



Professional Certification and Beyond

By Ronald O. Hamburger, NCSEA President

Structural engineering in the United States is not generally regarded as a distinct and separate professional discipline requiring unique training, skills and education. Often it is viewed as indistinct from Civil Engineering. Many have difficulty separating structural engineering from architecture. Structural engineers know, however, that the safety and general welfare of the public are more dependent on the skills and competence of the structural engineer than those of most other professionals, including medical doctors.

The average Structural Engineer designs several hundred structures in his or her career. Our buildings provide thousands of person-hours of shelter each year. Thousands of persons per day may pass over or underneath our bridges. A single structural collapse can result in the loss of thousands of lives and millions of dollars. Fortunately such collapses are rare. However, as technology advances, economic pressures drive us to the use of ever more efficient and less robust systems and materials. We are asked to design structures to withstand everything from hurricanes to earthquakes to terrorist attacks and, in the process, are increasingly expected to exercise greater levels of competence. Those who do not have the necessary education, skills, and training should not be permitted to practice.

Several years ago, NCSEA resolved to seek the establishment of separate structural engineering registration in all U.S. jurisdictions. Engineers in several states tried. Oregon was successful. Alabama was not. Though it should have come as no surprise, we quickly found that organizations representing other types of engineers, including Civil Engineers, opposed separate structural engineering registrations. These organizations want to protect their members' right to broad practice, whether or not they possess the necessary qualifications. Many state registration boards also opposed such separate registration. Members of registration boards and of NCEES argued that there was no specific definition of the practice of structural engineering and, therefore, it was impossible to define the necessary qualifications to create a registration program.

Recognizing the significant impediments to establishing separate structural engineering registration but not abandoning the goal, NCSEA pursued establishment of structural engineering certification as an interim step (i) to allow structural engineers to establish a national identity for the profession, as a distinct professional practice, (ii) to provide a means for structural engineers throughout the United States to establish uniform requirements for the necessary education, skills and knowledge to practice structural engineering, and

(iii) to help build recognition for structural engineering as a unique field of professional practice.

A separate autonomous structural engineering certification board (SECB) now exists. SECB, in the process of establishing the education, training and other requirements appropriate to certification, is populating its operating committees with members and accepting applications for certification on the basis of demonstrated experience and education. Many engineers have already begun to apply for participation in this program and I hope each of you will visit the certification board's website at www.secertboard.org for more information.

The certification program has already had significant positive impact on breaking down the barriers to establishment of separate structural engineering registration. Last year, NCEES developed a model law for structural engineering registration, and it is currently establishing a professional qualifications records service for structural engineers. NCEES and NCSEA have been working together to define a series of examinations that can establish applicants' qualifications and that will, at the same time, satisfy the rigorous standards of existing state laws, including those in California, Illinois and Washington. More work needs to be done.

It is time once again for NCSEA to step forward, working hand-in-hand with CASE, NCEES and SEI, to actively seek the establishment of separate registration in the individual jurisdictions. I believe that we should follow the example of organized labor in this pursuit. When organized labor seeks to expand its influence, it identifies targets of opportunity. These "targets" are individual companies with conditions that are favorable to establishment of a labor organization. The entire resources of the union are then concentrated on achieving success at that company. In a similar manner, structural engineers should look for one, or at most a few, targets of opportunity, and then concentrate our resources on successfully obtaining registration in these battleground states. The ideal state will be a place with one or more recent failures, that can either be ascribed to substandard practice or which demonstrate the importance of superior practice to protect the public safety. States with unique conditions, such as severe hurricane or earthquake exposure, a preponderance of tall buildings, or a preponderance of demonstrated poor construction, could all be good candidates.

The leadership of NCSEA is looking to our membership to help us identify key candidate states for pressing the campaign to establish separate structural engineering registration and, also, for members who are willing to commit the time and resources to help us achieve this goal. ■

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