IDAPA 10 - IDAHO BOARD OF LICENSURE OF PROFESSIONAL ENGINEERS AND PROFESSIONAL LAND SURVEYORS

10.01.01 - RULES OF PROCEDURE DOCKET NO. 10-0101-1101

NOTICE OF RULEMAKING - PROPOSED RULE

AUTHORITY: In compliance with Section 67-5221(1), Idaho Code, notice is hereby given that this agency has initiated proposed rulemaking procedures. The action is authorized pursuant to Section 54-1208, Idaho Code.

PUBLIC HEARING SCHEDULE: A public hearing concerning this rulemaking will be held as follows:

Wednesday, July 13, 2011 - 9:00 a.m.

1510 E. Watertower St. Meridian, ID 83642

The hearing site(s) will be accessible to persons with disabilities. Requests for accommodation must be made not later than five (5) days prior to the hearing, to the agency address below.

DESCRIPTIVE SUMMARY: The following is a nontechnical explanation of the substance and purpose of the proposed rulemaking:

- 1. Eliminate the need for engineer intern and land surveyor intern applicants to provide references on their examination application;
- 2. Adopt national standards for the evaluation of non-accredited engineering programs;
- 3. Allow individuals to select retired status at any time upon request; and
- 4. Amend the examination submittal deadlines to accommodate converting some examinations to computer-based format.

FEE SUMMARY: The following is a specific description of the fee or charge imposed or increased: There is no fee associated with this proposed rule.

FISCAL IMPACT: The following is a specific description, if applicable, of any negative fiscal impact on the state general fund greater than ten thousand dollars (\$10,000) during the fiscal year as a result of this rulemaking:

There is no impact to the state general fund or to the dedicated fund of the Board.

NEGOTIATED RULEMAKING: Pursuant to Section 67-5220(1), Idaho Code, negotiated rulemaking was conducted. The Notice of Intent to Promulgate Rules - Negotiated Rulemaking was published in the May 4, 2011 Idaho Administrative Bulletin, Vol. 11-5, Page 52.

INCORPORATION BY REFERENCE: Pursuant to Section 67-5229(2)(a), Idaho Code, the following is a brief synopsis of why the materials cited are being incorporated by reference into this rule: No materials are cited as being incorporated by reference into this rule.

ASSISTANCE ON TECHNICAL QUESTIONS, SUBMISSION OF WRITTEN COMMENTS: For assistance on technical questions concerning the proposed rule, contact David L. Curtis, P.E., Executive Director at dave.curtis@ipels.idaho.gov or at (208) 373-7210.

Anyone may submit written comments regarding this proposed rulemaking. All written comments must be directed to the undersigned and must be delivered on or before July 27, 2011.

DATED this 9th day of June, 2011.

David L. Curtis, P.E., Executive Director Board of Professional Engineers and Professional Land Surveyors 1510 E. Watertower St., Meridian, Idaho 83642 Voice (208) 373-7210; Fax (208) 373-7213

email: dave.curtis@ipels.idaho.gov

THE FOLLOWING IS THE PROPOSED TEXT OF DOCKET NO. 10-0101-1101

013. PUBLICATIONS.

- **01. Annual Report**. An annual report shall be submitted to the governor, the contents of which shall comply with the provisions of Section 54-1210, Idaho Code. (7-1-93)
- **02. Roster**. A roster of professional engineers, professional land surveyors, engineer interns, land surveyor interns, and engineering and land surveying business entities in good standing and licensees and certificate holders in the retired status as provided in these rules shall be maintained in an electronic format available to the public. (5-8-09)
- **03. Retired Status.** Those licensees who *have reached the age of sixty (60) (or are totally and permanently disabled) and* are retiring from practice may be listed in the retired section of the Roster, *upon application to the Board.* The biennial fee for being thus listed shall be established by the Board. Such listing does not permit a licensee to engage in the practice of engineering or land surveying. The fee for reinstatement to active practice shall be as required for delayed renewals in Section 54-1216, Idaho Code.

(BREAK IN CONTINUITY OF SECTIONS)

016. APPLICATION FOR LICENSURE OR CERTIFICATION.

- **61. Forms.** Application forms for licensure as a professional engineer, or professional land surveyor, certification as an engineer intern, land surveyor intern or certificates of authorization to practice or offer to practice engineering or land surveying by a business entity may be obtained from the office of the Executive Director of the Board of Professional Engineers and Professional Land Surveyors. (5-8-09)
- **O2. Completion of Application.** Applications shall be made on such forms as may be prescribed by the Board. An application which is not fully completed by the applicant need not be considered or acted upon by the Board. The application by a business entity for a certificate of authorization to practice or offer to practice engineering or land surveying must set forth their address, and name and address of the individual, or individuals, duly licensed to practice engineering or land surveying in this state, who will be in responsible charge of engineering or land surveying services offered or rendered by the business entity in this state. (5-8-09)
- **O3.** Dates of Submittal and Experience Cutoff Date. Applications for the Spring and Fall examination, respectively, must be received by the Executive Director or postmarked by January 10 or August 1 of any year. Examinations may be given in various formats and different submittal dates apply depending on the examination format. For examinations administered once or twice a year in the Spring and Fall, there is an examination assignment cutoff date that varies depending on the actual date of the examination. For examinations administered once or twice a year in the Spring and Fall, receipt of the applications after October 10 for the Spring

exam or after July 1 for the Fall exam, may not provide sufficient time for required credentials to arrive at the Board office prior to the exam assignment cutoff date. If this occurs, the applicant will be assigned to a later examination if all requirements are met. For examinations administered in a computer-based format during testing windows, there is no deadline for submittal of the application and the applicant, if assigned to the exam, will be allowed to test during the current testing window, if open on the date of the letter notifying of assignment, or during the next two (2) available testing windows. Failure to test during these periods will void the assignment. For examinations administered continuously in a computer-based format, there is no deadline for submittal of the application and the applicant, if assigned to the exam, will be allowed to test during a nine (9) month period beginning on the date of the letter notifying of assignment. Failure to test during this period will void the assignment. In order for the Board to be able to verify experience, only experience up to the date of submittal of the application will be considered as valid. Experience anticipated between the date of the application submittal and the date of the examination or issuance of license or certificate will not be considered. For students, the application filing date for the Fundamentals of Engineering and the Fundamentals of Surveying examination may be extended at the discretion of the Board.

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- **04. Residency Requirement.** Except for military personnel stationed in Idaho, only Idaho residents and students at Idaho universities will be assigned to examinations, unless otherwise approved by the Board. (5-8-09)
- **O5. Confidentiality of References**. All information received from references named by the applicant shall be held in confidence by the Board except as provided by Section 9-342, Idaho Code. Neither members of the Board nor relatives of the applicant by blood or marriage shall be named or accepted as references. (5-8-09)
- **06. Minimum Standards -- References**. An applicant may not be admitted to the examination until satisfactory replies have been received from a minimum of five (5) of his references for professional engineers or land surveyors and three (3) references for engineer interns and land surveyor interns. It shall be the responsibility of each applicant to furnish their references with the forms prescribed by the Board.

017. EXAMINATIONS.

- **01. Special or Oral Examination**. Examinations for licensure as a professional engineer or professional land surveyor, or certification as an engineer intern or land surveyor intern will be held on dates and at times and places to be determined by the Board. Special oral or written examinations may be given by the Board as necessary. (3-29-10)
- **O2.** Eligibility for Examinations, Educational Requirements. The application for licensure as a professional engineer, professional land surveyor or certification as an engineer intern or land surveyor intern, together with the written examination, shall be considered in the determination of the applicant's eligibility. Each applicant must meet the minimum requirements as set forth in Section 54-1212, Idaho Code, before being assigned to any examination.

 (3-29-10)
- a. In regard to educational requirements, the Board will consider as unconditionally approved only those engineering programs which are accredited by the Engineering Accreditation Commission (EAC) of ABET, Inc. Non-EAC/ABET accredited engineering programs, related science programs, and engineering technology programs will be considered by the Board on their specific merits, but are not considered equal to engineering programs accredited by EAC/ABET. The Board may continue consideration of an application for valid reasons for a period of one (1) year, without forfeiture of the application fee. (3-29-10)
- **b.** An applicant who has completed a four (4) year bachelor degree program in engineering not accredited by EAC/ABET or a four (4) year bachelor degree program in engineering technology, or in a related science degree program other than engineering must have completed a minimum of fifteen (15) semester credits of Engineering Science at a Sophomore and Junior level, six (6) semester credits of Engineering Design related courses at a Senior level, twelve (12) semester credits of Advanced Mathematics including Calculus and Differential Equations, and twelve (12) semester credits of basic science courses including Chemistry, calculus based Physics and other appropriate basic science courses the following before the Board will consider them to possess knowledge and skill approximating that attained through graduation from an approved four (4) year engineering curriculum as required by Section 54-1212(3)(b), Idaho Code, for assignment to the examination for certification as an Engineer Intern or as required by Section 54-1212(1)(b), Idaho Code, for assignment to the examination for licensure as a

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professional engineer: (5-8-09)(_____

i. Thirty-two (32) college semester credit hours of higher mathematics and basic sciences. The credits in mathematics must be beyond algebra and trigonometry and must emphasize mathematical concepts and principles rather than computation. Courses in calculus and differential equations are required. Additional courses may include linear algebra, numerical analysis, probability and statistics and advanced calculus. The credits in basic sciences must include courses in chemistry and calculus-based general physics with a minimum of a two (2) semester (or equivalent) sequence in one or the other. Additional basic sciences courses may include life sciences (biology), earth sciences (geology, ecology), and advanced chemistry or physics. Computer skills and/or programming courses may not be used to satisfy mathematics or basic science requirements. Basic engineering science courses or sequence of courses in this area are acceptable for credit but may not be counted twice.

- ii. Sixteen (16) college credit hours in a general education component that complements the technical content of the curriculum. Examples of traditional courses in this area are philosophy, religion, history, literature, fine arts, sociology, psychology, political science, anthropology, economics, professional ethics, social responsibility. No more than six (6) credit hours of languages other than English or other than the applicant's native language are acceptable for credit. English and foreign language courses in literature and civilization may be considered in this area. Courses which instill cultural values are acceptable, while routine exercises of personal craft are not.
- iii. Forty-eight (48) college credit hours of engineering science and engineering design. Courses shall be taught within the college / faculty of engineering having their roots in mathematics and basic sciences but carry knowledge further toward creative application of engineering principles. Examples of approved engineering science courses are mechanics, thermodynamics, heat transfer, electrical and electronic circuits, materials science, transport phenomena, and computer science (other than computer programming skills). Courses in engineering design stress the establishment of objectives and criteria, synthesis, analysis, construction, testing, and evaluation. Graduate level engineering courses can be included to fulfill curricular requirements in this area. Engineering technology courses cannot be considered to meet engineering topic requirements.
- iy. Standard, regularly scheduled courses from accredited university programs, (on campus, correspondence, video, etc.) are normally acceptable without further justification other than transcript listing. The Board may require detailed course descriptions for seminar, directed study, special problem and similar courses to insure that the above requirements are met. (7-1-93)
- Graduate level engineering courses, i.e. courses which are available only to graduate students, are normally not acceptable since the Board believes graduate engineering courses may not provide the proper fundamental foundation to meet the broad requirements of professional engineering. (7-1-93)
- c. Beginning July 1, 2010, an applicant who has completed a four (4) year bachelor degree program in a related science must have completed a minimum of the following college level academic courses, or their equivalents as determined by the Board, before the Board will consider them to possess knowledge and skill approximating that attained through graduation from an approved four (4) year surveying curriculum as required by Section 54-1212(4)(b), Idaho Code, for assignment to the examination for certification as a Land Surveyor Intern or as required by Section 54-1212(2)(b), Idaho Code, for assignment to the examination for licensure as a professional land surveyor:

1.	Three (3) credits in Surveying Law and Boundary Descriptions;	(3-30-07)
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- ii. Three (3) credits in Route Surveying; (3-30-07)
- iii. Three (3) credits in Public Land Surveying; (3-30-07)
- iv. Three (3) credits in Surveying Software Applications; (3-30-07)
- v. Three (3) credits in Research and Evidence in Surveying; (3-30-07)
- vi. Three (3) credits in Surveying Adjustments and Coordinate Systems; (3-30-07)

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- vii. Three (3) credits in Subdivision Planning and Platting; (3-30-07)
- viii. Three (3) credits in Geodesy; and (3-30-07)
- ix. Three (3) credits in Survey Office Practice and Business Law in Surveying. (3-30-07)
- d. The Board may require an independent evaluation of the engineering education of an applicant who was educated outside the United States. Such evaluation shall be done through an organization approved by the Board and shall be done at the expense of the applicant. Such evaluation shall not be required if the applicant has received a master's degree or Doctor of Philosophy degree from an U.S. institution which has a bachelor degree program accredited by the Engineering Accreditation Commission of ABET, Inc. in the discipline of the applicant's master's degree or Doctor of Philosophy degree, and, in addition, has completed the coursework requirements of Subsection 017.02.b. The Board may table action on the application pending receipt of the evaluation, and, in the event the applicant does not provide the evaluation within one (1) year, the Board may terminate the application, in which case the application fee shall be forfeited. (3-29-10)
- **O3. Excused Non-Attendance at Exam.** In the event that an applicant cannot attend an examination, he shall immediately notify the Board to that effect and shall state the reason for non-attendance. Normally, no more than one (1) valid excuse and reassignment shall be granted to an applicant. If an applicant fails to appear for two (2) administrations of an examination their application may be terminated and they may be required to submit a new application and pay a new application fee in order to be reconsidered. (3-30-01)
- **104. Two Examinations for Engineering Licensure.** The complete examining procedure for licensure as a professional engineer normally consists of two (2) separate written examinations. The first is the Fundamentals of Engineering examination for engineer intern certification, and the second is the Principles and Practice of Engineering for professional engineer licensure. The examination shall be a duration as determined by the Board. Normally, applicants are eligible to take the Fundamentals of Engineering examination during the last or second-to-last semester of or after graduation from an accredited bachelor of science engineering program. A certificate as an Engineer Intern will be issued only to those student applicants who earn a passing grade on the examination and who receive a degree. Having passed the Fundamentals of Engineering examination, applicants will be required to take the Principles and Practice of Engineering examination at a later date when qualified by experience. (3-29-10)
- **05. Fundamentals of Engineering**. The Fundamentals of Engineering examination will cover such subjects as are ordinarily given in engineering college curricula and which are common to all fields of practice. The examination may also cover subject matters that are specific to the engineering discipline of the applicants' education.

 (5-8-09)
- **96. Principles and Practice of Engineering -- Disciplines.** The Principles and Practice of Engineering examination will cover the practice of engineering to test the applicant's fitness to assume responsibility for engineering works affecting the public health, safety and welfare. Separate examinations will be given to test the applicant's fitness in any discipline for which there is an examination which, in the opinion of the Board, meets the requirements of duration and difficulty necessary to adequately test the applicant's fitness to practice in that particular discipline. The Board may use examinations prepared by the National Council of Examiners for Engineering and Surveying (NCEES) or it may prepare or commission the preparation of examinations in disciplines other than those for which examinations may be available from NCEES. (4-22-94)
- **O7. Two Examinations for Land Surveying Licensure.** The complete examining procedure for licensure as a professional land surveyor consists of two (2) separate written examinations. The first is the Fundamentals of Surveying examination for land surveyor intern certification, and the second is the Principles and Practice of Surveying for professional land surveyor licensure. The examination shall be a duration as determined by the Board. Having passed the Fundamentals of Surveying examination, applicants will be required to take the Principles and Practice of Surveying examination at a later date when qualified by experience. The examination shall cover the theory and principles of surveying, the practice of land surveying and the requirements of legal enactments. The Principles and Practice of Surveying examination may consist of separate modules, each of which must be passed.

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08. Oral or Unassembled Examinations. An oral examination or unassembled written examination,

in addition to the prescribed written examination, may be required for professional engineer and professional land surveyor applicants. (7-1-93)

- **O9. Special Examinations.** A special examination, written or oral or both, may be required in certain instances where the applicant is seeking licensure through comity or reciprocity with another state or political entity having required written examinations that are not wholly comparable in length, nature or scope. This examination supplements the certified qualifying record of the applicant and establishes a more common basis for judging the application and awarding a certificate of qualification or licensure in this state. The length of these special examinations shall be determined by the Board, but shall in no case exceed the lengths specified for the regular examination dates.
- **10. Grading.** Each land surveyor intern, engineer intern and professional engineer applicant must normally attain a scaled score of seventy (70) or above on the entire examination or modules as determined by the Board, before being awarded certification or licensure. Examinees on the Principles and Practice of Land Surveying examination must normally attain a scaled score of seventy (70) or above on each module of the examination.

(3-29-10)

- 11. Use of NCEES Examinations. Examinations prepared and graded by the National Council of Examiners for Engineering and Surveying (NCEES) for professional engineer, engineer intern, professional land surveyors, and land surveyor intern may be used by the Board. The examination for the field of structural engineering shall be the examination as determined by the Board. (3-29-10)
- 12. Review of Examination by Examinee. Due to security concerns about the examinations, examinees shall not be allowed to review their examination. Examinees who fail an examination will be provided a diagnostic analysis of their performance on the examination if such an analysis is available to the Board. (3-20-04)
- 13. **Proctoring of Examinations**. Unless otherwise approved, the Board will not proctor an examination for another jurisdiction except State-Specific examinations nor will they request another jurisdiction to proctor an examination for an Idaho applicant. (5-8-09)

(BREAK IN CONTINUITY OF SECTIONS)

019. LICENSEES OR CERTIFICATE HOLDERS OF OTHER STATES AND BOARDS.

- **O1. Interstate Licensure Evaluation**. Each application for Idaho professional engineer license or professional land surveyor license submitted by an applicant who is licensed as a professional engineer, or licensed as a professional land surveyor, respectively, in one (1) or more states, territories or foreign countries, shall be considered by the Board on its merits, and the application evaluated for substantial compliance with respect to the requirements of the Idaho law. Graduates of programs accredited by organizations signatory to the "Washington Accord" and graduates from programs evaluated by ABET as being substantially equivalent to EAC/ABET programs shall be considered to have satisfied the educational requirement for issuance of a license as a professional engineer. Individuals who have passed examinations considered by the Board to be of comparable difficulty and duration as those utilized by the Board shall be considered to have satisfied the examination requirement for issuance of a license as a professional engineer or professional land surveyor. (5-8-09)
- a. The Board may require an independent evaluation of the engineering education of an applicant who was educated outside the United States. Such evaluation shall be done through an organization approved by the Board and shall be done at the expense of the applicant. Such evaluation shall not be required if the applicant has been licensed in another jurisdiction of the United States for an minimum of ten (10) years and has not had any disciplinary action against them and there is none pending, and possesses the education, experience and examination credentials that were specified in the applicable registration chapter in effect in this state at the time such certification was issued. The Board may table action on the application pending receipt of the evaluation, and, in the event the applicant does not provide the evaluation within one (1) year, the Board may terminate the application, in which case the application

fee shall be forfeited. (5-8-09)

b. An applicant who was originally licensed in another jurisdiction after June 30, 1996 and who has completed a four (4) year bachelor degree program in engineering not accredited by EAC/ABET or a four (4) year bachelor degree program in engineering technology, or in a related science degree program other than engineering must have completed a minimum of fifteen (15) semester credits of Engineering Science at a Sophomore and Junior level, six (6) semester credits of Engineering Design related courses at a Senior level, twelve (12) semester credits of Advanced Mathematics including Calculus and Differential Equations, and twelve (12) semester credits of basic science courses including Chemistry, calculus based Physics and other appropriate basic science courses the following before the Board will consider them to possess knowledge and skill approximating that attained through graduation from an approved four (4) year engineering curriculum as required by Section 54-1212(1)(b), Idaho Code:

- i. Thirty-two (32) college semester credit hours of higher mathematics and basic sciences. The credits in mathematics must be beyond algebra and trigonometry and must emphasize mathematical concepts and principles rather than computation. Courses in calculus and differential equations are required. Additional courses may include linear algebra, numerical analysis, probability and statistics and advanced calculus. The credits in basic sciences must include courses in chemistry and calculus-based general physics with a minimum of a two (2) semester (or equivalent) sequence in one or the other. Additional basic sciences courses may include life sciences (biology), earth sciences (geology, ecology), and advanced chemistry or physics. Computer skills and/or programming courses may not be used to satisfy mathematics or basic science requirements. Basic engineering science courses or sequence of courses in this area are acceptable for credit but may not be counted twice.
- ii. Sixteen (16) college credit hours in a general education component that complements the technical content of the curriculum. Examples of traditional courses in this area are philosophy, religion, history, literature, fine arts, sociology, psychology, political science, anthropology, economics, professional ethics, social responsibility. No more than six (6) credit hours of languages other than English or other than the applicant's native language are acceptable for credit. English and foreign language courses in literature and civilization may be considered in this area. Courses which instill cultural values are acceptable, while routine exercises of personal craft are not.
- iii. Forty-eight (48) college credit hours of engineering science and engineering design. Courses shall be taught within the college / faculty of engineering having their roots in mathematics and basic sciences but carry knowledge further toward creative application of engineering principles. Examples of approved engineering science courses are mechanics, thermodynamics, heat transfer, electrical and electronic circuits, materials science, transport phenomena, and computer science (other than computer programming skills). Courses in engineering design stress the establishment of objectives and criteria, synthesis, analysis, construction, testing, and evaluation. Graduate level engineering courses can be included to fulfill curricular requirements in this area. Engineering technology courses cannot be considered to meet engineering topic requirements.
- c. An applicant who was originally licensed in another jurisdiction after June 30, 2010 who has completed a four (4) year bachelor degree program in a related science must have completed a minimum of the following college level academic courses, or their equivalents as determined by the Board, before the Board will consider them to possess knowledge and skill approximating that attained through graduation from an approved four (4) year surveying curriculum as required by Section 54-1212(2)(b), Idaho Code, for licensure as a professional land surveyor:

 (3-30-07)

i. Three (3) credits in Surveying	Law and Boundary	Descriptions;	(3-30-07)
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- iv. Three (3) credits in Surveying Software Applications; (3-30-07)
- v. Three (3) credits in Research and Evidence in Surveying; (3-30-07)
- vi. Three (3) credits in Surveying Adjustments and Coordinate Systems; (3-30-07)

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vii. Three (3) credits in Subdivision Planning and Platting; (3-30-07)

viii. Three (3) credits in Geodesy; and (3-30-07)

ix. Three (3) credits in Survey Office Practice and Business Law in Surveying. (3-30-07)

- **O2. Denials or Special Examinations**. An application from a licensee of another state, territory or foreign country may be denied by the Board for any just cause and the application fee retained; or the Board may approve the applicant for a special written and/or oral examination. (3-29-10)
- **O3. Business Entity Requirements.** No application for a certificate of authorization to practice or offer to practice professional engineering or professional land surveying, or both, in Idaho by a business entity authorized to practice professional engineering or professional land surveying or both in one (1) or more states, territories or foreign countries shall be considered by the Board unless such application includes the name and address of the individual or individuals, duly licensed to practice professional engineering or professional land surveying or both in this state, who will be in responsible charge of the engineering or land surveying services, or both, as applicable, to be rendered by the business entity in Idaho. The said individual or individuals must certify or indicate to the Board their willingness to assume responsible charge. (5-8-09)