



RULE-MAKING ORDER

(RCW 34.05.360)

CR-103 (7/22/01)

Agency: Department of Licensing

- Permanent Rule
- Emergency Rule
- Expedited Rule Making

(1) Date of adoption: November 15, 2001

(2) Purpose: To implement amendments to WAC 196-12-020 and WAC 196-12-030 which will notify the public and the engineering profession of changes in the requirements to become licensed as a structural engineer. WAC's 196-12-020 and 196-12-030 were amended to make their language consistent with the changes made to RCW 18.43.040 by the 2000 Legislature regarding the licensing of structural engineers.

(3) Citation of existing rules affected by this order:

Repealed:
 Amended: WAC 196-12-020; WAC 196-12-030
 Suspended:

(4) Statutory authority for adoption: RCW 18.43.035

Other Authority:

PERMANENT RULE ONLY (Including Expedited Rule Making)

Adopted under notice filed as WSR 01-20-013 on September 21, 2001 (date).
 Describe any changes other than editing from proposed to adopted version: No Changes

EMERGENCY RULE ONLY

Under RCW 34.05.350 the agency for good cause finds:

- (a) That immediate adoption, amendment, or repeal of a rule is necessary for the preservation of the public health, safety, or general welfare, and that observing the time requirements of notice and opportunity to comment upon adoption of a permanent rule would be contrary to the public interest.
- (b) That state or federal law or federal rule or a federal deadline for state receipt of federal funds requires immediate adoption of a rule.

Reasons for this finding:

(5.3) Any other findings required by other provisions of law as precondition to adoption or effectiveness of rule?:

- Yes
 - No
- If Yes, explain:

(6) Effective date of rule:

Permanent Rules

- 31 days after filing
- Other (specify) 01/30/02*

*If less than 31 days after filing, specific finding in 5.3 under RCW 34.05.380(3) is required

Emergency Rules

- Immediately
- Later (specify) _____

Name (Type or Print)

George A. Twiss

Signature

Title

Executive Director

Date

December 13, 2001

CODE REVISER USE ONLY

CODE REVISER'S OFFICE
STATE OF WASHINGTON

DEC 14 2001

3:50

TIME _____ AM/PM

WSR 02-01-07

(COMPLETE REVERSE SIDE)

**Note: If any category is left blank, it will be calculated as zero.
No descriptive text.**

Count by whole WAC sections only, from the WAC number through the history note.
A section may be counted in more than one category.

The number of sections adopted in order to comply with:

Federal statute:	New	_____	Amended	_____	Repealed	_____
Federal rules or standards:	New	_____	Amended	_____	Repealed	_____
Recently enacted state statutes:	New	_____	Amended	<u>2</u>	Repealed	_____

The number of sections adopted at the request of a nongovernmental entity:

New	_____	Amended	_____	Repealed	_____
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The number of sections adopted in the agency's own initiative:

New	_____	Amended	_____	Repealed	_____
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The number of sections adopted in order to clarify, streamline, or reform agency procedures:

New	_____	Amended	<u>2</u>	Repealed	_____
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The number of sections adopted using:

Negotiated rule making:	New	_____	Amended	_____	Repealed	_____
Pilot rule making:	New	_____	Amended	_____	Repealed	_____
Other alternative rule making:	New	_____	Amended	_____	Repealed	_____

AMENDATORY SECTION (Amending WSR 98-12-052, filed 5/29/98, effective 7/1/98)

WAC 196-12-020 Experience records. The law requires eight years of experience in engineering work of a character satisfactory to the board and passing the fundamentals-of-engineering examination to be eligible for the second stage (PE) engineer examination. These eight years must be of broad based, progressive experience to include gaining knowledge and comprehension of engineering subjects and applying engineering principles. The eight years of experience must be completed sixty days prior to the date of the examination.

The board shall evaluate all experience, which includes education, on a case-by-case basis and approve such experience as appropriate. The board will use the following criteria in evaluating an applicant's experience record:

(1) Education experience will be based on transcripts. Therefore, any transcripts not previously sent to the board's office should be submitted for maximum experience credit. Education may be approved as experience based on the following:

(a) Graduation with a baccalaureate degree in engineering approved by the engineer accreditation commission (EAC) of the accreditation board for engineering and technology (ABET) shall be equivalent to four years of required experience. Satisfactory completion of each year of such an approved engineering curriculum is equivalent to one year of experience.

(b) Graduation with a baccalaureate degree in a program in engineering technology approved by the technology accreditation commission (TAC) of the accreditation board for engineering and technology (ABET) is equivalent to three years of required experience. Satisfactory completion of each year of such an approved program is equivalent to three-fourths of one year of experience.

(c) Graduation in an approved four year non-ABET accredited engineering curriculum will be given a maximum of three years of experience.

(d) A maximum of one year may be granted for postgraduate engineering courses approved by the board for those applicants having earned degrees in accordance with (a), (b) or (c) of this subsection.

(e) A nonengineering bachelor of science program can be given a maximum of two years of experience. If the degree is followed by a master of science in engineering from a school that has an ABET accredited undergraduate program in the same discipline as the master's degree, a maximum of four years of experience may be granted for this combination of education.

(f) Graduation with an associate degree in engineering from an

approved curriculum may be equivalent of up to two years of required experience.

(g) Education gained in a piecemeal fashion over time where no degree is conferred will be granted up to a maximum of two years of experience. For the purpose of this subsection, education in a "piecemeal fashion" means: One or two classes taken at a time, often at different schools; seminars; workshops; and classes taken through industry and the military. In order to determine the appropriate amount of experience, this type of education will be compared to college coursework in a baccalaureate of engineering technology degree program.

(h) The board may approve engineering degree programs from other countries.

(i) A number of foreign degree programs are included in mutual recognition agreements entered into by ABET with other accrediting authorities. Applicants with a degree from one of these programs will be evaluated in accordance with (a) and (b) of this subsection. A list of those approved mutual recognition degree programs is maintained in the board office.

(ii) Applicants having engineering degrees from programs in countries that are not on the mutual recognition list will be required to have their transcripts evaluated by a transcript evaluation service approved by the board. This evaluation will be performed at the applicant's expense, and the applicant will be responsible for submitting all necessary information to the evaluation service. If the evaluation service says that the foreign degree is equivalent to an ABET accredited degree, experience will be granted in accordance with (a) or (b) of this subsection. If the evaluation says that the foreign degree is not equivalent to an ABET accredited degree, then a maximum of three years of experience may be granted in accordance with (c) of this subsection.

(iii) An applicant with an undergraduate foreign degree from a program that is not on the mutual recognition list, can waive the requirement for a degree evaluation if they have a master of science in engineering from a school that has an ABET accredited undergraduate engineering degree program in the same discipline as the master's degree. A maximum of four years of experience can be granted for this combination of education.

(i) Any other education will be taken into account and evaluated on its merits.

(j) Work experience gained between semesters or quarters or during summers while enrolled in an approved curriculum will be considered as part of the educational process. The board grants one year of experience for a year of approved education including any associated work experience within that year.

(2) Work experience will be approved based on a demonstration of competency and progressive responsibility in the analysis, synthesis and evaluation of engineering concepts and data, under the direct supervision of a person authorized by chapter 18.43 RCW or other applicable statute to practice engineering. Under the general guidance and direct supervision of an authorized professional, the applicant must be in a position of making

independent judgments and decisions in the following experience areas:

- (a) Formulating conclusions and recommendations;
- (b) Identifying design and/or project objectives;
- (c) Identifying possible alternative methods and concepts;
- (d) Defining performance specifications and functional requirements;
- (e) Solving engineering problems;
- (f) Interacting with professionals from other areas of practice;
- (g) Effectively communicating recommendations and conclusions;
- (h) Demonstrating an understanding and concern for energy/environmental considerations, and sustainability of resources.

(3) The branch of structural engineering requires specialized work experience to protect the public safety. To be eligible to take the structural (~~(principle and practice)~~) license examination, an applicant must have ~~((eight))~~ at least two years of progressive responsibility in structural engineering experience. These two years of structural experience are in addition to the eight years of engineering experience required to be registered as a professional engineer and must be documented in the application in accordance with subsection (2) of this section. ~~((This))~~ The structural engineering experience must be supervised by a licensed professional engineer in the branch of structural engineering or a licensed professional engineer with significant structural engineering work experience. ~~((Up to five years of this experience may be gained through education in accordance with subsection (1) of this section. In order to be granted the fifth year, a postgraduate degree in engineering with a concentration of structural courses must be obtained from a school that has an ABET accredited undergraduate program in engineering.))~~

(4) Engineering teaching character may be considered satisfactory experience up to a maximum of two years.

(5) Applied research is considered satisfactory experience when it meets the following conditions:

(a) The research must be conducted under the guidance or supervision of a licensed engineer. For the purposes of this subsection, guidance or supervision means being cognizant of all applicable aspects of the work and a reviewer of all applicable reporting documentation.

(b) The principle result(s) of the research are in a published report or a recognized engineering journal article in which the applicant is the first author or the work is adequately documented and available to the board upon request.

(6) For military engineering experience to be considered acceptable, it should be similar to engineering experience that would be gained in a nonmilitary environment as defined in subsection (2) of this section, and such experience must be verified.

(7) Any work experience gained without the supervision of a professional engineer authorized to practice under chapter 18.43 RCW or an individual authorized by another statute to practice

engineering, or a work experience gained in / other situation which violates the provisions of chapter 18.43 RCW or Title 196 WAC will not be counted toward the statutory experience requirement.

AMENDATORY SECTION (Amending WSR 01-09-016, filed 4/6/01, effective 5/7/01)

WAC 196-12-030 Examinations. (1) Except as provided in WAC 196-12-050, to become licensed as a professional engineer the candidate must pass two stages of examination. The first stage is the fundamentals-of-engineering examination. The second stage examination consists of multiple parts including the principles and practice (branch) examination and law and ethics examination. The law and ethics exam is a take-home examination covering chapter 18.43 RCW and Title 196 WAC. The fundamentals-of-engineering examination must be passed, or waived in accordance with WAC 196-12-050, before taking the second stage examination.

Examinations are given at times and places designated by the board. The schedule of future examinations and examination syllabi may be obtained from the board office. Examinees will not be allowed to view any examination material prior to taking the examination other than syllabi available to the public or sample examination booklets published by the National Council of Examiners for Engineering and Surveying. If one examination part is failed, only that examination part must be retaken.

(2) If a professional engineer holding a current registration in the state of Washington wants to become licensed in multiple branches of engineering, an additional principle and practice examination must be taken in each branch.

(3) The branch of structural engineering requires a (~~more exhaustive principle and practice~~) series of examinations, as determined by the board, to protect the public safety. (~~In addition to the stage 1 fundamentals-of-engineering examination,~~) To become licensed as a professional engineer in the branch of structural engineering, the candidate must pass: The stage 1 fundamentals-of-engineering examination; the stage 2 principles and practice of engineering (PE) and the take-home law and ethics examinations; and the stage 3 examination comprised of (~~all parts of~~) examinations in the principles and practice of structural engineering (~~examination, including a demonstration of competency in~~) and structural engineering issues important to Washington state (~~, and the law and ethics examination~~).