Ovda, John Blake, Irving Davis, Otis Grafa, Bob Horton, Dick Huggins, Patrick Kelly, John Morris, Nick Moon, Pete Peterson, and Ed Wainwright assisted me.

Most notably, John F. Wall, then a brigadier general and project manager and since retired from the Army as a lieutenant general, made sure that I got what I needed. He assured the cooperation of his staff, tolerated my intrusions into the busy life of the Near East Project Office, and gave me the time I needed for interviews. Without the cooperation of General Wall, along with Brig. Gen. Paul T. Hartung of the United States Air Force and Brig. Gen. Moshe Bar-Tov of the Israeli Air Force, my research in Israel would never have been successful.

While I was with the Corps' history office, I got more than a little help from my friends. John Greenwood, who was the chief through almost the entire development of this history, chose me for the project and was supportive throughout. Marty Reuss, with whom I shared an office through most of the period, was an insightful and intelligent critic. Paul Walker oversaw the processing of my many oral history tapes quickly and efficiently; later, when he became chief of the office he continued to be helpful, as a critic and a friend. Margaret Wales provided any administrative support I needed; and Lisa Wagner organized the project records into a usable collection. Diane Arms managed the editorial work and Kathleen Richardson edited the manuscript. Jim Dayton of the

Humphreys Engineer Center Support Activity, a perfectionist as well as a photographer, reproduced the pictures.

Outside the Corps of Engineers I also found people willing to provide assistance. Thanks go to Haywood Hansell and Wayne Upshur of the Middle East Task Group in the Office of the Secretary of Defense; Fred Pernell of the Washington Regional Archives in Suitland, Maryland; Bill Heimdahl in the Office of Air Force History; Daisy Walker of Defense Security Assistance Agency; and Verina Jordan and Joyce Rhode, first at the Federal Emergency Management Agency and later in the Office of the Secretary of Defense. Naomi Kogon Steinberg also helped me understand some of the nuances of the Israeli press.

At the U.S. Army Center of Military History, I have been fortunate to work with Morris MacGregor, John Elsberg, Catherine Heerin, Arthur S. Hardyman, Diane Arms, and Sherry Dowdy. Without them there would be no book. I would also like to thank contractor Susan Carroll for the index.

Many of the people mentioned above and some others also read and commented on various drafts of the manuscript. For this particularly important service—and especially onerous task—they deserve special recognition. Thanks go to Bill Baldwin, Roger Beaumont, Frank Billiams, Joseph Bratton, Bates Burnell, David Chambers, John Chambers, Paul Cheverie, Carl Damico, Charles Dunnam, Barry Fowle, Gene Gamble, John Gates, Ernest Graves, John Greenwood, Bud Griffis, James Johnson, Bennett Lewis, Glenn Lloyd, Morris MacGregor, Fred McNeely, John W. Morris, Max Noah, Richard Perry, Marty Reuss, Bory Steinberg, Paul Walker, John Wall, and William Wray. All of them helped improve the manuscript; none of them should be blamed for any errors of fact or interpretation in the final product. The views expressed in this book are mine and do not reflect the official policy or position of the Department of Defense or the U.S. government.

Through it all my wife Irene and my son Max remained my best friends. I thank them for that friendship, which still helps me keep my work in proper perspective.

1 November 1991  
Washington, D.C.

FRANK N. SCHUBERT