

RULE

Transportation and Development
Board of Registration for Professional Engineers and Land Surveyors

Minimum Standards for Property Boundary Surveys
(LAC 46:LXI.2501-2509)

In accordance with the R.S. 49:950 et seq., the Board of Registration for Professional Engineers and Land Surveyors has amended LAC 46:LXI.2501-2509 as follows.
Title 46

PROFESSIONAL AND OCCUPATIONAL STANDARDS

Part LXI. Professional Engineers and Land Surveyors

Subpart 1. Rules

Chapter 25. Minimum Standards for Property Boundary Surveys

§2501. General

A. ...

B. These standards are set forth to solely provide a means by which professional performance can be assessed by the Louisiana State Board of Registration for Professional Engineer and Land Surveyors and to enable the surveying profession as a whole to better protect the safety, health, and welfare of the public. It should be recognized that surveying practices now in place may vary from one region of the state to another, and these practices should be evaluated when at variance with these standards.

C. It is intended that these be recognized as minimum standards of practice and that they not be relied upon by the professional surveyor as a substitute for the exercise of proper individual skill, professional discretion, and good judgment in fulfilling the legal and/or contractual requirements of any property boundary survey.

D. When in the professional surveyors opinion special conditions exist that effectively prevent the survey from meeting these minimum standards, the special conditions and any necessary deviation from the standards shall be noted upon the drawing. It shall be a violation of this rule to use special conditions to circumvent the intent and purpose of these minimum standards.

E. A property boundary survey shall only be performed by persons qualified to practice land surveying and registered in accordance with the provisions of R.S. 37:681, et seq.

AUTHORITY NOTE: Promulgated in accordance with R.S. 37:681, 682(9), 688.

HISTORICAL NOTE: Promulgated by the Department of Transportation and Development, Board of Registration for Professional Engineers and Land Surveyors, LR 16:1064 (December 1990), amended LR 22:713 (August 1996).

§2503. Definitions

Any terms not specifically defined herein shall be as defined in the most current publication of *Definitions of Surveying and Associated Terms* as published by the American Congress on surveying mapping. For the purpose of these standards, all the definitions listed that differ from any other source are to be interpreted as written herein.

Client—the person with whom the contract for work is made. This may, or may not be the owner.

Corner—a point on a land boundary, at which two or more boundary lines meet. Not the same as monument, which refers to the physical evidence of the corner's location on the ground.

Deed—an instrument in writing which, when executed and delivered, conveys an estate in real property or interest therein.

Description, Legal—a written description usually contained in an act of conveyance, judgment of possession, etc., recognized by law which definitely locates property by metes and bounds or by reference to government surveys, coordinate systems or recorded maps; a description which is sufficient to locate the property without oral testimony.

Description, Metes and Bounds—a description of a parcel of land by reference to course and distances around the tract, or by reference to natural or record monuments.

Encroachment—any structure or obstruction which intrudes upon, invades or trespasses upon the property of another.

May—when used means that a choice on the part of the surveyor is allowed.

Monument—a physical structure which marks the location of a corner or other survey point. In public-land surveys, the term "corner" is employed to denote a point determined by the surveying process, whereas the "monument" is the physical structure erected to mark the corner point upon the earth's surface. Monument and corner are not synonymous, though the two terms are often used in the same sense.

Positional Accuracy—the difference between the actual position of a monument and the position as reported on the plat.

Positional Tolerance—the distance that any monument may be mislocated in relation to any other monument cited in the survey.

Prescription—title obtained in law by long possession. Occupancy for the period prescribed by the Louisiana Civil Code, as sufficient to bar an action for the recovery of the property, gives title by prescription.

Right of Way—any strip or area of land, including surface, overhead, or underground, granted by deed or easement, for construction and maintenance according to the designated use.

Servitude—a nonpossessing interest held by one person in land of another whereby the first person is accorded partial use of such land for a specific purpose. A servitude restricts but does not abridge the rights of the fee owner to the use and enjoyment of his land. The term easement is often used interchangeably with servitude and means the same thing.

Shall—the subject is imperative or mandatory and must be done by the surveyor.

AUTHORITY NOTE: Promulgated in accordance with R.S. 37:681, 682(9), 688.

HISTORICAL NOTE: Promulgated by the Department of Transportation and Development, Board of Registration for Professional Engineers and Land Surveyors, LR 16:1064 (December 1990), amended LR 22:713 (August 1996).

§2505. Classification of Surveys

A. - D. ...

AUTHORITY NOTE: Promulgated in accordance with R.S. 37:681, 682(9), 688.

HISTORICAL NOTE: Promulgated by the Department of Transportation and Development, Board of Registration for Professional Engineers and Land Surveyors, LR 16:1065 (December 1990), amended LR 22:714 (August 1996).

§2507. Property Boundary Survey

A. Definition

Mineral Unit Survey (or Unit Plat)—a plan showing subsurface mineral boundaries prepared for the specific purpose of allocating mineral rights. A mineral unit survey should not be viewed as a property boundary survey subject to the requirements of the Minimum Standards for Property Boundary Surveys. This does not absolve the professional land surveyor from his obligation to use due diligence in the practice and from complying with all applicable rules and laws pertaining to the practice of land surveying.

Property Boundary Survey—a survey which, after careful study, investigation, and evaluation of major factors influencing the location of boundaries, results in the deliberate location or relocation on the ground of one or more boundaries. When all the boundaries of a parcel of land are surveyed, an area determination may be included if requested by the client.

B. Purpose. The primary purpose of the property boundary survey is to locate or relocate the physical position and extent of the boundaries of real property, and the discovery of visible evidence of prescriptive rights relating thereto. A property boundary survey may also include the location or relocation of the physical position and extent of political boundaries which define the perimeters of public or private ownership. In addition, the property boundary survey is a means of marking boundaries for sufficient definition and identification to uniquely locate each lot, parcel, or tract in relation to other well recognized and established points of reference, adjoining properties and rights-of-way.

C. Product. A property boundary survey will result in the establishment of monumented corners; point of curvature and tangency; and reference points (See Subsection E, "Monuments," in this Section). In event that no plat of survey is required, the professional land surveyor must maintain adequate records to substantiate his professional opinion in reestablishing boundary lines and corners on a survey. If requested by the client, a boundary survey may also include the following:

1. - 3. ...

D. Research and Investigation. A surveyor shall be provided the legal description or plats describing the property to be surveyed. The surveyor shall then evaluate the necessity to obtain the following data based on the specific purpose of the survey:

1. the most recent recorded legal descriptions and plats of the tract to be surveyed, tracts adjoining or in proximity to the property to be surveyed;

2. the recorded legal descriptions of adjoining, severing, or otherwise encumbering servitudes or rights-of-way, including, but not necessarily limited to, highways, roadways, pipelines, utility corridors, and waterways used for drainage, navigation or flood control. Where the purpose of a survey neither requires nor includes research and investigation of servitudes, a note to that effect shall be placed upon the plat of survey;

3. ...
E. - E.2.a. ...

b. Concrete monuments shall be at least three inches in width or diameter by 24 inches in length, reinforced with an iron rod at least one-fourth inch in diameter, and may contain a precise mark on top indicating the exact location of the corner.

c. Marks on existing concrete, stone, or steel surface will consist of drill holes, chisel marks or punch marks and must be of sufficient size, diameter or depth to be definitive, stable and readily identifiable as a survey monument. Marks on asphalt roads may consist of railroad spikes, large nails, or "PK nails".

d. ...
e. Monuments must be set vertically whenever possible and the top may be reasonably flush with the ground when practical. Monuments subject to damage from earthwork, construction or traffic should be buried at a sufficient depth to offer protection.

f. ...
3 ...
F. - F.1. ...

2. In performing resurveys of tracts of whose boundaries are defined by lines established in public lands surveys, the surveyor shall, as nearly as possible, reestablish the original lines of any prior survey made under United States or state authority. In all townships or portions of townships where no survey has been made, the surveyor, in surveying or platting the township or portion thereof, shall make it conform as nearly as practicable to the lots and sections indicated upon the plats according to which the lands were granted by the state or by the United States. (R.S. 50:125)

3. ...
4. Special consideration shall be afforded by the rules of evidence and "hierarchy of calls" before any decision is made regarding property boundaries. "... The legal guides for determining a question of boundary or the location of a land line in order of their importance and value are:

- a. 1—natural monuments
- b. 2—artificial monuments
- c. 3—distances
- d. 4—courses
- e. 5—quantity

But the controlling consideration is the intention of the parties." (See citation in Meyer vs. Comegys, 1920 La. Supreme Court, 147 La. 851 and 86 SO. 307, 309.)

5. - 7. ...

G. Plats and Maps. Every original plat or map of a boundary survey should be a reproducible drawing at a suitable scale which clearly shows the results of the field work, computations, research and record information as compiled and checked. The plat, map or drawing shall be prepared in conformity with the following guidelines.

1. - 2. ...
3. All dimensions, bearings or angles, including sufficient data to define the curve shall be neatly and legibly shown with respect to each property or boundary line. When possible, all bearings shall read in a clockwise direction around the property. All lines and curves shall show sufficient data on the map to calculate a map closure.

4. Monuments shall be labeled as "found" or "set," with a brief definitive description of the monument and relevant reference markers, if any, along with their positions in relation to the corner. This

description shall include the physical characteristics of the monument and its relevance to the survey.

5. When the purpose of the survey dictates, all pertinent natural or manmade features located during the course of the field survey (water courses, streets, visible utilities, etc.) shall be labeled or represented by an appropriate symbol on the plat in its proper location. When appropriate, the feature should be dimensioned and referenced to the nearest property line.

6. ...

7. A statement indicating the origin of angles or bearings shall be shown on each plat, map, or drawing. If bearings are used the basis of the bearings shall include one or more of the following:

a. - b. ...

c. reference to the record bearing of a well established line found monumented on the ground as called for in a relevant deed, or survey plat;

d. when none of the above alternatives are practical, a magnetic bearing (corrected for declination) or assumed bearing may be used.

8. If a coordinate system other than the Louisiana Coordinate System is used on a map, that system must be identified. If that system is the Louisiana Coordinate System, the appropriate zone must be shown on the map.

9. Where the new survey results differ from the prior deed information in regard to course, distance, location or quantity, the plat shall indicate such differences or discrepancies.

10. ...

11. Cemeteries and burial grounds known by the surveyor to be located within the premises being surveyed should be indicated on the plat. However, a detailed survey of the limits of the cemetery shall not be required unless directed by the client.

12. ...

13. Original section, grant, subdivision or survey lines, when an integral part of the deed, shall be shown in proper location with pertinent labeling. A measurement of course and distance must be shown to a parent tract corner, block corner, section corner, subdivision or grant corner, and existing monuments shall be indicated.

14. - 16. ...

H. - H.4. ...

5. Every metes and bounds description may be written in at least two parts. The first part, called the "General Description," should indicate the general location of the property by naming the particular lot or block, etc., within which it is located if in a subdivision or by naming the grant or aliquot part of a rectangular section within which it is located, along with the township, range, land district and meridian (if applicable), city (if applicable), parish and state. The second part called the "Particular Description," shall logically compile and incorporate calls for the following:

a. - b. ...

c. monuments (when controlling), including descriptions of type, size, material, reference monuments (if applicable), and whether found, set or replaced;

d. ...

e. the area, if stated, shall be in square feet or acres or hectares within the tolerances specified in this Chapter.

6. ...

7. The courses in the written description shall be as brief and yet as explanatory as the surveyor can construct. Brevity should not cause important locative information to be omitted, and explanatory phrases should not enlarge the description to the extent of confusion.

8. Curved boundaries shall be identified as tangent or

nontangent curves and sufficient data to define the curve shall be presented.

9. Curved boundaries shall be identified as tangent or nontangent curves and sufficient data to define the curve shall be presented. Each metes and bounds description must return to the point of beginning and close mathematically within the tolerances stated in this Chapter.

10. A statement at the end of the description should connect the description to the specific survey on which it is based and to the map or plat which depicts the survey. Such a statement may be phrased "This description is based on the boundary survey and plat made by _____, Registered Professional Land Surveyor, dated _____," or "This description is based on plat recorded _____" (give recordation data).

11. The metes and bounds description shall then be signed and sealed by the surveyor.

AUTHORITY NOTE: Promulgated in accordance with R.S.37:681, 682(9), 688.

HISTORICAL NOTE: Promulgated by the Department of Transportation and Development, Board of Registration for Professional Engineers and Land Surveyors, LR 16:1065 (December 1990), amended LR 22:714 (August 1996).

§2509. Precision Specifications and Positional Tolerances

CONDITION	C		A		D
	B	RURAL	REMARKS AND FORMULA	SUBURBAN	
	URBAN	URBAN BUSINESS			
			DISTRICT		
Unadjusted Closure (maximum allowable)	1:5,000	1:15,000	1:7,500	Traverse Loop or between	1:10,000
Angular Closure (maximum allowable)	Control Monuments				
15√N of Angles in Traverse	30"√N		10"√N	25"√N	N=Number
Accuracy of Bearing	± 40 Sec.	±15 Seconds	± 30 Sec.	In Relation to Source	±20 Sec.
Linear Distances		0.1 ft. +	0.05 ft.±	0.07 ft +	
Accurate to:	± 0.1 ft.		± 0.2 ft	± 0.15ft	Applies
when the distance (maximum allowable) per 1,000 ft.	per 1,000 ft		per 1,000 ft	per 1,000 ft	
			is not part of a closed traverse		
Positional Tolerance and Positional Accuracy of Any Monument		0.2'+		0.1'+	0.1'+
(Maximum)	AC/10,000		AC/5,000 AC/15,000	AC/7,500	AC=Length of Any Course*
Calculation of area -	0.001	0.001	0.001	0.001	
To 1 acre					
Accurate and carried to	.01	.001		.01	.001
nearest ____ (decimal	To 10 acres			.1	
place) of an acre.	.1			.01	
	To 100 acres				
	.3				.2

	.1	To 1,000 acres	.1
Elevations for Boundaries Controlled by Tides, Contours, Rivers, etc. Accurate to:		0.3 ft.	0.5 ft.
			0.2 ft.
		Based on Accepted Local Datum	0.4 ft.
Location of Improvements Structures, Paving, etc. (Tie Measurements)		± 1 ft.	± 0.5 ft
	± 0.2 ft.	± 0.1 ft.	
Adjusted Mathematical Closure to Survey (Minimum)	1:50,000	1:50,000	1:50,000
	1:50,000		

*Short courses in Categories "A" and "B" may generate Positional Errors of less than 0.01 feet. A minimum course distance of 200' should be used in calculating Positional Error.

AUTHORITY NOTE: Promulgated in accordance with R. S. 37:681, 682(9), 688.

HISTORICAL NOTE: Promulgated by the Department of Transportation and Development, Board of Registration for Professional Engineers and Land Surveyors, LR 16:1068 (December 1990), amended LR 22:716 (August 1996).

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