

ALABAMA BOARD OF LICENSURE  
FOR PROFESSIONAL ENGINEERS  
AND LAND SURVEYORS

**THIRD QUARTER  
2017 EDITION**

**INSIDE THIS EDITION**

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# BELS BULLETIN



BELS Special Investigator, Robert “Bob” Herbert is presented the CLEAR award for Investigative Excellence for his work on the Roddy Fitzgerald / Commodore Steel case.

## On the Case

### *Herbert recognized for investigative excellence*

By Griffin Pritchard |  
BELS Public Information Specialist

- Robert “Bob” Herbert has been a special investigator for BELS for the past 10 years. He is a veteran of the United States Air Force and is a former Assistant Chief of the Greensburg, Indiana Police Department
- The CLEAR (Council on Licensure, Enforcement and Regulation) Investigative Excellence Award recognizes an investigator who has demonstrated exceptional performance in a particular case or has a history of excellent performance beyond what is expected or required.

In what was probably the worst case scenario presented as a complaint to the Alabama Board of Licensure for Professional Engineers and Land Surveyors, longtime investigator Bob Herbert worked through the kudzu like intricacies. The work paid dividends and was recognized by those in the office, and on a national stage as he was presented CLEAR’s Investigative Excellence Award in September.

“The complexity of the investigation...,” Herbert said, “originally what appeared to be a complaint on two projects – two churches – began to snowball. More information led to additional cases. Then led to talking to code officials throughout Mobile and Baldwin counties which led to

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## INVESTIGATOR

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additional victims.”

The CLEAR (Council on Licensure, Enforcement and Regulation) Investigative Excellence Award recognizes an investigator who has demonstrated exceptional performance in a particular case or has a history of excellent performance beyond what is expected or required.

The case being referenced is Roddy Fitzgerald/Commodore Steel which led to the heaviest fine since BELS convened for the first time in 1936 and numerous eventual felony convictions. Fitzgerald was fined \$30,000 and pled guilty to multiple counts of felony forgery, identity theft and theft for the stealing of multiple licensed professional engineers’ seals.

“This is truly a worst case scenario for the individual,” Herbert said.

“It would have never been caught by the municipalities because everything appeared to be as it should be. It was a set of design plans submitted by an engineer. The only way we found out was that an engineer had questions about the design plans and contacted the engineer whose seals were on the plans. That’s how it all got started. Had that not happened, Roddy ‘could’ still be doing this and taking advantage of the public and the public would be at great risk.”

Fitzgerald’s initial complaint was received by BELS August 2013 when questions were raised following the drawings for a metal building that, upon PE review, didn’t meet with 2009 IBC standards or the 140 mph wind load requirement that is needed for structures in the Mobile / Baldwin county area. Upon further investigation, Fitzgerald/Commodore Steel did not employ a PE nor did the original design comply with current building code.

The greatest issue in the initial com-



plaint was the fact that he sealed the design using the seal of a professional engineer without that engineer’s knowledge.

As a result of the hearing order, Fitzgerald was presented a Cease and Desist letter requesting he stop all acts constituting the practice (or offer thereof) engineering in the State of Alabama.

He was ordered to pay BELS \$2,500 and then an additional \$1,900 to the state for the cost of the hearing.

In January of 2015, a new complaint was filed against Fitzgerald / Commodore Steel for essentially the same issues as in the 2013 complaint, but on a much grander scale.

Two designs were submitted for a pre-engineered building for two churches containing the seals of a PE without [the PE’s] knowledge. The buildings did not meet code and contained multiple errors to the extent that the plan looked like a “cut and paste job.”

Overall, five different professional engineers had their seals used by Fitzgerald/Commodore Steel without permission or prior knowledge.

“The difficulty (of this type of investigation) was in following the leads and knowing when to ask for assistance,” Herbert said.

“It was a matter of progression. You’d get one thing and then two more sprouted. Once you found out

who the victims were...then we started doing our interviews and relying on the experts to help. The technical reviewers were a big help.”

For Fitzgerald’s litany of misdeeds he was found guilty by BELS and assessed a civil penalty of \$25,000 to be paid to the Alabama General Fund and a hearing cost of exceeding \$5,000 to be paid to the Board.

“The code officials did what they should have done,” said Herbert. “They did everything right. He was just a criminal that took advantage of the public.

“He conned the municipalities – everybody. I’m thankful those complaints were made and we were able to get him off the street.”

During all the interaction with the investigative process, Herbert reached out to law enforcement agencies in Mobile County and the Baldwin County District Attorney’s Office who worked the criminal angle.

Herbert was nominated for the award by BELS Director Rick Huett, with the support of the board.

“I was humbled to get the award,” Herbert said.

“Just looking at the stage and seeing the other individuals and groups that did wonderful things. For me to be listed among them was very humbling. I was very thankful the Board and Rick (Huett, BELS Director) even submitted me for the award and that CLEAR selected me. It makes it even more humbling.”

Herbert and BELS would like to extend special thanks to Det. Sgt. Keith Miller with the Mobile County Special Investigation Unit and Baldwin County District Attorney Administrative Chief Howard Eddy for all the assistance they provided the Board and their efforts to protect the public safety on behalf of the citizens impacted by Fitzgerald’s crimes.

# Helen Adams-Morales appointed to BELS

By Griffin Pritchard |

BELS Public Information Specialist

**H**elen Adams-Morales has been appointed to fill the vacant Professional Engineer position as part of the Alabama Board of Licensure for Professional Engineers and Land Surveyors (BELS). Adams-Morales late July appointment fills the open position and brings the board back to its seven-member capacity.

“I was honored,” Adams-Morales said when asked about her selection to BELS. “I knew that I had been nominated. I received a letter from Gov. Ivey.”

Adams-Morales, an Opp native currently residing in Mobile, brings 30-plus years of engineering experience to the state’s licensing board. She becomes Gov. Kay Ivey’s first appointment to BELS and is another female appointment.

A 1977 graduate of Opp High School, the Bobcat became a Tiger when she earned her Bachelor of Science in Civil Engineering from Auburn University in August 1981.

She earned her Alabama Professional Engineer License in 1987 and has held professional licenses throughout the southeast: Alabama, Mississippi, Georgia and Texas.

An award-winning engineer, Ad-



- Gov. Kay Ivey’s first appointment to BELS and only the second female in the Board’s 80-plus year history.
- Adams-Morales holds professional engineering licenses in multiple states, is a graduate of Auburn University and has spent 30-plus years as part of the Thompson Engineering staff.

ams-Morales has accrued 33.5 years of engineering practice experience, with 28 years of experience in responsible charge of projects. She is a member of the 100 Women Strong Executive Committee of Auburn University’s Samuel Ginn College of Engineering and in 2014 was named the Mobile Area Civil Engineer of the Year by the Mobile Area Council of

Engineers. She also holds an ASCE (both state and national) membership.

“I’ve practiced the entire time I’ve been in the engineering field,” Adams-Morales said. “And I think having that interaction with the young engineers with day-to-day issues and challenges within the industry will be a great asset and that’s also part of the experience I bring.”

She is a Leadership Mobile graduate and has been trained in Dale Carnegie Leadership. Along with training, Adams-Morales has a wealth of practical leadership experience as she retired in 2015 from Thompson Engineering as an Executive Vice President and a member of the Board of Directors. Overall, her history with Mobile’s Thompson Engineering spans 34 years where she served as Vice President of Engineering (three years), Executive Vice President (eight years), Manager of Accounting and Information Technology (three years) and Chief Operating Officer (seven years). Along with executive positions, Adams-Morales served as a member of the Thompson Engineering Board of Directors for 20 years and a member of the LLC Board Watermark Design for 15 years.

During the time spent at Thompson, Adams-Morales garnered high

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## our CONTACTS

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## our MISSION

The Alabama Board of Licensure for Professional Engineers and Land Surveyors was established by legislative action in 1935. Its charter is to protect the public by helping to safeguard life, health, and property, and to promote the public welfare by providing for the licensing and regulation of persons in the practices of engineering and land surveying. This purpose is achieved through the establishment of minimum qualifications for entry into the professions of engineering and land surveying, through the adoption of rules defining and delineating unlawful or unethical conduct, and through swift and effective discipline for those individuals or entities who violate the applicable laws or rules.

# Reaching out to the general public

By BELS Staff

Over the course of the past three quarters, it's been a goal of BELS, and Griffin Pritchard, the Public Information Officer, to expand our offerings to not just industry, as in the past, but to the general public.

To that end, efforts have been made to attend events throughout the state - Home and Garden Shows and Builders Expos - for example.

At those venues, the message is different, as BELS is introducing

itself to a new group of people - a new customer base, if looked at as a business. The experiment has paid dividends as the BELS logo is beginning to be recognized more and more and the number of website, and social media views and likes have increased. An added benefit, is that the public feels more comfortable reaching out to the office or now know to use the License Search feature on the website as a way to find local PEs or PLS's.

## NEED A SPEAKER?

If your university, firm or organization would benefit from a presentation by BELS, we would be happy to join you. We cover a myriad of topics:

- Our identity
- Engineering / surveying ethics
- Continuing education (PDH)
- The investigative process

Please contact Public Information Specialist Griffin Pritchard to make your request. He can be reached via email at: [griffin.pritchard@bels.alabama.gov](mailto:griffin.pritchard@bels.alabama.gov) or via phone at 334-242-5568



# ADAMS-MORALES

From Page 3



enough praise to have its annual Quality Award renamed in her honor in 2015.

“They announced at my retirement party,” said Adams-Morales. “That was my reputation, being very high quality.”

In the wake of Hurricane Katrina, Adams-Morales was recognized for her work with the Chevron Project team. She received the 2007 Thompson Holdings Model Project Award and then a year later received a letter of high recognition for her parts in Projects Phase 2 and Phase 3 of the Hurricane Protection System Higher Level of Protection. She also was part of a presentation team at the Gulf Coast Hurricane Preparedness, Response, Recovery, & Rebuilding Conference that spoke to the “Success around Chevron’s Pascagoula Refinery” during Hurricane Katrina.

Adams-Morales was officially sworn in as a member of BELS Aug. 2 and participated in her first board meeting Sept. 12 in Montgomery, Alabama.

## Speaking Engagements

Within the BELS mission statement lies a mandate to protect the public by helping “to safeguard life, health, and property, and to promote the public welfare.” The best way to live up to the mission’s mantra is through education and, through a series of presentations, BELS’ staff has been busy doing just that.

In the first six months, Griffin Pritchard and Bob Herbert have made several appearances speaking in front of different organizations on topics ranging from our identity, to engineering/land surveying ethics, to continuing education and the investigative process.

Recently, Pritchard and Herbert have attended Code Officials

gatherings in Auburn and Fairhope to discuss the Roddy Fitzgerald / Commodore Steel case and to answer any questions they may have. Having a new director and a new board member has also provided fodder for Pritchard to discuss.

While BELS, over the years, has annually attended certain meetings and conferences this summer a handful of new events were thrown into the mix. Pritchard appeared at the breakout session of County Engineers, ate barbecue with the North Alabama Fire Marshals, and spoke to the Montgomery Chapter of the Society of Professional Engineers. In October, Pritchard traveled to Birmingham to speak at the ASPLS meeting and has more events scheduled.



## Bradford joins BELS staff

By BELS Staff

The BELS Staff has grown by one as Darrick Bradford joined in September. He will be responsible for the handling of Certificates of Authorization as well as the renewals, audits and is available to field any question regarding the items listed above.

Darrick Bradford is a resident of Montgomery, where he attended G.W. Carver High and later Alabama State University.

At ASU he majored in Business Administration and graduated with honors in 2012.

Following graduation, he went on to pursue a career in the business field where he worked in real estate as a property man-

See **BRADFORD** PAGE 6

# The Licensure Question



## Renewal Period Ongoing

- The Renewal License Period began Oct. 3 and, for individuals wishing to renew in “Active” or “Inactive” status, the cost is \$100. To avoid the \$250 reinstatement fee, renewals have to be accomplished prior to December 31, 2017. In order to renew your “Active” license as a professional engineer or professional land surveyor, 30 Professional Development Hours are required.
- If renewing as **RETIRED** there is no cost, but licensees must go through the online process and are not allowed to practice with this designation.
- If renewing as **INACTIVE** there is still the \$100 renewal cost, licensees must go through the online process and are not allowed to practice while inactive. To return to active status, licensees must fulfill the PDH requirements.
- Newly licensed PE/PLS will be granted 30 PDH by BELS to be used toward their first renewal.
- Certificates of Authorization also can be renewed during this period at a cost of \$80 and will go on until January 31, 2018 without penalty. Those that renew after the January 31 date, will have to pay a \$250 reinstatement fee, plus the \$80.

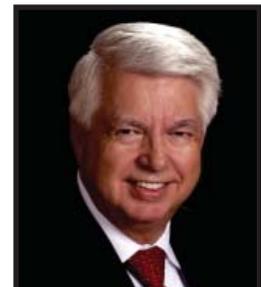
### OUR NEW LEADERSHIP



Nathan Johnson, PE/PLS  
Vice Chair



Liz Hyde, PE  
Chair



Randall Whorton, PE  
Secretary



Prior to opening the Alabama Society of Professional Land Surveyors conference in Pelham, the leadership gathered to honor the state's top Trigonometry teacher Todd Taylor and students Gen Ki Nishimura and William Zhang. Zhang is a three-time winner of the state Trig-Star competition. All attend Vestavia Hills High (AL).

# Math matters

## *ASPLS recognizes Zhang as Trig-Star winner during annual conference*

By Griffin Pritchard |  
Public Information Specialist

At the conclusion of a ASPLS Board of Directors meeting, the group gathered in the Silver Room at the Pelham Civic Complex to recognize a pair of high school students from Vestavia Hills High School (Alabama) who are really good at math.

Students William Zhang and Gen Ki Nishimura (Alabama winner and runner-up, respectively) were applauded and awarded for their mathletic prowess as part of NSPS's national Trig-Star competition.

According to the NSPS website Trig-Star "is an annual high school mathematics competition" with a purpose of "promoting the study of trigonometry in high school and to promote the excellence in mastery of trigonometry by honoring the individual students who have demonstrated superior skills among classmates;" to "acquaint the high school trigonometry students with the application of trigonometry in the surveying profession;" and to "build an awareness of surveying as a profession among the mathematically-skilled high school students, guidance counselors and high school math teachers."

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- Darrick Bradford joins BELS staff and will be responsible for handling CA's, renewals and audits and will be able to field questions on those topics.
- Graduated ASU with honors twice (bachelor's and master's) and is actively involved within the Montgomery community.

**BRADFORD**

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ager. Eventually he moved to Florida, to continue his management career for a couple years.

In 2015, Darrick had an opportunity to work for the Alabama Attorney General's Office, which prompted him to move back to Montgomery for the position.

In the time working there, he completed his Master of Business Administration (MBA) degree, graduating, again, with honors in 2016.

He worked at the AG's office till September of 2017, after which he accepted a job at the Board as an Administrative Support Assistant.

Bradford is very active within the Montgomery community.

He is a member of several community service based organizations (i.e. Phi Beta Sigma Fraternity, Inc., F&A.M Masons of Alabama, A.E.A.O.N.M.S Shriners).

While working with the different organizations, he has chaired several projects that raised funds for the organizations' national programs which supported research for cancer, diabetes and HIV/AIDS. He's also worked with programs geared to help the homeless, NAACP, and UNICEF.

# 100+ Women Strong

## *Auburn-based program promotes women and engineering*

By Griffin Pritchard |  
Public Information Specialist

Auburn University athletics preaches the family mentality. That mantra extends beyond the gridiron, courts and diamonds and into the classrooms. Enter the Samuel Ginn College of Engineering and their 100+ Women Strong initiative.

According to the Auburn University Foundation's website: "Auburn Engineering's 100 Women Strong is made up of alumni and friends of the college who embrace its vision to provide resources and programming that will enable Auburn Engineering to attract, support and retain female students. 100 Women Strong members recognize the importance of connecting with the new generation of female engineers."

In an industry that is, historically, male dominated – Auburn is looking to change that through 100 Women Strong which focuses on "recruiting, retaining and rewarding women in engineering."

But what does that mean?

"This organization was established in 2012 for the purpose of recruiting, retaining, and rewarding AU women in engineering," Myra Girard, the Samuel Ginn College of Engineering's development coordinator, wrote in an email. "We are now an organization of 165 women and are in contact with others who would like to join."

In terms of recruiting, according to the 100+ Women Strong July newsletter, the organization provided a record \$82,300 in scholarships and awards for 2017-2018 comprised of:

- 3 undergraduate research awards (\$6,000)
- 2 undergrad leadership awards (\$2,000)
- 2 graduate leadership awards (\$2,000)
- 2 study abroad awards (\$7,000)
- 19 annual scholarships (\$19,000)
- 6 upperclassmen Helping Hands awards (\$6,000)
- 1 Leadership and Diversity Faculty Award (\$5,000)
- 6 new faculty research awards (\$35,000)

- Created as a way to bridge emerging engineering students with those who have since graduated and are active within the industry, 100+ Women Strong continues to grow and now stands at 165.
- The women in industry also serve as mentors to those currently enrolled at Auburn.

"Our members gift the organization \$1,000 annually," wrote Girard, "and this is the money that funds our recruiting, retaining and rewarding initiatives."

Newly appointed BELS board member, Helen Adams-Morales is a graduate of the Ginn College and has been actively involved with the 100+ Women since its inception.

"When I started there were four," Adams-Morales said with a laugh before the October BELS meeting. "Margaret Arnold was the pioneer of the program. It's grown to 165 women now."

Of the benefits of the initiative, one that both Girard and Adams-Morales highlight is the mentor/mentee relationship.

"It's significant to retaining the female engineers in the program," said Adams-Morales, "and a lot of times the mentors have had similar experiences and they can share how they overcame that obstacle. It lets them know that if they flunk a class or maybe a professor made them feel like [engineering] wasn't the right curriculum for them...all of the 100 Women Strong have stories that they share where they've all been there."

Adams-Morales pointed to the presentation where the speaker noted that her statistics professor called (the speaker) aside and said "I don't think you're really cut out for engineering."

"She went on to get her master's degree and is an executive with Mississippi Power," Adams-Morales said.

As the number of women in the initiative approaches 200, the growth has been surpassed on the mentorship side. The summer newsletter points out that there are currently "at an all-time high" with 200 mentor/mentee assignments and requests.

Mentors are available from all engineering disciplines.



**ANNOUNCEMENT**

**N**CCEES is still seeking licensed professional engineers practicing industrial and systems engineering to participate in a professional activities and knowledge study for the Principles and Practice of Engineering (PE) Industrial and Systems exam.

Details on the online survey are included in the news release, which is posted on the National Council website at <https://ncees.org/ncees-seeks-industrial-systems-engineers-professional-expertise-advice/>.

The survey is scheduled to close November 30.

**MATH MATTERS**

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To that end Todd Taylor, who taught both Zhang and Nishimura at Vestavia Hills, was also awarded by ASPLS.

Zhang, who won the state competition for the third consecutive year, was awarded a plaque and \$1,000. Nishimura and Taylor both were awarded \$500 each.

Nationally, Treydn Fitzwater (Clearfield High School, Utah) Jathan Mentzer (Williamsport High School, Maryland) and Joseph Kovac (Macomb Math Science Technology Center, Michigan) were the top three overall national winners. The national winners teachers were also honored at the national event.

**Certificate of Authorizations: Engineering**

**OVER THE LAST FIVE YEARS**



..... -- Reflects trend over the five-year span | Annual report available at [www.bels.alabama.gov](http://www.bels.alabama.gov)

**our ADVICE**

"Social media is changing the way we communicate and the way we are perceived, both positively and negatively" said Amy Jo Martin, founder and CEO of Digital Royalty (an online marketing firm specializing in social media campaigns and advertising). "Every time you post a photo, or update your status, you are contributing to your own digital footprint."

According to the Joy of Marketing: "If you want social media to work for your business, you have to view it as any other marketing tool and use it to build trust with your clients."

In its article – "Think Before You Post: Social Media Tips for Small Businesses" the group posits a list of scenarios for business owners to consider before clicking the post button.

- Friends can post YouTube videos, jokes, post cards and bumper stickers on your wall that may appeal to you personally, but that could turn off or offend clients. Change your privacy settings so that people cannot post on your wall.
- Status updates / tweets: Keep them business related or don't post them at all.
- Send an inbox message to all of your personal friends letting them know the page is for business purpose so please keep it clean.
- Don't allow people to "tag" photos of you. This will ensure unflattering images of you doing things your client base may not agree with or care to know about aren't seen.
- Don't comment on friends' posts or photos that may hurt your brand and your credibility. Remember your friends can see what you post on other's walls.

The biggest question to ask, before sharing information is a simple one: "Does this post have value?"

If, yes, then go ahead and put it out there. If no, then refrain and choose a different more suitable network for it.

**ENFORCEMENT ACTIONS****Case No: 2017-09-B: Professional Service Industries Inc**

Professional Service Industries Inc, a certificated firm, performed engineering services from a branch office that did not employ a resident Alabama licensed professional engineer. The firm's previous resident engineer for the office left its employment in October 2016 and the firm continued to perform engineering services in the office without a licensed Alabama professional engineer until January 2017.

The firm agreed to a consent order that required it to pay a \$1,000 fine to the Board, a reprimand, and the Consent Order and Final Order would be a public record.

**Helping Hands***NSPS Disaster fund aimed at aiding Surveyors*

One facet of the National Society of Professional Surveyor's mission statement looks to "...establish and further common interests ... that would help bind the surveying profession into a unified body in the United States."

Think of it as surveyors helping their own. Ultimately, that's the genesis behind the creation of the NSPS Foundation Disaster Relief Fund. According to the NSPS the Disaster Relief Fund was established following Hurricane Andrew's spin through South Florida in the early 90s.

"An appeal was made to surveying societies, equipment suppliers and individual surveyors nationwide...for those working in Surveying who were affected by the disaster," according to the fund's info sheet.

Fast-forward to 2017 and over the past several months, parts of the country have been pounded by a string of natural disasters. Hurricanes have damaged the states surrounding the Gulf of Mexico and the Puerto Rico. On the west coast, a continuous string of wildfire left members of the surveying community without jobs and, in some cases, without homes. According to Tommy Brooks, the NSPS representative and a member of ASPLS, the need to help replenish the fund is almost dire.

In speaking to the membership during their two-day October conference in Pelham Brooks said: "This fund was put in place to keep surveyors working if their offices are damaged, enough money to go down and rent a total station or to give a family enough money to buy groceries for two weeks."

According to the NSPS website: "Donations of any amount are being accepted to the fund as we try to build it back-up after disbursements are made. You can make checks payable to the NSPS Foundation and write Disaster Relief Fund in the memo field and mail to NSPS headquarters." The donations are tax deductible.

# REFERENCE POINT

## What does it mean to survey property?

I recently posted this question on a message board and receive more than a few responses. This was by no means a scientific study, but the resulting comments, many of which strayed way off topic, confirmed what I have already come to realize. The answer to this question lies largely in the eyes of the beholder.

I have literally crisscrossed this country from Holton, Maine to San Diego, California, and from Tacoma, Washington to Key West, Florida, talking to land surveyors about land surveying. If you ask two surveyors what it means to survey property you get two different answers, if you ask three you get three different answers. I could go on, but I digress. I do feel, however, that my travels, my surveying background and my study of the law have put me in a somewhat unique position to make a few observations.

The first observation is that this is not good for the overall profession and may actually be the undoing of the profession as we presently know it. It seems to be common knowledge to those on the outside looking in who have a vested interest in the outcome of surveying activity (landowners, lawyers, realtors, title insurers, etc.) that no two surveyors can ever agree on a corner. There is certainly ample physical proof that can be found on the ground to back up this statement. Can you say “pincushion corner?” Depending on the severity of the differences in surveys, these people, especially the landowners, can find themselves embroiled in a lawsuit (or worse) as a result. Land surveying has moved away

*Jeffrey N. Lucas*

J.D., PLS

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from being a benefit to the landowner to now being a potential liability. After all, who wants to buy a lawsuit?

The problem, in a nutshell, can be found on page 2 of one of our most venerated texts on land surveying:

In keeping with recent legal decisions, we have somewhat modified some of the terminology.

For instance, seldom is the term *property line* or *property boundary* used. It is our belief that property rights, including property boundaries, are legal questions and as such are not addressed by land surveyors. Surveyors locate boundaries, or land boundaries or deed lines. They do not and cannot locate property rights. [Emphasis provided.]

The problems with this statement are legion and I could spend the rest of this column going over all of them, but for our present purposes I will just focus in on one.

It flies in the face of what the courts and the rules of evidence demand of land surveying. It also cuts to the core of my question. What does it mean to survey property? The unwary will read this statement and conclude that the determination of the location of property lines or property boundaries is beyond the purview of the land surveyor.

This statement and others like it are the basis for the idea that the land survey-

or's only obligation is to stakeout the client's deed from the geometry contained in the description.

When boundaries are dependent upon the next measurement to come along, land surveyors will always have differing results. Is this what it means to survey property? To simply stakeout the geometry in the client's deed throwing out endless possible locations for the parties to litigate over?

This is certainly acceptable practice in many parts of the country. Some surveyors have actually told me this is what their regulatory board requires of them. The proponents of this type of surveying see boundary surveying as a measurement exercise to be done for the lowest possible price. In a pure boundary dispute case, however, where the ultimate issue is the location of the property line between the coterminous landowners and two surveyors are in court with two different locations, the only line that matters is the “property line.”

And the terms “property line” and “property boundary” are used all of the time, contrary to what we are being told.

How precisely you made your measurements or how tightly you ran your closure are almost irrelevant. Measurements, in the final analysis, are merely evidence and by no means the best available evidence. In the priority of things, measurements are generally subordinate to natural monuments, artificial monuments and calls for adjoining (often seen by the courts as a type of monument).

Oral testimony and long held occupation will trump measurement evidence and answer the location question in most

## REFERENCE POINT

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instances. A judge sitting on a bench with jurisdiction over the parties and the subject matter can determine what the property is and where it is located without any surveying measurements whatsoever. Surveyors are not necessary to the settlement of a disputed boundary. This should be another warning to the land surveying profession. Ultimately, our services are not necessary and most of the services we provide can be provided from other sources.

### The second observation I've made is that landowners think we are surveying property.

Land surveyors like to think that nobody understands what we do or how we do it. We are basically the Rodney Dangerfields of the professions—we don't get any respect. Actually, most landowners who know anything about land surveying think that when the land surveyor goes to the field, the land surveyor determines where the property lines are located. This is why they react to land surveying activity, especially when the results of the survey upset the status quo.

*The Robertsons then employed another surveyor, Samuel Ball, to conduct a complete survey of their property and plot the results. He entered the bearings and distances in a computer plotter and found the line as described in the deeds was in fact about 15 feet west of the line established by the pins. [Emphasis added.]*

The Robertsons didn't ask for a deed stakeout, they asked for a "complete survey of their property." But they didn't get that, and once his surveyor told Mr. Robertson he owned 15 feet more, what did Mr. Robertson want?



*Kenneth Robertson, a plaintiff and an appellee, and a grantee of the 3-acre tract who is now claiming the erroneous description controls, testified: ...*

*Q: Okay. Now you know, I want to ask you something, Mr. Robertson. I mean, what I hear you saying is that if the legal description in your deed gives you a little more land, then what Mr. Ball [the surveyor] says, is what you want. Is that right?*

*A: Well, what Mr. Ball—according to Mr. Ball here, this is what I should have.*

*Q: Okay. And even though it goes beyond the pins, that's what you should have because that's what it says in the deed?*

*A: I should have on—what my deed says is what I want, and Mr. Ball has got it marked here right, and that's what I want and that's all, that's it.*

Robertson's three acres was originally cut out of a larger tract. Robertson and his grantor set the pins for the three acres, walked the boundaries at the time of the conveyance and accepted the pins as the limits of the property that was sold to Robertson. A surveyor was subsequently hired to describe the property and he made a mistake causing the description and the measurements it contained to be, as the court put it, "erroneous."

The surveyor later hired to do a "complete survey of their property" misdiagnosed the condition of the patient (made decisions based on the lowest form of

evidence, i.e. measurements, because no other evidence was gathered), wrote the wrong prescription (computer plotter survey), and killed the patient as a result (sent all of the parties to court wasting tens of thousands of dollars). But as long as the surveyor has a north arrow on his map and met the applicable closure ratio, it is irrelevant if the surveyor kills the patient.

### This brings us to my last observation, at least for this column.

Our surveying standards are a major part of the problem. I do not claim to have read every set of standards that are out there, but from the sampling I have read, they are all the same. They are not professional standards of practice, even though some of them claim that title. They are all technical standards written for technicians. They are all focused primarily, if not exclusively, on measurements and the results of measurements. Measurements are not needed to resolve a boundary problem and neither are surveyors. The land surveying profession needs to wake up before it's too late and we all become irrelevant. What's the clicking noise I hear? It's the sound of 400,000 GIS'ers putting property line information into their data base.

**NOTE: The views and opinions expressed in this article are those of the author and do not necessarily reflect the official policy or position of the Board.**

## GREYSCALE



*Marc Barter*

Professional Engineer

## Performance Specs

**The purchaser of services relies on the ethical practices of the licensed engineer for his or her protection; and the business of the licensed engineer relies on the efficient use of resources...**

The latent ethical dilemma in today's construction environment, which is seldom discussed, is use of performance specifications. Performance specifications are a "requirement that describes the functional performance criteria required for a particular equipment, material, or product. In contrast, a design specification describes design characteristics and manufacturing methodology."

Unfortunately some engineers have sought to bridge the gap between lack luster compensation and rising expenses by overusing performance specifications. Performance specifications have long been used to specify proprietary products and systems or specialized construction, but more recently they have come into play in the off-loading of design work to contractors.

This abdication of design control has led to a blurring of responsibilities, poorly coordinated construction documentation, and very likely buildings and systems that are below code. A byproduct of this practice is the potential misunderstanding with the purchaser of the design services regarding the scope of work and responsibilities of the engineer of record.

Seldom do clients, who are primarily owners and architects, understand what they are actually buying.

Owners in the role of purchaser have little experience with engineers and are easily misled, while other design professionals, not familiar with the particular discipline they are seeking services from, usually have just a modicum of knowledge.

The purchaser of services relies on the ethical practices of the licensed engineer for his or her protection; and the business of the licensed engineer relies on the efficient use of resources, including performance specifications.

For decades structural engineers have used performance specifications to specify items such as steel bar joists, pre-engineered metal buildings, prefabricated wood trusses and, more recently, prefabricated metal trusses.

It is advantageous to the owner to have these products engineered and fabricated by the recommended supplier in order to take advantage of the knowledge that the specialty engineer brings to the project.

While any qualified structural engineer should be able to design a truss, i.e., a bar joist, efficiencies are certainly gained by having the joist manufacturer's engineers design them.

The same goes for wood trusses, which are constructed with grades of lumber not always readily available locally, and proprietary connection plates. In recent years, however, too much of the design engineer's responsibilities have been off-loaded to third party engineers via the contractor. As a result, work that could have been done by the engineer of record was assigned to the contractor, making the contractor's job difficult, and blurring responsibilities.

How far does the responsibility of the engineer of record extend when a third party engineer is engaged to design special elements of the project? Is there an ethical obligation for his or her involvement that takes precedence over any contractual obligation?

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Might the engineer of record have entered into a contract that is perfectly legal yet unethical?

Suppose an architect allowed the structural engineer to exclude the design of all the columns in the building.

No legal principle states that a structural engineer, as opposed to any licensed engineer, must design the columns.

Nonetheless, most owners would assume that the structural engineer of record is designing the columns as part of his or her responsibilities. Owners are going to believe that's a service they are paying for, and to pay a third party engineer to provide that service would be paying twice for the same service.

So while a performance specification covering the columns might be legal, it is not ethical unless the person paying the engineer is aware and accepts that the structural engineer's scope of work does not include the design of the columns.

Engineers have a responsibility to make sure that purchasers of their services understand what they are purchasing and, of equal importance, what they are not purchasing. And therein lies the problem with performance specifications.

Engineers are off-loading their responsibility for design through the use of "proprietary" materials and requiring the contractor to share design responsibility, largely without the client's knowledge.

The owners believe the design team, which in many cases they so carefully vetted with interviews, resumes and references, is actually designing their project.

Little do they know or understand that, through performance specifications, an engineer who was not vetted, who may have specialized knowledge or not, who may carry liability insur-

ance, or not, is designing major elements and systems for their project. While every performance specification requires "a qualified professional engineer", who is actually evaluating that individual's qualifications?

Engineers are being pressed by their clients to accept lower fees, and they are seeking ways to remain profitable. Engineers provide a marketable commodity which is labor in the form of professional services.

The only way for engineers to lower their fees, and not give away their marketable commodity, is to reduce services.

When engineers feel compelled by reduced fees to reduce their services below the implied or perceived level, the purchaser of those services has a right to know. When services fall below the level mandated by the standard of care, the safety of the public may potentially be sacrificed.

Rather than have the frank discussion with the client about fee and the correlation of fee to service, it is not unusual for engineers to work around it.

Light gage steel design, wood truss design, and metal truss design are all commonly handled by specialty engineers via performance specification when, in combination, these elements amount to the entire superstructure.

Add a performance specification to cover the foundation and the construction plans could consist of a general note sheet that states "Furnish Building".

Coming down a notch, the proper way to design a building according to this engineer does not constitute a paradigm of ethics; however, it is important for every engineer to understand that transparency is the coin of the realm in ethical behavior.

Use performance specifications as you must, or as you think wise, but

make sure that your client understands your role in the project and, more importantly, the role of the entities you have engaged.

Understand further that judges and juries decide liability, not specifications. When your name is on the cover sheet, you are the responsible party for your discipline; and it will come easier to you to justify your own design versus that of the absentee specialty engineer.

In other words, if there is going to be a deviation in perceived responsibilities, choose permission/proclamation now, over thinking you can obtain forgiveness later. It will be far easier to discuss and clarify your role in the project prior to signing a contract than it will be to explain what you thought it was in a deposition.

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