

# MISSOURI SURVEYOR

A Quarterly Publication of the  
Missouri Society of Professional Surveyors

Jefferson City, Missouri

September 2025

ROBERT E. (BOB) MYERS BUILDING

## What's in this issue...

A Rolla Landmark is Named.....	4
Bob Myers — A Life Well Lived.....	10
Thanks to Bob Myers.....	15
The Genesis of Missouri .....	17
Nominees for Officers and Board of Directors ...	20
Surveying Math.....	28
W.L. Potts Circumferentor .....	30
Surveyor Exempt from Trespass Card .....	34



## CALENDAR OF EVENTS

2025

### October 2-4, 2025

68th Annual Meeting and Convention  
Stoney Creek Conference Center,  
Independence, MO

### December 5, 2025

Zoom Call, Board Meeting  
MSPS Office, Jefferson City, MO

### April 30 - May 1, 2026

48th Annual Spring Workshop  
Lodge of Four Seasons, Lake Ozark, MO

### October 1-3, 2026

69th Annual Meeting and Convention  
Oasis Hotel, Springfield, MO

**Front Cover:** New lettering naming the building is now prominently displayed above the windows of the Repository Section of the Missouri Department of Agriculture, Division of Weights, Measures & Consumer Protection, Land Survey Program.  
(MSPS Photo)

**Back Cover:** Photo of the plaque MSPS commissioned and donated honoring Robert E. (Bob) Myers, PLS. Few embodied the "Surveyors' Creed" we all ascribe to as well as Mr. Myers, and it is memorialized here on the building now bearing his name.  
(Photo by Katie Jones, USFS)

Chris Ferguson, Editor  
Austin DeSain, Editor



## Notes from Editor Ferguson's Desk

*Chris Ferguson, Vice-President, Editor*

As we march to the beat of a long, hot summer here in Missouri, it's my pleasure to offer this edition to allow you a chance to catch up on your Society – hopefully somewhere with good AC!

Austin and I have been streamlining processes, and with the dependable assistance of Publisher and Executive Director Sandy Boeckman present what should be both informative and entertaining. Headlining this edition is the long-overdue naming of the building housing the State Land Survey Program after the late Robert E. (Bob) Myers, PLS 134 and 1964 MSPS President. Mr. Myers was truly the pioneer in making Missouri likely the most organized state in the Union for recordkeeping of GLO records and subsequent surveys among countless other achievements on behalf of our profession. Poignantly, Bob himself contributed to this edition with possibly one of his last papers about his family compass which is traceable to GLO Deputy Surveyor Joseph C. Brown.

Contrary to what we may have thought as new editors, it seems there's almost an overabundance of content to include in the newsletter. While we strive to include every article by all authors, sometimes the sideboards we have (a 40-page magazine with several pages of advertisement and obligatory messaging) preclude either getting those contributions printed timely or sometimes even at all.

But we will continue to encourage you all to send in whatever you feel may be of interest to other surveyors, technicians and students. There's an alternate method for some material to be "seen by the masses" and that will be through **NEWS BLAST** messages from the Society via your email. Sometimes, that may be the preferred method to get the word out, whether it be a PDH offering, legislative issue, or just something else that needs to make it to the PLS community in a hurry. Last but certainly not least, stay cool out there! 🇺🇸

*Chris*



## Notes from Editor DeSain's Desk

*B. Austin DeSain, P.L.S., Director, Editor*

Welcome to another edition of Missouri Surveyor, where we strive to bring you interesting history, new industry technology, organization news and more!

We are more than halfway through 2025, and there's a plethora of relevant topics for discussion. With the addition of the **NEWS BLAST**, you'll find points of interest from MSPS prior to the printed edition. The first two included Darrel Pratte's message on behalf of the SHS with news about the 2027 St. Charles Rendezvous held in conjunction with the MSPS Annual Convention. Congratulations to Missouri

*(continued on page 29)*

# THE MISSOURI SURVEYOR

*Published quarterly by the  
Missouri Society of  
Professional Surveyors*

## OFFICERS

Chuck Quinby ..... President  
Mark Wiley ..... President-Elect  
Chris Ferguson ..... Vice President  
Scott Faenger ..... Secretary-Treasurer  
Sandra C. Boeckman ..... Executive Director  
Bob Anderson ..... Past President  
Michael D. Zahner ..... NSPS Director

## DIRECTORS

Bart Korman  
Phil Grout  
Kellan Gregory  
Austin DeSain  
Norman Ellerbrock  
Brian Viele

## ADVERTISING RATES

	4 issues	1 issue
Full Page	650.00	200.00
Half Page	400.00	150.00
(horizontal or vertical)		
Quarter Page	250.00	100.00
Professional Card	50.00	N/A

## COPY DEADLINE

March Issue — February 1  
June Issue — May 1  
September Issue — August 1  
December Issue — November 1

## EDITORS

Chris Ferguson  
Phone (573) 259-3207  
E-mail: surveyor1322@hotmail.com

Austin DeSain  
Phone (314) 629-6843  
E-mail: adesain@gmail.com

## PUBLISHER

Sandra Boeckman  
722 E. Capitol Avenue  
Jefferson City, MO 65101  
(573) 635-9446 FAX (573) 635-7823  
E-mail: msps@missourisurveyor.org

*The Missouri Surveyor is published quarterly by the Missouri Society of Professional Surveyors, to inform land surveyors and related professions, government officials, educational institutions, contractors, suppliers and associated businesses and industries about land surveying affairs. Articles or opinions appearing in this publication do not necessarily reflect the viewpoints of MSPS but are published as a service to its members, the general public and for the betterment of the surveying profession. No responsibility is assumed for errors, misquotes or deletions as to its contents. Articles may be reprinted with due credit given.*

## President's Message

*Chuck Quinby, PLS*



### *President's Farewell Message*

As my term as MSPS President draws to a close, I want to express my sincere thanks to everyone for their support throughout the year. Your encouragement has made this journey both rewarding and memorable.

It is remarkable how swift time has passed. Now, I am preparing to move forward toward new opportunities.

While I am uncertain what these next steps will be, I am quite sure they will keep me out of the summer heat.

If there is one thing this past year has taught me, it is that I am truly a fair-weather surveyor. My productivity and motivation soar in mild conditions—give me temperatures in the 70s or low 80s with low humidity, and I can accomplish many of my goals.

My hat is off to all of you who have spent this summer in the heat outdoors. With the overnight temperatures remaining in the 80's, getting up early to beat the heat just wasn't that much help. Knocking off early before you melt in the sun, meant being home before lunch.

As brutal as this summer has been, I believe this fall will be a welcome change. As temperatures become more comfortable, we can all be more productive. Let's keep those projects moving forward.

I hope to see you all at the Annual Meeting in Independence, Missouri. Be sure to give our incoming president Mark Wiley the same support you gave me. Remember to be active in our society and join a committee or two. Thank you again for a memorable year. 🇺🇸

*Chuck Quinby*

## 68th Annual Meeting & Convention

**October 2-4, 2025**

**Stoney Creek Conference Center  
Independence, MO**

---

# A Rolla Landmark is Named

---

by Chris Ferguson

---

On a balmy 90° spring day with promises of a long, hot summer in the air, a Rolla landmark was finally given a name – the only name it should have ever had. On this day, June 11, 2025, at 2 PM, the building that houses the Missouri State Land Survey Program along with the DNR Dam Safety and Water Resources Division was named for our first State Land Surveyor, Robert E. (Bob) Myers, Jr., PLS, PE.

A prelude to this event was hosted at a local restaurant by Dick Elgin, PLS, PE which offered travelers from all over the state and beyond to gather for food and fellowship. It concluded with remarks from Dick, State Representative Don Mayhew, PLS, PE, and MSPS President Chuck Quinby, PLS. After lunch the party left for a spot outside 1251A Gale Drive familiar to anyone who is familiar with the Missouri Department of Agriculture, Division of Weights, Measures and Consumer Protection, Land Survey Division.

Promptly at 2:00, State Land Surveyor Scott Faenger, PLS began with opening remarks. Notwithstanding the afternoon sun, all present were attentive to the joyous yet solemn occasion. A note about the Land Survey Program's home from Scott's speech follows:

*"The building was constructed in 1967 and used for rock core storage and evaluation as well as equipment storage. A records vault was built in the basement in 1976 and the upper level was remodeled into office space in 1984 for the Land survey program staff.*

*In 2005 a major renovation of the warehouse and Land Survey areas took place converting the warehouse into office space for Water Resources and Dam Safety.*

*So, instead of being called the Annex building or the 'other' building behind the Buehler building we now have a name."*

Other speeches were given by Missouri Department of Natural Resources Director Kurt Schaefer, Missouri Director of Agriculture Chris Chinn, and Rep. Mayhew.

Speeches concluded, it was time to properly christen the building. On hand for the ribbon-cutting were Bob Myers' children, Beth Myers Dickenhoffer, Paul Myers, and John Myers (who traveled from Germany) to see their father so honored.

Afterwards, the crowd adjourned to the Mozarkite Room inside for refreshments and time to reflect on Mr. Myers (as he is still often referred to within the LSP), his life, career and many accomplishments. Emcee Mike Flowers, PLS, who succeeded Bob as State Land Surveyor, shared many stories about Bob's youth and the events that led to him becoming the first State Surveyor. College fraternity brother and roommate George Johnson had some hilarious accounts of young Bob's days at Washington University and was emotional in recounting that they remained lifelong friends. Several of Bob's longtime employees fondly gave accounts of working with him throughout the early years of the program, more than a few barely holding back tears. Daughter Beth shared several humorous and heartfelt memories of her dad as well, and it was obvious that Bob is still dearly missed.

The survey community was well-represented, with all surviving State Land Surveyors in attendance, other federal and state agency surveyors, MSPS officers and directors, NSPS State Directors, APEPLSPLA Board members and directors, current and former Surveyor/State Legislators and many other noteworthy Land Surveyors gathered far and wide.

It was readily apparent that all who knew Bob Myers throughout his long career either respected or loved him, and often both. Special thanks for such a splendid dedication ceremony go to the following: Scott Faenger and all his staff at LSP for hosting the event and ensuring everything from parking to cake and punch was superb; Kurt Schaefer and DNR staff for coordinating the event, hosting meetings since last winter to make the day possible, Rep. Mayhew and former Rep. Robert Ross, PLS, for initiating and promoting legislation to name the building after Mr. Myers; Mike Flowers, who maintained contact with Bob's family and coworkers to coordinate their arrival and also for being the link to Bob's early days with the Program (Mike was among Bob's first hires, along with the legendary Norman Brown); Stan Emerick and Austin DeSain, who gathered some of Bob's many City of St. Louis plats and plans for display, and others too many to mention but all of whom were instrumental in making this a day to remember in honor of Bob Myers.





A sizeable crowd gathered to attend the ceremony in the afternoon heat (MSPS photo)



Missouri Director of Agriculture Chris Chinn speaks of the significance of the occasion (MSPS photo)

*(continued on page 7)*



# ZAHNER

AND ASSOCIATES, INC.  
PROFESSIONAL LAND SURVEYORS AND ENGINEERS

**ZAHNER & ASSOCIATES  
PROUDLY SUPPORTS  
MSPS & MGA**

**Fall 2025 Currently  
in Session at MGA**



Want to stay in the know? Write to [info@geospatialacademy.us](mailto:info@geospatialacademy.us) to be placed on the mailing list.

Courses offered in Spring 2026 are SUR202, Surveying II and SUR302 Legal Aspects of Boundary Surveying. We will also offer SUR125-MO State Specific Exam Prep.

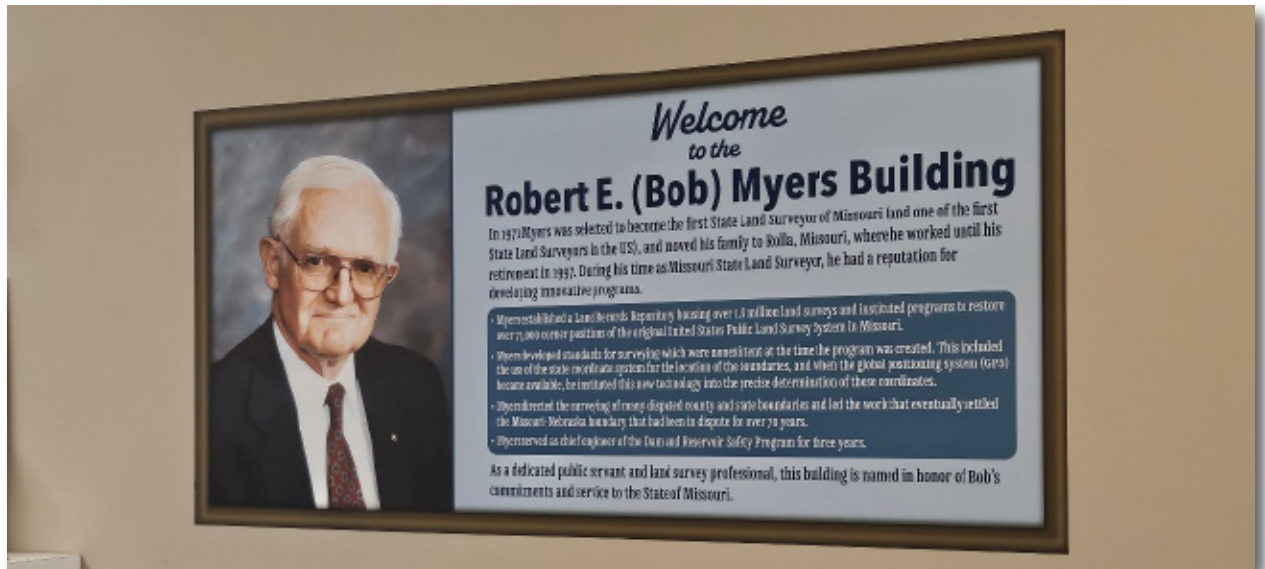
MGA's courses have been reviewed by the Missouri Board and found acceptable for education credentials for PLS: SUR201 and SUR202, Surveying I and II. SUR301, Land Records, and SUR302 Legal Aspects of Boundary Surveying and SUR303, Elements of Surveying Practice.

We also have exam prep courses: SUR121 FS Exam Prep (summer 2026), SUR123 PS Exam Prep (Fall 2026) and SUR125-MO State Specific Exam Prep (Spring 2026). These are not applicable towards PLS applications.

Enroll online at [www.geospatialacademy.us/admissions](http://www.geospatialacademy.us/admissions). Questions?  
Write [info@geospatialacademy.us](mailto:info@geospatialacademy.us).



## A Rolla Landmark is Named *(continued)*



Visitors will be greeted with a summary of Mr. Myers' career highlights (MSPS photo)



Bob's sons John and Paul hold the ribbon as daughter Beth cuts, making the naming official. Also present are (second row, from left) Sandra Boeckman, MSPS Executive Director, Former State Representative Robert Ross, MSPS President Chuck Quinby, State Land Surveyor Scott Faenger, Department of Agriculture Director Chris Chinn, State Representative Don Mayhew, Carey Bridges, Missouri Geological Survey Director, Department of Natural Resources (DNR), and Kurt Schaefer, Director, Missouri DNR. (MSPS photo)

*(continued on next page)*

## A Rolla Landmark is Named *(continued)*

---



Bob's compass – which has verifiable provenance to Joseph C. Brown (surveyor of the 5<sup>th</sup> PM Baseline, State boundaries, the Santa Fe Trail, and a plethora of other historic Missouri Surveys) - on site for the ceremony from the State Capitol where it has been on display for years. (photo by Austin DeSain)



Some Myers, Keller and Byers linen “Rugs” (St. Louis City block maps) now held by Clayton Engineering Co., St. Louis (MSPS photo)



Limitless opportunities to excel

# We Own It.®



View our open  
Survey/Geospatial  
positions:



## **CEC | St. Louis**

1450 Beale Street, 3rd Floor  
St. Charles, MO 63303  
314.656.4566

## **Offices nationwide**

800.365.2324  
[www.cecinc.com](http://www.cecinc.com)



Civil & Environmental  
Consultants, Inc.

# Bob Myers – A Life Well-Lived

by Chris Ferguson

**Robert E. (Bob) Myers**

**PLS 134, PE 7863**

**Missouri State Land Surveyor 1971-1997**

Bob Myers, PLS, PE, was Missouri's first State Land Surveyor, serving from his appointment in 1971 until his retirement in 1997. In that role, he is considered one of the first state land surveyors in the United States. Bob also served as chief engineer of the Dam and Reservoir Safety Program for three years. He was also a seventh-generation surveyor from his family. During his Missouri state service, Myers was responsible for numerous new and innovative initiatives.

These include:

- Establishing a statewide land records repository
- The scanning, cataloging, and indexing of 1.8 million land surveys
- Instituting programs to restore the corners of the United States Public Land Survey System in Missouri based on the original General Land Office (GLO)
- Developing modern surveying standards for the surveying profession, which were nonexistent at the time the program was created
- Directing the resurveying of disputed county and state boundaries
- With approval of Congress, helped resolve a longstanding dispute at the boundary between Missouri and Nebraska known as the Missouri-Nebraska Boundary Compact

Bob served as President of the Missouri Association of Registered Land Surveyors in 1964 and was the recipient of numerous awards, including Missouri Surveyor of the Year in 1992.

*\*The above was from Bob's Building Dedication Program, but there was much more about the life and times of Robert E. Myers.*

Born in St. Louis on February 8, 1930, as the son and grandson of city surveyors/engineers in the venerable downtown firm Myers, Keller and Byers, Robert Emmet Myers, Jr. appeared destined from birth to become one himself.

Young Bob worked in the family business when not attending college at Washington University. He often recounted stories of taking what was necessary to survey a city block or lot (transit, tape, tripod, level rod, hammer, rail spike for cutting curb, etc.) on a streetcar since that was the quickest and most economical way to move a survey crew around



Bob circa 1950 (family photo)

what was then a bustling metropolis of almost a million inhabitants.

Upon graduation, Bob found himself eligible for military service as the Korean War was well underway. Drafted into the army, Bob served honorably and returned home to work at Horner & Shifrin, a local engineering company. Soon however, with his father's passing, Bob was needed at the company that bore his name, and steered it well into the 1960's including working on the construction of the Gateway Arch.

But there was a greater calling ahead. While President of the Missouri Association of Registered Land Surveyors (predecessor to today's MSPS), a need was identified to standardize the quality of surveys throughout the state, and perhaps an even greater need to ensure land records and GLO corner information would not be "lost for the ages" as courthouses modernized and County Surveyors were steadily becoming a thing of the past.

As an advocate for excellence in surveying along with perpetuation of GLO corners, he witnessed the creation of the State Land Survey Authority (LSA) in 1969, the first of its kind in the nation. The Missouri Land Survey Authority Chairman was Dan Kennedy, who at the time was Chief of the USGS Midcontinent Mapping Center in Rolla. Other





The original home of the State Land Survey Authority was formerly an infectious eye disease hospital. Rolla, MO circa 1973 (Land Survey Program photo)

members of the Authority were the late Rich Barr, PE, RLS of Clayton Engineering and former MSPS President, Dr. Wallace Howe, the State Geologist, and Willard Leland Eckhardt, Dean of the University of Missouri Law School.

While well-intentioned, its part-time committee status could not devote the necessary effort to accomplish its objectives. It was apparent that a dedicated state agency with a full-time State Land Surveyor in charge would be required. But who to take on this role? The answer was easy for the members of the LSA – it was Bob Myers!

By 1971, Bob had accepted the challenge of becoming the first Missouri State Land Surveyor. Uprooting his wife Jinnie and their young family, he moved to Rolla to take on his new role. The need for competent help soon was apparent and among Bob's first hires were Texas County Surveyor Norman Brown soon followed by transitman/rodman Mike Flowers. The first home of the new State Land Survey Authority was in the former Missouri Trachoma Hospital building (now a part of the MS&T Campus across from Wendy's and other take-out restaurants on Kingshighway). They would move into the building that now bears his name within three years.

Bob undertook many initiatives such as indexing and microfilming GLO plats and field notes from the Secretary of State's office and any County Surveyor plats and records available along with adroitly moving the LSA into the Department of Natural Resources where it became an integral part of the Division of Geology and Land Survey. Meanwhile, he oversaw the creation of

Codified State Regulations (CSR's) which set enforceable standards for the performance of all boundary surveys. One important aspect of his work was that it breathed life back into the dwindling offices of County Surveyor throughout the state. For instance, by statute, a County Surveyor could only charge \$3 per survey and eighty cents for the plat. Along with standardizing GLO re-establishments, Bob was instrumental in modernizing Chapter 60, RSMo. In addition, he promoted the State Plane Coordinate System and its routine use.

Later, he toiled for the creation of what we now call Corner Documents. They were not at all uniform and entirely voluntary before his time (and seldom used). But through his legislation drafting, testifying, and lobbying efforts they became administrative law

and aid in countless GLO corner recoveries today. And perhaps one of his foremost yet quiet accomplishments was to ensure the State Land Surveyor was integral to the MSPS, giving reports of the program's statewide activities throughout the year.

We surveyors should be forever grateful to Bob, for what we somewhat take for granted here in Missouri became a model for other State Surveyor offices as several states emulated what he and his staff built. However, to this day most adjacent states do not enjoy the ease of availability to GLO plats, notes, corner records and subsequent surveys we do.

But this is just an abbreviated list of all he championed on behalf of the profession before retiring from his post in 1997. But by no means did he quietly depart the profession – he formed his own company - Land Related Technology - and consulted on a broad spectrum of topics to include the emerging relationship of cadastral surveys to GIS.

Bob won every award presented to an outstanding Missouri Professional Land Surveyor (a term he pushed to create vs. "Registered Land Surveyor" that had preceded our title by the way), to include winning the *Robert E. Myers Service Award* eponymously named in 2009. Even after moving to Webster Groves Retirement Complex, Bob routinely stayed active reviewing surveys, presenting survey topics to attorneys, being an expert witness and

*(continued on next page)*

## Bob Myers – A Life Well-Lived (continued)

staying connected to young surveyors by such means as the NSPS Certified Survey Technician program.

Through all that, he never neglected being a loving husband and father, a doting grandfather and a lifelong friend to college roommates, coworkers, and the survey community at large.

This is but a summary of who Bob was, all he accomplished, and how much he meant to not only the Missouri survey community but whose lives were touched by such a fine man.

The author thanks Mike Flowers, Dick Elgin and Darrell Pratte for contributions to this article. However, for a much more exhaustive tome about Mr. Myers, the reader is invited to view the article in the June 2019 edition of the *Missouri Surveyor* penned by former State Surveyors Mike and Darrell cited above along with Ron Heimbaugh. 🇲🇴



Bob enjoying a laugh in the field on a corner investigation (LSP photo)



Bob reviewing bound plat books (LSP photo)

**GOVERO**  
**Land Services**  

---

**SURVEYING • ENGINEERING**

DANIEL L. GOVERO LS1778  
PRESIDENT

5929 OLD STATE RD.  
IMPERIAL, MO 63052  
(636) 464-9380  
Fax (636) 464-9626  
dland@goverolandservices.net

**KLIETHERMES**  
**RESEARCH, LLC**  
*Property & Ancestry Research*  
**PATRICK KLIETHERMES**

P.O. Box 234 • Loose Creek, MO 65054  
kliethermesresearch@gmail.com  
**573-694-9475**





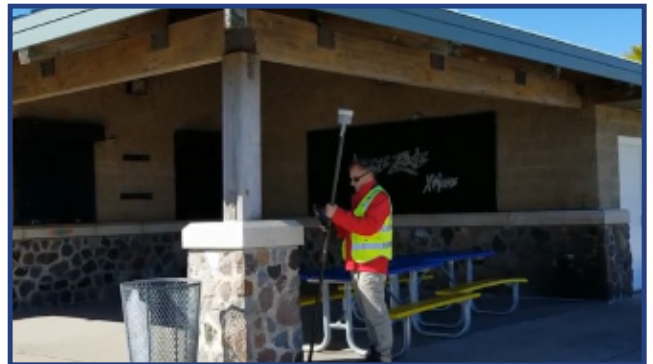
**Missouri**  
3433 Tree Court Ind. Blvd.  
St. Louis, MO 63122  
Office: 314-968-2282

**Kansas**  
11801 W. 86th Terrace  
Lenexa, KS 66214  
Office: 816-331-3383

**Tech Support: 844-266-7266**



Want to try  
before you buy?  
Ask about our  
**TAKE FIVE**  
Rental Program



**Providing high accuracy products,  
superior training and support since 1945**

- Total station & GNSS solutions to exceed your productivity needs
- Field and office software that supports your workflows
- Scanning and leading aerial mapping solutions
- Training customized for the way you work
- Experienced and knowledgeable staff
- Service, repair, and rental solutions



 **SCAN ME**



**Sales • Service • Support • Rentals • Training • Consulting**



Are you a  
Licensed Land  
Surveyor or LSIT  
searching for  
a new  
opportunity?

**POWELL**  
ARCHITECTURE / ENGINEERING / SURVEYING

We are hiring! And  
would love to  
meet you!

### Knowledge and Experience

- ▶ Current Professional License
- ▶ Strong proficiency using AutoCAD
- ▶ MicroStation experience preferred
- ▶ Clear communicator with a collaborative spirit
- ▶ Ability to delegate tasks
- ▶ Ability to manage multiple projects and teams
- ▶ Remote pilot license and unmanned aerial system experience preferred

Salary based on experience,  
skills and qualifications.  
**\$85,000 - \$125,000**

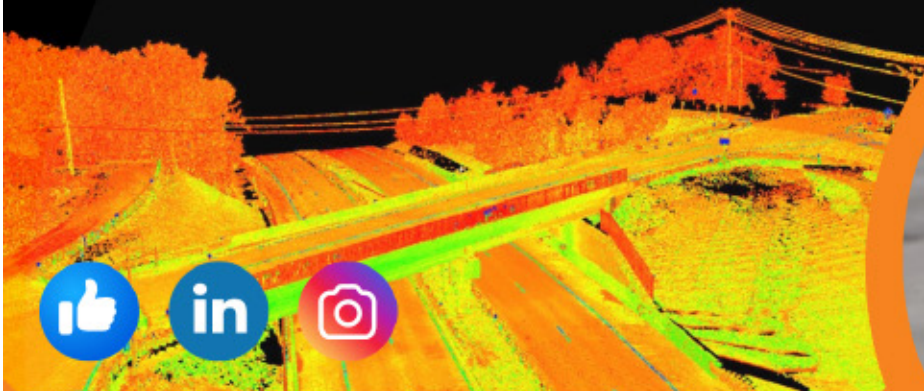
### As Part of Our Team

- ▶ Your Voice is Heard
- ▶ Your Work Matters
- ▶ Your Growth is Prioritized

Call us at 816.642.2441

Send Your Resume to [ctroutman@powellcwm.com](mailto:ctroutman@powellcwm.com)

Learn more about us by visiting [powellcwm.com](http://powellcwm.com)





# Thanks to Bob Myers

by Austin DeSain, PLS

When I was introduced to Bob Myers in the early part of this century, I only knew that he was the first State Land Surveyor of Missouri. I thought he must have been ancient. My dad, Kevin DeSain, introduced us at an MSPS conference and after a few quick questions he started talking to me about becoming a technician and ways to further my career in land surveying. While I was in the process of taking my state specific courses in the evenings, and working for the family business during the day, Mr. Myers (and my dad) encouraged me to also learn about a new program called the Certified Survey Technician. It was a national certification through NSPS that a handful of states had started to incorporate at that time, and I'd heard that Missouri would soon be one of them. I took the second exam offered in MO on December 1<sup>st</sup>, 2007, at Florissant Valley Community College in St. Louis. My employer then, The Clayton Engineering Company, let me study and take the practice exams leading up to it at work and my boss checked my math and went through the practices with me. I'm grateful to my boss at that time, Tom Jamboretz, for the encouragement and support at work. The following January, Bob Myers handed me my CST certificates at a St. Louis MSPS Chapter meeting with other graduates and shook my hand in congratulations.

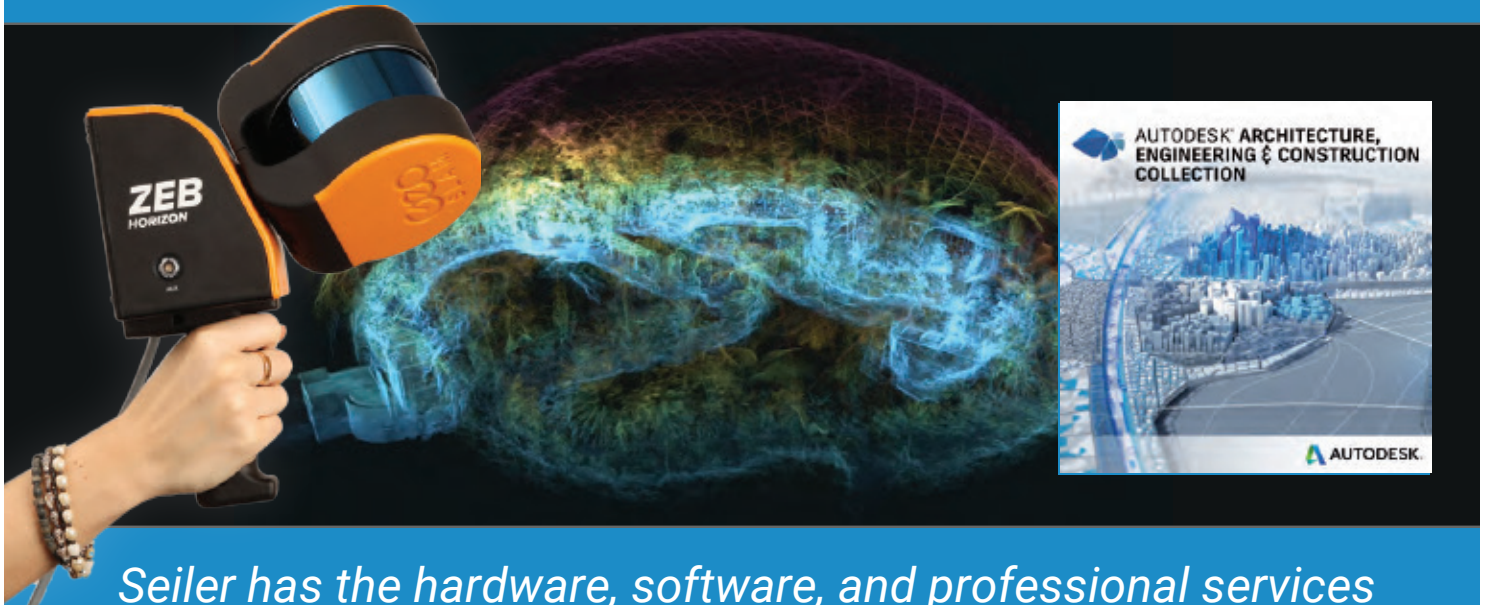
Later, at a history committee meeting I attended in Rolla, Bob asked me where I worked, and I told him Clayton Engineering. His tone seemed to change a little and he mentioned the Myers, Keller & Beyers (MKB) records that Clayton Engineering owned, which I didn't know much about at the time. He looked at me dead in the eyes and said, "Those belong in a museum." I could only think that those same words were spoken by Indiana Jones and hoped that I wasn't setting myself up for years of being crusaded against by working there. MKB sold the records to Clayton in the early seventies, and the employees came over too. It was a good deal for both companies, I've always heard. One of Bob's old MKB coworkers, Bill Powell (Bakes), still stops by the office to make sure everyone is sharp-witted and on the edge of their seats for stories of surveying during the trolley car days.

While I was the Survey Manager of Clayton Engineering, I came to understand the importance of the St. Louis City and County sketches, plats, and survey rugs produced by MKB. I made it a priority to digitize them, and to share them when asked by others. Clayton, and other surveyors in the region, use them often. They've been well kept in a temperature-controlled room, with other century old records. My respect for Bob Myers as a seventh-generation surveyor and the first State Land Surveyor of MO increased tenfold after being around the records. 🇺🇸





*From data capture in the field to design  
and documentation in the office*



*Seiler has the hardware, software, and professional services  
to keep you ahead of schedule and under budget.*

## PRODUCTS & SERVICES WE OFFER:

- Autodesk Software Solutions
- Handheld Scanners
- Hands-on Custom Training
- Template Creation
- Workflow Analysis
- Skills Assessment Testing
- Custom Content Creation
- Complete Support- before, during, and after every sale.
- Services and Sales via Seiler Geospatial; Robotic Total Stations, scanning, imaging, GNSS, and UAV Technology.



IOWA • ILLINOIS • INDIANA • KANSAS • MICHIGAN • MISSOURI • NEBRASKA • WISCONSIN

cad@seilerinst.com | 1-888-263-8918 | www.seiler-ds.com



# ***The Genesis of Missouri From Wilderness Outpost to Statehood, by William E. Foley***

## **Introduction and Selection for Missouri Surveyor**

*Edited by B. Austin DeSain, PLS*

---

We continue this series with chapter four of Foley's book. Missouri was wild country in those days, and like much of colonial America, daily life was about surviving. French speculators in the late 1600s and early 1700s continued to think of the potential business opportunities that this part of the world held, but did not quite have a way to secure them. In came John Law, a Scottish gambler who fled from London after killing a man in a duel. Law found himself in France at high stakes tables and won a considerable fortune, and the respect by the higher circles at the Court of France. In August 1717, he had secured the patent for the Company of the West after working with the Duke of Orleans to help alleviate financial burdens. The Company of the West was granted "a monopoly on Louisiana's trade, ownership of all mines, use of all forts, depots, and garrisons in the province, the right to import French goods into Louisiana duty free, reduced duties on good shipped to France, control of Louisiana's commercial and Indian policies, and the right to name all officials in the province."

Shortly after, the Illinois country was removed from Canadian control and put completely into the control of The Company of the West. Jean-Baptiste Le Moyne de Bienville was designated by The Company as the provincial governor, who founded New Orleans in 1718. The Company of the West became The Company of the Indies in 1719 through flashy re-branding and consolidating of other companies and businesses.

Pierre Dugué de Boisbriand took command of the Illinois country which included both sides of the Mississippi and directed the construction of Fort de Chartres. The Fort is a State historic Site that I was able to visit earlier this year, located just north of Kaskaskia on the east bank of the Mississippi River. The site holds five major events throughout the year, but we went on a quiet Monday afternoon. I'd recommend the drive and walking around the grounds, counting the earliest construction of it, it's a three-hundred-year-old fort in our region.

The French were still hopeful to find mines full of riches like those that the Spanish had discovered and determined to mine. After finding a vein of lead at Mine La Motte, the operation grew substantially in the following years. Additional lead mines were opened, smelting started, and clearing trees to support the smelting was required. Lead was often thought to be near silver.

Despite all of the labor and efforts of the French in the region, the powers around the world were still ultimately in control. The French and Indian War resulted in the fall of Quebec to the English in 1759 and the loss of Montreal the following year. It started to look like France would lose control of Canada when Spain joined forces to fight off the English. Despite both French and Spanish efforts, the English held the upper-hand and their victory seemed certain. France pressed for a speedy end to the war, and to pay back the Spanish for their support they ceded the land west of the Mississippi. The Spaniards accepted the terms in the Treaty of Fontainebleau and "With the stroke of a pen Louisiana passed from French to Spanish control."

### **Chapter 4. You Cannot Lock Up an Open Field, pages 62 to 69.**

As soon as the ordinances had been drafted, the American entrepreneur ordered a land survey and opened a land office, where he offered 320-acre tracts for \$48 apiece, subject to final confirmation by the king. During the spring of 1789 New Madrid was the scene of intense activity. The prospective residents cleared a large field, planted crops, built storehouses,

*(continued on page 20)*

# Nominees for 2025-2026 Officers



## President – Mark W. Wiley

Mark is a second-generation land surveyor and has contributed to the Missouri Surveyor newsletter with articles; “Who remembers the Golden age of surveying?” and “Direct & Reverse, Surveying?”

He has presented at several MSPS workshops and Annual Meetings addressing the following topics:

- Survey Cost Analysis
- Understanding the Boundaries of the Profession Ethics and the Professional Surveyor
- Reading and writing Boundary Descriptions
- Safety for Surveyors
- He revised the Safety Manual for Surveyors, originally prepared by MARLS in 1973

Licensed in Missouri and Illinois, he has completed surveying related courses at St. Louis Community College, Mineral Area College and the University of Missouri -Rolla [Missouri S & T]. He began his career prior to 1978 working for his father during the summers and on weekends. He has continued in the surveying profession ever since.

He opened and operated Advanced Land Surveyors Inc. in Ste. Genevieve from 1994 to 1999 and worked at Heideman and Associates Inc. from 1999 to 2021.

He has worked in Metro St. Louis, Springfield and the counties of Jefferson, Ste. Genevieve, St. Francois, Franklin and Washington during his 45+ year career.

He has donated time and effort over the past years with the MSPS Legislative and Standards Committees, believing that “all evil needs to succeed is for the good people to do nothing”.

He serves as Pastor of three Presbyterian congregations in the towns of Ironton, Hillsboro and Park Hills.

He is active in his community serving as President of the Belew’s Creek Watershed Partnership, a group of local folks working to make a difference in the watershed by both cleaning and stabilizing the creek.

## President-Elect – Chris Ferguson

Chris Ferguson is the owner of Heartland Surveyors, LC located in Waverly, Missouri concentrating on large rural boundaries and small-town surveys. He recently retired from the U.S. Forest Service after nearly 20 years of surveying the Ozarks.

Chris began his surveying career in the U.S. Marine Corps transferring from the infantry into an artillery battalion and eventually became the senior Survey/Meteorological and Radar Officer for the 14<sup>th</sup> Marine Regiment concluding 23 years of active and reserve service. Concurrently, he worked his way from rodman to manager while employed by several Metro St. Louis engineering/surveying firms. That led to running his own company for over a decade highlighted by several capstone projects such as Busch Stadium, the Gateway Arch National Park grounds, and STL-Lambert International



Airport expansion.

Along with Missouri registration, Chris holds licensure in other Midwestern states, remaining active in Kansas and Arkansas and is also a Certified Federal Surveyor (CFedS) and a Certified Floodplain Manager (CFM®)

In addition, he is also a co-Editor of the *Missouri Surveyor*. Editor Emeritus Don Martin recently told Chris that he is “bad at retiring”. Likely so...although he does find occasion to enjoy with his lovely wife Beth and their grandchildren. As the goal perhaps now is to be “semi-retired”, he will still make time to serve as President-Elect and looks forward to the opportunity.



## Vice President – Scott Faenger

Scott Faenger is the Missouri State Land Surveyor and the Director of the Department of Agriculture’s Land Survey Program located in Rolla, Missouri. He was introduced to the profession in the early 1990’s when he answered a laborer want ad in Houston, Texas and spent that summer locating pipeline for a surveying / engineering firm. He went on to become

a party chief with that company. He has also worked for land surveying firms in Arkansas and Missouri and has been with the Land Survey Program of Missouri for the past 20 years. Scott started with the Land Survey Program in 2003, as an instrument man with the Missouri’s State Parks survey crew. In 2005, he transferred into the Land Survey Program’s Cadastral Section and has been a part of numerous township wide, county line, and state line projects that involve restoring or reestablishing corners of the United States Public Land Survey System. In February 2022, Scott became Missouri’s 5th State Land Surveyor and the Director of the Land Survey Program. The Land Survey Program is responsible for preserving and protecting the United States Public Land Survey corners and state and county boundary markers, providing the framework for all geodetic positioning activities in the state; collecting, preserving, and providing copies of land survey records; and disseminating regulations designed to assist in uniform and professional surveying methods and standards for the State of Missouri. Scott is currently a member of the Missouri Society of Professional Surveyor’s Board of Directors and serves on the history committee and the public relations/sales committee. He resides in Rolla with his wife, Patty. Scott is currently serving as Secretary-Treasurer for MSPS and also serves on the history committee and the public relations/sales committee.

## Secretary-Treasurer – Philip Grout

Philip is the Survey Service Leader for Civil Design, Inc. in St. Louis, where he is responsible for surveying operations across all locations. He earned his BS in Civil Engineering Technology with an emphasis in Surveying from Murray State University in 2003. After graduating, Philip worked for surveying consultants in Kentucky, Kansas, and Arizona before setting roots in Missouri, earning licensure





# 68<sup>th</sup> Annual Meeting

OF THE  
MISSOURI SOCIETY OF PROFESSIONAL SURVEYORS

**OCTOBER 2-4, 2025**

STONE CREEK HOTEL-KANSAS CITY

18011 BASS PRO DRIVE

INDEPENDENCE, MO 64055



## **PRESENTERS**

Gerald Bader, PLS | Dave Doyle  
Francis Duncan, PLS | Dr. Richard L. Elgin, PLS, PE  
Stan Emerick, PLS | Kellan Gregory, PLS  
J. Paul Maurin, IV, PLS | Mike Oetterer, LSIT  
Joseph V.R. Paiva, PhD, PLS, PE | Darrell Pratte, PLS

# THURSDAY, OCTOBER 2, 2025

**7:00 am**                      **Registration and Breakfast**

**8:00 - 5:00 pm**            **Hospitality Room**

**8:00 - 10:00 am**        **MODERNIZATION OF THE NATIONAL SPATIAL REFERENCE SYSTEM**

In 2026, the National Geodetic Survey (NGS) plans to deliver new and improved horizontal and vertical geodetic datums for the country. These enhancements will embrace significant advancements in earth orientation measurement systems and reflect high levels of interagency collaboration to provide more accurate and contemporary positional and height information detailing the foundation of the National Spatial Reference System. The community of professional surveyors will have the opportunity to provide a significant leadership role in the adoption of these new systems to a vast array of other disciplines in the private and public sectors at the local, state, and national levels. It will be important for these professionals to understand the rationale for this effort and the magnitude of changes expected in geodetic heights and positions resulting from significant changes in the State Plane Coordinate System.

**Dave Doyle, Base 9 Geodetic Consulting Services, NGS Chief Geodetic Surveyor (retired)**

**10:00 - 10:15 am**        **Break with Exhibitors**

**10:15 - 12:15 pm**        **MODERNIZATION OF THE NATIONAL SPATIAL REFERENCE SYSTEM CONTINUED**

**12:15 - 1:00 pm**        **Lunch**

**12 noon**                      **Golf Tournament at Country Creek Golf Club**

**1:00 - 5:00 pm**

## **YOUNG SURVEYORS RODEO**

An individual skills-based competition comprised of nine events and strictly for the young surveyors. Requirements for competition are that participants must be 40 years old or younger OR within the first five (5) years of professional licensure. Space is limited.

**Kellan Gregory, PLS, Lamp Rynearson**

**1:00 - 3:00 pm**            **NEW DATUM COORDINATE AND HEIGHT ESTIMATIONS AND DATUM TRANSFORMATIONS**

This presentation will demonstrate the specific use of current NGS Alpha/Beta tools to estimate positional changes both in heights (NAPGD2022) and Missouri/Kansas State Plane Coordinates (NATRF2022). In addition, the presentation will cover the use of the NGS National Coordinate Conversion and Transformation (NCAT) tool as a vital utility that will likely be a significant support to easily assist in the migration of various existing local reference systems.

**Dave Doyle, Base 9 Geodetic Consulting Services, NGS Chief Geodetic Surveyor (retired)**

**3:00 - 3:30 pm**            **Break with Exhibitors**

**3:30 - 5:30 pm**            **NEW DATUM COORDINATE AND HEIGHT ESTIMATION AND DATUM TRANSFORMATIONS CONTINUED**

**5:30 - 7:00 pm**            **Exhibitor Set-Up**



# FRIDAY, OCTOBER 3, 2025

7:00 am	<b>Registration and Breakfast</b>
7:00 am	<b>Young Surveyors Breakfast</b> (Invitation Only)
8:00 - 5:00 pm	<b>Hospitality Room</b>
8:00 - 10:00 am	<b>MSPS BUSINESS MEETING &amp; ELECTION OF OFFICERS AND DIRECTORS</b>
10:00 - 10:30 am	Break with Exhibitors
10:30 - 12 noon	<b>EDUCATING COMPETENT LAND SURVEYORS OF THE FUTURE: THE ROLE OF THE PROFESSIONAL LAND SURVEYOR</b> <p>The land surveying profession is at a crossroads. As the number of licensed professionals continues to decline, the responsibility to educate and inspire the next generation falls squarely on the shoulders of today's surveyors. In the last six years the number of Missouri surveyors has declined by 122 surveyors. The 2024 number, including those not resident in Missouri, stands at 825. The number of new surveyors being licensed annually is a far cry from this rate of decline. This talk calls on leaders as well as members of the profession to become active participants in education, mentorship, and policy advocacy. We'll explore how professional engagement can help reverse the trend—and ensure a strong, competent surveying workforce for the decades ahead. Simple tips, even if you are not an educator, are provided so that you can do your part to build up a strong, competent and professional body of Missouri surveyors.</p> <b>Joseph V.R. Paiva, PhD, PLS, PE, President, Midwest Geospatial Academy</b>
12:00 - 12:30 pm	<b>MSPS Awards &amp; Rodeo Winners</b>
12:30 - 1:30 pm	<b>Luncheon</b>
1:30 - 3:30 pm	<b>COMPLIANCE WITH THE MISSOURI STANDARDS FOR PROPERTY BOUNDARY SURVEYS</b> <p>This helpful course can help new surveyors as well as experienced ones refresh their understanding of the mandatory requirements to be fulfilled with every boundary survey in Missouri. It can also help to serve as a template for internal education of the non-licensed teams who are essential to providing boundary survey services. Coverage of the somewhat mysterious PPM requirements for internal consistency and positioning uncertainty will be covered by providing suggestions on how to evaluate these important sections of the Missouri Standards.</p> <b>Francis Duncan, PLS, MODOT; Mike Oetterer, LSIT, Midwest Geospatial Academy, BFA Inc.</b>
3:30 - 3:45 pm	Break with Exhibitors
3:45 - 5:45 pm	<b>KANSAS MINIMUM STANDARDS</b> <p>These standards were adopted by vote of the membership of the Kansas Society of Land Surveyors on November 21, 2020. It is the intent of these Standards to provide the surveyors and the recipients of surveys a realistic and prudent yardstick of adequate surveying performance. The Rules and Regulations that reference these Minimum Standards were adopted by the Kansas State Board of Technical Professions on May 21, 2021.</p> <b>J. Paul Maurin, IV, PLS, JD</b>
5:45 - 6:45 pm	<b>Reception with Exhibitors</b>

# SATURDAY, OCTOBER 4, 2025

7:00 am

Registration and Breakfast

8:00 - 12 noon

## LEGAL PRINCIPLES 101: A REVIEW OF THE LEADING BOUNDARY CONTROL PRINCIPLES

The legal principles of boundary control have been the foundation of boundary location for generations of boundary surveyors. Those principles are as applicable today as they ever were...if not more important. But, it seems these legal principles do not have the priority that they once did. In surveying education, it seems measurement technologies have supplanted legal principles. This seminar outlines the leading boundary control legal principles: Sequence and simultaneous conveyances, construing and writing boundary descriptions, prescription, acquiescence, easements, resurveys in urban subdivisions, USPLSS, and riparian boundaries. This seminar is ideal for those on the path to licensure and great for those wishing to review/expand their legal principles knowledge.

**Dr. Richard L. Elgin, PLS, PE, Archer-Elgin Surveying, LLC**

12:00 - 1:00 pm

Lunch To Go

1:00 - 4:00 pm

## THE OSAGE LINE: FROM DEFINING THE WEST BOUNDARY OF THE UNITED STATES TO A FOOTNOTE AS STATION 0+00 OF THE SANTA FE TRAIL SURVEY

(Location: Fort Osage, 105 Osage Street, Sibley, Missouri 64088)

In 1816 Joseph C. Brown and John C. Sullivan are contracted to survey the Osage Treaty Line. Brown is to survey the southern portion from Fort Osage on the Missouri River southward to the Arkansas River, to a place designated to be a sister factory fort. Sullivan is to survey and mark the northern portion of the Treaty Line, northward from the intersection of the Missouri and Kansas Rivers for a hundred miles, thence eastward to the Des Moines River.

One of these Surveyors takes great care in determining the magnetic declination of his compass needle, even periodically checking and adjusting variations along the way. The other takes a cavalier approach to the project, myopically assuming that these treaty lines will tend to be extinguished in a matter of years. That sentiment will hold true for one of the lines, while the other will eventually mark the boundary of nine Missouri Counties as well as the line between a bordering state. But the story doesn't play out as planned. Factoring in the unknown geography, along with climatically provoked hardships and the multinational geopolitical storms of the day, it's a wonder that chaos didn't reign supreme.

With regards to the determination of magnetic declination, how did those old surveyors figure out which way was North? How did they adjust their compass to run in a cardinal direction? What did they use to measure, and how did they keep track? These questions and others will be answered at this demonstration.

## HISTORICAL DEMONSTRATION

By Darrell D. Pratte, PLS,  
Gerald Bader, PLS and  
Stan Emerick, PLS





# SPEAKERS

**Gerald V. Bader, PLS**, President of Bader Land Surveying, Inc., which began operations in April of 1996. In the fall of 1996 he was elected as the Ste. Genevieve County Surveyor and is presently serving his 8th term. Gerald is an advocate for the protection of the Public Land Survey System and has been participating in LSP's County Surveyor Cooperative Remonumentation Program and the Private Surveyor Remonumentation Program since 1996. Gerald has served as the MACS President from 2004-2005 and again from 2010-2012. Gerald coordinated MACS re-monumentation of the Tri-State corner in 2004 and the PK Robbins Memorial Bench in 2006. Gerald served as MSPS President in 2018, receiving the MSPS Surveyor of the Year Award in 2018 and the Robert E. Myers Memorial Service Award in 2020. Gerald will be portraying P.K. Robbins at the annual Déjà vu Spirit Reunion at the Ste. Genevieve Cemetery in October.



**Dave Doyle** joined the National Geodetic Survey in 1972, and held the position of chief geodetic surveyor at his retirement in January, 2013. He was responsible for the development, technical design and management of plans and programs that enhance the United States National Spatial Reference System. Mr. Doyle began his career as a geodetic surveyor in the U.S. Army in 1967, and

served on numerous survey campaigns until completion of his military service in 1970. From 1970 until 1972, he worked for a private surveying company near Washington D.C. where he was responsible for completing boundary, topographic and engineering surveys while he pursued undergraduate studies in geodesy, cartography and mathematics at the George Washington University. During his time at NGS his experiences included all phases of geodetic triangulation, astronomic positioning, leveling, GPS data collection, data analysis, datum transformations, network adjustments, and data publication. Mr. Doyle's activities have included extensive efforts on the development and implementation of the North American Datum of 1983, the North American Vertical Datum of 1988, the Puerto Rico Vertical Datum of 2002 and the Virgin Islands Vertical Datum of 2009. He has also provided technical support to various countries for the modernization of national and regional geodetic reference systems in Caribbean and Central America, Africa, and the Pacific. Mr. Doyle's activities include 35 articles on geodesy and geodetic surveying in national and local surveying publications and he has conducted more than 420 workshops and seminars detailing the various aspects of geodesy and the National Spatial Reference System. Mr. Doyle continues to support education in geodesy for surveyors and others interested in high accuracy geospatial positioning by providing seminars at surveying and GIS conferences. Mr. Doyle is a past president of the American Association for Geodetic Surveying, a Fellow member of the American Congress on Surveying and Mapping and a charter member of the Geographic and Land Information Society and has served on the U.S. delegation to the International Federation of

Surveyors. Mr. Doyle is also an active member of the American Association for Geodetic Surveying, the District of Columbia, Maryland, and Virginia professional surveyors' associations.

**Francis Duncan, PLS**, has over eight years of land surveying experience with the public sector in Northwest Missouri. She earned her PLS in 2025. Her education includes survey-related coursework at Oklahoma State University and the State Technical College of Missouri. Francis enjoys encountering a diverse range of surveying specialties. Notable projects include her contribution to the Emergency Flood Repair following the 2019 floods in Northwest Missouri and her collaboration with the State Land Surveyor's office on resetting a portion of the Missouri-Iowa state line. She regularly participates in projects across Northwestern Missouri. Francis is an active member of the MSPS Young Surveyors Network organization and serves on an Education Committee sub-committee. Professional highlights of her career include collecting bathymetric data, educating the public about land surveying practices, all manner of topography, and resolving boundary issues along highways. Francis particularly enjoys the historical aspect that comes with the interconnection of Missouri's highways and the Missouri PLSS. When she's not outside on the clock, she can be found outside off the clock with her spouse and two dogs either camping, dirt biking, or snowboarding.

**Dick Elgin, PLS, PE**, a second generation surveyor, Dr. Elgin was raised in St. James, Missouri and in his late parents' surveying business located in nearby Rolla. After high school Dick joined the Army, went through helicopter flight school, was made a Warrant Officer, and spent 1969 in Vietnam flying the Hughes OH6A Light Observation helicopter "LOH" and the ubiquitous UH-1 "Huey." He flew with the Americal Division and was decorated for service. He remains active in veterans affairs. Following the Army he received the BSCE and MSCE degrees from the Missouri University of Science and Technology (S&T) and his PhD from the University of Arkansas. Leaving Arkansas, he joined the faculty of the Department of Civil Engineering at S&T as an Assistant Professor (1980-1984) and is now Adjunct Professor (retired), having taught surveying courses for many years. From 1984 until 2008 Dick was the owner and President of Elgin Surveying & Engineering, Inc. Semi-retired, Dick currently works for Archer-Elgin Engineering, Surveying and Architecture. He is a former member of the Missouri Board for Architects, Professional Engineers, Professional Land Surveyors and Professional Landscape Architects and a Past President of the Missouri Society of Professional Surveyors. Dick is the author of *The U.S. Public Land Survey System for Missouri*, *Riparian Boundaries for Missouri* and *Riparian Boundaries for Arkansas*. Dick was Arkansas' surveying and mapping expert in a state riparian boundary dispute with Mississippi, decided by the U.S. Supreme Court. See *Arkansas v. Mississippi*, 471 U.S. 377 (1985).



# SPEAKERS

**Stan Emerick, PLS**, has participated in multiple aspects of the land surveying business over the last thirty years. During his career, he has been engaged in everything from legal research to project development, to conflict resolution to protégé mentoring. He has performed numerous cadastral and land title surveys in the St. Louis area. He has been active in MSPS, serving on its board and committees. He piloted the Society's dedication of the Joseph C. Brown Memorial, and the Survey Parties at the Arch and Fort Osage. He has served as chairman for the Missouri Land Survey Advisory Committee and contributes articles to the Missouri Surveyor.



**Kellan Gregory, PLS**, is a Missouri land surveyor with over 20 years of experience. He earned his PLS license in 2011 and has enjoyed a career centered around the civil engineering field. He is the Survey Practice Lead of Lamp Rynearson's Kansas City office and manages surveys for stormwater, water/wastewater, aquatics, and transportation. Kellan also currently serves as the chairman for MSPS' Young

Surveyors Committee. He resides in Cass County and enjoys hunting, fishing, and trapping activities in his spare time.

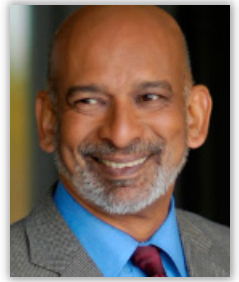
**J. Paul Maurin, IV, PLS, JD**, has been with Evergy, formerly Kansas City Power & Light Co., for the past 10 years, serving in many different roles, most currently the Lead Engineering Tech. Paul graduated from Benedictine College in 1998 with a Bachelors in Sociology and continuing on to Washburn University School of Law to receive his Juris Doctor in 2003. He is licensed to practice law in both Kansas and Missouri.



**Mike A. Oetterer, LSIT**, Land Survey Program Advisor and Instructor, Midwest Geospatial Academy. He also currently is the Lead Computer Aided Design (CAD) Drafter and Drone Manager at BFA, Inc. Previous experience includes Survey Program Coordinator and Adjunct Instructor, and previously, Instructor in Drafting and Design Engineering Technology at State Tech. He has also interned at the Missouri Department of Transportation and

has held positions with various construction companies. Mike's education includes a B.A.S. in Business Management from Central Methodist University and an A.A.S in Design Drafting Technology from State Tech. He has also earned 12 additional semester credits at State Tech to meet the educational requirements for licensure as a professional land surveyor. Mike possesses the following certifications: Initial Career Education Certificate, January (2017 – present) from the Missouri Department of Secondary and Elementary Education, Certified Mechanical Drafter, (2014) from the American Design Drafting Association and Remote Pilot Small Unmanned Aircraft Certificate (Part 107), (October 2021 – present) from the FAA

**Joseph V.R. Paiva, PhD, PLS, PE**, is President of Midwest Geospatial Academy (MGA). He is also instructor at MGA and is instrumental in helping educate the PLSs of the future, as MGA's courses are accepted by the Missouri Land Surveying Board for meeting the education requirements. Information on the coursework offered at MGA can be found at [www.geospatialacademy.us](http://www.geospatialacademy.us). Joe is also CEO of GeoLearn LLC ([www.geo-learn.com](http://www.geo-learn.com)), an online provider of video-based continuing education for land surveyors. Joe is past president of the Surveying and Geomatics Educators Society and has been involved in surveying education at the college level and for continuing education since the 1970s. Joe believes that the crisis facing surveying due to decreasing numbers of land surveyors can only be solved with participation from the practitioners doing more than encouraging young people to enter the profession.



**Darrell D. Pratte, PLS**, began his career in land surveying in 1974 as a chainman at Smith and Company, a multi-discipline engineering and surveying, firm located in Poplar Bluff, Missouri. Gaining licensure in 1985, Pratte accepted a complimentary membership to the Missouri Association of Registered Land Surveyors (MARLS). The position of State Parks Surveyor with the Missouri Department of Natural Resources (DNR) became available in 1987. In 1991, he left the Division of State Parks to work directly for the Cadastral Survey Section of the Land Survey Program (LSP) in the Division of Geology and Land Survey of DNR. Pratte was first elected to the MARLS Board of Directors in 1999. The following year MARLS changed its name to the Missouri Society of Professional Surveyors (MSPS) In 2002, Pratte was promoted to Chief of the Geodetic Survey Section of the LSP. Continuing on this management track, Pratte accepted the position of Missouri State Land Surveyor (SLS) in July of 2008. The following year he served as President of MSPS. In 2013, during Pratte's tenure as SLS, the Land Survey Program transferred from the DNR to the Missouri Department of Agriculture. 2013 brought the beginning of several accolades, starting with MSPS Surveyor of the Year. In 2016 he was awarded Surveyor of the Year by the St. Louis Chapter of MSPS, followed in 2017 with the Robert E. Myers Service Award. After 35 years with the State of Missouri, Pratte retired to Desloge, Missouri in November of 2021. In 2022, Pratte was elected to the Surveyors Historical Society (SHS) Board of Directors.



# REGISTRATION

Name \_\_\_\_\_ RLS # \_\_\_\_\_

Firm \_\_\_\_\_

Address \_\_\_\_\_

City/State/Zip \_\_\_\_\_

Phone \_\_\_\_\_ Email \_\_\_\_\_

## MSPS MEMBER

**MEMBER (3 days)** **\$400** \$ \_\_\_\_\_

DAILY RATE: ☐ Thursday ☐ Friday ☐ Saturday \$140 (daily) \$ \_\_\_\_\_

## STUDENT/TECHNICIAN

(NON-LICENSED)

**STUDENT/TECHNICIAN (3 days)** **\$300** \$ \_\_\_\_\_

DAILY RATE: ☐ Thursday ☐ Friday ☐ Saturday \$100 (daily) \$ \_\_\_\_\_

## NON-MEMBER

**NON-MEMBER (3 days)** **\$600** \$ \_\_\_\_\_

DAILY RATE: ☐ Thursday ☐ Friday ☐ Saturday \$220 (daily) \$ \_\_\_\_\_

## OPTIONAL ACTIVITIES

**Young Surveyors Rodeo** (NO PDU's) **FREE** ☐

**GOLF** (Includes Cart & Two Mulligans) **\$85.00** \$ \_\_\_\_\_

**GOLF SPONSOR** **\$100.00** \$ \_\_\_\_\_

10% Surcharge for Late Registration (After 9/15) \$ \_\_\_\_\_

**TOTAL \$** \_\_\_\_\_

## PAYMENT OPTIONS

☐ Credit Card (MC/V/Disc/AmX) ☐ Check ☐ Invoice my Organization

Credit Card # \_\_\_\_\_

Exp. Date \_\_\_\_\_ / \_\_\_\_\_ CVV Code \_\_\_\_\_

Send Registration Form with Payment to: MSPS, 722 E. Capitol Avenue, Jefferson City, MO 65101

Phone: 573-635-9446 | Fax: 573-635-7823 | Email: [msps@missourisurveyor.org](mailto:msps@missourisurveyor.org)

Registration Deadline: Monday, September 15, 2025

## REGISTRATION INFORMATION

Registration fee is \$400 for Members and \$600 for Non-Members.

**The deadline for registrations is Monday, September 15, 2025.**

After this date, a 10% processing fee will be added to all registration fees.

The registration fee includes instructional materials, refreshment breaks, a lunch and breakfast each registered day, and a cocktail reception with exhibitors. To register, complete the attached registration form and mail, fax or email with your payment to MSPS. Registration is open online at [www.missourisurveyor.org](http://www.missourisurveyor.org).

### MSPS

722 E. Capitol Avenue  
Jefferson City, MO 65101  
Phone: 573-635-9446  
Fax: 573-635-7823

Email: [mmps@missourisurveyor.org](mailto:mmps@missourisurveyor.org)  
[www.missourisurveyor.org](http://www.missourisurveyor.org)

## GOLF TOURNAMENT

The Golf Tournament benefitting the MSPS PAC Fund will be held at the **Country Creek Golf Club**.

You may pick your partner or a foursome. If you do not have a partner, one will be provided to you. Tee-time starts will begin at 12:00 noon with a shotgun start. The cost is \$85 per person and includes 18 holes, a cart and two mulligans.

**Country Creek Golf Club**  
21601 East State Route P  
Pleasant Hill, MO 64080

## MEMBERSHIP DUES

We will be checking the membership status of each registration. If your MSPS 2025 membership dues are not paid you may add that amount to your registration fee. \$145.00 for PLS and \$35.00 for Associate members.

## LOCATION & LODGING

Stoney Creek Hotel-Kansas City is the site for the 2025 Annual Meeting of MSPS. A special room rate of **\$125.00** for single/double rooms has been extended until **Monday, September 1, 2025**. Reservations can be made by calling 816-908-9600. Parking is complimentary for all guests and attendees. Ask for the conference special rate and identify yourself with MSPS when making reservations.

**Stoney Creek Hotel-Kansas City**  
18011 Bass Pro Drive  
Independence, MO 64055

### BOOK ONLINE

[www.stoneycreekhoteles.com](http://www.stoneycreekhoteles.com)  
Group Code: MOSPS

## HOSPITALITY ROOM

A hospitality room will be provided on Thursday and Friday during conference hours. Please see the registration desk for hospitality room location. A map of the area will be available at the registration desk.

## YOUNG SURVEYORS RODEO

An individual skills-based competition comprised of nine events and strictly for the young surveyors. Requirements for competition are that participants must be 40 years old or younger OR within the first five (5) years of professional licensure. Space is limited. If anyone would be interested in making a donation to the Young Surveyors Committee to help pay for Rodeo Prizes, a check can be sent to MSPS.

**MSPS-Young Surveyors Committee**  
722 E. Capitol Avenue  
Jefferson City, MO 65101

## CONTINUING EDUCATION

This course has been approved for 22 Professional Development Units (PDUs) by the Missouri Board of Architects, Professional Engineers, Professional Land Surveyors and Professional Landscape Architects (2.0 hours of Standards).

**PDU Breakdown for each day is as follows:**

**Thursday - 8.0 PDUs**

**Friday - 7.0 PDUs**

**Saturday - 7.0 PDUs**

## CANCELLATION POLICY

MSPS reserves the right to cancel the program and return all fees in the event of insufficient registration. A participant may cancel a registration at any time, however **ALL REFUNDS are subject to a \$25 processing fee.**

**NO REFUNDS WILL BE GIVEN AFTER Monday, September 15, 2025.**

## CONTACT INFORMATION

Contact Sandra Boeckman,  
MSPS Executive Director,  
at 573-635-9446  
should you have any questions.

### MSPS

722 E. Capitol Avenue  
Jefferson City, MO 65101  
Fax: 573-635-7823  
[mmps@missourisurveyor.org](mailto:mmps@missourisurveyor.org)

Registration is open online at  
[www.missourisurveyor.org](http://www.missourisurveyor.org).



here in 2010. He has since become licensed in Indiana, Illinois, and Kentucky. His experience includes residential, commercial, industrial and municipal surveying for a wide variety of clients including MoDOT, MoDNR, and MoDC, as well as many municipalities, county governments, sewer districts, and private companies. In his position as a leader and mentor, Philip takes pride in building the next generation of surveyors. He is dedicated to raising awareness of the profession, personally volunteering as a Surveying merit badge counselor for Scouts BSA and visiting

local schools through the Project Lead The Way program. He has served as president of, and been a long-time director of, the St. Louis Chapter of MSPS and is a co-chair of the standards committee. In his free time, Philip enjoys cycling, playing ice hockey, and canoeing and backpacking rivers and trails in Missouri and across the country with his wife, Catherine, who indulges his hobby of finding benchmarks during their travels. Philip appreciates this opportunity to serve on the MSPS Board of Directors to help build the reputation and future of our profession.

## Nominees for 2025-2026 Board of Directors



**Bernie Baldus**

J. Bernard “Bernie” Baldus is a Professional Land Surveyor with over 45 years of experience in land surveying and geospatial services. A University of Missouri–Columbia graduate (BAEconomics, ’87), Bernie earned his professional license in 1990. As Senior Land Surveyor and owner at Land Survey

Company in Grandview, Missouri for 30 years, he specializes in single lot surveys and site planning, using advanced tools to serve residential and commercial clients. Bernie actively participates in the Missouri and Kansas Societies of Land Surveyors through ongoing education, mentorship, and advocacy. Outside of work, he enjoys family time and motorsports racing.

**Tim Devaney**

Tim Devaney is a Land Surveyor and one of two Team Leaders of a geospatial group of more than 60 people for McClure Engineering Company’s Midwest region. Tim was first introduced to geospatial technology and its applications while studying precision agriculture during the completion of his B.S. in Agronomy from Missouri State University in 2007. Following this, he continued to explore applications in both geodesy and precision layout while performing post-baccalaureate research and working as a photovoltaic systems designer and installer. Tim officially discovered his passion for land surveying while learning the role of Survey Crew Chief at A Civil Group, LLC, and completing the required coursework for Missouri licensure. In 2017, Tim joined McClure Engineering, where he obtained his PLS license and continues to maintain a strong interest in evolving survey technology. Tim has a passion for teaching and learning alongside fellow surveyors. He has successfully guided 10 individuals through NSPS-CST certification, actively participates in the MSPS Young Surveyors Committee, and recently obtained his M.S. degree in Geographic Information Science from Northwest Missouri State University. When not surveying, Tim enjoys all things outdoors, including working on his small family farm and raising honeybees.



**James Gray**

James Gray is the Operations Supervisor Survey Section, City of Springfield Public Works. Jim started his career in surveying working part time at the Howard Moore Group on a field crew in the summer of 1993 while pursuing his BS in Cartography and Map Technology from Missouri State University. After graduating in 1994, while working for Landmark Surveying & Consulting, he went back and took the remaining survey courses and earned his Missouri PLS license in 2000. Jim worked as a Project Manager for Mathews & Associates in Springfield Missouri from 2001-2007 before becoming the Survey Manager for CJW Transportation Consultants from 2007-2014. In May of 2015, he joined the City of Springfield as a Right-of-Way Agent before taking the role of City Surveyor in 2022. Jim has served as President and Director of Ozark Chapter of MSPS and is a member of The International Right of Way Association. Jim and his wife Beth (that he found at the Recorder of Deeds office) have 5 grown kids, 5 grandchildren, 2 dogs and 2 cats.

**Michael White**

Career Information: Began surveying in 1985, Licensed in 1994, Past President of the Ozark Chapter of Missouri Society of Professional Surveyors, Currently serves on the Executive Committee of the Ozark Chapter of Missouri Society of Professional Surveyors, Owner of White Land Surveying, LLC, August 2002 to present, Serves on the Christian County Missouri Planning and Zoning Commission, 2018 to Present.

Hobbies and Passions: Enjoys spending time with family (mainly my two Grandsons!), Serving my church, Playing Golf and Playing guitar (old country and bluegrass music) as often as possible and for anyone that will listen.



---

## The Genesis of Missouri (*continued*)

---

and generally busied themselves in preparation for the expected rush of settlers from the United States. 15

With the necessary arrangements well underway, Morgan departed for New Orleans to discuss his plans with Governor Miró. To his dismay the Spanish officer was barely civil. Miró considered Morgan's proposals for "a little republic" fatally flawed because they offered no incentives to encourage the Americans to embrace Spanish rule and convert to Catholicism. He also saw no reason for allowing the American promoter to enrich himself by selling lands that the Spaniards gave away. The governor's negative assessment had been bolstered by the arguments of James Wilkinson, who looked upon Morgan's scheme as a threat to his own plans. Despite his misgivings, Miró gradually softened his criticism of Morgan, whose services he still hoped to employ in encouraging American immigration. After rejecting Morgan's original plan outright, the governor offered to let the American promoter bring families to New Madrid under the regulations previously set down by the Spanish government in 1787. Miró further agreed to confirm the land patents that Morgan had already awarded to settlers and promised him a one-thousand acre grant with an equal amount for each of his sons. Finally, the governor offered Morgan the vice commandant's position at New Madrid. 16

Following his departure from New Orleans, Morgan returned to Philadelphia, where he reported to Gardoqui his conversations with Miró. He indicated a willingness to continue working for American immigration, but his dissatisfaction with Miro's required changes had cooled his ardor. Within a short time he abandoned the project entirely. Morgan never went back to New Madrid, and most of the individuals who had accompanied him to the settlement in 1789 also decided against remaining and returned to the United States. Others did come to New Madrid, particularly French settlers from Vincennes and the American Illinois settlements. The plans for building an agricultural colony were slow to materialize as hunters, traders, and boatmen remained the predominant elements in New Madrid's populace. 17

Spain's initial efforts to encourage American immigration failed to attract the large numbers of settlers that proponents of the plan had envisioned. Between 1 December 1787 and the end of 1789, only 293 Americans availed themselves of the opportunity to settle in Spanish Illinois, and that figure included 106 black slaves who had no choice. 18 Wilkinson's activities in Kentucky had also foundered after he lost interest when the Spaniards decided to reopen the Mississippi to American commerce subject to the payment of duties. Wilkinson had vigorously opposed that move because he insisted the Americans would pay the duties rather than go to the trouble and expense of moving to Spanish territory. He therefore considered any further campaigning to recruit American immigrants to be futile. 19

Recurring reports that an army of American banditti was poised for a strike against the Mississippi River settlements forced officials in Spanish Illinois to keep a watchful eye throughout the 1780s. Sporadic Indian hostilities added to the local unease. In May 1784 a Big Osage party forced two Ste. Genevieve hunters to strip naked and then left them stranded in the wilderness, bereft of food, clothing, or supplies. Later that summer, members of the same tribe made away with a number of horses belonging to the town's residents. 20 Fortunately Upper Louisiana's settlements escaped the most serious Osage depredations. Governor Miró's 1787 order suspending all trade with that tribe was intended primarily to combat the assaults committed by breakaway Osage bands occupying the Arkansas River. But much to the dismay of St. Louis traders, the ban also applied to them. Miró clearly had doubts about his proposed course, for after ordering the closing of the Osage trade he cautioned Lieutenant Governor Cruzat not to make the powerful Osages Spain's permanent adversaries. Treat them, he advised, as errant and disobedient sons rather than as enemies. 21

Cruzat's successor, Manuel Pérez, who arrived in St. Louis in November 1787, inherited the thorny problem. Miró's hesitant steps to counter the Osage depredations brought an angry response from tribal leaders, who descended upon St. Louis to protest the unfairness of the governor's decision to close all trade. Less than a month later a Little Osage party murdered, scalped, and then decapitated Jean La Buche while he was hunting along the Meramec with his two sons. The brutal killing, a rarity in Spanish Illinois, left residents of the region shaken. Pérez demanded that the Little Osages turn



over the culprit responsible for this act, but when tribal members reported that the accused warrior had subsequently died from injuries suffered in an accident, the lieutenant governor accepted their word and did not pursue the matter further. 22

The fear of increased Osage attacks prompted the Spaniards to encourage emigrant Indian tribes from east of the Mississippi to move to Missouri so they could act as a buffer between the hostile Osages and Upper Louisiana's exposed settlements. In 1780 approximately two hundred Peoria warriors and their families took up residence a short distance from Ste. Genevieve, and at about the same time members of the Shawnee and Delaware tribes also began settling in Spanish Illinois farther to the south. 23 For many years the eastern tribes occasionally had crossed the Mississippi to hunt or receive presents from the Spaniards, but the destruction of several Shawnee towns during the American Revolutionary War caused some members of that tribe to take refuge on the west bank. One small Shawnee band settled near St. Louis, and Capt. Alexander McKee reported in June 1784 that some Delawares, often referred to by the French as the Loups, were also leaving the United States and moving permanently to the Spanish side of the river. 24

Louis Lorimier, a Canadian-born métis (mixed-blood) trader with a Shawnee wife and strong ties to both the Shawnees and Delawares, actively recruited them to join him on the Saline Creek south of Ste. Genevieve following his arrival there in 1786. Lorimier, who wore his black hair in a long queue that he allegedly used as a whip while riding his horse, previously had operated a trading post with his father in Ohio. He cast his lot with the British during the American Revolution, and with the aid of his Shawnee allies he once captured Daniel Boone. Lorimier, who barely escaped with his life when George Rogers Clark attacked and burned his post in 1782, eventually found a safe haven in Spanish Louisiana, where Lieutenant Governor Pérez fully supported his efforts to persuade the eastern Indians to follow him west of the Mississippi. By 1787 a reported twelve hundred Shawnees and six hundred Delawares accepted the Tory trader's invitation and settled along the Saline, Apple, Cinque Hommes, and Flora creeks south of Ste. Genevieve. They came seeking to take advantage of Upper Louisiana's expanding fur markets and its plentiful supply of game. There were occasional incidents between the Indian newcomers and the European settlers. Shortly after their arrival, one of the Delawares assaulted Pierre Morin not far from St. Louis. The Frenchman protested his treatment to Pérez, who then ordered a local militia company under Charles Tayon's command to chastise the errant band. When the militiamen killed five Delawares in retaliation for the attack, critics accused them of having used excessive force. Spanish authorities summoned Tayon to New Orleans to answer for his conduct, but the resulting investigation cleared Tayon, who was subsequently appointed commandant of St. Charles. 25

Elsewhere, the relations between the emigrant Indians and their white neighbors were friendlier. George Morgan's reconnaissance expedition stayed at a Delaware camp across from the Ohio River in early 1789, and tribal representatives helped acquaint the American promoter and his followers with the region. Sometime around 1792, Lorimier moved from Saline Creek to Cape Girardeau, where he opened a new trading establishment, and by all accounts his influence among the emigrant tribes remained undiminished. The following year Louisiana's new governor, the Baron de Carondelet, confirmed Lorimier's de facto trading monopoly with the Shawnee, Delaware, and other refugee tribes located between the Missouri and the Arkansas rivers. 26

The transplanted tribes resided in villages scattered in the eastern Ozarks. A 1797 report indicated the presence of Shawnee, Delaware, Peoria, Illinois, Miami, Ottawa, Mascouten, Kickapoo, and Potawatomi Indian camps in Spanish Illinois. Aside from occasional clashes with the fierce Osages, who resented the intrusions, and sporadic incidents of alleged thievery, animal killing, and drunkenness, the emigrant Indians lived peaceably in close proximity to white settlements. The whites, who came in frequent contact with the nearby tribes and maintained regular commercial ties with them, considered some tribes better neighbors than others. The recurring Osage attacks against Ste. Genevieve and its environs suggest that the emigrant tribes were an ineffective shield, but their presence made them very much a part of everyday life in the region. 27

*(continued on next page)*

---

## The Genesis of Missouri *(continued)*

---

Governor Miró's successor in Louisiana, the Baron de Carondelet, who took office in 1792, took a dim view of the various schemes for Anglo-American colonization. The intrepid incoming officer of the crown may not always have acted wisely, but his determination to defend Spain's interests was never in doubt. He clearly feared the ambitious Americans, whom he described as "determined bandits armed with carbines...hostile to all subjection." 28 Warning that American promises of independence, self-government, taxation by consent, and free trade might eventually persuade the Anglo inhabitants of Louisiana's underpopulated settlements to turn against their Spanish rulers, Carondelet advised his superiors that "a general revolution in America threatens Spain, if that country does not hasten forcibly and promptly to apply the remedy." 29

Carondelet's remedy was a more aggressive policy for protecting Spain's New World possessions. He proposed to revert to the earlier policy of recruiting a loyal European Catholic population more compatible with Spanish rule and monarchical government. He organized a buildup of Louisiana's military defenses and negotiated alliances with southern Indian tribes, whom he encouraged to resist further American expansion westward. He also contemplated resurrecting plans to promote a separatist movement in the western territories of the United States. 30 The governor's call to man the bulwarks against revolution came at a time when the forces of change were sweeping across Europe. The revolutionary forces that had just toppled the Bourbon dynasty in France unexpectedly confronted the Spaniards as a potential new foe in Europe and America.

As part of his effort to lure European immigrants to Louisiana, Carondelet dispatched Ste. Genevieve's controversial commandant, Henri Peyroux de la Coudrenière, to Philadelphia in 1792 to initiate contact with French, German, Irish, or Flemish emigres who might be willing to move there. Peyroux's mission was a failure: the altered conditions in Europe following Louis XVI's execution and the outbreak of war between France and Spain had dampened European interest in settling in the Spanish colony. 31 Pierre-Charles Delassus de Luzières, a French aristocrat who had fled his homeland to escape the revolution, was a notable exception. With Carondelet's blessing, De Luzières headed an effort to attract French emigre settlers from Gallipolis on the Ohio River and elsewhere to the settlement he established three miles south of Ste. Genevieve on the hills overlooking the Big Field. The staunch royalist named his new village New Bourbon as a tribute to the late French king.

The transition from the fashionable life at the French court to the primitive ways of frontier America was a traumatic experience for the well-born De Luzières family, but especially so for Madame de Luzières. When Moses Austin visited them in 1797, he admired a large painting in their home depicting a grand festival staged by the people of Paris to honor Queen Marie Antoinette on the occasion of the birth of the Dauphin. Madame de Luzières pointed to the coach in which she had been riding on that happy occasion, and then poignantly remarked, "My situation is now strangely changed." It is hardly surprising that so few of their aristocratic emigre compatriots chose to follow them to the North American hinterlands. Spanish Illinois was a far cry from Paris. The De Luzières' son, Charles Dehault Delassus, fared better than his parents. He joined the Spanish service in 1782, became commandant of New Madrid in 1796, and served as Upper Louisiana's lieutenant governor between 1799 and 1804. 32

On other fronts, the energetic Carondelet's ambitious plans for rescuing Louisiana moved ahead with greater dispatch. After pronouncing the province's defenses sadly lacking, he gained approval in January 1792 for the construction of a squadron of naval galleys to patrol the Mississippi River. The freshwater fleet's completion came none too soon. 33 That fall, reports again began circulating that American adventurers were planning to attack Spanish positions along the Mississippi, and New Madrid seemed a likely target. The new settlement was strategically located on the first high ground below the mouth of the Ohio on the west bank. Miró had sent Lt. Pierre Foucher and a detachment of royal troops

*(continued on page 24)*





**Make sure your instruments are in peak shape and get a free estimate!**

## Service and Repair

GPS/GNSS/GIS

Data Collectors • NIST Certification

Lasers (Pipe, Grade, Interior) • Levels

Mechanical Total Stations • Clean, Relube

Robotic Total Stations • Trimble Mobile LiDAR

Calibrate and Repair most makes and models

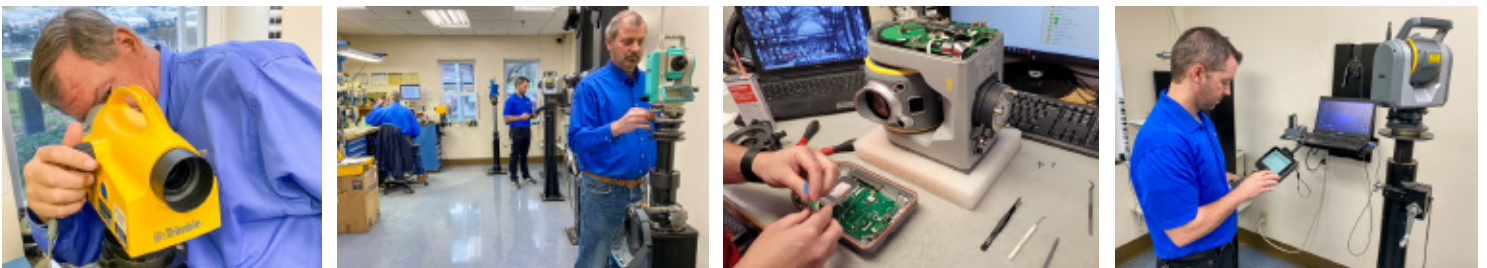
**Email: [servicedept@seilerinst.com](mailto:servicedept@seilerinst.com)**

**Toll Free: 877-330-6303**

**[www.seilergeo.com](http://www.seilergeo.com)**



**SCAN ME**



**Service Centers**

**ILLINOIS • INDIANA • KANSAS • MICHIGAN • MISSOURI • WISCONSIN**

---

## The Genesis of Missouri *(continued)*

---

there in 1789 to construct a fort, which they named Fort Céleste in Señora Miró's honor. 34 The threats against the post in 1792 prompted Carondelet to instruct militia units in all other Upper Louisiana settlements to be prepared to report to New Madrid at first signs of an attack. As an added precaution he dispatched La Flecha, one of the new freshwater naval vessels, to the Mississippi River outpost with additional arms and munitions. 35

As officials in Spanish Illinois watched for a possible invasion during the fall of 1792, a small party of travelers from the west unexpectedly arrived in St. Louis. Pedro Vial, a seasoned wilderness pathfinder, arrived in the capital city on 3 October with two traveling companions following a harrowing eleven-hundred-mile trip from Santa Fe. New

Mexico's governor, Fernando de la Concha, had sent them eastward in search of a route linking the two Spanish outposts and in order to gather additional information about tribes in the region. Vial returned to Santa Fe the following year with encouraging news concerning the feasibility of the long-desired connection. But Spanish authorities in the southwestern city had begun to have second thoughts about tying themselves to the besieged eastern province and chose not to follow with another expedition. In fact, Vial's journey, which took him along portions of the later Santa Fe Trail, brought home to the Spaniards the expanding American republic's relative proximity to their valuable Mexican mines. 36

The outbreak of war between France and Spain in 1793 had revived fears that Louisiana might soon be attacked. When Citizen Edmond Charles Genêt came to the United States as the representative of the French revolutionary government, he sought to convert the United States into a base for operations against England and Spain. Shortly after his arrival, Genêt dispatched representatives to the western U.S. provinces to recruit Americans for an assault against Spanish Louisiana and Florida. George Rogers Clark, a hero of the American Revolution in the west who had since fallen on hard times, accepted a commission from Genêt, and in January 1794 he issued a call for volunteers to open the Mississippi to duty-free navigation. In return for their services Clark promised all recruits land grants in the Spanish territories. 37

Rumors of an impending Franco-American invasion spread like wildfire among Louisiana's jittery residents during the early months of 1794. Carondelet instructed Spain's secret agent James Wilkinson to monitor carefully any developments in Kentucky, and in January the governor-general ordered six boats from the naval squadron to transport 150 troops upriver to reinforce the Spanish outpost at New Madrid. Thomas Portell, the panicky commandant there, had become convinced that his post was all but lost. All along the Mississippi, residents of Missouri's river towns took special precautions to defend themselves. In Ste. Genevieve, François Vallé spearheaded efforts to build a wooden fort under



*Fort San Carlos, St. Louis, 1780, by Clarence Hoblitzelle. The original is an ink drawing commissioned by Pierre Chouteau in 1807 as support material for his proposal to recreate the village of old St. Louis on the levee. Courtesy Missouri Historical Society.*





---

## The Genesis of Missouri (*continued*)

---

The St. Louis merchants welcomed Trudeau's decision to resume trade with the Osages, but elsewhere the reaction was less favorable. The Shawnee, Delaware, Miami, Ottawa, Potawatomi, and Peoria tribes, who accused the Osages of killing their people and stealing their horses, found it difficult to fathom. Likewise there was considerable grumbling in the Ste. Genevieve district, where the Osage raids continued apace. Amid increasing complaints, Carondelet ordered an extension of the total ban on Osage trade and invited the protesting rival tribes to make war on their Osage adversaries. Trudeau had misgivings about the wisdom of those actions and cautioned the baron not to expect a quick or easy victory over the powerful tribe, which, according to his estimates, could field 1,250 warriors. 42

Trudeau's fears proved justified. Carondelet's attempts to force the Osages into submission not only failed, but produced the opposite effect, as Osage aggression increased. In January 1793 the Little Osages stole twenty horses in the Ste. Genevieve district. Trudeau had delayed publishing Carondelet's declaration of war against the Osages until 23 June 1793 in order to allow traders in the field to return safely to their homes. Spain's Indian allies declined to attack the Osages without assistance from Spanish forces, and a frustrated Trudeau again admonished his superiors in New Orleans that the Spaniards must either "annihilate the Indians or stop irritating them." Even the residents of Ste. Genevieve, who initially had applauded the governor's course, were having second thoughts in the wake of the mounting number of Osage depredations. 43

So too was Carondelet, who expected Louisiana to be invaded by a Franco-American force at any moment. In an abrupt policy turnaround, in April 1794 he declared the war on the Osages to be at an end, and by mid-May he had willingly accepted Auguste Chouteau's offer to build, arm, and equip a fort on the Osage River near the principal Osage village. Chouteau promised to maintain a garrison of twenty men under the direction of his brother Pierre at the proposed stockade. In return, the St. Louis trader asked the Spaniards to give him a six-year monopoly of the rich Osage trade and two thousand dollars a year for the salaries of the men stationed at the fort. The terms were incorporated in an agreement signed in New Orleans on 18 May. 44

**Credit for this selection of pages from *The Genesis of Missouri From Wilderness Outpost to Statehood* is thanks to The University of Missouri Press, Columbia, Missouri 65211**

### **Author's Notes Cited from this selection:**

15. Morgan to Gardoqui, 20 August 1789, and John Dodge, Peter Light, David Rankin, et al. to Turnbull and Co., 14 April 1789; both in *ibid.*, 1:295, 282.
16. Esteban Miró to Antonio Valdes, 20 May 1789; Morgan to Gardoqui, 20 August 1789; and Miró to Morgan, 29 May and 26 June 1789; all in *ibid.*, 276-78, 297-99, 308.
17. Morgan to Gardoqui, 20 August 1789, in *ibid.*, 290-99; Savelle, George Morgan, 224-27.
18. "Statement of Inhabitants who have come from the American side to settle in the District of Illinois" between 1 December 1787 and 31 December 1789, in SMV, 2:290.
19. Din, "Immigration Policy of Miró," 171-74.
20. Carl Ekberg, Colonial Ste. Genevieve, 95.
21. Miró to Francisco Cruzat, 15 May 1787, in SMV, 2:201.
22. Henri Peyroux de la Coudrenière to Miró, 12 March 1788, in *ibid.*, 2:247; Ekberg, Colonial Ste. Genevieve, 95-96; and Din and Nasatir, The Imperial Osages, 184-85, 187. 23. Grant Foreman, ed., "Notes of Auguste Chouteau on Indian Boundaries of Various Indian Nations," in Missouri Historical Society's Glimpses of the Past (October-December 1940), 126.



24. Shawnees to the President of the United States, 29 March 1811, Letters Received by the Secretary of War Relating to Indian Affairs, 1800-1816, M271, National Archives; Capt. Alexander McKee to Sir William Johnson, 2 June 1784, in Thwaites, ed., "The British Regime in Wisconsin, 1760-1800," Collections of the State Historical Society of Wisconsin 18 (1908): 435; and Cruzat to Miró, 19 March 1782, in SRM, 1:209-10.
25. Nicolas de Finiels affirmed Lorimier's mixed-blood status in his "Notice sur la Louisiane Supérieure." See Carl J. Ekberg and William E. Foley, eds., *An Account of Upper Louisiana by Nicolas de Finiels*, 35. Nasatir, *Spanish War Vessels on the Mississippi, 1792-1796*, 71-72; "Louis Lorimier," in *Dictionary of American Biography*, 11:413; *Wisconsin Historical Collections*, 18:435n; George Sharp and Thomas Sheperd to Hugh Heward, 4 May 1787, in Houck, *A History of Missouri*, 2:172-73; and Testimony of François Duchoquet in Hunt's Minutes, book 2, 134-35. Meriwether Lewis commented on Lorimier's long queue of hair after visiting him while en route to St. Louis in 1803. See Lewis's journal entry for 23 November 1803 in Gary E. Moulton, ed., *The Journals of the Lewis & Clark Expedition*, 2:107-8. One Shawnee who migrated to Missouri was Methoataske, the mother of Tecumseh and Tenskwatawa (the Prophet). Only one of her children, her second daughter, accompanied her across the Mississippi. That daughter, Tecumseh's older sister, later married François Maisonville, a French Creole from New Madrid, and the couple had a large family. See R. David Edmunds, *Tecumseh and the Quest for Indian Leadership*, 22, and Lynn Morrow, "New Madrid and Its Hinterland, 1783-1826," 242.
26. Morgan to Gardoqui, 20 August 1789, and Trudeau to Louis Lorimier, 8 August 1792 and 1 May 1793, all in SRM, 1:292, 2:47, 50-51; and Trudeau to Carondelet, 28 September 1793, in BLC, 1:203. 27. Trudeau to Carondelet, 8 June 1794; Trudeau to Gayoso, 20 December 1797, both in BLC, 1:232-33, 2:529.
28. Carondelet to Marquis de Branceforte, 7 June 1796, in *ibid.*, 2:440.
29. Carondelet to Count de Aranada [1793], in SRM, 2:12-13.
30. Din, "Spain's Immigration Policy in Louisiana and the American Penetration, 1792-1803," 255-57; Nasatir, *Spanish War Vessels*, 9-12, 20-21.
31. Din, "Spain's Immigration Policy," 257-58; Ekberg, *Colonial Ste. Genevieve*, 461-62.
32. Ekberg, *Colonial Ste. Genevieve*, 445-50. Ekberg's account details the fascinating story of the royalist emigre's frontier experiences in colonial Missouri. Austin recorded Madame de Luzières' comments in the journal he kept during his reconnaissance trip to Louisiana in 1796-1797. See George P. Garrison, ed., "A Memorandum of Moses Austin's Journey, 1796-1797," 541. See also Testimony of Charles Dehault Delassus in Hunt's Minutes, book 2, 179.
33. Nasatir, *Spanish War Vessels*, 29-32.
34. *Ibid.*, 177n; "Miro's Appointment of Foucher as Commandant at New Madrid," 28 July 1789, in SRM, 1:309.
35. Carondelet to Trudeau, 22 December 1792, in SMV, 3:107-8; and Nasatir, *Spanish War Vessels*, 62-64.
36. Fernando de la Concha to Trudeau, 7 October 1792; Diary of Pedro Vial from Santa Fe to St. Louis, 21 May to 3 October 1792; and Pedro Vial from St. Louis to Santa Fe, 14 June to 16 November 1793; all in Noel M. Loomis and Nasatir, *Pedro Vial and the Road to Santa Fe*, 369-407.
37. Carondelet to Las Casas, 31 May 1794, in SRM, 2:100-101; F. R. Hall, "Genêt's Western Intrigue, 1793-1794"; and E. Wilson Lyon, *Louisiana in French Diplomacy, 1759-1804*, 69-75, 101-9.
38. Nasatir, *Spanish War Vessels*, 76-88; François Vallé to Louis Lorimier, 18 March 1793, and Louis Lorimier's Journal, 1793-1795, both in SRM, 2:49, 59-99; and Ekberg, *Colonial Ste. Genevieve*, 72-74.
39. Trudeau to Carondelet, 8 June 1794, in BLC, 1:231.
40. Carondelet to Las Casas, 31 May 1794, in SRM, 1:100-101; Din and Nasatir, *Imperial Osages*, 221-24.
41. Trudeau to Carondelet, 25 July 1792, in BLC, 1:156-57.
42. Carondelet to Trudeau, 22 December 1792, and Trudeau to Carondelet, 10 April 1793; both in SMV, 3:107, 148.
43. Trudeau to Carondelet, 2 March 1793 and 28 September 1793, in BLC, 1:167-68, 197-203; Proclamation of Zenon Trudeau, 23 June 1793, typescript copy in Ste. Genevieve Papers, Missouri Historical Society.
44. Din and Nasatir, *Imperial Osages*, 252-54; Contract between Chouteau and Carondelet, 18 May 1794, in SRM, 2:106-10. 

# SURVEYING MATH

Dr. Richard L. Elgin, PS, PE  
Rolla, Missouri

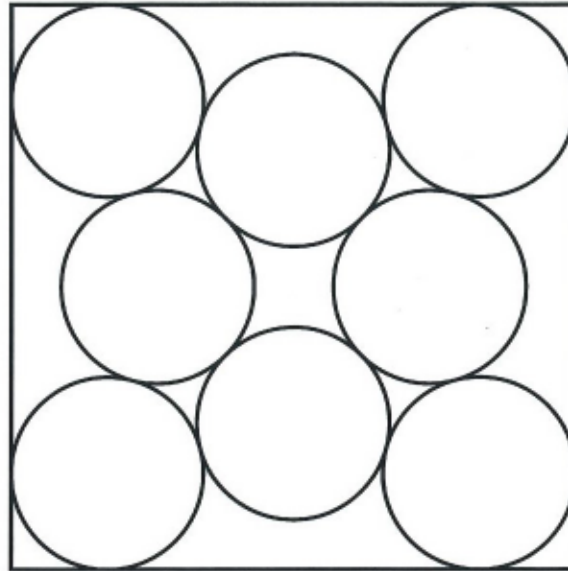
This begins a new feature for “Missouri Surveyor,” a surveying math problem. Each future issue will contain two or three surveying problems. There are many types to choose, such as Geometry, Coordinate Geometry, Traversing, Leveling, Horizontal Circular Curves, Public Lands. The solution to the problems posed will be posted on the MSPS website. These problems should assist Young Surveyors on their path to licensure as a Professional Surveyor. Let’s get started with Problem Number 1. The answers will be sent via NEWSFLASH email later in the quarter.

1.) Complete the table. Distances and coordinates to nearest 0.01’. Azimuths to nearest 01 minute.

Point or Course	Azimuth	Distance	LAT	DEP	Coordinates	
					N	E
A					2000.00	1000.00
AB	340°18'	269.47				
B						
BC						
C					2471.91	1111.11
CD		746.98	-211.46	+		
D						
DE	170°37'	511.26				
E						
EA						
A						

Draw a scaled sketch of this traverse:

- 2.) A north Missouri farmer owns a flat, square 40-acre field. She wishes to arrange a symmetrical circular irrigation system as shown in the sketch. All circles have the same diameter. Compute their radii. 🇲🇴



## Notes from Editor DeSain's Desk *(continued)*

Trig-Star winner Tate Uchtman on the MSPS scholarship and best of luck at the national competition! Retired MO PLS, Don Clinkenbeard has been generous in providing us with another on-point math refresher with "Solving Any Triangle – Revisiting a Core Skill".

I encourage the surveyors in our state to be mindful of the legislation proposed that will affect our profession, learn about it and form your own opinion to discuss with others, including our legislators. Find a common ground. Recently proposed HB 1318 modifies MO Revised Statutes to add duties of the State Land Survey to restore and monument the centerlines of railroad rights of way. A problem that definitely spans generations. The question is always "how" and "who pays for it?". In the committee hearing it became evident that there could be small funds available to spread this work over a very long time into the future. A solution that may also spread generations.

New and soon-to-be surveyors need to look to their mentors in this peculiar time where we seem to be inundated by AI integration and evolving technology. The old ways are often the best ways, with much of surveying practice. One can't retrace or follow in footsteps without understanding the how and why, from the stories and field book notes, details on the plats or notes on the field plats. It is an understanding from one generation to the next that's critical in our profession. Always look back, not just forward. 🇲🇴

*Austin*



---

# W.L. Potts Circumferentor

---

by Robert E. Myers, Jr., PLS, PE

---

The *Antique Roadshow* is one of the most popular TV programs of the Public Broadcasting System today. I took my old compass to the show in St. Louis. I thought that they might be interested in describing it in some detail on their show. They were very busy and the only thing they had to say was that they had seen a compass like this once before and that it was worth between \$2000 and \$3000. Since they didn't feature the compass as they do with other antiques in their program, I thought I would describe it in this paper.

Well, where did I get the compass? The compass was given to me by my grandfather Claude Myers a few months before he moved into a nursing home and then passed away. He was a professional surveyor and had been surveying all his life. When he gave it to me, I asked him what he knew about the compass. He said that he didn't know too much about the compass but that it had been in the family several generations and it was used to survey the Santa Fe Trail and some of the boundaries of Missouri. He said that was all he knew and so that's all I was able to gain from him about the compass.

Let's look at the compass itself. It is a very finely made surveying instrument which at the time was called a circumferentor. It has a 5 ½ inch engraved silver dial with decorated eight -point rose, and the fleur-de-lis representing North. It has a blue steel compass needle and outer ring calibrated from 0 to 90 degrees in 4 quadrants, a single spirit level and a nunes (vernier) for setting off the magnetic declination and screw mounted sites. The face of the compass is engraved with the name of the maker of the instrument: W.L. Potts, and his location: Bucks Pennsylvania. William Lukens Potts (1771-1854) was a partner with Benjamin Rittenhouse the famous American survey instrument maker of that time. It is known that he worked with Rittenhouse from 1796 to 1798 during which time they produced several compasses marked Rittenhouse and Potts. In 1807 Mr. Potts bought land in Bucks County, Pennsylvania where he began manufacturing and selling circumferentors like the ones he had made as a partner with Rittenhouse. This instrument was one of those made at this location. In 1817 Mr. Potts moved to Philadelphia Pennsylvania where he became an "iron merchant".

We now know that the instrument was made by Mr. Potts sometime in the period of 1807 and 1817. Remember my grandfather and said that the compass was used to survey the Santa Fe Trail and some of the boundaries of the state of Missouri. That description fits only one man - Mr. Joseph C. Brown.

We know that Mr. Brown came to the St. Louis area from Virginia in 1815. His name appears as a witness to some of the Indian treaties signed at Portage De Sioux in the summer of 1815. Also in 1815, Mr. Edward Tiffin, surveyor general of the United States, issued instructions for surveying the public lands so that they could then sell to the public. In those instructions Mr. Tiffin specifically stated that the surveys of the public lands were to be conducted with a compass of Rittenhouse construction which meant that compasses to be used must have a vernier to set off the declination and also a level bubble. This compass meets those requirements. A young man traveling to the territory of Missouri in those days that had the ability to survey was very much in demand. It is reasonable to assume that Mr. Brown purchased the compass in Virginia and brought it with him when he came to Missouri. Thus, he had the knowledge and required equipment to conduct surveys for the General Land Office

He subsequently had a distinguished career as a surveyor. Many of his important surveys were a result of contracts with the government. Deputy Surveyor General William Rector selected him to be a part of the first survey of the US Public Land Survey System of the Louisiana Purchase in 1815. It was a survey that established the baseline for the Fifth Principal Meridian which controls the rectangular surveys in all of: Arkansas, Missouri, Iowa, North Dakota, and in most of Minnesota and half of South Dakota. It's interesting to consider that this particular instrument was probably the one used to survey the Baseline, meeting with Prospect K. Robbins at the Initial Point of the 5<sup>th</sup> PM.

In 1816, he surveyed the "Indian Territory line". This line was a true North-South line that ran south from Fort Osage on the Missouri River to the Arkansas River. It marked the western line of Missouri territory. On that survey, he was gone so long that it was thought that Indians had killed him and his entire party.



(MSPS Photo)

After Missouri became a state, he was contracted to survey the western and southern lines of the new state in 1823. The records of that survey show the difficulties and idiosyncrasies that accompanied the surveyors of those days.

Later, Brown was selected to survey the Santa Fe Trail for George C. Sibley (first Indian Agent and Postmaster of Ft. Osage) in 1826. That survey opened a trade route with Mexico and is an important part of our history.

In 1837 he surveyed the north line of Missouri. That line resulted in a conflict with the Iowa that became known as the "Honey Wars." The boundary was in contention since the US Supreme Court later judged Brown's line to be approximately thirteen miles north of where it was later ruled to be.

He also executed many other surveys during his career including surveys of St. Louis, Ste. Geneveive, several Standard (Township) Lines to name but a few. Nothing in Brown's field notes specifically indicates that this compass was used on these surveys, but it is safe to assume that this was his compass and that it would have been the one he used.

So how did the compass end up with the Myers family? Mr. Brown died on February 21, 1849. It was the custom in those days to inventory all the possessions of the deceased. That inventory was completed on April 11, 1849. The inventory shows only one surveyor's compass. In 1850 the compass in inventory was sold to Mr. William Gardner. This is shown on page 192 of Mr. Brown's estate. Mr. Gardner was a landowner in St. Ferdinand where Mr. Brown lived.

Mr. William Gardner died in 1857 and on page 14 of the inventory of his property there is a notation that the compass was sold to John Hiatt for \$20. John Hiatt was the son of Mr. Frederick Hiatt who along with Joseph C. Brown had surveyed the original town of St. Ferdinand in 1839. Both John Hiatt and Frederick his father were surveyors in the St Ferdinand area.

John Hiatt's daughter Mariah married Mr. John M. Myers in 1860. John Myers was also a surveyor. Claude Myers, my grandfather, was the son of John and Mariah Myers. He was the recipient of that compass. This shows how the compass came into my possession through that chain of family history.

This old surveyor's compass is an example of the exceptional quality and workmanship of instruments made in the early 1800s. It also clearly has great historic value. This compass was used in many instances of importance to the history of the state of Missouri and to the entire country. It is truly an historic instrument involving the quality of the surveys and the interesting facets of our early history.

Other W. L. Potts compasses are curated in the following noteworthy collections: the Smithsonian - National Museum of American History - Kenneth E. Behring Center; the Winterthur Museum in Delaware, and the Marlborough Museum in New Zealand. 🇺🇸



# MSPS YOUNG SURVEYORS COMMITTEE

68th Annual Fall Meeting  
Thursday, Oct 2nd, 2025

*proudly presents*

Stoney Creek Hotel  
Independence, MO

## THE FIRST ANNUAL YOUNG SURVEYOR RODEO!

A friendly competition to test your  
ability in the various skills of  
land surveying!



1. THE COMPETITION IS OPEN TO YOUNG SURVEYORS WHICH IS DEFINED BY THE COMMITTEE AS ANYONE IN THE INDUSTRY UNDER 40, OR WITHIN FIVE YEARS OF LICENSURE. 2. TRUE TO OUR PROFESSION THIS CONTEST WILL GO ON RAIN OR SHINE, SO BE WEATHER PREPARED. 3. THE CONTEST WILL FEATURE NINE (9) EVENTS: DISTANCE ESTIMATION, HEIGHT ESTIMATION, ANGLE ESTIMATION, PACING, TRIPOD TRIBRACH SETUP, CURSIVE DOCUMENT READING, PLAN READING, LIGHT SURVEY TRIVIA, AND TREE IDENTIFICATION. 4. THIS IS A FRIENDLY COMPETITION AND WE ARE GUESTS AT THE HOTEL! ROUGH HOUSING WILL NOT BE TOLERATED. 5. ARGUING WITH THE VOLUNTEER JUDGES WILL BE GROUNDS FOR EJECTION FROM THE CONTEST. 6. OFFICIAL RULES AND SCORING TO FOLLOW.

ANY QUESTIONS, CONCERNS, OR COMMENTS CAN BE SENT TO :

Kellan Gregory PLS @ [Kellan.Gregory@LampRynerson.com](mailto:Kellan.Gregory@LampRynerson.com)



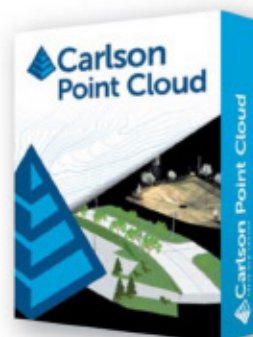
# Complete Your Carlson Software Toolbox Today!

Ask your Laser Specialists Representative about these products!



## Survey

Powerful Field-to-Finish, Office Platting and Drafting Software, Now with Improved Autodesk Civil3D® and/or MicroStation® DGN Support



## Point Cloud

Turn your point cloud data sets into usable models quickly and easily with Point Cloud Basic or Point Cloud Advanced



## SurvCE/SurvPC

Powerful Field Data Collection Software with Extensive Equipment Support, Now with Hybrid



## BRx7

Flexible, Powerful GNSS receiver with 800+ channels, tilt compensation, and field-proven performance



## GIS

From aerial imagery to data capture, Carlson GIS is the GIS "Swiss Army Knife" for the surveyor



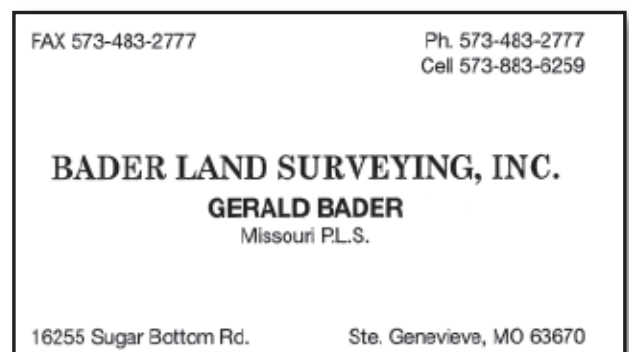
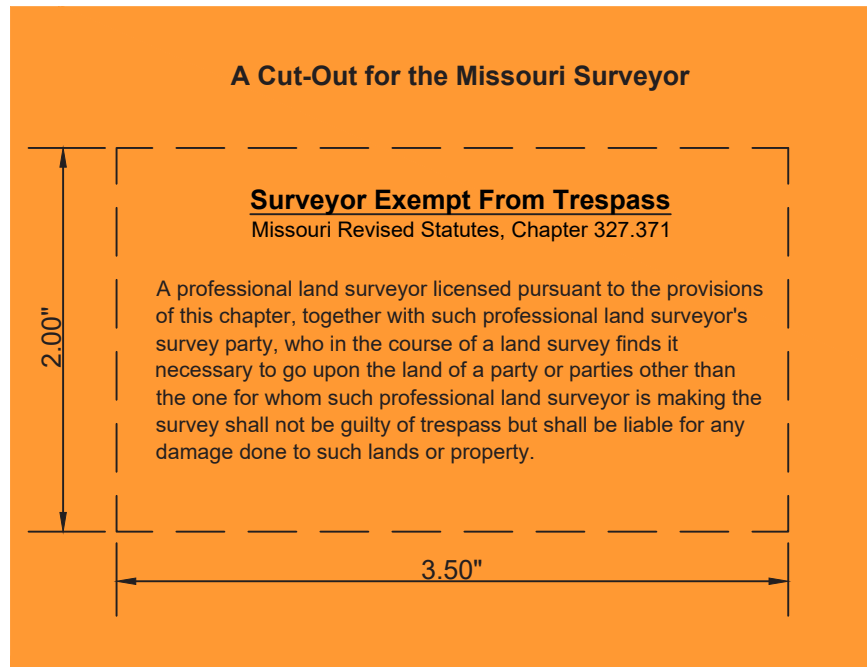
# Laser Specialists Inc

[www.LaserGPS.com](http://www.LaserGPS.com)

Matt Todd  
(417) 371-1927

Kevin Lindsey  
(417) 208-6629

# Surveyor Exempt from Trespass Card





# Surveyors Materials, Inc.

8875 Frost Avenue  
St. Louis, MO 63134  
(314) 521-9041

**Sales \* Rentals \* Service**

**From Laths and Hubs to Robotics, Network GNSS  
&  
High Definition Scanners**

- when it has to be right

**Leica**  
Geosystems

**SPECTRA**  
PRECISION

**Nikon**

**SOKKIA**

## Be a Magazine Cover Model or News Maker!

Highlight your work! Impress your friends! Make your momma proud! Prove to the bankers you are using that commercial loan!



“How” you may ask? By sharing photos, stories and news with Missouri Surveyor! It is really that simple. Just as this edition’s cover features Missouri surveyors you and your work may be featured as well. All content is welcome! For the cover, high quality images in landscape format at an aspect-ratio comparable to 17”x11” work best; stories and articles merely need to be in Microsoft Word. 🇺🇸





**Missouri Society of  
Professional Surveyors**  
722 E. Capitol Avenue  
Jefferson City, Missouri 65101

**PRSRT STD**  
US Postage PAID  
Permit No. 364  
Jefferson City, MO 65101



This building is dedicated to

**Robert E. (Bob) Myers, PE, PLS (1930-2019)**

**Missouri's First State Land Surveyor 1971-1997**  
**Dedicated Public Servant to the Land Survey Profession**

*As a Professional Land Surveyor, I dedicate my knowledge and skill to the betterment of human welfare.*

*I pledge: To engage only in honorable endeavor;  
To do my utmost to raise the standards of the land surveying profession;  
To believe that success as a land surveyor is a worthy ambition, but to seek success based only upon justice and right;  
To live according to the laws of man and the highest principles of professional conduct;  
To place service to others before personal profit, the honor of the land surveying  
profession before personal advantage and the public welfare above all other considerations.  
In humility and with admitted need for Divine Guidance, I make this pledge.*

*Plaque provided by MSPS*