NCSEA Policy on Structural Engineering Licensure

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Policy

The National Council of Structural Engineers Associations (NCSEA) supports licensure for structural engineers to protect the safety, health, and welfare of the public due to the potential loss of life and property in improperly designed and constructed structures such as buildings and bridges.

NCSEA encourages all jurisdictions to adopt a Structural Engineering Practice Act that defines the practice of structural engineering and restricts it to those who have demonstrated competence by means of education, experience, and examination. In particular, NCSEA endorses the 16-hour Structural Examination developed by the National Council of Examiners for Engineering and Surveying (NCEES) and administered for the first time in April 2011, as well as the NCEES Model Law Structural Engineer qualifications as the standard for licensure of structural engineers.

NCSEA also encourages jurisdictions to include in their new legislation an equitable transitioning clause for engineers currently practicing structural engineering.

Issues

Some of the issues that need to be addressed in the adoption of structural engineering licensure and practice restrictions include:

- The qualifications for licensure should include education, experience and examination standards.
- The requirements for licensure should be as consistent as possible across jurisdictions to allow appropriately qualified structural engineers to practice nationwide.
- The provisions for licensure should permit currently licensed professional engineers (PE) with appropriate education and experience to continue designing structures for which they have adequate expertise without requiring additional examination.
- Some jurisdictions will choose to adopt threshold criteria for structure size and/or type for which design by a licensed structural engineer is required.
  Each jurisdiction must decide whether licensure of structural engineers should be a post-PE credential.

Rationale

Every engineer holds paramount the safety, health and welfare of the public.

The field of civil engineering encompasses a broad spectrum of concepts from traffic and surveying, water and wastewater treatment, and municipal and utility engineering to building and bridge design. The specialty of structural engineering within this spectrum is unique in its impact on the safety, health and welfare of the general public. A structural system failure almost always has serious consequences; even in the best cases, there are often substantial costs associated with correcting what is or could become a life-threatening situation.

The field of structural engineering has become increasingly complex, requiring the engineers who practice it to be diligent in keeping up with the latest codes and specifications. The complexity of the structural engineering field has been recognized by NCEES in the development of the "Model Law Structural Engineer" designation that requires 16 hours of examination instead of the 8 hours of testing required for other fields of engineering. The implementation of the new 16-hour structural engineering examination further attests to the higher standard to which structural engineers are being held.

The need for advanced credentials has been acknowledged sporadically across the country, resulting in a lack of uniformity among jurisdictions that makes licensure by comity or reciprocity difficult.

- The structural engineering specialty within civil engineering has been recognized by a number of jurisdictions, starting with Illinois in 1915, with the implementation of structural licensure laws.
- California requires a specialized licensing exam that incorporates seismic design principles in order to obtain a professional civil engineering license. Following sufficient experience, a specialized examination, in addition to the 16-hour NCEES exam, is currently required to obtain structural engineering title authority which allows the design of schools and hospitals.
- Several other western states require additional examination before an engineer can practice structural engineering or use the title "structural engineer". These states have differing education, experience, and examination requirements and differing criteria that govern which structures must be designed by a licensed structural engineer.

The Council of American Structural Engineers (CASE) and the American Society of Civil Engineers (ASCE), as well as its Structural Engineering Institute (SEI), also support licensure for structural engineers.

NCSEA believes the effort to implement structural engineering licensure in all jurisdictions is a worthy commitment and encourages their Member Organizations and the structural engineering community to take the lead in making these changes in each jurisdiction.