

The Tarheel SURVEYOR

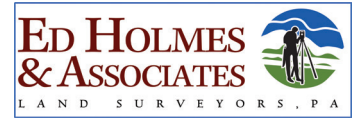
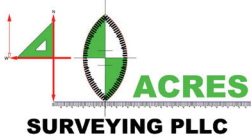
FALL 2023 No. 252





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The Tarheel SURVEYOR Fall 2023

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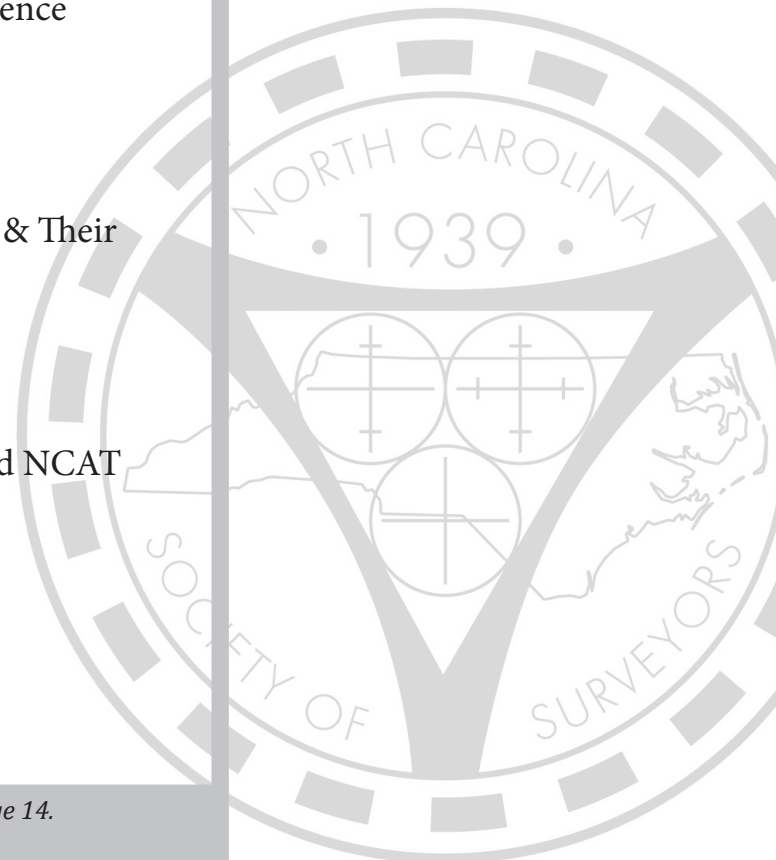
ABOUT NCSS:

- Founded January 31, 1939
- Second oldest professional surveying organization in the United States
- Only professional surveying organization in NC
- Affiliated with the National Society of Professional Surveyors and, therefore, all Professional Members are also accounted as members of NSPS as of July 1, 2013

OUR MISSION:

"A society of professional surveyors and their associates dedicated to enhancing professionalism, improving legislative awareness and promoting the profession of surveying."

Cover Image: Doug Suttles, PLS - see feature article on page 14.



WHO WE ARE



NCSS PRESIDENT

J. David Lee
dlee@essassociates.com

NCSS PRESIDENT-ELECT

Timothy S. Guisewhite
tim@gplsurvey.com

NCSS VICE PRESIDENT

Dean Exline
dexline@gisspc.com

NCSS PAST PRESIDENT

Jerry W. Nave
jwnave@ncat.edu

NCSS SECRETARY/TREASURER

Cliff Johnson
cliffj@cityofgastonia.com

NSPS NC DIRECTOR

Jim Craddock
jamescraddock@cesicgs.com

ALBEMARLE CHAPTER PRESIDENT

Lucy Cardwell
sablecardwell@hotmail.com

CAPE FEAR CHAPTER PRESIDENT

Michael J. Adams
capefeearchapter.ncss@gmail.com

CENTRAL CHAPTER PRESIDENT

Jerry C. Callicutt
jcc@rtmc.net

COASTAL CHAPTER PRESIDENT

John A. Odom
jodom.pls@embarqmail.com

EASTERN CHAPTER PRESIDENT

Carl Parker
cparker@parkerandassoc.com

FOOTHILLS CHAPTER PRESIDENT

J. Douglas Suttles
doug@suttlessurvey.com

GUILFORD CHAPTER PRESIDENT

John Willis
jwillis@dmp-inc.com

JOHNSTON COUNTY CHAPTER PRESIDENT

Shane Strickland
mebstrick@gmail.com

MECKLENBURG CHAPTER PRESIDENT

Jim Strome
jstrome@Carolina.rr.com

NANTAHALA CHAPTER PRESIDENT

Jake E. Stephens
jstephens7848@gmail.com

NE PIEDMONT CHAPTER PRESIDENT

Nathan R. Hymiller, Jr.
pls3010@aol.com

NORTHWEST CHAPTER PRESIDENT

Neil Shepherd
neil@ridge.blue

PIEDMONT CHAPTER PRESIDENT

Jeff Allen
jeff@allengematics.com

SOUTHEASTERN CHAPTER PRESIDENT

Benjamin C. Brown
benjyb@bellsouth.net

SOUTH BRUNSWICK CHAPTER PRESIDENT

Steve Norris
stevenorris@atmc.net

SW PIEDMONT CHAPTER PRESIDENT

Gavin Proffit
gproffit@dewberry.com

TRIANGLE CHAPTER PRESIDENT

Troy Clayton
ctroyclayton@gmail.com

WESTERN CHAPTER PRESIDENT

David Turner
david@turnerlandsurveying.com

YADKIN VALLEY CHAPTER PRESIDENT

Rusty Douglas
douglassurveying@outlook.com

CHAPTER MEETINGS

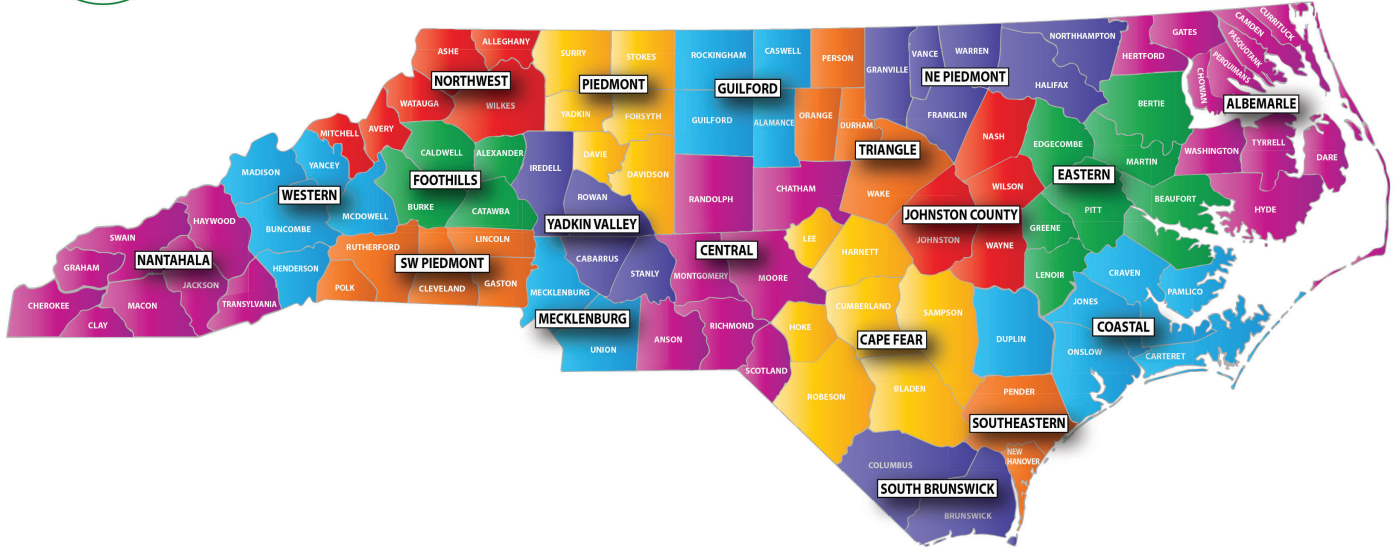
CHAPTER	DATE & TIME	LOCATION
Albemarle	4th Tuesday 6:30 pm	Various Locations, NE Counties
Cape Fear	Last Thursday 6:30 pm	Various Locations, Fayetteville
Central	Last Tuesday 6:00 pm	Blake's B-Que, Candor
Coastal	Last Monday 6:30 pm	Sagebrush Steakhouse, Morehead City
Eastern	2nd Monday 6:30 pm	Parker's BBQ, Greenville
Foothills	2nd Tuesday, 7:00 pm	Timberwoods, Morganton
Guilford	Various Times	Various Locations
Johnston County	2nd Tuesday 6:00 pm *no meeting Jun-Aug	Various Locations, Smithfield
Mecklenburg	1st Tuesday 6:00 pm *no meeting Jul-Aug	Dilworth Grille, Charlotte
Nantahala	3rd Tuesday 6:30 pm *no meeting Jun-Aug	Various Locations, Sylva
NE Piedmont	4th Tuesday 7:00 pm	Johnny Bulls, Louisburg
Northwest	3rd Tuesday 6:00 pm	Various Locations, Boone & Wilkesboro
Piedmont	4th Tuesday 6:00 pm	Foothills Brewpub, Winston-Salem
Southeastern	Last Wednesday 7:00 pm	Various Locations, Wilmington
South Brunswick	Last Friday 12:00pm	Chance's Steak & Seafood, Shallotte
SW Piedmont	2nd Thursday 6:00 pm	Fisherman's Feast, Shelby
Triangle	3rd Tuesday 6:30 pm	Mason Jar Tavern, Fuquay Varina
Western	2nd Tuesday 6:00 pm	Various Locations, Asheville
Yadkin Valley	2nd Wednesday 6:30 pm	Pancho Villa's, Salisbury

Please contact chapter president to confirm meeting details before attending.



NCSS CHAPTER AREAS

There are 19 local chapters of NCSS located throughout the state of North Carolina that meet regularly. These meetings are a great way to stay up to date on the latest issues affecting surveyors in the state. If you are not currently attending your local chapter meeting, we would like to encourage you to get involved.



NCSS STAFF

NCSS EXECUTIVE DIRECTOR
 Sherri L. Barron
 sbarron@ncsurveyors.com

MEMBERSHIP DIRECTOR
 Anna L. Culiati
 aculiati@ncsurveyors.com

NCSS OFFICE MANAGER
 Alison Olwell
 aolwell@ncsurveyors.com



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DIRECTOR'S NOTES



The last six months have been a whirlwind of activity. Since I took on the role of Executive Director and we released the previous edition of *The Tarheel Surveyor* on May 1st, our organization has been consistently engaged and productive.

On my first day as Executive Director, I attended as the North Carolina Senate convened and voted on Senate Bill 677, where it received an unequivocal and favorable response. Throughout the summer, we eagerly awaited its journey through the House; and, on September 21st, it received a favorable response there too. It is worth noting that the bill underwent an amendment, incorporating a new section focused on building permits (§ 160D-1110.1). On October 10th, it received a party-line, concurrence vote in the Senate. The Governor has 10 days to sign or veto the bill. If he does neither, it will automatically go into effect.

On June 16th, I was honored to attend the Congressional Field Hearing on Grid Security and Resilience in Pinehurst alongside President David Lee and Past President Jerry Nave. While there, we had the privilege of meeting Subcommittee Chairman Jeff Duncan (R-SC). Representative Duncan was very receptive to our input regarding the invaluable contributions made by surveyors to critical services.

In July, Jerry Nave and I had the opportunity to represent NCSS at the inaugural North Carolina HERricane Experience career fair hosted by NC Emergency Management. Paddy Jordan, Get Kids Into Survey Ambassador, joined us as well. The HERricane Experience is a program designed to inspire young women in grades 9-12 to explore careers in emergency management and public safety. The enthusiasm of these young women was palpable, and they displayed a keen interest in learning more about potential careers in land surveying.

The National Society of Professional Surveyors (NSPS) held its fall meeting in Cleveland from September 20th to 23rd. I was pleased to attend with Jim Craddock, North Carolina NSPS Director. While there, I actively participated in numerous committee meetings, including Public Relations, Workforce Development, Trig-Star, CFS, Executive Directors, Southern Directors Council, and Joint Government Affairs. It's heartening to note that North Carolina boasts a thriving and dynamic land surveying community, setting the pace in many aspects of land surveying on a national scale.

In addition to collaborating with John Story and the Education Committee to construct our fall seminar schedule, our staff dedicated their efforts to ensuring the seamless execution of the Otis A. Jones Educational Institute from October 4th to 6th at the McKimmon Center in Raleigh. I'm delighted to report that it was an overwhelming success. We witnessed record attendance and had many noteworthy instructors. The participation of 92 attendees in the FS and PS Exam Reviews is a promising sign for the growth of future licensed surveyors in North Carolina.

While the role of Executive Director has kept me incredibly busy, Alison and Anna have also been actively serving the members of NCSS. We are indeed fortunate to have them as part of the NCSS staff. I am enthusiastic about the progress we've made and eager to see what lies ahead of us.

Sincerely,

A handwritten signature in cursive script that reads "Sherri L. Barron".

Sherri L. Barron
NCSS Executive Director

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Cal Scheinert
Pharez Scruggs
Jeffrey Smith
Stuart Sorrell
Taylor Sparks
Erik Spencer
Rory Stodgell
Matthew Svejkovsky
Jeffery Tallent
Keith Taylor
Nathan Toothaker
John Walker
Richard Wilkie
Timothy Wiswell

LETTER FROM THE PRESIDENT



Fall has arrived at last! The sun is getting lower in the southern hemisphere, causing the days to get shorter and nights to get cooler. It's one of my favorite seasons to be a surveyor. There is less heat, less humidity, and less foliage!! I hope this note finds everyone healthy and busy.

Serving the Society as President for the past eight months has been a pleasure. Wow! Time flies when you are having fun, right? We have had a few bumps in the road, but overall, we are doing well. SB 677 continues to move in the Senate, and we hope to have our bill become law before the end of the current session. Our membership is off the charts. We are at 104% of our membership budget for the year at the end of the first quarter. We have a total of 1,245 members, 931 of them being PLSs. If you remember, one of my goals is to reach 1,000 PLSs before our winter conference. So, please encourage anyone you know who is not a member to join. Sherri and each Chapter President have an informational flyer entitled "What's in It for Me?" that explains what the Society provides members. Please request as many as you need to distribute. Lastly, our Education budget is at 80% and our overall budget is at 66%. We are starting our year strong with higher representation and financially sound numbers.

Our winter conference is coming together nicely, and I look forward to seeing everyone in Raleigh on February 8th – 10th. I hope we have just as big a turnout as last year, if not even bigger. With Tim Guisewhite in charge, I know it will be great. Tim's conference committee has been working hard to coordinate all of the details.

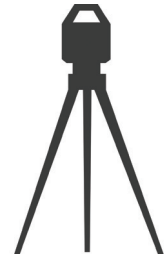
Since I also serve on the Education Foundation, I would be remiss if I did not mention the NC Surveyor Specialty License Plate. Fifteen dollars from every license plate is returned to the Foundation to fund the scholarship program. I would love to see 1,000 tags in use. This amount would provide \$15,000 annually to the Education Foundation Scholarship program.

Lastly, working with Sherri, Alison, and Anna has been a pleasure after Christy's retirement. These ladies have been and still are working hard for all of us. They are always willing to help and have smiles on their faces. We have not missed a beat since Christy's departure, which is a testament to finding the right people for the job and watching them grow. On a side note, I did see Christy back in August; she is doing great and enjoying retirement and requested I tell everyone, "Hello!"

In closing, I hope everyone has a safe and wonderful holiday season, and I look forward to seeing everyone at the conference in February.

Sincerely,

J. David Lee
NCSS President



Schedule at a GLANCE

NOVEMBER 3, 2023

Nantahala Chapter Partnership

8:00am-4:30pm
7.4 PDHs
Sylva, NC

NOVEMBER 4, 2023

NCSS Fall Board Meeting

8:00am
Wake Forest, NC

NOVEMBER 10, 2023

Yadkin Valley Chapter Partnership

8:00am-4:30pm
7.4 PDHs
Gold Hill, NC

NOVEMBER 17, 2023

Western Chapter Partnership

8:00am-4:30pm
7.4 PDHs
Mills River, NC

NOVEMBER 17, 2023

Johnston County Chapter Partnership

8:00am-4:30pm
7.4 PDHs
Clayton, NC

DECEMBER 1, 2023

Piedmont Chapter Partnership

8:00am-4:30pm
7.4 PDHs
Winston Salem, NC

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Education Foundation

by Michael J. Adams, PLS

Education Foundation President



It's finally that time of year when school buses dot the roads, a chill is in the air, and the smell of pumpkin spice permeates our senses. College sessions have also resumed, and the Education

Foundation is proud to announce that all our scholarships from this past year have been awarded and are being put to good use to further the surveying profession.

Congratulations to This Year's Scholarship Winners

John Brown - \$2,250 (Southwestern CC)

Samuel C. Dunbar - \$3,500 (NC A&T/UNCC/NCSU)

Keller Guisewhite - \$3,500 (NC A&T)

Ian Kresak - \$3,500 (NC A&T)

Jackson E. Miles - \$2,250 (Guilford College)

Please encourage any students you know to apply next year, particularly those in the local community colleges pursuing a surveying career. This year, we have noticed a drop-off in applicants, especially from the community colleges. We want to encourage young students to utilize what we have worked hard to attain.

This year, we would also like to encourage participation in the NSPS Trig-Star program, an annual mathematics competition based on the application of trigonometry. The program aims to demonstrate practical uses for mathematics and raise greater awareness of the land surveying profession among high school students, career guidance counselors, and high school teachers. Scholarships are awarded to students who demonstrate their superior math skills. In addition, teachers of the winning students receive a financial award. If you know a high school teacher who would be interested in the Trig-Star program, please encourage them to participate. We want to see this grow to the point that every NCSS chapter is administering the test yearly. Details can be found by visiting <https://trig-star.com>. Please get in touch with anyone on the Education Foundation if you would like assistance putting this in place.

We are also looking into other avenues to promote our profession in early education. We have contacted Montgomery County Early College to start a discussion about the surveying profession. We are also looking into Major Clarity, a tool that guides students into a career based on their strengths and academic skills. We hope to report more on that in the next edition.

We are still promoting our license plates and encouraging every one of our members and non-members to purchase one. We have a brochure that we will be handing out at the local chapter seminars that explains the simple ordering process. Order using the form found at <http://www.ncsseducationfoundation.com/images/LicensePlate/ApplicationMVR-27PPA.pdf>. Order when renewing online: <https://www.ncdot.gov/dmv/title-registration/license-plates/pages/specialty-plates.aspx>

\$15 of each sale goes back to the Education Foundation and helps support our scholarships for geomatics students across the state. Our next goal is to fund a full scholarship for an up-and-coming surveyor for an entire year. We know we can achieve it based on the support of our fellow members.

We are also starting work on our two raffles for the coming conference. These raffle tickets will be distributed at the November Board meeting, so please see your Chapter President or someone in the Education Foundation if you are interested. This year we have added a special touch to the shotgun raffle. More details are forthcoming at the November meeting.

Lastly, we will be attending the Math Conference again this year to connect with math educators and potential future surveyors across the state. These conferences are well attended and are a great source of contact.

If you ever have any questions, would like to donate, or know of a future surveying student with whom we should get in touch, please don't hesitate to contact any one of us.

Our committee members: Mike Adams, Jeff Allen, David Lee, Robin Lee, John Odom, Jared Ownbey, Clay Pate Gary Thompson, and Jamie Watkins.

Thanks for your time and support!!



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The True Value of Your State Conference

by Bill Beardslee, PLS, PE, PP

During January and February, there are approximately twenty-five state conferences throughout the country. From coast to coast, surveyors migrate to the chosen site in their state. Some stay just for the conference, and some turn it into a mini vacation by adding a few extra days. We are fortunate that our site is chosen by the North Carolina Society of Surveyors (NCSS).

NCSS creates a great conference that offers speakers who expound on a variety of topics. Whether it's surveying procedures, mathematics, the application of law to surveying, business practices, or project planning, you will find a subject that interests you. This conference provides opportunities to experience "outside the box" topics which aren't normally discussed in the everyday work environment but are important to the expansion of your knowledge. Of course, you are also always gathering those important continuing education credits.

The information you obtain from the instructors may help you work more efficiently, collect more effectively, expand into a new service area, or obtain a critical data source. But to me, it is and always will be about the people – the great surveyors of North Carolina.

It is a pleasure to sit and converse with a surveyor from the other end of the state with whom I get to spend time only once a year and who I probably would never have met without the state society. You find out about families and tragedies, interests and hobbies, and are fascinated by what some surveyors are involved in (how about a college hockey referee or a UFO investigator?).

At some time during a seminar or class, or whenever a few surveyors are just sitting around talking, the most valuable part of the conference arises – the "war stories." They are as much a part of survey lore as Lewis and Clark. At every conference I attend, at least one time during the telling of these stories, I realize, "Wow! I never thought of that!" It may be a place to get information, a person to contact, a way to solve a field problem, a method of handling a personnel issue, a way to increase collections, or an item to include in proposals – each one coming from a surveyor's personal experiences. There will always be that one gold nugget from your colleagues that makes the trip worthwhile.

I am fortunate to have attended more conferences than I could ever remember in numerous states. The overall value of these events is the number of great ideas I have discovered and the wonderful surveyors I have been blessed to meet.

You may begin to realize that after all the years you have been in this great profession, other surveyors are no longer just your friends, they are your surveying family!

Attending the conference is like going to a wedding. You see family members you only have an opportunity to see at this special event. You promise you will stay in touch. You hear, "Let's get together for dinner or golf or something." And, just as importantly, you are ready, at a moment's notice, to help anyone in this huge extended family.

Why don't we all keep that in mind when we attend the next State Conference in 2024 and when we interact with our surveying family throughout the year? Maybe it will help us work together to help the profession reach even greater heights!



William E. Beardslee, PLS, PE, PP, is a licensed Professional Land Surveyor, Engineer and Planner with over 45 years of experience in the field of land development. He is known for his excellent presentation and writing capabilities, along with being one of the leading technical experts on land development in the engineering and surveying arena. This is one in a series of articles produced by the Education Committee that will appear in The Tarheel Surveyor.



Jeff Todd
President

jeff@imcipls.com
Mobile: 704-500-6887
Direct: 704-997-2719

Tips and Tricks

by John Story, PLS

Multiple Field Crew Management

Contributed by Norman Ribelin

When I oversaw seven field crews, I found out quickly that if you are not there, they tend to not be as punctual and observant. Even though it was mainly an office position, my presence was required in the field even more so. Therefore, onsite presence occasionally is essential (Boots on the ground even for the management.)

Employee (and our) Continuing Education

Contributed by John Story

If we're honest with ourselves, taking professional development or continuing education courses would not have the priority in our lives it now does if it was not a requirement for renewing our license. Since continuing education is not a requirement for our field and office technicians, implementing or even encouraging continuing education is probably not a

high priority for most of us (I'm speaking from personal experience here). Yet, most of us would acknowledge that continuing education is important. The question is: how do you incorporate a continuing education program for field and office technicians, and even for yourself that has even a remote chance of succeeding?

Let me suggest you start a "Book Club" for you and your employees. Here is one way to do that:

- Select a book on a subject that is applicable to you and your employees' needs and those of your business and our profession.
- Buy a copy of the book for each employee (and you).
- Set aside time on a regular basis to review a chapter or two of the books. I have weekly staff meetings on Monday mornings, and I've found this is the best time to implement our "Book Club." When we are going through a book, it takes about 10 to 15 minutes to go through a particular day's assignment.
- Decide how many chapters you intend to cover each time you meet. For some books it will only be one chapter. For others it could be two or three or more.
- Commit to doing it.

Here is an example: Suppose the goal is for you and your employees to be more effective and efficient through better habits. One book that I've used and thought it to be an excellent book to study is *Eat That Frog* by Brian Tracy. The chapters are short, usually three to four pages, and concise. A "Book Club" could easily cover one to two chapters in 15-20 minutes. If you took two chapters a week (there are 21 chapters in the book), and allowed one or two weeks for a buffer, a Club could finish in three months.

Or suppose you wanted to discuss ethics. *Ethics For The Professional Surveyor, A Collection of Thoughts* by Dennis J. Mouland, PS is one book I would recommend. Here again the chapters are three to four pages in length, although there are 54 chapters in the book. Since the

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subject of ethics could lead to more discussion than one on forming great habits, it might take you all year to get through it.

At this point you may be thinking “So what you are suggesting is that I buy a book for each of my employees, set aside 15-30 minutes a week or 12-25 hours a year, not to mention the time needed for coordinating the facilitation and preparation of the discussion, for continuing education that most likely will not be applicable as credit for my license renewal, among other things?” And my answer would be “Yes, exactly.” The reason is that unless continuing education is not intentional and a priority, the chances are very low to nonexistent that it will be implemented. If there is no continuing education, then personal growth won’t occur, which will affect our bottom line over time.

Think of it this way. Those of us of the average age of land surveyors in North Carolina could probably conduct a survey with a transit and chain and draft it by hand. Does a transit and chain cost less than a total station or GPS receiver? Does drafting paper and a pen or pencil cost less than an AutoCAD subscription? Will the transit and chain and hand drafting get the job done? The answer to

all of these questions is “Yes”. But who would still do a survey with a transit and chain and draft a plat by hand? No one. Why? Because it isn’t efficient and while the equipment might be cheaper, the cost of producing the plat would be more.

My encouragement is to think of investing in you and your employees’ continuing education as if you are moving from transit and chain to a robotic total station. Yes, there will be an investment. But the cost will be well worth the time and investment.

We hope you have enjoyed this article on ‘Tips and Tricks’ and will consider submitting your own contribution for future articles. Please send your ideas to John Story, Chairman of the NCSS Education Committee, to jstory@dg-anc.com.



John Story entered the surveying business working as a young man for his father. He earned his Bachelor of Civil Engineering Technology in 1978. In 1994, John became a shareholder and was named to the Board of Directors of Donaldson, Garrett & Associates, Inc. John has served on the NCSS Board of Directors in several roles such as the Mecklenburg Chapter President, NCSS Treasurer, and NCSS Education Committee Chairperson.

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Unexpected Surveying Stories

Surveying, a profession known for precision and accuracy, is also home to extraordinary tales that range from measuring a potato plant for the Guinness World Record to 3-D laser scanning ancient structures. Join us on a journey to explore these captivating and unexpected surveying stories.

Potato Plant

Doug Suttles, PLS

“Suttles Surveying, this is Jennifer. How may I help you?”

That's how it all began when my admin assistant took the call. When the person on the other end begins with “this may be a strange request,” you never know what to expect! You know, those conversations where people say, “let me ask you a question” or “it's only one line” or the old faithful “it's a real small piece of property, it won't take long at all.” So, you tense-up and immediately prepare to have a long conversation explaining every part of the surveying process or trying to tell someone that it's NOT “just one

line” or that “small” DOES NOT mean “quick and simple.”

Well, we've taken some “doozies” through the years. We've had to survey accident sites, trees that have almost caused houses to be burned down in anger, fences that did NOT “make good neighbors,” antennae, the tops of buildings, towers, mountain peaks, swinging bridges, and water depths. We've had police called, knives pulled, guns drawn, threats made, and even almost been arrested by the NSA! But until this summer, I had never been asked to survey... wait for it...a POTATO? Well, at least the vine.

Our offices received a call from a lady who lives locally who had made an odd attempt at planting a rose bush. She had seen online...“Hey, wait a minute! I thought you were

Penn Museum

Kris Nixon, PLS

In 2015, Kris Nixon's company, Meridian 3D, assisted the Penn Museum in Philadelphia with their plan to relocate two very large Egyptian columns into their newly renovated Egyptian Gallery. They 3D-laser scanned the columns, space, and building to help the engineers develop the weight of the columns and create a rigging plan and a disinvestment and reinvestment plan for the new space. The Egyptologists noticed the fine detail of hieroglyphs in the adjoining space in Meridian's scans and asked if Meridian could scan some of the archived collection to provide electronic access through photo-realistic 3D models. The next year, Meridian developed a method to perform this scan and were awarded a contract to scan an Egyptian tomb called “The Kaipure Chapel.” Over six weeks, Kris scanned and photographed hundreds of large blocks that had made up the chapel walls. Each stone was covered in hieroglyphs, and many still had ancient pigments. Their deliverables were a series of one-to-one scale 3D PDF files that were scanned using an articulated scanning arm and colored using a high-definition camera. The PDFs were accessible by the Penn Museum internally and lightweight for distribution to collaborating Egyptologists.

Kris is pleased to report that their scans of both the columns and chapel stones will be used in the upcoming new renovation of the Egyptian Gallery at the Penn Museum. <https://www.phillyvoice.com/penn-museum-renovations-ancient-egyptian-nubian-galleries/>

Air Chair

Jeff Allen, PLS

Jeff Allen was contacted by a water skier in 2004 who wanted to verify a world record for Guinness Book. He was riding an "Air Chair," which is a hydrofoil that he sat on. The record was to be the highest flip. Jeff established some triangulation points and a viewpoint of his boat path. As he rode by and did his flip, Jeff would aim at the highest point of his jump, enter the vertical angle in his calculations and get the height above water. He did it! The record for the highest jump performed on a Hydrofoil is 23 feet (7.01 m) and was set by Billy Rossini at Lake Norman, North Carolina, on August 1st, 2004.

surveying a potato plant here!" I know, it gets confusing, but that's how we felt too! Anyway, back to the story. This client had seen an online "hack" that the best way to grow a rose bush was to prune a limb from an existing bush and burrow the cut edge into a raw potato.

She had tried it and after much anticipation for the beautiful roses that were to come, the stem had not survived, but had left a fledgling vine growing from the potato. So she thought "my rose bush died, but let's see what this vine does."

It began to pique her interest more and more once she realized that the potato vine was thriving, although the rose bush had not, and she began to wonder..."what's the longest potato vine on record?" Well, let me answer that for you. Currently, the record for the longest Solanum Tuberosum (commonly known as a potato vine) is held by Kevin Fortey of the United Kingdom at a length of 284.7 centimeters or 9 feet and 4.1 inches.

When our client called us, her impromptu house guest was an unexpected eight or nine feet. "And it's just a potato out of a bag from Walmart!" she exclaimed and indicated she had already contacted the Guinness Book of Records organization to find out what the process was to enroll

a competing and, hopefully, undisputed Heavyweight, I mean, Longlength Champion of the World. Now, she needed a licensed surveyor to officially measure the vine and be a "witness" to the claim. Not only was a surveyor required, but also two additional witnesses were needed: a horticulturalist and a videographer. Each of us would be required to complete a witness statement document from Guinness containing various points of precise information related to our individual areas of expertise.

On the day of the weigh-in, I mean measurement, we met at the home of the client to make history and get her name into the record books. When I arrived, I was not fully prepared. It was then I was informed the measurement could not be an imperial measurement, but had to be metric and could not be converted to metric. Since we're still good ol' southern boys and haven't switched completely to the world standards yet, I had to return to the office and retrieve a pair of 225-centimeter measuring rods. Once back onsite and "ready to rumble," I didn't want there to be any room for error because of slack in the vine (for those non-agriculturists out there, vines don't grow in a straight line). So, instead of someone climbing up a ladder and holding the tip in the air while I tried to

continued on page 22

Sky Lift

Joeseph Dunahoe, PLS

Most of you probably know Carowinds Theme Park, but did you know Joseph Dunnahoo was the surveyor in charge of surveying for the park? Surveying the Sky Lift ride proved his most exciting task. The cables that connected the three towers and supported the ride chairs had to be aligned, and someone had to climb the middle tower to do the work. Joseph served in the Special Forces for fourteen years. Heights do not bother him. Up he went, carrying all his equipment. He positioned another man at each end of the ride and aligned them with each other by flopping the telescope of the transit four times, two times with the starting point changing after each pair of points was set. Then he changed the starting point from one side to the other and repeated the process. They took a midpoint between the differences and called it good. Joseph was the first person on the Sky Lift and he is happy to say, "he did not die."

The 2Point Way: Recording Statutes & Their Significance for Easements

by Kristopher M. Kline

The Connor Act of 1885 is the frequent subject of court discussion when a single grantor conveys conflicting interests on the same piece of land. The original law is credited with transforming North Carolina into a “Pure Race State” as noted in **Love v. United States, 889 F. Supp. 1548 (1994)**. *“The Connor Act of 1885, currently codified at N.C.G.S. 47-18, transformed North Carolina into a “pure race” state for the recording of deeds, contracts to convey, and other instruments affecting interests in land. Under its terms, no such instrument is effective as against either lien creditors, or purchasers for value, until the time of its registration.”* This standard contrasts with most jurisdictions that apply a “race-notice” or “pure notice” standard. The law was intended to ensure an orderly and reliable set of records for real property title transfers. Later alterations to the original act generally strengthened rather than weakened the basic requirements.

The North Carolina law **G.S. 47-18** begins as follows: *“No (i) conveyance of land, or (ii) contract to convey, or (iii) option to convey, or (iv) lease of land for more than three years shall be valid to pass any property interest as against lien creditors or purchasers for a valuable consideration from the donor, bargainer or lesser but from the time of registration thereof in the county where the land lies, ... instruments registered in the office of the register of deeds shall have priority based on the order of registration as determined by the time of registration, ...”*

Despite its origins from a single legislative act, **G.S. 47-18** currently is one of at least three North Carolina statutes that have been variously identified as the ‘Connor Act.’

A separate statute first enacted in 1919 supports the provisions of the Connor Act but also provides additional guidance for the recording of easements. **G.S. 47-27** begins: *“All persons, firms, or corporations now owning or hereafter acquiring any deed or agreement for rights-of-way and easements of any character whatsoever shall record such deeds and agreements in the office of the register of deeds of the county where the land affected is situated.”*

G.S. 47-27 originally did not specify the effect of non-recording of easements, but subsequent changes

bring this statute in line with the intent of the original Connor Act. Recent North Carolina court rulings equate both statutes cited above to the original Connor Act of 1885, along with G.S. 47-20.


Early Application to Easements

One early easement dispute that considers the Connor Act and its relationship to easements is **Carolina Power & Light Co. v. Bowman: 228 N.C. 319 (1947)**. A power line was originally created through a decree of condemnation in 1912. Relevant documents were filed in the Clerk of Courts office in Robeson County but were not recorded in the Register of Deeds office. Under then-current standards, the court concluded that condemnations were already a matter of public record and thus exempt from the requirement for recordation in the Register of Deeds office.


Judge Devin considers the relationship between the Connor Act—in its various forms—and easements: *“The North Carolina recording statute, the Connor Act, declares among other things, that no conveyance of land shall be valid to pass any property as against creditors or purchasers for a valuable consideration but from the registration thereof in the county where the land lies, G. S., 47-18.”*


Devin mentions changes enacted in 1917, 1919, and 1935. Language added in the 1919 amendment is of particular interest: *“By Chapter 107, Public Laws 1919, the Act of 1917 was amended by adding further provisions as to registration of easements granted by said deeds and agreements.”* Alterations to the law in 1943 required utility companies to record easements. Additional changes were made in 1959, 1975, 2003, and 2005.

Some recent decisions raise additional questions in relating the Connor Act to deeded easements. For example, the effect of the Connor Act on prescriptive easements that arise independently of written deeds and recording laws is not clear from the statutory language. However, **Kaperonis v. N.C. State Highway Comm.: 260 N.C. 587 (1963)** notes that highway easements on original inventory roads may be upheld based on long public use despite lack of recordation of any original



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Easement Disputes—Bona Fide Purchaser Status Required?

Several recent North Carolina decisions consider “bona fide purchasers for value,” a phrase usually equated with race-notice and notice jurisdictions. Quoting Black’s Law Dictionary, one Federal Court decision observes “A bona fide purchaser is defined as ‘One who buys something for value without notice of another’s claim to the item or of any defects in the seller’s title.’” *Clark v. Banc One Mortgage Corp. (In re Gilbert)*, 274 B.R. 541 (2002).

Department of Transportation v. Humphries: 347 N.C. 649 (1998) attempts to clarify the apparent disconnect between bona fide purchaser status and the Connor Act as it relates to easements under [G.S. 47-27](#): “While this statute set out the procedures for recording ‘any deed or agreement for rights of way and easements of any character whatsoever,’ as well as the penalty for noncompliance, it did not address the effect that non-recording would have against bona fide purchasers for value.

“In 1943, the General Assembly amended the statute. The most significant aspect of the amendment required all easements, deeds, and right-of-way agreements to be recorded in order to have effect against bona fide

purchasers for valuable consideration. The final paragraph of N.C.G.S. § 47-27, added in 1943, provided as follows:

“No deed, agreement for right of way, or easement of any character shall be valid as against any creditor or purchaser for a valuable consideration but from the registration thereof within the county where the land affected thereby lies.

N.C.G.S. § 47-27, para. 4 (1943). It therefore appears that the General Assembly intended N.C.G.S. § 47-27 to operate under the same theory as the Conner Act — as a “pure race” statute. As noted above, a “pure race” statute protects any purchaser for value who records first, regardless of notice. Thus, the effect of the 1943 amendment was to require that any ‘deed, agreement for right of way, or easement of any character’ be registered before it could be valid against a bona fide purchaser for value.”

Additional Corollaries

The **Humphries** decision also cautions against reliance on easement documents filed in locations other than the Register of Deeds office. An NCDOT easement document was finalized circa 1952, but the only available copies were kept by the department in their own files. Judge Orr concluded that subsequent purchasers for value were protected against later assertions of the validity of the prior unrecorded deed.

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The repeated references in the **Humphries** and **Howell** decisions to “bona fide purchasers for value” remains puzzling. These decisions imply significance of prior knowledge of an unrecorded prior conveyance. Yet North Carolina’s long history as a pure race state is repeatedly affirmed by the courts. The recent ruling *In re: Matter of on George: 264 N.C. App. 38 (2019)*, includes this statement: “...under the Connor Act, any “purchaser for a valuable consideration” who records first is protected against any prior, unrecorded conveyance. N.C. Gen. Stat. § 47-18 (2017).”

Additional arguments in this case centered on 1959 changes to **G.S. 47-27**, which expressly required highway deeds to be recorded. This ruling concludes that the recording requirement for DOT easements applies equally to pre-1959 documents: *“In the present case, the parties have stipulated that defendants were bona fide purchasers for value. Thus, in order for a right-of-way agreement to be valid against them, the 1943 amendment requires that it be recorded. Accordingly, the unrecorded right-of-way agreement in the present case does not entitle DOT to the claimed right-of-way...”*

Howell v. Clyde: 127 N.C. App. 717 (1997) considers a deeded easement that includes a termination clause. The question: whether a deed that included a condition subsequent required the recordation of a separate document in order to terminate the easement. The trial court ruling was overturned and Judge John concluded that *“...recordation of termination of the easement, whether determinable or subject to conditions subsequent, was not required to make such termination effective as against plaintiff.”*

Additional discussion in this case equates both **G.S. 47-18** and **G.S. 47-27** to the Connor Act. The case headnotes include this summary: *“Recordation of a purported termination of a defeasible access easement, whether determinable or subject to conditions subsequent, was not required to make such termination effective as against a bona fide purchaser for value of the property benefited by the easement.”*

Limit of Liability: While the author has used his best efforts in the preparation of this article, he makes no representation or warranty with respect to its accuracy or completeness. You should consult with a professional where appropriate.

Kristopher M. Kline is a surveyor, author, instructor, and consultant living near Asheville, North Carolina. President of 2Point, Inc., he can be reached at kristopherkline1@gmail.com. More information on Kline’s continuing education courses and books can be found at www.2Point.net. Kline also presents seminars each year in Tennessee and North Carolina, d.b.a. Surveyors Educational Seminars. Information on classes presented by Kline and by Donald A. Wilson may be found at www.surveyorsed.com.

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Hello

by Ken Mills, PLS

Over the last couple of years, since I can't do field work anymore due to medical difficulties, I have been answering calls and preparing proposals for different surveys. Many calls are from people wanting to get their property surveyed for one reason or another.

I collect regular information from them, such as their name, phone number, e-mail address, and the address or PIN of their property. Then I discuss some of what the surveyor will need to do for their type of requirements.

I've learned that the only people who know what a surveyor does are the surveyors. The general public doesn't have a clue what a surveyor is required to do by the licensing board. Also, friends, realtors, lawyers, and bankers tell the public that their surveyors should not cost more than one hundred dollars. My teeth hurt just thinking about that.

These informational phone calls are my favorite. The characters in the one-act play below are not real. Any resemblance to someone you know is an accident. Of course, I'm sure everyone will recognize the scene as one you've been through repeatedly.

Act One, Scene One

Mr. Sam Johnson is in his office working on a proposal for a five-acre boundary and topographic survey that some nitwit needs to have completed tomorrow. While he's deep in thought, the phone rings.

He reaches for the phone without thinking. "Johnson's Land Surveying, how may I help you?"

"Yes, my name is Mrs. Needy, and I want one line of my property surveyed. I've taken tomorrow off from work to be here when you come out. I also want to know how much it will cost. My friend at the bank said it shouldn't cost more than one hundred dollars."

Sam leans back in his chair and runs his hand over his face. "Great, the bank has struck again. It will cost at least one thousand dollars," he thinks to himself. "I'm sorry, Mrs. Needy," he replies, "but I can't come out tomorrow. I have a long list of clients and couldn't possibly do your survey for at least four weeks."

Silence descends over the phone line.

"Mrs. Needy, are you there?"

"Yes, I was thinking." Ten more seconds pass. "A friend of mine highly recommended you, and I'd still like you to mark my boundary line for me."

Sam reaches for a pad of paper and a pen. "Okay, Mrs. Needy, I'll need a little more information on your property and why you need the boundary line survey." He writes her name at the top of the page and draws a line under it. "First, what is the address of your property?"

"I live at 251 Haywood Street."

Since Sam has lived in the town all his life and has operated his surveying business for twenty-two years, he's familiar with the area she named. He adds this information to the notepad.

He knows from past surveys in the same area how difficult this one could become. "Make it one thousand two hundred dollars," he thinks.

"Okay, Mrs. Needy, which boundary line do you need surveyed?"

"The side where Mr. Potter lives."

Sam adds that to the notepad. "Are you planning to put up a fence?"

"No."

"You just need to know where that one boundary line is located?"

"That's all."

"Well, how large is your property?"

"I don't know, but it's not real big."

"I know the area, Mrs. Needy, and it's difficult to find existing corner markers to complete an accurate survey. Since I'll have to survey your entire property and look for additional supporting markers on both sides, would you like a complete survey with the location of your house and other improvements such as fencing and the driveway?"

"Why do you have to survey all of my property when all I need is one line marked?"

"If we find a corner marker at both ends of the line, we can't tell if they are in the correct location without supporting proof from other corner markers. Hopefully, on both sides."

"I know the markers are correct because my father showed me where he put them."

"Make it one thousand five hundred dollars," Sam thinks. He continues, "Still, Mrs. Needy, the surveying standards in this state require me to find other markers, so I can prove the ones your father showed you are correct."

"Well, okay, I only want what's mine."

Sam closes his eyes as his chin drops to his chest. "She only wants what's hers. The kiss of death," he thinks. "I'll never get it right in her eyes, even if I find all the original corner markers."

"When you come out, I don't want you to tell Mr. Potter what you're doing."

Here comes the real reason she wants a survey. "Why not?" Sam ventures.

"Well, he put up a shed beside his house, and it's on my property. I've told him to move it, and he's been very rude to me." One thousand eight hundred dollars.

"Mr. Potter has a shed on your property?" Sam asks in a subdued voice.

"Yes, he has, and I'm going to use your survey to make him take it down." Two thousand dollars.

Sam takes a deep breath and concentrates on slowing his heart rate. He notices a slight tremble in his right hand and flexes his fingers. "What if I find out the shed is on his property?"

"It's on my property. I know it is," Mrs. Needy replies forcefully.

"Well, if it is, you'll need a lawyer to file a lawsuit against him. Otherwise, he won't move the shed," Sam states.

"I'll hire someone to take it down."

"He could have you arrested for damaging private property."

"He can?"

"Yes."

"Well, I'll just hire a lawyer then." Two thousand two hundred dollars.

Sam swallows the lump in his throat. "Well, I'll do the best survey possible, but I can't change the boundary evidence I find. If his shed is on his property, there's nothing I can do."

"I understand. Now, how much will the survey cost?"

A slight smile appears on Sam's lips. "Two thousand five hundred dollars with the map your lawyer will need." There is silence on the phone, so Sam continues. "If the case goes to court, my fee as an expert witness will be one hundred dollars an hour for any meetings required with your lawyer, review of the survey data before testifying in court, preparing court exhibits for the jury to view, and my time in court." When Sam hears a swallow on the other end of the phone, he leans back in his chair and relaxes.

Mrs. Needy clears her throat. "Well, I didn't realize it would be that expensive. My friend at the bank said it shouldn't cost more than one hundred dollars."

"Great, let the banker survey your property," Sam thinks. To Mrs. Needy, he simply replies, "The survey services you'll need are not cheap."

"Well, yes. Let me think about it, and I'll call you back."

"We require a 50% retainer before we add a name to the survey list, and the balance when we deliver the survey map. Call back soon. As I mentioned earlier, the list is getting longer every day."

"Yes, I'll do that. Thank you for your information. I'll call back. Goodbye."

"Goodbye."

Sam places the phone back on the cradle, picks up his cup of coffee, and takes a sip. "Thank goodness she'll never call back," he thinks and goes back to the proposal.



*Ken Mills became a PLS in 1975. He has been an active member of NCSS, serving three terms as the Western Chapter President. He served as the NCSS President in 1998. Mills co-authored *Following in their Footsteps* with Otis A. Jones. He has also written for *American Surveyor Magazine*.*

continued from page 15

ascend the same ladder and measure the vine or me trying to climb a different ladder while keeping one rod on the ground, holding the second one atop it end-to-end, and then reading the measurement, plus hoping the other guy is keeping it level, straight, and taut, I came-up with a brilliant solution. We laid it on the ground!

“Isn't that the way it grows anyway?” you ask. Well, yes, I do believe so, but the caretakers (trainers, if you will) of the contender had been going the vertical route during this growth spurt. However, by stretching it out on the ground, I was more confident that we could ensure the vine was straight, taut, and fully supported. Butting the rods together, the vine ran the length of the first rod and well into the second one. I finally had the long-awaited measurement (pardon the pun)...343 centimeters. Quick, you old-school surveying mathematicians that can still do the math in your head, that comes to what? Yes, 11 feet and 3.039 inches! Knock-out!!! Fortey is down on the mat, and we think we have a winner!!!

The entire process was videoed and photos were taken

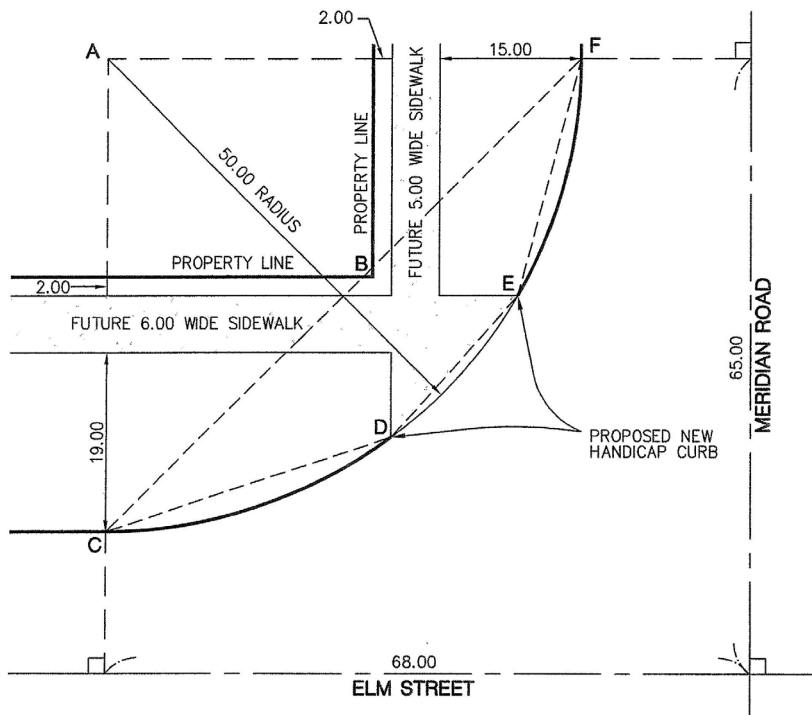
not only to commemorate the unusual and potentially record-breaking moment, but also to be submitted to Guinness as part of the required documentation package. I provided my witness statement form which required the name of the record title attempting to be broken, our client's application number, full contact details for myself, details of the event, explanation of my role, overview of my field of expertise, proof of qualifications, confirmation of the measurements taken, and explanation of the methods used. In addition, I also provided a Surveyor's Report to meet the North Carolina Minimum Standards of Practice for Land Surveying. The other witnesses also had to provide their respective detailed forms.

All of this took place in the middle of July 2023 and we have yet to hear back from our client about official word on the outcome. I'm sure there are a plethora of reviews that must occur to confirm the decision. We are eagerly waiting to learn whether our client has become the new champion or has fallen short (pardon the pun, again) in getting her name, and possibly ours as the surveyor, recorded for posterity as “The Best” of something in the world....at least until someone else tries to grow some roses.



PROBLEM CORNER

A local surveyor has been asked to stake out points D and E, where a future sidewalk will meet a new handicap curb at the corner of Meridian Road and Elm Street. The surveyor already knows the location of points B, C, and F but must make some calculations to establish and verify the points needed.



FIND:

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Chord Distance DE = _____

Chord Distance EF = _____

Chord Distance CF = _____

Arc Distance CF = _____

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NGS’s Alpha Sites for SPCS 2022 and NCAT

by David B. Zilkoski

I have written several articles in the Tarheel describing the National Geodetic Survey’s (NGS) new, modernized National Spatial Reference System (NSRS). This article will highlight the proposed State Plane Coordinate System of 2022 (SPCS2022), which is probably the most important aspect of the modernized NSRS that will impact surveyors and mappers. In July 2023, NGS developed an Alpha Site to enable users to preview preliminary NSRS products and services. Users can access the site at the following weblink: <https://alpha.ngs.noaa.gov/SPCS/index.shtml>.

The purpose of the Alpha Site is to provide examples of the content, format, and structure of data and products that NGS plans to release as a part of the modernized NSRS. NGS highlights that these products are for illustrative purposes only and do not contain any authoritative NGS data or tools. They state that they are under active development and are subject to change without notice. That said, NGS would like everyone to try these Alpha products and provide feedback to NGS. The first two Alpha products are the State Plane Coordinate System of 2022 (SPCS2022) and the NGS Coordinate Conversion and Transformation Tool (NCAT). On July 20, 2023, NGS held a webinar previewing the Alpha Site. You can download the PowerPoint and video of the presentation at the following website: https://geodesy.noaa.gov/web/science_edu/webinar_series/alpha-zone-2023.shtml.

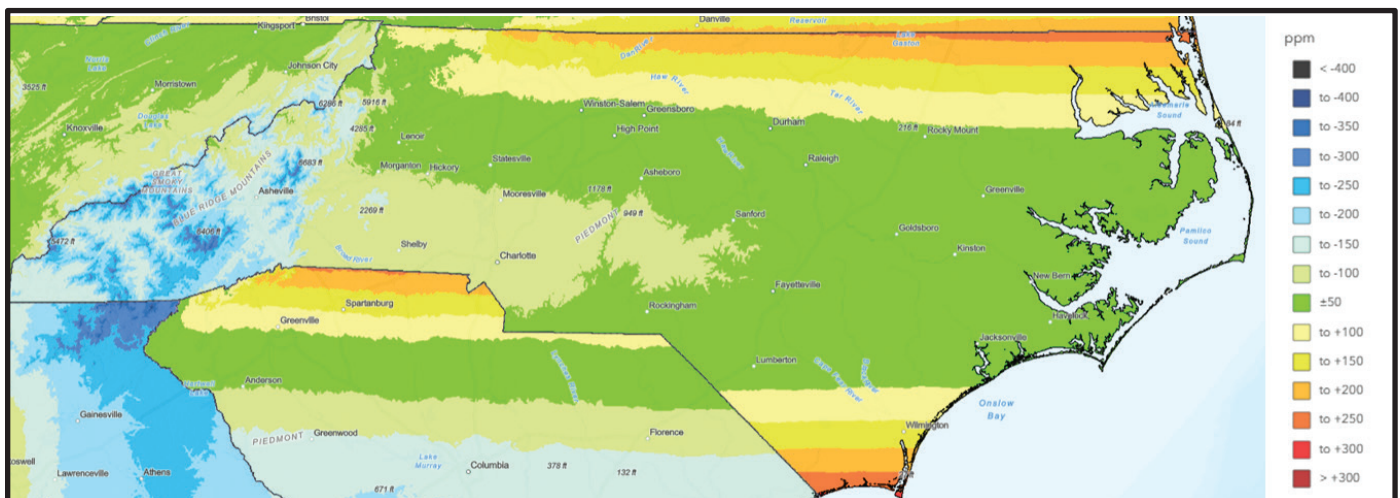
There are many differences between SPCS2022 and State Plane Coordinate System of 1983 (SPC83); but,

in my opinion, there are two main differences that should be highlighted. First, nationwide SPCS2022 has significantly more zones than the current SPCS83 zones. Second, SPCS83 map projections were designed to minimize linear distortion at ellipsoid surface, while the SPCS2022 map projections were designed to minimize linear distortion at topographic surface. The purpose of this is to reduce the difference between projected “grid” and “actual” ground distances. To minimize the linear distortion, some states decided to design several Low Distortion Projections (LDP) that cover certain areas or cover the entire state. North Carolina had one zone in SPCS83 and elected to have one zone in SPCS2022. That said, there are differences between SPCS83 and SPCS2022 in North Carolina.

One tool of the Alpha Site is that it provides a distortion map of the new SPCS2020 for every zone. The green in the distortion map below represents +/- 50 ppm. The distortion map of North Carolina shows that most areas of the state fall within the +/- 50 ppm range. The parameters of the zone are provided when the user clicks on the map.

Another Alpha Site available for users is the Alpha NGS Coordinate Conversion and Transformation Tool (NCAT). NCAT is probably the tool that most surveyors will be interested in using and on whose effectiveness they will provide feedback to NGS. Users can access NCAT on the Alpha SPCS2022 webpage or at the following weblink: <https://alpha.ngs.noaa.gov/NCAT/>.

Distortion Map of North Carolina SPCS2022



(Image: NGS Website)

Parameters of NC SPCS2022 Zone

North Carolina	
Zone Code	370001
Full Zone Abbreviation	NC
Full Zone Name	North Carolina
Zone Type	Statewide
Projection Type	Lambert Conformal Conic, one parallel
Origin Latitude	35°15'N
Origin Longitude East	281°00'E
Origin Longitude West	79°00'W
Projection Origin Scale Factor	0.999960
Skew Azimuth (deg)	
False Northing (m)	200,000
False Easting (ift)	3,280,839.895
False Northing (ift)	656,167.979
False Easting (m)	1,000,000
Designed By	NGS
Date of Design	1/14/2022
Status of Design	Final
Reference Frame	NATRF2022

Image: NGS website

Alpha NGS Coordinate Conversion and Transformation Tool (NCAT) for SPCS2020 Coordinates of NCMR

The screenshot shows the Alpha NGS Coordinate Conversion and Transformation Tool (NCAT) interface. The 'Convert/Transform from' section is set to 'Horizontal-Height'. The 'Select the type of horizontal coordinate' is set to 'Geodesic lat-long'. The 'Select a height' is set to 'Ellipsoid'. The 'Enter lat lon in decimal degrees' section shows Latitude: 34.9818899333 and Longitude: -80.5238373722. The 'Ellipsoid Height' is set to 142.971. The 'Input reference frame' is set to 'ITRF2020 (epoch 2020.0)'. The 'SPC zone' is set to 'Auto Pick (default zone)'. The 'Converted Coordinate' table shows the following data:

Reference Frame: ITRF2020 (epoch 2020.0)			
Lat-Lon-Height	SPC	UTM/USNG	XYZ
Latitude: N34° 58' 54.80376" N345854.80376 34.9818899333	Zone: NC-370001 (Statewide)	Zone: 17	X: 861,332.096 m
Longitude: E279° 28' 34.18546" W0803125.81454 -80.5238373722	Northings: 171,324.049 m 562,086.774 860,870.548 m 2,824,378.437	Eastings: 543,460.372 m	Y: -5,160,305.346 m
Ellipsoid Height (m): 142.971	Scale factor: 0.999970887	Convergence: 00° 16' 22.79"	Z: 3,636,302.905 m
	Scale factor: 0.999945446	Scale factor: 0.999623278	
	Combined factor: 0.999945446	Combined factor: 0.999600845	
	Distortion: -51.554 ppm	Distortion: -399.155 ppm	
		USNG: 17SNU4346071138	

Image: NGS website

coordinates.

I have highlighted a few items on the input box. The program defaults to horizontal only, so I changed it to the horizontal-height option. The user then enters the latitude, longitude, and height of the mark. Lastly, the user has an option to select the SPC zone or to let the program select the zone based on the coordinates of the mark [see the auto pick (default zone) box]. In my example, I selected the auto pick option. The Alpha NCAT website has a note about the coordinates that users should provide as input to the routine. The bottom line is that the input coordinates need to be in ITRF2020 (epoch 2020.0), or you may not get your desired zone. NGS recommends that you convert your coordinates to ITRF2020 (epoch 2020.0) using the Horizontal Time-Dependent Positioning (HTDP) tool. Users can access HTDP at the following weblink: <https://geodesy.noaa.gov/NCAT/>.

As a comparison, I used NGS's current NCAT production tool to convert the NAD83 (2011) epoch 2010.0 coordinates to SPCS83 values for the same mark. Obviously, there are differences in values, but I would like to highlight that the Northing and Eastings in SPCS2022 are provided in meters and in international foot units, while the SPCS83 coordinates are provided in both U.S. survey foot and international foot units. SPCS2022 will only provide the values in international foot unit

NGS Coordinate Conversion and Transformation Tool (NCAT) for SPCS83 Coordinates of NCMR

The screenshot shows the Alpha NGS Coordinate Conversion and Transformation Tool (NCAT) interface. The 'Reference Frame' is set to 'NAD83(2011)'. The 'Converted Coordinate' table shows the following data:

Lat-Lon-Height	SPC	UTM/USNG	XYZ (m)
Latitude: N34° 58' 54.77673" N345854.77673 34.9818824250	Zone: NC-3200	Zone: 17	X: 861,332.970
Longitude: E279° 28' 34.20982" W0803125.79018 -80.5238306056	Northings: 137,720.666 (m) 451,838.553 (usft) 451,839.456 (ift)	Eastings (m): 543,460.993	Y: -5,160,306.826
Ellipsoid Height (m): 144.345	Eastings: 470,484.515 (m) 1,543,581.279 (usft) 1,543,584.366 (ift)	Convergence: 00° 16' 22.80"	Z: 3,636,303.011
	Convergence: -00° 52' 46.23"	Scale factor: 0.99962328	
	Scale factor: 0.99988362	Combined factor: 0.99960063	
	Combined factor: 0.99986097	USNG: 17SNU4346171137	

Image: NGS website

I used the HTDP tool to convert the NAD83 (2011) [epoch 2010.0] coordinates of the NC Monroe CORS (NCMR) to ITRF2020 (epoch 2020.0) coordinates, and then I used the Alpha NCAT tool to convert the ITRF2020 (epoch 2020.0) coordinates to SPCS2022

because the deprecation of the use of the “U.S. survey foot” became effective on December 31, 2022.

NGS would like everyone to try these Alpha products and provide feedback so they can improve their products and services. I would encourage everyone to use the Alpha NCAT tool on a couple of marks to understand the differences between SPCS83 and SPCS2022 and to provide your comments and suggestions to NGS. NGS wants to develop tools that are helpful to users, but they cannot do that without your feedback. More information on the two Alpha Sites can be found in a September 2023 GPS World Survey Scene Newsletter (<https://www.gpsworld.com/ngss-first-alpha-products-for-the-modernized-nrsr/>).



David B. Zilkoski served as Director, National Geodetic Survey, from 2005 - 2009 and was the Project Manager of the New Adjustment of the North American Vertical Datum of 1988. He currently works as a geodetic consultant on NGS' modernization of the National Spatial Reference System. He is Chair of North Carolina Geodetic Survey Advisory Committee and a member of the North Carolina 2022 Reference Frame Working Group.

Taylor Wiseman & Taylor
ENGINEERS | SURVEYORS | SCIENTISTS

2043 Energy Drive
Apex, NC 27502
(919) 297-0085

9771-A Southern Pine Blvd.
Charlotte, NC 28273
(704) 527-2535

www.taylorwiseman.com

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2024 Bridging the Gap Conference

by *Tim Guisewhite, President-Elect*

I don't know about all of you, but to me, it seems like the holiday preparations start just a little earlier every year. Before we know it, the decorations will be out, and the season will be upon us! Well, the same could be said of our annual conference. Yes, I know it's not even on the radar for most of us, and that's fair enough. Those of you who attended the conference last year in Cherokee know it was a well-attended and valuable time for our society. This year we are hoping to carry that momentum forward! However, our conference doesn't just fall out of thin air. There are tons of behind-the-scenes preparations taking place right now to make it a success. This is my first experience being the chair on the NCSS conference committee, so I figured I'd pull back the curtain a little and let you in on some of the secrets.

The theme this year will be the task of mentoring as a way of raising another generation of surveyors. With my own son coming up in the profession and now attending

North Carolina A&T, this is a theme that really hits home for me. As mentors, we need to have a plan. We need to be forward-thinking about meeting the needs of those whom we have the privilege to lead. They deserve the same effort that those who went before us took for us. I imagine my former bosses often looked over my shoulder and cringed at the time it took me to accomplish a small task or held back their comments for the time it took me to do something twice because I didn't listen the first time. There is a rising generation of surveyors that needs mentorship, and we are the chosen few who can really make a difference in their lives. The conference this year will be targeted at arming you with the tools you need to make a difference in the life of a young surveyor.

In the coming months there will be much preparation to make all this happen. Our incredible staff has already secured a spacious event space. They have a great layout in mind already for how this event will happen. We have helpful speakers lined up who are gathering their thoughts and developing their presentations. We have a variety of vendors getting all their latest equipment dialed in so they can show it to us in person. I think the most exciting thing about this coming conference is pulling all these pieces together into the cohesive theme of equipping you to carry the torch to another generation!

As the rollout begins in the next few months and you see those conference ads, I just want to encourage you all to "Choose One." I'd love for each licensed surveyor in North Carolina to identify one other person that they can mentor in the next year. This conference will be an entire toolkit to help you do that. If you can identify that person to whom you can be a mentor, this conference will be very helpful to you! If you need to sharpen the axe, so to speak, in order to get some mentoring skills under your belt, this conference will be helpful to you as well! Whatever your position is right now, let's make a pointed effort to train up the next generation and bridge the gap for those who will follow in our footsteps.

Not to spoil all the surprises, but... we're throwing in some changeups this year, and I think you'll enjoy it. See you all in February.

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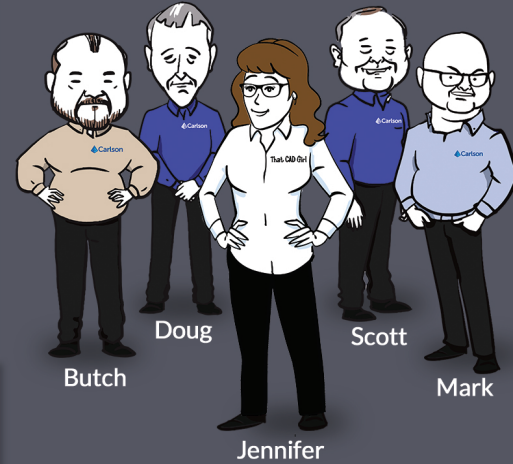
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MEMBER PROFILE

Lucy Cardwell



Husband's Name

Stephen Cardwell

Favortie Move

"Casablanca" or "National Lampoon's Christmas Vacation"

Favorite Food

Seafood

First Job

Window girl at the local Wendy's

As a child, Lucy's greatest ambition was to win a game of flashlight tag. As a teenager, Lucy's ambitions became a little more practical, and she began mapping for her father Henry Cuningham, a local land surveyor, to make money for gas and clothes throughout highschool. She would occasionally help him in the field, but she mostly drew maps. While in college, she started working for a local civil engineer and earned her AAS degree in Drafting and Design Engineering Technology. She began to think that there was more to see in the world than what was in northeast North Carolina, so she joined the United States Air

Force and served for several years working on C-130 Hercules avionics at Pope Air Force Base (now Pope Army Airfield) in Fayetteville. Their mission was to transport the nearby 82nd Airborne from Fort Bragg to anywhere in the world that they needed to go. England, Germany, Sicily, and Saudi Arabia are a few of the places that she remembers best. She also served during Desert Shield and Desert Storm.

Lucy met Stephen, her husband of 31 years, in the Air Force. He is originally from the greater Birmingham, Alabama area; but after separating from the Air Force, they settled back in Lucy's hometown of Elizabeth City. Initially, she had imagined that her career would be drawing house plans or working for engineers or surveyors, but she was at just the right place at the right time to start her job with Currituck County when GIS was in its beginning years. In 2003, Lucy started working for Currituck County. Her title is GIS Specialist—Land Records, and she is a NC Certified Property Mapper and a GISP and received her GIS PLS in 2014. Her husband was licensed as a PLS in 2001 and started his own business, SL Cardwell Surveying, which is now a PLLC. In the early days of his business, during the 2000s housing boom, they would spend many weekends together staking houses. It was typical for her to stake all the houses on entire subdivision blocks over the weekend before returning to the office Monday morning.

From 2014-2019, Lucy served on the NC Property Mappers Association Executive Board, and she acted as the president of the Board in 2018. She has also been the president of the NCSS Albemarle Chapter since

2020. Through these roles, she displays the value that she places on helping others in her profession in any way she can. She believes service is important whether it is through education, training, or simply keeping up with current events in the profession. Now she is responsible for the maintainance of the 25,000 county parcels in the Currituck County parcel layer and all the legal text information associated with those parcels. She is proud of the quality of Currituck County's parcel information and believes the parcel layer offers the public quality information. Today, she works in an office environment, but since she has her license, who knows what the future may hold! To any young surveyors just starting out, Lucy would offer the encouragement to go for every opportunity that arises. She never thought that she would be a PLS, but she walked through that door when it opened and has never regretted it.

Of all her projects, Lucy is proudest of the exhibit maps she has prepared and of how she has helped the Currituck County legal department to visualize descriptions of land, easements, agreements, etc. Some of those visualizations have even been used in court. Her favorite piece of surveying equipment is the Robotic Total Station because it always reminds her of the Terminator when it searches for the prism.

Lucy has extended family in the area and spends quite a bit of her free time with them. In warm weather, she likes to garden and enjoy the water recreation in her area. When it gets cooler, she catches up on reading and movies, especially in the genre of crime fiction.



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