

Chapter 2: General Surveying Procedures

Section 1: General Surveying Procedures

Standards and Requirements Overview

Information contained in this section is excerpted in its entirety and/or adapted for this manual from the Texas Board of Professional Land Surveying, the Texas Society of Professional Surveyors, and the Texas Administrative Code.

The Standing Committee on Surveying (SCOS) endorses the minimum standards set by the Texas Board of Professional Land Surveying (TBPLS) and all surveying completed for the Texas Department of Transportation (TxDOT) shall adhere to those standards.

The SCOS also endorses the Texas Society of Professional Surveyors (TSPS) *Manual of Practice* as a guideline for all types of land surveying, either by or for TxDOT.

Where standards and requirements contained and described in this manual are more comprehensive than those found in the Texas Board of Professional Land Surveying Professional and Technical Standards (Texas Administrative Code, Title 22, Part 29, Chapter 663, Subchapter B, Professional And Technical Standards), and the *TSPS Manual of Practice*, it is due to the additional needs and requirements of TxDOT. Note that each district may have standards for individual projects which exceed these minimum recommended standards and requirements.

A glossary of terms is available in Appendix D.

Minimum Standards of Practice (TBPLS)

Following are the minimum standards for Professional Land Surveyor as adopted by the Texas Board of Professional Land Surveying (TBPLS), which are contained in the Texas Administrative Code, Title 22 Examining Boards, Part 29 Texas Board of Professional Land Surveying, Chapter 663 Standards of Responsibility and Rules of Conduct, Subchapter B Professional and Technical Standards.

Any instrument carrying the seal and signature of a Registered Professional Land Surveyor must comply with the Professional Land Surveying Practices Act and Rules adopted by the TBPLS.

22 Texas Administrative Code §663.13. Introduction

The Board establishes these minimum standards of practice to better serve the general public in regulating the practice of professional surveying in Texas. Professional surveying performed in Texas, unless otherwise specifically exempted herein, shall meet or exceed the requirements of these standards. The Board considers any survey, the purpose of which is to delineate, segregate, separate, or partition any interest in real property of any kind, under these standards.

To better serve the general public in regulating the practice of land surveying in Texas, these minimum standards of practice (Standards) are established. All land surveys performed by a Registered Professional Land Surveyor (RPLS) in Texas shall adhere to these standards by meeting or exceeding the requirements hereof.

22 Texas Administrative Code §663.15. Precision

The actual relative location of corner monuments found or set within:

- *corporate limits* of any cities in Texas shall be reported within a positional tolerance of 1:10,000 + 0.10'
- *extraterritorial jurisdiction* (EJT) of any cities in Texas shall be reported within a positional tolerance of 1:7,500 + 0.10'
- *all rural areas outside extraterritorial jurisdiction areas* of all cities in Texas shall be reported within a positional tolerance of 1:5,000 + 0.10'.

Areas, if reported, shall be produced, recited, and/or shown only to the *least* significant number compatible with the precision of closure.

Survey measurement shall be made with equipment and methods of practice capable of attaining the tolerances specified by these standards. Positional tolerance of any monument is the distance that any monument may be mis-located, in relation to any other monument cited in the survey.

22 Texas Administrative Code §663.16. Boundary Construction

When delineating a property or boundary line as an integral portion of a survey, the surveyor shall respect:

- junior/senior property rights
- footsteps of the original surveyor
- the record, the intent as evidenced by the record
- proper application of the rules of dignity or the priority of calls, and
- applicable statutory and case law of Texas.

Appropriate deeds and/or other documents including those for adjacent parcels shall be relied upon for the location of the boundaries of the subject parcel(s).

A land surveyor, assuming the responsibility of performing a land survey also assumes the responsibility for such research of adequate thoroughness to support the determination of the intended boundaries of the land parcel surveyed. The land surveyor may rely on record data related to the determination of boundaries furnished for the registrants' use by a qualified provider, provided that the registrant reasonably believes such data to be sufficient and notes, references, or credits the documentation by which it is furnished.

All boundaries shall be connected to identifiable physical monuments of record dignity. In the absence of such monumentation, the surveyor's opinion of the boundary location shall be supported by other appropriate physical evidence, which shall be explained in the surveyor's report.

22 Texas Administrative Code §663.17. Monumentation

(a) All monuments set by a RPLS shall be set at sufficient depth to retain a stable and distinctive location and be of sufficient size to withstand the deteriorating forces of nature and shall be of such material that in the surveyor's judgment will best achieve this goal.

(b) When delineating a property or boundary line as an integral portion of a survey (survey being defined in the Act, §1071.002 subsection (6) or (8), the land surveyor shall set, or leave as found, sufficient, stable and reasonably permanent survey markers to represent or reference the property or boundary corners, angle points, and points of curvature or tangency. *ALL SURVEY MARKERS SHALL BE SHOWN AND DESCRIBED* with sufficient evidence of the location of such markers on the surveyors' plat.

If the land surveyor prepares a written description of the surveyed premise, he/she shall include the following in that written description:

1. reference to a description of the survey markers as shown on the plat, and
2. the seal and signature of a registered or licensed surveyor.

All metes and bounds descriptions prepared for easements shall be tied to physical monuments of record related to the boundary of the affected tract. In addition, the land surveyor may furnish an electronic copy of a written description, provided that the text is verbatim to that of the certified document retained in the land surveyor's file.

Where practical, all monuments set by Professional Land Surveyors to delineate or witness a boundary corner shall be marked in a way that is traceable to the responsible registrant or associated employer.

22 Texas Administrative Code §663.18. Certification

The Registered Professional Land Surveyor (RPLS) shall apply his/her seal to all documents representing professional surveying as defined in the Act.

If the surveyor certifies, or otherwise indicates, that his/her product or service meets a standard of practice in addition to that promulgated by the Texas Board of Professional Land Surveying, then the failure to so meet both standards may be considered by the Board, for disciplinary purposes, to be misleading the public.

22 Texas Administrative Code §663.19. Plat / Description / Report

Preliminary documents released from a land surveyor's control shall identify the purpose of the document, the land surveyor of record, the land surveyor's registration number, and the release date.

Such preliminary documents shall not be signed or sealed and shall bear the following statement in the signature space: "Preliminary, this document shall not be recorded for any purpose."

Preliminary documents released from the land surveyor's control, which include this text in place of the land surveyor's signature, need not comply with the other minimum standards promulgated in this chapter.

A land surveyor shall certify only to factual information that the land surveyor has personal knowledge of or to information within his/her professional expertise as a land surveyor, unless otherwise qualified.

Registered professional land surveyors may certify, using the registrant's signature and official seal, service that are not within the definition of professional land surveying as defined in the Act, provided that such certification does not violate any Texas or federal law.

For the purpose of these rules, the word "report" shall mean any or all of the following:

- survey plat,
- descriptions, or
- separate narratives.

All reports shall delineate the relationship between record monuments and the location of boundaries surveyed; such relationship shall be shown on the survey plat, if a plat is prepared, and/or a separate report and recited in the description with the appropriate record references recited thereon and therein.

Every description prepared for defining boundaries shall provide a definite and unambiguous identification of the location of such boundaries and shall describe all pertinent monuments found or placed.

Every survey plat prepared shall be to a convenient scale, and provide a definite and unambiguous representation of the location of the surveyed land according to its record description. Where material discrepancies are found between the record and the condition discovered, the surveyor shall apprise his/her client in the following manner:

- If a plat of survey is prepared, the surveyor shall:
 - make specific reference of the discrepancy on the plat or survey, or
 - make a general reference to the discrepancy on the plat of survey and a specific reference to a report of survey which more specifically describes the discrepancy
- If a survey plat is not prepared, the surveyor shall notify his/her client of any material discrepancy by report of survey or other written notice.

Courses shall be referenced by notation upon the survey plat to an identifiable line for directional control.

The survey plat shall bear the name of the land surveyor responsible for the land survey, his/her official seal his/her original signature (Rule §661.46), and date surveyed.

Boundary monuments found or placed by the surveyor shall be described upon the survey plat, including those controlling monuments to which the survey may be referenced. The surveyor shall note upon the survey plat, which monuments were found and which monuments were placed because of his/her survey.

A reference shall be cited on the plat to the record instrument, which defines the location of adjoining boundaries.

When appropriate, reference shall be cited in the description prepared to the record instrument, which defines the location of adjoining boundaries.

If any report consists of more than one part, each part shall note the existence of the other part or parts.

If a land surveyor provides a written narrative in lieu of a Plat/sketch/drawing to report the results of a survey, the written narrative shall contain sufficient information to demonstrate the survey was conducted in compliance with the Act and rules of the Board.