States with Separate Licensure Treatment for Structural Engineers

Full Practice Restrictions

Two states have full practice restrictions for structural engineering design work, where the structural engineering exam must be passed and only structural engineers can seal designated structures.

- **Hawaii**: §16-115-2 defines structural engineering as “that branch of professional engineering which deals with the investigation of, the design of, the selection of, and construction observation of the force-resisting and load-supporting members of structures such as foundations, walls, columns, slabs, beams, girders, trusses, and similar members where such investigation, design, selection, and supervision requires a knowledge of engineering laws, formulae, practice, and knowledge of the methods used in their erection. Structure is not further defined.

- **Illinois**: Section 5 of the Structural Engineering Practice Act defines the practice of structural engineering as “who is engaged in the design, analysis, or supervision of the construction, enlargement or alteration of structures, or any part thereof, for others, to be constructed by persons other than himself. Structures within the meaning of this Act are all structures having as essential features foundations, columns, girders, trusses, arches or beams, with or without other parts, and in which safe design and construction require that loads and stresses must be computed and the size and strength of parts determined by mathematical calculations based upon scientific principles and engineering data. A person shall also be regarded as practicing structural engineering within the meaning of this Act who is engaged as a principal in the design, analysis, or supervision of the construction of structures or of the structural part of edifices designed solely for the generation of electricity; or for the hoisting, cleaning, sizing or storing of coal, cement, sand, grain, gravel or similar materials; elevators; manufacturing plants; docks; bridges; blast furnaces; rolling mills; gas producers and reservoirs; smelters; dams; reservoirs; waterworks; sanitary works as applied to the purification of water; plants for waste and sewage disposal; round houses for locomotives; railroad shops; pumping or power stations for drainage districts; or power houses, even though such structures may come within the definition of "buildings" as defined in any Act in force in this State relating to the regulation of the practice of architecture.” Structure is not further defined.

Partial Practice Restrictions

Six states have partial practice restrictions for structural engineering design work.

- **Alaska**: Only civil engineers and structural engineers may design structures. 36.990(42) defines structural engineering as “the branch of professional engineering that embraces the studies and activities relating to the investigation, evaluation, analysis, design and construction of buildings, bridges, and other structures such as walls, columns, slabs,
beams, trusses, or similar members requiring force-resisting and load bearing members and their connections, or similar members used singly or as a part of a larger structure, and the organizational and economic aspects of these studies and activities.” Structure is defined as “a system of materials and components that resists horizontal and vertical loads”.

- **California:** Structural engineering practice restrictions only pertain to public schools and hospitals. Section 404(pp) of the Board Rules and Regulations Relating to the Practices of Professional Engineering and Professional Land Surveying defines structural engineering as “the application of specialized civil engineering knowledge and experience to the design and analysis of buildings (or other structures) which are constructed or rehabilitated to resist forces induced by vertical and horizontal loads of a static and dynamic nature. This specialized knowledge includes familiarity with scientific and mathematical principles, experimental research data and practical construction methods and processes. The design and analysis shall include consideration of stability, deflection, stiffness and other structural phenomena that affect the behavior of the building (or other structure). Structure is not further defined.

- **Nevada:** Section 625.260 states that structural engineering practice restrictions only pertain to structures requiring special expertise such as radio towers and buildings more than three stories or 45 feet in height.

- **Oregon:** Structural engineering practice restrictions only pertain to hazardous facilities and special occupancy structures, essential facilities over 4,000 square foot plan area or 20 feet in height, structures with irregular features, and occupied buildings more than four stories or 45 feet in height. The restrictions are limited to primary frame or lateral load-resisting system. Must be licensed as a Professional Engineer before applying to be a Structural Engineer. Section 820-040-0020 of the administrative rules for the Board of Examiners for Engineering and Land Surveying defines structural engineering as “that branch of professional engineering that provides analysis, design, evaluation or review of structures or their elements, parts or systems for support of external forces such as gravity, lateral loading, temperature, seismic influence, etc.”

- **Utah:** Structural engineering practice restrictions include hazardous facilities, a public occupancy with an assembly greater than 300, schools and care facilities with occupancy greater than 250, a college/adult education facility with occupancy greater than 500, resident health care facilities with occupancy of 50 or more, jails/detention facilities over 3000 square feet or occupancies greater than 5000. Essential facilities including hospitals, surgery/emergency facilities over 3000 square feet, fire/rescue/police/emergency vehicle garages with a height over 24 feet or over 5000 square feet, emergency shelters over 3000 square feet, emergency communication and operations centers with a height over 24 feet or over 5000 square feet, power stations/public utilities over 3000 square feet, structures with toxic contents over 24 feet or over 5000 square feet, aviation control towers and centers and emergency hangers over 35 feet or 20,000 square feet, and normally occupied
structures of five or more stories of average roof height of 60 feet or more, or over 200,000 square feet.

- **Washington**: Structural engineering practice restrictions include hazardous facilities, essential facilities over 5,000 square feet plan area or 20 feet in height including standby power equipment, air traffic control towers, critical national defense structures, structures exceeding 100 feet in height, occupied building more than four stories, bridges with total span over 200 feet and piers with surface area over 10,000 square feet, and structures where over 300 people congregate.

**Title Restrictions**

Three states have restrictions on the use of the SE designation.

- **Idaho**: Section 006.01 states “A Licensee shall undertake to perform assignments only when qualified by education or experience in the specific technical field involved, however, a Licensee, as the prime professional, may accept an assignment requiring education or experience outside of his own field of competence, but his services are restricted to those phases of the project in which the Licensee is qualified. All other phases of such project shall be performed by qualified associates, consultants or employees. For projects encompassing one (1) or more disciplines beyond the Licensee’s competence, a Licensee may sign and seal the cover sheet for the total project only when the Licensee has first determined that all elements of the project have been prepared, signed and sealed by others who are competent, licensed and qualified to perform such services.” The Idaho Board of Licensure for Professional Engineers and Land Surveyors uses this section to clarify that a civil engineer who is competent in structural engineering may practice structural engineering if they pass the NCEES Structural Engineering exam. Structure is not defined.

- Louisiana and Nebraska do not define “structural engineering” but they do recognize the SE designation for individuals that have passed the NCEES Structural Engineering examination. Structure is not defined.