

# The Interior Angle

## OCTOBER 2022



# **Interior Angle**

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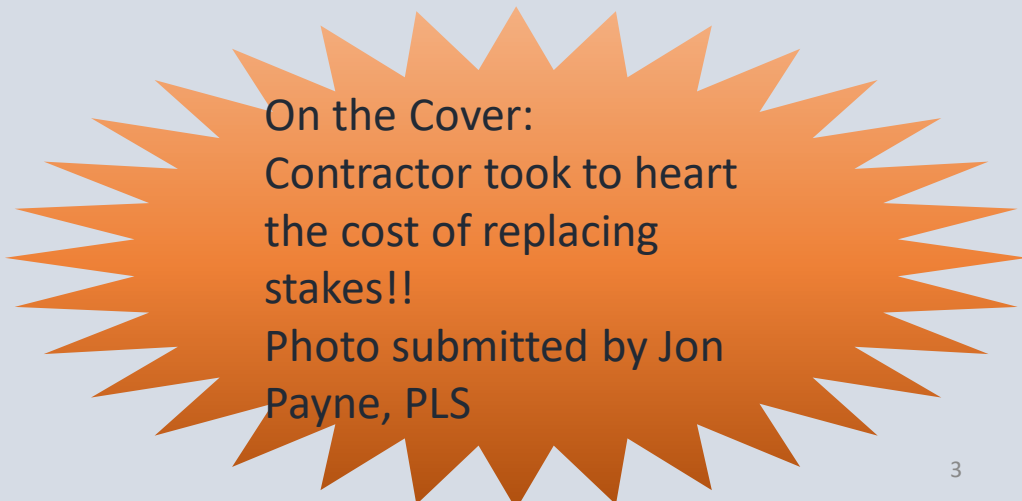
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Contractor took to heart  
the cost of replacing  
stakes!!  
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Payne, PLS

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Archived at the Library of Congress:  
<https://www.loc.gov/resource/g3950.ct001246/?r=0.649,0.069,0.256,0.156>.

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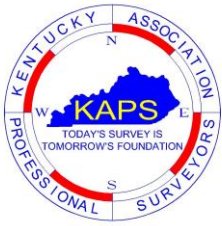
Northeast...Inactive

Northern Kentucky...James Elliott

Purchase...Shaun Foley

Southeast...Curtis Felts





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Tom Bushelman, PLS

## Story of a Survey

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I have been involved in a boundary job in Eastern Kentucky that has occupied a couple of days a week for six or seven months now. Expect a comprehensive article upon completion of the project but I've had so much fun for so long I feel the need to share bits and pieces.

My first day on the job, I followed and shot about 5,500 feet of wandering fence line up and down the hills most of which turned out not to mean diddley squat. The initial search point was for a fence post 100 feet from any sort of fencing in the middle of a well-tended

pasture field. Starting out with that sort of search radius is a little daunting but an important corner a couple thousand feet up was a 48" sycamore tree which was not to be missed, and in fact turned out to be about where the deed said it was supposed to be. There were three of us on site that day and at the end of my section I was looking for another sycamore tree on the west bank of a creek. I found the creek and there were no sycamores to be seen. I had big plans for shooting the creek because that was a



Tom Bushelman, PLS

## **Story of a Survey**

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significant part of the call but had lost all cell reception and UHF range from the base. I wandered around looking at trees and fence lines, wondering if the scrivener actually meant birch tree because those were plentiful. Eventually, I looked down and covered up in the briars was a railroad rail sticking straight up about six inches and painted orange. Barring a major train wreck that caused pieces of rail to fly through the air and impale the ground that was a “sure nuff” corner marker. I flagged the rail and area and went to meet the rest of the crew. We came back to shoot in the corner with WAAS float and wouldn't you know it, the UHF signal came through for us and we were able to pick the shot right up. Turns out at the top of the next hill 3,000 feet away, one of the other guys shot another rail and it was a straight line between them. As they used to say on the A-Team, “I love it when a plan comes together”

Another day, two of us were driving in our trucks from one side of the job around to the other side which can take 30 minutes on narrow county roads. My survey truck doubles as a farm truck and has “holster hips” being a dually. Another truck was coming the opposite way and I slowed down and rode the edge of the pavement. I've gotten good at putting half a tire over the edge and never had a problem until this moment. I saw a vertical drop of five feet in the dirt ditch right next to the asphalt which would flip me right over if I went into it and about then, my front tire dropped, and I ground immediately to a halt looking like a serious off-roader with the suspension system in maximum twist. Three sets of tires were in fine shape sitting on asphalt and the front right tire was also sitting on asphalt, but that asphalt had broken off from the edge and was way down into the ditch while the weight of my truck was sitting on the axle tube and control arm. Lucky for me, I had a heavy-duty chain

Tom Bushelman, PLS

## Story of a Survey

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and a friend with a truck right behind me. Unlucky for me, the weight difference in the trucks was too much to overcome pulling uphill and a downhill pull would almost certainly flip the truck into the ditch. A call to the insurance company for a tow was somewhat confusing while I tried to explain to a call center in New Delhi that I needed a tow truck to just pull me one foot up and over but we finally reached an understanding. When the tow truck pulled up, he had me out in moments, no muss, no fuss. There was still plenty of time in the day and we ended up with another very productive day of monument location. I sent pictures of my stuck truck to some friends and I feel like they didn't really believe the road had collapsed under my tire and it does sound like a story a teenager would tell his parents but sure enough, pictures of the roadbed kept me out of the Liars Club for just a little while longer..... as far as anybody knows.

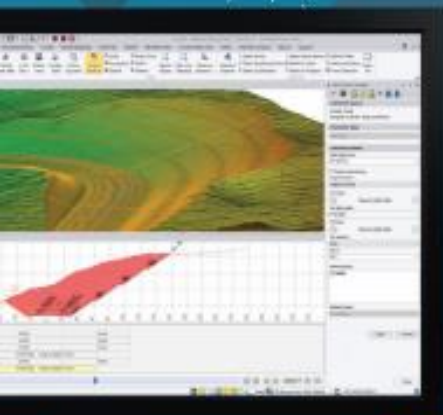






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#### Nashville

1311 Elm Hill Pike  
Nashville, TN 37206

615-840-2260

Ryan@yourprecision.com



Jon Payne, PLS  
jpayne3536@gmail.com

## Editor's Commentary

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It has already been almost one year serving as the editor of the Interior Angle. This is the fourth edition.

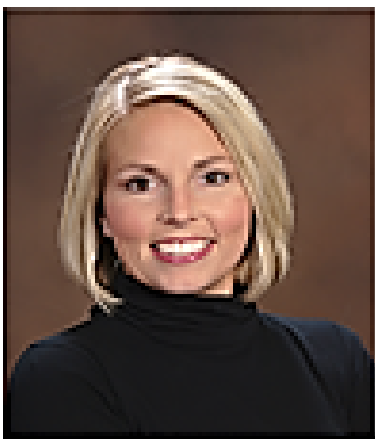
There has been some good feedback in terms of having these issues coming out again, and I appreciate those comments. There have been several constructive suggestions for improvement, and I'll try to implement ideas as I have time to do so.

Reducing the information obtained to an at least presentable form is not too difficult. Getting materials for print is the hard part. As is obvious from the issues with good participation from other KAPS members, this is just like any of the in-person seminars I have presented – they are only even half-way good because of those people who participate in discussion. So, a huge thanks to all who have contributed articles so far and to those who will contribute in future.

We always discuss the benefits of KAPS membership, but never the dark side. Well, here it is – my current addiction which I would not have been introduced to except for the bad influence of James Mayo.

Regards,  
Jon Payne





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Jon Payne, PLS

## **Does a Surveyor Ever Really go on Vacation?**

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In the last issue, there was a photo with a caption that it would pertain to an upcoming short story in the Interior Angle. This will just be a brief tale about being in what is basically an idyllic vacation location and being so survey oriented that property boundaries still deserve photo op status.



**Placencia, Belize**

When I was teaching at Murray State, along with a colleague, I took some students on a study abroad trip to Belize. It was a beautiful location and we all enjoyed learning about the local engineering/architecture/planning environment. We were fortunate enough as to be able to visit with a local architect and a local developer to see some development sites. In Belize City, there was some significant roadway construction happening as well.

Pictured to the right is a property boundary marker near the Cozy Corner Hotel & Restaurant where we stayed. For some reason, this was at least equally as fascinating for me as the beautiful ocean view from above (where we saw a dolphin swimming!!).



Jon Payne, PLS

## **Does a Surveyor Ever Really go on Vacation?**

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As we walked around the beach front community and enjoyed the wonderful local food and ocean views, I kept noticing the property corners.

I even saw issues that needed to be resolved. It is a good thing I didn't know where the local records were kept, or I might have spent the whole time there investigating why the potential "pin-cushion" as seen below might have happened.



Jon Payne, PLS

## Does a Surveyor Ever Really go on Vacation?

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Fortunately, since I didn't know where the records were kept (and I'm not licensed to practice in Belize), I was able to look up from monument hunting and get some pictures and memories of a very beautiful country. Do you find it difficult to turn off surveyor mode when you are supposed to be off?



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- All day battery, backed up by a removable battery option helps you power through the day
- Built-in Bluetooth, Wi-Fi, GNSS, worldwide WWAN, and a rear facing camera, make it easy to capture videos and images, send and receive data and access the Internet





# Getting to Know ...

## Derrick Daily, PLS

### **What started you in the surveying profession and what about surveying has held your interest such that you stayed with it?**

I attended Simon Kenton High School and attended vocational school at J.D. Patton Area Technology Center my junior and senior years where I took carpentry. In that carpentry class, we learned DMS and how to use a transit to turn angles and shoot distance to set up batter boards. I fell in love with the surveying aspect and there was so much to learn. My senior year I did a co-op for a local company performing interior and exterior remodeling and realized I could make a living doing so. But I wanted more. I love swinging a hammer and my heart has always been in construction. Toward the end of my senior year, I researched surveying and the path to licensure. I wrote my senior exit project about the career and presented the path to licensure to the panel. I attended Cincinnati State the following August. Here I am ten years later, licensed in two states and doing exactly what I said I would do in that senior exit project.

### **In your professional surveying career, what is something you are most proud of accomplishing?**

I am most proud of going to college and working diligently toward licensure. College is not easy and not for everyone and it is hard to balance a hefty class load while trying to work. It was hard to see the light at the end of the tunnel when all I wanted to do was work. I wasn't a good student, but I was good at working. However, obtaining licensure is a critical step to moving forward in this profession.





# Getting to Know ...

## Derrick Daily, PLS

**Tell us about one of your more memorable surveying projects.**

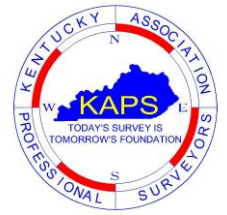
I worked for John R. Jurgensen throughout and after college and one project that stands out is the I-75 project in Erlanger, KY. We worked 50+ days straight. It was long hot days and it never seemed to rain on that job. The Superintendent, Project Manager and team made that job fun. We had to have fun or all of us would have been miserable.

**In your opinion, what are the benefits of being a member of KAPS and what would you suggest KAPS could do to be of more benefit for its members?**

The biggest benefit I've found to being a member is the relationships built with other surveyors. Our NKY chapter is a tight group and all of us know each other. When I need help and have questions, I can call on others and seek help. Since I'm still "wet behind the ears", as some would say, it's nice to have those relationships to rely on for guidance.

Something KAPS could do to benefit its members would be to be more active on social media. I am considered a millennial and social media came out when I was in high school and grew like wildfire. My Generation, and especially younger generations, almost exclusively use social media for communication and to get their gossip, news, etc. I think we could reach the younger generation if we became more active on social media.





# **Getting to Know ...**

## **Derrick Daily, PLS**

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**What do you do to unwind and step away from the work aspect of surveying?**

I think I speak for everyone when I say it is hard to turn it off. When I am walking down an urban street, working or not, I am looking for mag nails and notches. It is a passion, not just a profession. A cold beer never hurts either.

**Tell the readers something your colleagues may not be aware of about yourself.**

I am an outdoorsman at heart so when I'm not beating around the woods looking for monuments, I'm cutting firewood, fixing fence, boating at Cumberland, raising our children, being a husband, chasing cows, volunteering, hunting, and being involved at The Bridge Church in Alexandria, KY. Howard Johnston, a pioneer for the beginning of KAPS has been Pendleton County Surveyor for over thirty years. With his blessing, I am running for Pendleton County Surveyor in the November election.

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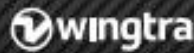
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**DJI M300 RTK**



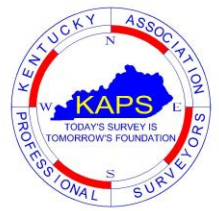
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# CONFERENCE 2022

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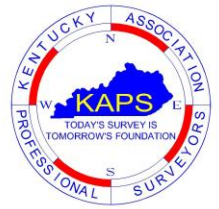
The conference has occurred! Since I missed out last year, it was nice to be able to participate again. We had some great courses offered, and we had some fellowship. I believe there are better photos out there and perhaps a more in depth telling, so I'll just put a couple of my cellphone pics here showing lunch time discussion, swearing in of officers, and Ben discussing HB 526 from earlier this year.



# CONFERENCE 2022

## UPDATES

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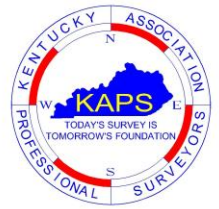


One of the great things about conference is catching up with folks you don't get to see very often. One person it was great to see again was Doug Comer. He was kind enough as to share these pictures of Chino keeping everyone engaged with his humor and Greg receiving a MUCH deserved "Surveyor of the Year" award.



# CONFERENCE 2022

## UPDATES

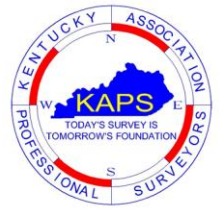


One very important function of KAPS is to try to support young people in their pursuit of the profession. Several fund-raising events take place throughout the year to help fund scholarships. It was nice to see that effort turn into scholarship awards to these great young people.



# **KAPS ONLINE CPD CONTENT**

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Courses are hosted on an online learning management system which means they are available to you anywhere that you have internet service, and they can be accessed via PC, tablet, smartphone, etc... You will be creating an account and password for that learning management system website.

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Currently, all fees from the online courses go to the KAPS scholarship fund. If you would like to produce a course to support the scholarship fund, there are KAPS members who will be glad to aid if they can.

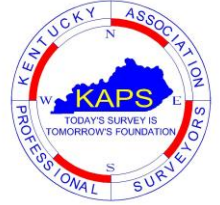
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# Become a KAPS Member

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We would love to have you be a member of KAPS if you are not already one. If you would like to join for a first time or would like to renew your membership for the coming year, you can do so easily online using the following QR code from your smartphone or by visiting the website at:

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# **Celebrating the 50th Anniversary of the Brooks Act, by John Palatiello**

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On this day, October 27, in 1972, President Nixon signed into law legislation providing for qualifications based selection (QBS) of architecture, engineering, (A&E) and related services, including surveying and mapping. It was 50 years ago today the Brooks Act became law.

At the time of its enactment, the Brooks Act was a radical departure from the norm of lowest bid in Federal procurement. It set a precedent that enabled qualitative factors to become commonplace in various contemporary acquisition procedures. In other words, A&E was for past performance and best value before it was cool.

Enacted by Public Law 92-582, the Brooks Act was named for its author, then-Representative Jack Brooks (D-TX). Although agencies had used qualifications as an evaluation and selection factor, followed by negotiation of a fee that is “fair and reasonable to the government” for A&E services for more than a century, the legislation was necessary to codify the practice.

“Ask 10 A&E firms to bid on the design of a particular facility and many agencies will take the easy way out and select the low bidder. Under such circumstances, we may end up with a technically capable architect or engineer, but one who, for lack of experience or because of a desire to stay within his bid reduces the time spent on field surveys or in the preparation of detailed drawings, or in providing inspection services. As a result, the government may have saved itself a half of one percent to the cost of construction, operation or maintenance,” said Senator Jennings Randolph (D-WV) on the

# **Celebrating the 50th Anniversary of the Brooks Act, by John Palatiello**

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Senate floor during the 1972 debate on the legislation that became the Brooks Act.

The “qualifications based selection” or “QBS” process is codified for Federal agencies in title 40 of the United States Code, section 1101 and implemented in the Federal Acquisition Regulation (FAR) at 48 CFR 36.6. Passed on a bipartisan basis and supported by lawmakers in both parties over the ensuing 50 years, the process is also recommended by the American Bar Association in its Model Procurement Code for State and Local Government, and has subsequently been adopted by almost every state in a “mini-Brooks Act”. In Kentucky such procurement language is found in KRS 45A 730 ... 838 (<https://apps.legislature.ky.gov/law/statutes/chapter.aspx?id=37250>).

The law emphasizes an investment in quality and competence in A&E services, so the integrity of buildings, facilities and other government activities dependent on designs, drawings, surveys, and other related services could be relied upon during construction, operation, and maintenance over the life of such structures and program activities.

The law requires an agency’s public announcement of its requirements for professional A/E-related services, interested firms compete by submitting their qualifications, usually on a standard government form, SF 330, the agency evaluates the firms’ submittals and selects a short list of most qualified firms for an interview. Based on evaluations of the firms’ qualifications, experience, past performance and other factors, the agency determines which firm is

## **Celebrating the 50th Anniversary of the Brooks Act, by John Palatiello**

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the most qualified to meet the government's requirements. The government prepares an independent estimate of the anticipated cost, and a negotiation is held between the government and the selected firm to arrive at a price that is fair and reasonable to the government. In the process, the government holds the cards. If a fair price cannot be negotiated, the government is free to terminate the negotiation and begin discussions with the second ranked firm.

It is rare that the United States suffers from faulty buildings. When such failures do occur, such as the 1978 implosion of the roof of the Hartford Civic Center or the 1981 collapse of the Hyatt Regency Kansas City skywalk, Congress investigated these incidents and issued a report on "Structural Failures in Public Facilities" in 1984. It found, "procurement practices that lead to or promote the selection of architects and engineers on a low bid basis should be changed to require prequalification of bidders with greater consideration given to prior related experience and past performance." The chairman of the subcommittee conducting the study and publishing the report was then Rep. Al Gore, Jr. (D-TN). As President, Ronald Reagan said at a ceremony recognizing design excellence in Federal buildings said, "Good design doesn't cost money. Good design saves money, and you know how that warms my heart."

When earthquakes, hurricanes, and other calamities impact foreign countries, the destruction to buildings too often results in tragic loss of life. In America, such instances are rare, due to strong building codes and excellence in A/E services employed through the QBS

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process. Non-construction related services also benefit from the emphasis on quality. A recent drowning in Loudoun County, Virginia was attributed to inaccurate and incomplete mapping use by the local 911 emergency response system. The Commonwealth of Virginia does not use its state QBS law for this mapping program.

The Brooks Act, licensing of design professionals, and strong building codes contribute to the fact that hurricanes and other natural disasters, while tragic, do not result in the property damage and loss of life in the United States that is experienced in most other countries.

When the landmark Competition in Contracting Act was enacted in 1984 in response to the scandals related to over-priced coffee pots and toilet seats bought by the Pentagon, Congress defined the QBS process as a competitive procedure in Federal law. During consideration of the original Brooks Act in 1972, Senator Edward Gurney (R-FL) explained “any Federal procurement officer ... will tell you that competition based on professional-technical qualifications is every bit as hot and demanding as competition based on price, perhaps more so.”

The famous showman, P.T. Barnum, is well known for saying, “There’s a sucker born every minute.” What is less known is that Barnum also observed, “The smartest way of deriving the greatest profit in the long run is to give people as much as possible for their money.” To the nineteenth century British author John Ruskin is attributed the observation, “It’s unwise to pay too much, but it’s

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worse to pay too little. When you pay too much, you lose a little money — that is all. When you pay too little, you sometimes lose everything, because the thing you bought was incapable of doing the thing it was bought to do. The common law of business balance prohibits paying a little and getting a lot — it can't be done. If you deal with the lowest bidder, it is well to add something for the risk you run, and if you do that you will have enough to pay for something better.”

The Brooks Act saves money. There is no evidence that selecting architects, engineers, surveyors, or mapping professionals on the basis of qualifications, competence, experience, and past performance results in higher costs. Indeed, given that such services amount to less than 1/10th of 1 percent of the total life cycle cost of a structure or facility, but affect the operation and maintenance costs over the life of the facility, the research and data shows the investment in quality in design-related services saves money and human lives. A study conducted jointly by the University of Colorado and Georgia Institute of Technology drew from a database of approximately 200 public and private construction projects in 23 states, including transportation, water, commercial and industrial projects, ranging in size from relatively small projects to those costing hundreds of millions dollars. Its authors compared various procurement methods, including QBS, best value, and low-bid, with such factors as total project cost, projected life-cycle cost, construction schedule, and project quality outcome. Results showed

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that using QBS to procure the design component of a construction project “consistently meant lower overall construction costs, reduced change orders, better project results and more highly satisfied owners than in other procurement methods”.

The Brooks Act is a law that has worked for 50 years. It contributes to the public health, safety, and welfare, as well as is part of what makes the United States the envy of the world.

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John Palatiello is Administrator of the Council on Federal Procurement of Architectural & Engineering Services (COFPAES), a coalition of leading professional societies and trade associations in the design field and an association executive serving several organizations in the architecture, engineering, surveying, mapping, and geospatial community.