



WILLIAM D. ALEXANDER

1911–2003

Elected in 1978

“For leadership in organizing complex multidisciplinary engineering projects.”

BY JAMES L. LAMMIE

WILLIAM D. ALEXANDER died on December 9, 2003, at Waccamaw Community Hospital at Murrells Inlet, North Carolina. Bill was elected to the National Academy of Engineering in 1978 in recognition of his contributions to design and construction management for major infrastructure projects in the United States.

Bill was born on June 20, 1911, in Charlotte, North Carolina. He graduated from Central High School in Charlotte. He then attended Virginia Military Institute, earning a bachelor of science degree in chemistry in 1934. He later obtained a civil engineering degree from North Carolina State University in 1953. He was a registered professional engineer in 11 states.

After graduation in 1934, Bill worked as a consulting engineer in High Point, North Carolina, and Boise, Idaho, until being commissioned as an officer in the U.S. Army Corps of Engineers in 1940. Bill worked on projects, mostly heavy air fields, in the United States and in the Philippines and Japan. He transferred to the Air Force in 1953 and became chief of engineering for Far East Operations and then moved to the Air Force Directorate of Civil Engineering, with responsibilities for global Air Force installations, including early warning projects such as SAGE (Semi-Automatic Ground Environment system and the DEWLINE (Distant Early Warning Line).

In 1958 he became chief of facilities design for the USAF Ballistic Missile Division and was in charge of facility design for the Atlas, Titan, and Minuteman missile facilities. This multibillion-dollar complex project, known collectively as the Intercontinental Ballistic Missile System, received the Outstanding Civil Engineering Achievement Award from the American Society of Civil Engineers in 1962. Bill retired from the Air Force in 1962 with the rank of colonel.

In 1962, Bill became the project manager of a joint venture—URSAM—composed of the firms Urbahn, Roberts, SSV&K, and Mueser Rutledge, to design Launch Complex 39 and NASA's (National Aeronautics and Space Administration's) Vehicle Assembly Building on Merritt Island at Cape Canaveral, Florida. The success of the Apollo program and the record size of the vehicle assembly building resulted in the project being designated as the Outstanding Civil Engineering Achievement for 1966 by the American Society of Civil Engineers.

In 1964, Bill became a partner in and president of the design firm SSVK (Seelye-Stevenson-Value and Knecht) of New York City. In 1966 he became project director of the DUSAF Joint Venture (DMJM, Urbahn, SSV&K, G. A. Fuller), responsible for the design and construction of the Fermi National Accelerator Laboratory in Batavia, Illinois. This 200-BEV national accelerator won the American Society of Civil Engineers Award of Merit as one of the top U.S. projects in 1972.

In 1975, Bill moved to Atlanta and joined the staff of the Metropolitan Atlanta Rapid Transit System, as MARTA's assistant general manager, directly responsible for the design and construction of the multibillion-dollar Atlanta transit system. MARTA General Manager Allen Kiepper said, "I need a man who has built big projects and managed large organizations but more importantly one who has successfully built world-class projects on time and on budget." His leading candidate was Bill Alexander. Bill took immediate charge; restructured his organization; renegotiated the contract with the general engineering consultant; improved relations with the city, railroads, and public utilities; and put the project back on

track. Bill also developed an excellent relationship and a high degree of credibility with MARTA's public Board of Directors. MARTA, a billion-dollar-plus project, was recognized as a model of an on-time, on-budget system with a reputation for fair dealings with contractors and an ability to find a way to move ahead despite many obstacles. MARTA was recognized in 1983 with an Award of Merit as one of the outstanding civil engineering projects of the year by the American Society of Civil Engineers.

After MARTA, Bill moved on to Houston to start up the Houston Transit System, which he did with several major design contracts that were awarded very quickly. Unfortunately, political issues developed, and Bill then had to terminate contracts that were already in progress, which he did in a fair and an equitable fashion. He then served as an individual consultant for Denver, Hawaii, and other transit systems and mega projects before fully retiring to Pawley's Island, North Carolina.

Bill was very active in the civil engineering profession. His numerous articles appeared in *Civil Engineering Magazine* in 1962, 1965, and 1972; in *Transactions of ASCE* in 1966 and 1973; and in *Consulting Engineer* in 1960. He testified on airstrip paving materials before the House Armed Services Committee in 1957. Bill was a recognized authority on organization and procedures for civil design and on the engineer's role in managing major projects, including construction. He lectured extensively before professional societies and at the engineering schools of many universities. His many organizational affiliations permitted him to interact with other professionals, who were able to learn from his experiences. He was a fellow of the American Society of Civil Engineers, chairman of its AeroSpace Transportation Division, and chair of its Research Committee from 1966 to 1971. He was also a fellow of the American Consulting Engineers Council, a member of the Society of American Military Engineers, and a member of the Board of the Civil Engineering Foundation. He was a member of the Moles, Phi Kappa Phi, Tau Beta Pi, and North Carolina State University's Engineering Advisory Council.

Bill received the Air Force Commendation Medal early in his Air Force career and the Legion of Merit in 1962. *Engineering News Record* named him among “Men Who Made Marks” in 1962, and he received the Outstanding Engineering Alumnus Award from North Carolina State University in 1976. He was designated Civil Engineer Member of the Year by the American Society of Civil Engineers New York Chapter in 1967. Bill’s greatest recognition, though, was having his major projects—the Air Force ICBM System, the Apollo Space Launching Facility, the Fermi Accelerator, and the MARTA Transit System—all receive awards as outstanding projects for their respective years.

For his many awards, Bill was described as a “creative engineer, team organizer and leader, a manager of huge, sophisticated, complex multidisciplinary engineering projects.” He was a man with “an unusual ability to understand and manage complex engineering systems and to provide leadership and motivation for his management team.”

Mr. Alexander was survived by his wife, Alice; a son, William D. Alexander IV; and a grandson, Adrian Alexander.

