

Kul Bhushan, Ph.D., G.E., Chief Technical Officer

Professional Registration

Civil Engineer, California
R.C.E. 22766

Geotechnical Engineer,
California, R.G.E. 144

Education

Ph.D., Duke University, 1970

M.S., Highway Engineering,
1963

EXPERIENCE SUMMARY

Dr. Bhushan is a registered Civil and Geotechnical Engineer with over 40 years diverse geotechnical experience. His geotechnical consulting experience includes over 12 soft ground improvement projects which have used surcharge, stone columns, and wick drains to improve the soft soils, 50 power/petrochemical/heavy industrial plants, 100 bridge and seismic retrofit projects, about 20 offshore and harbor projects, more than 20 seismic hazard studies, two nuclear power plants, three solar power plants, 25 medium and high-rise buildings, six airport projects, and a large number of other projects such as schools, hospitals, commercial, industrial and residential structures, airports, highway bridges, embankments, and transmission lines. Responsibilities consisted of complete geotechnical investigations and analyses including earthwork and site preparation, deep and shallow foundation bearing capacity and settlement, deep excavation and shoring, slope stability, seismicity, liquefaction, earthquake design, development of recommendations, report preparation, and construction supervision.

PUBLICATIONS

“Seismic Design Analysis of CIDH Pile Foundations Subject to Liquefaction-Induced Lateral Spreading & Downdrag,” with Endi Zhai, and Ron Tognazzini, to be presented at 8th National Conference for Earthquake Engineering (NCEE) to be held in San Francisco in April, 2006.

“Factors Affecting Lateral Capacity of Piles Within an Embedded Pile Cap,” with Curt Scheyhing, a paper submitted for publication in the ASCE Geotechnical and Geoenvironmental Journal, 2005.

“Design & Installation of Large Diameter Pipe Piles for LAXT Wharf,” Geotechnical Special Publication No. 125, Current Practices and Future Trends in Deep Foundations, Jerry A. DiMaggio and Mohammad H. Hussein, Ed., The Geo-Institute of ASCE, in Honor of George G. Goble, 2004, pp. 370-389.

“Ground Improvement by Stone Columns and Surcharge at a Tank Site,” with Ashok Dhingra, Curt Scheyhing, and Endi Zhai. Proceedings: Fifth International Conference in Case Histories in Geotechnical Engineering, New York, N.Y. Paper No. 8-36, April 13-17, 2004.

“Lateral Load Tests on Drilled Piers in San Diego Area Residual and Formational Soils,” with Curt Scheyhing. Proceedings of the DFI 27th Annual Conference on Deep Foundations, Oct. 9-11, 2002, San Diego, California.

“Soil Improvement by Precompression at a Tank Farm Site in Central Java, Indonesia,” with C. V. Amante and R. Saaty. Proceedings, 3rd International Conference on Ground Improvement Techniques, Singapore, September 2000.



"Dynamic Testing of Large Capacity Precast Concrete Piles in the Port of Long Beach," with Dr. Alain E. Holeyman. Fifth International Conference on Piling and Deep Foundations, Bruges, Belgium, June 1994.

"Settlement of a Ring Foundation Using Cone Data," with F. Boniadi. Proceedings of The First International Symposium on Penetration Testing/ISOPT-1/Orlando, Vol. 2, 20-24 March 1988, pp. 681-696.

"Lateral Load Tests on Drilled Pier Foundations for Solar Plant Heliostats," with Shahen Askari. Laterally Loaded Deep Foundations: Analysis and Performance, ASTM Special Technical Publication 835, Philadelphia, Pennsylvania, September 1984, pp. 140-156.

"Friction Capacity of Piles Driven into Clay," discussion of a paper by Leland M. Kraft, Jr., John A. Focht, Jr., and Srinath Amerasinghe (Proc. Paper 16663), Journal of the Geotechnical Engineering Division, ASCE, Vol. 109, No. 5, Proc. Paper 17924, May 1983, pp. 761-762.

"New Design Correlations for Piles in Sands," discussion of a paper by Harry M. Coyle and Reno R. Castello (Proc. Paper 16379), Journal of the Geotechnical Engineering Division, ASCE, Vol. 108, No. GT 11, Proc. Paper 17435, November 1982, pp. 1508-1510.

"Lateral Load Tests on Drilled Piers in Sand," with Louis J. Lee and Donald B. Grime, Proceedings of a Session on Drilled Piers and Caissons Sponsored by the Geotechnical Division at the ASCE Fall Convention, St. Louis, Missouri, October 28, 1981.

"Lateral Load Tests of Drilled Piers in Stiff Clays," with S.C. Haley and Patrick T. Fong, Journal of the Geotechnical Engineering Division, ASCE, Vol. 105, No. GT 8, Proc. Paper 14789, August 1979, pp. 969-985.

"Stress Distribution for Heavy Embedded Structures," with S.C. Haley, Journal of the Geotechnical Engineering Division, ASCE, Vol. 102, No. GT 7, Proc. Paper 12227, July 1976, pp. 807-810.

"Resistance of Ocean Sediments to Sampler Penetration," with Arshud Mahmood and R. L. Allen, OTC Paper No. 2624, Offshore Technology Conference, Houston, Texas, May 3-6, 1976.

"Experience in Settlement Analysis and Related Geostatic Considerations for the Foundation Design of Heavy Reactor Structures," with R. L. McNeill, B.C. Yen, and S. C. Haley, Proceedings of International Conference on Experience in the Design, Construction and Operation of Prestressed Concrete Pressure Vessels and Containments for Nuclear Reactors, University of York, England, September 8-12, 1975, pp. 75-81.

"An Experimental Investigation into Expansion of Spherical and Cylindrical Cavities in Sand," Ph.D. Dissertation, Department of Civil Engineering, Duke University, Durham, North Carolina, 1970.