

Iowa Farmland Legal Descriptions

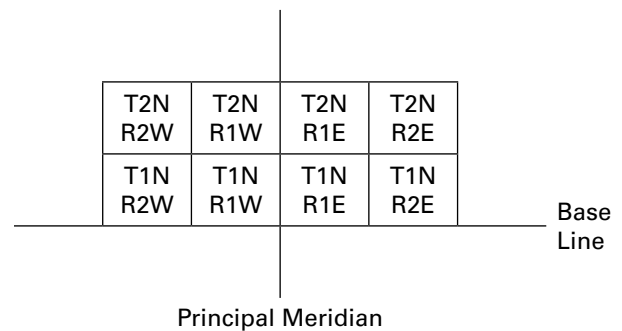
The Public Land Survey System (PLSS) is the system used in Iowa to identify the location of specific tracts of land for legal and other purposes. It is sometimes referred to as the “rectangular survey system.”

Latitudes are horizontal lines (e.g. equator) and longitudes are vertical lines running from the North Pole to the South Pole. The geographic location of farmland is based on the distance east or west of the longitudinal reference lines called “Principal Meridians” and north or south of the latitudinal lines called “Base Lines.”

Every county is subdivided into townships, just like every state is subdivided into counties. Every township has a specific geographic location. For example, Figure 1 is an example of how townships are referenced in relationship to a meridian and base line. T1N R1W is the first township north of the base line and the first range west of the

meridian. T2N R2E is the second township north of the base line and the second range east of the meridian.

Figure 1. Reference Points of Townships (meridians and base lines)

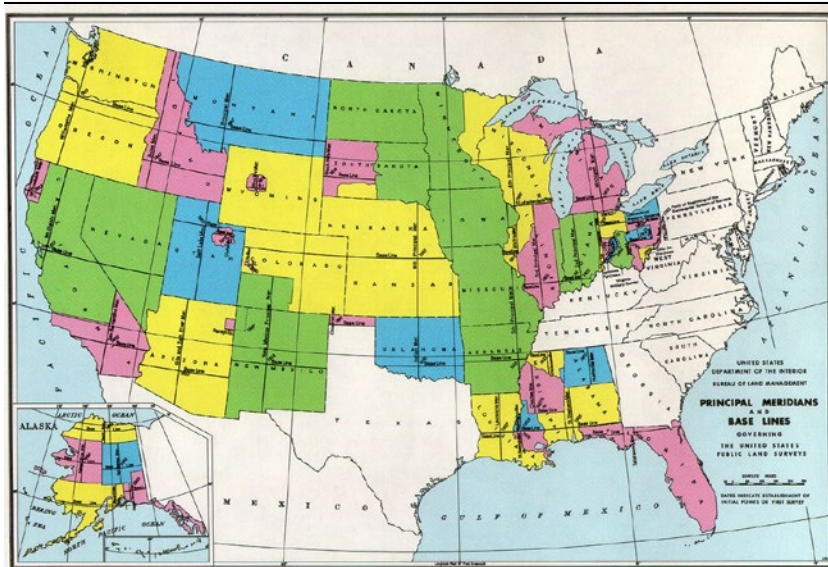


Legend

T = township
R = range
N = north

W = west
E = east

Figure 2. Bureau of Land Management map depicting the principal meridians and baselines used for surveying states (shaded) in the PLSS



The specific meridian (longitudinal reference line) used in Iowa is the Fifth Principal Meridian that runs north and south along the eastern edge of Iowa. This was the first Meridian of the new Louisiana Purchase with the designated location at the confluence of the Arkansas and Mississippi rivers. As shown in Figure 2, the Fifth Principal Meridian governs the surveys in Arkansas, Missouri, Iowa, North Dakota, western Minnesota and eastern South Dakota.

The base line (latitudinal reference line) for this area runs east and west through central Arkansas. Its location was designated as the confluence of the St. Francis and Mississippi Rivers. The initial point or place where the meridian and baseline cross is in the middle of a swamp in Arkansas.

Most townships are six miles vertically (north and south) and six miles horizontally (east and west) for a total of 36 square miles. Each square mile in a township is a “section.” A section is a square mile in size and consists of 640 acres. The sections in a township are numbered according to the configuration in Figure 3.

Figure 3. Configuration of the 36 Sections Located in a Township

6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

However, there is an exception to this six mile by six mile rule. A special problem of the survey system is that the distance between the meridians becomes smaller as you move north. This is due to the curvature of the earth. All meridian lines meet at the North Pole. To compensate for this, a series of “correction lines” are used. A correction line is used at every fourth township line (24-mile intervals). You will notice this on north (south) bound roads where the road will periodically jog to the right (left) before again proceeding north (south).

A section is further subdivided into four “quarter sections.” A quarter section is one-half mile by one-half mile and consists of 160 acres (640 acres / 4 = 160 acres). Each quarter section is identified by its location in the section, as shown in Figure 4.

Figure 4. Quarter Sections in a Section

NW (northwest) ¼	NE (northeast) ¼
SW (southwest) ¼	SE (southeast) ¼

Land ownership may be further divided into 80 acre tracts, 40 acre tracts and other configurations. As shown in the examples below, the legal description of land starts with its location within a quarter section followed by the location of the quarter section in the section.

Examples

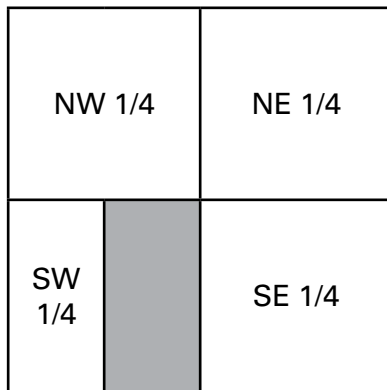
Tract: 80 acre tract in Section 10 of Grant Township in Story County

Location: South ½ of the Northeast ¼ of Section 10, Township 83 North, Range 23 West

NW 1/4	NE 1/4
SW 1/4	SE 1/4

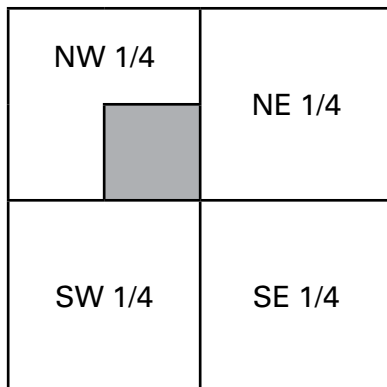
Tract: 80 acre tract in Section 14 of Scott Township in Henry County

Location: East $\frac{1}{2}$ of the Southwest $\frac{1}{4}$ of Section 14, Township 73 North, Range 05 West



Tract: 40 acre tract in Section 28 of Maple River Township in Carroll County

Location: Southeast $\frac{1}{4}$ of the Northwest $\frac{1}{4}$ of Section 28, Township 84 North, Range 35 West



In addition to its geographic location reference numbers, each township has a name, for example, Mason Township in Cerro Gordo County of Iowa. Mason Township references the township as a political entity. So, every township has both a political reference (Mason Township) and a geographic reference (Township 96 North and Range 20 West). However, there are situations where the geographic township and the political entity township are not the same. For example, along rivers the political townships and the 36 section townships are not always congruent.

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