

# Why Are We Licensed?

*by Edward Hall, PLS*

At a recent PLSO board meeting I heard a County Surveyor make some statements about how little he understood about positional tolerance, though he was convinced it was something very important that we burden ourselves with. My first thoughts were if we do not understand what positional tolerance is why would we champion it? When we, as surveyors make statements about survey practice, they should reflect our competence in our area of practice and not our guess as to what might be good practice. I then realized that we were in a deep discussion about the need to determine something statistically that would make very little difference to a large percentage of a Land Surveyors usual clients. Then I let my thoughts take me to why would a person the legislature has entrusted with powers of oversight, such as a County Surveyor want to champion this issue? One that judging from his statements, he felt he did not completely understand. From there I went on to wonder if the legislature even understands what they have done in allowing this piece of poorly written legislation to become law.

All of this made me go back and think about why we have a license in the first place. We all have heard the stories about how many of the present Surveyors came to the profession. Many of these stories are both colorful, and in many cases, a good historical picture of what we were and where we came from. We have all, sometimes regrettably, seen the crusty old Land Surveyor attending a public hearing in his shagged pants and original old tin coat. We even see some today that still try to maintain that ancient romantic image. The stories about the various compatriots of ours that have dodged rattle snakes, fell in the river, or were chased through the poison oak, are numerous and often legendary. I believe Land Surveyors probably have more fun re-telling these old stories of field and survey crew experiences than any other profession. Do we think this is why we are licensed?

Do we have a license issued by the State of Oregon because the legislature believes we need to have our incomes protected? Are we somehow special people that are superior to others in some manner? Does the legislature think we provide a unique service that no one else can do and that we need protection from outsiders? After all, we are scientist, the science we practice is measurement. We must possess considerable knowledge of law, though some forget we are not attorneys. To advise clients it is necessary to understand economics, planning, land values, and various government restrictions. It is required that we have a fair background in mathematics. Some of us are well versed in botany, forestry, history, detective work and astronomy. All of us in private practice with employees, should be knowledgeable about business law, OR-OSHA regulations, bookkeeping and taxes. We need to understand many forms of electronic equipment and their

limitations. It is very important that we have good knowledge of the difference between precision and accuracy, along with methods to evaluate both. With today's methods and equipment, we could establish every position to within 2 or 3 millimeters if we were to so desire. Are these the reasons the legislature saw a need to regulate our profession by requiring licenses?

How many times have you heard, and cringed, when an associate has said "but my client can't afford to do it that way", while you have visions of not trying to the adjoiner or indicating clearly how the survey resolution was made. I know I have. While not agreeing this argument it is closer to the truth than the Land Surveyor believing that finite statistical analysis is the reason.

None of the above are the reason the legislature saw a need to license any of us. The purpose to regulate us is not for our protection. Not so we can demonstrate to some extreme standard our abilities to practice our science. And certainly not so we can meet once a month and tell each other how precise our measurements are. Licensing of Land Surveyors exists to PROTECT THE CONSUMER and public in general from incompetent and or harmful land surveying practices. It is to protect someone FROM US. Not a license to do it to them as some seem to think. The sole purpose for regulating boards in most states is to set standards and protect the consumer. Some regulating boards go as far as requiring that once you agree to begin a project you must complete the project regardless of whether you are compensated or not. Your compensation becomes an issue the courts can decide. Fortunately for us (maybe not for the consumer) OSBEELS does not, from what I hear, seem to concern itself with a Land Surveyor's contract obligations.

Regulating boards do not test us to show that we are the paragons of the profession - that we, above anyone else, have the best knowledge and experience in this field. The test is to demonstrate that we have the MINIMUM qualifications to offer our services to the public. This fact alone should indicate to the knowledgeable that a certain percentage of us who get by will not be good Land Surveyors. We need to begin to police those not complying with the present laws and standards. We need to bring them up to the bar [or drive them out.]

To identify those who are not good Land Surveyors and / or commit malpractice as a way of doing business, the regulating boards must establish certain standards to guarantee that the consumer and general public get what they pay for and are not harmed as a result. The fact that ORS 209 and 92 are as lengthy as they are, is testimony as to how difficult this can be. And, in my opinion, they both omit many items needed to make for good surveying practice. Some standards such as requiring monumentation and maps are to overcome the practitioners who wanted to charge for their service but leave no evidence of their work to be questioned later.

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Balance must be maintained between a reasonable accuracy standard, and providing for the minimum that a consumer needs, and the precision and accuracy obtainable through electronic surveying. After all, the purpose is to see the consumer receives a good survey for the purpose and is not gouged for any unnecessary services. The tools and equipment that are available to today's Land Surveyor were only seen in a Buck Rogers comic strip 50 years ago. Our profession has zoomed into the twenty-first century with things the early twentieth century Land Surveyors may have only dreamed about; personal computers, global positioning, distance meters, hand-held computers, CADD programs, and GIS, just to name a few.

Changing to a more precise way of determining errors does not alter the position of the consumer's fence, nor does it help solve the dispute with the neighbor. It is without question that positional tolerance through least squares computations, gives a better guess as to the probable coordinate value for any given point. It is also without question that this knowledge will make no difference to the average consumer. It will cost the average consumer much more to obtain the location of the property line within the dimension of the average top of a fence post. Also, it can be observed that without the personal computer we would not be discussing this at all.

Now let us look at the consumer of 50 years ago. That consumer had a desire for an affordable home on a lot where they could build a fence or other improvements. They may have gotten in to a dispute with their neighbor. Perhaps they wanted to build a fence or define a conflict between their title and ownership. To me, these do not sound much different than what today's consumer is looking for, [other than the cars are smaller.] When Oregon had the stated accuracy of 1:5000, it seemed like a reasonable standard for the purpose. Even if this accuracy were changed to 1:10000 or 0.10 of a foot, whichever was greater, it should be considered reasonable for set monuments and certainly should be within more than the reasonable precision of today's equipment. When you consider the purpose of these monuments, why would the average consumer be expected to pay for more? If a consumer is building a linear accelerator or massive industrial complex, they certainly would be knowledgeable about the desired precision and accuracy and could negotiate that standard with the Land Surveyor. However, for the average consumer the accuracy does not need to be more than 3rd Order as the minimum

standard and it is difficult to believe that someone feels anything better is needed or warranted as a minimum.

We Professional Surveyors in Oregon are in a very unique position. We have been give the responsibility to police our own work by the legislature turning OSBEELS over to us in the manner they did. Not many state legislative bodies would allow for such self monitoring. We need to honor that trust by actually policing our activities and not by making standards that only bring financial harm to the consumer with no added measurable benefit.

I know that there are many Land Surveys out there that do not come close to the old 1:5000 standard, and in the past my employer has been part of the problem.

There are solutions to this within the present law. We need to report those who are not in compliance on this issue. I realize that OSBEELS probably will not act strongly on a single complaint because it could be an isolated blunder. However, with repeated complaints on the same Land Surveyors they will have to act.

The things missing from ORS 209 that allow for bad survey practice will not be improved by positional tolerance. They also will not be easy to enact. At present, the need is to revise ORS 92.050 and 92.060 to reflect a realistic accuracy standard that corrects the incongruities and serves the average consumers need.

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