

1 S.154

2 An act relating to the Vermont State Plane Coordinate System

3 It is hereby enacted by the General Assembly of the State of Vermont:

4 Sec. 1. 1 V.S.A. chapter 17 is amended to read:

5 CHAPTER 17. VERMONT STATE PLANE COORDINATE SYSTEM

6 § 671. VERMONT COORDINATE SYSTEMS DEFINED

7 The ~~systems~~ most recent system of plane coordinates, known as the State
8 Plane Coordinate System, which have that has been established by the ~~National~~
9 ~~Ocean Service/National Geodetic Survey (formerly the U. S. Coast and~~
10 ~~Geodetic Survey)~~ National Geodetic Survey or its successors for defining and
11 stating the horizontal positions or locations of points on the surface of the earth
12 within the State of Vermont ~~are hereafter to be known and designated as the~~
13 ~~“Vermont Coordinate System 1927 and the Vermont Coordinate System~~
14 ~~1983.”~~ shall be known as the Vermont State Plane Coordinate System. The
15 ~~term~~ terms “Vermont Coordinate System” ~~is~~ and “Vermont Plane Coordinate
16 System” are synonymous with the term “Vermont State Plane Coordinate
17 System.” Previous versions of this system include “Vermont Coordinate
18 System 1927” and “Vermont Coordinate System 1983.”

19 § 672. COORDINATES DEFINED

20 (a) The plane ~~coordinate values for~~ coordinates of a point on the earth’s
21 surface, to be used to express ~~to express~~ for expressing the ~~horizontal~~ geographic position

1 or location of ~~such~~ the point on in the appropriate zone of the Vermont State
2 Plane Coordinate Systems, shall consist of two distances; expressed in:

3 (1) meters and decimals of a meter, or international feet and decimals of
4 a foot, when using the Vermont State Plane Coordinate System or its
5 successors;

6 (2) U.S. Survey feet and decimals of a foot when using the Vermont
7 Coordinate System 1927 ~~and;~~ or

8 (3) ~~expressed in~~ meters and decimals of a meter, or U.S. Survey feet and
9 decimals of a foot, when using the Vermont Coordinate System 1983.

10 (b) One of ~~these~~ the distances described in subsection (a) of this section, to

11 be known as the “east or x-coordinate,” shall give the ~~position in an east and~~
12 ~~west direction~~ distance east of the y-axis; the other distance, to be known as the
13 “north or y-coordinate,” shall give the ~~position in a north and south direction~~
14 distance north of the x-axis. ~~These coordinates shall be made to depend upon~~
15 ~~and conform to plane rectangular coordinate values for the monumented points~~
16 ~~of the National Spatial Reference System established by the U. S. Coast and~~
17 ~~Geodetic Survey, its predecessor, or its successors~~ The y-axis of any zone shall
18 be parallel with the central meridian of that zone. The x axis of any zone shall
19 be at right angles to the central meridian of that zone.

20 (c) One international foot equals 0.3048 meter exactly. For conversion of
21 meters to international feet, multiply the meters by 3.280839895.

1 (d) The international foot shall be used for all foot distances and
2 coordinates unless the distances or coordinates are tied to one of the legacy
3 systems referenced in this section.

4 (e) The U.S. survey foot, which equals (1200)/(3937) meter, shall be
5 superseded by the international foot specified in subsection (b) of this section,
6 following guidance from the National Institute of Standards and Technology,
7 the National Geodetic Survey, the National Ocean Service, and the National
8 Oceanic and Atmospheric Administration.

9 § 673. ADDITIONAL DEFINITIONS

10 (a) The Vermont State Plane Coordinate System is the most recent system
11 of plane coordinates established by the National Geodetic Survey, based on the
12 National Spatial Reference System, and known as the State Plane Coordinate
13 System, for defining and stating the geographic positions or locations of points
14 within the State of Vermont and shall be known as the Vermont State Plane
15 Coordinate System.

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

19 ~~(b)~~(c) The Vermont Coordinate System 1927 is a transverse Mercator
20 projection of the Clarke spheroid of 1866, having a central meridian 72 degrees
21 30 minutes west of Greenwich, on which meridian the scale is set one part in

1 28,000 too small. The origin of coordinates is at the intersection of the
2 meridian 72 degrees 30 minutes west of Greenwich and the parallel 42 degrees
3 30 minutes north latitude. This origin is given the coordinates: $x = 500,000$
4 feet and $y = 0$ feet.

5 ~~(e)~~(d) For purposes of defining the Vermont Coordinate System 1983, the
6 following definition by the National Ocean Service/National Geodetic Survey
7 is adopted. The Vermont Coordinate System 1983 is a transverse Mercator
8 projection of the GRS 80 ellipsoid, having a central meridian 72 degrees 30
9 minutes west of Greenwich, on which meridian the scale is set one part in
10 28,000 too small. The origin of coordinates is at the intersection of the
11 meridian 72 degrees 30 minutes west of Greenwich and the parallel 42 degrees
12 30 minutes north latitude. This origin is given the coordinates: $x = 500,000$
13 meters and $y = 0$ meters.

14 ~~(d)~~(e) The position of the Vermont Coordinate System 1983 shall be
15 marked on the ground by existing or future survey stations established in
16 conformity with standards adopted by the National Geodetic Survey or its
17 successors for first-order or second-order work, or both, whose geodetic
18 positions have been rigidly adjusted to the North American Datum 1983 (NAD
19 1983).

1 § 674. RECORD

2 Coordinates based on ~~either~~ any Vermont Coordinate System, purporting to
3 define the position of a point on a land boundary, presented to be recorded in
4 any public land records or deed records shall be accompanied by a specific
5 statement as to their basis and a description of the survey method used to
6 determine them on the record plat or description of the survey.

7 § 675. RESTRICTION

8 The use of the terms “Vermont State Plane Coordinate System,” “Vermont
9 Coordinate System 1927,” or “Vermont Coordinate System 1983” on any map,
10 report of survey, or other document shall be limited to coordinates based on the
11 respective Vermont Coordinate Systems System as defined in this chapter.

12 * * *

13 § 679. TRANSITION

14 The Vermont Coordinate System 1927 shall not be used for projects
15 commenced after January 1, 2000; and the Vermont Coordinate System 1983
16 ~~will be the sole system for projects commenced after this date~~ shall not be used
17 for projects commenced after release of the State Plane Coordinate System
18 2022 by the National Geodetic Survey.

19 Sec. 2. EFFECTIVE DATE

20 This act shall take effect on passage.