

TRUE CONFESSIONS OF A RIGHT-OF-WAY SURVEYOR

This article deals with right-of-way surveying in Georgia, specifically for county or Georgia Department of Transportation (GDOT) road widenings along state and county road improvement projects. Presented here are my opinions on several aspects of surveying roads and right-of-ways. These opinions are based entirely on my experiences and observations won from many years of doing this kind of surveying. It is not based on legal research. It is also very much a work in progress.

Is surveying the right of way line any different than surveying any other property line? In some ways it is. It should be pointed out that in surveying the right-of-way line you are paying attention to what was previously the most neglected line for the property. While few people knew precisely where the right-of-way line was, they did know its' general location, and when land was cheap that was sufficient. No one cared much about their right-of-way line. As time marches on and land values increase that nonchalance transitions into a desire to know the location of the right-of-way line with a greater precision. And then, when the road and right-of-way along a property owner's street is about to be widened, suddenly, its exact location is of extreme importance to everyone involved. So when you survey right-of-way you have to pay atonement for the sins of previous owners, previous surveyors, and the controlling government entity, none of whom correctly or diligently cared for the right-of-way lines.

To start with I will mention a few points about right-of-way in Georgia;

- 1) When most people say right-of-way they mean "fee simple" or true ownership. This is despite the fact that the term itself is perfectly self-descriptive and only indicates a right to pass through. In truth, the large majority of right-of-way in Georgia is an easement, and most property owners own to the centerline of the road. In fact, in the absence of record information to the contrary, it is a rebuttable presumption that ownership runs to the centerline of the road.

- 2) There are three ways that roads are created in Georgia; by deed, by condemnation, and by dedication. Of the three, dedication is the most prolific. Where roads were created by dedication, be it express or implied, the property extends to the centerline and the public only holds an easement. When land is transferred in this case, the land in the easement is also conveyed, regardless that the legal description only described the area bounded by the iron pins and did not include the easement area. Thus, in most subdivision lots in Georgia the adjoining owners possess to the centerline. When roads are created by deed or condemnation it is assumed that they are fee, unless specifically stated otherwise in the documents used to create the road.

- 3) The way that most roads were created is not well documented and often may be truly unknown. Records of creating roads were generally

not kept until around the 1930s. This includes state routes that have not been widened since “the old days”. With this in mind it makes one wonder about all of those plats one sees in which the right-of-way is so confidently and definitively called out.

But what is right-of-way surveying and how is it so different than any other kind of boundary surveying? To answer that we'll have to discuss briefly what ordinary boundary surveying entails. In ordinary boundary surveying, the land surveyor is charged with following the footsteps of the original surveyor. It is incumbent upon he or she to depict the boundary lines not where they should have been placed, but where the original surveyor placed them. In aid of doing this the surveyor arms himself with the land description of record and follows the boundary evidence left behind by the original surveyor. In Georgia every land lot was originally an individual farm. And theoretically, each line of each land lot was cut out, blazed and monumented at least on the end corners. Then, as most farms were divided among heirs, new property lines arose and these lines were subsequently cut out, blazed and monumented. It is the duty of the present day land surveyor, in retracing these lines, to follow the marked lines closely and to look for evidence. It is extremely rare these days to find blazes on the trees or even the original monumentation placed at the ends of the lines (usually rocks which have a columnar characteristic to them placed on end). But the evidence of property owners occupying the previously marked lines in the way of fences, walls, and lawn or garden maintenance is; and this is usually the best if not only evidence available to the location of the original marked line. But what about the right of way line? If the road preceded the land parcel in any form, then it was not cut out and blazed. Barring fences placed along the road the right-of-way line did not accumulate evidence along it, thus there is none to follow. So it follows that the course one is to take in surveying the line would be a little different.

As we are talking primarily about road widening projects here, how does one resolve the right-of-way line for a state route? Does one follow the plans on file at the GDOT records room, the right-of-way monuments, other existing evidence, or a combination of the above? Let's assume that the GDOT has right-of-way plans on file. Usually, one can take the plans and construct in a CAD program a long stretch of the right-of-way geometry. One problem arises when the surveyor goes to place it on the found field evidence, especially the right-of-way monuments, and it is central to the focus of this article. It may fit reasonably well in some areas, but it won't fit in all areas. The surveyor is then left with the decision to go with the right-of-way geometry as calculated from the right-of-way plans and best fitting it to found monuments or to hold the line or curve from monument to monument where they exist and to hold a section of the calculated geometry between the nearest found monuments when some are missing. I have found the prevailing tendency is to use the computed geometry and laying it upon the ground so that it hits or nearly hits the largest number of monuments and or a best fit centerline solution. In fact, there is a tendency in the surveying community that specializes in right-of-way surveying to not hold right-of-way monuments. The lack of care with which they are set is usually offered as a reason for this and it is often true that construction contractors end up placing them. It is well known that they are often set with a lot of slop.

But I disagree with this solution. To use the plans to reconstruct the right-of-way would depend on a great many things, many of which contain variables and thus are more susceptible to error than right-of-way monuments. The plans are based on a monumented base line. The base line was destroyed during construction of the road. The visible centerline seam is only an approximation of the original centerline monuments and changes every time the road is repaved. (I should note here that in many localities it is common for the state department of transportation to set centerline monuments. They do not commonly do that in Georgia, however.) I think that the right-of-way monuments should be held in almost every instance. Why? Because they pass every test for worthiness as property corner monuments. Consider the following:

- a) The right-of-way deed refers to the right-of-way plans and the right-of-way plans show the monuments.
- b) They are open and notorious (in this sense a legal term meaning anyone could take note of them).
- c) They were not set by surveyors? Perhaps not. But they were set by one of the adjoining owners, the government, or at least the government's agents. And it is a time honored principle of land surveying that property owners can survey and monument their own lands.
- d) They are intended to indicate the RW. They say "R/W" on them. And, finally,
- e) They are even called "monuments".

Thus, I feel that the right of way line should be placed right square on them. The government entity put them there. It's their monument. Original, undisturbed monuments contain no error. To my way of thinking they are due more respect than any other property corner monument one is likely to come across.

This leads us into a discussion key to right-of-way surveying, the so-called Perfect Number right-of-way. There is a marked tendency to hold a perfect, round number for the right-of-way. It is often repeated among land surveyors that "the road gets its full measure". However, this is a misapplication of a practice that originates from the methodology of "Proportioning" or "pro-roating". Proportioning is a method of retracement that is used at certain times in lot and block surveys when no monumentation can be found on the subject property. Any discrepancies between the record distances and the ground distance between monumentation that is found on adjoining properties or several properties over is equally distributed across several lots. But if the lots being prorated cross a street of, say, 50 feet then that right of way width remains 50 feet and does not absorb any of the excess or deficiency. The right of way is left intact at 50 feet, while the properties adjoining it are changed slightly. It is obvious that the idea that the right of way must not be violated and unable of being changed spread from the practice of proration. But, to my knowledge, the characteristic of the unchangeable right of way, outside of proration in a lot and block survey, is not supported by court rulings. Also, it is standard for surveyors to produce a perfectly smooth line for the right-of-way,

with perfect, tangent curves and with no jogs or jagged angles. In the absence of county or state right-of-way plans, it's very common for surveyors involved in route surveying projects to calculate a best fit centerline based on surveyed centerline locations. An offset is created at one-half of the record right-of-way and the property corners are treated as "closing corners" in which they control the position and direction of the property owners' boundary lines but not the end of it. In other words, the side property lines are either extended or trimmed to precisely terminate on the calculated offset centerline. I disagree with this practice. While it is possible to create a perfect number right-of-way on paper it is not possible to monument or to maintain one on the ground. After the 1st monument is set across from another then error will inherently be present. Many surveyors doubt the possibility of a 50.47' right of way. But I think that uneven, jagged, non-parallel right-of-ways are the rule and not the exception. Over time, to do otherwise would lead to strange results. Consider if a property owner (and this could just as easily be the road owning public agency) desires to build a fence at the edge of their right of way. What are they to use as controlling? The only possibilities are the existing monumentation, which measures 50.47' across at one point and the centerline of the road. The road has been paved several times. It is a foregone conclusion that the centerline paving seam does not lie directly over the original centerline. The original position can only be determined by peeling up the subsequent layers of new paving. And no matter what is held, after many years and several repavings, the wall will find itself either inside or outside of the present centerline offset. What else is there to rely on except existing monuments? Thus, I don't believe in a 50.00' right-of-way. I don't believe anyone would ever be able to find it. I try to rely on evidence along the right-of-way, including old fences, as much as possible.

Note that although I don't believe in a 50.00' right-of-way, I do believe in a 50' right-of-way. I am not advocating calling the right-of-way anything other than the round number, if it is close to one. In fact, when it is close, I think it is important to use a round number. Unless the opposing sides of the road are completely parallel the exact number would change at all points along the front of the property. My purpose in labeling it as a round number is to let the property owners and subsequent surveyors know, not where the boundary is, but where to look for the monuments that mark the boundary. If it is not close I would recommend labeling it as "R/W Varies", and show a distance to the centerline of the road.

There are many times when it is appropriate to use a best fit centerline calculation. Anytime there are curves in the road without iron pins set at the Points of Curvature and Points of Tangency would be one. I usually create the best fit centerline and offset it so that it goes through one found property corner and offset another copy of it to go through the other. Then I hold the tangents of the lines and put in a tangent curve between them. Another would be when there are no front corners found and you don't have a good bearing and distance to go from the back. Think of a rural road that has several curves in it with no corners for 1000'. Situations like these are tailor made for offsetting the centerline to a perfect number right-of-way. Also, there are times when the deed call is to the centerline of the road. This is a controlling call, but remember that

it goes to the centerline as originally placed. The surveyor is tasked with finding the original centerline location if it has moved. But, as mentioned before, it is virtually impossible to find the original centerline location once it has moved. This leads one, again, to resort to holding the pins along the right-of-way.

I have heard it said that right-of-ways are similar to riparian rights in that they change due to the gradual migrations of the road centerline. I disagree with this line of thinking. If you construct a stone wall along a river bank, you are not making a declaration about the extent of your property rights. If you owned to the centerline of the creek, then you still do, if you own to the low water mark, then you still do. And if the water was to change course and your wall should fall into it, no one would be blamed for it, it would be a natural act. But along a road your rights don't become entirely your own until an approximate offset from the centerline is reached. There is a line that can be demarcated, and the point of the wall is to demarcate it. And if the centerline of the road gradually migrates toward your property due to repaving then would anyone believe it is acceptable for you to lose your wall?

It is often argued to hold perfect number right-of-ways because to hold a pin that is, for example, 0.7' inside a best fit centerline solution amounts to adverse possession. Adverse possession will not work against a sovereign (the controlling government entity) they argue, which, of course, is true. If a property owner erects a fence 40' from the centerline of a 100' Right of Way, they will never obtain title to the ten feet in question. But the question at hand deals with surveying errors not blunders. If the existing original undisturbed monumentation was set within the positional tolerance accepted at the time they were placed then they are to be held. Adverse possession deals with obtaining title to land, not to where that title begins and ends. No one adversely possesses a strip of land 3 tenths of a foot wide. They adversely possess land that is 50 feet wide, or 15 feet wide, or even 4 feet wide. Where is the cutoff? A land surveyor must exercise professional judgment and decide that for himself for each situation that arises. That is why we are licensed. But, clearly, adverse possession does not apply to cases where pins are set slightly inward from an offset centerline.

Another point to make is that when one surveys right-of-way for a road improvement project one is surveying both sides of a road simultaneously. This is something that is pretty rarely done outside of road improvement projects. Usually, when property descriptions are drawn up they do not take the other side of the road into account in coming up with the placement of the right-of-way line. Look at a stack of surveys of adjacent properties. Notice that they all indicate a round number right-of-way. But to be sure of what the right-of-way was, wouldn't it be necessary to survey monuments on both sides of the road? Very seldom have I observed that as a standard of care to determine where the right-of-way line is to be placed. The few occasions that I have observed it was when someone was determining *what* the width of the right-of-way was, not its exact location. And you can be sure that the number obtained was not a perfectly round number, nor did it control the placement of the subject properties right-of-way. So it is standard to *not* take the other side of a right-of-way into account when positioning a right-of-way line. This in itself would

indicate that right-of-ways were not meant to be perfect numbers. In fact, if one did survey both sides of the road, the last thing one would expect to see would be perfectly round number right-of-ways. At any rate, I would advise you not to just put down a 60' R\W and centered on the road because you found three surveys in close proximity that call for 60'. It may be a case of one erroneous survey copied by adjoining and subsequent surveyors.

From the above it may seem as though land surveyors confer a special status upon the right-of-way line compared to the other property lines. If this is true, it may be due to the fact that one can never obtain title to land owned by the government through adverse possession. But I don't think this fact should change the manner that the lines that adjoin land owned by the public are retraced. They are still just boundary lines and the rules of construction and the priority of calls still apply; and all landowners, including government departments, are subject to following them. Monuments control. Yes, the road is a monument, but the set corners are better ones and at the very least they are more precise.

Right-of-way, as it pertains to land surveying, is a fascinating subject, and I have only touched on a few of its aspects here, and only as it applies to surveying for road widening projects. The conclusions from this article are simply this; to have a healthy dose of skepticism about purported right-of-ways, to hold monuments over best fit centerline solutions, and to not confer a special status upon the right-of-way line. Right-of-way lines are surveyed a little differently than the other property lines, but they are still just property lines. Obtaining as much research as possible is important to know how to proceed in resolving their location. But the point of the research is to guide the land surveyor toward monumentation in the field, which when found undisturbed as originally set should control over record bearings and distances.

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