



*Bob Brown*

# GEORGE F. SOWERS

1921–1996

Elected in 1994

*“For translating theory into practice as a teacher, author,  
and consultant in geotechnical engineering.”*

BY PAUL W. MAYNE AND BRUCE R. ELLINGWOOD

IN OCTOBER OF 1996, civil engineering lost one of its giants with the passing of Professor George F. Sowers at the age of 75 after a rather short bout with bone cancer. He was a rare breed of person who truly integrated the practices of geotechnical engineering and engineering geology with research and teaching

“There Were Giants on the Earth in Those Days.” That was the title of George F. Sowers’ keynote lecture at the 1979 Annual Convention of the American Society of Civil Engineers. This special presentation, called the Terzaghi Lecture, was awarded to just one individual in the profession of civil engineering each year. The year George was chosen to give this talk, the auditorium was packed to capacity.

At first glance, his odd title for a technical lecture might have been about dinosaurs, but true to his intentions, George wove a fascinating story about the details and evidence concerning ancient earthwork construction and rock engineering practices on the North and South American continents dating back several thousand years. George’s talk included descriptions of the Aztec pyramids, the great cities of the Incas, Mayan centers, and the Etowah Indian burial mounds in Georgia. Most of us in the geotechnical profession were dumbfounded, because we had been taught that Professor Karl Terzaghi had founded our

discipline just a few decades earlier, circa 1925. Now we were presented with proof that our engineering discipline had a much, much longer history. Needless to say, George left an impression that was forever “karst” in stone.

Throughout a long and distinguished career of more than 60 years of participation in civil engineering projects, George had simultaneously worn a number of hats, with equal excellence, humility, dignity, and enthusiasm. However, if one were forced to describe him in one word, it would have to be educator. Regardless of whether he was in front of 60 aspiring civil engineers in an undergraduate geotechnical engineering class at the Georgia Institute of Technology or in the presence of some of the world’s leading consultants standing on the abutment of a 300 m high rockfill dam in Malaysia attempting to assimilate the characteristics of the large slide that had just occurred, Professor Sowers always tried to learn something new for himself and to help educate everyone who was present. The infectious enthusiasm with which he did this ensured that his listeners always left with a better understanding and a feeling of accomplishment.

George F. Sowers was born on September 23, 1921, in Cleveland, Ohio, to George B. Sowers and Marie Tyler Sowers. His engineering career began at an early age when, as a teenager, he worked as a part-time engineering aide in heavy foundation and harbor construction with his father’s consulting firm. He obtained a B.S. in civil engineering from the Case Institute of Technology in Cleveland in 1942, and upon graduation, spent a few years working as an assistant hydraulic engineer for the Tennessee Valley Authority before serving in the U.S. Navy from 1944 to 1946 as an instructor in electronic servicing. More important, in April 1944, he married a mathematician and hydrologist from the Tennessee Valley Authority named Frances Lott. Over the next 52 years, they become one of the best known and most admired couples on the national and international geotechnical circuit.

Soon after the war, George attended Harvard University, where he had the honor of attending classes given by none other than the “father of geotechnical engineering,” Professor Karl

Terzaghi. He also studied under Professor Arthur Casagrande. Sowers received an M.S. in civil engineering from Harvard in 1947 in the areas of soil mechanics, foundations, and engineering geology.

George then moved to Atlanta, Georgia, where, for the next 50 years, he held two positions simultaneously—consultant with the Law Engineering Testing Company (now known as MacTec) and professor in the School of Civil Engineering at the Georgia Institute of Technology. Between 1950 and 1958, George and Frances produced four children: Carol, Janet, Nancy, and George Jr. On the professional side, George held a succession of increasingly senior appointments with both Law Engineering and Georgia Tech. At Law, he was named a vice president in 1955, senior vice president in 1967, and chairman of the board in 1971. After serving in the latter capacity for a number of years, however, he was anxious to return to more technical matters, so he resumed his appointment as senior vice president in 1975. Later, he was named senior consultant for Law Engineering Testing Company.

At Georgia Tech, George was appointed professor of civil engineering in 1953 in charge of instruction in soil and rock mechanics and geotechnical engineering. In 1965, he was appointed Regents Professor of Civil Engineering. In addition to balancing and fulfilling his commitments as a consultant and academician, Professor Sowers also found time to participate actively in the activities of professional societies, including the Geotechnical Engineering Division of American Society of Civil Engineers (ASCE), International Society for Soil Mechanics and Foundation Engineering (ISSMFE), Earthquake Engineering Research Institute, National Society for Professional Engineers, American Society for Testing and Materials, Geological Academy of Science, U.S. National Society for Soil Mechanics, U.S. Committee on Large Dams, Seismological Society of America, and Association of Engineering Geologists. In many of these organizations he participated at the highest level, serving on the Executive Committee of the Geotechnical Engineering Division of ASCE and as vice president of ISSMFE.

Professor Sowers was the author or co-author of eight books. His first book, *An Introduction to Soil Mechanics and Foundations*, published in 1951 by MacMillan, was widely acclaimed and was reissued in three editions (1961, 1970, and 1979). In addition to the English version, it has been translated into Spanish and Chinese. During the last year of his life, in failing health, he worked diligently to complete his final book, *Building on Sinkholes: Design and Construction of Foundations in Karst Terrain*, which was published by ASCE in 1996. When he received the first copy directly from the printer and was asked about how long the book had taken to write, he replied, "my whole life." Considering that it contains things he had learned over a 50 year period, that was probably the correct answer.

George was also the author of more than 140 technical papers, many of which received prestigious awards. The excellence of his professional endeavors was recognized with numerous accolades: Teacher of the Year Award at Georgia Tech in 1971; Engineer of the Year Award from the Georgia Society of Professional Engineers in 1973; Herschel Prize from the Boston Society of Civil Engineers in 1976; ASCE Middlebrooks Award in 1977; Terzaghi Lecture in 1979; ASCE Martin Kapp Lecture in New York in 1985; Brooks Award in 1990; ASCE Middlebrooks Award in 1994; ASCE Terzaghi Award in 1995; and ASCE Forensic Engineering Award in 1995. He was elected a member of NAE in 1994.

Notwithstanding his hectic dual careers, intensive travel schedule, professional involvement, community and church activities, and active family life, George Sowers clearly was a giant among his peers. He left a far-reaching legacy through his teachings, writings, and the physical structures he helped design and build, which will ensure that many more will come to know the giant, who, for a few years, many of us had the privilege knowing.

He is survived by his four children: Carol, Janet, Nancy, and George, Jr.; ten grandchildren; and 1 great grandchild. His wife, Frances Sowers, died in 2008.

