

Title 1: General Provisions

Chapter 17: Vermont Coordinate System

1 V.S.A. § 671

- § 671. Vermont Coordinate Systems defined

The following abbreviations will be used throughout this law to increase conciseness:

- NSRS = National Spatial Reference System or its successors
- NGS = National Geodetic Survey or its successors
- SPCS = State Plane Coordinate System or its successors
- VTSPCS = Vermont State Plane Coordinate System

The most recent systems of plane coordinates which have been established by NGS, ~~the National Ocean Service/National Geodetic Survey (formerly the U. S. Coast and Geodetic Survey) or its successors,~~ based on the NSRS, and known as the SPCS for defining and stating the ~~horizontal~~ geographic positions or locations of points on the surface of the earth within the State of Vermont ~~are hereafter to be known and designated as the "Vermont Coordinate System 1927 and the Vermont Coordinate System 1983."~~ shall be known as the "Vermont State Plane Coordinate System" (VTSPCS). The terms "Vermont Coordinate System" and "Vermont Plane Coordinate System" ~~is~~ are synonymous with the term "Vermont State Plane Coordinate System." Previous versions of this system include "Vermont Coordinate System 1927" and "Vermont Coordinate System 1983". (Amended 1987, No. 169 (Adj. Sess.), § 1, eff. May 3, 1988; 2007, No. 164 (Adj. Sess.), § 38.)

1 V.S.A. § 672

- § 672. Coordinates defined

(a) The plane coordinates ~~values for~~ of a point on the earth's surface, to be used to in expressing the ~~horizontal geographic~~ position or location of ~~such the~~ point in the appropriate zone of or the Vermont Coordinate Systems, shall consist of two distances, expressed in meters and decimals of a meter, or international feet and decimals of a foot when using the VTSPCS or its successors, expressed in U.S. Survey feet and decimals of a foot when using the Vermont Coordinate System 1927 and expressed in meters and decimals of a meter, or U.S. Survey feet and decimals of a foot when using the Vermont Coordinate System 1983. One of these distances, to be known as the "East or x-coordinate," ~~shall give the position in an east and west direction~~ shall give the distance east of the Y axis; the other, to be known as the "North or y-coordinate," shall give the ~~position in a north and south direction~~ distance north of the X axis. The Y axis of any zone shall be parallel with the central meridian of that zone. The X axis of

any zone shall be at right angles to the central meridian of that zone. These coordinates shall be made to depend upon and conform to plane rectangular coordinate values for the monumented points of the National Spatial Reference System established by the U. S. Coast and Geodetic Survey, its predecessor, or its successors. (Amended 1987, No. 169 (Adj. Sess.), § 2, eff. May 3, 1988; 2007, No. 164 (Adj. Sess.), § 39.)

- (b) One (1) international foot equals 0.3048 meter exactly. For conversion of meters to international feet, multiply the meters by 3.280839895.
- (c) Beginning on January 1, 2023 the international foot shall be used for all foot distances and coordinates unless such distances or coordinates are tied to one of the legacy systems. U.S. survey foot which equals (1200)/(3937) meter will be superseded by the international foot specified in subsection (b), following guidance from the National Institute of Standards and Technology (NIST), NGS, National Ocean Service (NOS), and National Oceanic and Atmospheric Administration (NOAA).

1 V.S.A. § 673

- **§ 673. Additional definitions**

(a) The Vermont State Plane Coordinate System is the most recent system of plane coordinates which has been established by NGS, based on the NSRS, and known as the SPCS, for defining and stating the geographic positions or locations of points within the State of Vermont and shall be known as the Vermont State Plane Coordinate System.

~~(a)~~ (b) For purposes of more precisely defining the Vermont Coordinate System 1927, the following definition by the U. S. Coast and Geodetic Survey (now the National Ocean Service/National Geodetic Survey) is adopted:

~~(b)~~ (c) The Vermont Coordinate System 1927 is a transverse Mercator projection of the Clarke spheroid of 1866, having a central meridian 72 degrees 30 minutes west of Greenwich, on which meridian the scale is set one part in 28,000 too small. The origin of coordinates is at the intersection of the meridian 72 degrees 30 minutes west of Greenwich and the parallel 42 degrees 30 minutes north latitude. This origin is given the coordinates: $x = 500,000$ feet and $y = 0$ feet.

~~(c)~~ (d) For purposes of defining the Vermont Coordinate System 1983, the following definition by the National Ocean Service/National Geodetic Survey is adopted. The Vermont Coordinate System 1983 is a transverse Mercator projection of the GRS 80 ellipsoid, having a central meridian 72 degrees 30 minutes west of Greenwich, on which meridian the scale is set one part in 28,000 too small. The origin of coordinates is at the intersection of the meridian 72 degrees 30 minutes west of Greenwich and the parallel 42 degrees 30 minutes north

latitude. This origin is given the coordinates: $x = 500,000$ meters and $y = 0$ meters.

~~(d)~~ (e) The position of the Vermont Coordinate System 1983 shall be marked on the ground by existing or future survey stations established in conformity with standards adopted by the National Geodetic Survey or its successors for first-order or second-order work, or both, whose geodetic positions have been rigidly adjusted to the North American Datum 1983 (NAD 1983). (Amended 1987, No. 169 (Adj. Sess.), § 3, eff. May 3, 1988; 1993, No. 6, § 1.)

1 V.S.A. § 674

- **§ 674. Record**

Coordinates based on ~~either~~ any Vermont Coordinate System, purporting to define the position of a point on a land boundary, presented to be recorded in any public land records or deed records shall be accompanied by a specific statement as to their basis and a description of the survey method used to determine them on the record plat or description of the survey. (Amended 1987, No. 169 (Adj. Sess.), § 4, eff. May 3, 1988; 1993, No. 6, § 2.)

1 V.S.A. § 675

- **§ 675. Restriction**

The use of the terms "Vermont State Plane Coordinate System", "Vermont Coordinate System 1927" or "Vermont Coordinate System 1983" on any map, report of survey, or other document shall be limited to coordinates based on the respective Vermont Coordinate Systems as defined in this chapter. (Amended 1987, No. 169 (Adj. Sess.), § 5, eff. May 3, 1988.)

1 V.S.A. § 676

- **§ 676. Description**

For the purposes of describing the location of any survey station or land boundary corner in the State of Vermont, it shall be considered a complete, legal, and satisfactory description of such location to give the position of such survey station or land boundary corner on the system of plane coordinates as defined in this chapter. (Amended 1987, No. 169 (Adj. Sess.), § 6, eff. May 3, 1988.)

1 V.S.A. § 677

- **§ 677. Construction**

Nothing contained in this chapter shall require any purchaser or mortgagee of real property to rely solely on a description, any part of which depends entirely upon the Vermont Coordinate Systems. (Amended 1987, No. 169 (Adj. Sess.), § 7, eff. May 3, 1988.)

1 V.S.A. § 678

- **§ 678. Severability**

If any provision of this chapter shall be declared invalid, such invalidity shall not affect any other portion of this chapter which can be given effect without the invalid provision; and to this end, the provisions of this chapter are declared severable. (Added 1987, No. 169 (Adj. Sess.), § 8, eff. May 3, 1988.)

1 V.S.A. § 679

- **§ 679. Transition**

The Vermont Coordinate System 1927 shall not be used for projects commenced after January 1, 2000; and the Vermont Coordinate System 1983 shall not be used for projects commenced after release of the Vermont State Plane Coordinate System by NGS; the VTSPCS will be the sole system for projects commenced after ~~this date~~ its release. (Added 1987, No. 169 (Adj. Sess.), § 9, eff. May 3, 1988.)