STATE OF WISCONSIN
EXAMINING BOARD OF ARCHITECTS, LANDSCAPE ARCHITECTS, PROFESSIONAL ENGINEERS, DESIGNERS AND LAND SURVEYORS

IN THE MATTER OF RULE-MAKING PROCEEDINGS BEFORE THE EXAMINING BOARD OF ARCHITECTS, LANDSCAPE ARCHITECTS, PROFESSIONAL ENGINEERS, DESIGNERS AND LAND SURVEYORS	:	PROPOSED ORDER OF THE EXAMINING BOARD OF ARCHITECTS, LANDSCAPE ARCHITECTS, PROFESSIONAL ENGINEERS, DESIGNERS AND LAND SURVEYORS ADOPTING RULES (CLEARINGHOUSE RULE 12-053)

ORDER

An order of the Examining Board of Architects, Landscape Architects, Professional Engineers, Designers and Land Surveyors to repeal A-E 4.06 and 4.08 (7); to renumber A-E 4.07, 4.08 (8), 4.08, 4.09, and 4.08 (2) (b) to amend A-E 4.03 (2) (a) 4, 4.08 (2) (a) and (b) and 4.09 (1) (b); and to repeal and recreate A-E 4.05, to create A-E 4.09 (2) (am), 4.09 (2) (c) relating to requirements for registration as a professional engineer.

Analysis prepared by the Department of Safety and Professional Services.

ANALYSIS

Statutes interpreted:

Sections 443.04, 443.09, 443.10, Stats.

Statutory authority:

Sections 227.11 (2) (a), 443.015 (2)

Explanation of agency authority:

Section 227.11 (2) (a), Stats., authorizes state agencies to promulgate rules interpreting the statutes they enforce or administer when deemed necessary to effectuate the purpose of those statutes. Section 443.015 (2), Stats., authorizes the Professional Engineer Section of the Examining Board of Architects, Landscape Architects, Professional Engineers, Designers and Land Surveyors (Joint Board) to promulgate rules governing the practice of professional engineering.

Related statute or rule:

No statutes or administrative rules beyond those referenced above are related to this proposed rule-making.

Plain language analysis:

This proposal is solely based on legislation that became effective on May 28, 2010. 2009 Wisconsin Act 350 amended the statutory requirements for registration as a professional engineer, which were then set forth in the now-former versions of ss. 443.04 and 443.09, Stats. As relevant to this proposal, Act 350 repealed former ss. 443.04 (1) (c) and (d), and (2), and 443.09 (6), Stats. Prior to Act 350's effective date, s. 443.04 (1), Stats., provided four alternative means for an applicant to satisfy the education and experience requirements for licensure as a professional engineer by examination, and s. 443.04 (2), Stats., allowed a failed examinant to obtain review of his or her examination by the appropriate section of the examining board. Act 350 recreated s. 443.04, Stats., which now provides for only two paths to professional engineer licensure by examination in new subsections (1m) and (2m). Act 350 also removed provisions within the former s. 443.09 (4), Stats., as necessitated by the statutory changes. The repeal of s. 443.09 (6), Stats., eliminated the examination review provision.

Summary of, and comparison with, existing or proposed federal regulation:

None.

Comparison with rules in adjacent states:

Illinois:

In Illinois, an applicant for licensure as a professional engineer by examination must graduate either from an approved 4-year engineering curriculum and have an additional 4 years or more of qualifying work experience; or graduate from a non-approved 4-year engineering or other related science curriculum and have an additional 8 years or more of qualifying work experience. 225 ILCS 325/10. Both types of applicants must also pass two 8-hour examinations, one on engineering fundamentals, and the other on engineering principles and practice. *Id.*

The statutes do not address examination review for applicants who fail the required licensure examinations.

http://www.ilga.gov/legislation/ilcs/ilcs3.asp?ActID=1344&ChapterID=24

With respect to the education and experience requirements for licensure as a professional engineer by examination, the Illinois Administrative Code merely restates the statutory provisions on the same. 68 Ill. Admin. Code 1380.230 (c). The Illinois rules specifically prohibit examination review by failed examinants, including the rescoring of an examination, but do allow for a retabulation of the numerical score. 68 Ill. Admin. Code 1380.260 (h).

http://www.ilga.gov/commission/jcar/admincode/068/06801380sections.html

Iowa:
The Iowa statutes (Iowa Code) require that applicants for licensure as a professional engineer graduate from a 4-year course in engineering in a school or college which, in the opinion of the Iowa Engineering and Land Surveying Examining Board, has properly prepared the applicant for the first required examination, which covers engineering fundamentals. Section 542B.14 1.a. (1), Iowa Code. The applicant must also show a specific record of four years or more of practical engineering experience of a character satisfactory to the Board. Section 542B.14 1.c., Iowa Code. Entrance into the second required examination, engineering principles and practice, is contingent upon the applicant showing that he or she has the necessary work experience. Section 542B.14 1.d., Iowa Code.

Although failed examinants may request information from the Board concerning their examination grades and incorrectly answered questions, the statutes do not provide for a review of a failed examination by the Board. Section 542B.15, Iowa Code.

http://search.legis.state.ia.us/nxt/gateway.dll?f=templates&fn=default.htm

Referring to the requirements for licensure as a professional engineer set forth in s. 542B.14, Iowa Code, Iowa's administrative rules note that the Iowa Engineering and Land Surveying Examining Board will issue an initial license only upon an applicant's chronological satisfaction of those requirements. Section 193C—4.1, Iowa Admin. Code. The rule goes on to state that applicants who did not graduate from a nationally accredited engineering curriculum must, in addition to their 4-year degree, complete an extra year of practical experience prior to sitting for the engineering fundamentals examination. Section 193C—4.1(1) a. (1), Iowa Admin. Code. Finally, the rules provide that the applicant must successfully complete the engineering principles and practice examination, eligibility for which requires a record of 4 years of practical engineering work experience of a character satisfactory to the Board. Section 193C—4.1(3) a., Iowa Admin. Code.

The Iowa rules also state that the results of all professional engineer licensure examinations will be reported as pass or fail, but that failed examinants may obtain a converted score and a diagnostic report indicating areas of weakness, as available. Section 193C—4.1(8) g., Iowa Admin. Code. The rules otherwise do not address examination review.

http://search.legis.state.ia.us/nxt/gateway.dll?f=templates&fn=default.htm

Michigan:

To become licensed by examination as a professional engineer in Michigan, Michigan's statutes require an applicant to have at least a 4-year degree in engineering from an accredited program or its equivalent, as determined by the Board of Professional Engineers. Section 339.2005 (2) (b), MCL. The applicant must also have not less than 8 years of professional experience in engineering work acceptable to the Board. Section 339.2005 (2) (a), MCL. Not more than 6 years of education will count toward the experience requirement. *Id.* Upon the applicant's fulfillment of those requirements, the applicant must then pass both the engineering fundamentals and professional practice examinations, or show proof of equivalent qualification

for practice acceptable to both the Department of Licensing and Regulatory Affairs and the Board of Professional Engineers. Section 339.2004 (2) (b), MCL.

The Michigan statutes do not address review of a failed examination for professional engineer licensure applicants.

http://www.legislature.mi.gov/(S(20fedyfiyad30amdcuypsx45))/mileg.aspx?page=MCLIndex&objectname=mcl-chap339

The Michigan administrative rules establish the standards used by the Board of Professional Engineers in determining the acceptability of bachelor's degrees for professional engineer licensure, and what will qualify as acceptable work experience. Sections 339.16021, 339.16022, Mich. Admin. Code. A bachelor's degree from an acceptable program will fulfill 4 of the 8 years' work experience requirement. Section 339.16021 (4), Mich. Admin. Code. Each advanced engineering degree, such as a master's or a doctorate, will count as 1 additional year of experience. Section 339.16021 (5), Mich. Admin. Code. The rules provide for an equivalency alternative to the engineering fundamentals examination for certain applicants, but otherwise do not address examination results or review. Section 339.16026, Mich. Admin. Code.

http://www7.dleg.state.mi.us/orr/Files/AdminCode/932_2009-032LR_AdminCode.pdf

Minnesota:

The Minnesota statutes regarding the licensure of professional engineers contain very few specific provisions, but delegate licensing authority to the Board of Architecture, Engineering, Land Surveying, Landscape Architecture, Geoscience, and Interior Design. Section 326.10, subd. 1. (a), Minn. Stats. The Board's authority includes establishing the educational and experience requirements for professional engineer licensure by examination. Section 326.10, subd. 1. (a) (1), Minn. Stats. The Minnesota statutes do not address examination review.

https://www.revisor.mn.gov/statutes/?id=326

The Board of Architecture, Engineering, Land Surveying, Landscape Architecture, Geoscience, and Interior Design requires applicants for licensure as a professional engineer to pass two 8-hour written examinations, one on the fundamentals of engineering (FE) and the other on engineering principles and practice. Section 1800.2500 Subp. 1., Minn. Admin. Rules. The Board must waive the FE examination requirement for applicants with 20 or more years of qualifying engineering experience and a doctorate degree in either engineering or an equivalent field. Section 1800.2800, Minn. Admin. Rules. To qualify to take the FE, an applicant must have at least a 4-year degree in engineering from either an accredited curriculum or one non-accredited that includes the minimum number of engineering science and design credits required by an accredited curriculum. Section 1800.2500, Subp. 2., A., C., Minn. Admin. Rules. An applicant whose bachelor's degree was in a non-engineering program, but who has a master's degree in engineering, will also qualify to the take the FE. Section 1800.2500, Subp. 2., D., Minn. Admin. Rules.

Eligibility for the principles and practice examination requires, beyond the educational component, a certain number of years' engineering work experience, depending on the type of degree held by the applicant. Section 1800.2500, Subp. 2a., B., Minn. Admin. Rules. A graduate of a 4-year accredited engineering program must show at least 4 years of qualifying work experience; a graduate of a non-accredited 4-year engineering or a non-engineering curriculum must have had 6 years of experience; and an applicant with a master's degree or doctorate in engineering, but whose bachelor's degree was in a non-engineering program must have had 5 years' experience. Section 1800.2500, Subp. 2a., B. (1)-(3), Minn. Admin. Rules. Finally, an applicant with both a bachelor's and master's degrees in engineering need only have completed 3 years' experience. Section 1800.2500, Subp. 2a., B. (4), Minn. Admin. Rules.

The Minnesota rules do not provide for examination review, but under S. 1800.0900, Subp. 4, Minn. Admin. Rules, require a failed examinant to retake the examination.

https://www.revisor.mn.gov/rules/?id=1800

Summary of factual data and analytical methodologies:

No factual data was required for the rule-making in this proposal, as the changes were necessitated by statute. For that reason, no analysis was involved in the preparation of these proposed rules.

Analysis and supporting documents used to determine effect on small business or in preparation of economic impact analysis:

These proposed rules will not have an economic impact on small businesses, as defined in s. 227.114 (1), Stats.,

Fiscal Estimate and Economic Impact Analysis:

The Fiscal Estimate and Economic Impact Analysis are attached.

Effect on small business:

Because the statutory changes that prompted this proposal took effect over two years ago, these proposed rules will not have an economic impact on small businesses, as defined in s. 227.114 (1), Stats., beyond that which such businesses have already experienced and absorbed. The Department's Regulatory Review Coordinator may be contacted by email at Greg.Gasper@wisconsin.gov, or by calling (608) 266-8608.

Agency contact person:

Shawn Leatherwood, Paralegal, Department of Safety and Professional Services, Division of Board Services, 1400 East Washington Avenue, Room 117, P.O. Box 8935, Madison, Wisconsin 53708; telephone (608) 261-2385; email at Shancethea.leatherwood@wisconsin.gov.

Place where comments are to be submitted and deadline for submission:

Comments may be submitted to Shawn Leatherwood, Paralegal, Department of Safety and Professional Services, Division of Board Services, 1400 East Washington Avenue, Room 117, P.O. Box 8935, Madison, WI 53708-8935, or by email to Shancethea.leatherwood@wisconsin.gov . Comments must be received on or before January 31, 2013, at 9:30 a.m., to be included in the record of rule-making proceedings.

TEXT OF RULE

SECTION 1. A-E 4.03(2) (a) 4 is amended to read:

A-E 4.03(2) (a) 4. Defining performance, specifications and functional requirements such as materials, energy balances and environmental considerations.

SECTION 2. A-E 4.05 is repealed and re-created to read:

A−E 4.05 Requirements for registration as a professional engineer. (1) FOUR YEAR COURSE OF STUDY. A four year course of study requires all of the following: (a) A bachelor of science degree (B.S.) in engineering from a school or college of engineering accredited by the engineering accreditation commission of the accreditation board for engineering and technology (EAC/ABET) in engineering of not less than 4 years, or a diploma of graduation in engineering of not less than 4 years deemed by the professional engineer section to be equivalent to a B. S. degree in engineering from an EAC/ABET accredited school or college of engineering.

(b) A specific record of 4 or more years of experience within the 10 years preceding the application in engineering work of a character satisfactory to the professional engineer section indicating that the applicant is competent to be placed in responsible charge of engineering work. Experience gained in obtaining a master's degree in engineering and experience gained in obtaining a Ph.D. in engineering or in an engineering related program shall each be deemed equivalent to one year of qualifying experience.

(c) Successful completion of the fundamentals of engineering examination and the principles and practice of engineering examination.

(d) If an engineering degree is from an educational institution located outside the United States or its territories, the applicant shall provide an official evaluation by a transcript evaluation service acceptable to the professional engineer section which compares the degree to an engineering education standard acceptable to the professional engineer section. The professional engineer section may approve the degree if it finds equivalence.

(2) TWO YEAR COURSE OF STUDY. A 2 year course of study requires all of the following: (a) An associate degree in engineering related course of study from a technical school or college accredited by the engineering technology accreditation commission of the accreditation board for engineering and technology (ETAC/ABET) in an engineering related course of study of not less than 2 years. This shall be deemed equivalent to a degree from a technical school or college approved by the professional engineer section.

(b) A specific record of 6 or more years of experience within the 10 years preceding the application in engineering work of a character satisfactory to the professional engineer section indicating that the applicant is competent to be placed in responsible charge of engineering work.

(c) Successful completion of the fundamentals of engineering examination and the principles and practice of engineering examination.

(3) EXPERIENCE**.** To qualify as satisfactory experience in professional engineering for purposes of ss. 443.04(2m) (a) and (b), Stats., an applicant's experience must be obtained subsequent to completion of the educational requirements set forth in s. 443.04(1m), Stats. This requirement may be waived, in the sole discretion of the professional engineer section, for reasons it considers sufficient.

SECTION 3. A-E 4.06 is repealed.

SECTION 4. A-E 4.07 is renumbered A-E 4.06

SECTION 5. A-E 4.08(2) (a) and (b) are amended to read:

A−E 4.08 (**2)** REQUIREMENTS FOR ENTRANCE TO EXAMINATIONS.

(a) To be eligible to take the examination on fundamentals of engineering, the applicant shall:

1. Be of not less than senior standing in an accredited B.S. engineering program qualifying under s. A-E 4.05(1)(a)~~;~~ or

2.~~Have at least 4 years of engineering experience qualifying under s. A-E 4.03 or;~~ Have successfully completed a program in an engineering related course of study qualifying under s. A-E 4.05(2)(a).

~~3. Have a combination of engineering experience qualifying under s. A−E 4.03 and education qualifying under s. A−E 4.05 totaling at least 4 years.~~

(b) To be eligible to take the examination on the principles and practices of engineering, the applicant shall have one of the following:

1. Have a B.S. degree from an accredited engineering program qualifying under s. A-E 4.05(1)(a), and at least 4 years of engineering experience qualifying under s. A−E 4.03; or

2. Have a degree from an educational institution located outside of the United States or its territories approved by the professional engineer section as qualifying under s. A-E 4.05(1)(d) and at least 4 years of engineering experience qualifying under s. A-E 4.03; or

~~2~~3. ~~Have at least 8 years of engineering experience qualifying under s. A-E 4.03; or~~ Have an associate degree in an engineering related course of study from a technical school or college accredited by the engineering accreditation commission of the accreditation board for engineering and technology (ETAC /ABET) and at least 6 years of engineering experience qualifying under s. A-E 4.03.

~~3. Have a combination of engineering experience qualifying under s. A-E 4.03 and education qualifying under s. A-E 4.05 totaling at least 8 years.~~

SECTION 6. A-E 4.08 (7) is repealed.

SECTION 7. A-E 4.08 (8) is renumbered A-E 4.08 (7).

SECTION 8. A-E 4.08 is renumbered A-E 4.07.

SECTION 9. A-E 4.09 is renumbered A-E 4.08.

SECTION 10. A-E 4.09(1) (b) is amended to read:

A-E 4.09(1) (b) References from at least 5 individuals having personal knowledge of the applicant's ~~experience in professional~~ engineering work, 3 or more of whom are registered professional engineers, one of whom is registered in Wisconsin and one of whom has served as supervisor in responsible charge of the applicant's engineering work.

SECTION 11. A-E 4.08(2)(b) is renumbered to A-E 4.08(2) (d).

SECTION 12. A-E 4.09 (2) (am) is created to read:

A-E 4.09 (2) (am) References from at least 5 individuals having personal knowledge of the applicant's engineering work 3 or more of the references shall be registered professional engineers and one of whom has served as supervisor in responsible charge of the applicant's engineering work.

SECTION 13. A-E 4.09 (2) (c) is created to read:

A-E 4.09 (2) (c) Verification of meeting the continuing education requirements set forth in A-E 13.09.

SECTION 14. The rules adopted in this order shall take effect on the first day of the month following publication in the Wisconsin administrative register, as prescribed by s. 227.22 (2) (intro.), Stats.

END OF TEXT OF RULE

Dated_____ Agency _____

Member, Examining Board of
Architects, Landscape Architects,
Profession Engineers, Land Surveyors and
Designers