

Solomon Cady Hollister

August 4, 1891 — July 6, 1982

Solomon Cady Hollister, retired dean of the College of Engineering and professor emeritus of civil and environmental engineering, made extraordinary contributions in his service to both Cornell University and the engineering profession.

Born in Crystal Falls, Michigan, and raised in the Pacific Northwest, “Holly” (as he was called since his college days) was self-educated to a considerable degree, as many great men have been. He often cited the “pioneer” aspects of his boyhood, when he learned to work with various tools, machines, and materials, as the roots of his aptitude for engineering. He enrolled at Washington State University in 1909 and worked his way through college, taking considerable time off to earn money as a surveyor and engineer. Largely because of his very keen interest in a correspondence course in reinforced concrete that he took from the University of Wisconsin and from his many hours of self-study from books authored by Wisconsin professors, he decided to transfer to Madison, where he completed his final one and a half years and received the Bachelor of Science degree in 1916. He also met his wife-to-be, Ada, at Madison.

He entered engineering practice in 1916 and also taught at the University of Illinois for one year. In 1918, at the age of twenty-six, he was appointed chief designer and head of the Research Branch of the Concrete Ship Section of the U.S. Shipping Board. In this capacity he was responsible for several major innovations in reinforced concrete that led to the construction of the world’s first practical large seagoing concrete vessels. In the 1920s he was a consulting engineer in Philadelphia, designing mainly in reinforced concrete; in 1929 he received the first Wason Research Medal from the American Concrete Institute (ACI) for his innovative design, construction, and testing of a skew-arch bridge built in Chester, Pennsylvania.

Holly also took particular pride in his design of the thirty-foot diameter welded steel penstocks for the Hoover Dam, one of the major projects on which he consulted in the 1930s. His research and consulting activities over seven decades contributed greatly to diverse areas of engineering, including concrete technology, structural welding, and the design of thin-shell structures such as boilers, ships, penstocks, and pressure vessels.

After four years on the faculty at Purdue University, Holly came to Cornell in 1934 as professor and director of the School of Civil Engineering. He was appointed associate dean and then dean of the College of Engineering in 1937, a position he held for twenty-two years until his retirement in 1959. During his tenure as dean, Holly rebuilt

the faculty, curriculum, and physical plant of the College of Engineering and thereby thrust Cornell into the top echelons of engineering education in the United States.

His concerns about the curriculum required intensive faculty participation, of course, and his longer-term plans for the character of engineering education were enlightened and fit well the needs of the time. The major step he initiated was to move the college into a five-year undergraduate curriculum. He also brought the School of Chemical Engineering into the college and instituted a new School of Engineering Physics and the Graduate School of Aeronautical (later Aerospace) Engineering. By wise selection and encouragement of faculty he attempted to accelerate the research program, which he visualized as essential for the vitality of the college. In this same period he established the Engineering College Council to provide advice on college affairs as well as support for the execution of his plans for the college.

But from the very start the major problem faced by Holly was that of facilities. Once he had convinced the central administration not to place the new college facilities in the area on the gorge north of Sibley and had succeeded in placing Olin Hall at the south end of the campus, he was “off to the races.” As a development officer he was an outstanding success—and the Engineering Quadrangle at the south end of the campus gives testimony to this fact. Almost single-handedly he was responsible for raising about \$50 million, primarily from prominent alumni who are now commemorated by the various buildings. Moreover, as a tribute to his intellectual and developmental skills, the Olin family, who provided the funds for the new civil engineering building, asked that it be named Hollister Hall in his honor.

For a period after the war he was vice president of development as well as dean of engineering. After retirement in 1959 he maintained an active role in professional and educational affairs, particularly at Cornell, as a university trustee (1959-64) and as a member of the Engineering College Council until his death.

Holly’s breadth of interests and capabilities was widely recognized by requests for his assistance to help resolve problems of national and international importance. In this regard he served on the second Hoover Commission on the Organization of the Executive Branch of the Government; chaired the Board of Consultants on the Isthmian Canal Study; was a member of a Department of Defense committee of business and scientific leaders to advise the National Security Council on defense systems; and was a member of the steering committee for the study of Africa south of the Sahara undertaken by the National Academy of Sciences. He also served as a member of many other professional and public commissions, including the Manpower Commission of Engineers Joint Council (now the American Association of Engineering Societies); the Committee on Specialized Personnel, Office of

Defense Mobilization; the Advisory Committee on Engineering Sciences for Selective Service; and the Advisory Committee for the National Registry of Engineers and Scientists.

He gave freely of his precious time for these important national activities. From these experiences Holly especially treasured the friendship he developed with Herbert Hoover during and after their work on the second commission. He admired Hoover particularly as an engineer become public servant.

Holly was dedicated to strengthening and improving the quality of engineering education. At the national level he aggressively exploited his leadership positions as chairman of various committees of the Engineers Joint Council for Professional Development to achieve these ends. While president of the American Society for Engineering Education in 1951 he established a committee that in 1955 produced a major study (known as the Grinter Report) that outlined future directions for engineering education. The principles set forth in this report continue to guide engineering education today. He also served as chairman of the Special Committee on Education of the American Institute of Architects, which recommended changes in architectural curricula.

A national figure in the profession as well as in education, Holly was the recipient of numerous awards and honors, including election to the National Academy of Engineering and the Hall of Fame of Engineering Educators of the American Society for Engineering Education (ASEE). He served as president of the American Concrete Institute (ACI) in the early 1930s and was the recipient of the Lamme Award of ASEE in 1952.

Holly was awarded honorary Doctor of Engineering degrees from Stevens Institute of Technology, Purdue University, and Lehigh University and an honorary Doctor of Science degree from the University of Wisconsin. He was elected to honorary membership in no fewer than six national professional societies: American Society of Civil Engineers, American Society for Mechanical Engineers, American Concrete Institute, American Institute of Architects, American Society for Engineering Education, and Chi Epsilon (civil engineering honor society). He was a fellow of the American Association for the Advancement of Science and a life member of both the American Society for Testing and Materials and the Structural Stability Research Council. To be honored by civil engineers, mechanical engineers, and architects reflects the unique breadth of this man. He received the Turner Medal of the ACI in 1979, and Holly's last award came in spring 1982, when he received Washington State University's Alumni Achievement Award for "brilliance and boldness in pioneering the field of reinforced concrete and in bringing prominence to his profession."

Dean Hollister contributed articles to several handbooks and texts and authored many technical papers and articles on structural mechanics, structural engineering, construction materials, and educational matters. He consulted with many companies and was a director of Raymond International, Inc. In one of his many hobbies, paleontology, Holly's scholarship was also recognized. He was a research associate and president of the Paleontological Research Institute in Ithaca and contributed scientific papers and one book to the literature of this field.

Holly always had a strong interest in the history of science and engineering, and two major contributions to Cornell came out of this interest: the Hollister Collection of rare books in engineering and science, which resides in the Department of Rare Books and Special Collections of the Cornell Library, and the history of science program in the College of Arts and Sciences, in which Holly played a key role during its formative stages.

In the 1960s and 1970s he continued to be active in an amazing variety of projects: high-level consulting on many difficult problems, including large power plants; development of improved equipment for football players; research on high-strength concrete; advising faculty and graduate students; participating in civil engineering faculty meetings and curriculum development; and developing materials for his book on marine fossils—to cite but a few of his many interests and activities.

Holly was a famous man, a distinguished man, a good man, a man of great achievements: he was one of the few Renaissance men we have had the privilege of knowing well. He was an artist, a paleontologist, a musician, an analyst, an avid reader, a creative designer, a visionary educator, a most effective promoter, and a great engineer. The Engineering Quadrangle and the revitalized College of Engineering at Cornell are testimony to his dedication to Cornell and to his achievements. We have lost a good friend and a patient adviser.

Dean Hollister is survived by his wife of sixty-three years, Ada, of Ithaca; three children: John G. Hollister of Rockford, Illinois, David G. Hollister of Seattle, Washington, and Elizabeth H. Zimmerman of Madison, Wisconsin; ten grandchildren; and six great-grandchildren.

John F. Abel, Walter R. Lynn, Andrew Schultz, Jr., Richard N. White