

FIRST ENGROSSMENT

ENGROSSED SENATE BILL NO. 2260

Introduced by

Senators Burckhard, Barta, Roers

Representatives Berg, Satrom

1 A BILL for an Act to amend and reenact sections 47-20.2-01, 47-20.2-02, 47-20.2-03,
2 47-20.2-05, and 47-20.2-06 of the North Dakota Century Code, relating to the North Dakota
3 coordinate system zones.

4 **BE IT ENACTED BY THE LEGISLATIVE ASSEMBLY OF NORTH DAKOTA:**

5 **SECTION 1. AMENDMENT.** Section 47-20.2-01 of the North Dakota Century Code is
6 amended and reenacted as follows:

7 **47-20.2-01. North Dakota coordinate system zones defined.**

8 1. The systems of plane coordinates which have been established by the national
9 oceanic and atmospheric administration national ocean survey/national geodetic
10 survey or its successors for defining and stating the geographic positions or locations
11 of points on the surface of the earth within this state are, ~~as of July 1, 1989,~~ to be
12 known and designated as the North Dakota coordinate system of 1927 ~~and~~ the North
13 Dakota coordinate system of 1983, the North Dakota statewide coordinate system of
14 2022, and the North Dakota low-distortion coordinate system of 2022. For the purpose
15 of the use of ~~these~~ the North Dakota coordinate systems of 1927 and 1983, the state is
16 divided into a north zone and a south zone:

- 17 4. a. The area now included in the following counties constitutes the north zone:
18 Divide, Williams, McKenzie, Mountrail, Burke, Renville, Ward, McLean, Bottineau,
19 McHenry, Sheridan, Pierce, Rolette, Towner, Benson, Wells, Foster, Eddy,
20 Ramsey, Cavalier, Pembina, Walsh, Nelson, Grand Forks, Griggs, Steele, Traill.
21 2. b. The area now included in the following counties constitutes the south zone:
22 Dunn, Golden Valley, Slope, Bowman, Adams, Hettinger, Stark, Mercer, Oliver,

1 Morton, Grant, Sioux, Emmons, Burleigh, Kidder, Logan, McIntosh, Stutsman,
2 Barnes, LaMoure, Dickey, Cass, Ransom, Sargent, Richland.

3 2. For the purpose of the use of the North Dakota statewide coordinate system of 2022,
4 the state is covered by one, statewide zone.

5 3. For the purpose of the use of the North Dakota low-distortion coordinate system of
6 2022, the state has been divided into sixteen, low-distortion projection zones:

7 a. Beulah zone, which includes Dunn, McLean, and Mercer counties.

8 b. Bismarck zone, which includes Burleigh, Kidder, Morton, and Oliver counties.

9 c. Bottineau zone, which includes Bottineau, Cavalier, Rolette, and Towner
10 counties.

11 d. Bowman zone, which includes Adams, Bowman, Hettinger, and Slope counties.

12 e. Cannon Ball zone, which includes Grant and Sioux counties.

13 f. Carrington zone, which includes Eddy, Foster, Griggs, Sheridan, and Wells
14 counties.

15 g. Devils Lake zone, which includes Benson, McHenry, Nelson, Pierce, and Ramsey
16 counties.

17 h. Dickinson zone, which includes Billings, Golden Valley, and Stark counties.

18 i. Fargo zone, which includes Cass, Ransom, Richland, and Sargent counties.

19 j. Grand Forks zone, which includes Grand Forks, Pembina, Steele, Traill, and
20 Walsh counties.

21 k. Jamestown zone, which includes Barnes and Stutsman counties.

22 l. Linton zone, which includes Emmons, Logan, and McIntosh counties.

23 m. Minot zone, which includes Renville and Ward counties.

24 n. New Town zone, which includes Burke and Mountrail counties.

25 o. Oakes zone, which includes Dickey and LaMoure counties.

26 p. Williston zone, which includes Divide, McKenzie, and Williams counties.

27 **SECTION 2. AMENDMENT.** Section 47-20.2-02 of the North Dakota Century Code is
28 amended and reenacted as follows:

29 **47-20.2-02. North Dakota coordinate system names defined.**

30 1. As established for use in the north zone, the North Dakota coordinate system of 1927
31 or the North Dakota coordinate system of 1983 is named, and in any land description

1 in which it is used it must be designated the North Dakota coordinate system of 1927,
2 north zone, or the North Dakota coordinate system of 1983, north zone. As established
3 for use in the south zone, the North Dakota coordinate system of 1927 or the North
4 Dakota coordinate system of 1983 is named, and in any land description in which it is
5 used it must be designated the North Dakota coordinate system of 1927, south zone,
6 or the North Dakota coordinate system of 1983, south zone.

7 2. As established for use in the statewide zone, the North Dakota statewide coordinate
8 system of 2022 is named, and in any land description in which it is used, it must be
9 designated the North Dakota statewide coordinate system of 2022.

10 3. As established for use in the:

11 a. Beulah zone, the North Dakota coordinate system of 2022 is named, and in any
12 land description in which it is used, it must be designated the Beulah zone of the
13 North Dakota coordinate system of 2022;

14 b. Bismarck zone, the North Dakota coordinate system of 2022 is named, and in
15 any land description in which it is used, it must be designated the Bismarck zone
16 of the North Dakota coordinate system of 2022;

17 c. Bottineau zone, the North Dakota coordinate system of 2022 is named, and in
18 any land description in which it is used, it must be designated the Bottineau zone
19 of the North Dakota coordinate system of 2022;

20 d. Bowman zone, the North Dakota coordinate system of 2022 is named, and in any
21 land description in which it is used, it must be designated the Bowman zone of
22 the North Dakota coordinate system of 2022;

23 e. Cannon Ball zone, the North Dakota coordinate system of 2022 is named, and in
24 any land description in which it is used, it must be designated the Cannon Ball
25 zone of the North Dakota coordinate system of 2022;

26 f. Carrington zone, the North Dakota coordinate system of 2022 is named, and in
27 any land description in which it is used it must be designated the Carrington zone
28 of the North Dakota coordinate system of 2022;

29 g. Devils Lake zone, the North Dakota coordinate system of 2022 is named, and in
30 any land description in which it is used, it must be designated the Devils Lake
31 zone of the North Dakota coordinate system of 2022;

- 1 h. Dickinson zone, the North Dakota coordinate system of 2022 is named, and in
2 any land description in which it is used, it must be designated the Dickinson zone
3 of the North Dakota coordinate system of 2022;
- 4 i. Fargo zone, the North Dakota coordinate system of 2022 is named, and in any
5 land description in which it is used, it must be designated the Fargo zone of the
6 North Dakota coordinate system of 2022;
- 7 j. Grand Forks zone, the North Dakota coordinate system of 2022 is named, and in
8 any land description in which it is used, it must be designated the Grand Forks
9 zone of the North Dakota coordinate system of 2022;
- 10 k. Jamestown zone, the North Dakota coordinate system of 2022 is named, and in
11 any land description in which it is used, it must be designated the Jamestown
12 zone of the North Dakota coordinate system of 2022;
- 13 l. Linton zone, the North Dakota coordinate system of 2022 is named, and in any
14 land description in which it is used, it must be designated the Linton zone of the
15 North Dakota coordinate system of 2022;
- 16 m. Minot zone, the North Dakota coordinate system of 2022 is named, and in any
17 land description in which it is used, it must be designated the Minot zone of the
18 North Dakota coordinate system of 2022;
- 19 n. New Town zone, the North Dakota coordinate system of 2022 is named, and in
20 any land description in which it is used, it must be designated the New Town zone
21 of the North Dakota coordinate system of 2022;
- 22 o. Oakes zone, the North Dakota coordinate system of 2022 is named, and in any
23 land description in which it is used, it must be designated the Oakes zone of the
24 North Dakota coordinate system of 2022; and
- 25 p. Williston zone, the North Dakota coordinate system of 2022 is named, and in any
26 land description in which it is used, it must be designated the Williston zone of
27 the North Dakota coordinate system of 2022.

28 **SECTION 3. AMENDMENT.** Section 47-20.2-03 of the North Dakota Century Code is
29 amended and reenacted as follows:

1 **47-20.2-03. North Dakota coordinate system defined.**

2 The plane coordinate values for a point on the earth's surface, used in expressing the
3 geographic position or location of such point in the appropriate zone of this system, shall consist
4 of two distances, expressed in United States survey feet [meters] and decimals of a foot [meter]
5 when using the North Dakota coordinate system of 1927. One of these distances, to be known
6 as the X-coordinate, shall give the position in an east-west direction; the other, to be known as
7 the Y-coordinate, shall give the position in a north-south direction. These coordinates shall be
8 made to depend upon and conform to plane rectangular coordinate values for the monumented
9 points of the North American horizontal geodetic control network as published by the national
10 ocean survey/national geodetic survey, or its successors, and the plane coordinates which have
11 been computed on the systems defined in this chapter. Any such station may be used for
12 establishing a survey connection to either North Dakota coordinate system. For the purposes of
13 converting coordinates of the North Dakota coordinate ~~systems~~systems of 1983 and 2022 from
14 meters to feet, the international survey foot must be used. The conversion factor is: one foot
15 equals 0.3048 meter exactly.

16 **SECTION 4. AMENDMENT.** Section 47-20.2-05 of the North Dakota Century Code is
17 amended and reenacted as follows:

18 **47-20.2-05. North Dakota coordinate system origins defined.**

- 19 1. For the purposes of more precisely defining the North Dakota coordinate system of
20 1927, the following definitions by the United States coast and geodetic survey are
21 adopted:
- 22 a. The North Dakota coordinate system of 1927, north zone, is a Lambert conformal
23 conic projection of the Clarke spheroid of 1866, having standard parallels at north
24 latitudes, forty-seven degrees twenty-six minutes and forty-eight degrees
25 forty-four minutes along which parallels the scale shall be exact. The origin of
26 coordinates is at the intersection of the meridian one hundred degrees thirty
27 minutes west of Greenwich and the parallel forty-seven degrees zero minutes
28 north latitude. This origin is given the coordinates: $x = 2,000,000$ feet [609.6
29 kilometers], and $y = 0$ feet [0 kilometers].
- 30 b. The North Dakota coordinate system of 1927, south zone, is a Lambert
31 conformal conic projection of the Clarke spheroid of 1866, having standard

1 parallels at north latitudes forty-six degrees eleven minutes and forty-seven
2 degrees twenty-nine minutes along which parallels the scale shall be exact. The
3 origin of coordinates is at the intersection of the meridian one hundred degrees
4 thirty minutes west of Greenwich and the parallel forty-five degrees forty minutes
5 north latitude. This origin is given the coordinates: $x = 2,000,000$ feet [609.6
6 kilometers], and $y = 0$ feet [0 kilometers].

7 2. For the purposes of more precisely defining the North Dakota coordinate system of
8 1983, the following definition by the national ocean survey/national geodetic survey is
9 adopted:

10 a. The North Dakota coordinate system of 1983, north zone, is a Lambert conformal
11 conic projection of the North American datum of 1983, having standard parallels
12 at north latitude of forty-seven degrees twenty-six minutes and forty-eight
13 degrees forty-four minutes along which parallels the scale shall be exact. The
14 origin of coordinates is at the intersection of the meridian one hundred degrees
15 thirty minutes west of Greenwich and the parallel forty-seven degrees zero
16 minutes north latitude. This origin is given the coordinates: $x = 600,000.0000$
17 meters, and $y = 00.0000$ meters.

18 b. The North Dakota coordinate system of 1983, south zone, is a Lambert
19 conformal conic projection of the North American datum of 1983, having standard
20 parallels at north latitude of forty-six degrees eleven minutes and forty-seven
21 degrees twenty-nine minutes along which parallels the scale shall be exact. The
22 origin of coordinates is at the intersection of the meridian one hundred degrees
23 thirty minutes west of Greenwich and the parallel forty-five degrees forty minutes
24 north latitude. This origin is given the coordinates: $x = 600,000.0000$ meters, and
25 $y = 00.0000$ meters.

26 3. For the purposes of more precisely defining the statewide zone of the North Dakota
27 coordinate system of 2022, the definition by the national ocean survey or national
28 geodetic survey is the North Dakota coordinate system of 2022, statewide zone, a
29 Lambert conformal conic projection of the North American Terrestrial Reference Frame
30 of 2022. The origin of coordinates is at the intersection of the meridian one hundred
31 degrees fifteen minutes west of Greenwich and the parallel forty-seven degrees thirty

1 minutes north latitude. This origin is given the coordinates: x = 838,200.0000 meters,
2 and y = 342,900.0000 meters.

3 4. For the purposes of more precisely defining the low-distortion projections as described
4 under subsection 3 of section 47-20.2-01, the following definition by the national ocean
5 survey or national geodetic survey is adopted:

6 a. The North Dakota coordinate system of 2022, Beulah zone, is a Lambert
7 conformal conic projection of the North American Terrestrial Reference Frame of
8 2022, the origin of coordinates is at the intersection of the meridian one hundred
9 one degrees fifty-one minutes west of Greenwich and the parallel forty-seven
10 degrees twenty-seven minutes north latitude. This origin is given the coordinates:
11 x = 2,286,000.0000 meters, and y = 152,400.0000 meters;

12 b. The North Dakota coordinate system of 2022, Bismarck zone, is a Lambert
13 conformal conic projection of the North American Terrestrial Reference Frame of
14 2022, the origin of coordinates is at the intersection of the meridian one hundred
15 degrees forty-five minutes west of Greenwich and the parallel forty-six degrees
16 forty-eight minutes north latitude. This origin is given the coordinates: x =
17 3,200,400.0000 meters, and y = 114,300.0000 meters;

18 c. The North Dakota coordinate system of 2022, Bottineau zone, is a Lambert
19 conformal conic projection of the North American Terrestrial Reference Frame of
20 2022, the origin of coordinates is at the intersection of the meridian ninety-nine
21 degrees forty-two minutes west of Greenwich and the parallel forty-eight degrees
22 thirty-six minutes north latitude. This origin is given the coordinates: x =
23 1,371,600.0000 meters, and y = 152,400.0000 meters;

24 d. The North Dakota coordinate system of 2022, Bowman zone, is a Lambert
25 conformal conic projection of the North American Terrestrial Reference Frame of
26 2022, the origin of coordinates is at the intersection of the meridian one-hundred
27 three degrees west of Greenwich and the parallel forty-six degrees eighteen
28 minutes north latitude. This origin is given the coordinates: x = 3,810,000.0000
29 meters, and y = 114,300.0000 meters;

30 e. The North Dakota coordinate system of 2022, Cannon Ball zone, is a Lambert
31 conformal conic projection of the North American Terrestrial Reference Frame of

1 2022, the origin of coordinates is at the intersection of the meridian one-hundred
2 one degrees eighteen minutes west of Greenwich and the parallel forty-six
3 degrees eighteen minutes north latitude. This origin is given the coordinates: x =
4 4,114,800.0000 meters, and y = 114,300.0000 meters;

5 f. The North Dakota coordinate system of 2022, Carrington zone, is a Lambert
6 conformal conic projection of the North American Terrestrial Reference Frame of
7 2022, the origin of coordinates is at the intersection of the meridian ninety-nine
8 degrees eighteen minutes west of Greenwich and the parallel forty-seven
9 degrees thirty-three minutes north latitude. This origin is given the coordinates: x =
10 = 2,590,800.0000 meters, and y = 152,400.0000 meters;

11 g. The North Dakota coordinate system of 2022, Devils Lake zone, is a Lambert
12 conformal conic projection of the North American Terrestrial Reference Frame of
13 2022, the origin of coordinates is at the intersection of the meridian ninety-nine
14 degrees twenty-seven minutes west of Greenwich and the parallel forty-eight
15 degrees nine minutes north latitude. This origin is given the coordinates: x =
16 1,676,400.0000 meters, and y = 152,400.0000 meters;

17 h. The North Dakota coordinate system of 2022, Dickinson zone, is a Lambert
18 conformal conic projection of the North American Terrestrial Reference Frame of
19 2022, the origin of coordinates is at the intersection of the meridian one hundred
20 three degrees three minutes west of Greenwich and the parallel forty-seven
21 degrees north latitude. This origin is given the coordinates: x = 2,895,600.0000
22 meters, and y = 114,300.0000 meters;

23 i. The North Dakota coordinate system of 2022, Fargo zone, is a transverse
24 mercator projection of the North American Terrestrial Reference Frame of 2022,
25 the origin of coordinates is at the intersection of the meridian ninety-seven
26 degrees twelve minutes west of Greenwich and the parallel forty-five degrees
27 forty-five minutes north latitude. This origin is given the coordinates: x =
28 4,991,100.0000 meters, and y = 00.0000 meters;

29 j. The North Dakota coordinate system of 2022, Grand Forks zone, is a transverse
30 mercator projection of the North American Terrestrial Reference Frame of 2022,
31 the origin of coordinates is at the intersection of the meridian ninety-seven

1 degrees twenty-four minutes west of Greenwich and the parallel forty-six degrees
2 thirty minutes north latitude. This origin is given the coordinates: x =
3 1,981,200.0000 meters, and y = 00.0000 meters;

4 k. The North Dakota coordinate system of 2022, Jamestown zone, is a Lambert
5 conformal conic projection of the North American Terrestrial Reference Frame of
6 2022, the origin of coordinates is at the intersection of the meridian ninety-eight
7 degrees thirty-six minutes west of Greenwich and the parallel forty-six degrees
8 fifty-seven minutes north latitude. This origin is given the coordinates: x =
9 3,505,200.0000 meters, and y = 114,300.0000 meters;

10 l. The North Dakota coordinate system of 2022, Linton zone, is a Lambert
11 conformal conic projection of the North American Terrestrial Reference Frame of
12 2022, the origin of coordinates is at the intersection of the meridian ninety-nine
13 degrees fifty-one minutes west of Greenwich and the parallel forty-six degrees
14 eighteen minutes north latitude. This origin is given the coordinates: x =
15 4,381,500.0000 meters, and y = 114,300.0000 meters;

16 m. The North Dakota coordinate system of 2022, Minot zone, is a transverse
17 mercator projection of the North American Terrestrial Reference Frame of 2022,
18 the origin of coordinates is at the intersection of the meridian one hundred one
19 degrees twenty-seven minutes west of Greenwich and the parallel forty-six
20 degrees thirty minutes north latitude. This origin is given the coordinates: x =
21 1,104,900.0000 meters, and y = 00.0000 meters;

22 n. The North Dakota coordinate system of 2022, New Town zone, is a transverse
23 mercator projection of the North American Terrestrial Reference Frame of 2022,
24 the origin of coordinates is at the intersection of the meridian one hundred two
25 degrees twenty-seven minutes west of Greenwich and the parallel forty-six
26 degrees thirty minutes north latitude. This origin is given the coordinates: x =
27 762,000.0000 meters, and y = 00.0000 meters;

28 o. The North Dakota coordinate system of 2022, Oakes zone, is a transverse
29 mercator projection of the North American Terrestrial Reference Frame of 2022,
30 the origin of coordinates is at the intersection of the meridian ninety-eight
31 degrees eighteen minutes west of Greenwich and the parallel forty-five degrees

1 forty-five minutes north latitude. This origin is given the coordinates: x =
2 4,686,300.0000 meters, and y = 00.0000 meters; and

3 p. The North Dakota coordinate system of 2022, Williston zone, is a transverse
4 mercator projection of the North American Terrestrial Reference Frame of 2022,
5 the origin of coordinates is at the intersection of the meridian one hundred three
6 degrees twenty-seven minutes west of Greenwich and the parallel forty-six
7 degrees thirty minutes north latitude. This origin is given the coordinates: x =
8 457,200.0000 meters, and y = 00.0000 meters.

9 **SECTION 5. AMENDMENT.** Section 47-20.2-06 of the North Dakota Century Code is
10 amended and reenacted as follows:

11 **47-20.2-06. North Dakota coordinate system - Use of term.**

12 The use of the North Dakota coordinate system of 1927 north zone or south zone, ~~or the~~
13 North Dakota coordinate system of 1983 north zone or south zone, the North Dakota statewide
14 coordinate system of 2022, or the North Dakota low-distortion coordinate system of 2022 on
15 any map, report of survey, or other document must be limited to coordinates based on the North
16 Dakota coordinate systems as defined in this chapter. The map, report, or document must
17 include a statement describing the standard of accuracy, as defined by the national ocean
18 survey/national geodetic survey, maintained in developing the coordinates shown therein. The
19 coordinates must be established in conformity with these standards:

- 20 1. No coordinates based on the North Dakota coordinate system, purporting to define the
21 position of a point on a land boundary, may be presented to be recorded in any public
22 records or deed records unless the point is connected to ~~a triangulation or traverse~~
23 ~~station~~the national spatial reference system and established in conformity with the
24 standards prescribed in this chapter.
- 25 2. Coordinate values used in land descriptions under this section must be certified by a
26 duly registered professional land surveyor under the laws of this state.