



**KEVIN A. HALL, L.S.**  
ADIRONDACK LAND SURVEYOR

## **TYPES OF SURVEY SERVICES**

### **LOCATION OR TITLE SURVEY:**

This type has many aliases and many poor substitutes. Because the location survey is a necessary part of complete title insurance it is often called a title survey. For the same reason it is sometimes called a land title survey, mortgage survey or just simply survey.

What is a location survey? It is a survey that is required by and is certified to a title insurance company, lending institution, and or individuals with an interest in real property. It is part of a package that insures the existence of good marketable and problem free collateral for a mortgage. It is the total combined work of deed and map research, field survey, computations and working drawing as needed, survey analysis, additional field work as needed, drafting of the Map of Survey, preparing a new metes and bounds description if needed and a report of survey if needed. Most important, it is a survey to physically locate on the ground the locative calls of a particular deed description. This of course is why this type of survey is called a location survey. Once the title lines have been established, it is also a survey to locate and show evidence of possession such as fences, walls, hedges or limits of apparent use in relation to the title lines along with the location of buildings, driveways, apparent easements and all other physical facts that the surveyor believes might be of concern to the new owner or the title company. Building offsets and setbacks are shown so a check can be made by any concerned party as to conformity with deed restrictions, zoning regulations, building codes and Adirondack Park Agency permits.

A location survey can be very simple or very complex and only a land surveyor with extensive experience in the area in question will know what needs to be done for a proper survey. If the property in question has a reliable existing survey done by a land surveyor who is still in practice, all that may be needed is a field inspection and a few simple checks with a tape. If the property has a poor quality metes and bounds description there may be a need for many hours of research to determine senior rights and develop the information needed to properly locate the title lines on the ground. There may even be a need for traverse work across adjoining properties to establish the lines in question. This is why terms like “tape survey” or “instrument survey” have no real meaning. How a location survey should be done and what equipment is needed to do it correctly can only be known by a qualified professional land surveyor that has the necessary experience in the particular area in question.

In many geographic areas the setting of corner markers is not considered to be a necessary part of a location survey. If the property in question is a lot in a properly monumented modern subdivision done by a reliable firm, there may be no need or justification in requiring corner markers. This type of subdivision, which is quite common in urban areas, does not exist in Essex County or its surrounding areas. Therefore, Kevin Hall Surveying considers good corner markers to be a necessary part of all location surveys within this geographic area. All location surveys done by Kevin Hall Surveying will include all work normally done for a boundary survey.

Kevin Hall Surveying will make a reasonable attempt by research and or field survey to determine and map the probable true width and location of all public roads bounding the subject premises. If we cannot determine the bounds with certainty, the bounds as shown on the Map of Survey will have the note “Assumed road bounds”.

The government and the legal professional have not done what should have been done in the past to create, maintain and retain adequate records for public roads. The laws of this state regarding roads are many and complex and the courts have been inconsistent in the interpretation of road legislation.

Most of the public and some of the private roads in use today in northern New York were created between 100 and 200 years ago. In many towns there were twice as many miles of road 100 years ago as there are today. Sections of many roads were once part of a turnpike.



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The surveys for most early roads were quite crude and were only recorded by description in the town record book. Many of these towns records have been lost or misplaced, and where they are available it can take many hours of careful reading to attempt to find a particular description. And even when an early road description is found, it is seldom possible to relocate it on the ground with the precision and certainty desired.

In more recent years, when the county or state has acquired land for highways, most of the monuments set to mark the limits of the new highway bounds were crudely set by irresponsible contractors, often many feet from the intended location.

For the foregoing reasons, Kevin Hall Surveying is not herein responsible for determining the location and width of adjoining roads with absolute certainty as part of a standard location or boundary survey.

If an individual or company has a need for certainty of location and width of a particular road because of planned improvement, zoning or other reasons, they should contract with an attorney and Kevin Hall Surveying to resolve the problem in the most practical manner.

A Location Survey shows the location of and general description of buildings and other major artifacts existing at the time of the survey. The Land Surveyor is not herein responsible for attempting to determine any possible zoning violations. Most local zoning laws are ambiguous and building permits are often issued by zoning officers without reference to a survey of any kind. All questions of possible zoning violations or building rights as per the Adirondack Park Agency regulations are herein considered to be questions of law and therefore are the responsibility of the legal profession.

Many parcels have been subdivided and deeded out from larger parcels in recent years without obtaining the required local planning board or Adirondack Park Agency approvals. The determination of whether or not proper approvals have been obtained as required by law is herein considered to be the responsibility of the legal profession.

It is common practice to mortgage a portion of a large parcel and to have a title survey prepared only for the portion to be mortgaged. It is herein considered a question of law, as to whether this type of separation can legally be done without zoning and planning board approvals, and it is therefore considered to be the responsibility of the legal profession to obtain any necessary approvals or inform the surveyor of any requirements such as minimum areas or setbacks.

On large tracts of land, those lines that are not clearly evidenced by existing fences, stone walls or roads will be cleared, blazed, and painted. The blazing will consist of the marking of a reasonable number of trees along or within about three feet of the property line. Blazes are made about shoulder high with an ax. A small section of bark and underlying wood is removed. In a few years the blaze will heal or grow over, but a slight scar will always remain that can be found and followed by a competent land surveyor. Also, any future surveyor will be able to cut into a tree, count the growth rings, and determine the year in which the blaze was made. Trees that are intersected by the property line will have just two blazes, one on each side of the tree with a blaze facing you as you walk along the line. Trees that are not on the property line will have a third blaze facing toward the property line. In the past, many lines in the Adirondacks have been blazed by unqualified or incompetent individuals. It is very risky to assume that a line of blazed trees marks the true property line when you do not know who made the blazes.



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**BOUNDARY SURVEY:**

A survey to find or set a good secure long lasting identifiable marker at all property corners and angle points in the property lines. Additional markers may also be set if needed for line points on long straight boundaries. A limited survey may be done for one line only, but in most cases, only a small amount will be saved by not getting a complete boundary survey. A map of survey showing and describing the markers found or set, showing the bearings and distances between these markers, showing any differences between the deed boundary location and physical possession lines, showing the area and noting all pertinent deed and map data as used in determining the boundary locations is prepared as a necessary part of a complete boundary survey. This type of survey may not include everything required by a location survey. If you think you might need a survey for title insurance in the near future it would be wise to let your surveyor know so he can include any additional work that might be needed.

There is always the possibility that the work done on a boundary survey will turn up a problem area that can only be resolved by a boundary line agreement, a legal action to quiet title, or building a good fence and waiting for time to make the fence the legally correct line. Incompetent surveyors often use boundary line agreements where they were never really needed. A good land surveyor, one that understands his quasi-judicial rights and duties regarding boundary location, will seldom have to burden the client with these additional problems. However, should the need arise, a good surveyor will provide a detailed report of survey explaining the problems and the possible solutions.

Kevin Hall Surveying feels that potential clients have a right to know what to expect when they negotiate for survey services, and to that end have included a description of the type and quality of markers that are normally set, and the level of precision that is normally achieved. It is important in this description to have a clear understanding of the meaning of precision and positional tolerance. To that end the following definitions are provided.

Precise or precision as used herein relates to acceptable levels of error. A measurement with a high degree of precision will have an acceptable error of less than 0.01 feet per hundred feet. A measurement with a low degree of precision might have an acceptable error of 0.10 feet or even 1.0 feet per hundred feet.

Positional Tolerance as used herein refers to the acceptable positional error between any two corner or line markers on a particular survey. Positional tolerance is a circle in which any marker must fall when referenced by perfect angle and distance measurements from any other two markers on a particular survey. As such, positional tolerance is a function of the distance between the markers in question. With a positional tolerance of one part in five thousand, a marker one hundred feet away would be required to fall within a circle having a radius of 0.02 feet while a marker five thousand feet away would be required to fall within a circle having a radius of one foot.

Measurements will be made using instruments and methods capable of attaining a precision of 1 part in 10,000 or greater. All transits and total stations will be maintained in good condition and close adjustment. While every reasonable effort will be made in both field work and office balancing and adjusting to attain a positional precision of 1 part in 10,000, it must be recognized that some field work will be done under conditions of wind and cold that make it difficult or impossible to attain this precision and that some large wooded tracts do not have a value that would justify this precision. The minimum positional tolerance that can be expected for location surveys and boundary surveys done by Kevin Hall Surveying is therefore established at 1 part in 5,000. A positional tolerance that is higher or lower than this can of course be contracted for.



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All new corner and line markers will be detectable with conventional instruments used to find ferrous or magnetic objects. All new markers will have a minimum outside diameter of 5/8" for iron rods and a minimum inside diameter of 1/2" for iron pipes with a minimum length of 24" set below grade unless the marker is properly set in concrete. Where practical, a length of three feet or more will be used. A short section of iron pipe set in a drill hole in a large stone, rock ledge or concrete may also be used as a marker. Old axles, drill rods or other suitable forms of iron or steel bars will be used when available as their uniqueness lends certainty to their identity as the intended point.

To help identify and be certain of the corners markers found or set, the Map of Survey will contain complete descriptions. A minimum of two corner markers will have a minimum of two reference ties from reasonably permanent physical objects such as house corners, utility poles, fire hydrants, trees or cross cuts.

**LIMITED SURVEY:**

Any specific survey service that by agreement is less than would normally be done for a complete survey. It might be the survey of only part of a property line. It might be the marking of property corners without preparing a Map of Survey and supplying instead a report of survey. Or it might be determining the area of a parcel to a very low degree of precision. There are many limited services that a competent land surveyor can provide.

**CONTINUATION SURVEY OR UPDATE SURVEY:**

Bringing an existing survey up to date. This requires appropriate field checks, a new map of survey or revisions to the existing map and new certification if needed. This type of survey should only be done by the surveyor or firm that made the original survey.

**TOPOGRAPHIC OR ARCHITECTURAL SURVEY:**

A survey to locate and map the physical features and elevations of a site. The surveyor should know what construction or design is being planned so that the survey can be done in the most economical manner. This type of survey is often labor intensive, especially if the terrain is irregular, the ground cover is dense, or if a contour interval of one or two feet is required. Large topographic surveys may best be done using aerial photography. Advance planning is very important due to short flying seasons (spring or fall). Sometimes it is wise to get the necessary photography in case it is needed. There may also be times when we have in our files existing photography and controls that can be used for your mapping needs. Some limited form of boundary surveying may be necessary as part of a topographic survey if we feel there is some question as to the location or boundaries of the parcel being mapped.

**FORESTRY SURVEY:**

A survey to mark a property boundary line or lines to designate the limit of a timber harvest or to determine the amount of a timber trespass. Depending on the property value and the timber value, the lines may be run roughly by hand compass and marked with plastic ribbon flagging or they may be more precisely run and marked with ax blazes and paint on trees. In the case of a timber trespass, the stumps would be counted, measured and the species noted so that the value of the timber taken in the trespass can be determined. A map of survey is usually not a necessary part of a forestry survey. This type of survey may require extensive deed and map research along with field traverse and survey analysis to determine the correct corner locations before the lines can be marked.



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**SKETCH MAP:**

A map that can be used to correct an assessment map that is in error, as a marketing tool by real estate brokers, for preliminary subdivision work, and for general low cost information. A sketch map is prepared using data found in deeds of record, existing survey maps, assessment maps, aerial photos and where necessary, rough taped distances and hand compass bearings. The same detailed and complete deed and map research that would be done for a complete survey is done in the preparation of a sketch map. Because of the limited amount of field time and the rough rather than precise measurements, this type of map cannot be called a survey and cannot be signed or certified as such. A sketch map will usually develop the necessary data to indicate the correct area within about one percent and boundary distances within about ten feet. It is of course always possible that the work done for a sketch map will turn up problem areas that will require a more detailed survey or a boundary line agreement for a final solution. A sketch map is not cost effective on small parcels where a complete survey could be accomplished with only a few additional hours of field time.

**DEED PLOT:**

A sketch drawn from existing deed and map data without any field measurements or inspections. If you have a good deed description that was taken from a survey, but a copy of that survey can not be located, then a deed plot will at least reproduce part of the original survey map. A deed plot can only be completed if there is enough data in the available records to fix the shape and area of the property in question. Most deed plots are a sketch or working drawing that is used as an aid in scouting property to plan the field work and as an office tool when doing survey analysis.

**DEED DESCRIPTION:**

Composing the wording for the part of a deed that describes the parcel being conveyed. This work should always be done by a surveyor because a surveyor will someday have to use the description to establish the physical boundaries on the ground. If a location or boundary survey has been done on the property that is to be conveyed, it is a good idea to have the surveyor prepare a description based on the survey to be used in the deed of conveyance. If a parcel is being subdivided without a survey it is very important that a competent surveyor help with the description to avoid the possibility of expensive legal and surveying problems when it becomes necessary to survey these new boundaries.

**SITE PLAN:**

A sketch based on existing survey data showing a proposed building along with proposed sewer and water connections or systems. A site plan is used for planning and for indicating compliance with existing regulations when applying for a permit.

**FOUNDATION LOCATION:**

This is a service that is sometimes required by lending institutions that are advancing construction money as the work progresses. They need to know that the house they are financing is not in violation of existing regulations.



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**PERCOLATION TEST:**

A test taken to determine if an acceptable septic system can be built on a particular piece of property. A hole approximately three feet deep and one foot square is dug in the area of the proposed septic system. Water is placed in the hole and the rate of absorption by the ground is monitored until it stabilizes. It is also wise, if practical, to have a hole approximately ten feet deep dug by a back hoe to find out if there is a critically high water table or if seepage pits could be used instead of a disposal field. Many towns now have strict ordinances that require permits to build and use a septic system. You would be taking a big gamble if you purchase a piece of property with the intention of building a dwelling thereon without having this test done. Sellers might want to have the test done to establish market value and in the case of most subdivisions, it would be one of the requirements for approval. Consideration should also be given to water supply when a percolation test is done. Is there a public water system or will a well be required? If a well is needed can it be placed the required safe distance from proposed and existing septic systems? Are there working wells in the area and if so how deep are they?

**SUBDIVISION SURVEY:**

A survey that establishes new boundary lines. There are many variations of this type of survey such as buying a small strip of land from a neighbor, exchanging parcels with a neighbor to create a more suitable boundary, setting one or more building lots out of a large tract, or dividing a tract of land to settle an estate. A sketch map showing the proposed subdivision is sometimes needed for preliminary planning board approval. All zoning and subdivision regulations should be reviewed and complied with. Suitable corner markers must be set and a map of survey prepared that can be signed with any necessary approvals and recorded in the County Clerk's Office. A metes and bounds description of the parcel to be set out will also have to be prepared for incorporation into the deed of conveyance. When building lots are being created regulations may require a topographic survey and percolation tests. If there will be new roads or more than four building lots you will probably be required to have engineering design of the roads, water supply, storm drainage and sewage disposal. There are of course many other types of surveying services that we provide, such as all types of construction stakeout, engineering surveys, aerial mapping control and industrial alignment. They are not explained in detail here because the companies and individuals that use these services usually know exactly what they need and how to convey these needs to the surveyor.