

**RULES  
OF  
TENNESSEE STATE BOARD OF EXAMINERS  
FOR LAND SURVEYORS**

**CHAPTER 0820-03  
STANDARDS OF PRACTICE**

**TABLE OF CONTENTS**

0820-03-.01	Applicability	0820-03-.07	Survey Types and Requirements
0820-03-.02	General	0820-03-.08	Making of Property Boundaries
0820-03-.03	Definitions	0820-03-.09	Land Descriptions
0820-03-.04	Reserved	0820-03-.10	Instruments and Apparatus
0820-03-.05	Accuracy of Surveys	0820-03-.11	Global Position Systems Surveys
0820-03-.06	Maps and Mapping		

**0820-03-.01 APPLICABILITY.**

The provisions of this Chapter shall apply to all land surveyors registered pursuant to Title 62, Chapter 18, T.C.A.

**Authority:** T.C.A. § 62-18-106(c). **Administrative History:** Original rule filed August 15, 1980; effective September 28, 1980.

**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). **Administrative History:** Original rule filed August 15, 1980; effective September 29, 1980. Amendment filed November 20, 1991; effective January 4, 1992. Repeal and new rule filed December 17, 2010; effective March 17, 2011.

**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.

(Rule 0820-03-.03, continued)

- (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. §§ 62-2-105(d), 62-2-106(c), 62-18-105(d), and 62-18-106(c). **Administrative History:** Original rule filed August 15, 1980; effective September 29, 1980. Amendment filed November 20, 1991; effective January 4, 1992. Repeal and new rule filed December 17, 2010; effective March 17, 2011.

#### **0820-03-.04 RESERVED.**

**Authority:** T.C.A. §§ 62-2-105(d), 62-2-106(c), 62-18-105(d), and 62-18-106(c). **Administrative History:** Original rule filed August 15, 1980; effective September 29, 1980. Amendment filed November 20, 1991; effective January 4, 1992. Repeal and new rule filed December 17, 2010; effective March 17, 2011

#### **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).

(Rule 0820-03-.05, continued)

- (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

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

(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

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

(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). **Administrative History:** Original rule filed August 15, 1980; effective September 29, 1980. Amendment filed November 20, 1991; effective January 4, 1992. Repeal and new rule filed December 17, 2010; effective March 17, 2011.

#### 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.

(Rule 0820-03-.06, continued)

- (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). **Administrative History:** Original rule filed August 15, 1980; effective September 29, 1980. Amendment filed November 20, 1991; effective January 4, 1992. Repeal and new rule filed December 17, 2010; effective March 17, 2011.

#### **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.

(Rule 0820-03-.07, continued)

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

(Rule 0820-03-.07, continued)

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;

(Rule 0820-03-.07, continued)

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.

(Rule 0820-03-.07, continued)

- (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 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) 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.



(Rule 0820-03-.07, continued)

(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). **Administrative History:** Original rule filed August 15, 1980; effective September 29, 1980. Amendment filed November 20, 1991; effective January 4, 1992. Repeal and new rule filed December 17, 2010; effective March 17, 2011.

**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). **Administrative History:** Original rule filed August 15, 1980; effective September 29, 1980. Amendment filed November 20, 1991; effective January 4, 1992. Repeal and new rule filed December 17, 2010; effective March 17, 2011.

**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.

(Rule 0820-03-.09, continued)

- (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). **Administrative History:** Original rule filed August 15, 1980; effective September 29, 1980. Repeal and new rule filed December 17, 2010; effective March 17, 2011.

#### **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). **Administrative History:** Original rule filed August 15, 1980; effective September 29, 1980. Amendment filed November 20, 1991; effective January 4, 1992. Repeal and new rule filed December 17, 2010; effective March 17, 2011.

#### **0820-03-.11 GLOBAL POSITION SYSTEMS SURVEYS.**

- (1) Global Positioning Systems (GPS) are defined as the navigation and positioning systems that comprise the Global Navigation Satellite System (GNSS), which includes NAVSTAR, GLONASS, GALILEO, COMPASS, and any other satellite-based navigation and positioning systems.
- (2) The professional Land Surveyor in responsible charge of the GPS survey shall note on all prepared documents the following information. When a map or document consists of more than one (1) sheet, only one (1) sheet must contain the notes.
  - (a) Type of GPS field procedure, such as Static, Kinematic, Psuedo-Kinematic, Real-time Kinematic, Real-time Kinematic networks, and Online Position User Service;
  - (b) Relative positional accuracy or other mathematical expression as chosen by the Land Surveyor;
  - (c) Dates of survey;
  - (d) What datum and epoch coordinates or geographic positions are based on;
  - (e) Designation of fixed-control stations and their positional data;

(Rule 0820-03-.11, continued)

- (f) Geoid model used; and
  - (g) Combined grid factor(s).
- (3) GPS surveys performed to provide control networks shall be performed in such a manner to obtain a ninety-five percent (95%) confidence level of the positional accuracy of each point relative to the published positions of the control points used.
- (4) Fixed station(s) used for the project shall appear on the map, plat, or report. The minimum data shown for each fixed station shall be station name, horizontal position (northing and easting) or latitude, longitude, elevation (ellipsoid or orthometric), and datum and epoch.

**Authority:** T.C.A. § 62-18-106(c). **Administrative History:** Original rule filed January 11, 2018; effective April 11, 2018.