HAROLD L. MICHAEL
1920–1999

Elected in 1975

“For leadership in education, research, and practice in the fields of highway traffic engineering, planning, and safety.”

BY KUMARES C. SINHA

HAROLD L. MICHAEL, professor emeritus, School of Civil Engineering, Purdue University, and a pioneer in the field of traffic engineering, died August 2, 1999. Born in Columbus, Indiana, on July 24, 1920, he grew up on a family farm during the Great Depression. The family’s original German name was changed to Michael to avoid the prejudice against Germans during World War I. After finishing high school, Harold did not attend college but worked at the farm for several years before going off to World War II. He took part in five separate campaigns in Europe and was awarded the US Army Bronze Star. He continued his military service for many years as a reservist and ultimately rose to the rank of lieutenant colonel.

After the war he enrolled, with support from the GI Bill, as a student of civil engineering at Purdue University, where he received his BS in 1950 with distinction and his MS in transportation engineering in 1951. He moved up through the ranks at Purdue, from assistant professor to full professor, between 1954 and 1961.

The world was exploding with postwar opportunities. In the emerging field of transportation engineering, Harold unequivocally established himself as a national expert. One of the highlights of his career was his involvement in the planning and development of the US interstate highway system in the
1950s. He was associate director of the Joint Highway Research Project (JHRP) of Purdue University and the Indiana State Highway Commission for many years before becoming its director and head of the School of Civil Engineering in 1978. The JHRP continues to this day, as the Joint Transportation Research Program, and is a model of a university-government-private sector consortium in the nation.

Harold had a distinction that is unheard of in academia today: he accomplished all this without a PhD. Purdue rewarded his contributions with an honorary doctorate of engineering in 1992 after his retirement.

Harold’s specialty of traffic engineering and planning was a very new field in the 1950s, and he contributed significantly to shaping it into a discipline. He was an early proponent of the use of statistical methods to relate peak hour flows to average daily traffic flow, to express pavement surface qualities as rider responses, to quantify a hazard index for highway-railroad crossings, and to estimate the performance of unsignalized intersections. In the 1960s he was also a pioneer in using computers for processing traffic data.

An educator with practical applications in mind, Harold’s interest was in devising tools and techniques to regulate traffic flow. One of his major contributions was his work on the “bible” for modern-day traffic engineers, the Federal Highway Administration’s *Manual on Uniform Traffic Control Devices*.

Harold believed in giving back to his community, locally and nationally. He was an outstanding volunteer for various professional organizations, including the National Research Council’s Transportation Research Board (TRB), the Institute of Transportation Engineers (ITE), the American Road and Transportation Builders Association, and the American Public Works Association among others. He held leadership roles in many of these organizations.

Over the years he received many honors from professional societies in recognition of his dedicated and continuing service. These included the James Laurie Prize and the Wilbur S. Smith Award of the American Society of Civil Engineers (ASCE), TRB’s Roy W. Crum Distinguished Service Award, the George
S. Bartlett Award of the American Association of Highway and Transportation Officials, and the ITE Burton W. Marsh Award and Theodore M. Matson Award. In addition, ASCE and ITE named him an honorary member. In 1975, at the age of 55, Professor Michael was inducted into the National Academy of Engineering, a testament to his stature as an authority in transportation engineering.

Locally in Indiana, he was instrumental in the establishment of both a traffic commission for the city of West Lafayette and a highway planning committee for Tippecanoe County; he served these groups until his death. He was also a dedicated member and leader of the Rotary Club. He valued community service in other ways too, and it was not uncommon to see him ringing a bell in front of local stores at Christmas time for the Salvation Army.

At his funeral his son very eloquently summarized Harold’s life by saying that his motto was “I serve”—and serve well he did, and at the highest level with humility. Former Purdue President Steven Beering said of Harold, “He was a giant in the discipline of civil engineering. He brought national and international acclaim to Purdue through his prolific and astute research and because of his vast knowledge of transportation infrastructures.”