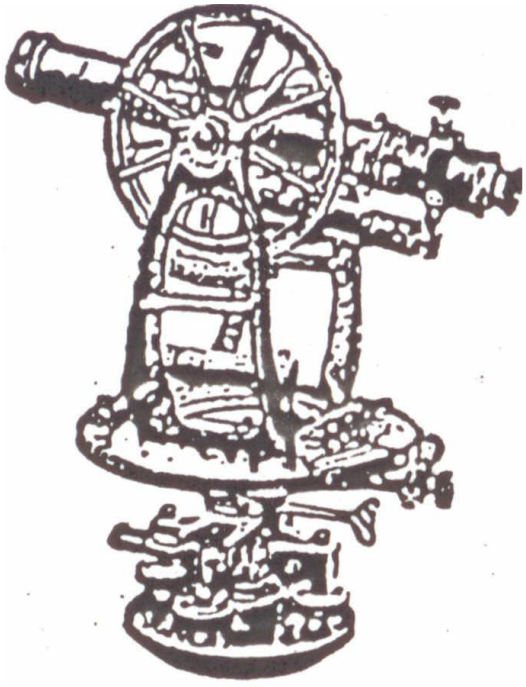
LAND SURVEYING PROGRAM
QUESTIONS AND ANSWERS



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U.S. Forest Service Land Surveying Program

With approximately 272,000 miles of boundary with other landowners across the nation, the Forest Service has an enormous task in administering the lands under its jurisdiction. With the increased values of lands, and increased uses of the resources on Forest lands, the exact location of Forest boundaries has become very important. The Forest Service established land surveying programs to begin to identify those boundaries. Congress passed the Resource Planning Act in 1974 which directed the Forest Service to have all of the resources under its jurisdiction identified and fully managed by the year 2020. This includes the surveying and posting of all of those boundaries. In 1987, about 31 percent of the boundaries were surveyed, marked and posted. Through reduction in funding and deterioration over time, only 20% of the boundaries are now readily identifiable.

Many questions arise from the public when they are somehow impacted by the Forest Service Land Surveying Program. We have attempted to answer many of those common questions in this booklet. If you have further questions, you should contact the Forest Land Surveyor, District Ranger or the Forest Supervisor on the particular National Forest, Grassland or Prairie you are interested in.

Abraham Lincoln, surveyor.

Q. WHY WAS MY LAND CHOSEN FOR LAND SURVEY BY THE FOREST SERVICE?

The many different management activities within a forest require a definition of property boundaries prior to starting a project. The most common needs for a survey are:

- Timber sale in the area.
- Need for right-of-way.
- New fencing.
- Suspected unauthorized use.
- Other administrative needs where actual boundaries are in question.

Q. UNDER WHAT LEGAL AUTHORITY CAN THE FOREST SERVICE CONDUCT THESE SURVEYS?

The Forest Service conducts land surveys through primarily one authority; state licensed land surveyors. Many authorities were granted to the states including the right to license and police land surveyors working in or around private lands. All of the states have enacted varying forms of laws for the licensing of surveyors which conveys to them the legal authority to survey the private lands within the Forest boundaries. It is through this means the Forest Service conducts legal boundary surveys. The Forest Land Surveyors are registered (licensed) professional land surveyors in the state or states in which they work. Similarly, when the USFS issues a contract for a legal boundary survey, the contractor must be a registered land surveyor.

There are other authorities available to the Forest Service. These are:

- Bureau of Land Management (BLM) federal authority.
- FS co-op surveys with the BLM.
- The limited "Small Tracts Act" of 1983.
- The Townsite Act

Q. WILL THE SURVEY OF MY LAND BE DONE BY FOREST SERVICE CREWS, BLM CREWS, OR A PRIVATE CONTRACTOR?

This greatly depends on the Forest program. These decisions are usually economic in nature and depend on the availability of Government crews, etc. Surveys performed under contract by a private land surveyor are becoming more common.

Q. UNDER WHAT LAWS AND RULES WILL THE SURVEY BE PERFORMED?

This depends on the nature of the Federal lands around your land. In the west, much of the Federal lands are "public domain," or lands which have always been surveyed under Federal laws and rules. The main source of these laws and rules is the "Manual of Instructions for the Survey of the Public Lands," hereinafter referred to as the "Manual", a BLM publication.

However, if the Federal lands were once private, and have since been "acquired", the rules for survey may fall under state laws, which vary greatly. The Forest land surveyor is a professional surveyor whose job it is to decide which laws, rules, or procedures apply to each survey project. Many states using the Public Land Survey (or rectangular) System (PLSS) have adopted the BLM rules as their state laws.

Q. I HAD A SURVEYOR PERFORM A SURVEY A FEW YEARS AGO. WHY DOES THE FS PERFORM ANOTHER SURVEY?

In many cases, surveys performed by other licensed land surveyors are acceptable to the Forest Service. However, they must have been conducted to FS standards, and to a legal standard set by law. Unfortunately, some surveyors have failed to fulfill their legal obligations. These vary from state to state, but if a surveyor failed to record a plat (map), tag his monuments, conduct his survey

to an acceptable standard, or follow the legal procedures set by law, the results of his survey are subject to verification by any other surveyor, including the FS. Unfortunately, to verify a survey, a complete survey is usually required.

If you plan to have some private land within a Forest surveyed in the future, insist that your surveyor contact the Forest Service. In many cases, we can provide him with information and advice that could save you money, and avoid future boundary disputes. It always pays to have the survey performed correctly.

Q. MY FENCE HAS BEEN IN POSITION FOR OVER 40 YEARS. BUT YOUR SURVEY PLACES IT SEVERAL FEET INTO THE FOREST. ISN'T THERE A LAW THAT SAYS THE FENCE IS THE BOUNDARY AFTER SO MANY YEARS?

The legal principal you have referred to is called “adverse possession” and generally applies to private, not Federal lands. The principal may apply to Federal land where the government acquired the land from private parties. The required time limit, which varies by state, must have been satisfied prior to Federal ownership. Only in rare cases, such as error in the patent, erroneous description, or other problems with the title, can the “Color of Title Act” be used.

Almost all fences, structures, or other improvements that encroach on National Forest System lands are a result of failure on the part of the landowner to have a legal survey performed to determine his actual boundaries, or by relying on an erroneous private survey. Quoting from the “Manual”, section 6-15; “The position of a tract of land, described by legal subdivisions is absolutely fixed by the original corners and other evidences of the original survey and not by occupation or improvements, or by the lines of a resurvey which do not follow the original.”

Also, section 6-17 reads; “A claim (patent) cannot generally be regarded as having been located in good faith if no attempts have been made to relate it in some manner to the original survey.”

This same basic principle applies to most types of surveys, not just to the rectangular survey system in the west.

Q. WHAT DO I DO IF SOME OF MY IMPROVEMENTS ARE FOUND TO BE ON FEDERAL LANDS?

This is a matter to be discussed with the District Ranger where the land is located. The land surveyor has no authority or jurisdiction in these matters.

Q. WHAT WILL BE THE FINAL RESULTS OF THE SURVEY?

Basically, all corners of the Forest boundary will be monumented with a standard survey monument. The lines between these corners will be cleared and posted - the setting of sign posts along the boundary with Forest boundary signs attached. Also, a complete legal survey plat (map) will be prepared and recorded in the county recorder's (or equivalent) office. You may request a copy of this plat from the Forest Service upon completion.

Q. YOU HAVE ASKED FOR PERMISSION TO ENTER MY LAND - WHAT WILL ACTUALLY BE DONE ON MY PROPERTY?

Your permission to enter for survey purposes is just what it says. We want to be able to enter your land by vehicle and/or foot travel to conduct the survey. This includes measuring distances and angles, searching for survey monuments and their accessories, setting new monuments, and the clearing of debris, brush, small trees, and limbs from the boundary line itself.

Your permission does not allow us to inflict damage to your land or improvements, other than the minor clearing mentioned above. You will find the Forest Service surveyors to be very considerate and conscious of your property and its appearance.

Q. HOW LONG WILL THE SURVEY TAKE?

This varies greatly depending on the project size, terrain, vegetation, and weather. Call us and we can give you an estimate on the particular project in your area.

Q. CAN I ARRANGE FOR YOU TO DO SOME ADDITIONAL SURVEY WORK INSIDE MY LAND? I' D BE HAPPY TO PAY.

The Forest Service crews cannot perform non-official work inside your land. You should consult private practicing land surveyors for such work.

Q. IN WHAT CASES MAY BOUNDARIES OR CORNERS BE CHANGED?

Under no circumstances can any surveyor, Federal or private change the location on the ground of any original survey. The purpose of a resurvey is to "retrace and reestablish the lines of the original survey in their true original positions according to the best available evidence of the positions of the original corners." (Manual of Survey Instructions 1973, section 6-4). Although it may often appear we are moving or changing lines and corners, this is not the case. We may not agree with another private survey, but the correct survey is the one that "follows lines of the original survey".

Q. DON'T ALL THE ELECTRONIC DEVICES YOU USE CAUSE DISCREPANCIES WITH THE EARLIER SURVEY?

Quite often our measurements are more precise, but it is important to remember that the laws established regarding boundary survey will not affect the location on the ground. The original corners, regardless of position, will always be the legal corners. The devices we use basically give us greater speed and efficiency, but the improvements in accuracy of measurements will not change your boundaries.

Q. WHAT RECOURSE DO I HAVE IF I DISAGREE WITH THE U.S. FOREST SERVICE SURVEY?

We suggest you contact a competent, local land surveyor and get their advice on the legal process and methods the Forest Service survey used. We will be happy to share our information with them and discuss the project in detail. If an error is discovered, we will correct it. If you feel our survey is still incorrect in procedure, or method, you should contact an attorney who is familiar with land laws and survey procedures. They can give you a clear understanding of your options.

On the following pages you will find a glossary of surveying terms and some drawings to assist you in understanding more of the Public Land System. A more complete list of surveying and mapping terms is most likely available for your review at the Forest Land Surveyor's office. The drawings show what a regular township and section would look like. It should be noted, however, that very rarely is a section of land a true square mile, and in some cases, the original survey was very distorted, or irregular in size and shape. If you have any other questions, please feel free to call the Surveyor's Office of your National Forest, Grassland or Prairie. We are always anxious to provide you or your land surveyor with any information we have.

SHORT LIST OF SURVEYING TERMS

ACRE - A unit of area. 1 Acre = 10 square chains = 43,560 square feet. 640 acres = 1 square mile.

BEARING TREE - A marked tree used as a corner accessory; its distance and direction from the corner being recorded. Bearing trees are identified by prescribed marks cut into their trunks; the species and size of the trees are also recorded.

CHAIN – A distance unit, 1 Chain = 100 links = 66 feet. 80 Chains = 1 Mile = 5,280 feet.

CORNER - A point on the earth, determined by the surveying process, which defines an extremity on a boundary.

FIELD NOTES - The official written record of a survey, certified by the field surveyor and approved by proper authority. Originally, field notes were prepared by hand, but they are now typewritten. The preparation of field notes is rare for surveys performed under state authority.

MEANDER LINE - A line surveyed along the bank or shore of a permanent, natural body of water. They are generally not intended to be boundaries of the upland. They are generally run simply to quantify the acreage of the upland, not to limit its size.

MONUMENT - The physical object which marks the location of a corner point.

ORIGINAL SURVEY - A cadastral survey which creates land boundaries and marks them for the first time.

PLAT - A graphic representation drawn to scale depicting the actual survey.

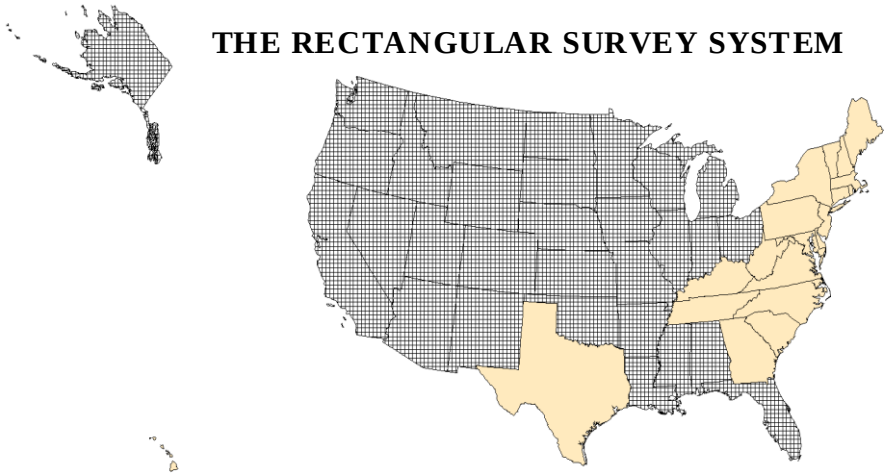
RESURVEY - A cadastral survey performed to identify and remark the boundaries of lands which were established by an earlier survey.

ROD – As a distance unit, 1 Rod = ¼ Chain = 16.5 feet.

TRAVERSE - A sequence of lengths and directions of lines connecting a series of stations.

WITNESS CORNER - A monumented point, usually on the true line of the survey, near a corner point which cannot be physically occupied or which falls at a place subject to destruction by the elements. The witness corner is then a reference to the true corner point.

THE RECTANGULAR SURVEY SYSTEM



The U.S. rectangular system of surveys is a marvel of simplicity. Because of the system and the cadastral surveyors who transferred it from a plan on paper to regular lines upon the land, the swift and orderly settlement of a vast public domain became a reality.

Separate large pieces of the Public Domain are, in themselves, huge survey areas. There are 31 principal meridians and base lines in the contiguous United States and 5 in Alaska, At the intersection of these two lines is the initial point of each of the survey areas. Some of the principal meridians are numbered and the rest have proper names. The numbered ones go only to the Sixth Principal Meridian. Most of the other (named) meridians give a clue as to the area they govern; for example, the Boise Meridian, the New Mexico Principal Meridian, and the Humboliit Meridian. Townships are numbered north or south of the base line. A line or column of townships is called a range, and they are numbered east or west of the principal meridian.

At the beginning of the use of the rectangular system, no provision was made for the convergence of meridians or the limitation of accumulated error. At a later time standard parallels and guide meridians were included in the plan. Between the standard parallels the excess or deficiency of measurement caused by convergency and accumulated error in each township is placed in the sections lying against the north and west township boundaries. Each of the other sections theoretically contains 640 acres.

Each 6-mile-square township is divided into 1-mile-square sections numbered from 1 to 36. The section numbers run in opposite directions in alternating lines, beginning with section number 1 in the northeast corner of the township (portions of Ohio depart from this numbering system). These numbered sections may be further divided into aliquot parts, and thus described and identified. The southeast quarter of the southeast quarter of the southeast quarter of section 5, Township 2 North, Range 3 West, of the Boise Meridan, describes just one parcel of land. Using this methodology one can determine the approximate acres being described. The familiar BLM abbreviation for this particular 10 acres is SE 1/4 SE 1/4 SE 1/4 sec 5, T. 2 N, R. 3 W. Boise Mer., Idaho.

Land, and the hope of sharing in the ownership, provided an attraction strong enough to bring millions of people to this country. The straightforward system of cadastral surveying and land identification added to the attraction. By its adoption the United States, for the most part, avoided the disputes, litigation, and bloodshed inherent in a metes and bounds system.

The chain is the unit of linear measurement for the survey of the public lands as prescribed by law. All returns of measurement in the rectangular system are made in the true horizontal distance in links, chains, and miles. The only exceptions to this rule are special requirements for measurement in feet in mineral surveys and townsite surveys.