

NATURAL RESOURCES CODE
TITLE 2. PUBLIC DOMAIN
SUBTITLE B. SURVEYS AND SURVEYORS
CHAPTER 21. SURVEYS AND FIELD NOTES

SUBCHAPTER A. GENERAL PROVISIONS

Sec. 21.001. DEFINITIONS. In this chapter:

(1) "Commissioner" means the Commissioner of the General Land Office.

(2) "Land office" means the General Land Office.

(3) "Navigable stream" means a stream which retains an average width of 30 feet from the mouth up.

Acts 1977, 65th Leg., p. 2355, ch. 871, art. I, Sec. 1, eff. Sept. 1, 1977.

SUBCHAPTER B. SURVEYS

Sec. 21.011. SURVEYS OF PUBLIC LAND. Each survey of public land shall be made under authority of law and by a surveyor duly appointed, elected, or licensed and qualified.

Acts 1977, 65th Leg., p. 2355, ch. 871, art. I, Sec. 1, eff. Sept. 1, 1977.

Sec. 21.012. SURVEYS ON NAVIGABLE STREAMS. (a) If the circumstances of the lines previously surveyed under the law will permit, land surveyed for individuals, lying on a navigable stream, shall front one-half of the square on the stream with the line running at right angles with the general course of the stream.

(b) A navigable stream may not be crossed by the lines of a survey.

Acts 1977, 65th Leg., p. 2355, ch. 871, art. I, Sec. 1, eff. Sept. 1, 1977.

Sec. 21.013. SURVEYS NOT ON A NAVIGABLE STREAM. Surveys that are not made on navigable streams shall be in a square as far as lines previously surveyed will permit.

Acts 1977, 65th Leg., p. 2355, ch. 871, art. I, Sec. 1, eff. Sept. 1, 1977.

Sec. 21.014. SURVEY FOR DIVISION LINE. (a) Before running a division line between two settlers or occupants claiming land, the surveyor shall give written notice to the interested parties.

(b) A survey made contrary to the true intent and meaning of this section is invalid.

Acts 1977, 65th Leg., p. 2356, ch. 871, art. I, Sec. 1, eff. Sept. 1, 1977.

SUBCHAPTER C. FIELD NOTES

Sec. 21.041. FIELD NOTES OF A SURVEY OF PUBLIC LAND. The field notes of a survey of public land shall state:

- (1) the county in which the land is located;
- (2) the authority under which the survey is made and a true description of the survey;
- (3) the land by proper field notes with the necessary calls and connections for identification, observing the Spanish measurement by varas;
- (4) a diagram of the survey;
- (5) the State Plane Coordinates based on the Texas Coordinate System of 1927, the Texas Coordinate System of 1983, or an alternative coordinate system adopted under Section [21.0711](#) values for the beginning point on the survey with appropriate reference to zone, mapping angle, grid distances, acreage and the N.G.S. Station to which the survey is tied;
- (6) the names of the field survey personnel;
- (7) the date the survey was made; and
- (8) the signature of the surveyor.

Acts 1977, 65th Leg., p. 2356, ch. 871, art. I, Sec. 1, eff. Sept. 1, 1977. Amended by Acts 1985, 69th Leg., ch. 624, Sec. 1, eff. Sept. 1, 1985; Acts 1987, 70th Leg., ch. 616, Sec. 1, eff. Sept. 1, 1987. Amended by:

Acts 2021, 87th Leg., R.S., Ch. 381 (S.B. [1072](#)), Sec. 1, eff. September 1, 2021.

Sec. 21.042. SURVEYOR'S CERTIFICATION. (a) The surveyor shall certify officially:

- (1) to the correctness of the survey;
- (2) that the survey was made according to law;
- (3) that the survey was actually made in the field;

and

(4) that the field notes are duly recorded, giving the book and page.

(b) If the survey was made by a deputy, the county surveyor shall certify officially that:

- (1) he has examined the field notes;
- (2) he finds them correct; and
- (3) he has determined that the survey is duly

recorded, giving the book and page of record.

Acts 1977, 65th Leg., p. 2356, ch. 871, art. I, Sec. 1, eff. Sept. 1, 1977.

Sec. 21.043. LOST FIELD NOTES. (a) If the original field notes of an authorized survey are lost or destroyed, the owner or his agent may obtain a certified copy of the record from the county surveyor on making an affidavit of the loss or destruction and filing it in the office of the county surveyor where the survey was recorded.

(b) The certified copy shall be as valid as the original record and shall secure to the owner all the rights before the commissioner that the original would have secured.

Acts 1977, 65th Leg., p. 2356, ch. 871, art. I, Sec. 1, eff. Sept. 1, 1977.

Sec. 21.044. INCORRECT FIELD NOTES. (a) The commissioner shall have a plain statement of errors in any field notes submitted to the land office, together with a sketch of the map, forwarded by mail, or personally by the interested party, to the surveyor who made the survey, with a request to correct and return the field notes and map.

(b) The surveyor shall correct and return the field notes

and map at once without further charge.

(c) If the conflict exists only on the map or in the field notes, the surveyor need only officially certify to the facts and furnish a true sketch of the survey with its connections.

(d) This section does not require the commissioner or a surveyor to make a new survey of land or a portion of the land after a survey of the land is accepted by the commissioner for filing in the official records of the land office.

Acts 1977, 65th Leg., p. 2356, ch. 871, art. I, Sec. 1, eff. Sept. 1, 1977.

Amended by:

Acts 2005, 79th Leg., Ch. 160 (H.B. 3340), Sec. 1, eff. September 1, 2005.

SUBCHAPTER D. TEXAS COORDINATE SYSTEMS

Sec. 21.071. ADOPTION OF COORDINATE SYSTEMS. (a) The systems of plane coordinates which have been established by the National Oceanic Survey/National Geodetic Survey for defining and stating the positions or locations of points on the surface of the earth within the State of Texas are adopted and will be known and designated as the Texas Coordinate System of 1927 and the Texas Coordinate System of 1983.

(b) Each system is a separate system and must be used as a separate system.

Acts 1977, 65th Leg., p. 2357, ch. 871, art. I, Sec. 1, eff. Sept. 1, 1977. Amended by Acts 1987, 70th Leg., ch. 616, Sec. 3, eff. Sept. 1, 1987.

Sec. 21.0711. ALTERNATIVE COORDINATE SYSTEMS. (a) The Texas Spatial Reference Center at Texas A&M University--Corpus Christi established under Section 88.503, Education Code, may adopt a revised state coordinate system that may be used for purposes of this subchapter under the authority granted to the center as the state's facilitator of the National Spatial Reference System.

(b) A revised coordinate system adopted under Subsection (a) is an official state coordinate system.

Added by Acts 2021, 87th Leg., R.S., Ch. 381 (S.B. 1072), Sec. 2, eff. September 1, 2021.

Sec. 21.072. PURPOSE AND LIMITATIONS OF COORDINATE SYSTEMS.

(a) The only purpose for adopting the Texas Coordinate System of 1927 and the Texas Coordinate System of 1983 is to recognize a system for use in the State of Texas to definitely ascertain positions on the surface of the earth.

(b) Except as provided in Section 21.041 of this code, the use of a system is not required, and the provisions of this subchapter shall not be construed to set aside or disturb any corner or survey already established.

(c) The use of the term "Texas Coordinate System" on a map, report, survey, or other document is limited to coordinates based on a Texas Coordinate System as defined in this subchapter.

Acts 1977, 65th Leg., p. 2357, ch. 871, art. I, Sec. 1, eff. Sept. 1, 1977. Amended by Acts 1985, 69th Leg., ch. 624, Sec. 2, eff. Sept. 1, 1985; Acts 1987, 70th Leg., ch. 616, Sec. 4, eff. Sept. 1, 1987.

Sec. 21.073. DIVISION OF STATE INTO ZONES. For the purpose of using a system, the state is divided into five zones:

- (1) the North Zone;
- (2) the North Central Zone;
- (3) the Central Zone;
- (4) the South Central Zone; and
- (5) the South Zone.

Acts 1977, 65th Leg., p. 2357, ch. 871, art. I, Sec. 1, eff. Sept. 1, 1977. Amended by Acts 1987, 70th Leg., ch. 616, Sec. 5, eff. Sept. 1, 1987.

Sec. 21.074. AREA WITHIN ZONES. (a) The area included in the following counties constitutes the North Zone: Armstrong, Briscoe, Carson, Castro, Childress, Collingsworth, Dallam, Deaf Smith, Donley, Gray, Hall, Hansford, Hartley, Hemphill, Hutchinson, Lipscomb, Moore, Ochiltree, Oldham, Parmer, Potter, Randall, Roberts, Sherman, Swisher, and Wheeler.

(b) The area included in the following counties constitutes

the North Central Zone: Andrews, Archer, Bailey, Baylor, Borden, Bowie, Callahan, Camp, Cass, Clay, Cochran, Collin, Cooke, Cottle, Crosby, Dallas, Dawson, Delta, Denton, Dickens, Eastland, Ellis, Erath, Fannin, Fisher, Floyd, Foard, Franklin, Gaines, Garza, Grayson, Gregg, Hale, Hardeman, Harrison, Haskell, Henderson, Hill, Hockley, Hood, Hopkins, Howard, Hunt, Jack, Johnson, Jones, Kaufman, Kent, King, Knox, Lamar, Lamb, Lubbock, Lynn, Marion, Martin, Mitchell, Montague, Morris, Motley, Navarro, Nolan, Palo Pinto, Panola, Parker, Rains, Red River, Rockwall, Rusk, Scurry, Shackelford, Smith, Somervell, Stephens, Stonewall, Tarrant, Taylor, Terry, Throckmorton, Titus, Upshur, Van Zandt, Wichita, Wilbarger, Wise, Wood, Yoakum, and Young.

(c) The area included in the following counties constitutes the Central Zone: Anderson, Angelina, Bastrop, Bell, Blanco, Bosque, Brazos, Brown, Burleson, Burnet, Cherokee, Coke, Coleman, Comanche, Concho, Coryell, Crane, Crockett, Culberson, Ector, El Paso, Falls, Freestone, Gillespie, Glasscock, Grimes, Hamilton, Hardin, Houston, Hudspeth, Irion, Jasper, Jeff Davis, Kimble, Lampasas, Lee, Leon, Liberty, Limestone, Llano, Loving, McLennan, McCulloch, Madison, Mason, Menard, Midland, Milam, Mills, Montgomery, Nacogdoches, Newton, Orange, Pecos, Polk, Reagan, Reeves, Robertson, Runnels, Sabine, San Augustine, San Jacinto, San Saba, Schleicher, Shelby, Sterling, Sutton, Tom Green, Travis, Trinity, Tyler, Upton, Walker, Ward, Washington, Williamson, and Winkler.

(d) The area included in the following counties constitutes the South Central Zone: Aransas, Atascosa, Austin, Bandera, Bee, Bexar, Brazoria, Brewster, Caldwell, Calhoun, Chambers, Colorado, Comal, DeWitt, Dimmit, Edwards, Fayette, Fort Bend, Frio, Galveston, Goliad, Gonzales, Guadalupe, Harris, Hays, Jackson, Jefferson, Karnes, Kendall, Kerr, Kinney, LaSalle, Lavaca, Live Oak, McMullen, Matagorda, Maverick, Medina, Presidio, Real, Refugio, Terrell, Uvalde, Val Verde, Victoria, Waller, Wharton, Wilson, and Zavala.

(e) The area included in the following counties constitutes the South Zone: Brooks, Cameron, Duval, Hidalgo, Jim Hogg, Jim Wells, Kenedy, Kleberg, Nueces, San Patricio, Starr, Webb, Willacy,

and Zapata.

Acts 1977, 65th Leg., p. 2357, ch. 871, art. I, Sec. 1, eff. Sept. 1, 1977.

Sec. 21.075. ZONE NAMES IN LAND DESCRIPTION. (a) As established for use in the North Zone, the Texas Coordinate System of 1927 or the Texas Coordinate System of 1983 shall be named, and in any land description in which it is used it shall be designated, the "Texas Coordinate System of 1927, North Zone" or "Texas Coordinate System of 1983, North Zone."

(b) As established for use in the North Central Zone, the Texas Coordinate System of 1927 or the Texas Coordinate System of 1983 shall be named, and in any land description in which it is used it shall be designated, the "Texas Coordinate System of 1927, North Central Zone" or "Texas Coordinate System of 1983, North Central Zone."

(c) As established for use in the Central Zone, the Texas Coordinate System of 1927 or the Texas Coordinate System of 1983 shall be named, and in any land description in which it is used it shall be designated, the "Texas Coordinate System of 1927, Central Zone" or "Texas Coordinate System of 1983, Central Zone."

(d) As established for use in the South Central Zone, the Texas Coordinate System of 1927 or the Texas Coordinate System of 1983 shall be named, and in any land description in which it is used it shall be designated, the "Texas Coordinate System of 1927, South Central Zone" or "Texas Coordinate System of 1983, South Central Zone."

(e) As established for use in the South Zone, the Texas Coordinate System of 1927 or the Texas Coordinate System of 1983 shall be named, and in any land description in which it is used it shall be designated, the "Texas Coordinate System of 1927, South Zone" or "Texas Coordinate System of 1983, South Zone."

Acts 1977, 65th Leg., p. 2358, ch. 871, art. I, Sec. 1, eff. Sept. 1, 1977. Amended by Acts 1987, 70th Leg., ch. 616, Sec. 6, eff. Sept. 1, 1987.

Sec. 21.076. DEFINITIONS. (a) For the purpose of precisely

defining the Texas Coordinate System of 1927 and the Texas Coordinate System of 1983, the following definitions are adopted:

(1) The Texas Coordinate System of 1927, North Zone, and the Texas Coordinate System of 1983, North Zone, is a Lambert conformal projection, having standard parallels at north latitudes $34^{\circ} 39'$ and $36^{\circ} 11'$, along which parallels the scale shall be exact. The origin of coordinates is at the intersection of the meridian $101^{\circ} 30'$ west longitude and the parallel $34^{\circ} 00'$ north latitude. The origin of the 1927 coordinate system is given the coordinates: $x = 2,000,000$ feet (720,000 varas) and $y = 0$ feet (0 varas). The origin of the 1983 coordinate system is given the coordinates: $x = 200,000$ meters (236,220 varas) and $y = 1,000,000$ meters (1,181,100 varas).

(2) The Texas Coordinate System of 1927, North Central Zone, and the Texas Coordinate System of 1983, North Central Zone, is a Lambert conformal projection, having standard parallels at north latitudes $32^{\circ} 08'$ and $33^{\circ} 58'$, along which parallels the scale shall be exact. The origin of coordinates for the 1927 coordinate system is at the intersection of the meridian $97^{\circ} 30'$ west longitude and the parallel $31^{\circ} 40'$ north latitude. This origin is given the coordinates: $x = 2,000,000$ feet (720,000 varas) and $y = 0$ feet (0 varas). The origin of coordinates for the 1983 coordinate system is at the intersection of the meridian $98^{\circ} 30'$ west longitude and the parallel $31^{\circ} 40'$ north latitude. This origin is given the coordinates: $x = 600,000$ meters (708,660 varas) and $y = 2,000,000$ meters (2,362,200 varas).

(3) The Texas Coordinate System of 1927, Central Zone, and the Texas Coordinate System of 1983, Central Zone, is a Lambert conformal projection, having standard parallels at north latitudes $30^{\circ} 07'$ and $31^{\circ} 53'$, along which parallels the scale shall be exact. The origin of coordinates is at the intersection of the meridian $100^{\circ} 20'$ west longitude and the parallel $29^{\circ} 40'$ north latitude. The origin of the 1927 coordinate system is given the coordinates: $x = 2,000,000$ feet (720,000 varas) and $y = 0$ feet (0 varas). The origin of the 1983 coordinate system is given the coordinates: $x = 700,000$ meters (826,770 varas) and $y = 3,000,000$ meters (3,543,300 varas).

(4) The Texas Coordinate System of 1927, South Central Zone, and the Texas Coordinate System of 1983, South Central Zone,

is a Lambert conformal projection, having standard parallels at north latitudes $28^{\circ} 23'$ and $30^{\circ} 17'$, along which parallels the scale shall be exact. The origin of coordinates is at the intersection of the meridian of $99^{\circ} 00'$ west longitude and the parallel $27^{\circ} 50'$ north latitude. The origin of the 1927 coordinate system is given the coordinates: $x = 2,000,000$ feet (720,000 varas) and $y = 0$ feet (0 varas). The origin of the 1983 coordinate system is given the coordinates: $x = 600,000$ meters (708,660 varas) and $y = 4,000,000$ meters (4,724,400 varas).

(5) The Texas Coordinate System of 1927, South Zone, and the Texas Coordinate System of 1983, South Zone, is a Lambert conformal projection, having standard parallels at north latitudes $26^{\circ} 10'$ and $27^{\circ} 50'$, along which parallels the scale shall be exact. The origin of coordinates is at the intersection of the meridian $98^{\circ} 30'$ west longitude and the parallel $25^{\circ} 40'$ north latitude. The origin of the 1927 coordinate system is given the coordinates: $x = 2,000,000$ feet (720,000 varas) and $y = 0$ feet (0 varas). The origin of the 1983 coordinate system is given the coordinates: $x = 300,000$ meters (354,330 varas) and $y = 5,000,000$ meters (5,905,500 varas).

(b) The position of the Texas Coordinate System of 1927 and the Texas Coordinate System of 1983 shall be as marked on the ground by triangulation or traverse stations established in conformity with the standards adopted by the National Oceanic and Atmospheric Administration for first-order and second-order work, whose geodetic positions have been rigidly adjusted on the North American datum of 1927 or 1983, and whose coordinates have been computed on the system defined in this subchapter. Any of these stations may be used for establishing a survey connection with the Texas Coordinate System of 1927 or the Texas Coordinate System of 1983.

Acts 1977, 65th Leg., p. 2358, ch. 871, art. I, Sec. 1, eff. Sept. 1, 1977. Amended by Acts 1987, 70th Leg., ch. 616, Sec. 7, eff. Sept. 1, 1987.

Sec. 21.077. UNIT OF MEASUREMENT. The unit of measurement in this subchapter has the following values, based on the International Meter established by the National Bureau of Standards:

- (1) one meter = 39.37 inches exactly;
- (2) one U.S. survey foot = 0.3048006096 meter;
- (3) one vara = 33-1/3 inches exactly; and
- (4) one international foot = 0.3048 meter exactly.

Acts 1977, 65th Leg., p. 2359, ch. 871, art. I, Sec. 1, eff. Sept. 1, 1977.

Amended by:

Acts 2021, 87th Leg., R.S., Ch. 381 (S.B. [1072](#)), Sec. 3, eff. September 1, 2021.

Sec. 21.078. TERMS "X COORDINATE" AND "Y COORDINATE". (a) The plane coordinate values for a point on the earth's surface, to be used in expressing the position or location of the point in the appropriate zone, of either system, shall consist of two distances, expressed in U.S. Survey Feet and decimals of a foot or varas or tenths of a vara when using the Texas Coordinate System of 1927 and expressed in meters and decimals of a meter, in U.S. Survey Feet or decimals of a foot, or in varas or tenths of a vara when using the Texas Coordinate System of 1983.

(b) One of these distances, to be known as the "x coordinate," shall give the position in an east-and-west direction; the other, to be known as the "y coordinate," shall give the position in a north-and-south direction.

(c) These coordinates shall be made to depend on and conform to the plane rectangular coordinate values for the monumented points of the North American Horizontal Geodetic Control Network as published by the National Oceanic Survey/National Geodetic Survey, or its successors, and whose plane coordinates have been computed on the systems defined in this subchapter.

(d) Any station described in this section may be used for establishing a survey connection to either the Texas Coordinate System of 1927 or the Texas Coordinate System of 1983.

Acts 1977, 65th Leg., p. 2359, ch. 871, art. I, Sec. 1, eff. Sept. 1, 1977. Amended by Acts 1987, 70th Leg., ch. 616, Sec. 8, eff. Sept. 1, 1987; Acts 1993, 73rd Leg., ch. 991, Sec. 4, eff. Sept. 1, 1993.

Sec. 21.079. LAND IN MORE THAN ONE ZONE. If a tract of land

to be defined by a single description extends from one zone into another of the coordinate zones, the positions of all points on its boundaries may be referred to by either of the zones, the zone which is used being specifically named in the description.

Acts 1977, 65th Leg., p. 2360, ch. 871, art. I, Sec. 1, eff. Sept. 1, 1977. Amended by Acts 1987, 70th Leg., ch. 616, Sec. 9, eff. Sept. 1, 1987.