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Rulemaking Hearing Rule(s) Filing Form

Rulemaking Hearing Rules are rules filed after and as a result of a rulemaking hearing. TCA Section 4-5-205

Agency/Board/Commission:	Tennessee Board of Examiners for Land Surveyors
Division:	Department of Commerce and Insurance, Division of Regulatory Boards
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Revision Type (check all that apply):

- Amendment
 New
 Repeal

Rule(s) Revised (ALL chapters and rules contained in filing must be listed here. If needed, copy and paste additional tables to accommodate multiple chapters. Please enter only ONE Rule Number/Rule Title per row)

Chapter Number	Chapter Title
0820-03	Standards of Practice
Rule Number	Rule Title
0820-03-.02	General
0820-03-.03	Definitions
0820-03-.04	Nomenclature
0820-03-.05	Accuracy of Surveys
0820-03-.06	Maps and Mapping
0820-03-.07	Survey Types and Requirements
0820-03-.08	Marking of Property Boundaries
0820-03-.09	Land Descriptions
0820-03-.10	Instruments and Apparatus

Chapter 0820-03
Standards of Practice

Amendments

Rule 0820-03-.02 General is amended by deleting the text of the rule in its entirety and substituting instead the following so that, as amended, Rule 0820-03-.02 shall read:

Rule 0820-03-.02 General

- (1) The proper execution of land surveying and mapping procedures and all other details of a land survey shall be the direct responsibility of the Land Surveyor whose stamp or seal and/or signature appear on the map, plat or other newly original survey documents. The fact that a map, plat or other newly original survey document(s) is accepted by the Register of Deeds for recordation in no way relieves such Land Surveyor of this responsibility.
- (2) Authorship of the original map(s) is the intellectual property of the Land Surveyor, unless otherwise specified by written contract; therefore it should be professionally and accurately prepared as a permanent record. After reproducible prints or copies have been made for recordation or other purposes, the map should be carefully preserved with the Land Surveyor's original field notes, calculations, work sheets, data, and other project documents for the statutory period as defined at T.C.A. § 28-3-114(a).
- (3) The Land Surveyor may agree with any client to perform a more accurate survey than required by this Chapter.

Authority: T.C.A. §§ 62-18-105(d) and 62-18-106(c).

Rule 0820-03-.03 Definitions is amended by deleting the text of the rule in its entirety and substituting instead the following so that, as amended, Rule 0820-03-.03 shall read:

Rule 0820-03-.03 Definitions

- (1) "Land description" means a detailed statement of appropriate information necessary to completely locate, relocate, or define the boundaries of a certain area or tract of land.
- (2) "Leveling Survey" means a survey involving the control of levels for land areas where a common Datum is necessary.
- (3) "Survey Plat or Survey Map" means an accurate graphical representation of a finite piece of surveyed property, including pertinent and important data and information pertaining to the surveyed land.
- (4) "Suburban Land Survey" means a survey of land which is located within the limits of a city or town.

Authority: T.C.A. §§ 62-18-105(d) and 62-18-106(c).

Rule 0820-03-.04 Nomenclature is amended by deleting the text of the rule in its entirety and substituting instead the following, so that, as amended, Rule 0820-03-.04 shall read:

Reserved.

Authority: T.C.A. §§ 62-18-105(d) and 62-18-106(c).

Rule 0820-03-.05 Accuracy of Surveys is amended by deleting the text of the rule in its entirety and substituting instead the following, so that, as amended, Rule 0820-03-.05 shall read:

Rule 0820-03-.05 Accuracy of Surveys

Surveys for categories I, II, and III as defined below must meet the minimum accuracy requirements provided below for the category where the survey is located. The category must be determined by the Land Surveyor to the best of his knowledge and belief at the time of the survey. Nothing in this rule shall preclude a Land Surveyor from using a greater degree of accuracy than that required as a minimum for any category provided below.

- (1) Urban and Subdivision Property Surveys (Category I). For Category I surveys in Tennessee, the angular closure shall not exceed fifteen (15) seconds times the square root of the number of angles turned. The linear error of closure shall not exceed 1 foot per 10,000 feet of perimeter of the lot of land (1:10,000). When very small lots of one (1) acre or less are encountered, the allowable error shall not exceed one tenth (1/10) of a foot of positional accuracy at any corner.
- (2) Suburban and Subdivision Property Surveys (Category II). For Category II surveys in Tennessee, the angular error of closure shall not exceed twenty-five (25) seconds times the square root of the number of angles turned. The linear error of closure shall not exceed 1 foot per 7,500 feet of perimeter of the lot of land (1:7,500). When very small lots of one (1) acre or less are encountered, the allowable error shall not exceed one tenth (1/10) of a foot of positional accuracy at any corner.
- (3) Other Property Surveys (Category III). For Category III surveys in Tennessee, the angular error of closure shall not exceed thirty (30) seconds times the square root of the number of angles turned. The linear error of closure shall not exceed 1 foot per 5,000 feet of perimeter of the lot of land (1:5,000). When very small lots of one (1) acre or less are encountered, the allowable error shall not exceed one tenth (1/10) of a foot of positional accuracy at any corner.
- (4) Remote Sensing Surveys (Category IV). For Category IV surveys in Tennessee, the Land Surveyor is to use the current standards and applications set by Rule 0820-03-.07(5) of this Chapter.
- (5) Differential Leveling Surveys.

The surveying process in which a horizontal line of sight of known elevation is intercepted by a graduated standard, or rod, held vertically on the point being checked (does not apply to Trigonometric or GPS surveys).

- (a) Urban Differential Leveling Surveys. Leveling employed for commercial, industrial or urban land surveys shall be executed with an error of closure (Y) not to exceed in feet

$$Y = 0.04 \sqrt{\frac{0.5}{M}}$$

(Y equals 0.04 times the square root of M) Where Y = discrepancy in vertical measurement (in feet) and M = distance from datum reference (in miles).

- (b) Other Differential Leveling Surveys. Other leveling surveys shall be conducted with an error of closure (Y) not to exceed in feet

$$Y = 0.10 \sqrt{\frac{0.5}{M}}$$

(Y equals 0.10 times the square root of M) Where Y = discrepancy in vertical measurement (in feet) and M = distance from datum reference (in miles).

- (c) Agreement for Leveling Surveys. Prior to any type of Leveling Survey, including control for photogrammetric mapping, the Land Surveyor may determine and set forth in a

written agreement with his client to perform a more accurate Leveling Survey and the general procedure to be employed.

Authority: T.C.A. §§ 62-18-105(d) and 62-18-106(c).

Rule 0820-03-.06 Maps and Mapping is amended by deleting the text of the rule in its entirety and substituting instead the following, so that, as amended, Rule 0820-03-.06 shall read:

Rule 0820-03-.06 Maps and Mapping

- (1) When a Land Surveyor furnishes a Survey Plat or Survey Map, it shall be properly and accurately drawn, and should depict information developed by and during the survey.
- (2) The size of the Survey Plat or Survey Map shall be such that details can be shown clearly.
- (3) Preliminary documents must be clearly marked as such prominently on the face of the document. The Land Surveyor has the professional discretion not to sign, stamp or seal any preliminary survey, documents, drafts, drawings or composite drawings. In the compilation of a composite Survey Map or Survey Plat, the Land Surveyor shall indicate and cite the source of all lines copied from a previous source.
- (4) Property lines which are not actually surveyed must be clearly indicated on the Survey Plat or Survey Map. A statement shall be included revealing the source of information from which the line is derived.
- (5) Electronic survey documents such as CAD files, PDF copies, and word processor documents or other emailed or digitally copied and/or other electronically forwarded information and documents are considered "Preliminary" or "Draft" documents.
- (6) Pertinent information on the Survey Plat or Survey Map shall be correctly plotted to the scale shown or noted otherwise. Enlargement "Detail" of a portion of a Plat or Map is acceptable in the interest of clarity, where shown as inserts on the same sheet and/or with a description of where to find the "Detail" if it is located on another sheet of the same Survey Map or Survey Plat.
- (7) Visible and apparent rights-of-way, utilities, and roadways shall be accurately located where crossing or forming any boundary line of the property shown.
- (8) Easements evidenced by Record Documents which have been delivered to the Land Surveyor shall be shown, both those burdening and those benefiting the property surveyed, indicating recording information. If an apparent easement cannot be located, a note to this effect shall be included. Observable evidence of easements and/or servitudes of all kinds, such as those created by roads; rights-of-way; water courses; drains; or utilities on or across the surveyed property and on adjoining properties if they appear to affect the surveyed property, shall be located and noted. If the Land Surveyor has knowledge of any such easements and/or servitudes, not observable at the time of the survey, such lack of observable evidence shall be noted. Surface indications, if any, of underground easements and/or servitudes shall also be shown. Where non-observable data is shown relative to existing utilities in reliance on apparent surface markings or available utility plans or the apparent surface indicators which are not visible to the Land Surveyor, a statement as to the source of the data shall be included on the Survey Map or Survey Plat as well as a note stating such data should not be relied upon without verification from the proper utility authority having jurisdiction.
- (9) Area: When a boundary is formed by a closed survey, the area shall be shown in acres and/or square feet. Area is to be computed by double meridian distance or equally accurate method. Area computations by estimation, planimeter, by scale, or copying from another source, or non-accessible areas, are not acceptable methods except in preliminary maps and non-accessible areas, in which case the method will be clearly stated. If the survey is a new/original tract or the area is different from the recorded area, then the survey must show the area of any closed

surveyed tracts or lots.

- (10) Unless necessary because of space or other limitations, abbreviations and symbols should not be used in land surveying work. However, when it is deemed necessary, a thorough legend, describing all symbols and abbreviations used, shall be included on the Survey Plat or Survey Map.

Authority: T.C.A. §§ 62-18-105(d) and 62-18-106(c).

Rule 0820-03-.07 Survey Types and Requirements is amended by deleting the text of the rule in its entirety and substituting instead the following, so that, as amended, Rule 0820-03-.07 shall read:

Rule 0820-03-.07 Survey Types and Requirements

A Land Surveyor shall comply with the minimum requirements provided below for all surveys and Survey Plats or Survey Maps prepared therefrom.

(1) General Property Surveys.

- (a) A Survey Map or Survey Plat shall be a copy, print or tracing, and shall be dated and stamped or sealed and signed by a registered Land Surveyor, in compliance with applicable law.
- (b) A Survey Map or Survey Plat shall have a title and contain the following information:

1. A descriptive location of the property, or vicinity map, and a corner of the property must be tied by bearing and distance either:

- to a corner of a subdivision, or
- to a tract from which property is carved, or
- to a permanent identifiable corner, or
- to a nearby permanent identifiable reference point.

A corner of the property may be tied to the nearest road intersection by distance only.

In the case of a formation of a new tract, a tie must be made by bearing and distance to an identifiable corner of the parent tract.

2. The city or district, county, and the state where the property is located;
3. The name of the grantor or grantee of the property, or the name of the person who requested or required the Survey Map or Survey Plat;
4. The date of the Survey Map or Survey Plat;
5. A graphic scale and numeral scale;
6. The name, registration number, address and telephone number of the Land Surveyor; and
7. A certification on the face of the final Survey Map or Survey Plat as to the category of the survey and the ratio or precision of the unadjusted survey, which shall have the following minimum content:

- Certification as to Category I, II, III, or IV;
- Ratio of Precision of the unadjusted survey;
- Statement that the survey was done in compliance with current

Tennessee Minimum Standards of Practice;

- Signature; and
 - Registration number.
- (c) The north arrow shall be shown, and shall be correlated with, the courses or bearings, with the source of reference clearly indicated.
- (d) All property lines shall be defined by horizontal distances and bearings, and shall be plotted to the scale shown in the title block.
- (e) Where a boundary is formed by a curved line, the curve shall be defined with the length and radius of each curve, together with elements necessary to mathematically define each curve in the description. When intersecting boundary lines are non-radial or non-tangential, the chord bearing and distance shall be shown.
- (f) The Land Surveyor shall show the widths or center-lines of easements and rights-of-way which are obvious and apparent to him and also the survey shall be completed using the relevant recorded deeds to the property, but shall show pertinent information, such as easements, joint driveways, etc. as described in Rule 0820-03-.06(7).
- (g) Boundaries formed by water course shall be located and plotted to the scale shown in the Survey Map or Survey Plat title block. Traverse lines and/or offset lines used to close water course boundaries shall be shown plotted to scale and defined by bearing and distance.
- (h) Monumentation requirements:
1. New property monuments shall be composed of material(s) suitable to perpetuate the position and location of the monument. A notation on the Survey Map or Survey Plat shall state whether the monuments were found or set, and in addition, the statement shall indicate the material and size of the monument found or set.
 2. Metal monuments shall be no less than one-half ($\frac{1}{2}$) inch in diameter; concrete monuments shall be no less than four (4) inches in diameter and shall contain ferrous or magnetic material; and both shall be no less than eighteen (18) inches in length unless some impregnable material is encountered.
 3. The type of monument (old or new) shall be indicated on the Survey Map or Survey Plat along with the size and type of material. No monument should be placed if, in the opinion of the Land Surveyor, the existing monument, whether original or not, is found undisturbed and adequate to perpetuate the position and can be reasonably made to conform to the angle point in the boundary. Large or indefinite monuments which cannot be measured to within the positional accuracy requirements contained herein, such as trees, rock piles or fence corners, will be marked with witness monuments as deemed necessary by the Land Surveyor.
 4. When conditions warrant setting a reference for a monument on an offset, the location shall be selected so that the monument reference lies on a line of the survey, or a prolongation of such line.
 5. New metal or concrete monuments placed shall have a cap with the Land Surveyor's registration number or company name stamped upon it. In the case of placement of a concrete marker, the marker shall have a permanent mark for the survey point and shall have the Land Surveyor's registration number or company name attached or stamped upon it.
 6. Survey points that do not divide land ownership, such as point of intersection (P.I.), centerline of water course, etc. may be established with or without

monumentation at the Land Surveyor's discretion.

- (i) In the compilation of a composite Survey Map or Survey Plat, the Land Surveyor shall indicate and cite the source of all lines copied from a previous survey on the Survey Map or Survey Plat, and qualify the Survey Map or Survey Plat as prepared from other sources and does not represent a current survey.
 - (j) The names of adjoining land owners and deed references, if available at the property assessor's office, and/or lots and/or block numbers, and highways, streets, and named waterways shall be shown.
 - (k) The point of beginning in the metes and bounds description prepared by the Land Surveyor shall be shown on the Survey Map or Survey Plat of the survey (except in the case of a subdivision plat).
- (2) Topographic Surveys.
- (a) A Survey Map or Survey Plat shall be a copy print or tracing, and shall be dated and stamped or sealed and signed by the registered Land Surveyor, in compliance with applicable law.
 - (b) A Survey Map or Survey Plat shall have a title and contain the following information:
 - 1. A descriptive location of the property or a vicinity map;
 - 2. The city or district, county, and the state where the property is located;
 - 3. The name of the grantor or grantee of the property, or the name of the person who requested the Survey Map or Survey Plat;
 - 4. The date of the survey or Survey Map or Survey Plat;
 - 5. A graphic scale and a numerical scale; and
 - 6. The name, registration number, and address of the Land Surveyor.
 - (c) A north arrow shall be shown with the source indicated.
 - (d) Property lines, if shown on the topographic map, shall be shown as needed and/or as deemed necessary by the Land Surveyor and shall be plotted to the scale shown in the title.
 - (e) The Land Surveyor shall show the widths of easements and rights-of-way which are obvious and apparent to him.
 - (f) If limits of the topographic survey are formed by water course, then the water course shall be located and plotted to the scale shown in the title.
 - (g) The Land Surveyor shall indicate and cite the source of any lines copied from previous sources.
 - (h) The names of adjacent land owners, deed references, block numbers, highways, streets and named waterways shall be shown if applicable.
 - (i) Topography Surveys shall be referenced to a boundary line or to a point and/or line of reference only as deemed appropriate by the Land Surveyor.
 - (j) Visible, obvious, and apparent surface indications of physical features such as utilities, buildings, water bodies, etc. shall be shown and plotted to the scale shown in the title.

- (k) Elevations shall be shown as spot elevations and/or contours. The contour interval shall be noted and shall meet national mapping accuracies.
 - (l) An on-site project bench mark shall be established with reference to datum, assumed or otherwise, and plotted to the scale shown in the title block.
 - (m) The registered Land Surveyor in responsible charge of the ground control shall sign, stamp or seal the Survey Map or Survey Plat for the ground control portion of the survey.
- (3) Oil and Gas Well Location Surveys.
- (a) Oil and gas well location surveys must be made in compliance with the provisions of T.C.A., Title 60, Chapter 1, and the rules of the Tennessee State Oil and Gas Board (Chapters 1040-01-01 through 1040-08-01).
 - (b) Where surveyed lines or areas must be located or calculated, they must also comply with the accuracy standards set forth in Rule 0820-03-.05 of this chapter for the category in which the survey is located.
 - (c) The Survey Map or Survey Plat shall have a title and contain the same information as required under this Chapter relative to General Property Surveys.
- (4) Geodetic Control Surveys (GCS).
- (a) All Geodetic Control Surveys must be made in accordance with the Federal Geodetic Control Standards (F.G.C.S.). Horizontal and vertical control work must meet or exceed those accuracy specification standards as published by the Federal Geodetic Control Committee, September 1984, in the bulletin titled "Standards and Specification for Geodetic Control Networks" or any subsequently published bulletins modifying such class standards. Copies of said bulletins may be obtained from the United States Department of Commerce.
 - (b) The Survey Map or Survey Plat shall have a title and contain the same information as normally would be required under this Chapter for General Property Surveys.
 - (c) It shall be acceptable practice to incorporate the use of Global Positioning Systems (commonly known as GPS) equipment into any survey. The precision of all measurements made with such equipment must, at a minimum, meet all precision standards required otherwise by applicable state law. When using GPS equipment in the course of a survey, the Land Surveyor shall state on the face of the Survey Plat, or within the report in cases where this is no Survey Plat, the following:
 1. A note stating what portion (or all) of the survey was performed using GPS equipment;
 2. The type of GPS equipment used including manufacturer and model number, and whether single or dual frequency receivers were used;
 3. The type of GPS survey that was performed, such as static, real time kinematics ("RTK"), network adjusted real time kinematics, etc.;
 4. A note that discloses the precision of the GPS work done, either in relative positional accuracy, vector closure, or other mathematical expression chosen by the Land Surveyor; and
 5. The registered Land Surveyor in responsible charge of such GPS survey shall date, stamp or seal and sign the prepared documents in compliance with all applicable law.

(5) Remote Sensing Surveys.

(a) Global Positioning System (GPS) surveys are defined as any survey performed using the GPS three-dimensional (3D) measurement system based on satellite observation signals. GPS surveys include, but are not limited to: General Property Surveys; Topography Surveys; Oil and Gas Surveys; Local Control Surveys; Network Surveys; Construction Surveys; Geodetic Control Surveys; Aerial Photography Control Surveys; Geographic Information Systems and/or Land Information Systems Data Collection Surveys and any other application listed with the Board's specifications shall be performed by a Land Surveyor licensed in Tennessee. Minimum Standards from Remote Sensing Surveys are as follows:

1. Static GPS Surveys – The Land Surveyor must use the current GPS standards as set by the Board.
2. Real Time Kinematic (RTK) Surveys – The Land Surveyor must use the current GPS standards as set by the Board.

(6) Hydrographic Surveys.

(a) Hydrographic surveying is the term applied to the process used in surveying any body of water. In the case of lakes and rivers, this may include the determination of shore lines, soundings, characteristics of the bottom, location of buoys, etc. The survey of a river may also include the determination of the velocity and characteristics of the flow. In its broad sense the term may be applied to the survey of drainage areas and proposed locations for reservoirs for the storage of water.

Hydrographic maps shall be prepared as follows:

1. A Survey Map or Survey Plat shall be a copy, print or tracing, and shall be dated and stamped or sealed and signed by the registered Land Surveyor, in compliance with all applicable law.
2. The Survey Map or Survey Plat shall have a title and contain the same information as normally would be required under this Chapter for Topographic Surveys.
3. In addition to the above required data, the Survey Map or Survey Plat shall show the shore line, designated with the heaviest line on the Survey Map or Survey Plat, and the low-water line designated with the next heaviest line on the Survey Map or Survey Plat.
4. Topography to be shown outside the shore line shall be determined by the use for which the Survey Map or Survey Plat is intended, and requested in writing by the client. Topography of the submerged portions shall be shown with a dashed line.
5. Hydrographic charts prepared for purposes of navigation shall include sufficient topography to show the location of any landmarks which may be of use to the navigator, such as conspicuous objects on the shore.
6. Sufficient survey control points shall be shown on the Survey Map or Survey Plat in order for the survey to be tied to other maps or adjacent surveys.
7. Where soundings are represented on the Survey Map or Survey Plat, they shall be shown in feet and tenths in black, the number representing the depth of the water below the datum. Where the datum is mean low water, these soundings which are below shall be shown in black, and those that are above the datum

shall be shown in another color or method of line designation.

8. In preparation of the navigation chart of a small river the soundings shall be recorded in feet and tenths, and contours drawn every three (3) or six (6) feet. The direction of the current shall be shown with an arrow. Rapids or waterfalls shall be shown on the Survey Map or Survey Plat when encountered in the survey.

(b) Hydrographic surveys must conform to the above minimum standards if no other more stringent standards or specifications are provided by the client, or other standards are required by the jurisdiction of the U.S. Corps of Engineers, or other legal authority, in the area where the survey project is located.

Authority: T.C.A. §§ 62-18-105(d) and 62-18-106(c).

Rule 0820-03-.08 Marking of Property Boundaries is amended by deleting the text of the rule in its entirety and substituting instead the following, so that, as amended, Rule 0820-03-.08 shall read:

Rule 0820-03-.08 Marking of Property Boundaries

The marking of lines between corners is not a requirement of a General Property Survey; however, if needed, contracted or requested, the marking shall be the responsibility of the registered Land Surveyor who performs the survey.

Authority: T.C.A. §§ 62-18-105(d) and 62-18-106(c).

Rule 0820-03-.09 Land Descriptions is amended by deleting the text of the rule in its entirety and substituting instead the following, so that, as amended, Rule 0820-03-.09 shall read:

Rule 0820-03-.09 Land Descriptions

- (1) Terminology. The following terminology shall be used in land descriptions:
 - (a) "Beginning" shall mean a well-defined, readily located and permanent point or monument which is both the starting point and final point for a metes and bounds description.
 - (b) "Boundary line" shall mean an adequately dimensioned and described line (which may be straight, irregular, circular or spiral) bounding an area or dividing separate properties.
 - (c) "Conveyance" shall mean the act of transferring title or rights in a property.
 - (d) "Coordinate description" shall mean a description of lands in which the angle points or other points in the boundary are each referred to grid coordinates on the Tennessee or similar coordinate system.
 - (e) "Description by lot number" shall mean a description which identifies a lot or tract of land by reference to book and page numbers of a register in which a Survey Map or Survey Plat is recorded with other pertinent information.
 - (f) "Grantor" shall mean a person or party conveying property or rights therein to a grantee.
 - (g) "Grantee" shall mean a person or party receiving title to or rights in property.
 - (h) "Grid coordinates" shall mean distances measured at right angles to each other in a rectangular system having two base lines at right angles to each other.
 - (i) "Metes and bounds description" shall mean a description in which the boundary lines

starting from a given point are described by listing the direction, distance and description of corners of the lines forming the boundary.

- (j) "Title" shall mean a written claim or right which constitutes a just and legal cause of exclusive possession.
- (2) Preparation. The Land Surveyor may prepare the land description in a land survey, but shall not engage in the writing of a deed. In the preparation of a land description, the Land Surveyor shall include on the document his full name, his registration number, and the date of the survey from which the information was procured (or the book and page numbers of the recorded Survey Map, Survey Plat or deed, if used in preparing the description).
- (3) Content.
 - (a) In the description of a lot located in a subdivision by number, the following information shall appear: the name of the subdivision; the Survey Map or Survey Plat referred to; the Land Surveyor's name; the general location of the property and the book and page number of the register in which the lot is recorded.
 - (b) A metes and bounds description shall include the general location of the tract or lot with sufficient accuracy so that the tract can be readily located on the ground. The beginning point must be so selected that it can readily and accurately be located from some previously established monument, corner of record, etc., and can be readily described. The description shall include the names of adjoining property owners and/or a reference to any adjoining plat of record. The description shall include the monument or marker if found or placed and shall be described by size, material, and whether found or placed. A metes and bounds description shall describe a course around a tract or lot in a clockwise direction. All lines adjacent to street, roads or other rights-of-way shall be referenced to same; and all pertinent distances and curve data shall be listed. Chord bearing and distance shall be included in all curb descriptions. All corners falling in roads or other inaccessible locations shall be referenced to nearby and permanent points.

Authority: T.C.A. §§ 62-18-105(d) and 62-18-106(c).

Rule 0820-03-.10 Instruments and Apparatus is amended by deleting the text of the rule in its entirety and substituting instead the following, so that, as amended, Rule 0820-03-.10 shall read:

Rule 0820-03-.10 Instruments and Apparatus

Land Surveying in Tennessee shall be conducted in the field with a properly adjusted instrument of measurement which is appropriate to the closeness of the work being performed. The instrument shall be calibrated at regular intervals to maintain its optimum accuracy.

Authority: T.C.A. §§ 62-18-105(d) and 62-18-106(c).

* If a roll-call vote was necessary, the vote by the Agency on these rulemaking hearing rules was as follows:

Board Member	Aye	No	Abstain	Absent	Signature (if required)
Jackie Dillehay, <i>Chairman</i>	X				
Timothy Lingerfelt, <i>Vice-Chairman</i>	X				
David Cagle, <i>Board Member</i>	X				
Sue Braly, <i>Public Member</i>	X				

I certify that this is an accurate and complete copy of rulemaking hearing rules, lawfully promulgated and adopted by the Tennessee State Board of Examiners for Land Surveyors on 04/29/10, and is in compliance with the provisions of TCA 4-5-222.

I further certify the following:

Notice of Rulemaking Hearing filed with the Department of State on: 02/08/10

Rulemaking Hearing(s) Conducted on: (add more dates). 04/29/10

Date: 7.20.2010

Signature: *[Handwritten Signature]*

Name of Officer: ROBERT E. HERNON

Title of Officer: ATTORNEY



My Commission Expires September 25, 2011

Subscribed and sworn to before me on: 7/20/10

Notary Public Signature: *Nicole Center*

My commission expires on: 9/25/10

All rulemaking hearing rules provided for herein have been examined by the Attorney General and Reporter of the State of Tennessee and are approved as to legality pursuant to the provisions of the Administrative Procedures Act, Tennessee Code Annotated, Title 4, Chapter 5.

[Handwritten Signature]
 Robert E. Cooper, Jr.
 Attorney General and Reporter
12-8-10
 Date

Department of State Use Only

Filed with the Department of State on: _____

12/17/10

Effective on: _____

3/17/11

Tre Hargett

Tre Hargett
Secretary of State

SECRETARY OF STATE
STATE CAPITOL
2010 DEC 17 PM 3:00

RECEIVED
13

Public Hearing Comments

One copy of a document containing responses to comments made at the public hearing must accompany the filing pursuant to T.C.A. §4-5-222. Agencies shall include only their responses to public hearing comments, which can be summarized. No letters of inquiry from parties questioning the rule will be accepted. When no comments are received at the public hearing, the agency need only draft a memorandum stating such and include it with the Rulemaking Hearing Rule filing. Minutes of the meeting will not be accepted. Transcripts are not acceptable.

Regulatory Flexibility Addendum

Pursuant to T.C.A. § 4-5-401 through 4-5-404, prior to initiating the rule making process as described in T.C.A. § 4-5-202(a)(3) and T.C.A. § 4-5-202(a), all agencies shall conduct a review of whether a proposed rule or rule affects small businesses.

(If applicable, insert Regulatory Flexibility Addendum here)

1. Types of small businesses directly affected:

All small professional land surveying firms doing business within the State of Tennessee may be affected by these rules.

2. Projected reporting, record-keeping and other administrative costs:

There is no foreseeable alteration in small business record-keeping that will result from the promulgation of these rules.

3. Probable effect on small businesses;

These proposed rules may directly affect small businesses when they participate in commerce for which adherence to current standards of practice is required.

4. Less burdensome, intrusive or costly alternative methods:

The Board knows of no alternative means available to accomplish these objectives.

5. Comparison with federal and state counterparts;

There are no federal counterparts to the issues addressed by these rules; additionally, the rules impact procedures within a state agency rather than impose new or altered regulation upon private entities.

6. Effect of possible exemption of small businesses:

There will be no exemptions created by these rules.

Additional Information Required by Joint Government Operations Committee

All agencies, upon filing a rule, must also submit the following pursuant to TCA 4-5-226(i)(1).

- (A)** A brief summary of the rule and a description of all relevant changes in previous regulations effectuated by such rule;

Rule 0820-03-.02 General is amended by updating requirements for the use of a registered land surveyor's stamp and upon which documents it should appear; this rule also clarifies ownership rights in all materials generated by the registered land surveyor.

Rule 0820-03-.03 Definitions is amended by updating the descriptions of various forms and/or categories of land surveys.

Rule 0820-03-.04 Nomenclature is amended by removing the index of symbols used on land survey documents in order to allow for a more standardized application established through national sources.

Rule 0820-03-.05 Accuracy of Surveys is amended by adding a reference to a new category for remote sensing surveys (a new category IV) and to update accuracy requirements differential leveling surveys.

Rule 0820-03-.06 Maps and Mapping is amended by adding to and updating the requirements for producing maps by including new technologies and strengthening current methods.

Rule 0820-03-.07 Survey Types and Requirements is amended by updating methods for the production of maps and plats, updating monumentation procedures and adding geodetic control surveys to acceptable practice for the production of land survey documents.

Rule 0820-03-.08 Marking of Property Boundaries is amended by removing the requirement to mark lines between corners unless needed or requested by another party.

Rule 0820-03-.09 Land Descriptions is amended by making some housekeeping changes to the language of the rule in order to provide clarity.

Rule 0820-03-.10 Instruments and Apparatus is amended by converting the rule to a statement that all equipment used by a land surveyor in the course of producing documents must be properly maintained and calibrated.

- (B)** A citation to and brief description of any federal law or regulation or any state law or regulation mandating promulgation of such rule or establishing guidelines relevant thereto;

The proposed amendments to the rules of the Tennessee State Board of Examiners for Land Surveyors are made pursuant to Tenn. Code Ann. §§ 62-18-105(d) and 62-18-106(c).

- (C)** Identification of persons, organizations, corporations or governmental entities most directly affected by this rule, and whether those persons, organizations, corporations or governmental entities urge adoption or rejection of this rule;

These amendments to the rules of the Tennessee State Board of Examiners for Land Surveyors will affect holders in good standing of registration certificates in land surveying and also applicants for registration as land surveyors. There were minor written and oral comments made in connection with this rulemaking hearing that applied to the application of terms of the profession in order to provide greater clarity in the rules rather than conduct.

- (D)** Identification of any opinions of the attorney general and reporter or any judicial ruling that directly relates to the rule;

I am unaware of any opinion of the attorney general or any judicial ruling which directly relates to these rules.

- (E) An estimate of the probable increase or decrease in state and local government revenues and expenditures, if any, resulting from the promulgation of this rule, and assumptions and reasoning upon which the estimate is based. An agency shall not state that the fiscal impact is minimal if the fiscal impact is more than two percent (2%) of the agency's annual budget or five hundred thousand dollars (\$500,000), whichever is less;

These rules are expected to have no fiscal impact on the Department.

- (F) Identification of the appropriate agency representative or representatives, possessing substantial knowledge and understanding of the rule;

Donna Moulder, Administrative Director of the Tennessee State Board of Examiners for Land Surveyors, and I as attorney for the agency have substantial knowledge and understanding of these rules.

- (G) Identification of the appropriate agency representative or representatives who will explain the rule at a scheduled meeting of the committees;

Donna Moulder or I will explain the rules at any scheduled meeting of the Government Operations Committee.

- (H) Office address, telephone number, and email address of the agency representative or representatives who will explain the rule at a scheduled meeting of the committees; and

I may be reached at the Department of Commerce and Insurance, Office of Legal Counsel, 500 James Robertson Parkway, Davy Crockett Tower, Nashville, Tennessee 37243, (615) 741-3072.

- (I) Any additional information relevant to the rule proposed for continuation that the committee requests.

If you require additional information, please contact me.



**STATE OF TENNESSEE
DEPARTMENT OF COMMERCE AND INSURANCE
OFFICE OF LEGAL COUNSEL
500 JAMES ROBERTSON PARKWAY
DAVY CROCKETT TOWER
NASHVILLE, TENNESSEE 37243
(615) 741-3072 FAX: (615) 532-4750**

December 14, 2010

Mr. Fred Standbrook, Legislative Attorney
Government Operations Committee Staff
Office of Legal Services
War Memorial Building
Nashville, Tennessee 37219

***RE: Tennessee State Board of Examiners for Land Surveyors
Amendments to Rules, Chapter 0820-01***

Dear Mr. Standbrook:

Pursuant to Tenn. Code Ann. § 4-5-226(i), please find enclosed a copy of the proposed amendments to rules promulgated by the Tennessee State Board of Examiners for Land Surveyors.

1. The rules of the Tennessee State Board of Examiners for Land Surveyors are amended to reflect the following:

Rule 0820-03-.02 General is amended by updating requirements for the use of a registered land surveyor's stamp and upon which documents it should appear; this rule also clarifies ownership rights in all materials generated by the registered land surveyor.

Rule 0820-03-.03 Definitions is amended by updating the descriptions of various forms and/or categories of land surveys.

Rule 0820-03-.04 Nomenclature is amended by removing the index of symbols used on land survey documents in order to allow for a more standardized application established through national sources.

Rule 0820-03-.05 Accuracy of Surveys is amended by adding a reference to a new category for remote sensing surveys (a new category IV) and to update accuracy requirements differential leveling surveys.

Rule 0820-03-.06 Maps and Mapping is amended by adding to and updating the requirements for producing maps by including new technologies and strengthening current methods.

Rule 0820-03-.07 Survey Types and Requirements is amended by updating methods for the production of maps and plats, updating monumentation procedures and adding geodetic control surveys to acceptable practice for the production of land survey documents.

Rule 0820-03-.08 Marking of Property Boundaries is amended by removing the requirement to mark lines between corners unless needed or requested by another party.

Rule 0820-03-.09 Land Descriptions is amended by making some housekeeping changes to the language of the rule in order to provide clarity.

Rule 0820-03-.10 Instruments and Apparatus is amended by converting the rule to a statement that all equipment used by a land surveyor in the course of producing documents must be properly maintained and calibrated.

2. The proposed amendments to the rules of the Tennessee State Board of Examiners for Land Surveyors are made pursuant to Tenn. Code Ann. §§ 62-18-105(d) and 62-18-106(c).
3. These amendments to the rules of the Tennessee State Board of Examiners for Land Surveyors will affect holders in good standing of registration certificates in land surveying and also applicants for registration as land surveyors. There were minor written and oral comments made in connection with this rulemaking hearing that applied to the application of terms of the profession in order to provide greater clarity in the rules rather than conduct.
4. I am unaware of any opinion of the attorney general or any judicial ruling which directly relates to these rules.
5. These rules are expected to have no fiscal impact on the Department.
6. Donna Moulder, Administrative Director of the Tennessee State Board of Examiners for Land Surveyors, and I as attorney for the agency have substantial knowledge and understanding of these rules.

December 14, 2010

Page 3

7. Donna Moulder or I will explain the rules at any scheduled meeting of the Government Operations Committee.
8. I may be reached at the Department of Commerce and Insurance, Office of Legal Counsel, 500 James Robertson Parkway, Davy Crockett Tower, Nashville, Tennessee 37243, (615) 741-3072.

If you require additional information, please contact me.

Sincerely,



Robert E. Herndon
Attorney for the Board

Enclosure

cc: Donna Moulder, Administrative Director
Tennessee State Board of Examiners for Land Surveyors

Richard Arnold, Director
Publications Division, Office of Secretary of State



**STATE OF TENNESSEE
DEPARTMENT OF COMMERCE AND INSURANCE
OFFICE OF LEGAL COUNSEL
500 JAMES ROBERTSON PARKWAY
DAVY CROCKETT TOWER
NASHVILLE, TENNESSEE 37243
(615) 741-3072 FAX: (615) 532-4750**

M E M O R A N D U M

TO: Secretary of State's Office, Attorney General's Office, House and Senate Government Operations Committee

**FROM: Robert E. Herndon
Attorney for the Board**

DATE: December 14, 2010

**SUBJECT: Regulatory Flexibility Act
Economic Impact Statement
Chapter 0820-3 [STANDARDS OF PRACTICE]
Tennessee Board of Examiners for Land Surveyors**

Public Chapter 464, effective June 21, 2007 requires that prior to initiating the rulemaking process pursuant to Tenn. Code Ann. §§4-5-202(a)(3) and 4-5-202(a), all boards and commissions and presumably other regulating state agencies shall review all proposed rules and the affect that the proposed rule has on small businesses. The public chapter requires that as a part of its analysis, each agency shall prepare an economic impact statement as an addendum to each rule that is deemed to affect small businesses, which shall be published in the Tennessee Administrative Register, filed with the Secretary of State's Office, and made available to all interested parties, including the Secretary of State, Attorney General, and the House and Senate Government Operations Committees.

This economic impact statement shall include the following: the type or types of small businesses and an identification and estimate of the number of small businesses subject to the proposed rule, including the type of professional skills necessary for preparation of the report or record; the projected reporting, recordkeeping and other administrative costs required for compliance with the proposed rule, including the type of professional skills necessary for preparation of the report or record; a statement of the probable effect on impacted small businesses and consumers; a description of any less burdensome, less intrusive or less costly alternative methods of achieving the purpose and/or objectives of the proposed rule that may exist, and to what extent, such

alternative means might be less burdensome to small businesses; a comparison of the proposed rule with any federal or state counterparts; and analysis of the effect of the possible exemption of small businesses for all of any part of the requirements contained in the proposed rule.

Description of Proposed Rule:

The Tennessee Board of Examiners for Land Surveyors ("Board") intends to convene a rulemaking hearing on April 7, 2010 in order to consider amending current Board rules governing the standards of practice within the profession of land surveying. The rules contained in the Notice of Rulemaking would replace the current chapter, which is outdated in many respects, with the proposed updated standards. At its January 13, 2010 meeting, the Board unanimously adopted the following:

Economic Impact Statement:

1. Types of small businesses directly affected:

All small professional land surveying firms doing business within the State of Tennessee may be affected by these rules.

2. Projected reporting, recordkeeping, and other administrative costs:

There is no foreseeable alteration in small business record-keeping that will result from the promulgation of these rules.

3. Probable effect on small businesses:

These proposed rules may directly affect small businesses when they participate in commerce for which adherence to current standards of practice is required.

4. Less burdensome, intrusive, or costly alternative methods:

The Board knows of no other alternative method to achieve the goals exhibited by these rules.

5. Comparison with federal and state counterparts:

There are no federal counterparts to the issues addressed by these rules; additionally, the rules impact procedures within a state agency rather than impose new or altered regulation upon private entities.

6. Effect of possible exemption of small businesses:

There will be no exemptions created by these rules.

ADDENDUM

Effective July 1, 2010, Public Chapter 1070 (a new section specified as Tenn. Code Ann. § 4-5-228) requires that "on any rule and regulation proposed to be promulgated, the proposing agency shall state in a simply declarative sentence, without additional comments on the merits or the policy of the rule or regulation, whether the rule or regulation may have a projected financial impact on local governments. The statement shall describe the financial impact in terms of increase in expenditures or decrease in revenues. If the statement says that the rule or regulation has a financial impact on local governments, the general assembly may request representatives of any affected local government to testify concerning its impact," and that "the proposing agency shall submit a copy of the statement provided in subsection (a) to the secretary of state."

Projected financial impact on local governments:

The Board of Examiners for Land Surveyors licenses only individuals and foresees no financial impact on any local governments.

END OF DOCUMENT



**STATE OF TENNESSEE
DEPARTMENT OF COMMERCE AND INSURANCE
OFFICE OF LEGAL COUNSEL
500 JAMES ROBERTSON PARKWAY
DAVY CROCKETT TOWER
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TELEPHONE (615) 741-3072 FACSIMILE (615) 532-4750**

November 16, 2010

VIA UNITED STATES MAIL

Mr. James F. Boyer, RLS #734
4501 Idumea Road
Corryton, Tennessee 37721

***RE: Rulemaking Hearing re: Chapter 0803—3 (Standard of Practice)
Tennessee State Board of Examiners for Land Surveyors***

Dear Mr. Boyer:

I serve as attorney for the Tennessee State Board of Examiners for Land Surveyors ("Board"). This letter addresses your oral comments made at the Board's public rulemaking hearing held on April 29, 2010. The purpose of the rulemaking hearing was to allow the Board to hear public comments on its intention to revise its administrative rule chapter governing the standard of practice relative to land surveying, which has not been update in some time. After due consideration of all available information, the Board has decided to adopt the chapter with amendments based on public comment, feeling that the amendments best serve to protect the health, safety and welfare of Tennessee's citizens when the chapter becomes effective. Your input was certainly considered as the Board made its final determination; the amendments incorporated into the final form of the chapter are based primarily on your comments. Of particular usefulness were your statements made in your capacity as president of the Tennessee Association of Professional Surveyors. The Board certainly appreciates your efforts to represent the profession as a whole and values your contributions for the revision of this chapter.

Sincerely,

Robert E. Herndon
Attorney for the Board



STATE OF TENNESSEE
DEPARTMENT OF COMMERCE AND INSURANCE
OFFICE OF LEGAL COUNSEL
500 JAMES ROBERTSON PARKWAY
DAVY CROCKETT TOWER
NASHVILLE, TENNESSEE 37243
TELEPHONE (615) 741-3072 FACSIMILE (615) 532-4750

November 16, 2010

VIA UNITED STATES MAIL

Mr. Paul Henson, RLS
P.O. Box 367
Selmer, Tennessee 38375

***RE: Rulemaking Hearing re: Chapter 0803—3 (Standard of Practice)
Tennessee State Board of Examiners for Land Surveyors***

Dear Mr. Henson:

I serve as attorney for the Tennessee State Board of Examiners for Land Surveyors ("Board"). This letter addresses your comments submitted via email relative to the Board's public rulemaking hearing held on April 29, 2010. The purpose of the rulemaking hearing was to allow the Board to hear public comments on its intention to revise its administrative rule chapter governing the standards of practice for the performance of land surveying services, which has not been update in some time. After due consideration of all available information, the Board has decided to adopt the chapter with amendments based on public comment, feeling that the amendments best serve to protect the health, safety and welfare of Tennessee's citizens when the chapter becomes effective. Your input was certainly considered as the Board made its final determination.

Specifically, you made a written comment to proposed amended rule 0820—03—.07(1)(h)(3), which discusses the relationship between monument witnesses and corners. To address this, the Board has decided to change the term "corner" to "monument."

Secondly, you commented about amended rule 0820—03—.07(5) which adds GPS requirements. You felt that this restriction was unnecessary. However, in the interest of providing the most informative survey possible, the Board voted to leave this amendment as written.

The Board certainly appreciates your participation in the profession and values your contributions for the revision of this chapter.

Sincerely,

A handwritten signature in black ink, appearing to read "R. Herndon", written in a cursive style.

Robert E. Herndon
Attorney for the Board



**STATE OF TENNESSEE
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November 16, 2010

VIA UNITED STATES MAIL

Mr. Nicholas Phipps, RLS
1218 Gunbarrel Road
Chattanooga, Tennessee 37421

***RE: Rulemaking Hearing re: Chapter 0803—3 (Standard of Practice)
Tennessee State Board of Examiners for Land Surveyors***

Dear Mr. Phipps:

I serve as attorney for the Tennessee State Board of Examiners for Land Surveyors ("Board"). This letter addresses your comments submitted via email relative to the Board's public rulemaking hearing held on April 29, 2010. The purpose of the rulemaking hearing was to allow the Board to hear public comments on its intention to revise its administrative rule chapter governing the standards of practice for the performance of land surveying services, which has not been update in some time. After due consideration of all available information, the Board has decided to adopt the chapter with amendments based on public comment, feeling that the amendments best serve to protect the health, safety and welfare of Tennessee's citizens when the chapter becomes effective. Your input was certainly considered as the Board made its final determination.

Specifically, you made a written comment to proposed amended rule 0820—03—.06(8), which discusses easements evidenced by record documents. The proposed language was taken largely from the current ALTA/ACSM standards, and was discussed quite a bit during the review. There was some alternative language considered the use of data received from an appropriate utility jurisdiction. In many cases, this information will not be available, so the Board voted to leave the amended rule as written due to its more in-depth descriptions as opposed to the alternative language.

Secondly, you commented about amended rule 0820—03—.06(9) which you felt needed an additional statement addressing the acceptable means of calculating area for non-accessible regions. On your suggestion, the Board voted to add "non-accessible areas" to this rule.

Thirdly, you asked for clarification as to why the proposed amended rule 0820—03—.07(b) requires a bearing tie as well as a distance tie to the nearest intersection. The Board declares a bearing tie necessary to ensure accuracy in all situations, with the possible exception of road intersections. In a close situation, bearing would be important.

The Board certainly appreciates your participation in the profession and values your contributions for the revision of this chapter.

Sincerely,

A handwritten signature in black ink, appearing to read "R. E. Herndon", written in a cursive style.

Robert E. Herndon
Attorney for the Board



STATE OF TENNESSEE
DEPARTMENT OF COMMERCE AND INSURANCE
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November 16, 2010

VIA UNITED STATES MAIL

Mr. Lincoln B. Northcutt, RLS #1808
117 Hickory Drive
Shelbyville, Tennessee 37160

***RE: Rulemaking Hearing re: Chapter 0803—3 (Standard of Practice)
Tennessee State Board of Examiners for Land Surveyors***

Dear Mr. Northcutt:

I serve as attorney for the Tennessee State Board of Examiners for Land Surveyors ("Board"). This letter addresses your oral comments made at the Board's public rulemaking hearing held on April 29, 2010. The purpose of the rulemaking hearing was to allow the Board to hear public comments on its intention to revise its administrative rule chapter governing the standard of practice relative to land surveying, which has not been update in some time. After due consideration of all available information, the Board has decided to adopt the chapter with amendments based on public comment, feeling that the amendments best serve to protect the health, safety and welfare of Tennessee's citizens when the chapter becomes effective. Your input was certainly considered as the Board made its final determination. Of particular usefulness were your statements concerning the enforcement of licensing laws relative to global positioning systems once their use is incorporated into regulated activity. The Board certainly appreciates your efforts to represent the profession as a whole and values your contributions for the revision of this chapter.

Sincerely,

Robert E. Herndon
Attorney for the Board



STATE OF TENNESSEE
DEPARTMENT OF COMMERCE AND INSURANCE
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500 JAMES ROBERTSON PARKWAY
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November 16, 2010

VIA UNITED STATES MAIL

Mr. Galyon Northcutt, RLS #1529
2607 Forestview Drive
Antioch, Tennessee 37013

***RE: Rulemaking Hearing re: Chapter 0803—3 (Standard of Practice)
Tennessee State Board of Examiners for Land Surveyors***

Dear Mr. Northcutt:

I serve as attorney for the Tennessee State Board of Examiners for Land Surveyors ("Board"). This letter addresses your oral comments made at the Board's public rulemaking hearing held on April 29, 2010. The purpose of the rulemaking hearing was to allow the Board to hear public comments on its intention to revise its administrative rule chapter governing the standard of practice relative to land surveying, which has not been update in some time. After due consideration of all available information, the Board has decided to adopt the chapter with amendments based on public comment, feeling that the amendments best serve to protect the health, safety and welfare of Tennessee's citizens when the chapter becomes effective. Your input was certainly considered as the Board made its final determination. Of particular usefulness were your statements concerning the enforcement of licensing laws relative to remote sensing surveying once their use is incorporated into regulated activity. The Board certainly appreciates your efforts to represent the profession as a whole and values your contributions for the revision of this chapter.

Sincerely,

Robert E. Herndon
Attorney for the Board

Department of State
Division of Publications
 312 Rosa L. Parks Avenue, 8th Floor Snodgrass/TN Tower
 Nashville, TN 37243
 Phone: 615-741-2650
 Fax: 615-741-5133
 Email: register.information@tn.gov

"REDLINE"
 VERSION

Department of State Use Only
 Rule Number: _____
 Rule ID(s): _____
 File Date: _____
 Effective Date: _____

Rulemaking Hearing Rule(s) Filing Form

Rulemaking Hearing Rules are rules filed after and as a result of a rulemaking hearing. TCA Section 4-5-205

Agency/Board/Commission:	Tennessee Board of Examiners for Land Surveyors
Division:	Department of Commerce and Insurance, Division of Regulatory Boards
Contact Person:	Donna Moulder, Administrative Director
Address:	Tennessee State Board of Examiners for Land Surveyors 500 James Robertson Parkway Nashville, Tennessee
Zip:	37243
Phone:	(615) 741-3611
Email:	Donna.Moulder@tn.gov

Revision Type (check all that apply):

- Amendment
- New
- Repeal

Rule(s) Revised (ALL chapters and rules contained in filing must be listed here. If needed, copy and paste additional tables to accommodate multiple chapters. Please enter only ONE Rule Number/Rule Title per row)

Chapter Number	Chapter Title
0820-03	Standards of Practice
Rule Number	Rule Title
0820-03-.02	General
0820-03-.03	Definitions
0820-03-.04	Nomenclature
0820-03-.05	Accuracy of Surveys
0820-03-.06	Maps and Mapping
0820-03-.07	Survey Types and Requirements
0820-03-.08	Marking of Property Boundaries
0820-03-.09	Land Descriptions
0820-03-.10	Instruments and Apparatus

Chapter 0820-03
Standards of Practice

Amendments

Rule 0820-03-.02 General is amended by deleting the text of the rule in its entirety and substituting instead the following so that, as amended, Rule 0820-03-.02 shall read:

Rule 0820-03-.02 General

- (1) The proper execution of land surveying and mapping procedures and all other details of a land survey shall be the direct responsibility of the registered ~~land surveyor~~ Land Surveyor whose stamp or seal and/or signature appear on the map, plat or other newly original survey documents. The fact that a map, plat or other newly original survey document(s) is accepted by a Registrar of Deeds for recordation in no way relieves such ~~land surveyor~~ Land Surveyor of this responsibility.
- (2) Authorship of the original map(s) is ~~Original maps are the intellectual~~ property of the ~~land surveyor~~ Land Surveyor, unless otherwise specified by written contract; therefore it should be professionally and accurately prepared as a permanent record. After reproducible prints or copies have been made for recordation or other purposes, the map should be carefully preserved with the land surveyor's original field notes, calculations, work sheets, data, and other project documents for the statutory period as defined in T.C.A. § 28-3-114(a).
- (3) The ~~land surveyor~~ Land Surveyor may agree with any client to perform a more accurate survey than required by this Chapter.
- ~~(4) Samples of typical maps which represent acceptable practice in various aspects of land surveying may be obtained from the Board upon request.~~

Authority: T.C.A. §§ 62-18-105(d) and 62-18-106(c).

Rule 0820-03-.03 Definitions is amended by deleting the text of the rule in its entirety and substituting instead the following so that, as amended, Rule 0820-03-.03 shall read:

Rule 0820-03-.03 Definitions

~~For purposes of this Chapter:~~

- (1) "~~land~~ Land description" means a detailed statement of appropriate information necessary completely to locate, relocate, or define the boundaries of a certain area or tract of land.
- (2) "~~leveling survey~~ Leveling Survey" means a survey involving the control of levels for land areas where a common ~~datum~~ Datum is necessary.
- (3) "~~plat Survey Plat or Survey Map~~" means an accurate graphical representation of a finite piece of surveyed land property, including pertinent and important data and information pertaining ~~thereto~~ to the surveyed land.
- (4) "~~suburban land survey~~ Suburban Land Survey" means a survey of land which is located within the limits of a city or town.

Authority: T.C.A. §§ 62-18-105(d) and 62-18-106(c).

Rule 0820-03-.04 Nomenclature is amended by deleting the text of the rule in its entirety and substituting instead the following, so that, as amended, Rule 0820-03-.04 shall read:

Unless necessary because of space or other limitations, abbreviations and symbols should not be used in land surveying work. However, when necessary, the following abbreviations and symbols should be employed:

Ac	Ares	DH	Drill Hole
Ang	Angle	or 1	Delta Angle of Degl. Angle
Ave	Avenue		At P.I. or Central Angle
Az	Azimuth	DMD	Double Meridian Distance
BM	Benchmark	E	East
CB	Catch Basin	EC	Error of Closure
CC	Calculated Courses	EI	Elevations
CF	Curb Face	EP	Edge of Pavement
CH	Chord	Fd	Found
CL	Center Line	Gut	Gutter
CM(N)	Concrete Monument (New)	HWY	Highway
CM(O)	Concrete Monument (Old)	IP (N)	Iron Pipe, New
Cos	Cosine	IP (O)	Iron Pipe, Old
D	Degree of Curve	IR (N)	Iron Rod, New
DB	Deed Book	IR (O)	Iron Rod, Old
Defl Ang	Deflection Angle	L	Length of Curve
Dep	Departure	Lat	Latitude
LC	Long Chord	R	Radius
Mag	Magnetic North	RP	Reference Point
MC	Magnetic Course	RR	Railroad
MH	Manhole	RCP	Reinforced Concrete Pipe
Mi	Mile	Rwy	Railway
MK	Marker	R/W	Right of Way
Mon	Monument	S	South
N	North	Sin	Sine
ND	Nail & Disc	Sp	Spike
NGS	National Geodetic Survey	Sq	Square
P	Page	St	Street
PB	Plat Book	Sta	Station
PC	Point of Curvature	Stk	Stake
Per	Perimeter	T	Tangent of Curve
PK	PK Nail	Tan	Tangent
POC	Point of Curve	TK	Tack
OPT	Point of Tangent	Tr	Track
PRC	Point of Reverse Curvature	Tra	Traverse
PT	Point of Tangency	Vert	Vertical
Pt	Point	W	West
Pvmt	Pavement	Wd	Wood

Metric

A	Area	M	Meter
CM	Centimeter	Mil	Millimeter
Hec	Hectare	Sm	Square Meter
Kilo	Kilometer		

Note: When employing abbreviations and symbols, a land surveyor should attempt to utilize those which have become customary in the land surveying practice within the particular geographic region in which the surveyed property is located.

Reserved.

Authority: T.C.A. §§ 62-18-105(d) and 62-18-106(c).

Rule 0820-03-.05 Accuracy of Surveys is amended by deleting the text of the rule in its entirety and substituting instead the following, so that, as amended, Rule 0820-03-.05 shall read:

Rule 0820-3-.05 Accuracy of Surveys.

Surveys for categories I, II, and III as defined below must meet the minimum accuracy requirements provided above for the category where the survey is located. The category (I, II, or

~~III, as defined above~~) must be determined by the ~~surveyor~~ Land Surveyor to the best of his knowledge and belief at the time of the survey. Nothing in this rule shall preclude a ~~surveyor~~ Land Surveyor from using a greater degree of accuracy than that required as a minimum for any category provided ~~above~~ below.

- (1) Urban and Subdivision Property Surveys (Category I). For Category I surveys in Tennessee, the angular closure shall not exceed fifteen (15) seconds times the square root of the number of angles turned. The linear error of closure shall not exceed 1 foot per 10,000 feet of perimeter of the lot of land (1:10,000). When very small lots of one (1) acre or less are encountered, the allowable error shall not exceed one tenth (1/10) of a foot of positional accuracy at any corner.
- (2) Suburban and Subdivision Property Surveys (Category II). For Category II surveys in Tennessee, the angular error of closure shall not exceed twenty-five (25) seconds times the square root of the number of angles turned. The linear error of closure shall not exceed 1 foot per 7,500 feet of perimeter of the lot of land (1:7,500). When very small lots of one (1) acre or less are encountered, the allowable error shall not exceed one tenth (1/10) of a foot of positional accuracy at any corner.
- (3) All Other Land Property Surveys (Category III). For Category III surveys in Tennessee, the angular error of closure shall not exceed thirty (30) seconds times the square root of the number of angles turned. The linear error of closure shall not exceed 1 foot per 5,000 feet of perimeter of the lot of land (1:5,000). When very small lots of one (1) acre or less are encountered, the allowable error shall not exceed one tenth (1/10) of a foot of positional accuracy at any corner.
- ~~(4) Remote Sensing Surveys (Category IV). For Category IV surveys in Tennessee, the Land Surveyor is to use the current standards and applications set by Rule 0820-03-.07(5) of this Chapter.~~

~~(4) (5) Differential Leveling Surveys.~~

The surveying process in which a horizontal line of sight of known elevation is intercepted by a graduated standard, or rod, held vertically on the point being checked (does not apply to Trig or GPS surveys)

- (a) Urban Differential Leveling Surveys. Leveling employed for commercial, industrial or urban land surveys shall be executed with an error of closure (Y) not to exceed in feet

$$Y = 0.04 \begin{matrix} 0.5 \\ (M) \end{matrix}$$

(Y equals 0.04 times the square root of M) Where Y = discrepancy in vertical measurement (in feet) and M = distance from datum reference (in miles).

- (b) Other Differential Leveling Surveys. Other leveling surveys shall be conducted with an error of closure (Y) not to exceed in feet

$$Y = 0.10 \begin{matrix} 0.5 \\ (M) \end{matrix}$$

(Y equals .10 times the square root of M) where Y = discrepancy in vertical measurement (in feet) and M = distance from datum reference (in miles).

- (c) Agreement for Leveling Surveys. Prior to any type of ~~leveling survey~~ Leveling Survey, including control for photogrammetric mapping, the ~~land surveyor~~ Land Surveyor may determine and set forth in a written agreement with his client the accuracy with which the ~~survey~~ Leveling Survey will be conducted and the general procedure to be employed.

Authority: T.C.A. §§ 62-18-105(d) and 62-18-106(c).

instead the following, so that, as amended, Rule 0820-03-.06 shall read:

0820-3-.06 Maps and Mapping.

- (1) When a ~~land surveyor~~ Land Surveyor furnishes a plat Survey Plat or Survey Map, it shall be properly and accurately drawn, and should ~~reveal all of the~~ depict information developed by and during the survey.
- (2) The size of the Survey Plat or Survey Map shall be such that ~~all~~ details can be shown clearly.
- (3) ~~All preliminary~~ Preliminary maps documents must be clearly marked as such prominently on the face of the ~~map~~ document. The Land Surveyor has the professional discretion not to sign, certify or stamp any preliminary survey: documents, drafts, drawings or composite drawings. In the compilation of a composite Survey Map or Survey Plat, the Land Surveyor shall indicate and cite the source of all lined copied from a previous source.
- (4) Any Property lines which are not actually surveyed must be clearly indicated on the Survey Plat or Survey Map. ~~by a broken line and a~~ A statement shall be included revealing the source of information from which the line is derived.
- (5) ~~All pertinent information on the plat shall be correctly plotted to the scale shown or noted otherwise. Enlargements of portions of a plat are acceptable in the interest of clarity, where shown as inserts on the same sheet. Electronic survey documents such as CAD files, PDF copies, and word processor documents or other emailed or digitally copied and/or electronically forwarded information and documents are considered "Preliminary" or "Draft" documents.~~
- (6) ~~All visible and apparent rights-of-way, watercourses, utilities, roadways and other such improvements shall be accurately located where crossing or forming any boundary line of the property shown. Pertinent information on the Survey Plat or Survey Map shall be correctly plotted to the scale shown or noted otherwise. Enlargement "Detail" of a portion of a Plat or Map is acceptable in the interest of clarity, where shown as inserts on the same sheet and/or with a description of where to find the "Detail" if it is located on another sheet of the same Survey Map or Survey Plat.~~
- (7) ~~Where data is shown relative to existing utilities not visible to the surveyor, a statement shall be provided on the plat that such data should not be relied upon without verification from the proper utility authority having jurisdiction. Visible and apparent rights-of-way, utilities, and roadways shall be accurately located where crossing or forming any boundary line of the property shown.~~
- (8) ~~Area is to be computed by double meridian distance or equally accurate method. Area computations by estimation, by planimeter, by scale, or copying from another source, are not acceptable methods except in preliminary maps, in which case the method will be clearly stated. Easements evidenced by Record Documents which have been delivered to the Land Surveyor shall be shown, both those burdening and those benefiting the property surveyed, indicating recording information. If an apparent easement cannot be located, a note to this effect shall be included. Observable evidence of easements and/or servitudes of all kinds, such as those created by roads, rights-of-way, water courses, drains, or utilities on or across the surveyed property and on adjoining properties if they appear to affect the surveyed property, shall be located and noted. If the Land Surveyor has knowledge of any such easements and/or servitudes, not observable at the time of the survey, such lack of observable evidence shall be noted. Surface indications, if any, of underground easements and/or servitudes shall also be shown. Where non-observable data is shown relative to existing utilities in reliance on apparent surface markings or available utility plans or the apparent surface indicators which are not visible to the Land Surveyor, a statement as to the source of the data shall be included on the Survey Map or Survey Plat as well as a note stating such data should not be relied upon without verification from the proper utility authority having jurisdiction.~~
- (9) Area: When a boundary is formed by a closed survey, the area shall be shown in acres and/or square feet. Area is to be computed by double meridian distance or equally accurate method.

Area computations by estimation, planimeter, by scale, or copying from another source and non-accessible areas, are not acceptable methods except in preliminary maps and non-accessible areas, in which case the method will be clearly stated. If the survey is a new/original tract or the area is different from the recorded area, then the survey must show the are of any closed surveyed tracts or lots.

- (10) Unless necessary because of space or other limitations, abbreviations and symbols should not be used in land surveying work. However, when it is deemed necessary, a thorough legend, describing all symbols and abbreviations used shall be included on the Survey Plat or Survey Map.

Authority: T.C.A. §§ 62-18-105(d) and 62-18-106(c).

Rule 0820-03-.07 Survey Types and Requirements is amended by deleting the text of the rule in its entirety and substituting instead the following, so that, as amended, Rule 0820-03-.07 shall read:

0820-3-.07 SURVEY TYPES AND REQUIREMENTS.

A land surveyor shall comply with the minimum requirements provided below for all surveys and ~~plats or maps~~ Survey Plats and Survey Maps prepared therefrom.

(1) General Property Surveys.

- (a) A ~~plat Survey Map or Survey Plat~~ shall be a copy print or tracing, and shall be dated, and stamped or sealed with the ~~surveyor seal~~ and signed by a registered land ~~surveyor~~ Land Surveyor, in compliance with applicable law.

- (b) A ~~plat Survey Map or Survey Plat~~ shall have a title and contain the following information:

1. a descriptive location of the property, or vicinity map, and corner of the property must be tied by bearing to the nearest minute and distance to the nearest one-tenth of a foot to the nearest road intersection, or to a corner of a subdivision or to a tract from which the property is carved, or to a permanent identifiable corner, or to a nearby permanent identifiable reference point. In the case of a creation of a new tract, a tie must be made by bearing and distance either to an identifiable corner of the parent tract;
 - to a corner of a subdivision, or
 - to a tract from which property is carved, or
 - to a permanent identifiable corner, or
 - to a nearby permanent identifiable reference point.

A corner of the property may be tied to the nearest road intersection by distance only.

In the case of a formation of a new tract; a tie must be made by bearing and distance to an identifiable corner of the parent tract.

2. the city or district, county, and the state where the property is located;
3. the name of the grantor or grantee of the property, or the name of the person who requested or required the ~~plat Survey Map or Survey Plat~~ Survey Map or Survey Plat;
4. the date of the ~~survey~~ Survey Map or plat Survey Plat;
5. a graphic scale and/or numeral scale;

6. the name, registration number, address and telephone number of the surveyor
Land Surveyor; and
7. a certification on the face of the final survey Map or final survey plat as to the category of survey and the ratio or precision of the unadjusted survey, which shall state have the following minimum content:
- Certification as to Category I, II, III, or IV;
 - Ratio of Precision of the unadjusted survey;
 - Statement that survey was done in compliance with current Tennessee Minimum Standards of Practice;
 - Signature; and
 - Registration Number.
- (c) The north arrow shall be shown, and shall be correlated with, the courses or bearings, with the source of reference clearly indicated. ~~indications as to whether is true, magnetic, grid (indicating source thereof), or is reference to an old deed or a prior plat bearing(s). If the North index is magnetic or referenced to an old deed or plat bearing(s), the date and the source (if known) such index was originally determined shall be clearly indicated.~~
- (d) All property lines shall be defined by horizontal distances and bearings or sufficient horizontal ties, and shall be plotted to the scale shown in the title block.
- (e) Where a boundary is formed by a curved line, the curve shall be defined ~~by curve data including at least three elements of the curve~~ with the length and radius of each curve, together with elements necessary to mathematically define each curve in the description. ~~When intersecting boundary lines are non-radial or non-tangential, at least the delta angle, radius, and the chord bearing and distance shall be shown.~~
- (f) ~~The land surveyor~~ Land Surveyor shall show the widths or center-lines of all easements and rights-of-way which are obvious and apparent to him and also ~~The~~ the survey shall be made completed using the latest relevant recorded deeds to the property, but shall show any pertinent information, such as easements, joint driveways, etc. ~~of which the land surveyor is advised by the title attorney as described in Rule 0820-03-.06(7).~~
- (g) Boundaries formed by water course shall be located and plotted to the scale shown in the Survey Map or Survey Plat title block. Traverse lines and/or offset lines used to close water course boundaries shall be shown plotted to scale and defined by bearing and distance.
- (h) Monumentation Requirements:
1. All ~~New property corners~~ monuments shall be composed of established and shall be metal, concrete, or a natural object. material(s) suitable to perpetuate the position and location of the monument. A notation on the Survey Map or Survey Plat shall state whether the corners were found or set, and in addition, the statement shall indicate the material and size of the monument found or set.
 2. Metal ~~corners~~ monuments shall be no less than one-half (1/2) inch in diameter; concrete corners shall be no less than four (4) inches in diameter and contain ferrous or magnetic material; and both shall be no less than eighteen (18) inches in length unless some impregnable material is encountered.
 3. The type of ~~corner~~ monument (old or new) shall be indicated on the plat Survey Map or Survey Plat along with the size and type of material. No monument should be placed if, in the opinion of the Land Surveyor, the existing monument, whether original or not, is found undisturbed and adequate to perpetuate the position and can be reasonably made to conform to the angle point in the

boundary. Large or indefinite monuments which cannot be measured to within the positional accuracy requirements contained herein, such as trees, rock piles or fence corners, will be marked with corner or witness corners as deemed necessary by the Land Surveyor.

4. When conditions warrant setting a reference for a corner monument on an offset, the location shall be selected so that the corner monument lies on a line of the survey, or a prolongation of such line.
 5. ~~All new corners~~ New metal or concrete monuments placed shall have a cap with the Land Surveyor's or tag or non-corrosive material with the surveyor's registration number or company name stamped upon it. In the case of the placement of a concrete marker, the marker shall have a permanent mark for the survey point and shall have the Land Surveyor's registration number or company name attached or stamped upon it.
 6. ~~In the case of placement of a concrete marker, the marker shall have a permanent mark for the survey point and shall have the surveyor's registration number or company name attached or stamped. A notation on the plat shall be made stating whether the corners were found or set, and in addition, the statement shall indicate the material and size of the corner found or set. Survey points that do not divide land ownership, such as point of intersection (P.I.), centerline of water course, etc. may be established with or without monumentation at the Land Surveyor's discretion.~~
 - (i) ~~In the compilation of a composite plat Survey Map or Survey Plat, the land surveyor Land Surveyor shall indicate and cite the course source of all lines copied from a previous survey on the plat Survey Map or Survey Plat, and qualify the plat (i.e. Plat prepared from deed description only) Survey Map or Survey Plat as prepared from other sources only and does not represent a current survey.~~
 - (j) The names of adjoining land owners and deed references, if available at property assessor's office, and/or lots and/or block numbers, and highways, streets, and named waterways shall be shown.
 - (k) The point of beginning in the metes and bounds description prepared by the ~~surveyor~~ Land Surveyor shall be shown on the plat Survey Map or Survey Plat of the survey (except in the case of a subdivision plat).
- (2) Topographic Surveys.
- (a) A plat Survey Map or Survey Plat shall be a copy print or tracing, and shall be dated and stamped or sealed with the surveyor's seal and signed by the registered land surveyor Land Surveyor, in compliance with applicable law.
 - (b) A plat Survey Map or Survey Plat shall have a title and contain the following information:
 1. A descriptive location of the property or a vicinity map;
 2. The city or district, county, and the state where the property is located;
 3. The name of the grantor or grantee of the property, or the name of the person who requested the plat Survey Map or Survey Plat;
 4. The date of the survey or plat Survey Map or Survey Plat;
 5. A graphic scale and/or numerical scale; and
 6. The name, registration number, and address of the ~~surveyor~~ Land Surveyor.

- (c) ~~The A North arrow shall be shown, and shall be correlated with the courses, with indications as to whether it is true, magnetic, or grid source indicated.~~
 - (d) ~~All property Property lines, if shown on the topographic map, shall be defined by bearing and horizontal distance shown as needed an/or as deemed necessary by the Land Surveyor and shall be plotted to the scale shown in the title.~~
 - (e) ~~The land surveyor Land Surveyor shall show the widths of all easements and rights-of-way which are obvious and apparent to him. The survey shall be made using the latest recorded deed to the property, but shall show all easements, joint driveways, etc. and any other information (if any) of which the land surveyor may be advised by the title attorney.~~
 - (f) ~~Boundaries formed by If limits of the topographic survey are formed by water course, then the water course shall be located and plotted to the scale shown in the title.~~
 - (g) ~~The land surveyor Land Surveyor shall indicate and cite the source of all any lines copied from a previous survey.~~
 - (h) ~~The names of adjacent land owners, and deed references, if available at property assessor's office, and/or block numbers, and highways, streets, and named waterways shall be shown.~~
 - (i) ~~Topography Surveys shall be referenced to boundary or other point and/or line of reference only as deemed appropriate by the Land Surveyor.~~
 - (j) ~~Physical Visible, obvious, and apparent surface indications of physical features such as storm drains, sanitary sewers, power lines, gas lines, water lines utilities, buildings, and water bodies, shall be shown and plotted to the scale shown in the title.~~
 - (k) ~~Elevations shall be shown as spot elevations and/or contours. The contour interval shall be noted and shall meet national mapping accuracies. Ninety percent (90%) of the contours shall be accurate to within 1/2 the contour interval.~~
 - (l) ~~An on-site temporary project bench mark shall be established with reference to datum, assumed or otherwise, and plotted to the scale shown in the title block.~~
 - (m) ~~The plat shall indicate whether information was derived from random shots, cross sections, grid cross section, plain table, transit-stadia field survey, aerial flight, radial, or blown-up coast and Geodetic maps.~~
 - (n) ~~On site information and off-site information, including the limits, shall be requested by client in writing.~~
 - (~~e~~) (m) ~~The registered surveyor Land Surveyor in responsible charge of the ground control shall sign, stamp or and seal the plat Survey Map or Survey Plat for the ground control portion of the survey.~~
- (3) Oil and Gas Well Locations Surveys.
- (a) Oil and gas well location surveys must be made in compliance with the provisions of T.C.A., Title 60, Chapter 1, and the rules of the Tennessee State Oil and Gas Board (Chapters 1040-1-1 through 1040-8-1) ~~and where property lines or areas must be located or calculated, must also comply with the accuracy standards set out in rule 0820-3-.05 of this Chapter for the category in which the property is located.~~
 - (b) ~~Where surveyed lines or areas must be located or calculated, they must also comply with the accuracy standards set forth in Rule 0820-03-.05 of this chapter for the category in~~

which the survey is located.

(c) The Survey Map or Survey Plat shall have a title and contain the same information as required under this Chapter relative to General Property Surveys.

(4) Global Positioning Systems (GPS) Surveys- Geodetic Control Surveys (GCS)

(a) All GPS surveys Geodetic Control Surveys must be made in accordance with the Federal Geodetic Control Standards (F.G.C.S.). Horizontal and vertical control work must meet or exceed those accuracy specification standards as published by the Federal Geodetic Control Committee, September 1984, in the bulletin titled "Standards and Specification for Geodetic control Networks" or any subsequently published bulletins modifying such class standards. Copies of said bulletins may be obtained from the United States Department of Commerce.

(b) The class of control surveys shall be shown on documents prepared. The Survey Map or Survey Plat shall have a title and contain the same information as normally would be required under this Chapter fro General Property Surveys.

(c) The registered surveyor in responsible charge of such GPS survey shall certify, sign, and seal the prepared documents.

It shall be acceptable practice to incorporate the use of Global Positioning Systems (commonly known as GPS) equipment into any survey. The precision of all measurements made with such equipment must, at a minimum, meet all precision standards required otherwise by state law. When using GPS equipment in the course of a survey, the Land Surveyor shall state on the face of the Survey Plat or within the report in cases where there is no Survey Plat, the following:

1. A note stating what portion (or all) of the survey was performed using GPS equipment;

2. The type of GPS equipment used, including manufacturer and model number, and whether single or dual frequency receivers were used;

3. The type of GPS survey that was performed, such as static, real time kinematics ("RTK"), network adjusted real time kinematics, etc.;

4. A note that discloses the precision of the GPS work done, either in relative positional accuracy, vector closure, or other mathematical expression chosen by the Land Surveyor; and

5. The registered Land Surveyor in responsible charge of such GPS survey shall date, stamp or seal and sign the prepared documents in compliance with all applicable law.

(5) (Reserved)

Remote Sensing Surveys:

(a) Global Positioning System (GPS) surveys are defined as any survey performed by using the GPS three-dimensional (3D) measurement system based on satellite observation signals. GPS surveys include, but are not limited to: General Property Surveys, Topography Surveys, Oil and Gas Surveys, Local Control Surveys, Network Surveys, Construction Surveys, Geodetic Control Surveys, Aerial Photography Control Surveys, Geographic Information Systems and/or Land Information Systems Data Collection Surveys and any other application listed with the Board's specifications shall be performed by a Land Surveyor licensed in Tennessee. Minimum Standards from Remote Sensing Surveys are as follows:

1. Static GPS Surveys – The Land Surveyor must use the current GPS standards as set by the Board.
2. Real Time Kinematic (RTK) Surveys – The Land Surveyor must use the current GPS standards as set by the Board.

(6) Hydrographic Surveys.

- (a) Hydrographic surveying is the term applied to the process used in surveying any body of water. In the case of lakes and rivers this may include the determination of shore lines, soundings, characteristics of the bottom, location of buoys, etc.; the survey of a river may also include the determination of the velocity and characteristics of the flow. In its broad sense the term may be applied to the survey of drainage areas and proposed reservoirs for the storage of water.

Hydrographic maps shall be prepared as follows:

1. ~~The plat or map~~ A Survey Map or Survey Plat shall be a copy, print or tracing, and shall be dated and stamped or sealed with the surveyor's seal and signed by the registered surveyor Land Surveyor, ~~in responsible charge of the survey in compliance with applicable law.~~
2. ~~The plat or map~~ Survey Map or Survey Plat shall have a title and contain the same information as normally would be required under this Chapter for Topographic Surveys.
3. In addition to the above required data, the ~~plat or map~~ Survey Map or Survey Plat shall show the shore line, designated with the heaviest line on the ~~map~~ Survey Map or Survey Plat, and the low-water line designated with the next heaviest line on the ~~map~~ Survey Map or Survey Plat.
4. Topography to be shown outside the shore line shall be determined by the use for which the ~~map~~ Survey Map or Survey Plat is intended, and requested in writing by the client. Topography of the submerged portions shall be shown with a dashed line.
5. Hydrographic charts prepared for purposes of navigation shall include sufficient topography to show the location of any landmarks which may be of use to the navigator, such as conspicuous objects on the shore.
6. Sufficient survey control points shall be shown on the ~~plat or map~~ Survey Map or Survey Plat in order for the survey to be tied to other maps or adjacent surveys.
7. Where soundings are represented on the ~~plat or map~~ Survey Map or Survey Plat they shall be shown in feet and tenths in black, the number representing the depth of the water below the datum. Where the datum is mean low water, these soundings which are below shall be shown in black, and those that are above the datum shall be shown in another color or method of line designation.
8. In the preparation of the navigation chart of a small river the soundings shall be recorded in feet and tenths, and contours drawn every three (3) or six (6) feet. The direction of the current shall be shown with an arrow. Rapids or waterfalls shall be shown on the ~~plat or map~~ Survey Map or Survey Plat when encountered in the survey.

- (b) Hydrographic surveys must conform to the above minimum standards if no other more stringent standards or specifications are provided by the client, or other standards are

required by the jurisdiction of the U.S. Corp of Engineers, or other legal authority, in the area where the survey project is located.

Authority: T.C.A. §§ 62-18-105(d) and 62-18-106(c).

Rule 0820-03-.08 Marking of Property Boundaries is amended by deleting the text of the rule in its entirety and substituting instead the following, so that, as amended, Rule 0820-03-.08 shall read:

0820-3-.08 Marking of Property Boundaries.

~~The proper marking of boundary lines in a survey shall be the responsibility of the registered surveyor who performs the survey. The marking of lines between corners is not a requirement of General Property Survey; however, if needed, contracted, or requested, the marking shall be the responsibility of the registered Land Surveyor who performs the survey.~~

- ~~(1) — In wooded areas when boundary lines are required to be marked, the following procedures are recommended.~~
- ~~(a) — A living corner tree shall be marked with an X and 3 hacks or chops.~~
 - ~~(b) — A corner witness tree shall be marked with a 3 hacks or chops.~~
 - ~~(c) — A side line tree shall be marked with a blaze mark on the side of the tree quartering toward the line. (No side line tree shall be marked more than 5 feet either side of the property line.)~~
 - ~~(d) — A property line or center line tree shall be marked with 1 blaze and 2 hacks or chops, at points where the line enters and leaves the tree.~~

~~NOTE: Established local custom may be used in lieu of the procedures recommended above.~~

- ~~(2) — In open land where boundary lines are required by the client to be permanently marked, the following shall apply:~~
- ~~(a) — Where corner markers are too distant to be seen point to point, iron pins or other permanent markers shall be placed in the boundary line at points where they may be seen from either the corner mark or another iron pin in the line.~~
 - ~~(b) — Line points as required in (a) shall be noted on the plat of the survey stating the approximate location, material, and size of the line marker placed. In open land where boundaries are required to be temporarily marked, wood stakes may be placed along the line at convenient points; however said stakes shall be clearly marked "PL" or "Property Line."~~

Authority: T.C.A. §§ 62-18-105(d) and 62-18-106(c).

Rule 0820-03-.09 Land Descriptions is amended by deleting the text of the rule in its entirety and substituting instead the following, so that, as amended, Rule 0820-03-.09 shall read:

Rule 0820-03-.09 Land Descriptions

- (1) Terminology. The following terminology shall be used in land descriptions:
 - (a) "beginning" ~~means~~ shall mean a well-defined, readily located and permanent point or monument which is both the starting point and final point for a metes and bounds description.

- (b) "boundary line" ~~means~~ shall mean an adequately dimensioned and described line (which may be straight, irregular, circular or spiral) bounding an area or dividing separate properties.
 - (c) "conveyance" ~~means~~ shall mean the act of transferring title to or rights in a property.
 - (d) "coordinate description" ~~means~~ shall mean a description of lands in which the angle points or other points in the boundary are each referred to grid coordinates on the Tennessee or similar coordinate system.
 - (e) "description by lot number" ~~means~~ shall mean a description which identifies a lot or tract of land by reference to book and page numbers of a register in which a ~~plat~~ Survey Map or Survey Plat is recorded with other pertinent information.
 - (f) "grantor" ~~means~~ shall mean a person or party conveying property or rights therein to a grantee.
 - (g) "grantee" ~~means~~ shall mean a person or party receiving title to or rights in property.
 - (h) "grid coordinates" means distances measured at right angles to each other in a rectangular system having two base lines at right angles to each other.
 - (i) "metes and bounds description" ~~means~~ shall mean a description in which the boundary lines starting from a given point are described by listing the direction, distance and description of corners of the lines forming the boundary.
 - (k) "title" ~~means~~ shall mean a written claim or right which constitutes a just and legal cause of exclusive possession.
- (2) Preparation. ~~The land surveyor~~ Land Surveyor may prepare the land description in a land survey, but shall not engage in the writing of a deed. In the ~~certification~~ preparation of a land description, the ~~land surveyor~~ Land Surveyor shall include on the document, his full name ~~and signature~~, his registration number ~~and seal~~ and the date of the survey from which the information was procured (or the book and page numbers of the recorded ~~plat or map~~ Survey Map, Survey Plat or deed, if used in preparing the description.)
- (3) Content.
- (a) In the description of a lot located in a subdivision by number, the following information shall appear: the name of the subdivision; the ~~plat or map~~ Survey Map or Survey Plat referred to; the ~~land surveyor's~~ Land Surveyor's name; ~~the district and county and/or township~~; the general location of the property and the book and page numbers of the register in which the lot is recorded.
 - (b) A metes and bounds description shall include the general location of the tract or lot with sufficient accuracy so that the tract can be readily located on the ground. The beginning point must be so selected that it can be readily and accurately located from some previously established monument, corner or record, and can be readily described. The description shall include the names of adjoining property owners ~~on all lines and at all points~~ and/or a reference to any adjoining plat of record. The ~~description shall include the monument or marker at each corner if found or placed and shall be described by size, material and whether found or placed~~. A metes and bounds description shall describe a course around a tract or lot in a clockwise direction. All lines adjacent to street, roads or other rights-of-way shall be referenced to same; and all pertinent distances and curve data shall be listed. Chord bearing and distance shall be included in all curb descriptions. All corners falling in roads or other inaccessible locations shall be referenced to nearby and permanent points. ~~All rights-of-way crossing the property shall be indicated~~

substituting instead the following, so that, as amended, Rule 0820-03-.10 shall read:

Rule 0820-03-.10 Instruments and Apparatus

- (1) ~~Land surveying in Tennessee shall be conducted in the field with a properly adjusted instrument appropriate to the closeness of the work being performed. The instrument shall be tested at regular intervals and adjusted to maintain its optimum accuracy.~~
- (2) ~~All tapes shall be of alloy or carbon steel and shall be calibrated or certified as U.S. Bureau of Standards quality with a known coefficient of temperature and tension corrections and graduated in feet and decimal parts of a foot. The land surveyor shall be responsible for any errors which may enter into his survey as a result of the use of spliced tape. Plastic and metallic tapes shall be used within their limitations as specified by the manufacturer. Reserved.~~
- (3) ~~The use of electronic surveying equipment is recommended.~~

Land Surveying in Tennessee shall be conducted in the field with a properly adjusted instrument of measurement which is appropriate to the closeness of the work being performed. The instrument shall be calibrated at regular intervals to maintain its optimum accuracy.

Authority: T.C.A. §§ 62-18-105(d) and 62-18-106(c).

* If a roll-call vote was necessary, the vote by the Agency on these rulemaking hearing rules was as follows:

Board Member	Aye	No	Abstain	Absent	Signature (if required)
Jackie Dillehay, <i>Chairman</i>	X				
Timothy Lingerfelt, <i>Vice-Chairman</i>	X				
David Cagle, <i>Board Member</i>	X				
Sue Braly, <i>Public Member</i>	X				

I certify that this is an accurate and complete copy of rulemaking hearing rules, lawfully promulgated and adopted by the Tennessee State Board of Examiners for Land Surveyors on 04/29/10, and is in compliance with the provisions of TCA 4-5-222.

I further certify the following:

Notice of Rulemaking Hearing filed with the Department of State on: 02/08/10

Rulemaking Hearing(s) Conducted on: (add more dates). 04/29/10

Date: 7.20.2010

Signature: *[Handwritten Signature]*

Name of Officer: ROBERT E. HERNDON

Title of Officer: ATTORNEY



My Commission Expires September 25, 2011

Subscribed and sworn to before me on: 7/20/10

Notary Public Signature: *[Handwritten Signature]*

My commission expires on: 9/25/10

All rulemaking hearing rules provided for herein have been examined by the Attorney General and Reporter of the State of Tennessee and are approved as to legality pursuant to the provisions of the Administrative Procedures Act, Tennessee Code Annotated, Title 4, Chapter 5.

[Handwritten Signature]
 Robert E. Cooper, Jr.
 Attorney General and Reporter
12-8-10
 Date

Department of State Use Only

Filed with the Department of State on: _____

Effective on: _____

Tre Hargett
Secretary of State

Public Hearing Comments

One copy of a document containing responses to comments made at the public hearing must accompany the filing pursuant to T.C.A. §4-5-222. Agencies shall include only their responses to public hearing comments, which can be summarized. No letters of inquiry from parties questioning the rule will be accepted. When no comments are received at the public hearing, the agency need only draft a memorandum stating such and include it with the Rulemaking Hearing Rule filing. Minutes of the meeting will not be accepted. Transcripts are not acceptable.

Regulatory Flexibility Addendum

Pursuant to T.C.A. § 4-5-401 through 4-5-404, prior to initiating the rule making process as described in T.C.A. § 4-5-202(a)(3) and T.C.A. § 4-5-202(a), all agencies shall conduct a review of whether a proposed rule or rule affects small businesses.

(If applicable, insert Regulatory Flexibility Addendum here)

1. Types of small businesses directly affected:

All small professional land surveying firms doing business within the State of Tennessee may be affected by these rules.

2. Projected reporting, record-keeping and other administrative costs:

There is no foreseeable alteration in small business record-keeping that will result from the promulgation of these rules.

3. Probable effect on small businesses;

These proposed rules may directly affect small businesses when they participate in commerce for which adherence to current standards of practice is required.

4. Less burdensome, intrusive or costly alternative methods:

The Board knows of no alternative means available to accomplish these objectives.

5. Comparison with federal and state counterparts;

There are no federal counterparts to the issues addressed by these rules; additionally, the rules impact procedures within a state agency rather than impose new or altered regulation upon private entities.

6. Effect of possible exemption of small businesses:

There will be no exemptions created by these rules.

Additional Information Required by Joint Government Operations Committee

All agencies, upon filing a rule, must also submit the following pursuant to TCA 4-5-226(i)(1).

- (A)** A brief summary of the rule and a description of all relevant changes in previous regulations effectuated by such rule;

Rule 0820-03-.02 General is amended by updating requirements for the use of a registered land surveyor's stamp and upon which documents it should appear; this rules also clarifies ownership rights in all materials generated by the registered land surveyor.

Rule 0820-03-.03 Definitions is amended by updating the descriptions of various forms and/or categories of land surveys.

Rule 0820-03-.04 Nomenclature is amended by removing the index of symbols used on land survey documents in order to allow for a more standardized application established through national sources.

Rule 0820-03-.05 Accuracy of Surveys is amended by adding a reference to a new category for remote sensing surveys (a new category IV) and to update accuracy requirements differential leveling surveys.

Rule 0820-03-.06 Maps and Mapping is amended by adding to and updating the requirements for producing maps by including new technologies and strengthening current methods.

Rule 0820-03-.07 Survey Types and Requirements is amended by updating methods for the production of maps and plats, updating monumentation procedures and adding geodetic control surveys to acceptable practice for the production of land survey documents.

Rule 0820-03-.08 Marking of Property Boundaries is amended by removing the requirement to mark lines between corners unless needed or requested by another party.

Rule 0820-03-.09 Land Descriptions is amended by making some housekeeping changes to the language of the rule in order to provide clarity.

Rule 0820-03-.10 Instruments and Apparatus is amended by converting the rule to a statement that all equipment used by a land surveyor in the course of producing documents must be properly maintained and calibrated.

- (B)** A citation to and brief description of any federal law or regulation or any state law or regulation mandating promulgation of such rule or establishing guidelines relevant thereto;

The proposed amendments to the rules of the Tennessee State Board of Examiners for Land Surveyors are made pursuant to Tenn. Code Ann. §§ 62-18-105(d) and 62-18-106(c).

- (C)** Identification of persons, organizations, corporations or governmental entities most directly affected by this rule, and whether those persons, organizations, corporations or governmental entities urge adoption or rejection of this rule;

These amendments to the rules of the Tennessee State Board of Examiners for Land Surveyors will affect holders in good standing of registration certificates in land surveying and also applicants for registration as land surveyors. There were minor written and oral comments made in connection with this rulemaking hearing that applied to the application of terms of the profession in order to provide greater clarity in the rules rather than conduct.

- (D)** Identification of any opinions of the attorney general and reporter or any judicial ruling that directly relates to the rule;

I am unaware of any opinion of the attorney general or any judicial ruling which directly relates to these rules.

- (E) An estimate of the probable increase or decrease in state and local government revenues and expenditures, if any, resulting from the promulgation of this rule, and assumptions and reasoning upon which the estimate is based. An agency shall not state that the fiscal impact is minimal if the fiscal impact is more than two percent (2%) of the agency's annual budget or five hundred thousand dollars (\$500,000), whichever is less;

These rules are expected to have no fiscal impact on the Department.

- (F) Identification of the appropriate agency representative or representatives, possessing substantial knowledge and understanding of the rule;

Donna Moulder, Administrative Director of the Tennessee State Board of Examiners for Land Surveyors, and I as attorney for the agency have substantial knowledge and understanding of these rules.

- (G) Identification of the appropriate agency representative or representatives who will explain the rule at a scheduled meeting of the committees;

Donna Moulder or I will explain the rules at any scheduled meeting of the Government Operations Committee.

- (H) Office address, telephone number, and email address of the agency representative or representatives who will explain the rule at a scheduled meeting of the committees; and

I may be reached at the Department of Commerce and Insurance, Office of Legal Counsel, 500 James Robertson Parkway, Davy Crockett Tower, Nashville, Tennessee 37243, (615) 741-3072.

- (I) Any additional information relevant to the rule proposed for continuation that the committee requests.

If you require additional information, please contact me.