

MISSOURI SURVEYOR

A Quarterly Publication of the
Missouri Society of Professional Surveyors

Jefferson City, Missouri

September 2025

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CALENDAR OF EVENTS

2025 & 2026

December 12, 2025

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

February 1, 2026

Zoom Call, Board Meeting
Jefferson City, MO

March 18, 2026

USPLSS Webinar via zoom (Tentative)

April 29, 2026

Board Meeting
Lodge of Four Seasons, Lake Ozark, MO

April 30 - May 1, 2026

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

July 17, 2026

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

August 17-19, 2026

Review Course (Tentative)
Location TBD

October 1-3, 2026

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

December 11, 2026

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

Front Cover: Sarah Lovelady, LSI, prepares the drone for a lengthy water line extension topo survey in Joplin, MO. Photo by Andrew South, PLS, Allgeier, Martin and Associates, Inc.

Back Cover: GPS/RTK setup based on MoDOT/VRS control point for surveying perimeter of abandoned InterContinental Ballistic Missile (ICBM) control site along US 65 between Sedalia and Marshall. (photo by Chris Ferguson)

Chris Ferguson, Editor
Austin DeSain, Editor



Notes from Editor Ferguson's Desk

Chris Ferguson, President-Elect, Editor

Another year's Annual Meeting has just concluded as I write this, and the weather is finally seeming a little like autumn instead of drought season past. With that all-too-brief promise of pleasant working weather ahead of winter's icy bite, I encourage you to find time nonetheless to take a look at this edition since I think it is a good one if I do say so myself.

Congratulations are plentiful this issue with the election of new Officers and Directors for your Society and award winners as well as recognizing new PLS's and LSI's along with future surveyors-in-waiting who have won numerous scholarships from the state and local chapters of MSPS. Be sure to check out highlights from the 68th Annual Meeting also (you may even see yourself there!)

Finally, Austin and I are very conscious to try to "balance" the newsletter, focusing between our future with all the exciting technologies being fielded and our historic past, resplendent with pioneer folklore. Our greatest resource is you – the reader, who takes the time to send in something of interest that our community will either be informed or entertained by...maybe both! We can't guarantee everything will make it to print, but each submittal is greatly appreciated. 🇺🇸

Chris



Notes from Editor DeSain's Desk

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

Heading into this winter edition of the newsletter we have an abundance of material from generous surveyors (oxymoron?). Chris and I have again been in regular discussion throughout the quarter and have done our best to refine the content so that the membership can genuinely enjoy the printed tangible newsletter. Don't count out the NEWSBLASTs though, because they will be full of similar or even stand-alone articles.

I am reminded often that surveyors possess fundamental skills that make this a timeless profession, often independent of ages and even economies. I tell new surveyors that to hone their skillsets in this profession will not disappoint in the long run. Through the understanding of measurements, math, property law, record-keeping and problem solving we build our own careers. The technology comes in waves and we are early adopters and adapters. This age, like the ones before it, proves again that the Professional Surveyor has a future with almost limitless opportunities.

The future of our profession is exciting to contemplate, and I am excited about it. I'm also excited for you to read this edition of the Missouri Surveyor Newsletter, enjoy! 🇺🇸

Austin

THE MISSOURI SURVEYOR

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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

Mark W. Wiley, PLS



The Sixty-Eighth Fall convention is behind us, and planning for the Sixty-Ninth has already begun. As a profession we should stop for a few moments to reflect on this year's gathering in an effort to make next year's even better, if possible. Stoney Creek was a new venue for us and a nice facility in my opinion. We need to understand that when you aren't in Kansas anymore, Toto, things are going to be different. Please reach out to Sandy and let her know your thoughts on the matter

- without her efforts none of these things would happen. Your opinion and gratitude mean a lot to her.

Some honorable mentions are in order: First on the list is Kellan Gregory for his effort with the Young Surveyors. This program has been highly successful, and this past Young Surveyor Rodeo was remarkably successful under his stewardship; Thank You Kellan!

Whoever came up with that idea for the spontaneous auction, my hat is off to you. This event used entirely donated items (Thank You Donors) and raised \$1,750 dollars for the PAC. Numerous awards and licenses were given under Chuck Quinby's (now past President) last official act; I will let our talented editors Chris Ferguson and Austin DeSain give this list of recipients.

I do think it was a successful event, and a round of applause should be given to all the presenters and participants. We must not forget the vendors who came and were willing to participate. I know (because I heard from some of them) the open hall concept was concerning. It can be uncomfortable to walk into a place you have never been, and Land Surveyors know this fact all too well because we do it all the time.

As I made my acceptance speech, I spoke of several special people in my life who shepherded me to this point in my life. As Harry Truman said, "The Buck Stops Here" and this philosophy can make us think we are the end all be all. However, we need to always keep in mind those on whose shoulders we stand, and I have had many. A great number of them have joined the "Lost Monument" category but my hat is off to each and every one of them for their efforts to help make me the person I am.

It is odd to write on something that will be published sometime in the future which reminds me of "the new phone book" (Steve Martin quote from the movie *The Jerk*). By the time you read this, we should have just finished the season of being thankful and are preparing for a season of giving. On that note, we should not forget those who have walked with us through life and brought us to this place and time.

Peace be with each of you, each and every one. 🇺🇸

Mark Wiley

MSPS Scholarship Report

Among the truly beneficial things the Society does on behalf of our profession is to invest in the future. In few places is that more apparent than awarding scholarships to deserving survey technicians/students, especially those that aspire to become licensed surveyors someday. So it is with great pleasure that we announce this year's winners:

The 2025 Dan Lashley Memorial Scholarship: Named in honor of Orvis Daniel (Dan) Lashley, PLS 1538, a longtime member of the Department of Natural Resources (DNR) State Land Survey Program in Rolla, Dan was one of the most revered cadastral surveyors in the state. He had a love for surveying along with a passion to educate young people. So much so that Dan established a scholarship upon his retirement from DNR in 2008 and it has continued since his untimely passing that same year. His desire was for this \$500 scholarship to assist either full or part-time students to achieve their necessary survey credit hours for application to licensure.

This year's winner is Leah Guss of Truxton, a student at SIU-Edwardsville eager to complete her studies leading to a career in the land surveying profession and the opportunity to network with industry professionals along the way. Congratulations, Leah!



Photo by Leah Guss



Photo by Matt Gavin

The 2025 MSPS Non-Traditional Student Scholarship: Established to assist full-time survey technicians or draftspersons pursue their off-duty educational requirements to become eligible for examination and eventual licensure as PLS's, this scholarship has numerous criteria, all of which are demanding and competitive and evoke a commitment from the recipient to remain dedicated to his/her academic success. The application is virtually essay in composition and demands forthright answers from the candidate, who is eventually vetted by the MSPS Scholarship Committee for a \$500 annual award.

This year's winner is Matthew Gavin, employed by Anderson Survey Company in Lee's Summit, who is accumulating his educational requirements from Missouri Geospatial Academy. Congratulations, Matt!

It should be noted that both winners wrote letters to MSPS and the Scholarship Committee enthusiastically expressing their gratitude and desire to join the ranks of Professional Land Surveyors. With recipients such as these the future of our profession looks bright! 🇲🇴

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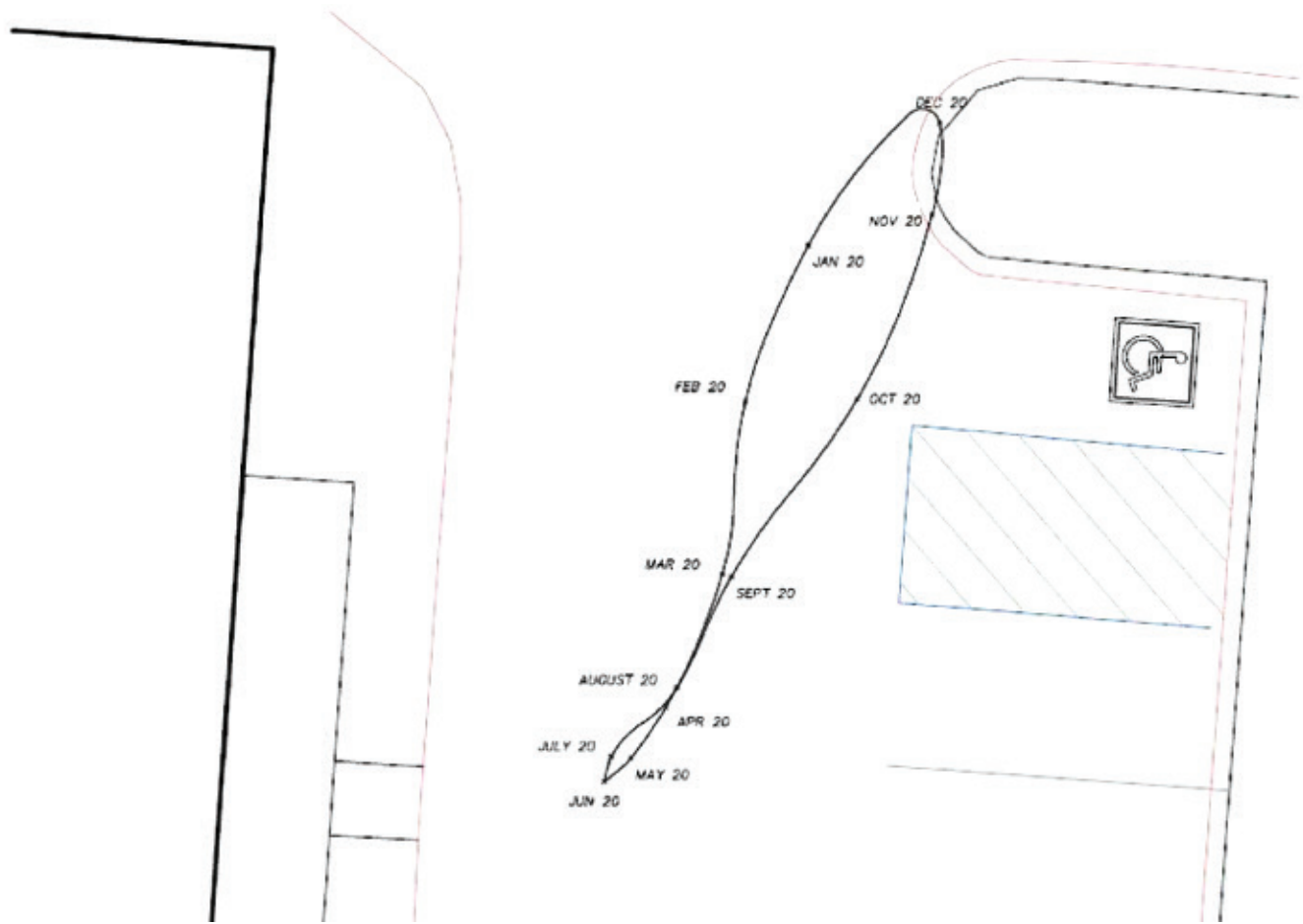
Shadow Tracker

Originally published in The Island Packet, By Lisa Wilson on June 27th, 2019. This article was brought to the Missouri Surveyor by Michael Blansit, PLS

Michael Dunigan of Okatie isn't like most people.

For the 64-year-old land surveyor, the shadows tell a story. He was so compelled to illustrate that story that he dedicated a year to doing just that. For the past year, on the 20th day of each month at 4 p.m., Dunigan made notes about the position of the shadow created by the roof of the building where he works, Coastal Surveying just off S.C. 170 in Ridgeland. When he marked the 12th point on the pavement with a woosh from a can of fluorescent orange spray paint on June 20, he finished the outline of a shape called an analemma. The shape is an elongated figure 8, of sorts, and it's a representation of the position of the sun in different parts of the sky throughout the year. "I always thought, for years, the sun went up and came down and basically made an arc," Dunigan said.

This illustration shows an analemma on the parking lot of Michael Dunigan's workplace. The shape is a representation of the position of the sun in the sky through the year. This illustration shows an analemma on the parking lot of Michael Dunigan's workplace. The shape is a representation of the position of the sun in the sky through the year. Courtesy Michael Dunigan.



(continued on page 8)

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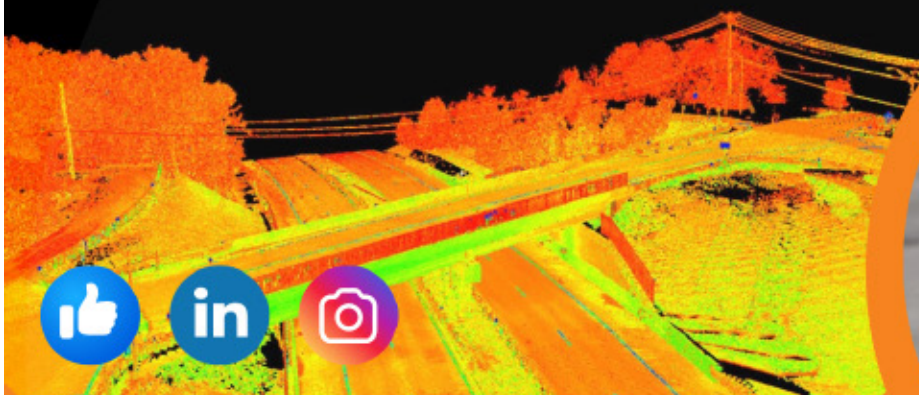
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Shadow Tracker *(continued)*

In reality, the Earth's tilt on its axis and its elliptical orbit around the sun mean the relationship between the two celestial bodies is not that simple. Though Dunigan has studied physics and math, he said he's not a scientist or an astronomer. He's just curious about the way things work and likes to see things with his own eyes. "It did really allow me to first-hand bring astronomy into my life to see that there's something fascinating going on," he said. A person in ancient times could look at the position of the sun in the sky and be able to tell how much longer it would be before winter days got shorter and colder or when it was time to plant crops, Dunigan said. In a modern society where people can measure days and time down to milliseconds on their ever-present cellphones, keeping track of shadows seems unnecessary. For Dunigan, though, plotting the points on an analemma was his way of making a concept he'd only read about come alive. "What I observe — had the pleasure to — has been going on for eons of time, and I just happen to be one person to say, 'Hey, this is happening.'" I get pleasure by getting to share it with anyone else who's interested," he said. So now that a year is up, what's next for Dunigan's parking lot analemma? He plans to add more points, taking measurements on the 6th of each month this coming year to better fill out the shape.

Dunigan has done lots of traveling — he's visited each of the 50 states and several countries — and also has taken deep dives into genealogy, handwriting analysis and writing limericks. "I'm just that kind of individual who, I get an idea and I just go with it," he said. "I want to learn about it." Dunigan, who is married and is father to a grown son and daughter, said he tries to live his life focusing on three guiding principles: Enthusiasm, curiosity and gratitude. "We're all on this planet just for a few short years, but it's fascinating that we can learn things that make life that much more enjoyable," he said. "Each of us are given certain gifts, and we should expand on those. And if we can share it with others, so much the better." 🇺🇸

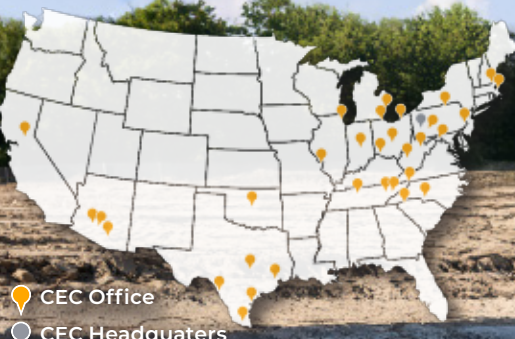
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Genesis of Missouri

Introduction and Selection for Missouri Surveyor

by B. Austin DeSain, PLS

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

In these days, keep in mind, that life was difficult. There were a few stone houses in St. Louis and later in St. Charles, but the vast majority of buildings throughout the middle Mississippi region were wooden construction made with squared logs. The house served multiple functions, primarily to keep the rain and dampness out, keep the inhabitants warm during winter, and provide shade during the summer months. Glass was expensive, but some could afford it; the windows were draped with oiled skin or cloth for those who couldn't.

The villages had dirt roads that turned into rutted swampy messes with the slightest bit of weather and if you were fortunate enough to have a horse, that was traveling at it's best. French and Spanish residences in Upper Louisiana were farmers and traders, and Americans who took up the Spanish invitation to settle scattered further out from the established villages. The early traders, farmers and hunters operated their businesses out of their homes. Farm life included orchards, barns, stockades and working in enclosed common fields. According to their family's size, residents could claim one or more long lots called common fields. The common fields were usually longer than a mile in length and enclosed by fence. The livestock, equipment and any out-buildings were all supposed to be within the confines of the fence until after harvest time, when the gates were opened and the livestock were free to roam and feed. Locally appointed officials fined the owners who did not keep their areas maintained and gates closed during the planting and harvesting months.

The populations of established cities increased drastically in the late 1790s, despite many villages entirely being lost due to changing river channels or Indian disapproval. Occasionally, there were larger political backings that would send a comandante, governor or lieutenant governor to attempt to move a population or group of families from their settlement but as the populations increased, it seemed that most of those situations had become back-burner efforts during this period. "The region was still a remote, sparsely populated frontier region."

Even with seemingly unlimited space, there were still conflicts amongst neighbors and businessmen. Moses Austin, who's settlement was outside of Potosi (Mine à Breton), stood ground after an attack of 30 Osage warriors, prompting him to install a three-pound cannon in the top of his home to protect from future attacks. Although he never used it against the Indians, he did threaten to use it against his arch nemesis John T. Smith. "Missouri's earliest inland settlement was no place for the timid."

Chapter 5. Villages and Farmsteads, pages 96 to 100.

Second only to agriculture in importance, the fur trade played a key role in the settlement and development of Upper Louisiana. After the founding of St. Louis in 1764, it had become a center of growing trade in the Missouri and Mississippi valleys. Operating within the framework of Spain's monopolistic system, a small number of influential traders grew rich from the exclusive rights they garnered. St. Louis's leading merchants engaged in the profitable business of outfitting the expeditions that regularly set out to trade with the Indians. Despite the decreasing profits caused by the growing competition for the trade-especially from British traders-large quantities of furs from tribes along the lower Missouri annually poured into St. Louis warehouses. Although St. Louis merchants dominated the trade in Upper Louisiana, residents in other villages often exchanged goods with local Indians in return for furs and skins. One reliable estimate placed the average annual value of furs and peltries in Upper Louisiana during the last fifteen years of Spanish rule at \$203,750. 61

Lead mining, also vital to Upper Louisiana's economy, changed little until near the end of the Spanish period. Through the years, French miners had continued to dig at Mine La Motte and at the sites along the Meramec and its tributaries, but after the discovery of rich deposits at Mine à Breton in the 1770s, that area became the focal point for mining activity. Moses Austin's innovations contributed to increased lead production there during the 1790s and helped spawn a major resurgence in Missouri's lead industry. 62

(continued on next page)

Genesis of Missouri *(continued)*

Austin sank the first mining shaft in the district and built a reverberatory furnace that was twice as efficient as the stone and log hearths that it largely supplanted. The American mining entrepreneur also conducted his operations on a year-round basis. The tradition-bound French miners were slow to embrace Austin's methods. Deep mining never won acceptance: it was too expensive, and the richness of the surface ores made it unnecessary. But the new smelting process was another matter. Austin's reverberatory furnace, which worked on the principle of an oven, using hot air and not direct contact with the fire to reduce the ore, obtained 75 percent of the lead from the ore. Soon, the local miners began bringing their ore to Austin for smelting. The increased activity at Austin's mines and at those of his competitors produced a substantial increase in Upper Louisiana's production. By 1800 Missouri's lead producers were shipping about two hundred tons annually to New Orleans. When the United States acquired the territory three years later, Austin estimated that the annual value of lead exports exceeded forty thousand dollars. 63

A small number of residents engaged in saltmaking, the other important contributor to the local economy. Most of the activity was concentrated along the Saline Creek below Ste. Genevieve, where French and American settlers manufactured enough salt to supply the settlements on both sides of the Mississippi and a growing number of Kentucky's inhabitants. At the turn of the century, they were sending approximately thirty-five hundred barrels to New Orleans each year. Although the district of Ste. Genevieve produced the major portion of Upper Louisiana's supply, Martin Bouvet operated a saltworks north of the Missouri on the Salt River intermittently during the 1790s until he was killed by Indians in 1800. 64

A select group of French merchants residing in the principal villages flourished under the Spanish regime's mercantilist policies. Because those merchants were favorably disposed to blending public interest and personal profit, the Spaniards gave their blessing to the activities of these resourceful capitalists, whose diverse trading interests often involved them in several of the major local enterprises-fur trading, general merchandising, farming, lead mining, and saltmaking. Their far-flung operations were international in scope. They commonly maintained regular business connections in New Orleans, Canada,

the United States, and Europe, as well as in the other provincial towns. They took advantage of their varied sources of supply to import all types of merchandise, which they then offered for sale to local residents from the places they set aside in their homes for conducting business. The risks in these frontier ventures were often great, but so were the potential profits. 65

The shortage of specie, a common situation in undeveloped areas, did not deter Upper Louisiana's merchant traders from transacting business. Very little money changed hands in the local stores, where almost all exchanges were based on credit. Customers signed promissory notes payable when their crops, furs, or minerals were ready. Just as they extended credit to their customers, the frontier merchants in turn bought their merchandise and goods from their suppliers on credit. Because they routinely dealt with firms in distant places, accounts were seldom settled speedily. The fur markets were especially volatile during periods of international instability. When fur prices were declining, shipments sent in payment for the previous year's merchandise sometimes proved to be insufficient in value to cover the combined costs of merchandise, commissions, and interest charges.

Because of the importance of the fur traffic, the Spaniards attempted to facilitate trade by authorizing the use of peltries as legal tender unless otherwise expressly stated in a contract or agreement. In his attempt to describe how the system worked, Nicolas de Finiels wryly observed that "the Indians are the true bankers of this region," noting that the furs they collected secured the local banking system. While Indians sometimes found themselves becoming enmeshed in the complexities of the market economy, many of the region's inhabitants-red, white, and black-remained beyond the pale of these larger commercial networks and subsisted by trading small quantities of goods within the primitive frontier exchange economy. 66

In St. Louis and Ste. Genevieve the growing number of artisans and craftsmen- including blacksmiths, masons, carpenters, sawyers, joiners, and grain millers- attempted to meet the increasing demands of the local market. Their handicrafts facilitated economic expansion and especially aided local construction in the preindustrial frontier society.

In line with Upper Louisiana's rudimentary economic system, its government under the Spaniards was equally uncomplicated. The simple political structure, which combined civil and military authority, adequately met the needs of the sparsely settled region. The territory's highest resident official, the lieutenant governor, lived in St. Louis, where he exercised civil, military, judicial, and financial powers. His numerous duties included handing down verdicts in important civil and criminal cases, supervising Indian affairs, licensing traders, directing public work construction, issuing land concessions, authorizing surveys, and commanding military operations. His immediate superior, the governor general of Louisiana, established policy for the entire province at his New Orleans headquarters, subject to instructions from the captain general in Havana. 67

In each of the larger villages Spanish officials appointed a commandant to oversee local matters. He served as judge in civil matters involving small amounts, commanded the local militia, issued permits to travel in the province, sought to maintain friendly relations with local Indians, recommended individuals for land grants, encouraged the development of the area under his jurisdiction, and kept his superiors informed on all local happenings. In the smaller and more remote settlements, a syndic performed similar duties. Decisions made by these officials could be appealed to the lieutenant governor or to the governor general, but they seldom were. The local barons who held these posts drew upon their influence in the community to settle disputes and secure compliance with their decisions. 68

The administration of justice was simple, direct, and paternalistic; the right of trial by jury did not exist. The local commandant resolved disputes, quarrels, and lawsuits, often without formal judicial proceedings. There were no elections; all officials were appointed. But neither were there any direct taxes or court costs. Despite its authoritarian framework, in practice the Spanish system functioned in a mildly liberal manner. More often than not, local problems were speedily resolved in a manner satisfactory to the interested parties, and from all indications the vast majority of Upper Louisiana's inhabitants lived peaceably and tranquilly under the benevolent patriarchal system. 69

Unlike the United States, Spain offered free lands to attract bona fide settlers into Upper Louisiana, but, under Spanish law, the process for acquiring a completed title was so complicated that few residents went through the proper

channels to establish a final title. To secure a concession, the settler submitted a petition to the local commandant asking for a grant of land. When the settler desired a particular tract, he or she described it in a petition; if the petitioner had not decided where to settle, as was often the case, he or she asked for a certain amount of land that could be located subsequently in any vacant area. If the commandant approved the request, he endorsed the petition and sent it to the lieutenant governor, who issued a concession.

Special concessions described the lands to be granted, while the general or floating concessions merely specified the amount of land conceded. After the delivery of the concession, the lieutenant governor ordered a survey of the actual lands selected, although frequently these surveys were never completed. In fact, the Spanish government had not made any regular provision for surveying lands in Upper Louisiana until 1795, when it named Antoine Soulard as surveyor general for the region. If the survey was made, the approved petition and order of survey, along with the completed report of the surveyor, had to be presented to the proper office at New Orleans for final confirmation of title. The distance from New Orleans, compounded by the hardships and expenses of frontier travel, made this final step prohibitive for the vast majority of Upper Louisiana's residents. 70

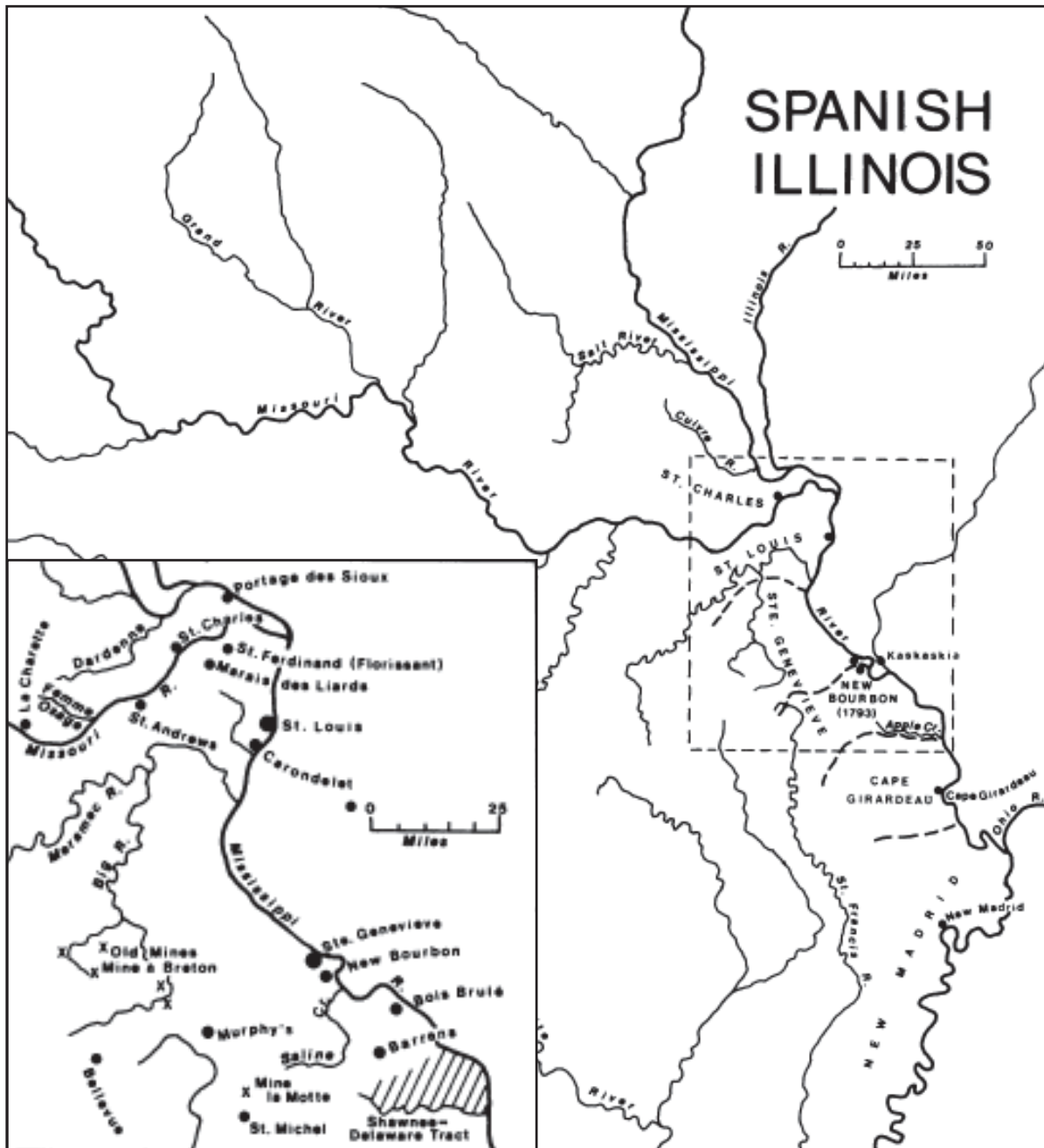
Because of the abundance of land and the smallness of the population, Spanish officials routinely granted concessions to those who requested them, and, during the final days of the Spanish regime, they became increasingly generous and frequently ignored the traditional eight hundred arpent limitation on individual grants. Most concessions in excess of that amount were issued near the end of the Spanish period, and with a few notable exceptions, such as John and Israel Dodge and Moses Austin, the recipients were prominent French residents of Upper Louisiana. Before he left office in 1799, Lieutenant Governor Zenon Trudeau reportedly signed a series of blank concessions that were distributed after his departure and filled in illegally by those who secured them. Trudeau's successor, Charles Dehault Delassus, supposedly granted extensive concessions to members of his family and to friends. 71

Spanish officials made no effort to encourage settlers to secure full titles. As late as 1788 only about 6,400 arpents of land had been surveyed in the entire district

(continued on next page)

Genesis of Missouri (continued)

of St. Louis. Local commandants regularly accepted the incomplete concessions as authorization to hold the lands and raised no questions when they were sold or inherited. Some of the early French settlers, and even more of the incoming Americans, simply squatted on the lands without bothering to request a formal concession from the Spanish authorities. The unexpected sale of Louisiana to the United States in 1803 drastically altered the situation, and the confused state of the land titles created a tremendous headache for American officials, who suddenly found themselves in control of a territory where the traditional Creole ways of doing things were considerably at variance with their own.



Settlement as of about 1800, at the end of the Spanish period.



(continued on page 14)

Genesis of Missouri *(continued)*

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:

61. Stoddard, Sketches, 297-98. Most of the furs were shipped through Canada; only about \$80,000 worth of furs reached New Orleans each year. See Clark, New Orleans, 212.
62. Ekberg, Colonial Ste. Genevieve, 154-58.
63. Gracy, Moses Austin, 81-85; Ekberg, Colonial Ste. Genevieve, 153-54; James Gardner, "The Business Career of Moses Austin in Missouri, 1798-1821," 237-38; Clark, New Orleans, 212; and Moses Austin, "Report on Lead Mines in Upper Louisiana," in American State Papers, Public Lands, 1:191.
64. Houck, History of Missouri, 2:255-56; Clark, New Orleans, 211; Michael J. O'Brien et al., Grassland, Forest, and Historical Settlement: An Analysis of Dynamics in Northeast Missouri, 91-92; and Ekberg and Foley, Account of Upper Louisiana, 44-45, 78.
65. The Chouteaus epitomized Upper Louisiana's frontier mercantile capitalists. See Foley and Rice, The First Chouteaus.
66. Stoddard, Sketches, 230, 282; Ekberg and Foley, Account of Upper Louisiana, 121. For the characteristics of the frontier exchange economy, see Usner, "Frontier Exchange Economy," 125.
67. Brackenridge, View of Louisiana, 138-39; Ekberg and Foley, Account of Upper Louisiana,
68. Ekberg and Foley, Account of Upper Louisiana, 125.
69. Ibid., 50-51, 68-69, 125. An excellent study of Upper Louisiana's legal and judicial systems is Morris S. Arnold, Unequal Laws Unto a Savage Race: European Legal Traditions in Arkansas, 1686-1836.
70. Amos Stoddard to Henry Dearborn, 10 January 1804, in American State Papers, Public Lands, 1:177.
71. Ibid.; Albert Gallatin to Thomas Jefferson, 5 January 1807, Jefferson Papers. The Spanish authorities rewarded Austin and Dodge for their special contributions to the region's development. Austin helped revolutionize the lead mining activities, and Dodge was credited with having erected several mills, distilleries, and breweries in the Spanish territory. 🇺🇸





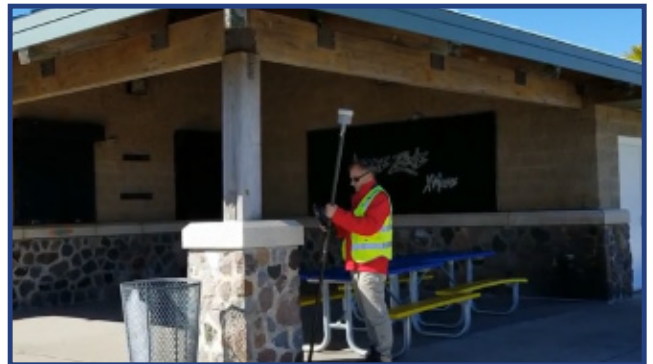
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USPLSS

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1 rod = $\frac{1}{4}$ chain = 25 links = 16.5 feet
1 link = .01 chains = .66 feet = 7.92 inches
1 mile = 80 chains = 320 rods = 1760 yards = 5280 feet
1 league = 3 miles
1 acre = 43560 sq. ft. = 160 sq. rods = 10 sq. chains = 4840 sq. yards
1 section = 640 acres
Side of one section = 80 chains = 1 mile = 5280 feet
Side of one quarter = 40 chains = $\frac{1}{2}$ mile = 2640 feet
Side of one forty = 20 chains = $\frac{1}{4}$ mile = 1320 feet
Side of one 10-acre = 10 chains = $\frac{1}{8}$ mile = 660 feet
Side of one square acre = 208.71 feet
40 sq. rods = 1 rood
4 roods = 1 acre

FRENCH AND SPANISH MEASURE

1 arpent (linear) = 192.5 feet = 2.916 chains
1 arpent (square) = 0.8507 acres

1 perch (French) = $\frac{1}{10}$ arpent
1 foot (French) = 1.0694 feet (English)
1 torse = 6 feet (French)
1 league (French - square) = 7056 arpents (square) = 6002.5 acres
1 league (Spanish - square) = 4428.4 acres
1 league and labor (Spanish - square) = 4605.5 acres
1 side of league (Spanish) = 5000 varas
1 side of labor (Spanish) = 1000 varas
1 vara = $33 \frac{1}{3}$ inches = 2.778 feet

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Highlights from the 68th Annual Meeting Independence, MO, October 2-4, 2025

If you didn't get a chance to attend this year's Annual Meeting at the Stoney Creek Hotel in Kansas City, you missed plenty! Here's just a few of the photos showing highlights of the event:



2025 President Chuck Quinby “passes the gavel” to 2026 President Mark Wiley as new Officers and Directors wait to be sworn in. Taking their oath were Chris Ferguson, Kellan Gregory, Phillip Grout, Norm Ellerbrock, Tim Devaney, and James Gray.



New PLS's accept their Certificates of Achievement to conclude the morning session. Present were: James Dowd, Francis Duncan, Daniel Hatley, Brandon Kurtz, Thomas Sandoval, Sean Smith, Eric Stosz, Andrea Weishaubt, and Shawn Wood. Welcome to the Professional ranks!

Highlights from the 68th Annual Meeting *(continued)*



New LSI's are awarded their certificates proclaiming their accomplishment. Present were: Marissa Almiron, Matthew Backes, Steve Bodenheimer, Cullen Bruckerhoff, Ian Cates, Shawn Crabtree, Kelly Kever, Coner Kile and Matthew Wilson. Congratulations to all!



Lifetime Achievement Award winner Jim Anderson accepts the honor from Past President (and son) Bob Anderson.



Awards Committee Chair Bob Anderson presents the Bob Myers Service Award to Scott Faenger.



Surveyor of the Year Kellan Gregory accepts his award.



State Representative Mark Nolte is presented with the Legislative Award.



Dr. Joe Paiva accepts his Resolution of Recognition by the Missouri General Assembly from Rep. Nolte.



Dr. Dick Elgin is also recognized by the Missouri Legislature.

(continued on next page)

Highlights from the 68th Annual Meeting *(continued)*



After setting the time to beat in the tripod/tribrach setup event at the Young Surveyor's Rodeo, Amos Meek watches his son practice the event.



Bart Korman utilizes his auctioneer skills to benefit the PAC in some spirited bidding.

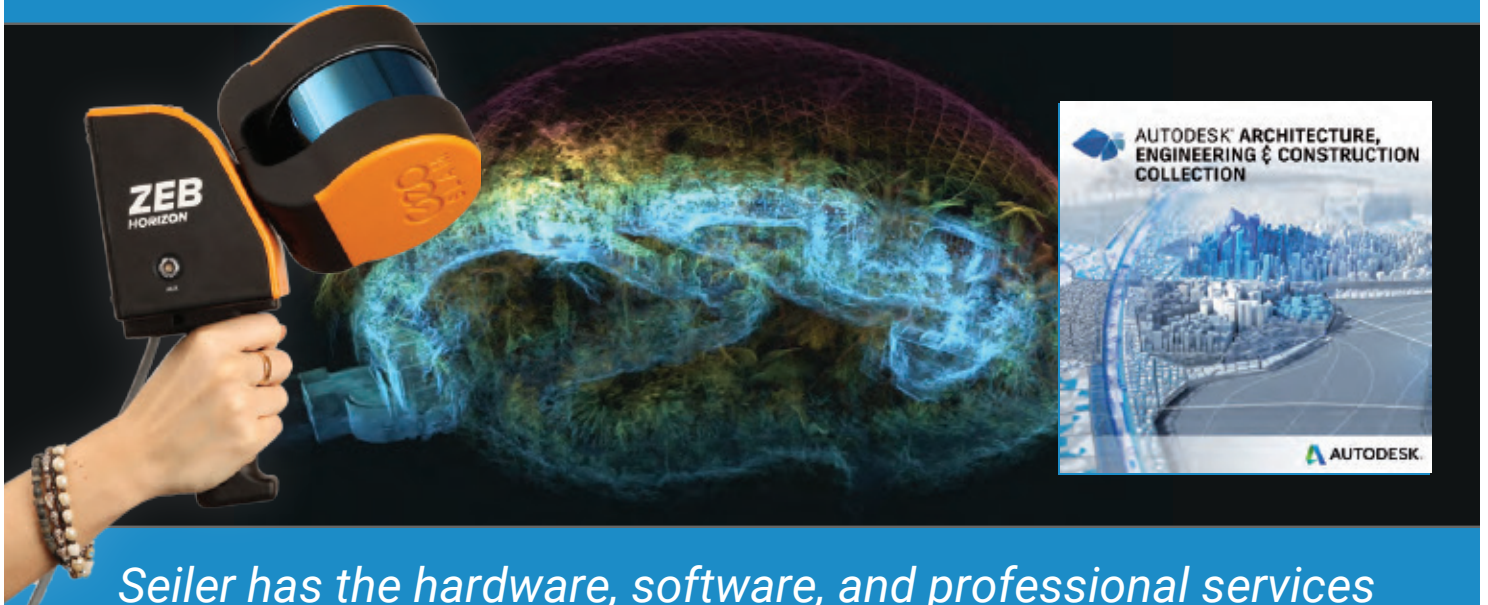


Duck Bader gave a lively demonstration about Joseph C. Brown's methods running the "Old State Boundary".

(continued on page 22)



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Highlights from the 68th Annual Meeting *(continued)*



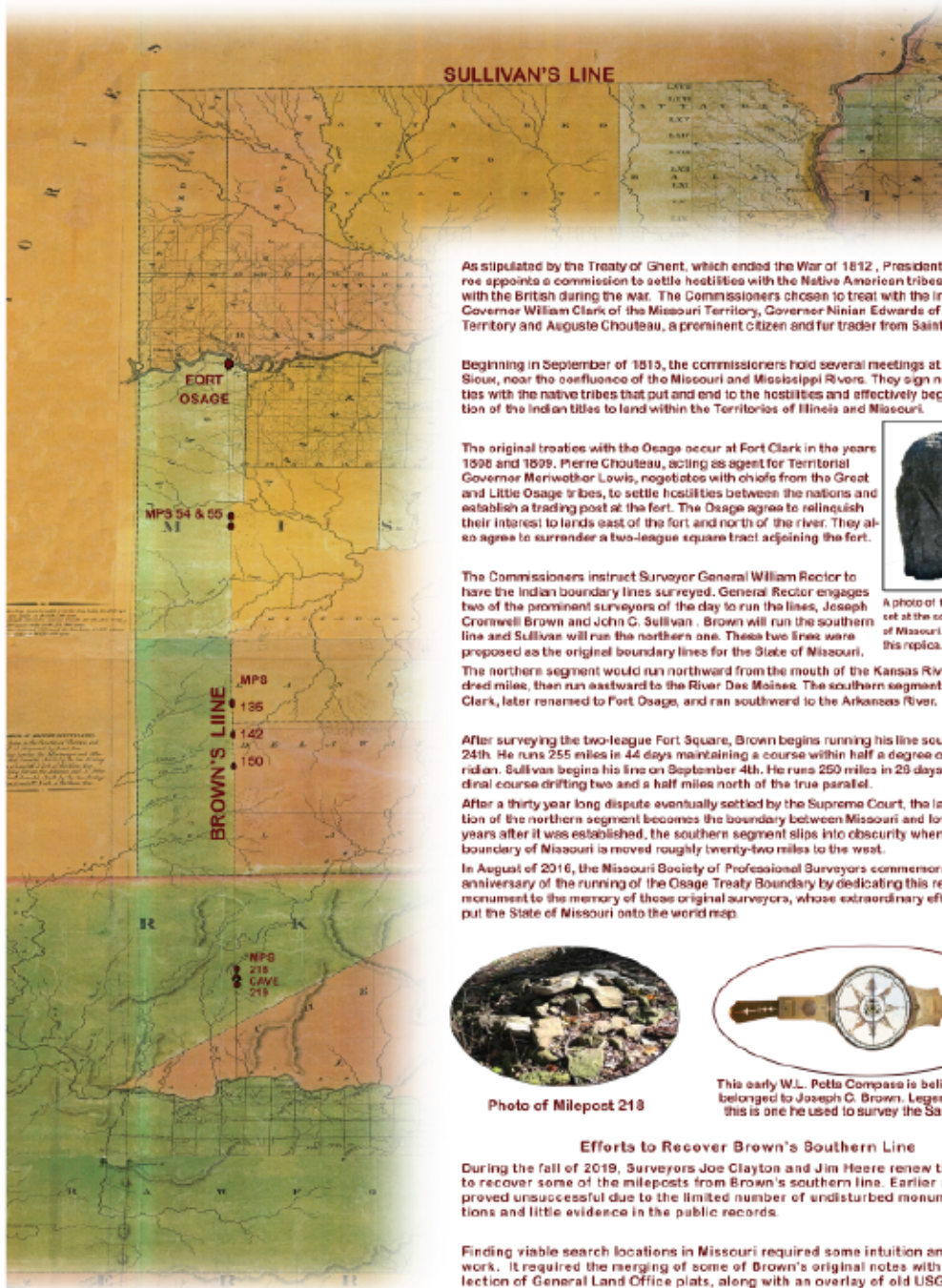
Francis Duncan and Mike Oetterer delivered a motivating “Missouri Standards” presentation.



Thanks go to our many vendors and sponsors (just a couple pictured here) who provide essential goods and services to the Society and make all this possible.

Stan Emerick, who originally penned “The Osage Treaty Line Initiative” for the June, 2016 edition of Missouri Surveyor to commemorate the 200th year of the Osage Treaty Line survey by Joseph C. Brown, has prepared the final revisions for the sign that was left at the Fort as part of the last day of the conference. The replica stone of the October 16th, 1823, Southwest Corner of Missouri sits at Fort Osage today and now has a sign to describe the efforts by Joe Clayton, Jim Heere, and others, to recover Brown’s line from the Fort Square to the southern state line. Thank you from the rest of the Missouri Surveyors, for keeping the history alive.

THE OSAGE TREATY BOUNDARY



As stipulated by the Treaty of Ghent, which ended the War of 1812, President James Monroe appoints a commission to settle hostilities with the Native American tribes that sided with the British during the war. The Commissioners chosen to treat with the Indians were Governor William Clark of the Missouri Territory, Governor Ninian Edwards of the Illinois Territory and Auguste Chouteau, a prominent citizen and fur trader from Saint Louis.

Beginning in September of 1813, the commissioners hold several meetings at Portage Des Sioux, near the confluence of the Missouri and Mississippi Rivers. They sign numerous treaties with the native tribes that put an end to the hostilities and effectively begin the extinction of the Indian titles to land within the Territories of Illinois and Missouri.

The original treaties with the Osage occur at Fort Clark in the years 1808 and 1809. Pierre Chouteau, acting as agent for Territorial Governor Meriwether Lewis, negotiates with chiefs from the Great and Little Osage tribes, to settle hostilities between the nations and establish a trading post at the fort. The Osage agree to relinquish their interest to lands east of the fort and north of the river. They also agree to surrender a two-league square tract adjoining the fort.



A photo of the stone Brown set at the southwest corner of Missouri. (Model used for this replica.)

The Commissioners instruct Surveyor General William Reclor to have the Indian boundary lines surveyed. General Reclor engages two of the prominent surveyors of the day to run the lines, Joseph Cromwell Brown and John C. Sullivan. Brown will run the southern line and Sullivan will run the northern one. These two lines were proposed as the original boundary lines for the State of Missouri.

The northern segment would run northward from the mouth of the Kansas River for one hundred miles, then run eastward to the River Des Moines. The southern segment began at Fort Clark, later renamed to Fort Osage, and ran southward to the Arkansas River.

After surveying the two-league Fort Square, Brown begins running his line south on August 24th. He runs 255 miles in 44 days maintaining a course within half a degree of the true meridian. Sullivan begins his line on September 4th. He runs 260 miles in 29 days with his latitudinal course drifting two and a half miles north of the true parallel.

After a thirty year long dispute eventually settled by the Supreme Court, the latitudinal portion of the northern segment becomes the boundary between Missouri and Iowa. Seven years after it was established, the southern segment slips into obscurity when the western boundary of Missouri is moved roughly twenty-two miles to the west.

In August of 2016, the Missouri Society of Professional Surveyors commemorated the 200th anniversary of the running of the Osage Treaty Boundary by dedicating this replica stone monument to the memory of these original surveyors, whose extraordinary efforts literally put the State of Missouri onto the world map.



Photo of Milepost 218



This early W.L. Petts Compass is believed to have belonged to Joseph C. Brown. Legend has it that this is one he used to survey the Santa Fe Trail.

Efforts to Recover Brown's Southern Line

During the fall of 2019, Surveyors Joe Clayton and Jim Heere renew their efforts to recover some of the mileposts from Brown's southern line. Earlier attempts proved unsuccessful due to the limited number of undisturbed monument locations and little evidence in the public records.

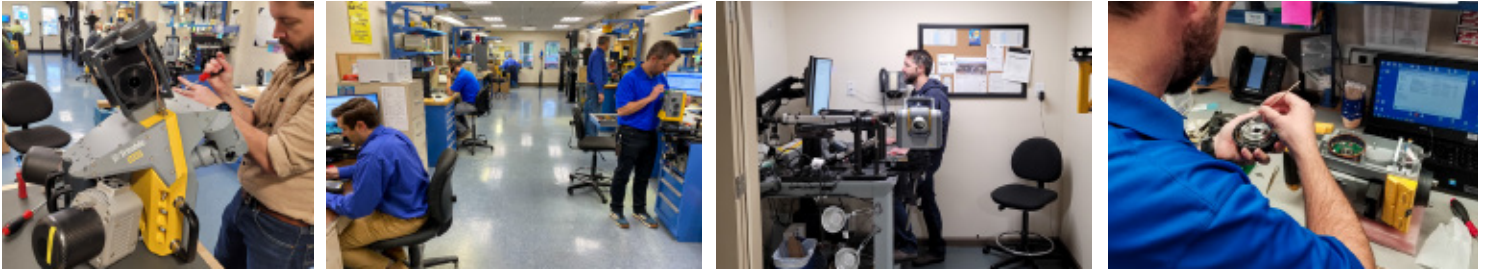
Finding viable search locations in Missouri required some intuition and detective work. It required the merging of some of Brown's original notes with a small collection of General Land Office plats, along with an overlay of old USGS topographic maps. The first practical location turned out to be in Bates County (T42N, R29W), a little south of the South Grand River. There appeared to be an undisturbed section of woods with some reference to both old GLO notes and subsequent surveys. After a short traverse into the woods, the first epiphanic discovery arrived at Milepost 54. Once located, it was a quick excursion to the recovery of Milepost 55.

In Arkansas, there was no references to the Treaty Line in any of the government surveys. The only hope for recovery would be trying to locate one unique call in Brown's notes to an "extensive cave" in the 218th mile. To do so would require compiling a strip map of Brown's water crossings with an 1886 USGS topographic map and then tying those together with current physical locations of the White River and its tributaries. By integrating the historical records with the modern features and utilizing both GPS and GIS mapping technologies, they were able to pinpoint the cave's location... 203 years after Brown had passed by. It's position was verified by the subsequent locations of Mileposts 218 and 219.

Nearly a dozen points have been recovered and verified. For more information on this project please visit our website at Missourisurveyor.org.



Joe Clayton & Jim Heere at the mouth of the cave at MP218.8



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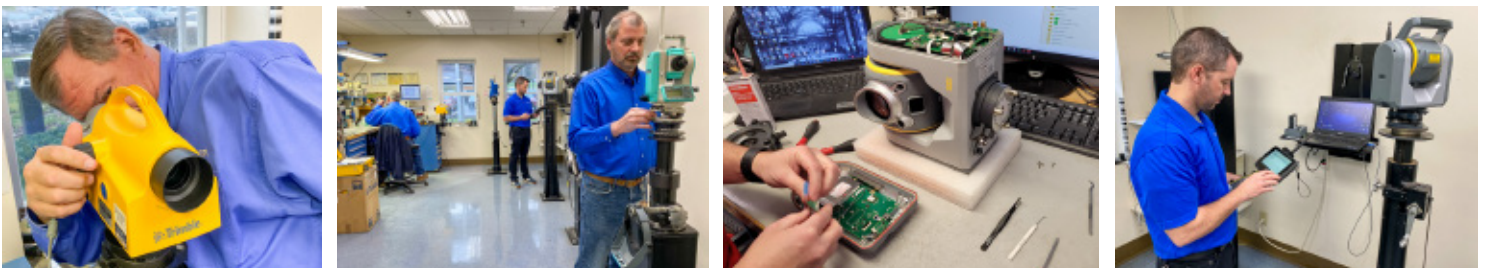
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Young Surveyors Shine at Annual Meeting

by Kellan Gregory, Committee Chairman

We of the Young Surveyors Committee hosted the 2025 Young Surveyors Rodeo at the 68th Annual Conference in Independence. Planning for the event started in December of 2024 when the idea was first brought before the MSPS Board and the Annual Conference Committee. The idea met with much enthusiasm and approval, thereby starting us off on the right foot. We scouted the venue and determined we could adequately handle nine areas of competition. These areas focused on skillsets that a surveyor may employ in his or her day-to-day work and prepared them in contest-fashion to be called the Young Surveyors Rodeo.

Rules and scoring for each of the events were determined, and we started publicizing the Rodeo in late summer. We ended up with nine competitors that showed up on the day of the event. The whole rodeo took about two hours to complete, with much credit going to the volunteers who showed up to help keep things running smoothly.

The Nine Events were:

Distance estimation	Cursive document reading
Angle estimation	Plan reading
Height estimation	Survey trivia
Pacing	Tree identification
Tripod/tribrach setup	

With the Winners listed below:

First place – Brandon Kurtz, PLS (Lewis-Bade, Inc.)
Second place – John Wade (GBA)
Third place – Kevin Nelson, PLS (Polk County Surveyor)

Generous donations from Seiler Geomatics, Geo-Tronics of Kentucky, and Midwest Geospatial Academy allowed us to give away some great prizes for the top three winners. These included a custom gold buckle, a waterproof Bluetooth speaker, a Yeti hard-sided cooler, and the most comfy camp chair Bass Pro had to offer. Seiler also went above and beyond by providing the tripods and tribrachs to make several of these areas of competition possible. We are very thankful to our sponsors who stepped up to make this a great afternoon.

It is the mission of the Young Surveyors Committee to aid and mentor those surveyors early in their careers. At the 2025 Spring Conference, we were happy to help host Technician's Day, a course that was tailored to help these specific surveyors in survey math, state standards, and test prep (be looking for that in 2026, too). For this time with the Rodeo at the Annual Conference, our goal was more networking-based; getting the young surveyors of the Society into a relaxed atmosphere where they could have a good time, meet one another, meet some of the more "seasoned" Society members, and maybe get a few bragging rights after the day was done. The smiles and handshakes at the end of the day were a great way to see it capped off. 🇺🇸



A few "action shots" from the Rodeo.

Meet MSPS Lobbyist Lynne Schlosser

by Chris Ferguson

Some readers may ask: “We have a Lobbyist!?” We do - her name is Lynne M. Schlosser and has been hard at work for the Society, replacing former MSPS Lobbyist Richard “Mo” McCullough several years ago.

Who is Lynne? For starters, she has been a fixture in the State Capitol for over 24 years. Her advocacy and lobbying career began with the American Cancer Society and today she is a contract lobbyist representing varied industries and issues highlighting her knowledge base and versatility

She has been representing MSPS since 2009 and serves as the voice and presence of Missouri surveyors in Jefferson City, advocating to our elected officials. She works diligently to keep MSPS and the Legislative Committee in particular informed regarding legislative developments which could impact Professional Land Surveyors and surveying in general. In addition, she is a regular attendee at Board of Directors meetings and typically gives a report at the Annual Meeting.

She actively engages in influencing action in the House and Senate - securing sponsors, advancing and passing legislation that supports our profession, and opposing measures that could negatively affect the industry. In addition, she keeps abreast of applicable executive branch and departmental matters, proposed rules and regulations and professional registration actions. Many may not be aware that there is near-constant activity in the statehouse that can adversely affect surveyors. As Mark Twain once said; “No man’s life, liberty, or property are safe while the legislature is in session.” We’re lucky to have Lynne watching out in our behalf.

In 2023, Lynne was recognized by the National Institute for Lobbying and Ethics (NILE) with a national award as one of America’s Top Lobbyists. According to NILE, she was nominated by clients and peers for her outstanding skills and dedication, with many noting that her passion and expertise have made



Lynne with good friend and US Representative Jason Smith (MO-08), House Way & Means Committee Chairman (photo by Lynne Schlosser)

a meaningful impact while upholding the highest standards of integrity, ethics, and excellence. Only 5 of the “Top 100 Lobbyist” honored were state based lobbyists, the other 95 work only on the Federal level.

Lynne said she was humbled by the recognition adding, “I truly love what I do and working with people from all walks of life. I am constantly learning and believe that I am making a positive impact in our state. Lobbyists are educators and an important tool for a productive government. It is up to us to communicate and inform legislators, on behalf of our clients, how proposed legislation impacts their constituents, their communities and the state as a whole. We are a resource, a liaison and a voice for those we represent.”

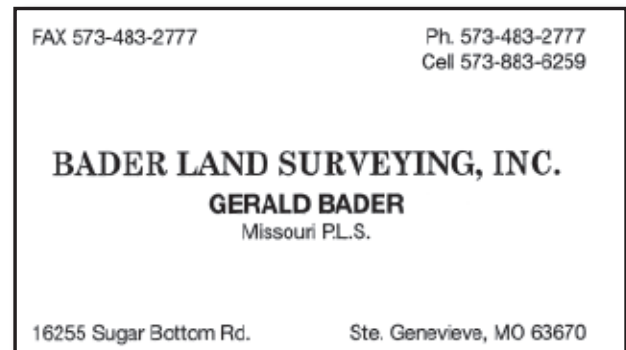
Before moving out to the County (St. Louis), Lynne thwarted an attempted armed robbery outside her loft building in downtown St. Louis (while herself unarmed). In the author’s opinion, that underscores the courage and tenacity she demonstrates on our behalf!

Lynne was born and raised in the bustling metropolis of Bismarck, ND (where winter is both a season and a lifestyle) and is a proud graduate of the University of North Dakota. Her great-uncle Joe was a land surveyor—so one might say precise measurements run in the family...well maybe. When she’s not busy schmoozing, she’s likely soaking up the outdoors—golfing, hiking, paddling around in a canoe or kayak, or coaxing life out of her garden. A lover of music, theater, and the arts, she’s also an artist herself. Most recently, she’s taken up welding, because apparently painting just wasn’t enough excitement—now Lynne can make art that requires both creativity and a fire extinguisher. 🇺🇸

2025 Lost Monuments Remembered

Robert “Bob” Volz – 1933 to 2025 – PLS 741. Rest in Peace.

David Wiley – 1962 to 2025 – PLS 2612. Rest in Peace.



RSMo 137.185

Ancient History of the Future of Property Descriptions

by Darrell D. Pratte, PLS

The Missouri Statutes have some very interesting law connected to land surveying. Some is arcane, like this tidbit in Section 446.420 of the Revised Statutes of Missouri (RSMo) “*Such surveyor shall note particularly in his field notes the corner from which he starts the survey and to which he traces the lines, noting the condition of the corner trees, if any, marking particularly every object of note, over or by which the lines may pass; also the falling off distance, and the variation at which side lines shall have been surveyed.*”

— The field notes! Who wrote this, Prospect Robbins? What does the rest of this even mean? —

I am not sure of the number of Missouri surveyors that practice in this manner, but I would imagine the answer is close to zero. Section 446.030 RSMo states surveyors must provide their field notes to anyone requesting them, at the rate of fifteen-cents per one hundred words. Today’s surveyor could print the gobblygook that comes out of their data collector and leave the requester scratching their head, and a few dollars lighter.

There is one old statute, Section 137.185 RSMo (heard of it?) that is making a resurgence. Resurgence might not be the proper word, because it was never a law that interested very many people. It is part of Chapter 137, the chapter on assessing real and personal property for taxation. Not an obvious place for anyone to look for a law concerning land surveyors and their craft. This particular statute first appears in 1889, with its last revision in 1939. The law simply demands that any landowner, selling off a piece of their property, not described as an aliquot part of a section, get it surveyed. The enforcement of this law is a bit convoluted, and chaotic. It requires the County Recorder to report the culprit, the County Commission to order the survey, the County Surveyor to perform the survey, the County Collector to collect the surveyor’s fee, and the County Clerk to receive the survey. The real winner is the Assessor, the only office that does not have a lot to lose in the enforcement of this law, and the only office that gets a survey of the real property that has to be assessed, or at least it is assumed the Assessor will walk down the hall, to the Clerks Office, and get a copy of the survey. Perhaps this is the reason the statute lands amongst the laws that guide the Assessor in the assessment of real property.

Why not Chapter 445 RSMo? An entire chapter dedicated to plats, what they shall show, how they are drawn, accepted,

recorded, and penalized. This is exactly what 137.185 is trying to do, in three paragraphs it is saying if a new parcel is created, a survey plat must be produced and recorded that will henceforth describe the property by the survey. A quick, first read of 137.185 RSMo, looks like it is saying, if a new parcel, of less than forty acres, is created, a proper survey is needed. Section 60.650 RSMo states a survey is to be made of each new parcel, regardless of size. Section 137.185 already existed in the Missouri Statutes, since 1889, why then did surveyors work tirelessly to add 60.650 in 1990?

My first thought in breaking down, examining, and trying to explain this law, as a laymen, as a land surveyor, was to break it down sentence by sentence. Looking at the first paragraph, I realized it is just one sentence. Generally, my first thought is my only thought, but we are looking at breaking out smaller tracts of land from larger tracts. Using that metaphor, let us examine the first section as a parcel, divide it into three smaller parcels, and then describe the parcels. First though, it needs mentioned this paragraph came in to the statutes during the 1880s.

“In all cases where any person, company or corporation may hereafter divide any tract of land into parcels less than one-sixteenth part of a section or otherwise, in such manner that such parcels cannot be described in the usual manner of describing lands in accordance with the surveys made by the general government, it shall be the duty of such person, company or corporation to cause such lands to be surveyed...”

Should a landowner desire to divide a tract of land into parcels smaller than one-sixteenth of a section (smaller than 40 acres), and those parcels are not described as an aliquot part of the section (that’s what the part “describing lands in accordance with the surveys made by the general government” means, aliquot part), that landowner shall hire a land surveyor. This statement lets a landowner know if they are going to subdivide any part of their land, and not describe the tract as an aliquot part of a section; a surveyor must be hired to work out the lines, and set some corners. Then there is the “or otherwise” part. The “less than one-sixteenth part of a section or otherwise,” part, meaning the size does not matter, the shape of the parcel matters. Is the parcel an aliquot part of the Section?

Should the answer be, “No”. Then survey the parcel.

The real problem, the nexus of the problem, is likely in the United States Surveys (USS), the so called Spanish Land Grants. The left over land concessions of Colonial Louisiana. Many of these concessions are quite large, hundreds, a few in the thousands, of acres. The Deputy Surveyors were required to survey the concessions and tie them to the Public Land Survey System (PLSS) and number each USS. Over the years the USS were broken up and sold, but there was no way to describe the several parcels other than by Metes and Bound. The whole purpose of the PLSS was to create a cadaster free from land descriptions that overlapped, created gores, had folks fighting over the tillable land, and leaving the rough country out of the tax base. If the land cannot be described as an aliquot part, and no wants a metes and bounds description, describe the land as a lot, parcel, or tract, complete with a number on a survey plat.

“...and a plat thereof made by a surveyor in the county where such lands are situated, which plat shall particularly describe and set forth the lots or parcels of land surveyed, as aforesaid; the lots and blocks shall be numbered in progressive numbers, and the plats shall show the number, location and quantity of land in each lot, and the description of the tract of land so divided;...”

The surveyor will make a plat that describes the parent tract, and progressively number the parcels. The plat will show the location of the parcels within the section (or within the USS, as the case may be), the number of each parcel, the area of each parcel, and the description of each parcel.

“...provided, that whenever it shall appear to the county commission of the county in which any such tracts are situated that tracts or parcels of land less than one-sixteenth of a section, and lying outside of the limits of any incorporated city, town or village, have been conveyed without having been surveyed and platted and the plat thereof recorded as herein provided, the commission may require the county surveyor, by order of record, to survey and plat such tract or tracts of land and record the plat so made, all of which shall be done at the expense of the owner of such tracts of land at the time the survey is made.”

If it should come to the attention of the County Commission that parcels of land, less than one- sixteenth of a section exist, or otherwise, and do not have a survey of record, the Commission may require a survey, at the expense of the landowner, at the time the survey is made? (I know that is a statement, I just have a question about how is the county is going to make sure this person pays for the survey.) This applies to land that lies outside the corporate limits of a town, and an explanation of the method of recordation, as well as how the surveyor is paid, comes later on in this statute.

The second paragraph of this statute has sentences. The structure of the paragraph differs from the first, as does the verbiage. The second paragraph deals with property within the corporate limits of a town. This language is added in 1909, a generation after the original passage of the legislation. We will examine each of the four sentences of paragraph two.

The first sentence; “...And when any tracts of land lying within the limits of any city, town or village cannot be described by lot or block number, or other description given in a recorded plat, the city council may have such tracts of land surveyed and platted by the city or county surveyor, or other competent surveyor.”

This sentence is written for land within corporate limits, but not described in lots and blocks. There are plenty of surveys, many times made for a city or town, of outlots. This is their origin. This is the statute that gave rise to these surveys. The city does not have to hire the County Surveyor, they just have find someone competent, and willing to wait on getting paid, until someone pays the tax bill on the property. (The tax bill part comes later on; perhaps there has been a problem with landowners paying the county surveyor, for those projects outside the corporate limits?)

The second sentence; “Such plat shall be given such appropriate name as will distinguish it from all other surveys and plats, and streets included therein appropriately named, and such plats hereafter or heretofore made by any city, town or village shall have the full force and effect as other plats made under the provisions of this section.”

These surveys will show the streets the parcels border, how these parcels fit with the rest of the town, with the surveyed additions and approved subdivisions, and the plat will have an appropriate name.

These outlots will have the full force and effect as other plats made under the provisions in this section, which will come later.

The third sentence; Said plat shall be certified to by the surveyor and recorded in like manner as the plats of towns are required to be certified to and recorded.”

Many times these surveys of outlots look just like a subdivision plat. Other times they look like something the surveyor cobbled together, and added to the city limits map. These survey plats are part of the public record, regardless of appearances, just like any other subdivision plat.

(continued on next page)

RSMo 137.185 (continued)

And the fourth sentence; "The description of real estate in any deed or conveyance, or for the purpose of taxation, in accordance with the number and description set forth in the plat aforesaid, shall be deemed a good and valid description of the lot or parcel of lands so described."

There, the sentence that says it all. The number of the parcel, as shown on the plat, shall be a good and valid description of the parcel. Nearly every town of any size had land within the corporate limits that was not subdivided. Land that was on the other side of the tracks, down in a steep hollow, across the highway, whatever the reason, but needed a plausible way of being described, platted and brought into the town. The surveying of these tracts, and the subsequent plat showing outlots is recorded, and the new description would sometimes read as a lot and block. Most times these surveys are outlots, and described as outlots. An example; "Outlot Number One of the Southwest Quarter of Section 22...as shown on survey recorded in Plat Book _ at Page _ of the County Deed Records".

One way of trying to determine the intent of a statute is to look at the previous statutes. The 1909 version in the Revised Statutes of Missouri Section 11389 reads essentially the same as these two paragraphs. It is just one paragraph, and ends with the sentence about these surveys being valid descriptions. In other words, the 1909 statute states, if land cannot be described by aliquot part, by lot and block, or some other document of record, it gets surveyed, platted, given a distinguishing name, and made part of the public record. The number of the parcel shown on the record plat is a good and valid description.

The very first time this statute shows up is in the 1889 Revised Statutes of Missouri, Section 7568: "Tract less than sixteenth of section. In all cases where any person, company or corporation may hereafter divide any tract of land into parcels less than one-sixteenth part of a section or otherwise, in such manner that such parcels cannot be described in the usual manner of describing lands in accordance with the surveys made by the general government, it shall be the duty of such person, company or corporation to cause such lands to be surveyed, and a plat thereof made by a surveyor in the county where such lands are situated, which plat shall particularly describe and set forth the lots or parcels of land surveyed, as aforesaid; the lots and blocks shall be numbered in progressive numbers, and the plats shall show the number, location and quantity of land in each lot, and the description of the tract so divided. Said plat shall be certified to by the surveyor, and recorded in like manner as the plats of

towns are required to be certified to and recorded. The description of real estate in any deed or conveyance, or for the purpose of taxation, in accordance with the number and description set forth in the plat aforesaid, shall be deemed a good and valid description of the lot or parcel of land so described."

The intent of this law is to provide a way to describe land without having to write a long, difficult to understand, and sometimes impossible to interpret, metes and bounds description.

There is one more paragraph;

"3. Said surveyor shall file in the office of the clerk of the county commission of the county, in which any such lots or tracts of land platted under the provisions of this law are situated, his report and copy of such survey and tracts or lots platted under the provisions of this section, with the statements of the costs of such survey and platting, and the recorder's fee for recording same, which shall be paid by the surveyor, with an apportionment of the same, against each tract thus surveyed and platted, and the commission at the next term thereafter shall levy the amount of such costs as a tax against such tracts as thus apportioned and certified to by the surveyor, and shall cause the same to be entered upon the tax books against the several tracts and collected as other taxes are collected. And when said taxes are thus collected the county commission shall cause a warrant to be drawn for the amount of such collections to the surveyor making said plat and cause same to be paid to him accordingly."

Once the County Commission is aware this violation has occurred, they penalize the County Surveyor by making him/her go out and do the survey. I would imagine the conversation goes something like:

County Surveyor (CS) "Okay, I'll do the survey, do I bill the Commission?" Presiding Commissioner (PC) "Send the bill to the County Clerk"

CS "The Clerk will just write me a check?"

PC "The Clerk will add the survey bill to the tax assessment" CS "When do I get paid?"

PC "After the taxes are paid the Collector will add that money to the general fund of the County" CS "When do I get paid?"

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RSMo 137.185 (continued)

PC “The County Commission will add an appropriation for the cost of the survey in the next fiscal year’s budget”

CS “Then I get paid?”

PC “If the appropriation is approved” CS “Wait, what?”

PC “Don’t worry! We will approve the appropriation!”

Unfortunately, the Presiding Commissioner was upset during the next election by an opponent that ran on a platform of the County Surveyor being paid too much money from the general fund. The other Commissioners had to go along with disallowing the appropriation to pay the County Surveyor, because they were facing like-minded opponents in their next election cycle.

The County Recorder is the first line of defense in making this a workable law. The second line is the County Assessor. Regardless of which office reports this crime, the County Commission has to order the survey, and the law clearly states the County Commission “...may require the county surveyor... to survey and plat such...tracts...” pretty harsh language huh!, “may require”. These are all elected officials forcing a constituent to get a survey. The constituent can be arrested for non-compliance, the next section of the law reads thus:

“Section 137.190, Penalty for violation of section 137.185. — Any person, company or corporation that may hereafter violate the provisions of section 137.185 shall upon conviction be deemed guilty of a misdemeanor.”

What in the world are the elected representatives of the people of Missouri thinking during decade preceding the “Gay ‘90s”? What was so bad about the way the land was being transferred, the public wanted a law to fix the problem? Three words, metes and bounds. With this law, the survey becomes the description. Just like with a subdivision plat, the survey becomes the description. Just like with the PLSS, the survey becomes the description. With a survey plat the Assessor has something tangible showing the land and area being assessed.

Part of the reason for the development of a PLSS was to get rid of the metes and bounds system. A system that leaves gaps of undesirable land between overlapping and contentious claims for the desirable lands. The aliquot part divided-up the good land with the bad. Tillable land and timberland sold at the same price. After the Civil War, Missouri’s cities and towns began to

flourish. Land began to be developed, and the PLSS was being trampled. This law was an effort to save the cadaster. The statute just happens to have more flaws than does a metes and bounds description.

All the sarcasm and doubt aside, what does this law, what could this law, mean for the practicing Missouri Professional Land Surveyor? Presumably, if someone owns the Northeast Quarter of the Northeast Quarter, and they want to sell the East One-Half. The East One-Half of the Northeast Quarter of the Northeast Quarter is a description of property made in the usual manner of describing lands in accordance with the surveys of the general government. The aliquot part describes the land without the benefit of a survey, even though the parcel is less than the requisite sixteenth of a section. Should the owner of the Northeast Quarter of the Northeast Quarter want to sell, “from here to yonder”, they must hire a surveyor. The surveyor will survey and describe the parent tract (Northeast Quarter of the Northeast Quarter is a perfectly fine description, and way better than a metes and bounds description). The plat will show the location of the two parcels within the confines of the parent tract. This means the section must be properly subdivided and the boundaries of the Northeast Quarter of the Northeast Quarter established. Each parcel is numbered, and the area of each parcel indicated. Record the plat and the good and valid property descriptions are Tract 1 of survey recorded in County Deed Records Plat Book 22 at Page 17, and Tract 2 of survey recorded in County Deed Records Plat Book 22 at Page 17. If the client prefers, name the survey, “The Survey of Ol’ McDonald’s Farm”, then the description becomes “Tract 1 of the Survey of Ol’ McDonald’s Farm as recorded in Plat Book 22 at Page 17 of the County Deed Records” Try to avoid words like, “the Subdivision of Ol’ McDonalds Farm”. County Recorders will try to make it Subdivision Plat and subject to Chapter 445 RSMo, including appropriate fees.

A long time ago, way back in private practice. I worked for Smith and Company in Poplar Bluff. We had a contract to survey, and divide a 170 acre parcel of land. The seller and buyer had agreed on some odd boundaries, center of a power line easement, top of a ridge, middle of a creek. The Parent Tract was described as aliquot parts of two sections. Two property descriptions were put together, typed out, double-spaced, each took about 5 pieces of legal size paper to put the descriptions together. They were written, read, checked, corrected, re-read, re-checked, corrected, read while another person followed the lines and calls on the plat,

(continued on page 34)

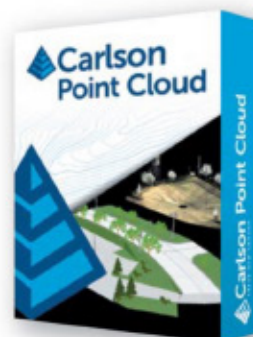
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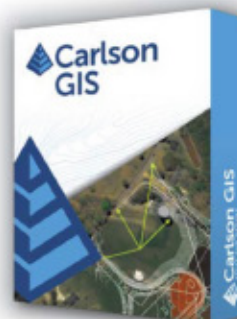
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RSMo 137.185 (continued)

corrected. The person that first read the description traded places, and followed the lines and calls on the plat while the other read the description, corrected, until there was no mistake, there were no mistakes, and then, checked again. I was proud of my part in putting this document together. I had never worked so hard, and so long, on so long a property description.

A few years later, I was asked to speak to some survey students at Three Rivers Community College about property descriptions. I found copies of the deeds made from those long property descriptions, and thought these will make great examples of a metes and bounds description. The actual deed didn't look as good as I thought it might, it was a copy of the property description, double spaced and all, somehow shrunk down in size, and superimposed as "exhibit A" on the deed document, but it did not look like enough pages were copied. A whole bunch of lines that went, "...South, so many degrees, minutes, and seconds East, along the top of the ridge, a distance of so many feet, to a five-eighths inch diameter rebar on the high point of the ridge; Thence, South so many degrees, minutes, and seconds East, along the top of the ridge, a distance of so many feet, to a five-eighths inch diameter rebar on the high point of the ridge; Thence,...(and so on and on)" seemed to be missing.

Page three had missed being attached to the deed. Had the survey described the parcel as; Tract A, and Tract B, it would have been a lot more difficult to have messed up the description. I could not believe that once that document left the surveyor's office, no one else cared about the description.

Not the seller, not the buyer, not the title company, not the title attorney. Then again, after the document leaves the surveyor's office, who else examines the description that can really follow that description. If it said Tract A on the survey plat and Tract A on the description, everyone can follow,"... uh, look, you're buying that..." What happened in this instance, no one cared that much about the words on the description, even when they were inserted onto the deed, they had a survey plat to look at, but the deed did not mention the survey. The description in the deed will not close by most of a ridge, down a power line, and part of a creek.

Like the law in Chapter 446, 137.185 has, is, largely forgotten, but there are counties in Missouri trying to remember, using 137.185 as the foundation for new ordinances and regulations. Newly classified First Class Counties, with new Planning and Zoning Departments, are looking through the statutes and

asking, what does this mean? As Missouri State Land Surveyor, I received several calls concerning 137.185. Sometimes, from the new Director of a new Planning and Zoning Department, asking for my interpretation of the statute, which is why I tried my best to interpret the statute. A couple Recorder of Deeds called to tell me this new appointee, in a new P&Z Department, was trying to change surveys, and the rules for recordation. No one was saying anything about metes and bounds descriptions being replaced with Lots, Parcels and Tracts. I was not saying anything bad about a local ordinance that creates a better, stronger, cadastral layer. I was accused by one county official (not a Recorder) of supporting a surveyor's full employment bill. "Uh...it's not a bill, it's been the law since 1889", was not an argument that resonated. If someone called me in opposition to what was going on in their Planning and Zoning Department, they did not want to listen to me trying to defend 137.185. Most people, whether trying to implement, or stand in the way of implementation, did not understand the reason this law is on the books. Did not understand, and did not care, this law ties the description to the survey, and the survey to the description, in the same manner as a subdivision plat. P&Z liked it because they would have a plat to look at as the land is improved.

It was put in Chapter 137, by design or by miscalculation, where it immediately fell into something unusable, and unenforceable. Had this statute been put in Chapter 445, along with all the other laws about plats and subdivisions, Recorders would have understood a plat must be recorded before the description of Tract A, is valid.

Section 137.185 justifies all sorts of Planning and Zoning regulations in First Class Counties. Live in a County with P&Z, and there are regulations about what gets surveyed and platted, and when it gets surveyed and platted. At the heart of the regulation is 137.185, 137.185 breathes life into the regulations. Section 137.185 was not written for First Class Counties, it was written before county classification. Section 137.185 can be used, not as justification for, but as the reason a Professional Land Surveyor must record a survey that creates a new parcel and describe the parent tract as Parcel 1, and the scion as Parcel 2.

Darrell Pratte is the former Missouri State Land Surveyor. On some days he thinks and remembers, other days he thinks he remembers. The preceding is from one of those thoughtful days. 



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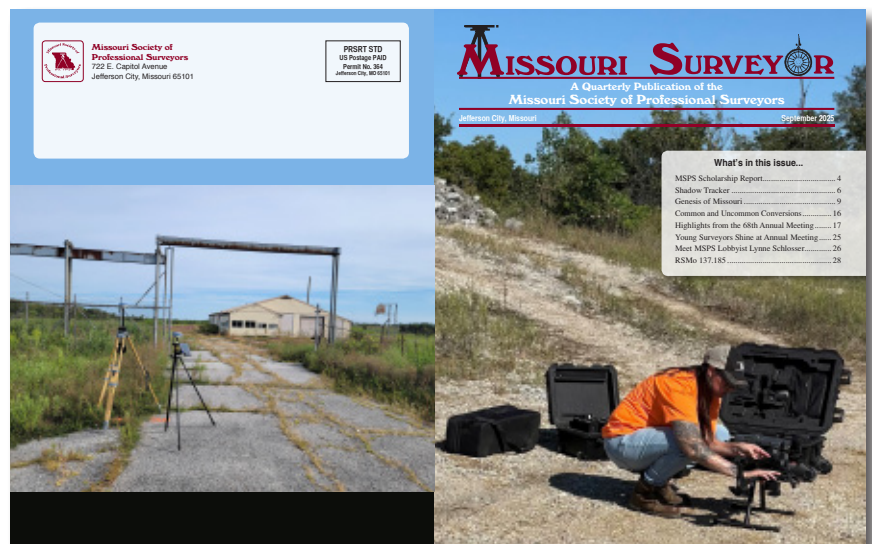
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