

BOARD RULES
NORTH CAROLINA ADMINISTRATIVE CODE
Title 21, Chapter 56
BOARD OF EXAMINERS FOR ENGINEERS AND SURVEYORS

WITH REVISIONS EFFECTIVE AUGUST 1, 2002

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21-56.0100. ORGANIZATION OF BOARD

21-56.0101. IDENTIFICATION

The North Carolina State Board of Examiners for Engineers and Surveyors is hereinafter referred to as "the Board."

**21-56.0102. GENERAL PURPOSE OF BOARD
(Repealed)**

21-56.0103. ORGANIZATION

(a) Chair. The chair elected annually by the Board has final authority and responsibility in the operation of the Board office subject to policies and directives as established by the full Board or these rules.

(b) Vice-Chair. The vice-chair serves in the absence of the chair.

(c) Secretary. The secretary shall perform duties as stated in G.S. 89C-11. The secretary may assign to the executive director those day-to-day administrative and operational duties as are approved by majority vote of the full Board. Authorization by the secretary for the disbursement of funds by the executive director must be in writing and have the unanimous approval of the Board.

(d) Board Committees. The Board shall be organized into an engineering committee, a land surveying committee and a continuing professional competency (CPC) committee. The engineering committee shall consist of the four engineer members and one public member. The land surveying committee shall consist of the three land surveyor members and one public member. The CPC committee shall consist of one engineer member, one land surveyor member and one public member. The Board chair shall appoint the chairs and members of each committee.

(e) Executive Director. The routine operations of the Board office shall be the responsibility of the executive director subject to policies and directives as established by the Board or these rules. The executive

director may be authorized by the Board or the chair to represent the Board before professional or governmental organizations when such representation serves to further and support the purposes of the Board and is made within the expressed policies of the Board or these Rules. The executive director shall be responsible for the administration of the policies of the Board.

(f) Notices of Board Meetings. The Board shall set the dates and times and provide notice of all meetings. The meetings shall be open to the public unless exempted from the open meetings law.

(g) Actions by the Board. Actions taken by the Board shall be by majority vote or a quorum of the Board.

(h) Hiring staff and consultants. The Board shall authorize the hiring of staff and consultants as necessary to carry out the Board's business.

21-56.0104. DESCRIPTION OF SEAL

The official seal adopted by the Board is the Great Seal of the State of North Carolina with the inscription of the Board name on the perimeter.

21-56.0200. BOARD PERSONNEL POLICIES AND WORK PLAN (Repealed)

21-56.0300. INSTRUCTIONAL PROGRAMS

21-56.0301. POLICY (Repealed)

21-56.0302. FINANCES (Repealed)

21-56.0303. DISBURSEMENT OF FUNDS

Funds for educational programs will be allocated and dispensed in the following manner:

(1) Funds will be dispensed by vote of the Board after study and recommendation of each specific request by the appropriate committee of the Board.

(2) The Board will consider requests for funds only from approved schools or professional organizations.

(3) Requests will be considered for any use that will directly further engineering or surveying education and competence.

(4) Requests for money shall be in writing and provide the following information:

(a) The amount needed, or appropriate limits thereof;

(b) Intended uses to be made of the requested monies;

(c) Subject material to be presented with qualifications of instructors to be employed;

(d) Itemized estimate of the total expected costs;

(e) Source and amount of assistance being given by any other person or organization.

21-56.0400. RECORDS AND REPORTS OF BOARD: RETENTION AND DISPOSITION

21-56.0401. RECORDS OF BOARD PROCEEDINGS

Records of all proceedings of the Board such as rule-making proceedings, declaratory rulings and contested cases and all other permanent records are retained at the office of the Board and are not disposed of or may be transferred to the Department of Cultural Resources..

21-56.0402. RECORDS OF APPLICATIONS

All records of applications for registration which are active are retained at the office of the Board. However, application files once submitted to the Board are Board property and are not returnable. During the time records are physically held in the Board office an applicant can obtain a copy of the two-page application form by request to this office. Inactive applications will be destroyed after one year after giving 30 day notice to the last known address of the applicant, upon approval of the Department of Cultural Resources in accordance with G.S. 121-5.

21-56.0403. APPLICATION FILES (Repealed)

21-56.0404. DESTRUCTION OF APPLICATION FILES (Repealed)

21-56.0405. REACTIVATION OF APPLICATION FILE (Repealed)

21-56.0500. PROFESSIONAL ENGINEER

21-56.0501. REQUIREMENTS FOR LICENSING

(a) Education. The education of an applicant shall be considered in determining eligibility for licensing as a Professional Engineer. The following terms used by the Board for the specific educational requirements to be eligible to be licensed as a Professional Engineer are defined by the Board as follows:

- (1) Engineering Curriculum of Four or more Years Approved by the Board is defined as a program that has been accredited by the Accreditation Board for Engineering and Technology (ABET). This program is incorporated by reference including subsequent amendments and editions. This material is available for inspection at the office of the North Carolina Board of Examiners for Engineers and Surveyors. Copies may be obtained at the Board office at a cost of five dollars (\$5.00) per copy.
- (2) Engineering or Related Science Curriculum of Four or more Years Other than Ones Approved by the Board is defined as a curriculum, although not accredited by ABET, of technical courses which contains engineering or scientific principles.
- (3) Equivalent Education Satisfactory to the Board:
 - (A) A graduate degree in Engineering from an institution in which the same discipline undergraduate engineering program has been accredited by ABET shall be considered equivalent to an engineering curriculum of four or more years approved by the Board.
 - (B) A bachelor's degree in Engineering Technology shall be considered equivalent to an engineering or related science curriculum of four or more years other than one approved by the Board.
 - (C) An associate degree in an engineering related curriculum with an additional two years of progressive engineering experience shall be considered equivalent to an engineering or related science curriculum of four or more years other than one approved by the Board.
 - (D) A high school diploma with an additional four years of progressive engineering experience shall be considered equivalent to an engineering or related

science curriculum of four or more years other than one approved by the Board.

- (E) Foreign degrees shall be considered only after receipt of an evaluation from the Foreign Engineering Education Evaluation Program (FEEEP) of the National Council of Examiners for Engineering and Surveying (NCEES), or from the American Association of Collegiate Registrars and Admissions Officers (AACRAO). The Board shall equate the degree to one of the education categories in (a)(1)-(3) of this subsection .0501.

(b) Experience:

- (1) General. The experience of an applicant shall be considered in determining whether an applicant is eligible to be licensed as a Professional Engineer.
- (2) Required Experience. In evaluating the work experience required, the Board may consider the total experience record and the progressive nature of the record. (Not less than half of required engineering experience shall be of a professional grade and character, and shall be performed under the responsible charge of a licensed Professional Engineer, or if not, a written explanation shall be submitted showing why the experience should be considered acceptable and the Board may approve if satisfied of the grade and character of the progressive experience.
- (3) Definition. The terms "progressive engineering experience" or "progressive experience on engineering projects" mean that during the period of time in which an applicant has made a practical utilization of acquired knowledge, continuous improvement, growth and development have been shown in the utilization of that knowledge as revealed in the complexity and technical detail of the work product or work record. The applicant must show continuous assumption of greater individual responsibility for the work product over that period of time. The progressive experience on engineering projects shall be of a grade and a character which indicates to the board that the applicant may be competent to practice engineering.
- (4) Specific Credit for Experience. In evaluating progressive engineering experience, the Board

may give credit for experience in the following areas of work:

- (A) Graduate schooling or research in an approved engineering program resulting in award of an advanced engineering degree, one year for each such degree - maximum two years;
- (B) Progressive land surveying - maximum two years;
- (C) Teaching of engineering subjects at the university level in an approved engineering program offering a four year or more degree approved by the Board - maximum two years.

The Board, however, shall not accept combinations, restricted only to the categories noted above, as fulfilling all the necessary statutory experience requirements.

Every applicant for licensure as a Professional Engineer, as part of the total experience requirement, shall show a minimum of one year experience of a progressive engineering nature in industry, or government, or under a licensed Professional Engineer offering service to the public.

Full time engineering faculty members who teach in an approved engineering program offering a four year or more degree approved by the Board, may request waiver of the minimum one year experience in industry, government, or private practice if they demonstrate consulting or research work of at least one year's duration, which was pursued to fruition, and which is of a progressive engineering nature. The faculty applicant shall document the work and demonstrate that the work meets the Board's requirement.

(5) Other Experience is Considered if it is:

- (A) Experience obtained prior to graduation as part of an ABET accredited engineering program which must be shown on the transcript, with a maximum credit of one year; or it is
- (B) Experience obtained in a foreign country that is performed under direct supervision of a Professional Engineer licensed with a member Board of the National Council of Examiners for Engineering and Surveying (NCEES).

**21-56.0502. APPLICATION PROCEDURE:
INDIVIDUAL**

(a) General. A person desiring to become licensed as a Professional Engineer must make application to the Board on a form prescribed and furnished by the Board.

(b) Request. A request for an appropriate application form may be made at the Board address.

(c) Applicable Forms:

(1) Engineering Intern Form. This form requires the applicant to set forth personal history, educational background, provide character references, and furnish a photograph for identification purposes. The form is for use by those graduating, or those having graduated, from an engineering curriculum approved by the Board as follows:

(A) Students graduating within two semesters, or the equivalent, of the semester in which the fundamentals of engineering examination is administered.

(B) Graduates with less than two years since graduation.

(2) Professional Engineer Form:

(A) All persons, including comity applicants and graduates of an engineering curriculum approved by the Board with more than two years progressive engineering experience, shall apply for licensure by using the Professional Engineer form. The submission of this form shall signify that the applicant seeks licensure, and shall result in seating for each examination required, when the applicant is so qualified. This form requires the applicant to set forth personal and educational background, engineering experience and character references. A passport-type photographic quality portrait that is adequate for current clear identification purposes is required.

(B) Persons who have previously completed the fundamentals examination by use of the Engineering Intern Form shall submit the Professional Engineer Form to request licensure when qualified to take the final eight-hour examination.

(3) Supplemental Form. Persons who initially applied for the fundamentals of engineering exam using the Professional Engineer form

must supplement the initial application upon applying for the principles and practice examination. The supplemental form requires that engineering experience from the date of the initial application until the date of the supplemental application be listed. Five references shall be submitted which are current to within one year of the examination date.

(4) Reference Forms:

- (A) Persons applying to take the examination for fundamentals of engineering must submit to the Board names of three individuals who are familiar with the applicant's work, character and reputation. Persons applying to take the examination for principles and practices of engineering must submit to the Board names of five individuals who are familiar with the applicant's work, character and reputation. Two of these individuals must be Professional Engineers.
- (B) In addition to the applicant submitting names to the Board of individuals familiar with the applicant's work, character and reputation, those individuals listed shall submit to the Board their evaluations of the applicant on forms supplied them by the applicant.
- (C) The reference form requires the individual evaluating the applicant to state the evaluating individual's profession, knowledge of the applicant and information concerning the applicant's engineering experience, character and reputation.
- (D) The reference forms shall be received by the applicant with the application. The reference forms shall then be distributed by the applicant to the persons listed on the application as references. The applicant shall see that the individuals listed as references return the reference forms to the Board prior to the filing deadline for the examination.

(d) Fees:

- (1) Engineering Intern Form. The examination fee for applicants applying for examination on the fundamentals of engineering using the engineering intern form is payable with the filing of the application. Once the applicant passes

the examination on the fundamentals of engineering, the application fee of one hundred dollars (\$100.00) and the examination fee for the principles and practice of engineering examination are payable with the applicant's subsequent application for licensure as a Professional Engineer using the Professional Engineer form.

- (2) Professional Engineer Form. The application fee of one hundred dollars (\$100.00) and appropriate examination fee for applicants applying for the examination on the fundamentals of engineering or the principles and practice of engineering using the Professional Engineer form are payable with the filing of the application.
- (3) Comity. The licensure fee of one hundred dollars (\$100.00) is payable with the filing of the application.
- (4) Examination. The examination fee for any applicant is payable with the filing of the application in accordance with G.S. 89C-14.

(e) The Board shall accept the records maintained by the National Council of Examiners for Engineering and Surveying (NCEES) as evidence of licensure in another state. For comity licensure the NCEES record shall be accepted in lieu of completing the experience, education and references sections of the application. A comity application, with or without a NCEES record, shall be administratively approved by the Executive Director based upon evidence of current licensure in another jurisdiction based on comparable qualifications, required references and no record of disciplinary action, without waiting for the next regular meeting of the Board at which time the action shall be reported to the Board for final approval.

(f) Model Law Engineer. The term "Model Law Engineer" refers to a person who meets the requirements of section .0500 by meeting the requirements of NCEES and has a current NCEES record on file and is designated as a "Model Law Engineer." A "Model Law Engineer" application is administratively approved by the Executive Director based upon the designation, without waiting for the next regular meeting of the Board at which time the action shall be reported to the Board for final approval.

(g) Personal interview. During the application process, the applicant may be interviewed by the Board members. The purpose of the interview is to augment the evidence submitted in an application with regard to education and experience.

21-56.0503. EXAMINATIONS

(a) Fundamentals of Engineering. This eight-hour written examination is designed primarily to test the applicant's proficiency and knowledge of the fundamentals of engineering.

(b) Principles and Practice of Engineering. This eight-hour written examination is designed to test the applicant's proficiency and knowledge of engineering principles and practices.

(c) Examination Aids. Examinees may utilize examination aids as specified by the exam preparer.

(d) Preparation of Examination. The examinations in the fundamentals of engineering and in the principles and practice of engineering are national examinations promulgated by the National Council of Examiners for Engineering and Surveying (NCEES) of which the Board is a member.

(e) Examination Sequence. Before the applicant is permitted to be examined on the principles and practice of engineering, the applicant must pass the examination on the fundamentals of engineering, unless the applicant can evidence 20 years of progressive engineering experience and receives a waiver from the fundamentals of engineering exam by the Board. In no event is an applicant allowed to take both examinations at the same time or at the same scheduled examination date.

(f) Examination Filing Deadline. The applicant who wishes to take an examination must have the completed application (which includes all necessary references, transcripts, and verifications) in the Board office prior to August 1 for Fall examinations and January 2 for Spring examinations.

(g) Seating Notice. After approval of an application to take either the examination on the fundamentals of engineering or principles and practice, the applicant shall be sent a seating notice by the Board. This notice shall inform the applicant of the date, time and location of the examination and the seat number assigned.

(h) Unexcused Absences. After a seating notice has been issued for a scheduled examination by the Board, and the applicant fails to appear, that applicant's record will reflect "unexcused absence" unless the absence was for official jury duty or the applicant was not physically able to be present, as indicated by a doctor's certificate. The examination fee is forfeited.

(i) Re-Examination. A person who has failed an examination may apply to take the examination again at

the next regularly scheduled examination period by making written request and submitting the required exam fee. A person having a combined record of three failures or unexcused absences shall only be eligible after submitting a new application with appropriate application fee, and be considered by the Board for reexamination at the end of 12 months. After the end of the 12-month period, the applicant may take the examination no more than once every calendar year. The applicant must demonstrate to the Board that actions have been taken to improve the applicant's chances for passing the exam.

(j) Special Accommodation. An applicant with a diagnosed disability may make a written request, before the application deadline, for special accommodation for the exam. Reasonable accommodation will be granted.

(k) Exam Results. Exam results shall be supplied in writing as pass or fail. No results will be given in any other manner.

(l) Review of Failed Exams. An applicant who fails to make a passing score on an exam may request in writing within thirty days of receiving the result to have an opportunity to review the exam. The review shall be done in the Board office under supervision of staff and is limited to one hour.

21-56.0504. CERTIFICATES (Repealed)

21-56.0505. EXPIRATIONS AND RENEWALS OF CERTIFICATES

(a) Professional Engineer Licensure. An annual renewal fee of forty dollars (\$40.00) for certificates of licensure for Professional Engineers shall be payable to the Board. A late fee shall be applied in accordance with G.S. 89C-17. The Board shall send to each licensed Professional Engineer a form which requires the licensee to provide the Board with both the business and residential addresses, and the professional development hours (PDH) obtained during the previous year. The licensee shall give notice to the Board of a change of business or residential address within 30 days of the change.

(b) Engineering Intern Certificate. The Engineering Intern certificate does not expire and, therefore, does not have to be renewed.

21-56.0600. PROFESSIONAL LAND SURVEYOR

21-56.0601. REQUIREMENTS FOR LICENSING

(a) Education. The following terms used by the Board for the specific education requirements to be eligible to be licensed as a Professional Land Surveyor are defined by the Board as follows:

- (1) B.S. in Surveying or Other Equivalent Curricula. These degrees must contain a minimum of 45 semester hours, or their quarter-hour equivalents, of subjects directly related to the practice of surveying. Of the 45 semester hours, a minimum of 12 semester hours of surveying fundamentals, 12 semester hours of applied surveying practice and 12 semester hours of advanced or theoretical surveying courses are required. The remainder of the required surveying courses may be elective-type courses directly related to surveying.
- (2) Associate Degree in Surveying Technology. This degree must contain a minimum of 20 semester hours, or quarter-hour equivalents, of subjects directly related to the practice of surveying. Courses in surveying practices, subdivision design and planning, surface drainage and photogrammetry must be successfully completed.

(b) Experience:

- (1) Definition. As used in the North Carolina Engineering and Land Surveying Act, the term "progressive practical surveying experience" means that during the period of time in which an applicant has made a practical utilization of the knowledge of the principles of geometry and trigonometry in determining the shape, boundaries, position and extent of the earth's surface, continuous improvement, growth and development in the utilization of that knowledge have been shown. In addition, the applicant must show the continuous assumption of greater individual responsibility for the work product over that period of time.
- (2) Experience Accepted. In evaluating the work experience required, the Board may consider the total experience record and the progressive nature of the record. (Not less than half of required land surveying experience shall be of a professional grade and character, and shall be performed under the responsible charge of a Professional Land Surveyor, or if not, a written explanation shall be submitted showing why the experience should be considered acceptable and the Board may

approve if satisfied of the grade and character of the progressive experience.

- (3) Other Experience. Work done in the following areas requires evidence to the Board of its equivalency to land surveying:
 - (A) construction layout,
 - (B) engineering surveying,
 - (C) part-time surveying work.

(c) Exhibits, Drawings, Plats:

- (1) Required Exhibit Before Fundamentals of Land Surveying Examination. The applicant must submit, along with the application, an actual plat or an example plat prepared by, or under the direct supervision of, the applicant which discloses that the applicant is knowledgeable in the elements of good mapping practices.
- (2) Required Exhibit Before Principles and Practices of Land Surveying Examination:
 - (A) General. The applicant must submit, along with the application, an actual plat of a boundary survey of an actual project prepared by, or under the direct supervision of, the applicant which discloses that the applicant is knowledgeable of the contents of the Standards of Practice for Land Surveying in North Carolina (Section .1600) and also is able to apply this knowledge by preparing a plat in accordance with the various legal and professional requirements of land surveying.
 - (B) Physical Requirement. The map submitted must be a clean, clear, legible print of an original map in the file of a Professional Land Surveyor.
- (3) Specific Requirements. The specific details that shall be evaluated are those applicable to the particular project as described in the Standards of Practice for Land Surveying in North Carolina (Section .1600) and as described in G.S. 47-30. In addition, the exhibit shall contain a statement that the field work, calculation and mapping were performed by the applicant under the supervision of a Professional Land Surveyor, attested to by the Professional Land Surveyor.

- (4) Requirements for Comity Applicant. The map submitted by an applicant under comity may be a sample plat of a project or work performed in the state of licensure which shall be evaluated in accordance with legal requirements of North Carolina.

**21-56.0602. APPLICATION PROCEDURE:
INDIVIDUAL**

(a) General. A person desiring to become a Professional Land Surveyor must make application to the Board on a form prescribed and furnished by the Board.

(b) Request. A request for the application form may be made at the Board address.

(c) Application Form. All persons applying to be licensed as a Professional Land Surveyor shall apply using the standard application form. This form requires the applicant to set forth personal background, plus educational background, land surveying experience, and references. A passport-type photographic quality portrait that shall be adequate for current clear identification purposes shall be required also.

(d) Supplemental Form. Persons who initially applied for licensure as a land surveyor, but were not eligible initially to be admitted to the examination for principles and practice of land surveying, must supplement their initial applications upon ultimately applying for the second examination. The applicant must supplement the initial application by using the supplemental form, which requires the listing of land surveying experience from the date of the initial application to the date of the supplemental application. Five references shall be submitted which are current to within one year of the examination date.

(e) Reference Forms:

- (1) Persons applying to take the examination for the fundamentals of land surveying or the examination for principles and practice must submit to the Board names of individuals who are familiar with the applicant's work, character and reputation. The names are submitted by the applicant on the application form.
- (2) Persons applying for the fundamentals of land surveying examination must submit three references, one of which must be a Professional Land Surveyor. Persons applying for the principles and practice examination

must submit five references, two of which must be Professional Land Surveyors.

- (3) In addition to the applicant submitting names to the Board of such individuals, those individuals shall submit to the Board their evaluations of the applicant on reference forms supplied them by the applicant.

- (4) The reference form requires the individual evaluating the applicant to state the evaluating individual's profession, knowledge of the applicant and information concerning the applicant's land surveying experience, character and reputation.

- (5) The reference forms shall be received by the applicant along with the application for licensure. The reference forms shall then be distributed by the applicant to the persons listed on the application as references. The applicant shall see that the individuals listed as references return the forms to the Board prior to the filing deadline for the examination applied for by the applicant.

(f) Fees:

- (1) Regular. The application fee of one hundred dollars (\$100.00) and appropriate examination fee for those applying for licensure based upon examination, experience, character and exhibit are payable with the filing of the application.
- (2) Comity. The licensure fee of one hundred dollars (\$100.00) and appropriate examination fee for those applying for licensure based upon comity are payable with the filing of the application.
- (3) Examination. The examination fee for any applicant shall be payable with the filing of the application in accordance with G.S. 89C-14.

(g) The Board shall accept the records maintained by the National Council of Examiners for Engineering and Surveying (NCEES) as evidence of licensure in another state. For comity licensure the NCEES record shall be accepted in lieu of completing the experience, education and references sections of the application. A comity application, with or without a NCEES record, shall be administratively approved by the Executive Director based upon evidence of current licensure in another jurisdiction based on comparable qualifications, required references and no record of disciplinary action, without waiting for the next regular meeting of the Board at

which time the action shall be reported to the Board for final approval.

(h) Personal Interview. During the application process, the applicant may be interviewed by Board members. The purpose of the interview shall be to augment the evidence submitted in an application with regard to education and experience.

21-56.0603. EXAMINATIONS

(a) Fundamentals of Land Surveying. This eight-hour written examination is designed primarily to test the applicant's proficiency and knowledge of the fundamentals of land surveying.

(b) Principles and Practice of Land Surveying. This eight-hour written examination is designed to test the applicant's proficiency and knowledge of land surveying practices and procedures generally and specifically within North Carolina.

(c) Examination Aids. Examinees may utilize examination aids as specified by the national exam preparer.

(d) Preparation of Examination. The examination in the fundamentals of land surveying and six hours of the examination in the principles and practice of land surveying are national examinations promulgated by the National Council of Examiners for Engineering and Surveying (NCEES) of which the Board is a member. The two-hour North Carolina portion of the principles and practice of land surveying examination is prepared and graded by the Board.

(e) Examination Filing Deadline. The applicant who wishes to take an examination must have the completed application (which includes all necessary references, transcripts, and verifications) in the Board office prior to August 1 for Fall examinations and January 2 for Spring examinations.

(f) Seating Notice. After approval of an application the applicant will receive a seating notice. This notice will inform the applicant of the date, time and location of the examination and the seat number assigned.

(g) Unexcused Absences. After a seating notice for a scheduled examination has been issued by the Board, and the applicant fails to appear, the applicant's record will reflect "unexcused absence" unless the absence was for official jury duty or the applicant was not physically able to be present, as indicated by a doctor's certificate. The examination fee is forfeited.

(h) Re-Examination. A person who has failed an examination is allowed to apply to take the examination again at the next regularly scheduled examination period. A person having a combined record of three failures or unexcused absences shall only be eligible after submitting a new application with appropriate application fee, and be considered by the Board for reexamination at the end of 12 months. After the end of the 12-month period, the applicant may take the examination no more than once every calendar year. The applicant must demonstrate to the Board that actions have been taken to improve the applicant's chances for passing the exam.

(i) Special Accommodation. An applicant with a diagnosed disability may make a written request, before the application deadline, for special accommodation for the exam. Reasonable accommodation will be granted.

(j) Exam Results. Exam results shall be supplied in writing as pass or fail. No results will be given in any other manner.

(k) Review of Failed Exams. An applicant who fails to make a passing score on an exam may request in writing within thirty days of receiving the result to have an opportunity to review the exam. The review shall be done in the Board office under supervision of staff and is limited to one hour.

21-56.0604. STANDARDS OF PRACTICE (Repealed)

21-56.0605. CERTIFICATES (Repealed)

21-56.0606. EXPIRATIONS AND RENEWALS OF CERTIFICATES

(a) Professional Land Surveyor Licensure. An annual renewal fee of forty dollars (\$40.00) for certificates of licensure for Professional Land Surveyors shall be payable to the Board. A late fee shall be applied in accordance with G.S. 89C-17. The Board will send each Professional Land Surveyor a form which requires the licensee to provide to the Board the business and residential addresses, and the professional development hours (PDH) obtained during the previous year. The licensee shall give notice to the Board of a change of business or residential address within 30 days of the change.

(b) Surveyor Intern Certificate. The Surveyor Intern certificate does not expire and, therefore, does not have to be renewed.

21-56.0700. STANDARDS OF PROFESSIONAL CONDUCT

21-56.0701. RULES OF PROFESSIONAL CONDUCT

(a) In order to safeguard the life, health, property and welfare of the public and to establish and maintain a high standard of integrity, skills, and practice in the professions of engineering and land surveying, the following rules of professional conduct are promulgated in accordance with G.S. 89C-20 and shall be binding upon every person holding a certificate of licensure as a Professional Engineer or Professional Land Surveyor (licensee), and on all business entities authorized to offer or perform engineering or land surveying services in this state.

All persons licensed under the provisions of Chapter 89C of the General Statutes are charged with having knowledge of the existence of the rules of professional conduct, and shall be deemed to be familiar with their several provisions and to understand them.

(b) The licensee shall conduct the practice in order to protect the public health, safety and welfare.

The licensee shall at all times recognize the primary obligation to protect the public in the performance of the professional duties. If the licensee's engineering or land surveying judgment is overruled under circumstances where the safety, health and welfare of the public are endangered, the licensee shall inform the employer, the contractor and the appropriate regulatory agency of the possible consequences of the situation.

(c) The licensee shall perform services only in areas of the licensee's competence and:

- (1) Shall undertake to perform engineering and land surveying assignments only when qualified by education or experience in the specific technical field of professional engineering or land surveying involved.
- (2) May accept an assignment or project requiring education or experience outside of the licensee's own field of competence, but only to the extent that the services are restricted to those portions or disciplines of the project in which the licensee is qualified. All other portions or disciplines of such project shall be performed by associates, consultants, or employees who are licensed and competent in those portions or disciplines.
- (3) Shall not affix the signature or seal to any

engineering or land surveying plan or document dealing with subject matter for which the licensee lacks competence by virtue of education or experience, nor to any such plan or document not prepared under the licensee's direct supervisory control. Direct supervisory control (responsible charge) requires a licensee or employee to carry out all client contacts, provide internal and external financial control, oversee employee training, and exercise control and supervision over all job requirements to include research, planning, design, field supervision and work product review. A licensee shall not contract with a non-licensed individual to provide these professional services. Research, such as title searches and soil testing, may be contracted to a non-licensed individual, provided that individual is qualified or licensed to provide such service and provided the licensee reviews the work. The licensee may affix the seal and signature to drawings and documents depicting the work of two or more professionals provided it is designated by a note under the seal the specific subject matter for which each is responsible.

(d) The licensee shall issue public statements only in an objective and truthful manner and:

- (1) Shall be objective and truthful in all professional reports, statements or testimony. The licensee shall include all relevant and pertinent information in such reports, statements or testimony.
- (2) When serving as an expert or technical witness before any court, commission, or other tribunal, shall express an opinion only when it is founded upon adequate knowledge of the facts in issue, upon a background of technical competence in the subject matter, and upon honest conviction of the accuracy and propriety of the licensee's testimony.
- (3) Shall issue no statements, criticisms, or arguments on engineering or land surveying matters connected with public policy which are inspired or paid for by an interested party, or parties, unless the licensee has prefaced the comment by explicitly identifying the licensee's name, by disclosing the identities of the party or parties on whose behalf the licensee is speaking, and by revealing the existence of any pecuniary interest the licensee may have in the instant matters.

- (4) Shall not attempt to injure, maliciously or falsely, directly or indirectly, the professional reputation, prospects, practice or employment of another engineer or land surveyor, nor indiscriminately criticize another engineer or land surveyor's work in public. Indiscriminate criticism includes statements without valid basis or cause or that are not objective and truthful or that fail to include all relevant and pertinent information. If the licensee believes that another engineer or land surveyor is guilty of misconduct or illegal practice, such information shall be presented to the North Carolina Board of Examiners.

(e) The licensee shall avoid conflicts of interest and:

- (1) Shall promptly inform the employer or client and any reviewing agency of any business association, interests, or circumstances which could influence judgment or the quality of services.
- (2) Shall not accept compensation, financial or otherwise, from more than one party for services on the same project, or for services pertaining to the same project, unless the circumstances are fully disclosed to, and agreed to, by all interested parties.
- (3) Shall not solicit or accept financial or other valuable considerations from material or equipment suppliers for specifying their products.
- (4) Shall not solicit or accept gratuities, directly or indirectly, from contractors, their agents, or other parties dealing with the client or employer in connection with work for which the licensee is responsible.
- (5) When in public service as a member, advisor, or employee of a governmental body or department, shall not participate in considerations or actions with respect to services provided by the licensee or the licensee's organization in private engineering and land surveying practices.
- (6) Shall not solicit or accept an engineering or land surveying contract from a governmental body on which a principal or officer of the licensee's organization serves as a member.
- (7) Shall not attempt to supplant another engineer or land surveyor in a particular employment

after becoming aware that the other has been selected for the employment.

(f) The licensee shall solicit or accept work only on the basis of qualifications and:

- (1) Shall not offer to pay, either directly or indirectly, any commission, political contribution, gift, or other consideration in order to secure work, exclusive of securing salaried positions through employment agencies.
- (2) Shall compete for employment on the basis of professional qualification and competence to perform the work. The licensee shall not solicit or submit proposals for professional services containing a false, fraudulent, misleading, deceptive or unfair statement or claim regarding the cost, quality or extent of services to be rendered.
- (3) Shall, with regard to fee bidding on public projects, comply with the provisions of G.S. 143-64.31 et seq., (or for federal projects, the Brooks Act, 40 U.S. Code 541 et seq.) and shall not knowingly cooperate in a violation of any provision of G.S. 143-64.31 et seq. (or of 40 U.S. Code 541 et seq.)
- (4) Shall not falsify or permit misrepresentation of academic or professional qualifications and shall only report educational qualifications when a degree or certificate was awarded, unless it is clearly stated that no degree or certificate was awarded. The licensee shall not misrepresent degree of responsibility in or for the subject matter of prior assignments. Brochures or other presentations incident to the solicitation of employment shall not misrepresent pertinent facts concerning employers, employees, associates, joint ventures, or past accomplishments with the intent and purpose of enhancing qualifications and work.

(g) The Licensee shall perform services in an ethical and lawful manner and:

- (1) Shall not knowingly associate with or permit the use of the licensee's name or firm name in a business venture by any person or firm which the licensee knows, or has reason to believe, is engaging in business or professional practices of a fraudulent or dishonest nature or is not properly licensed.

- (2) If the licensee has knowledge or reason to believe that another person or firm may be in violation of any of these provisions or of the North Carolina Engineering and Land Surveying Act, shall present such information to the Board in writing and shall cooperate with the Board in furnishing such further information or assistance as may be required by the Board. The licensee shall timely respond to all inquiries and correspondence from the Board and shall timely claim correspondence from the U. S. Postal Service, or other delivery service, sent to the licensee from the Board.

(h) A Professional Engineer or Professional Land Surveyor who has received a reprimand or civil penalty or whose professional license is revoked, suspended, denied, or surrendered as a result of disciplinary action by another jurisdiction shall be subject to discipline by the Board if the licensee's action constitutes a violation of Chapter 89C of the North Carolina General Statutes or the rules adopted by the Board.

21-56.0702. RULES OF CONDUCT OF ADVERTISING

(a) The Professional Engineer or Professional Land Surveyor shall not make exaggerated, misleading, deceptive or false statements or claims about professional qualifications, experience or performance in brochures, correspondence, listings, or other public communications.

(b) The prohibitions listed in Paragraph (a) of this Rule include, but are not limited to, the use of statements containing a material misrepresentation of fact or omitting a material fact necessary to keep the statement from being misleading; statements intended or likely to create an unjustified expectation; and statements containing a prediction of future success.

(c) Consistent with the foregoing, the Professional Engineer or Professional Land Surveyor may advertise for recruitment of personnel.

(d) Consistent with the foregoing, the Professional Engineer or Professional Land Surveyor may prepare articles for the lay or technical press. Such articles shall not imply credit to the author for work performed by others.

21-56.0800. FIRM LICENSURE

21-56.0801. REQUIREMENTS (Repealed)

21-56.0802. PROCEDURE

(a) Professional Corporations and Limited Liability Companies:

(1) Request. A request for an application for licensure as a professional corporation or professional limited liability company engaged in the practice of engineering or land surveying may be made at the Board address.

(2) Applicable Form. All professional corporations and professional limited liability companies complying with the statutory requirements of G.S. 89C, G.S. 55B and G.S. 57C which desire to practice engineering or land surveying shall apply by using a form prepared by the Board. This form shall require the applicant, by and through an officer, director and shareholder of the professional corporation or limited liability company who is currently licensed with the North Carolina Board of Examiners for Engineers and Surveyors in the field(s) of professional services to be offered, to certify that it and the stockholders of the corporation or members of the limited liability company have complied with the provisions of the applicable provisions of the General Statutes and requires that the officers, directors, shareholders, members and professional employees be listed on that application.

(3) Certificate of Licensure:

(A) Upon receiving the application with application fee of one hundred dollars (\$100.00), the Board, after determining that the firm has complied with the statutory requirements, will then issue a certificate of compliance.

(B) The firm, then, must forward the certificate of compliance to the Secretary of State along with its articles of incorporation or articles of organization.

(C) Upon approval by the Secretary of State, the firm then must forward to the Board a certified copy of its articles of incorporation or articles of organization.

(D) Upon receipt of the certified copy of the articles of the firm, if all statutory requirements have been met, the Board will

approve the application and issue the firm a certificate of licensure.

(b) Business Firms and Chapter 87 Corporations:

- (1) Request. A request for an application for licensure as a business firm or Chapter 87 corporation [as defined in G.S. 55B-15(a)(2)] engaged in the practice of engineering or land surveying may be made at the Board address. A sole proprietorship owned and operated by the individual licensee in the licensee's name as reflected in the Board's records is exempt from firm licensure.
- (2) Applicable Form. All business firms or Chapter 87 corporations that desire to practice engineering or land surveying shall apply by using a form prepared by the Board. The form shall require the applicant, through a principal officer, partner or owner, to certify that the business firm shall be operated in compliance with the laws of the State of North Carolina and the rules of the North Carolina Board of Examiners for Engineers and Surveyors.
- (3) Certificate of Licensure. Upon receiving the application with application fee of one hundred dollars (\$100.00), the Board, after determining that the firm has complied with the statutory requirements, shall then issue a certificate of licensure.

21-56.0803. FEES (Repealed)

21-56.0804. ANNUAL RENEWAL

(a) Renewal. The certificate of licensure for a professional corporation, limited liability company or business firm shall be renewed annually.

(b) Expiration. The certificate of licensure shall expire on the last day of June following its issuance by the Board and shall become invalid on that date unless renewed.

(c) Written Application. Upon written application on a renewal form prescribed by the Board accompanied by the prescribed fee of forty dollars (\$40.00) the Board shall renew the certificate of licensure providing that the firm has complied with all rules of the Board and applicable General Statutes of North Carolina. The form shall be mailed to all licensees in good standing no later than June 1st. A late fee shall be applied in accordance with G.S. 89C-17. The licensed entity shall give notice

to the Board of a change of business address within 30 days of the change.

(d) Failure of a firm to renew its certificate of licensure within one year of the expiration date shall require the firm to submit a new application for a new certificate of licensure in accordance with all requirements of these Rules and of all applicable statutes.

21-56.0805. REGISTRATION NOT REQUIRED (Repealed)

21-56.0900. BUSINESS ORGANIZATIONS: GENERAL

21-56.0901. OFFICES

(a) Professional Engineering Services. Every firm, partnership, corporation or limited liability company which performs or offers to perform engineering services in the State of North Carolina shall have a resident Professional Engineer in responsible charge in each separate office in which professional engineering services are performed or offered to be performed.

(b) Land Surveying Services. Every firm, partnership, corporation or limited liability company which performs or offers to perform land surveying services in the State of North Carolina shall have a resident Professional Land Surveyor in responsible charge in each separate office in which land surveying services are performed or offered to be performed.

(c) Resident. A resident Professional Engineer or Professional Land Surveyor as used in this Rule, means a licensee who spends a majority of the licensee's normal working time in said place of business. Such time shall not be less than a majority of the operating hours of the business. A Professional Engineer or Professional Land Surveyor shall be the resident licensee at only one place of business at one time unless each business is at least one-third owned by the resident professional and is specifically approved by the Board after a determination that the businesses are integrated in operation, ownership, office location and that the licensee will be in responsible charge of the professional services.

(d) No firm, partnership, corporation or limited liability company shall practice, or offer to practice, or market either land surveying or engineering unless there is a licensed resident for that service in responsible charge at that said place of business. Advertisements, signs, letterheads, business cards, directories, or any other form of representation shall avoid any reference to any service that cannot be provided under the responsible charge of a properly qualified resident professional. The licensed entity shall give notice to the Board of a change of resident professional within 30 days after the change and shall not practice, or offer to practice, or market the professional service during any period of time without a resident professional.

21-56.0902. TITLES OF BUSINESS ENTITIES

(a) Companies, partnerships, corporations, limited liability companies or any other business organization providing professional engineering or land surveying services in North Carolina shall not practice under a name that is misleading. Except as provided below, the titles of engineering or land surveying companies, partnerships, corporations, limited liability companies or any other business organization organized primarily to provide such professional services shall not contain the name of an individual not licensed to provide the professional services offered or eligible for licensure under the provisions of G.S. 89C-13.

(b) A firm may include in its title the name or names of one or more deceased or retired former members of the firm, provided that the firm submits a letter of request and explanation with its application to the Board, and that the Board finds as fact that the use of the name is not misleading.

(c) A business organization shall not change its title, or operate under an assumed name, without first applying to the Board for a determination that the proposed title meets the requirements of Paragraph (a) of this Rule. Requests for name changes shall be made in writing on forms provided by the Board for this purpose.

21-56.1000. TEMPORARY PERMIT

21-56.1001. GENERAL

A person who is eligible to be licensed in North Carolina by comity may apply for a permit to practice engineering or land surveying in the State of North

Carolina for an aggregate, consecutive total of 90 days in any one calendar year.

21-56.1002. APPLICATION PROCEDURE

(a) Request. A request for an application for a permit to practice engineering or land surveying in the State of North Carolina on a temporary basis may be made at the Board address.

(b) Applicable Forms. The forms provided by the Board for persons requesting a temporary permit requires the applicant to set forth the period of time in which he desires a temporary permit, to certify that he is currently licensed to practice in his own state, and to name the project or work for which the permit is desired.

(c) Verified Licensure. Before a temporary permit may be issued, a written verification of the applicant's current licensure in his own state must be received directly from the applicant's licensing Board.

(d) Fee. Licensure fee for applying for a temporary permit is payable with the filing of the application. No portion of this fee is refundable.

21-56.1003. SEAL

All plans, specifications, plats and reports issued by a temporary licensee in North Carolina shall be stamped or embossed with the seal of the state in which the individual is licensed as required by section .1100. In addition, however, the temporary licensee shall note directly beneath the seal the North Carolina permit number, the expiration date of the temporary permit and the signature of the temporary licensee.

21-56.1100. SEAL

21-56.1101. GENERAL

It is misconduct for a Professional Engineer or Professional Land Surveyor to seal work done by another individual unless the work is performed under the "responsible charge" of the Professional Engineer or Professional Land Surveyor.

21-56.1102. DESIGN

The standard design of the seal shall be two concentric circles in which North Carolina and the name of the licensee are placed within the outermost circle

and in which the license number of the licensee and either "Professional Engineer" or "Professional Land Surveyor," is placed within the innermost circle. The size shall be approximately 1 3/4 inches in diameter.

21-56.1103. STANDARD CERTIFICATION REQUIREMENTS

(a) Certification of Final Drawings. Drawings or maps not conforming to paragraph (c) of this subsection shall conform to the following:

- (1) Certification is required on reproducibles or original drawings;
- (2) The seal may be a rubber stamp, embossed seal, computer-generated seal, or other facsimile that becomes a permanent addition to a plan sheet or map;
- (3) The licensee's written signature must be placed over, or near, the seal on the original document. A facsimile signature is not acceptable;
- (4) The date of signing must be annotated on the original document;
- (5) All sheets of engineering and surveying drawings must be sealed;
- (6) The name and address of the licensee's firm shall be included on each sheet of engineering drawings. For surveys, the licensee's name and address shall be included on the first sheet of the survey or title sheet; and
- (7) Any revision on a drawing after a licensee's certification is affixed shall be noted and dated and if not done under the responsible charge of the same licensee shall be separately certified.

(b) Certification of Specifications and Reports. All specifications, reports, or other documents, including letter reports and calculations, not conforming to paragraph (c) of this subsection shall conform to the following:

- (1) Certification is required on original specifications, reports, or other documents, including letter reports and calculations;
- (2) The seal may be a rubber stamp, or other facsimile;
- (3) The licensee's written signature must be placed over, or near, the seal on the original

document. A facsimile signature is not acceptable;

- (4) The date of signing must be annotated on the original document;
- (5) The title sheet of engineering specifications or other reports must be sealed and bear the name and address of the licensee's firm. The title sheet of any survey report or written description of property shall include the name and address of the Professional Land Surveyor; and
- (6) Any revision in the document after a licensee's certification is affixed shall be noted and dated and if not done under the responsible charge of the same licensee shall be separately certified.

(c) Exceptions to Required Certification. The seal of a licensee on a map, drawing, plan, specification, plat, document, or report shall signify that it is the final work of the licensee unless the work is stamped or clearly marked substantially as follows so as to put the public on notice not to use as a final product, in which case certification is optional:

- (1) "Preliminary - Do not use for construction";
- (2) "Progress Drawings - Do not use for construction";
- (3) "Preliminary Plat - Not for recordation, conveyances, or sales";
- (4) "Final Drawing - Not released for construction";
- (5) "Final Drawing - For Review Purposes Only";
- (6) "Not a Certified Document – This document originally issued and sealed by (name of licensee), (license number), on (date of sealing). This document shall not be considered a certified document";
- (7) "Not a Certified Document as to the Original Document but Only as to the Revisions - This document originally issued and sealed by (name of licensee), (license number), on (date of sealing). This document is only certified as to the revisions".

(d) Electronically transmitted documents. Documents, including drawings, specifications and reports, that are transmitted electronically to a client or a governmental agency shall have the computer-generated seal removed from the original file, unless signed with a

digital signature as defined in paragraph (e). After removal of the seal the electronic media shall have the following inserted in lieu of the signature and date: This document originally issued and sealed by (name of sealer), (license number), on (Date of sealing). This medium shall not be considered a certified document. Hardcopy documents containing the original seal, signature and date of the licensee may be duplicated by photocopy or electronic scanning processes and distributed either in hardcopy or electronic medium. The scanned digital files of properly certified documents are not subject to the requirements of this paragraph. The electronic transmission of CAD, vector or other files subject to easy editing are subject to the requirements of this paragraph. Easy editing is based on the file consisting of separate elements that can be individually modified or deleted.

(e) Documents to be electronically transmitted that are signed using a digital signature, shall contain the authentication procedure in a secure mode and a list of the hardware, software and parameters used to prepare the document(s). Secure mode means that the authentication procedure has protective measures to prevent alteration or overriding of the authentication procedure. The term "digital signature" shall be an electronic authentication process that is attached to or logically associated with an electronic document. The digital signature shall be:

- (1) Unique to the licensee using it;
- (2) Capable of verification;
- (3) Under the sole control of the licensee; and
- (4) Linked to a document in such a manner that the digital signature is invalidated if any data in the document is changed.

(f) A digital signature that uses a process approved by the Board will be conclusive that it meets the criteria set forth in (e) (1) through (4) above. The licensee shall confirm that if another process is used, that it meets the criteria.

21-56.1104. CERTIFICATION WITH TEMPORARY PERMIT

All plans, specifications, plats, and reports issued by a person holding temporary license in North Carolina, and for use in North Carolina, shall be stamped with the licensee's seal from the state of residence where licensed and in good standing. Directly beneath this seal, the licensee shall note the North Carolina

Temporary Permit Number, written signature, and the date of signing. A facsimile signature is not acceptable.

21-56.1105. FIRM SEAL

The use of a seal by a firm is not required for certification. A firm seal is not authorized for use in lieu of the required seal of a Professional Engineer or Professional Land Surveyor. When a firm seal is used, it does not relieve the individual licensee of the requirements and responsibilities pertaining to the individual's seal.

21-56.1106. CERTIFICATION OF STANDARD DESIGN PLANS

Standard design plans that were initially prepared and sealed by an individual who is a licensed engineer in the state of origin of such plans may then be reviewed by a North Carolina Professional Engineer for code conformance, design adequacy, and site adaptation for the specific application within North Carolina. The Professional Engineer who is licensed in North Carolina assumes responsibility for such standard designs. Standard plans, which bear the seal of an individual who is a licensed engineer in another state, shall be sealed by the North Carolina Professional Engineer who is assuming responsibility. In addition to the seal, a statement shall be included as follows: "These plans have been properly examined by the undersigned. I have determined that they comply with existing local North Carolina codes, and have been properly site adapted for use in this area."

21-56.1107. CERTIFICATION OF PLANS FOR BUILDING AND STRUCTURE PERMITS (Repealed)

21-56.1108. LAND SURVEYING (Repealed)

21-56.1200. RULEMAKING PROCEDURES

21-56.1201. PETITIONS

(a) Any person wishing to submit a petition requesting the adoption, amendment or repeal of a rule by the Board shall send the petition to the executive director at the Board's office in Raleigh, North Carolina.

(b) The petition shall contain the following information:

- (1) a draft of the proposed rule;
- (2) reason for proposal;

- (3) effect on existing rules;
- (4) any data supporting proposal;
- (5) effect of the proposed rule on existing practices in the area involved, including cost factors;
- (6) names of those most likely to be affected by the proposed rule, with addresses if reasonably known; and
- (7) name and address of each petitioner.

(c) A review committee made up of one member of the Board, the executive director and the legal counsel for the Board, on behalf of the Board, shall determine, based on a study of the facts stated in the petition, whether the public interest will be served by granting it. It shall consider all the contents of the submitted petition, plus any additional information it deems relevant.

(d) The executive director, on behalf of the review committee, shall make a recommendation to the Board for the denial of the petition or the institution of rulemaking proceedings, as the case may be.

(e) Within 120 days of submission of the petition, the Board shall render a final decision.

(f) If the decision is to deny the petition, the executive director, on behalf of the Board, will notify the petitioner in writing, stating the reasons therefore. If the decision is to grant the petition, the Board shall publish notice of rulemaking proceedings.

21-56.1202. NOTICE (Repealed)

21-56.1203. HEARINGS

(a) Unless otherwise stated in a particular rulemaking notice, hearings before the Board shall be held in the Board office.

(b) Presentations may not exceed 10 minutes unless, upon request, either before or at the hearing, the Board grants an extension of time, for a fuller explanation.

(c) Upon receipt of a request to make an oral presentation the executive director shall acknowledge receipt of the request, and inform the person making the request of the imposition of any limitations deemed necessary to the end of a full and effective public hearing on the proposed rule.

(d) Any person may file a written submission containing data, comments or arguments after publication of a rulemaking notice as allowed by G.S. 150B-21.2(f). Written submissions, except when otherwise stated in the particular rulemaking notice, shall be sent to the Board. Such submissions shall clearly state the proposed rule(s) to which the comments are addressed.

(e) Upon receipt of such written comments, prompt acknowledgment shall be made by the Board.

(f) The presiding officer at the hearing shall have complete control of the proceedings, including extensions of any time requirements, recognition of speakers, time allotments for presentations, direction of the flow of the discussion and the management of the hearing. The presiding officer, at all times, shall take care that each person participating in the hearing is given a fair opportunity to present views, data and comments.

(g) A record of all rulemaking proceedings shall be maintained at the Board's office.

21-56.1204. EMERGENCY RULES (Repealed)

21-56.1205. DECLARATORY RULINGS

(a) Any person substantially affected by a statute administered or rule promulgated by the Board may request a declaratory ruling as to whether or how the statute or rule applies to a given factual situation or whether a particular agency rule is valid.

(b) All requests for declaratory rulings shall be written and mailed to the Board.

(c) All requests for a declaratory ruling must include the following information:

- (1) name and address of petitioner;
- (2) statute or rule to which petition relates;
- (3) concise statement of the manner in which petitioner is aggrieved by the rule or statute or its potential application to petitioner;
- (4) a statement of whether an oral hearing is desired, and if so, the reasons for such an oral hearing.

(d) Whenever the Board believes for good cause that the issuance of a declaratory ruling is undesirable, it may refuse to do so. When good cause is deemed to exist, the Board shall notify the petitioner of its decision

in writing stating reasons for the denial of a declaratory ruling.

(e) Where a declaratory ruling is deemed appropriate, the Board shall issue the ruling within 60 days of receipt of the petition.

(f) A declaratory ruling procedure may consist of written submissions, oral hearings, or such other procedure as may be appropriate in a particular case.

21-56.1300. BOARD DISCIPLINARY PROCEDURES

21-56.1301. IMPROPER PRACTICE BY A LICENSEE

(a) General. Alleged improper practice by a licensee shall be subject to Board investigation and disciplinary action by the Board if necessary.

(b) Preferring Charges. Any person who believes that any licensed Professional Engineer, Professional Land Surveyor or firm holding a certificate of authorization is in violation of the provisions of G.S. 89C or the rules in this Chapter may prefer charges against that person or firm by setting forth in writing those charges and swearing to their authenticity, along with providing corroborative evidence. The charges shall be filed at the Board's office in Raleigh, North Carolina.

(c) Preliminary Review:

- (1) Upon receipt of a properly filed charge, an investigation shall be initiated.
- (2) A written notice and explanation of the charge shall be forwarded to the person or firm against whom the charge is made and a response is requested of the person or firm so charged to show compliance with all lawful requirements for retention of the license. Notice of the charge and of the alleged facts or alleged conduct shall be given personally or by certified mail, return receipt requested.
- (3) In the discretion of the executive director, a field investigation may be performed.
- (4) After preliminary evidence has been obtained, the matter shall be referred to the Board's review committee which is made up of the following individuals:
 - (A) one member of the Board who is licensed in the respective profession,

- (B) the legal counsel of the Board, and
- (C) the executive director of the Board.

(5) Upon review of the available evidence, the review committee shall present to the Board a written recommendation that:

- (A) The charge be dismissed as unfounded or trivial;
- (B) When the charge is admitted as true, the Board accept the admission of guilt by the person charged and order that person not to commit in the future the specific act or acts admitted and also not to violate any of the provisions of the Board Rules or the statutes at any time in the future;
- (C) The charge, whether admitted or denied, be presented to the full Board for a hearing and determination by the Board on the merits of the charge in accordance with the substantive and procedural requirements of the provisions of Section .1400 of this Chapter and the provisions of G.S. 150B; or
- (D) Whether the charge is admitted or denied, the Board give notice to the licensee of a contemplated action as set out in Rule .1403(b) of this Chapter.

(d) Consultant. A consultant to the review committee shall be designated by the Board Chair if a current board member is a complainant, witness or respondent in a case. The consultant shall be a currently licensed professional engineer or professional land surveyor, depending on the nature of the case, selected from a list provided by the executive director of former Board members or other licensed professionals who are knowledgeable with the Board's processes and have expressed an interest in serving as a consultant. The consultant shall review all case materials and make a recommendation for consideration by the review committee as to the merits of the case. The consultant shall review any new information presented in the event of a settlement conference and make a recommendation to the settlement conference committee.

(e) Board Decision. Notice of the decision by the Board on recommendations of the review committee shall be given to the party against whom the charges have been brought and the party submitting the charge. Though it is not forbidden to do so, the Board is not

required to notify the parties of the reasons of the Board in making its determination.

(f) Settlement Conference. When the Board issues a citation for hearing or notice of a contemplated action, the licensee may request in writing a settlement conference to pursue resolution of the issue(s) through informal procedures. If, after the completion of a settlement conference, the licensee and Board's settlement committee do not agree to a resolution of the dispute for the full Board's consideration, the original administrative proceeding shall commence. During the course of the settlement conference, no sworn testimony shall be taken nor shall any witnesses be cross-examined.

- (1) The Board's settlement committee shall be made up of the following individuals:
 - (A) the member of the Board who served on the review committee or the replacement if no longer a member of the Board,
 - (B) one public member from the Board,
 - (C) the legal counsel of the Board, and
 - (D) the executive director of the Board.
- (2) Upon review of the available evidence, the settlement committee shall present to the Board a written recommendation that:
 - (A) the charge be dismissed as unfounded or trivial;
 - (B) when the charge is admitted as true, the Board accept the admission of guilt by the person charged and order the person not to commit in the future the specific act or acts admitted and, also, not to violate any provisions of the Board Rules or the statutes at any time in the future;
 - (C) the charge, whether admitted or denied, be presented to the full Board for a hearing and determination by the Board on the merits of the charge in accordance with the substantive and procedural requirements of the provisions of Section .1400 of this Chapter and the provisions of G.S. 150B; or
 - (D) whether the charge is admitted or denied, the Board give notice to the licensee of a contemplated action as set out in Rule .1403(b) of this Chapter.

21-56.1302. UNLAWFUL PRACTICE BY AN UNLICENSED PERSON

(a) General. Alleged unlawful practice by an unlicensed person shall be subject to Board investigation and referral to an agency of the state for appropriate legal action.

(b) Preferring Charges. Any person who believes that any person or firm is in violation of the acts specified in G.S. 89C may prefer charges against that person or firm by setting forth in writing those charges and swearing to their authenticity. The charges shall be filed at the Board's office in Raleigh, North Carolina.

(c) Preliminary or Threshold Determination:

- (1) Upon receipt of a properly filed charge, an investigation shall be initiated.
- (2) At the discretion of the executive director, a field investigation may be performed without notifying any of the parties involved.
- (3) After preliminary evidence has been obtained, the matter shall be referred to the Board's review committee which is made up of the following individuals:
 - (A) one member of the Board,
 - (B) the legal counsel of the Board, and
 - (C) the executive director.
- (4) The review committee shall recommend to the Board whether there is probable cause to believe that a party against whom a charge has been brought in fact has violated the provisions of G.S. 89C.
- (5) Upon review of the available evidence, the review committee shall make a threshold determination of the charges brought. The review committee shall then present to the Board written recommendations that:
 - (A) The investigation be continued,
 - (B) The charge be dismissed as unfounded or trivial,
 - (C) The matter be referred to an appropriate agency for necessary legal action.

(d) Board Decision. Notice of decision by the Board on recommendations of the review committee shall be given to the party submitting the charge.

21-56.1400. CONTESTED CASES

21-56.1401. GENERAL RULES

Whenever the Board, by its official action, acts in such a way as to affect the rights, duties, or privileges of a specific identified party, that party, upon request, will be given an administrative hearing.

21-56.1402. OPPORTUNITY FOR LICENSEE OR APPLICANT TO HAVE HEARING

Every licensee or applicant for a license shall be afforded notice and an opportunity to be heard on any action, the effect of which would be:

- (1) to deny permission to take an examination for licensing for which application has been duly made,
- (2) to deny a license based on comity,
- (3) to deny a license after an applicant has taken and passed an examination,
- (4) to require re-examination for licensing,
- (5) to withhold the renewal of a license for any cause other than failure to pay a statutory renewal fee,
- (6) to suspend a license,
- (7) to revoke a license,
- (8) to impose a civil penalty, or
- (9) to issue a reprimand.

21-56.1403. NOTICE OF CONTEMPLATED BOARD ACTION: REQUEST FOR HEARING

(a) When the Board takes action of a type specified in Subdivisions (1), (2) or (3) of Rule .1402 of this Section, it shall give to the applicant a written notice containing a statement:

- (1) that the applicant has failed to satisfy the Board of the qualifications to be examined or to be issued a license, as the case may be;
- (2) indicating in what respects the applicant has so failed to satisfy the Board; and

(3) that unless the applicant, within 20 days after service of said notice, deposits in the mail a certified letter addressed to the Board and containing a request for a hearing, the Board's action will become final.

In any Board proceeding involving the denial of a duly made application to take an examination, or refusal to issue a license after an applicant has taken and passed an examination, the burden of satisfying the Board of the applicant's qualifications shall be upon the applicant.

(b) When the Board contemplates taking any action of a type specified in Subdivisions (4), (5), (6), (7), (8), or (9) of Rule .1402 of this Section, it shall give to the licensee a written notice containing a statement:

- (1) that the Board has sufficient evidence which, if not rebutted or explained, will justify the Board in taking the contemplated action;
- (2) indicating the general nature of the evidence; and
- (3) that unless the licensee, within 20 days after service of said notice, deposits in the mail a certified letter addressed to the Board and containing a request for a hearing or settlement conference, the Board will take the contemplated action.

21-56.1404. REQUEST FOR HEARING (Repealed)

21-56.1405. NOTICE OF HEARING (Repealed)

21-56.1406. PLACE OF HEARING (Repealed)

21-56.1407. INTERVENTION (Repealed)

21-56.1408. HEARING OFFICERS (Repealed)

21-56.1409. CONDUCT OF CONTESTED CASE

(a) Failure to Appear:

- (1) If a party served with notice requests a hearing within the time required and fails to appear without having notified the Board, and no continuance or adjournment is ordered, the party is considered to have waived the right to appear at the hearing and the Board may proceed with the hearing in the party's absence.

(2) If the absent party is the only party other than the Board, the Board may proceed with the hearing and make its decision in the party's absence.

(3) Continuances and adjournments shall be granted to a party only in compelling circumstances and for hardship noted.

(4) If a hearing is conducted or a decision reached in the absence of a party, that party may petition the Board for a reopening of the case. Petitions will not be granted, except when petitioner can show that the reasons for the failure to appear were justifiable and that fairness requires reopening of the case. The decision made by the Board will be in writing. A copy will be sent to the petitioner and made a part of the record of the contested case.

(b) Simplification of Issues. The parties to a contested case may agree in advance to simplify the hearing by eliminating issues to be contested at the hearing, accepting the validity of certain proposed evidence, accepting the findings in some other case with relevance to the case at hand, or agreeing to such other matters as may expedite the hearing.

(c) Subpoenas:

(1) The executive director shall issue subpoenas in the Board's name.

(2) Subpoenas requiring the attendance of witnesses, or those to produce documents, evidence, or things, will be issued by the executive director within five business days of the receipt of a request from a party to the case for such subpoena.

(3) Any person receiving a subpoena from the Board may object thereto by filing a written objection to the subpoena with the Board. Such objection must include a concise, but complete statement of reasons why the subpoena should be revoked or modified. These reasons may include lack of relevancy of the evidence requested, lack of particularity in the description of the evidence sought, or any other reasons sufficient in law for holding the subpoena invalid, such as that the evidence is privileged, that appearance or production would be so disruptive as to be unreasonable in light of the significance of the evidence sought, or other undue hardships.

(4) The objecting witness shall serve the objection on the party who requested the subpoena as soon as the objection is filed with the Board.

(5) The party requesting the subpoena, within five days, may file a written response to the objection. The response shall be served in like manner as the objection.

(6) After receipt of the objection and response thereto, if any, the Board shall issue a notice to the party who requested and the party challenging the subpoena, and may notify all other parties of an open hearing, to be scheduled as soon as practicable, at which time evidence and testimony may be presented limited to the questions raised by the objection and response, if any.

(7) Promptly after the close of such hearing, the Board will rule on the challenge and issue a written decision. A copy of this decision will be issued to all parties and made a part of the record.

21-56.1410. DISCOVERY (Repealed)

21-56.1411. DEPOSITIONS

Depositions shall be taken in accordance with the North Carolina Rules of Civil Procedure.

21-56.1412. CONDUCT OF HEARING (Repealed)

21-56.1413. DECISION OF BOARD

(a) Manner and Time of Rendering Decision. After a hearing has been completed the Board shall proceed to consider the case and as soon as practicable shall render their decision. The decision must be rendered within 90 days after the hearing.

(b) Service of Written Decision. Within five working days after the decision is rendered the Board shall serve upon each party a written copy of the decision, either personally or by certified mail. If the decision is sent by certified mail it shall be deemed to have been served on the date borne on the return receipt.

(c) Final Decision. The final decision of the Board shall be in the manner and form prescribed by G.S. 150B-42(a).

(d) Official Record. The official record will be prepared in all contested cases in accordance with the requirements of G.S. 150B-42(b).

21-56.1500. FEES

21-56.1501. GENERAL

Fees for returned checks shall be in the maximum amount established by G.S. 25-3-506.

21-56.1600. STANDARDS OF PRACTICE FOR LAND SURVEYING IN NORTH CAROLINA

21-56.1601. GENERAL

In order to better serve the general public in regulating the practice of land surveying in North Carolina, the minimum standards of practice set forth in this section are established, and shall be observed by Professional Land Surveyors in the practice of land surveying.

21-56.1602. SURVEYING PROCEDURES

(a) A Professional Land Surveyor shall spend the necessary time and effort to make adequate investigation to determine if there are encroachments, gaps, lappages, or other irregularities along each line surveyed. Points may be placed on the line from nearby closed or verified traverses and the necessary investigations made from these points. If these investigations are not made, then the surveyor shall not certify to an actual survey of that line and the plat must contain the appropriate qualifications in accordance with the rules in this Section.

(b) Any and all visible or determined encroachments or easements on the property being surveyed shall be accurately located and clearly indicated.

(c) With respect to investigation of property boundaries and recorded easements, the surveyor shall, at a minimum, examine the most recent deeds and recorded plats adjacent to the subject property as well as all deeds and plats recorded after the date of the deed or plat upon which the survey is being based (the survey reference deed or plat).

(d) Except as provided in Paragraph (e) of the Rule, metal stakes or materials of comparable permanence shall be placed at all corners.

(e) Where a corner falls in a right-of-way, in a tree, in a stream, or on a fence post, boulder, stone, or similar object, one or more monuments or metal stakes shall be placed in the boundary line so that the inaccessible point may be located accurately on the ground and the map.

(f) The results of a survey when reported to the user of that survey, whether in written or graphic form, shall be prepared in a clear and factual manner. All reference

sources shall be identified. Artificial monuments called for in such reports shall be described as found or set. When no monument is found or set for points described in Paragraph (d) of this Rule, that fact shall be noted.

(g) Where the results of a survey are reported in the form of a plat or a written description, one or more corners shall, by a system of azimuths or courses and distances, be accurately tied to and coordinated with a horizontal control monument of some United States or State Agency survey system, such as the North Carolina Geodetic Survey, where such monument is within 2000 feet of the subject property, right-of-way, easement or other surveyed entity. Where the North Carolina grid system coordinates of said monument are on file in the North Carolina Office of State Planning, the coordinates of both the referenced corner or point and the monument(s) shall be shown in X (easting) and Y (northing) coordinates on the plat or in the written description or document. The coordinates shall be identified as based on 'NAD 83', indicating North American Datum of 1983 or as 'NAD 27' indicating North American Datum of 1927. The tie lines to the monuments must be sufficient to establish true north or grid north bearings for the plat or description if the monuments exist in pairs. Control monuments within a previously recorded subdivision may be used in lieu of grid control. In the interest of bearing consistency with previously recorded plats, existing bearing control may be used where practical. In the absence of Grid Control, other natural or artificial monuments or landmarks shall be used. In all cases, the tie lines shall be sufficient to accurately reproduce the subject lands from the control or reference points used.

(h) Area is to be computed by double meridian distance or equally accurate method and shown on the face of the plat, written description or other document. Area computations by estimation, by planimeter, by scale, or by copying from another source are not acceptable methods, except in the case of tracts containing inaccessible areas and in these areas the method of computation shall be clearly stated.

21-56.1603. CLASSIFICATION OF BOUNDARY SURVEYS

General. Boundary surveys are defined as surveys made to establish or to retrace a boundary line on the ground, or to obtain data for constructing a map or plat showing a boundary line. For the purpose of this Rule the term refers to all surveys, including "loan" or "physical" surveys, which involve the determination or depiction of property lines. For the purpose of specifying minimum allowable surveying standards for boundary surveys, the following four general

classifications of lands in North Carolina are established from the standpoint of their real value, tax value, or location. Each map shall contain a statement of the calculated ratio of precision before adjustments. Positional accuracy may be used in addition to Ratio of Precision when a network of multiple traverse loops is used in the field and the network has been adjusted by the least squares method.

- (1) Local Control Network Surveys (Class AA). Local control network surveys are traverse networks utilizing permanent points for the purpose of establishing local horizontal control networks for future use of local surveyors. For Class AA boundary surveys in North Carolina, the angular error of closure shall not exceed ten seconds times the square root of the number of angles turned. The ratio of precision shall not exceed an error of closure of one foot per 20,000 feet of perimeter of the parcel of land (1:20,000). When using positional accuracy standards for Class AA control and boundary surveys, neither axis of the 95% confidence level error ellipse for any control point or property corner shall exceed 0.05 feet or 0.015 meters measured relative to the position(s) of the horizontal control points used and referenced on the survey.
- (2) Urban Land Surveys (Class A). Urban surveys include lands which normally lie within a town or city. For Class A boundary surveys in North Carolina, the angular error of closure shall not exceed 20 seconds times the square root of the number of angles turned. The ratio of precision shall not exceed an error of closure of one foot per 10,000 feet of perimeter of the parcel of land (1:10,000). When using positional accuracy standards for Class A control and boundary surveys, neither axis of the 95% confidence level error ellipse for any control point or property corner shall exceed 0.10 feet or 0.030 meters measured relative to the position(s) of the horizontal control points used and referenced on the survey.
- (3) Suburban Land Surveys (Class B). Suburban surveys include lands in or surrounding the urban properties of a town or city. For Class B boundary surveys in North Carolina, the angular error of closure shall not exceed 25 seconds times the square root of the number of angles turned. The ratio of precision shall not exceed an error of closure of one foot per 7,500 feet of perimeter of the parcel of land (1:7,500). When using positional accuracy standards for Class B control and boundary

surveys, neither axis of the 95% confidence level error ellipse for any control point or property corner shall exceed 0.12 feet or 0.037 meters measured relative to the position(s) of the horizontal control points used and referenced on the survey.

- (4) Rural and Farmland Surveys (Class C). Rural and farmland surveys include lands located in rural areas of North Carolina and generally outside the suburban properties. For Class C boundary surveys in North Carolina, the angular error of closure shall not exceed 30 seconds times the square root of the number of angles turned. The ratio of precision shall not exceed an error of closure of one foot per 5,000 feet of perimeter of the parcel of land (1:5,000). When using positional accuracy standards for Class C control and boundary surveys, neither axis of the 95% confidence level error ellipse for any control point or property corner shall exceed 0.15 feet or 0.046 meters measured relative to the position(s) of the horizontal control points used and referenced on the survey.

21-56.1604. MAPPING REQUIREMENTS FOR BOUNDARY SURVEYS

- (a) The size of a map shall be such that all details can be shown clearly.
- (b) Any lines that are not actually surveyed must be clearly indicated on the map and a statement included revealing the source of information from which the line is derived.
- (c) Any revision on a map after a surveyor's seal is affixed shall be noted and dated.
- (d) All surveys based on the North Carolina grid system shall contain a statement identifying the coordinate system referenced datum used.
- (e) All plats (maps), unless clearly marked as "Preliminary Plat - Not for recordation, conveyances, or sales" shall be sealed, signed and dated by the Professional Land Surveyor and shall contain the following:
 - (1) An accurately positioned north arrow coordinated with any bearings shown on the plat. Indication shall be made as to whether the north index is true, magnetic, North Carolina grid ('NAD 83' or 'NAD27'), or is referenced to old deed or plat bearings. If the north index is magnetic or referenced to old

deed or plat bearings, the date and the source (if determined) shall be clearly indicated.

- (2) The azimuth or courses and distances of every property line surveyed shall be shown. Distances shall be in feet or meters and decimals thereof. The number of decimal places shall be appropriate to the class of survey required.
- (3) All plat lines shall be horizontal or grid measurements. All lines shown on the plat shall be correctly plotted to the scale shown. Enlargements of portions of a plat are acceptable in the interest of clarity, where shown as inserts. Where the North Carolina grid system is used, the combined grid factor shall be shown on the face of the plat. If grid distances are used, it must be shown on the plat.
- (4) Where a boundary is formed by a curved line, the following data must be given: actual survey data, or as a series of subchords with bearings and distances around the curve. If standard curve data is used, the bearing and distance of the long chord (from point of curvature to point of tangency) must be shown on the face of the plat.
- (5) Where a subdivision of land is set out on the plat, all streets and lots shall be accurately plotted with dimension lines indicating widths and all other information pertinent to retracing all lines in the field. This shall include bearings and distances sufficient to form a continuous closure of the entire perimeter.
- (6) Where control corners have been established in compliance with G.S. 39-32.1, 39-32.2, 39-32.3, and 39-32.4, as amended, the location and information as required in the referenced statute shall be shown on the plat. All other corners that are marked by monument or natural object shall be so identified on all plats, and where practical all corners of adjacent owners along the boundary lines of the subject tract that are marked by monument or natural object shall be shown.
- (7) The surveyor shall show one of the following where they could be determined:
 - (A) The names of adjacent land owners; or
 - (B) The lot, block, parcel and subdivision designations; or

(C) Other legal reference where applicable.

- (8) All visible and apparent rights-of-way, easements, watercourses, utilities, roadways, and other such improvements shall be accurately located where crossing or forming any boundary line of the property shown.
- (9) Tie lines as required and defined in Rule .1602(g) of this Section shall be clearly and accurately shown on the face of the plat, whether or not the plat is to be recorded.
- (10) A vicinity map (location map) shall appear on the face of the plat.
- (11) Each map shall contain the property designation, name of owner or prospective owner, location (including township, county, and state), and the date or dates the survey was conducted. In addition each map shall contain a scale of the drawing listed in words or figures; a bargraph; the name, address, license number, and seal of the surveyor; the title source; and a legend depicting nomenclature or symbols not otherwise labeled.

21-56.1605. CLASSIFICATION OF VERTICAL CONTROL SURVEYS

(a) General. Vertical control surveys are defined as measurements taken by surveying methods to determine elevation with respect to vertical datum, usually National Geodetic Vertical Datum of 1929 (NGVD29) or North American Vertical Datum of 1988 (NAVD88). For the purpose of specifying minimum allowable surveying standards, the following three general classifications of vertical control surveys are established.

- (1) Urban and suburban vertical control surveys. (Class A). Urban and suburban vertical control surveys include lands which lie within or adjoining a town or city. For Class A vertical control surveys in North Carolina, the vertical error in feet shall not exceed 0.10 times the square root of the number of miles run from the reference datum.
- (2) Other vertical control surveys (Class B). Other vertical control surveys include all lands which are not covered by Class A as described in Item 1 of this Rule. For Class B vertical control surveys in North Carolina, the vertical error in feet shall not exceed 0.20 times the square

root of the number of miles run from the reference datum.

- (3) Trigonometric vertical control surveys (Class C). Trigonometric vertical control surveys can be used for vertical control for aerial and topographic mapping. The vertical error in feet shall not exceed 0.3 times the square root of the number of miles run from the reference datum.

21-56.1606. SPECIFICATIONS FOR TOPOGRAPHIC AND PLANIMETRIC MAPPING, INCLUDING GROUND, AIRBORNE, AND SPACEBORNE SURVEYS

(a) General.

- (1) Topographic surveys are defined as surveys that have as their major purpose the determination of the configuration (relief) of the earth (ground) and the location of natural or artificial objects thereon.
 - (2) Planimetric mapping is defined as producing a map that presents the horizontal positions only for the features represented; distinguished from a topographic map by the omission of relief in measurable form.
 - (3) Airborne and spaceborne surveys are defined as the use of photogrammetry, LIDAR, IFSAR, or other similar measurement technologies for obtaining reliable information about physical objects and the environment, including terrain surface, through the process of recording, measuring, and interpreting images and patterns of electromagnetic radiant energy and other phenomena. This Rule establishes minimum allowable photogrammetric production procedures and standards for photogrammetric mapping and digital data production.
- (b) Production procedures for topographic and planimetric mapping surveys shall be in accordance with the standards established by Chapter 3 of the Federal Geographic Data Committee (FGDC) Geospatial Positioning Accuracy Standard and applicable extensions and revisions. These standards are incorporated by reference including subsequent amendments and editions. The material is available from the Board office at a cost of five dollars (\$5.00) per copy or from the FGDC.
- (c) Topographic or planimetric maps, orthophotos, or related electronic data, unless clearly marked as "Preliminary Map," shall meet contractually specified FGDC Standards for horizontal and vertical accuracies

(in the absence of specified standards, the National Map Accuracy Standards apply) and shall be sealed, signed and dated by the licensee.

(d) When the issued product is a digital (electronic) data set, or a map or document consists of more than one sheet or otherwise cannot be signed and sealed, a project report shall be certified, signed and sealed. Such report shall be clearly marked "Preliminary" if applicable.

(e) Ground control for topographic and planimetric mapping projects shall be in North Carolina State Plane Coordinate System grid coordinates and distances when the project is tied to Grid. A minimum of one permanent project vertical control point shall be shown.

(f) A project map or report shall contain the applicable following information:

- (1) Date of original data acquisition;
- (2) Altitude of sensor and sensor focal length, as applicable;
- (3) Date of document or data set compilation;
- (4) If hard copy product is produced, the maps shall contain a north arrow, map legend, final document scale, including bargraph, and contour interval, as applicable;
- (5) Coordinate system for horizontal and vertical denoting SI (Sustem International or English units (i.e., NAD83, assumed, or other coordinate system));
- (6) A list or note showing the control points used for the project. The minimum data shown for each point shall include: physical attributes (i.e. iron rod, railroad spike, etc), latitude and longitude (or X and Y Grid coordinates), and elevation, as applicable;
- (7) If other data is included, the source and accuracy of those items must be clearly indicated;
- (8) A statement of accuracy complying with contractually specified FGDC standards consistent with paragraph (c) of this Rule;
- (9) For topographic maps or data sets, contours in areas obscured by man-made or natural features shall be uniquely identified or enclosed by a polygon clearly identifying the obscured area. The accuracies of the contours or of features in this obscured area shall be noted

"No reliance is to be placed on the accuracy of these contours";

- (10) A vicinity map depicting the project location shall appear on the first sheet of all hard copy maps or in the report accompanying digital files;
- (11) Company name, address and phone number; and
- (12) The name of the client for whom the project was conducted.

(g) Nothing in this Rule shall be construed to negate or replace the relative accuracy standards found in Rules .1601 through .1608.

(h) A certificate, substantially in the following form, shall be affixed to all maps or reports:

" I, _____, certify that this project was completed under my direct and responsible charge from an actual (insert as appropriate: ground, airborne, photogrammetric) survey made under my supervision; that this photogrammetric survey was performed to meet Federal Geographic Data Committee Standards as applicable; that the imagery and/or original data was obtained on ____ (date) _____; that the photogrammetric survey was completed on ____ (date) _____; that contours shown as [broken lines] may not meet the stated standard; and all coordinates are based on _____.

(i) Documents transmitted electronically shall have the computer-generated seal removed from the original file and a copy of the project report shall be signed, sealed and sent to the client. The electronic data shall have the following inserted in lieu of the signature and date:

"This document originally issued and sealed by (name of sealer), (license number), on (date of sealing). This electronic media shall not be considered a certified document. See the project report for certificate and seal."

21-56.1607. GLOBAL POSITIONING SYSTEM SURVEYS

(a) General. Global Positioning System (GPS) surveys are defined as any survey performed by using the GPS 3-dimensional measurement system based on observations of the radio signals of the Department of Defense's NAVSTAR (Navigation Satellite Timing and

Ranging) GPS System. All GPS boundary and geodetic control surveys, aerial photography control surveys, and GIS/LIS collection surveys of features included in G.S. 89C-3(7) performed in North Carolina shall be performed by a Professional Land Surveyor licensed in North Carolina unless exempt by G.S. 89C-25.

(b) Geodetic control surveys for inclusion of the data in the National Spatial Data Network (Blue Book) shall be performed in accordance with specifications established by the Federal Geographic Data Committee (FGDC) and the National Geodetic Survey. These specifications are incorporated by reference including subsequent amendments and editions. The material is available for inspection at the office of the North Carolina Geodetic Survey, 121 W. Jones Street (Elks Building), Raleigh, North Carolina 27603. Copies may be obtained at the office of the North Carolina Geodetic Survey. Copies may be obtained at a cost of two dollars (\$2.00). GPS surveys performed to other Federal Standards shall conform to the appropriate Federal standard procedures for the specific project.

The Professional Land Surveyor in responsible charge of the GPS survey shall certify, sign and seal all prepared documents. When a map or document consists of more than one sheet, only one sheet must contain the certificate and all others must be signed and sealed. The certificate shall contain the following information:

- (1) Class of GPS survey.
- (2) Type of GPS field procedure (Static, Kinematic, Pseudo-Kinematic).
- (3) Type of adjustment used.
- (4) Dates of survey.
- (5) Type and model of GPS receivers used.
- (6) What datum coordinates or geographic positions are based on.

The certificate shall be substantially in the following form:

"I, _____, certify that this map was drawn under my supervision from an actual GPS survey made under my supervision; that this GPS survey was performed to _____ FGCC specifications and that I used _____ . GPS field procedures and coordinates were obtained by _____ adjustment. That this survey was performed on _____ using (type) (number) of receivers and all coordinates are based on _____ .

Prepared documents shall include coordinates (see paragraph f. of this Rule for the list of data to show) of all monuments and a map showing all non-trivial vectors measured. The map shall also contain the following information:

- (1) Scale (bar or numerical).
- (2) Legend.
- (3) Loop closures before any adjustment.
- (4) Certification.
- (5) Company name, address and phone number.

(c) GPS surveys performed to provide local control networks for use as a network base shall be performed using static or rapid static methods. These surveys shall be performed in such a manner that a 95% confidence level of the positional accuracy of each point relative to the published positions of the control points used and shall meet the accuracy standards of a Class AA survey as set out in Rule .1603.

(d) GPS surveys performed to provide local horizontal or vertical Grid control on a parcel of land where the boundary or topography of that parcel will be shown relative to NC Grid horizontal or vertical datum shall be performed using static or rapid static techniques, or kinematic or real time kinematic techniques. These surveys shall be performed using techniques that will provide the standards of accuracy for the class of survey being performed while determining the horizontal or vertical positions of objects as set out in Rule .1603 or Rule .1606 of this Section, as applicable.

(e) All plats, maps, and reports published based upon this type of GPS survey shall contain a statement worded substantially as follows: "The NC Grid coordinates shown on this [plat or report] were derived by [static or rapid static or kinematic or real time kinematic] differential GPS observations using [number of receivers] [brand name] [model number] receivers. The vectors were adjusted using the fixed station(s) shown using [software brand and program name] software producing a weighted least squares adjustment of the [WGS 84 or NAD 83 or other system] positions. The median vector error is computed to be [x.x] ppm. A loop of [miles or kilometers or feet or meters] using the un-adjusted vectors passing through the fixed and derived control stations yields a loop precision of [1:xxx or xx.x ppm]."

(f) A list or note showing the fixed station(s) used for the project shall appear on the map, plat, or report. The minimum data shown for each fixed station shall be

station name, latitude, longitude, elevation (ellipsoid or orthometric), and geoid height and epoch (93, 96, 99, etc.), and the coordinate reference system. State plane coordinates may be added if desired.

21-56.1608. CLASSIFICATION LAND INFORMATION SYSTEM/GEOGRAPHIC INFORMATION SYSTEM SURVEYS

(a) General: Land Information System/Geographic Information System (LIS/GIS) surveys are defined as the measurement of existing surface and subsurface features for the purpose of determining their accurate geospatial location for inclusion in an LIS/GIS database. All LIS/GIS surveys as they relate to property lines, rights-of-way, easements, subdivisions of land, the position for any survey monument or reference point, the determination of the configuration or contour of the earth's surface or the position of fixed objects thereon, and geodetic surveying which includes surveying for determination of the size and shape of the earth both horizontally and vertically and the precise positioning of points on the earth utilizing angular and linear measurements through spatially oriented spherical geometry, shall be performed by a Land Surveyor who is a licensee of this Board unless exempt by G.S. 89C-25. For the purpose of specifying minimum allowable surveying standards, three general classifications of LIS/GIS surveys are established:

- (1) Urban and Suburban LIS/GIS surveys (Class A). Urban and suburban LIS/GIS surveys include the location of features within lands which lie in or adjoining a town or city. For Class A LIS/GIS surveys in North Carolina, the relative accuracy shall be equal to or less than 0.5 meter (1.64 feet).
- (2) Rural LIS/GIS surveys (Class B). Rural LIS/GIS surveys include the location of features within lands which lie outside of suburban areas. For Class B LIS/GIS surveys in North Carolina, the relative accuracy shall be equal to or less than two meters (6.56 feet).
- (3) Regional LIS/GIS surveys (Class C). Regional LIS/GIS surveys include the location of features within lands which lie in multi-county areas. For Class C LIS/GIS surveys in North Carolina, the relative accuracy shall be equal to or less than five meters (16.40 feet).

(b) Nothing in this Rule shall be construed to negate or replace the relative accuracy standards found in Rules .1601 through .1607 of this Chapter.

(c) The Professional Land Surveyor in responsible charge of the LIS/GIS boundary or geodetic control survey shall certify to all of the following in either written or digital form:

- (1) Class of LIS/GIS survey;
- (2) Method of measurement (i.e. global positioning system, theodolite and electronic distance meter, transit and tape);
- (3) Date(s) of the survey; and
- (4) Datum used for the survey.

21-56.1609. MINIMUM PHOTOGRAMMETRIC PRODUCTION STANDARDS(Repealed)

21-56.1700. CONTINUING PROFESSIONAL COMPETENCY

21-56.1701. INTRODUCTION

Every licensee shall meet the continuing professional competency requirements of this Section for professional development as a condition for licensure renewal.

21-56.1702. DEFINITIONS

Terms used in this Section are defined as follows:

- (1) Professional Development Hour (PDH) - A contact hour (nominal) of instruction or presentation. The common denominator for other units of credit.
- (2) Continuing Education Unit (CEU) - Unit of credit customarily used for continuing education courses. One continuing education unit equals 10 contact hours of instruction or presentation.
- (3) College/Unit Semester/Quarter Hour - Credit for Accreditation Board for Engineering and Technology approved course or other related college course.
- (4) Course/Activity - Any course or activity with a clear purpose and objective which will maintain, improve, and expand the skills and knowledge relevant to the licensee's field of practice.

- (5) Dual Licensee - A person who is licensed as both an engineer and a land surveyor.
- (6) Sponsor - Organization or individual that has supplied information on a form prescribed and furnished by the Board with respect to the organization or individual's ability to provide instruction in "for credit" courses. Courses offered by those designated as "Sponsor" must contain a clear purpose and objective, and result in the maintenance, improvement, and expansion of skills and knowledge relevant to a licensee's field of practice. Courses offered by "Sponsors" are deemed acceptable for PDH credit without scrutiny of individual course content.

21-56.1703. REQUIREMENTS

Every licensee shall obtain 15 PDH units during the renewal period. If a licensee exceeds the annual requirement in any renewal period, a maximum of 15 PDH units may be carried forward into the subsequent renewal period. Selection of courses and activities which meet the requirements of Rule .1702 Item (4) of this Section is the responsibility of the licensee. Licensees may select courses other than those offered by sponsors. Post evaluation of courses offered by other than sponsors as defined in Rule .1702 Item (6) of this Section may result in non-acceptance. PDH units may be earned as follows:

- (1) Completion of college courses.
- (2) Completion of continuing education courses.
- (3) Completion of correspondence, televised, videotaped, audiotaped, and other short courses/tutorials.
- (4) Presenting or attending seminars, in-house courses, workshops, or professional or technical presentations made at meetings, conventions or conferences.
- (5) Teaching or instructing in Items (1) through (4) of this Rule.
- (6) Authoring published papers, articles, or books.
- (7) Active participation in professional or technical societies.
- (8) Patents.
- (9) Authoring exam questions accepted for use in the engineering or land surveying exams.

21-56.1704. UNITS

The conversion of other units of credit to PDH units is as follows:

- (1) 1 College or unit semester hour 45 PDH
- (2) 1 College or unit quarter hour 30 PDH
- (3) 1 Continuing Education Unit 10 PDH
- (4) 1 Contact hour of professional development in course work, seminars, or professional or technical presentations made at meetings, conventions or conferences. Contact hours equal the actual time of instruction and shall be credited to the nearest one-third of an hour. 1 PDH
- (5) For teaching in Items (1) - (4) of this Rule, PDH credits are doubled. Teaching credit is valid for teaching a course or seminar for the first time only. Teaching credit does not apply to full-time faculty, as defined by the institution where a licensee is teaching.
- (6) Each published paper, article or book. 10 PDH
- (7) Active participation in professional and technical society. (Each organization.) 2 PDH
- (8) Each patent 10 PDH
- (9) Each question used 2 PDH

21-56.1705. DETERMINATION OF CREDIT

- (a) The Board of Examiners has final authority with respect to approval of courses, sponsors, credit, PDH value for courses, and other methods of earning credit.
- (b) Credit for college or community college courses shall be based upon course credit established by the college.
- (c) Credit for seminars and workshops shall be based on one PDH unit for each hour of attendance. Attendance at programs presented at professional and technical society meetings shall earn PDH units for the actual time of each program.

- (d) Credit determination for published papers, articles and books and obtaining patents is the responsibility of the licensee.
- (e) Credit for active participation in professional and technical societies (limited to 2 PDH per organization), requires that a licensee serve as an officer or actively participate in a committee of the organization. PDH credits are not earned until the end of each year of service is completed.

21-56.1706. RECORDKEEPING

The licensee shall maintain records to be used to support credits claimed. Records required include, but are not limited to:

- (1) a log showing the type of activity claimed, sponsoring organization, location, duration, instructor's or speaker's name, and PDH credits earned;
- (2) attendance verification records in the form of completion certificates, or other documents supporting evidence of attendance; or
- (3) records as maintained by the National Professional Development Registry for Engineers and Surveyors (NPDRES) of the National Society of Professional Engineers (NSPE).

These records must be maintained for a period of three years and copies may be requested by the board for audit verification purposes.

21-56.1707. EXEMPTIONS

A licensee may be exempt from the professional development educational requirements for one of the following reasons:

- (1) New licensees by way of examination or reciprocity shall be exempt for their first renewal period.
- (2) A licensee serving on temporary active duty in the uniformed services of the United States for a period of time exceeding 120 consecutive days in a year shall be exempt from obtaining the professional development hours required during that year.
- (3) Licensees experiencing physical disability, illness, or other extenuating circumstances as

reviewed and approved by the board may be exempt. Supporting documentation must be furnished to the board.

- (4) Licensees who list their occupation as "Inactive" on the board approved renewal form and who further certify that they are no longer receiving any remuneration from providing professional engineering or land surveying services shall be exempt from the professional development development hours required. In the event such a person elects to return to active practice of professional engineering or land surveying, professional development hours must be earned in accordance with the requirements of Rule .1708 in this Section before returning to active practice for each year exempted not to exceed the annual requirement for two years.

21-56.1708. REINSTATEMENT

A licensee may bring an inactive license to active status by obtaining all delinquent PDH units. However, if the total number required to become current exceeds 30, then 30 shall be the maximum number required. Reinstatement of a license that was not renewed within 12 months after expiration (archived license), in addition to a new application, requires obtaining all delinquent PDH units as required to reinstate an inactive license.

21-56.1709. COMITY/OUT-OF-JURISDICTION RESIDENT

Licensees who are residents of jurisdictions other than North Carolina must meet the CPC requirements of their resident jurisdiction. The requirements for North Carolina will be deemed as satisfied when a non-resident licensee provides evidence of having met the requirements of his or her resident jurisdiction. If licensees reside in a jurisdiction that has no CPC requirement, the resident must meet the requirements of North Carolina.

21-56.1710. DUAL LICENSEES

The number of PDH units required shall remain the same for persons who hold a second licensure as engineer or land surveyor. Holders of second licensure must obtain a minimum of one-third of the total PDH requirements in each field. The remaining one-third requirement may be obtained in either field at the sole discretion of the licensee.

21-56.1711. FORMS

Renewal applications may require the completion of a continuing education form specified by the board outlining PDH credit claimed. The licensee must supply sufficient detail on the form to permit audit verification, must certify and sign the continuing education form, and submit the form with the renewal application and fee.

21-56.1712. COMPLIANCE

(a) Compliance with annual Continuing professional Competency (CPC) requirements shall be determined through an audit process conducted by the Board. Determination of individuals to be audited shall be accomplished through a random selection process or as the result of information available to the Board. Individuals selected for auditing shall provide the Board with documentation of the CPC activities claimed for the renewal period, including but not limited to:

(1) Attendance verification records in the form of transcripts, completion certificates, other documents supporting evidence of attendance, or a log as defined in Rule .1706 of the Section.

(2) Information regarding course content, instructors and sponsoring organization, for activities presented by other than approved sponsors as defined in Rule .1713 of this Section.

(b) Attendance records shall be maintained by individual licensees for a period of three years for audit verification purposes.

(c) Failure to comply with annual CPC requirements shall result in non-renewal.

21-56.1713. SPONSORS

(a) The Board shall approve sponsors of Continuing Professional Competency (CPC) activities and not particular courses. The Board shall maintain a list of sponsors which have agreed to conduct programs in accordance with the standards of CPC activities set forth in 21 NCAC 56.1700. Such sponsors shall indicate their agreement with the requirements by executing a Sponsor Agreement on a form provided by the Board. These sponsors shall be designated as "Approved Sponsors."

(b) By entering into an agreement with the Board to be designated as an "Approved Sponsor," the sponsor shall agree to:

(1) Allow persons designated by this Board to attend any or all courses, without fee or charge, for the purpose of determining that said course meets the standards of the Board.

(2) Allow persons designated by this Board to review course material for the purpose of determining that said course meets the standards of the Board.

(3) State in every brochure, publication or announcement concerning the course, the general content of the course and the specific knowledge or skill to be taught or addressed, as well as the credit to be earned in Professional Development Hours (PDH).

(4) Ensure that the instructors or presenters of the course or program are qualified to teach the subject matter.

(5) Provide persons completing the course with written documentation attesting to that person's attendance to the course, as well as the name of the course, the date and location held, the instructor's name and the number of PDHs earned.

(6) Submit quarterly reports to the Board which shall include the sponsor's name, the name of the course, the date and location held, the instructor's name, the number of PDHs earned and a list of attendees.

(7) Have a visible, continuous and identifiable contact person who is charged with the administration of the sponsor's CPC program. The contact person shall have the responsibility for assuring and demonstrating to the Board compliance with the Rules in Section .1700, as well as responsibility for any other organization working with the sponsor for the development, distribution or presentation of CPC courses or activities.

(8) Retain for a period of three years a copy of the above documentation.

(c) Sponsors shall renew annually on a form provided by the Board.

(d) Failure of an approved sponsor to comply with the terms of the CPC sponsor agreement shall be grounds for the Board to revoke, suspend or terminate the agreement, to remove the sponsor's name from the list of approved sponsors and to notify the public of such action. A sponsor that is given notice of revocation, suspension or termination may request an administrative hearing to be conducted as provided in 21 NCAC 56.1400 Contested Cases.