



Legal Descriptions of Property

In all states created out of the Territory Northwest of the Ohio River, states south and west of Georgia, and all states west of the Mississippi River except Texas, the U.S. System of Rectangular Surveys was used exclusively or nearly so. However, even in these states, metes-and-bounds descriptions have been resorted to in describing land tracts for which title was obtained prior to being officially surveyed by the U.S. government. Special attention should be directed to the states of Texas and Ohio. When the state of Texas came into the Union in 1845, it retained all lands within its present boundary. Most of eastern and southern Texas is comprised of unregulated land divisions and includes, in part, lands granted to individuals and groups of settlers by the Spanish and Mexican governments and later by the Republic of Texas. However, most of the lands in northern and western Texas were divided under a rectangular system patterned after the U.S. System of Rectangular Surveys.

U.S. System of Rectangular Surveys¹

This system, also referred to as the Survey of the Public Domain or the Congressional Survey System, is based on the Land Ordinance of 1785. After being modified in 1787 and again in 1796, it became the official land survey system for the public domain, i.e., those lands to which the federal government gained title through cession, purchase, and conquest before they were allotted to private individuals. The original public domain consisted of the westerly lands east of

the Mississippi River that were relinquished by the original 13 states between 1781 and 1802. Subsequent additions were made to the public domain between 1803 and 1867, comprising nearly all of the presentland areas of the U.S. west of the Mississippi River excluding Texas.

The U.S. System of Rectangular Surveys is based on arbitrarily selected pairs of east/west and north/south lines intersecting at an **initial point** (also referred to as the point of origin). The north/south line passing through the initial point is referred to as the **principle meridian**, and the perpendicularly intersecting east/west line is referred to as the **base line**. Both lines are run on true cardinal directions. The survey of the public domain has utilized 15 initial points and accompanying intersecting lines east of the Mississippi River, 19 points west of the Mississippi River, and three points in Alaska. Figure 1 shows the survey area controlled by each principal meridian and base line.

Figure 1 shows the subsequent division of each survey area into rectangular land tracts. This process follows distinct sequential steps. First, the four quadrants formed by the principal meridian and base line are divided into 24-mile blocks (not diagramed in Figure 2). Second, each 24-mile block is divided into sixteen, 6-mile square **townships**. The secondary north/south lines delineating the townships are referred to as **range lines** and the secondary east/west lines as **township lines**. Third, each township is divided

¹The Public Lands Survey is carried out under direction of the Bureau of Land Management, formerly the General Land Office. Further details on the U.S. System of Rectangular Surveys can be found in the Manual of Instructions for the Survey of the Public Lands of the United States (Washington, DC; U.S. Government Printing Office, 1947).

by north/south and east/west **section lines** into 36 one-mile square **sections** of approximately 640 acres each. Fourth, each section is divided into half-mile square **quarter sections** of approximately 160 acres each. Further subdivision may take place after the land is transferred into private ownerships.

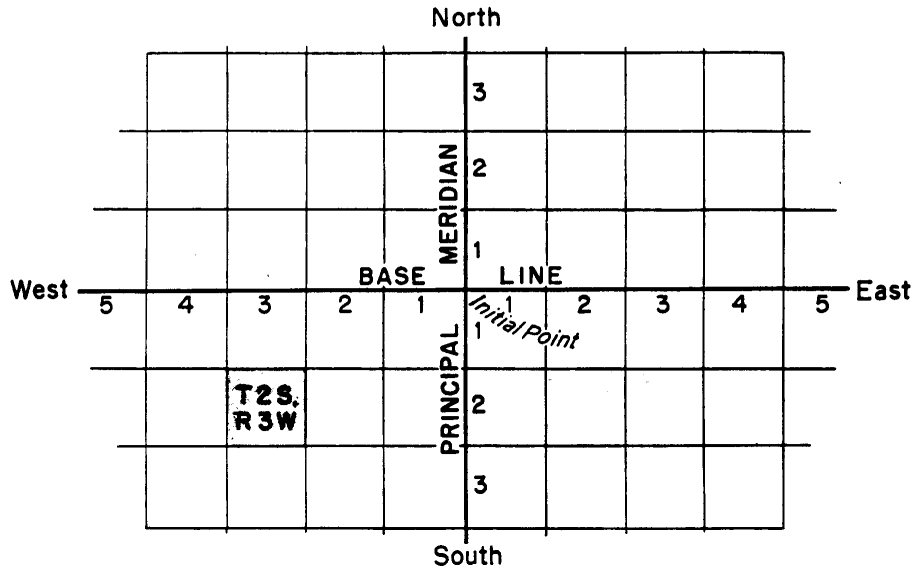
Within this land division system, only one tract of land can have a given description. Each township is designated numerically by the number of the **tier** (row) north or south of the base line and by the number of the **range** (column) east or west of the principal meridian. The sections within each township since 1796 have been numbered 1 through 36 beginning in the upper right hand corner as shown in Figure 2 (lower left). The complete legal description of the tract of land lying in the lower right corner of the section diagram of Figure 2 is (assuming location in the Salt Lake Principal Meridian survey area):

East half of the Southeast Quarter of
Section 14, Township 2 South, Range
3 West of the Salt Lake Principal
Meridian (abbreviated to E1/2SE1/4,
Sec. 14, T2S R3W, Salt Lake P.M.)

Range lines and township lines are respectively true meridians and true parallels. Theoretically, the sides and base (east, west, and south boundaries) of each township will be of full distance. Section lines, on the other hand, are surveyed parallel to the eastern and southern boundaries of the township. This results in putting the deficiencies or excess area in sections along the northern and western edges of the townships. These area discrepancies are allowed for by establishing irregular size lots along the outward edges of the affected sections. These lots, as well as those resulting from irregularities caused by such things as lake boundaries and survey area boundaries, are numbered within the section in a counter-clockwise direction.

GENERALIZED DIAGRAM OF THE RECTANGULAR SYSTEM OF SURVEYS

- TOWNSHIP GRID -



TOWNSHIP 2 SOUTH, RANGE 3 WEST

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

SECTION 14

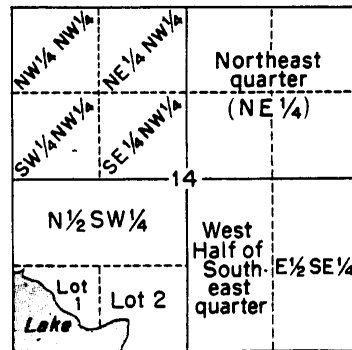


Figure 1. Generalized diagram of land division within the U.S. System of Rectangular Surveys.