



Carl Beck

RALPH B. PECK

1912–2008

Elected in 1965

“Soil mechanics and foundation engineer.”

BY GHOLAMREZA MESRI

SUBMITTED BY THE NAE HOME SECRETARY

RALPH B. PECK, professor emeritus of civil engineering at the University of Illinois at Urbana-Champaign and one of the most influential engineers of the twentieth century, died on February 18, 2008, at the age of 95.

He was born in Winnipeg, Manitoba, on June 23, 1912, to American parents, Orwin K and Ethel Huyck Peck, when his father was a bridge engineer with the Grand Trunk Pacific Railroad in Canada. Ralph Peck earned a degree in civil engineering in 1934 and a doctorate in civil engineering in 1937, both from Rensselaer Polytechnic Institute in Troy, New York. Ralph was employed from 1937 to 1938 as a structural detailer for American Bridge Company. In 1938–1939 he attended a course on soil mechanics at Harvard University and was a laboratory assistant to Arthur Casagrande. From 1939 to 1942, Peck was an assistant subway engineer for the city of Chicago, representing the “Father of Modern Soil Mechanics” Karl Terzaghi, who was a consultant on the Chicago subway project.

In 1942, Peck joined the University of Illinois, where he was a professor of geotechnical engineering from 1948 to 1974. After that he was a Professor Emeritus and a consultant in geotechnical engineering. Although he had moved to Albuquerque, New Mexico, he returned to the University of Illinois twice a year to deliver a series of lectures and to continue his interactions with students and faculty members until the age of 93. In 1987, the University of Illinois held a symposium in his honor, and in 1999 he was honored with an ASCE Geo-Institute Conference.

Ralph Peck, with Karl Terzaghi, published the most influential textbook in geotechnical engineering, *Soil Mechanics in Engineering Practice* (Wiley, 1948). The 3rd edition, with an additional co-author, Gholamreza Mesri, was published in 1996. With Walt Hanson and Tom Thornburn, Ralph Peck published *Foundation Engineering* (Wiley, 1953), a widely used textbook. Ralph built a premiere geotechnical program at the University of Illinois fulfilling Karl Terzaghi's hope that he would "educate a generation of geotechnical engineers who retain common sense and their sense of proportion." From 1942 to 1974, Ralph Peck directed 39 doctoral students. During those same years, more than 5,000 students attended his lectures.

Ralph taught the practical art of problem solving, always using the observational approach, and he had a profound influence on many, many students. As one distinguished engineer said, "To meet him, to listen to him, to be influenced by him at an early age have been gifts I value."

Ralph Peck's life and work have been detailed in two books and a publication of the Norwegian Geotechnical Institute (NGI). *Judgment in Geotechnical Engineering—The Professional Legacy of Ralph B. Peck* by John Dunncliff and Don U. Deere was published by John Wiley & Sons in 1984. *Ralph B. Peck, Engineer, Educator, A Man of Judgment*, edited by Elmo DiBiagio and Kaare Flaate, was published by NGI in 2000 for the dedication of the Peck Library, which stands next to the Terzaghi Library at NGI in Oslo. The most recent and most detailed of the three, *Ralph B. Peck, Educator and Engineer, The*

Essence of the Man, by John Dunnycliff and Nancy Peck Young, was published by BiTech Publishers Ltd. in 2006.

In addition to co-authoring the two most influential textbooks mentioned above, Ralph Peck's list of technical publications includes 260 invited lectures, journal and conference articles, discussions, and reports. Some of his key lectures and publications are "Earth-Pressure Measurements in Open Cuts, Chicago (Ill.) Subway" (1943); "Deep Excavations and Tunneling in Soft Ground" (1969); "Advantages and Limitations of the Observational Method in Applied Soil Mechanics" (1969); "The Direction of Our Profession" (1973); "Influence of Nontechnical Factors on the Quality of Embankment Dams" (1973); "Pitfalls of Overconservatism in Geotechnical Engineering" (1977); "Where Has All the Judgment Gone?" (1980); "The Last Sixty Years" (1985); and "Gaining Ground" (1997).

Ralph Peck directed his energies toward bridging the gap between academia and engineering practice. He recognized that "No theory can be considered satisfactory until it has been adequately checked by actual observations." He was a consultant in the United State and 33 foreign countries on more than a thousand civil engineering projects. Major dam and tunnel projects included Portage Mountain (Bennett) Dam in British Columbia; Lower Notch Dam in Ontario; Churchill Falls Dams in Labrador; James Bay Dams in Québec; Itzehitezhi Dam in Zambia; Saluda Dam in South Carolina; Wilson Tunnel in Hawaii; the Bay Area Rapid Transit System in San Francisco; and the Washington, D.C., Baltimore, and Los Angeles Metro Systems. Ralph Peck was also a consultant on foundations of structures for numerous projects, including the World Trade Center in New York. One of his last projects was the foundations of the Rion-Antirion Bridge in Greece.

Ralph was a member of the Executive Committee of the Soil Mechanics and Foundation Division of the American Society of Civil Engineers (ASCE) from 1954 to 1957 and chairman in 1957; he was a member of the Board of Directors of ASCE from 1962 to 1965. He was president of the International Society of Soil Mechanics and Foundation Engineering from 1969 to

1973. In 1999, the Geo-Institute of ASCE established the Ralph B. Peck Lecture and Medal in his honor.

Ralph Peck was awarded an Honorary Doctor of Engineering Degree by Rensselaer Polytechnic Institute in 1974 and an honorary degree of Doctor of Science by Laval University, Québec, in 1987. He was invited to give the Ninth Rankine Lecture of the British Geotechnical Society in 1969.

Other major honors included the 1944 Norman Medal, 1965 Wellington Prize, and 1969 Karl Terzaghi Award, all from ASCE; the National Society of Professional Engineers Award in 1972; the Outstanding Civilian Service Medal of the U.S. Army in 1973; Washington Award of the Western Society of Engineers in 1976; Rickey Medal from ASCE in 1988; John Fritz Medal from The American Association of Engineering Societies (AAES) in 1988; and ASCE OPAL (Outstanding Projects and Leaders) Award for Outstanding Lifetime Achievement in Education in 2001.

Ralph B. Peck was elected a member of the National Academy of Engineering in 1965. In 1975, President Gerald R. Ford awarded him the National Medal of Science "For his development of the science and art of subsurface engineering, combining the contributions of the sciences of geology and soil mechanics with the practical art of foundation design."

No doubt Ralph Peck had remarkable technical knowledge and experience. But what distinguished him was his exceptional ability to communicate at every level and in every form and his superb judgment and wisdom. These qualities combined made Ralph Peck a kind, considerate, thoughtful, and humane man. He communicated both eloquently and humbly. In the words of one distinguished engineer, "Ralph Peck was not only a gentleman, but also a gentle man." This sentiment is shared by all of his colleagues, co-workers, and friends.

Ralph married Marjorie E. Truby on June 14, 1937; she died in 1996. They had been married for fifty-nine years and he had known Marjorie for over seventy years. He is survived by a daughter and son-in-law, Nancy Peck (Allen) Young; and son and daughter-in-law, James (Laurie) Peck; and two grandchildren, Michael Young and Maia Peck.

