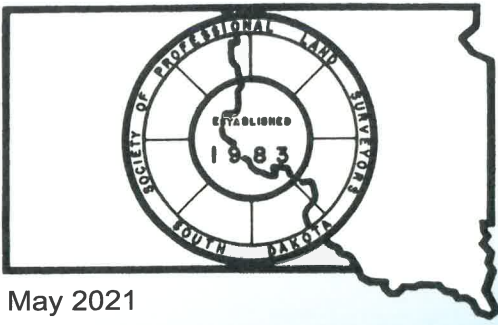


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BACKSIGHTS & FORESIGHTS

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Photo Credit: Travis Jacobson

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PUBLICATION DEADLINES

<i>Material Cutoff</i>	<i>Publication</i>
January 15	February 1
April 15	May 1
July 15	August 1
October 15	November 1

Backsights and Foresights

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Letter from the President.

This quarter I would like to talk about chapter membership and the 2022 & 2023 conventions.

Our overall membership numbers are low in 2021. That is most likely due to the lower attendance of the virtual convention vs. the normal convention routine. The board hopes that a normal/virtual hybrid convention in Deadwood this year will return our membership numbers to a pre-covid level and hopefully add some members from the technician and out of state categories who wouldn't otherwise travel to attend the convention. Information about the convention will be coming soon.

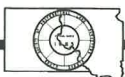
The West River chapter is planning and hosting the 2022 Deadwood convention and the Big Sioux Chapter will be planning and hosting the 2023 convention in Sioux Falls. Please consider attending chapter meetings and help plan these 2 events.

Stay safe and stay healthy.

Jon Collins, SDSPLS President

Looking for Presenters for the Convention!

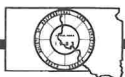
We are looking for presenters for the SDSPLS 39th Annual Convention, January 5-7, 2022 in Deadwood, SD. If you or someone you know is interested in presenting, please let me know. We are looking for presenters to cover topics including business management, accounting, leadership, marketing, all areas of surveying and anything else you can think of! Remember you can earn extra PDH's for presenting! For more information please contact Alesha Limbo at directorsdpls@hotmail.com or 605-645-5128



In Attendance: President Jon Collins, Past President Travis Jacobson, President-Elect, Kary Gregoire, NSPS Director Linda Foster, Treasurer Cory Biegler, Secretary Andrew Kangas, West River Chapter President Brad Limbo, Big Sioux Chapter President Beau Koopal, David Feilmeier, Don Jacobson, and Executive Director Alesha Limbo

1. Meeting called to order at 11:06 a.m. (Central) by Jon Collins.
2. Acceptance of Agenda: No new business added. Motion by Biegler to approve the agenda as presented, 2nd by Koopal - Motion approved.
3. Secretary's Report – Alesha Limbo for open secretary position - Written minutes from the Annual Meeting on January 6, 2021 and Board of Directors Meeting on January 5, 2021 were submitted. Motion by Travis Jacobson to approve meeting minutes as submitted, 2nd by Biegler - Motion approved.
4. Treasurer's Report – presented by Biegler: Written report submitted. Biegler and Alesha gave an update on the transition to QuickBooks and the accounting software and summarized the setup of the treasurer's report. There was discussion on changing the fiscal year to help more closely matchup the income with expenses. Motion by Koopal to approve the treasurer's report and add an item to new business for transferring funds from Raymond James to the scholarship account and from the scholarship account to the general checking account and to discuss amending the by-laws to adjust the fiscal year, 2nd by Brad Limbo - Motion approved.
5. President's Report – Jon Collins: No written report submitted.
6. Committee Reports:
 - a) Education – Kristi Goehring: No report.
 - b) Legislation – Gary Andersh: No report. Don Jacobson gave a summary about legislation and the legislation process.
 - c) Design Professionals' Coalition – Donald Jacobson: Submitted written report.
 - d) Professionalism & Practice – Dean Scott (absent): No report.
 - e) Public Information – Ruthie Wetzel (absent): No report.
 - f) Membership – Adam Thompson (absent): Written report submitted.
 - g) NSPS – Linda Foster: Written report submitted. Berkland reported the NSPS is currently looking at the FAA regulations that are being proposed for drones. The NSPS with working on an exemption for surveyors.

- h) Young Surveyors – David Feilmeier: Written report submitted. Currently working on ways to draw up members, including virtual happy hours, student competitions.
 - i) Trig Star – Chad Dodds (absent): No report submitted. Brad Limbo commented that no event was held last year and he wasn't sure if an event would be held this year. He mentioned that Chad would like help with Trig Star on the east side of the state.
7. Chapter Reports
- a) West River – Brad Limbo: No report submitted. They are working on details for the re-monumentation of US Locating Monument(s) in Deadwood. They are meeting in Deadwood on April 29th to work out more details. They hope to have the project complete in 2021 and have a dedication as part of the 2022 Convention in Deadwood.
 - b) Big Sioux
Beau Koopal: Written report submitted. Held a meeting on April 6th in Brookings. There was discussion on the Big Sioux Chapter helping plan the 2023 Convention that will be held in Sioux Falls.
 - c) Missouri River – Don Jacobson: No report submitted. No meetings were held in 2020. Suggestion was made to dissolve the chapter due to lack of membership.
8. Old Business
- a) Corner Records/On-line Records System – Linda Foster, They are working on an electronic platform for the corner record system. Linda has been in contact with ESRI. Attached are proposed changes to the by-laws for the Board to review. They have put together proposed legislation records, which are ready to be reviewed by the board. The SDBOTP would manage the system and the cost of the system would be added to the licensing fee. Uploading and downloading corner records would be free.
 - b) Low Distortion Projection (LDP's) and 2022 Datum Change: Foster and Collins, Design with 26 zones was submitted to NGS by the deadline. NGS is reviewing the submitted design and will provide comments.
 - c) Legislative Planning: Mike Behm with the SD DOT was conferenced into the meeting. He discussed the proposed legislation for amending the SDCL for eliminating the "US foot" and adopting the "international foot". He also discussed proposed legislation for amending the SDCL to reference the 2022 Datum Change. Board is to review the proposed legislation and provide comment. Travis Jacobson asked if the old legislation could be saved and have



the new legislation added as a new section. This way the past legislation is easily accessible.

- d) 2022 Convention – Jessica with JT Virtual Meetings was conferenced into the meeting and she gave ideas on holding a hybrid type convention with in-person session and an option to attend virtually. Attached is a quote from Jessica to setup and manage a hybrid type convention. There was discussion on recording the sessions and allow access later for purchase. There was also discussion on recording the technical sessions and making the recordings for sale to generate additional income for SDSPLS. Andrew Kangas made a motion to hire JT Virtual Meetings to come and run the 2022 convention as a hybrid type convention for a price not to exceed \$5000. 2nd by Limbo – motion approved. There were ideas discussed for events and attractions to have at the 2022 Convention.

9. New Business

- a) 2021 Membership Numbers – There was discussion on membership, generating additional members and the requirements to qualify as a life

member. It was suggested to remove the 9 year requirement to qualify for life membership.

- b) Amending the Fiscal Year: Collins, There was discussion on amending the by-laws to adjust the fiscal year to try match when a majority of the income is generated and expenses are paid in the same year.
- c) Transferring Funds: Brad Limbo made a motion to transfer \$2500 from the Raymond James scholarship checking account to the scholarship account and then transfer \$11500 from the scholarship account to the general checking account. 2nd by Foster – motion approved.

10. Next Board of Directors Meeting: July 16, 2021 (virtual), time TBD

11. Meeting adjourned at 3:15 pm (Central) by Jon Collins

Respectfully Submitted

By: Andrew Kangas, Secretary

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The Quest for the Highest Point

JODIE HARTNELL

02.08.2021



Khim Lal Gautam and Rabin Karki at the Ice Fall of Everest. Gautam looking ahead to find the best route through the Ice Fall. In April of 2014, 16 Climbing Sherpas lost their lives in an avalanche in this area.

Background: Lola Pass and Peak, just south of the Everest summit, at about 21,000 feet above mean sea level.

Determining the elevation of the world's most famous mountain is not as simple as taking a GNSS receiver to the summit. The newest elevation measurements involved far more: advances in GNSS, refinements in regional geodesy, and intrepid surveyors who faced perilous conditions

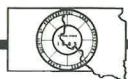
"We faced weather problems and wind turbulence at the South Col, our last stop before the summit on May 20, 2019. And we discovered there were not enough oxygen bottles stored at the South Col for us, due to the negligence of the expedition-operating company who had the responsibility for managing oxygen and other accessories. The main Sherpa of the team, Tshiring, told me that the mission was almost impossible and requested me to descend to the second camp. Having previously climbed Mount

Everest, I knew that the mission would fail if we descended. I felt heart-broken at the prospect of giving up. I said to Tshiring, "No! I cannot give up this historic mission at this final moment."—Chief Survey Officer Khim Lal Gautam, Survey Department of the Government of Nepal



To access this extreme terrain, a helicopter transported surveyors to set a GNSS reference station antenna on this boulder near Mount Makalu, at about 13,000 feet above mean sea level. This is the area of Makalu Barung National Park, Sankhuwashabha district.

Gautam and his team would continue up the mountain, by borrowing additional oxygen bottles. His team and their equipment performed flawlessly during the limited window for measurements despite brutal conditions on the summit. Gautam would also face a near-death situation during the descent—his first-hand account follows. But there is a backstory to this historic survey that began with broader geodetic goals in mind. GPS and GNSS receivers have been carried to the summit on many previous occasions, but never before by two successive survey teams from two countries, with the surveys registered to newly refined geodetic models and reference frameworks, and the results jointly released.





There were two surveys: the Nepal survey in 2019, and the Chinese survey, shown here at the summit in May of 2020. The GNSS antenna is at the top of the rod along with some prisms and flagging.

Recently announced by China and Nepal, the latest elevation for Mount Everest is more than just a number; it represents the culmination of more than 150 years of progressive advances in surveying methods and technologies since the mountain was first measured. The quality of the results is a function of how well the geodetic models of the region and earth have been refined. Few such technical details have been discussed in mainstream news since the announcement of the new elevation, but surveyors know there is more to such an endeavor than a climb and GNSS session.

The Arc of Time

The Great Trigonometrical Survey of India spanned the years—in one form or another—from 1802 to 1871. It sought to measure and define on the ground a single arc of longitude from the southern tip of India to northern reaches in the Himalayas; this was to serve as a baseline for mapping and surveying of the (then) British Colony. A series of towers were erected along the route and 400-pound theodolites were hauled by crews that sometimes numbered

in the hundreds. While reducing triangulation notes in 1852, an office technician noted that one peak (known simply as PEAK XV at the time) appeared to be the tallest ever recorded, at 29,002 feet. While the peak already had several local names, it was christened “Mount Everest” in honor of Sir George Everest, the survey leader at the time.

Optical instruments and triangulation were the only practical methods for determining an elevation of the mountain at the time. Since, instruments have gotten lighter and reference marks were established closer into the peak, but for over a century the method and tech changed little—until GPS came along. In the 1990’s, GPS was brought to the summit on several occasions, mostly Trimble systems at the time, and the company has continued to provide equipment for many of the subsequent surveys.



For the Chinese survey in 2020, a network of temporary CORS was also set up around the mountain. In an unrelated development, the first 5G service was established near the mountain around the same time which aided in team communications.

Notable among these surveys was the 1998 American Mount Everest Expedition, which explored multiple scientific goals: GPS played a part in these as well. In 1998, Charlie Trimble, (founder and president of the company that bears his name) said, “The

work being done on the mountain can help us understand more about the world around us, how it changes and how the body works,” “This information can be applied to everyday life. The science on the mountain above 29,000 feet will have value to those of us who live at sea level.” Four American researchers climbing Everest were fitted with bio-paks recording how their bodies reacted to the environment. That information, coupled with positioning data from the GPS receivers, provided researchers at the base camp with the most detailed information ever compiled on the effects of altitude and climbing. On the survey side of the expedition, GPS data was collected at four points on the mountain—Kala Pattar, Base Camp, South Col, and the Summit—to precisely track the slow geological movements of the mountain over time.

In 1999, the U.S. National Geographic Society expedition determined, with Trimble gear, an elevation of 29,035 feet, but in such early GPS surveys of the summit the precision was stated as +/- 6 feet (a mix of expected error and geodetic reference uncertainty). Other surveys concurred closely in 2005, 2013 and 2015. During this same period, multiple entities such as the USGS and the science non-profit UNAVCO established reference stations throughout the region to study earthquakes and plate tectonics. These stations also provided reference data for post-processing of several summit surveys.



An extensive network of GNSS observations were done to support the update of the geodetic reference framework for the area. A Trimble R9 receiver and Zephyr Geodetic antenna at SILICHE, Sol Khumbu, Eastern Nepal, the Southern part of the Mt Everest. As we know, GPS/GNSS only yields an ellipsoid height; a geoid model, derived from gravity observations, must be applied to derive an elevation. Any elevation determination has to also take into account a geodetic reference, and in the case of the earliest measurements, this might involve carrying reference elevations from distant shores. Over many decades, gravity meter measurements were mixed in with GNSS campaigns. Airborne and satellite gravity (i.e., GRACE and GOCE missions) also helped refine the geoid models. Yet there was still some disagreement as to an official elevation, as some say the true point is the apex of the rock, and others the highest point of the ice above it. To determine the top of the rock beneath the ice, ground penetrating radar (GPR) must be deployed, as it has on several occasions.

Fast forward to December 8, 2020, when the results of two surveys—29,031.69 feet—represented a gain of about 2 feet over the widely accepted previous elevation. The Sagarmatha (Everest) Height Measurement project, undertaken by the Survey Department of Nepal, summited in May of 2019; the Department of Land Surveying and Mapping of the Ministry of Natural Resources of China climbed a year later. Each team established networks of GNSS reference stations nearby, brought high-precision GNSS and GPR to the summit, and could now process the observations aligned to modernized reference frameworks. The science and technology had advanced to the point where this dual effort could yield the most precise elevation to date, but it all hinged on some hearty

surveyors and Sherpas performing one-shot rapid surveys on a perilous mountain.

Drivers



GNSS Antenna at the base of Kalapahhar, about 17,500 feet above mean sea level. One of the temporary project CORS stations, it is 8km from the summit.

The deadly earthquake that struck the Himalayas in 2015 brought with it fears for the stability of the mountain. And indeed, much of the chatter about these two surveys mentioned the earthquake as the main driver, yet this is not entirely true. Multiple studies using satellite-based radar and optical triangulation surveys of the mountain indicate there was minimal deformation. It had more to do with a desire to modernize the geodetic infrastructure of Nepal and build in-house expertise and stewardship of the mountain, which saw the ambitious campaign by the Survey Department of Nepal begin several years ahead of the eventual summit measurement. With this modernization, Nepal would become the foremost expert on the geodesy of the mountain and the region. This is a source of national pride as they had previously relied a lot on outside entities for such expertise. Less is known about the drivers for the Chinese survey, but it was something that had been planned for many years. A diplomatic visit to Nepal in late 2019 by Chinese leader Xi included discussion about a minor disagreement about the elevation of Everest. Nepal had just completed their

survey, and China had theirs in the works. The two countries agreed to delay announcement until both were complete and the respective surveying entities could come up with an agreed value.

Gear

Again, as for past surveys, Trimble stepped up to provide gear for the summit as well as the geodetic network. “Trimble India provided us a NetR9 base receiver, two R10 (GNSS rovers) for the survey of the peak, DiNi digital levels, S9 total stations that we used to measure our baselines for the reference network, and TBC (Trimble Business Center Software) for GNSS post-processing,” said Susheel Dangol, the coordinator and Chief Survey Officer of the Sagarmatha Height Measurement Secretariat.

“We established a network of 298 survey marks around the area of the mountain and did gravity measurements and GNSS on each,” said Dangol. “[Trimble] DiNi digital levels and trigonometric leveling with total stations were used to establish precise elevations on a subset of these marks to serve as primary points. And we did GNSS observations on each for horizontal positions.”

Eight temporary continuous operating reference station (CORS) receivers were set up on and around the mountain at elevations between 16,000 to 20,000 feet—several by helicopter. This campaign was long static sessions, constraining to the national CORS network. Nepal’s CORS network was built in cooperation with the international scientific community to study the plate tectonics of the region. This large-scale geodetic undertaking was phased over multiple years and an estimated final cost of nearly \$1.3 million.

Nepal Survey says they were pleased with the R10 GNSS rover chosen for the summit; they found it light, compact and had no issues during the climb and numerous

training and test sessions. Reliability was key; they would only get one chance in the narrow time window at the summit. The R10 weighs just over 2.25 lbs. and operates in temperatures as low as -40°F, a good fit for Everest's summit at 3:00am in May.

The Chinese team also set up a CORS network using a mix of multiple manufacturers' gear. It was reported that several different Chinese rovers were carried to the top, though only one has been confirmed by name (a P5 from CHC Navigation). One of the few photos released by China shows a GNSS antenna on a rod, along with what appears to be an array of prisms (and a lot of flagging for visibility from afar). It is highly likely that laser measurements were also employed.

Both teams collect just under 2 hours each of GNSS observations, but with multiple constellations, providing robust post-processing results.

The Nepal Team Climb

Chief Survey Officer Khim Lal Gautam, Survey Officer Rabin Karki, lead Sherpa Tshiring Jangbu and two additional Sherpas set out up the mountain, choosing the South Col route. The most popular route, it's the same one Sir Edmund Hillary and Tenzing Norgay took for the first ascent in 1953. This was Gautam's second ascent, having been the principal of the "Nepal Civil Servant First Mount Everest Expedition" in 2011.

May is one of the best months to climb, making it also the most crowded time on the mountain; there can be backups of climbers near the summit. For this reason, Gautam chose to make the final push in the middle of the night, so they could have the small summit area to themselves to do the GNSS and GPR measurements.

"By the morning of May 21, we were able to arrange for the required additional oxygen at the South Col, with the help of other Sherpas," says Gautam. "At around 2 PM

the same day, I decided to start our final journey from South Col to the summit. I knew it usually took climbers 10 to 15 hours to reach the peak of Mount Everest from South Col depending on the strength of the climbers."

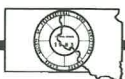
"When we summited Everest at 3:00am, initially there were no other climbers," said Gautam. "The first climbers we met were two Polish climbers. About halfway through our GNSS measurement, we witnessed a large crowd of climbers approaching." The impending crowd and the harsh conditions meant for a narrow window for measurements.

Measurements

One of the two Trimble R10's was set up on a mini-tripod with a quick-release attachment. "The tripod was specially designed by me to work on Everest," says Gautam. "This tripod is lightweight and short, allowing for greater stability in the wind. It had a locally designed special type of metal screw, one foot long, enabling us to fix it in the packed snow at the summit."

Working on the top of Everest is a challenging task; the conditions were rough throughout, but thankfully, the conditions did not deteriorate further during their work. The direction of the strong winds was random, so to further stabilize the tripod the team took turns laying down on the snow to hold it.

The R10 had been pre-configured to begin recording static observations on power-up, as removing heavy gloves to operate a controller keyboard could be dangerous. Unfortunately, lighter gloves were required to operate the data controller of the GPR receiver, which contributed to the frostbite that some of the team experienced. "The area of the summit is about five to six meters from side to side," says Gautam. "We did not have any difficulties with the GNSS or the GPR: the instruments were carried in insulated bags and we did not



have to charge any batteries. There was a fully charged battery in the R10 and we had spares.”

While the R10 GNSS was collecting data, they performed the GPR observations to determine the depth of the snow and ice on the summit at that time. The GPR was a Geophysical Survey Systems, Inc. (GSSI) SIR 4000, provided by the U.S. National Geographic Society. They scanned the surface around the top, an area of about 50-70 square feet, for about 10 minutes. After having worked for about two hours, the crowds of climbers approaching the summit increased and it was difficult to deter them from coming near the working area, and they had limited supply of oxygen, they decided to descend. In many ways, the descent can be the most dangerous part of the climb; the climbers are exhausted from a long day in the “death zone” above 24,600 feet. Up until that point the team had fared quite well, apart from fatigue, numbness, and some cyanosis (a level of frostbite). But Gautam was about to face personal peril. “I became unconscious at the altitude of around 27,000 feet and lay down on the blue ice near the South Col,” said Gautam. “I stayed unconscious for about two hours and only woke up after an unknown climber kicked me from behind—maybe he thought I was already dead. After I woke up, I found myself alone. As we were on the descent and near the camp, Tshiring possibly concluded that as we were in a less risky area, I was simply lagging behind and would come to the South Col eventually by myself. This long unconsciousness cost me part of the tip of my left toe forever, due to frostbite. Normally, when a climber loses consciousness and assistance is not timely, it is difficult to wake up again. Luckily, I woke up. I feel this was the miracle of my life.”

Due to weather conditions, the surveyors and Sherpas would spend a total of three

nights above the death zone—usually climbers spend only one. But without further incident, they returned safely.

Joint Announcement

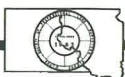
On December 8, 2020, a live virtual announcement event was held.

Representatives from Nepal and China simultaneously tapped keys and the new elevation appeared on the shared screen: 8,848.86m (29,031.69 feet). It had been over 18 months since the Nepal survey, and more than six months since the Chinese survey. And while there were certainly technical details to work out between the two teams, like geodetic references, much of the delay was likely due to planning the details and messaging for the joint announcement. “There has been splendid coordination between all of our people,” said Dangol. “We have very hard-working teams who had to survey in harsh conditions. Much of the fieldwork for the regional geodetic survey was also mostly at high altitudes and in inclement weather. The project was a matter of national pride for Nepal and a prestigious undertaking for the Nepali government. I feel very proud that we were able to complete it successfully. This is an amazing team.”

Gautam is honored to have been entrusted with leading the summit team and overseeing the survey. And indeed, it was his experience, commitment to the mission, and ability to act decisively that brought about the success of the Nepal survey. He says this expedition is a testament to the skill, tenacity and honor of surveyors

worldwide.

*Jodie Hartnell is geographer, chef, and freelance writer. Born in the UK, Jodie studied geography on both sides of the Atlantic and has settled in beautiful British Columbia. @hartnelljodie
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The Land Surveyor's Guide to the Supreme Court of

South Dakota – Part 34 – 1977

This article represents the thirty-fourth in a series of excerpts from a book prepared by South Dakota licensee Brian Portwood. The complete book can be obtained in PDF form at no charge, either from SDSPLS or directly from the author (bportwood@mindspring.com). It covers 120 years of historic South Dakota cases, answering fundamental land rights questions of potential interest to land surveyors, which are being presented in chronological order here in Backsights & Foresights.

How important is it to choose plat language wisely?

Piechowski v Case (1977)

While we have already seen the Court come to the defense of public land rights of various kinds, ranging from the access rights associated with the section line right-of-way to navigability in the context of riparian rights, here we will watch as the Court protects yet another variety of public rights, that are created through the platting of land for purposes of conveyance. Similarly, we have also repeatedly observed that any party who takes on the duty of preparing language for conveyance purposes, including the language used to describe the location and extent of the rights conveyed, is responsible for insuring the clarity and completeness of such language, and here we look on as the Court extends that same principle to the depiction of land rights through a statement regarding a proposed use of land appearing on a plat. Though plats have obviously been relevant to many of the cases reviewed herein as evidence, the specific content of a particular plat has been the main focal point of controversy in only a relatively small number of the land rights cases that have come before the Court, so the case we are about to review stands as one of only a few important examples of the potential significance of the specific words that are used to label particular areas or items that appear on a plat. Although land surveyors typically think of plats primarily as a means of graphically displaying boundaries, the great majority of all legal disputes over the content of a given plat do not involve any boundary issues, such disputes are far more frequently centered upon either the validity or the character of the various land rights pertaining to some portion of the platted area. Most such conflicts over platted land rights, like the one reviewed here, result from the use of ambiguous language, which causes confusion over the intended or allowable use or uses of a certain portion of the platted area, and topics such as dedication, vacation, easements and covenants are often implicated, indicating the importance of understanding that plats are intended to accomplish far more than just illustrating boundary locations. All those involved in creating a plat and carrying it through to a state of legal completion therefore need to appreciate the value in diligently addressing the intended use or uses of the many areas depicted on a typical plat, and while the subdivider is ultimately responsible for the manner in which the intended division and use of his land is depicted, the professionals who are employed to put his intentions into effect, such as the land surveyor, have a professional duty to assist the



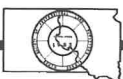
subdivider in creating a problem free plat, by applying their professional knowledge. The most essential point to always be cognizant of is the fact that any words placed on a plat can legally operate to create land rights, so all such words must be chosen with great care, with the specific objective of clearly and fully expressing the intentions of the subdivider for the future use of the relevant land, when identifying any areas or labeling any easements shown on a plat. In addition, this case presents a fine example of the manner in which dedication operates to simultaneously create public rights and limit private rights, since the platted area deemed by the Court to have been dedicated here is not only thereby endowed with an affirmative easement that benefits the public, at the same time that area is also effectively impressed with a negative easement, restricting its use for any private purpose.

1963 - Case was the owner of an unspecified amount of land lying along the north bank of the Missouri River in Yankton County, and he decided to create a residential subdivision. Riverside Acres included 8 public streets, forming a typical rectangular grid pattern, 6 blocks of typical rectangular lots, and 1 block that was identified only as a "Park and Commercial Area", which was situated in the southwest corner of the platted area, and occupied 12 acres fronting on the river. The plat was approved and recorded, along with the covenants and restrictions that applied to this new subdivision.

1964 to 1973 - During this period, Case sold most of the platted lots to various parties, including Piechowski, so by the end of this period many of the lots were occupied by single family homes, in accord with the restrictive covenants that had been created to govern the use of all of the platted land. The Park and Commercial Area, which consisted of unimproved wooded land, remained entirely undeveloped during this period, and it was presumably treated as a nature area, used to an unspecified extent for activities such as walking their dogs by some of the lot owners and possibly by others.

1974 - Case agreed to convey all of his remaining interest in Riverside Acres to Mayer, by means of a contract for deed. Whether or not Case conveyed any other land adjoining the subdivision to Mayer is unknown, but Mayer had plans to make further use of some of the land within Riverside Acres.

1976 - Mayer developed a plan to subdivide the Park and Commercial Area, proposing to create 14 lots within that area, upon which duplexes and apartments would subsequently be built. Mayer's plan reserved 2 acres of that area as a public park, but the area that his plan allocated for that purpose had no river frontage. Mayer submitted a preliminary plat showing his proposed use of the Park and Commercial Area to the county commissioners for review, but when Piechowski and several of the other owners of lots in Riverside Acres learned of Mayer's proposal, they objected to it, blocking approval of his plan by the county. Case and Mayer evidently refused to change their plans and persisted in their quest for approval of the plan as it stood, so the lot owners filed an action against



them, seeking to have their plan judicially nullified.

Piechowski, as the leader of an unspecified number of owners of lots within Riverside Acres, argued that the Mayer plan represented a violation of the covenants and restrictions that were applicable to the entire existing subdivision, and the lot owners had the right to demand that all such covenants and restrictions must be honored, so the lot owners had the right to prevent the proposed use of the Park and Commercial Area from taking place. Case and Mayer argued that the Park and Commercial Area had always been intended to remain available for future development, so the proposed use of that area did not represent a violation of any covenants or restrictions, and Mayer should be allowed to make free use of that land, as the fee owner of it, regardless of how the lot owners wanted that tract to be used. The trial court decided that the recorded plat, along with the declaration of covenants and restrictions, had legally bestowed the right to control the use of the Park and Commercial Area upon the lot owners, as an appurtenant right, legally connected to each of their lots, so Case and Mayer had no right to subdivide that tract over the objections, or without the full consent, of all of the owners of the lots within Riverside Acres.

This case essentially marks the arrival of the era of modern platting standards, which of course are intended to create both improved security and better living conditions for those who acquire platted lots, while elevating the level of responsibility placed upon those who seek to leverage their land, and maximize their personal profit, through the creation of a subdivision. The spirit of all such laws related to platting, the Court understands, is the protection of the welfare of the public as a general matter, through the prevention of unacceptable shortcuts in platting and developing land, and similar abuses, that have historically been perpetrated, by some of those who deal in land as a business, upon innocent buyers of subdivided land. As most surveyors are well aware, platting land under the modern standards can be quite onerous, even to the point of discouraging some developers from creating subdivisions, and preventing subdivisions from being created in certain locations, but the Court has no role in formulating such limitations on development, the Court focuses solely on protecting those land rights that have come into existence under the law, amplifying the already heavy legal burden upon grantors, when they elect to become subdividers. In the eyes of the Court, platting is not just about creating lots and boundaries, or mapping out measurements and dimensions, the larger goal of platting is the creation of original land rights, which accrue to the benefit of every lot buyer, so the Court places particularly strong emphasis upon defending the right of a grantee of a platted lot to rely upon the plat of the subdivision in which he resides, not merely as a source of spatial data and numerical information, but as a basis for the creation of a community. Case was presumably aware of all this, but his decision to convey all of his remaining interest in his subdivision to Mayer, long after the land had become well developed, indicates that he did not fully realize that he actually had no meaningful interest in any of that land left to convey. Given the view of platting held by the Court, under which a plat represents far



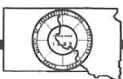
more than a mere map, its not surprising that the Court takes the position that everything shown on a plat is presumed to be an essential part of the subject matter of the plat, unless the contrary is clearly noted, and every object and all of the text that appears on it is presumed to appear for a reason, making all of the plat's content relevant to every grantee, and making that document a legitimate source of justifiable reliance. So whether he realized it or not, Case's decision to include the area in controversy on his plat, and to label it as a park, had very serious legal implications, severely limiting any potential future use of that area, particularly when viewed in context with the declarations that he published and recorded along with the plat. Case may well have believed that he could label the portion of the platted area at issue as a park on a temporary basis, and simply allow it to remain in it's natural state, until such time as he decided to make some other use of it, but in fact as soon as he sold even one lot shown on the plat, he had sacrificed his right to utilize the park area for any other purpose whatsoever, because as the Court explained, he had granted the right to rely on the perpetual existence of the park to each of his innocent lot purchasers:

"The Declarations drafted by appellants are captioned "Declarations of Restrictions and Covenants to Run with the Land" ... Appellants main argument for reversal is that the Declarations are ambiguous ... they contend that the ambiguity should be resolved in favor of their right to the free use of their own property ... The Declarations contain the following provisions ... "The area designated as Park and Commercial Area is to be used as a public park and for concession type commercial units" ... Language is ambiguous when it is reasonably capable of being understood in more than one sense ... As platted, the park area adjoins the Missouri River ... A potential buyer of a lot in Riverside Acres could reasonably observe that the park area is included as a part of the plat ... and that the park area not only provides convenient access to the river along a platted street but also provides a recreational area ... It is reasonable to view the inclusion of the park area by the subdividers as an added inducement to favorably influence potential lot purchasers. Each owner bought with notice of, and was entitled to rely upon, the material in the plat ... Each lot purchaser ... was entitled to enjoy as a benefit to his own lot ... the other property in the plat, to the end that the subdivision would be developed according to the comprehensive development plan ... The Park and Commercial Area is an integral part of the general plan ... we regard the real purpose of restrictive covenants ... as to increase the desirability of these lots as residences ... To allow residential use of any kind on eighty per cent of the park would materially interfere with respondent homeowners ... The area is to be used as a public park."

One important concept expressed by the Court, which was evidently not understood by either Case or Mayer, is the fact that covenants are appurtenances, which



are a fundamental part of each lot, they are not merely restrictions upon the lot owners, they also represent benefits to the lot owners, and they are fully binding upon the subdivider, just as they are upon each of the lot owners. Since the declarations confirmed the indication given on the face of the plat that the area in dispute was meant to be a park, and nothing else, there was no way either Case or Mayer could successfully assert any right to build private structures of any kind within that area, much less carve it up into additional lots. Buildings could be built within that area, but only to enhance and support the park as public ground, not for any private purposes, as stipulated in the quoted words of the declaration, so that entire area had been effectively dedicated to public use. The critical mistake that had been made by Case, was failing to reserve the area in question as an outlot, which would have left it available for future development, by identifying it as such on the plat, instead of labeling it as a park, which amounted to an inducement to prospective purchasers, particularly those who bought the lots directly across the street from the park area. Since Case had been the party responsible for the creation of the plat, and the grantor of the deeded lots as well, the Court would not allow him to maintain that the language pertaining to the park area, which had either been chosen by him, or chosen by a draftsman and agreed to by him, was ambiguous, so he was stuck with the consequences of the words that he had used, or allowed to be used, and the Court therefore fully upheld the lower court ruling in favor of Piechowski and his fellow lot owners. Mayer had wasted his money, both in buying the useless land, and in planning a development on land that was actually undevelopable, but the Court had no sympathy for Mayer, because he was not without notice, so he was not a bona fide purchaser, and if Mayer obtained the land at issue from Case by means of a quitclaim deed, then Mayer's loss rested entirely upon his own poor judgment, and he was without any legal remedy. If Mayer relied on anything misleading that Case may have told him, Mayer may have had grounds for legal action against Case, but be that as it may, Mayer could not ignore the recorded plat and declarations, which had created both private and public rights, so Mayer's failure to understand the legal implications of the existing plat had proven to be very costly to him. The most essential concept manifested in the result seen here, is that buyers of platted lots acquire an interest in all of the platted land, not just their own lot, because any conveyance that is made with reference to a plat legally incorporates the plat itself into the legal description of the land acquired. Even unrecorded plats, with no related covenants, can sometimes create land rights extending well beyond the boundaries of any individual platted lot, because plats are presumably viewed by all lot buyers, and whenever specific evidence exists that a plat was actually shown to a grantee by a grantor, the grantor can become bound to stand behind the validity of the plat, and to support everything shown on the plat which can be reasonably characterized as a benefit to the grantee. The major lesson of this case for land surveyors who are involved in platting, is the great importance of always placing labeling on plats in the most careful and judicious manner, and the lesson for surveyors when reading plats prepared by others, is the importance of recognizing that the significance of a plat is definitely not limited to the boundaries that are shown upon it.

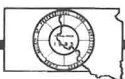


What are the essential elements of dedication?

Tinaglia v Ittzes (1977)

The circumstances surrounding our next case present a very interesting scenario, involving several significant aspects of the law related to easements and dedication, including especially detailed evidence of historic use, which is very clearly and thoroughly spelled out by the Court in its analysis of the situation, and for those reasons this case has frequently been cited by the Court in support of a number of important easement and dedication principles, when deciding subsequent cases featuring those topics. One major reason that the conditions and events which form the background of this case are unusually well documented is that a land surveyor actively participated in the trial, providing graphic information that was highly pertinent to the relevant issues, and his input proved to be essential to fully understanding the circumstances, providing an outstanding example of the evidentiary value that a land surveyor can add to any legal effort concerning the complex interaction of land rights held by various parties. Although that particular surveyor did not play the role of an expert witness with respect to the dispositive issues in this case, land surveyors are sometimes called upon to provide expert testimony, regarding either their own work or survey work done by others, and such testimony can be decisive, especially when competing surveys are in play, and the prime objective of each side is to overcome or negate the validity or value of the opposing survey, as we will observe in discussing an upcoming boundary case. It is important for surveyors to realize however, that any party can potentially serve as an expert witness on any subject, professional licensing is not an absolute requirement to achieve such judicial status, so with specific reference to land surveying, for better or worse, a party need not necessarily be licensed as a professional surveyor in order to function as an expert witness on survey issues. In *Wentzel v Huebner*, a 1960 case centered upon liability connected with an automobile accident, the Court clarified what it takes to qualify as an expert witness, indicating that the only requirement is that the party seeking such status must have "peculiar knowledge or experience, not common to the world", pertaining to the specific subject matter at hand, in the course of approving a college professor as an expert on the subject of automotive velocity. To the same effect, in *Mulder v Tague*, a 1971 drainage easement case, the Court accepted an unlicensed individual who held a physics degree as a legitimate expert on "flowage, volume, extent and depth of water", citing the fact that the individual had experience using surveys and contour maps, despite being neither a licensed surveyor nor a licensed engineer. In addition, the long term aftermath of the case we are about to review contains an intriguing post script, which gives this controversy a very unusual distinction, bringing the same site and one of the same parties back to the Court more than 2 decades after the conflict being litigated here is adjudicated, due in part to the fact that one unforeseen easement issue is left unaddressed by the original litigants.

1953 - The southeast quarter of the northwest quarter of a certain Section 32 in

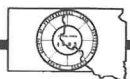


Fall River County was owned by Katt, and the northeast quarter of the northwest quarter was owned by Haley. A public road ran east and west through the northeast quarter of the northwest quarter, just a few hundred feet north of the sixteenth line between these quarter quarters, but no public roads evidently existed in the southeast quarter of the northwest quarter. A dirt road of unknown origin ran south from the public road, extending into the southeast quarter of the northwest quarter, and Katt regularly used this route to access his property, without objection from Haley.

1954 - Haley decided to create a residential subdivision covering the portion of his property lying south of the public road, so he had that area platted, and this recorded plat created 20 lots. Lots 15, 19 and 20 formed the eastern portion of Haley's subdivision, with Lot 20 being in the northeast corner, Lot 15 being in the southeast corner, and Lot 19 lying in between Lots 15 & 20. The existing dirt road that was being used by Katt ran through the eastern part of all 3 of these lots, but when Haley designed his subdivision, he created a new access road to serve Lots 15, 19 & 20, which also served several other lots lying further to the west, and this new platted road was located about 300 to 400 feet west of the existing road, but the old dirt road remained in use, running through the rear portions of Lots 15, 19 & 20. On the plat of Haley's subdivision, the old dirt road was shown as a single dotted line, labeled only "easement for ingress", while the new road was shown as a typical platted street, with a specified width of 20 feet. In his dedication statement on the plat however, Haley mentioned the old dirt road, along with the platted streets that he was creating, stating that the old dirt road was intended to provide access to the southeast quarter of the northwest quarter, as well as access to the 3 new platted lots over which it passed.

1955 to 1961 - At an unspecified time during this period, the public road running along the north side of the subdivision was replaced by a state highway. During the construction of the new highway, the old dirt road was closed and another route, presumably intended only as a temporary replacement, necessitated by the construction blockage, was installed by the highway construction crew to provide access for Katt. The north end of this new path was situated about 150 feet west of the north end of the old dirt road, but it tied into the old dirt road at the sixteenth line. Who owned Lots 15, 19 & 20 at this time is unknown, presumably these lots were still owned by Haley, but no one objected to this relocation of Katt's access easement, so he simply continued using this new location, even after the highway construction was completed, thereby abandoning the platted easement location.

1962 - At an unspecified time, Katt had acquired a large amount of additional land, lying directly to the south of the southeast quarter of the northwest quarter, and at this time he evidently began planning to sell that additional land, so he had a right-of-way platted, running through the southeast quarter of the northwest quarter, and he dedicated this new route as a public road. Katt intended this new



route to provide access from the new highway, across the southeast quarter of the northwest quarter, which he planned to retain, to the land further south, that he was planning to sell. Relying upon the public status of the access route that he had been using to cross Lots 15, 19 & 20, Katt designed this new public right-of-way across the southeast quarter of the northwest quarter to connect to the south end of the existing access route through those lots, at the point where the existing access road reached the sixteenth line. After dedicating this right-of-way over the northerly portion of his own land, Katt believed that a continuous public right-of-way had been formed, connecting the land that he was planning to sell with the highway. Katt had no need to use this platted right-of-way himself however, so he just continued using the existing dirt road to cross Haley's subdivision, and no actual roadway was ever constructed in or near the right-of-way that Katt platted and dedicated at this time.

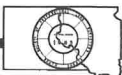
1963 - Ittzes acquired Lots 15 & 19, but he had no problem with Katt's use of the road running through his lots, so the use of the road by Katt continued without interruption.

1964 to 1967 - At an unspecified date during this period, Mower apparently acquired Lot 20, but he also accepted the use of the portion of the road crossing his lot, by both Ittzes and Katt, so no access issues arose during this period.

1968 - Ittzes built a house on his property, and he then paved the dirt road that had been relocated during the highway construction, and began using it himself, with no objection from Mower, who was presumably already using it as well and was glad to have it paved at no expense to him.

1969 to 1971 - Ittzes, Mower and Katt all continued to use the route that had been paved by Ittzes during this period, and no conflicts over it's use developed between them, but there was no evidence that it was ever used by the public at large.

1972 - Katt sold the southern portion of his property, consisting of 3000 acres lying directly south of the southeast quarter of the northwest quarter of Section 32, to Tinaglia. The existing roadway leading across the properties of Mower, Ittzes and Katt was the only means of access to the property conveyed to Tinaglia, and Katt told Tinaglia that it was a public road, so Tinaglia began using it. What specific use Tinaglia was making of his property, and how often he was using the road to cross Lots 15, 19 & 20, are unknown, but Ittzes apparently became annoyed by Tinaglia's use of the road, so he installed a gate across the road near the south boundary of his property, just north of the sixteenth line. Ittzes never locked this gate, but he claimed to have the right to control the use of the portion of the road crossing his property, and he therefore required Katt and Tinaglia to respect the gate, by properly opening and closing it whenever they used the road. Katt had no problem with the gate, but Tinaglia objected to it, so he filed an action against both Ittzes and Katt, seeking to have his right to make



free and unlimited use of the road judicially confirmed.

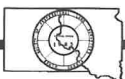
Tinaglia argued that the roadway in dispute constituted a dedicated public right-of-way, because it appeared on the plat of the subdivision that had been created by Haley, and the dedication statement on that plat indicated that Haley intended to dedicate it, regardless of the fact that the route in question was no longer in the same location that was shown on that plat. Alternatively, he argued that the road in controversy represented a private access easement, which was appurtenant to the property that he had acquired from Katt, so he had the right to make unobstructed use of it, and in either event he maintained, the gate that had been erected by Ittzes must be removed. Ittzes did not argue that the right-of-way at issue was invalid because it had been relocated, in fact he may not have even been aware that it had ever been in any other location, he argued instead that it had not been legally dedicated, and he denied that it represented an easement for the benefit of the Tinaglia property, so Ittzes had the right to prevent any use of the portion of the road that crossed his property, and Tinaglia was obligated to honor the gate in question, since his ongoing use of the road continued only at the discretion of Ittzes. The trial court found that no dedication of the paved road location had ever taken place, nor did any access easement exist in favor of Tinaglia or the land that he had acquired, so Tinaglia had no right to use that road without the permission of the owners of the land that it crossed, and no right to demand that the gate at issue be removed.

Over the course of nearly a quarter century, by the time this case reached the Court, since the plat that represented the source of this controversy had been created and recorded, the road that had been originally platted simply as a plain dashed line, running through the rear portion of 3 platted lots, had been unintentionally relocated, and it had never been used by the general public, since it did not connect with any public road to the south, but it had been steadily used, as relocated, by a limited group of people. Only 4 people were known to have ever used the road in question at all, prior to the arrival of Tinaglia, those being Haley, Katt, Ittzes and Mower, and Haley had used it only to visit Katt, and Mower had used only the portion of it that was located on his own lot, so this was the scenario confronting the Court, as it prepared to determine the legal status of this roadway. Haley was apparently either deceased or departed from the area and unavailable, because he was never called upon to testify concerning his intent as the subdivider, which could well have been vital to the outcome, but as it turned out his absence would make no difference, and his grantees would ultimately be required to bear the legal burden that he had stamped upon their lots. Interestingly, a land surveyor testified at the trial, and his testimony, which included drawing out a very substantial diagram of the subject area in the courtroom, was well appreciated by the Court, though only for the limited purpose of illustrating the existing conditions on the ground, and there was no indication that this surveyor was employed by any of the litigants, or that he ever surveyed any of the properties that were involved, although it is possible that he may have been the same surveyor who had created the subdivision for Haley. Tinaglia appeared to have a difficult task before him, his alternative argument, that a private

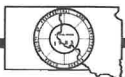


access easement appurtenant to his land existed, over the platted lots, had no validity, the Court decided, since Tinaglia's property did not even exist as such at the time the original easement was created, when those lots were platted by Haley, so in order to have the decision against him overturned, Tinaglia would have to prevail on the issue of dedication. As we have seen, the Court has always been very open to the concept of implied common law dedication, and knowing this may very well have given Tinaglia hope, but the very minimal number of parties that had used the road in question would have made it potentially difficult for him to succeed, if he had been required to base his dedication argument upon implication alone. One key evidentiary element however, made it unnecessary for him to resort to common law principles to support his dedication claim, and that element was not the plat itself, as a graphic document, it was the certificate of dedication that appeared on the plat, signed by Haley, which the Court quite naturally saw as the best available evidence of Haley's intent in 1954. After quoting the specific dedication language that was employed on the subdivision plat at issue, the Court proceeded to summarize the principles of dedication that it had previously established in prior cases, including several of those that we have reviewed, in an effort to clarify and distinguish the varying forms of dedication that the Court recognizes as valid:

“In the owner's certificate, the Haleys recited: "We hereby dedicate to the public roads and streets ... together with an easement through lots 15, 19 and 20, for ingress to lot 19 and to the SE1/4 of the NW1/4 of said Section 32" ... Dedication is ... the devotion of property to a public use by an unequivocal act of the owner that manifests an intention that the property dedicated shall be accepted and used ... dedication is express when the intent is manifested by oral or written words, and is implied when the intent must be gathered from the acts of the dedicator ... a dedication is express where the appropriation is formally declared, and is implied where it arises by operation of law ... A statutory dedication is in the nature of a grant ... while a common law dedication is generally held to rest upon the doctrine of estoppel ... recording of a plat has been held to manifest an indisputable intention on the part of the owner to dedicate ... the easement in question was established through an express, statutory dedication by the Haleys ... when a plat is incomplete, ambiguous or uncertain ... external evidence may be considered for the purpose of determining the real intention of the platter ... no ambiguity exists in the dedication here involved ... the owner's certificate expresses an intention to dedicate ... an easement through lots 15, 19 and 20 ... No doubt the Haleys could have limited the easement ... however, they neither did so nor, on the face of the certificate, did they attempt to do so ... acts and conduct of an owner will prevail over the owner's subsequent testimony that he intended no dedication ... the public has accepted the dedication of the easement by use."

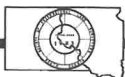


It should be understood that the "devotion of property" cited by the Court as the essence of dedication does not indicate a transfer of any property in fee, it simply represents a decision on the part of a property owner to commit some portion of his land to public use, so no fee interest need be passed when dedicating land, because the mere use of land, as opposed to actual occupation and possession of it, does not require a fee conveyance, and the easement concept exists for the very purpose of legitimizing use of land, as distinct from ownership of it. In the view taken by the Court, Haley's reference to the southeast quarter of the northwest quarter in his dedication statement was critical, because Haley did not own that quarter quarter, so by expressing his intention that the land adjoining his own land should derive the benefit of all of the access easements that were being created by his plat, he was unquestionably creating a public right to cross his land to reach Katt's land. This analysis of the situation by the Court made perfect sense, and it was supported by the facts, because Haley knew Katt well, and Haley presumably knew that his friend Katt also intended to sell some land one day, so Katt would need public access to his property, and the subsequent action of Katt, when he extended the public right-of-way across his own land in 1962, bore witness to the fulfillment of Haley's vision, since the Katt right-of-way was entirely dependent upon the right-of-way dedicated by Haley. Importantly, the Court here reiterated that estoppel forms the basis for implied dedication, because an owner of record cannot be allowed to deny the right of all parties to rely upon his prior statements or acts, acknowledging that actions always speak louder than words, although in this instance no estoppel was required, because Haley had fully expressed his intentions in the language he chose to use on his plat. In addition, the Court here again stated that implied common law dedication serves to give effect to plats that were inadequate in some way, although it was not necessary to validate the plat that had been created by Haley, since no challenge to its validity had been made. Even the relocation of the access easement in dispute did not result in any ambiguity, the Court observed, because the use of the relocated route by both Katt and Ittzes had amounted to an acceptance of the relocation, making the location that was actually used equivalent if not superior, in terms of validity, to the platted easement location, in the eyes of the Court, marking another step toward the eventual full acceptance of the easement relocation doctrine by the Court. Holding that the acceptance of the presence of the gate in controversy by Katt had not negated or eliminated the dedicated status of the right-of-way in contention, consistent with the position it had taken on gates across public roads in the 1973 Taylor case, the Court reversed the result that had been produced by the lower court, and declared that the paved roadway was in fact a public right-of-way across Lots 15, 19 & 20, so the gate maintained by Ittzes was subject to removal, as had been requested by Tinaglia. The Court had once again upheld a highly problematic dedication, despite the fact that it had been poorly depicted when originally platted, and despite the subsequent abandonment and alteration of its platted location. In so doing, the Court had confirmed that dedication is necessarily public in nature, and that dedication typically creates only an easement, while also demonstrating that public acceptance of a dedication can occur even with only minimal use, and even in the absence of any repair work done at public expense. Since neither side ever made the



width of the existing public right-of-way running through the platted lots an issue, the Court chose to leave it's width undetermined.

Although none of the members of the Court in 1977 would ever be called upon to revisit the scene of this legal battle, an entirely different group of Justices were destined to encounter Tinaglia and the access issues associated with his property once again, in the 1998 case of *Cleveland v Tinaglia*, which resulted in another noteworthy decision of the Court on the topic of easements. By the 1990s, Ittzes, Mower and Katt were apparently all gone from the scene, and the properties that they had once owned had evidently passed into the ownership of Cleveland and others, but Tinaglia was still the owner of the 3000 acre tract lying to the south, and he was still accessing his property by crossing the land that was then owned by Cleveland and the others. Tinaglia was not only using the particular route that had been deemed to be public by the Court in 1977 however, he was also using several other routes that spread out across other parts of the land that had once been owned by Katt, which had come to be owned by Cleveland and the others. Tinaglia claimed that he had the right to use all of the roads crossing the former Katt tract, by virtue of his deeds from Katt, which stated that "ingress and egress over existing trails and roadways" was being conveyed by Katt to Tinaglia, without any references to the exact location or width of any such routes, along with the 3000 acre tract which was thereby acquired by Tinaglia. Cleveland and the owners of the other tracts being driven through by Tinaglia decided to challenge Tinaglia's access rights, so they filed an action against him, seeking a judicial determination of his specific rights relating to each of several different routes crossing their lands. A trial court found that Tinaglia had legitimately acquired the right to use all of the roads in question from Katt, but ruled that he had lost his right to use one of those roads through abandonment of it, because he had neglected to fix a washed out culvert on that particular road, which had rendered it useless since 1983, and the trial court also established an easement width for each one of the roads at issue, ranging from 8 feet to 15 feet, including the public roadway that had been adjudicated in 1977. Cleveland and the other plaintiffs were apparently satisfied and did not appeal these results, but Tinaglia filed an appeal, protesting the abandonment ruling and the fact that the width of his access rights had been restricted to the existing width of each road, pointing out that statute 31-3-1, as revised in 1985, mandated a default right-of-way width of 66 feet. The Court rejected each of the 3 premises set forth by Tinaglia on appeal, fully upholding the lower court ruling, on the basis that a deed conveying any amount of land, along with "ingress and egress over existing trails and roadways" creates an access easement covering all such routes that exist on the grantor's land, and the easement width is governed by their existing widths, at the time of the conveyance. In addition, the Court agreed that when a culvert under an access easement is washed out, making the route physically useless for vehicular travel, and the culvert is left unattended by the holder of the easement for 15 years, who then uses another route as an alternate for access purposes during that period of time, such a substitution of one route for another is valid evidence of an intention on the part of the easement holder to abandon the original route. Finally, the Court informed

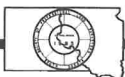


Tinaglia that 31-3-1, which concerns only the matter of public right-of-way width, is not retroactive, so any right-of-way that came into existence prior to 1985 would not be controlled by the statutory language that he was mistakenly relying upon, and any such right-of-way could therefore legally have either a greater or a lesser width than that specified by the statute.

About the Author: Brian Portwood is a professional land surveyor and historian of land rights law, providing advisory, consulting and educational services to the land rights community at no charge, fostering efforts to fully understand and properly resolve all land rights issues that involve a locational component, through interdisciplinary professional collaboration. He was born and raised near Chicago Illinois, graduated from Lamson Business College in Scottsdale Arizona in 1983, and began his ongoing career in the land surveying industry at that time. Over the ensuing 22 years he worked in the private sector in many different states from coast to coast, on land development projects of virtually every kind. Since 2005, he has been employed in the public sector as a professional land surveyor by the Bonneville Power Administration, which is a branch of the US Department of Energy, and has been engaged in federal land rights acquisitions. He has authored numerous materials supporting the continuing education of professional land surveyors, including quarterly articles on federal land rights topics, which are published by the National Society of Professional Land Surveyors, updating his professional colleagues on developments in federal case law pertaining to title and boundary issues. All such materials which are available in pdf form, free to anyone upon request, contact him at bportwood@mindspring.com.

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Do you enjoy being a part of a team and making a difference in our surveying society or planning events? Then please consider being a part of the Convention Planning Committees. Teams are already meeting for both the 2022 and 2023 SDSPLS Conventions.

To be involved of the 2022 Deadwood Convention, contact Alesha Limbo at directorsdspls@gmail.com or 605-645-5128 or join us for a planning meeting on Tuesday, July 13th at 7pm at the Miller Creek Pub in Spearfish.

To be involved in the 2023 Sioux Falls Convention contact Beau Koopal at beauk@infrastructuredg.com or 605-680-4156

2021 PDH Certificates and Handouts

SDSPLS Members – your PDH Certificates and Handouts from the SDSPLS 38th Annual Convention are available on our website www.SDSPLS.org under the members only tab. The members directory is available under the members only tab as well!

SDSPLS 39th Annual Convention 2022

**January 5, 6, & 7
(Wednesday, Thursday,
Friday)**

**The Lodge at Deadwood
Deadwood, SD**

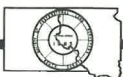
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Full-Time

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Position is eligible for Employee Referral Program.

Job Summary: Responsible for placing safety as #1 priority in day to day work routine for self and others. Under guidance and direction of department personnel, creates maps, and exhibits; and performs a variety of technical duties.

Minimum Qualifications: Must possess a working knowledge of AutoCAD mapping and drawing at a level normally acquired through the completion of a two-year degree in survey, civil, geomatics, engineering technology or drafting or equivalent related work experience.

Key Skills & Competencies • Effective interpersonal and communication skills in dealing with internal and external customers . • Must be self-motivated, detail-oriented and able to handle multiple priorities and meet deadlines. • Proficient in the use of Microsoft and other standard office software. • Strong analytical and problem-solving skills. • Proven time management and organizational skills. • Must take all measures necessary to protect networks, devices, programs and data from cyber-attack, damage or unauthorized access. • May be required to maintain a valid driver's license. • Requires travel: Minimal (up to 10%) Knowledge of the Public Lands Survey System, GPS and GIS. •

Must be legally authorized to work in the United States, no sponsorships considered. • Subject to pre-employment drug testing and background checks.

Apply online at jobs.mdu.com - Hiring manager Robert W Stanhope

Survey Intern

Full-Time

Salary: \$15-\$17 /hour

Job Summary: Assist the Survey group with various projects. Responsible for placing safety as #1 priority in day to day work routine for self and others.

Minimum Qualifications: Must have completed one year of college in survey/civil tech/engineering or CAD. Must have a valid driver's license.

Additional Requirements: Requires travel, required to maintain a valid driver's license. Must be able to effectively communicate, correspond, and interact with staff. Self-motivated and able to work effectively both independently and in a team environment.

Proficient in the use of Microsoft applications. May be eligible for Intern Scholarship. Subject to pre-employment drug testing and background checks. Must be legally authorized to work in the United States, no sponsorships considered.

Apply online at jobs.mdu.com - Hiring manager Robert W Stanhope

Minnehaha County Highway Department

Engineering Specialist

GENERAL INFORMATION:

The Minnehaha County Highway Department (MCHD) invites applications for an Engineering Specialist to join our high performing team of professionals! The Engineering Specialist assists in the design, management, and inspection of highway, bridge, and drainage construction projects, uses AutoCAD/C3D, performs boundary research, works with landowners, manages utility and other permits, and assists with pavement preservation projects and traffic data collection.

MCHD recognizes that our team is essential to the successful development and operation of our transportation system. Although we are small with an administrative and maintenance staff of 33, our efforts are mighty as we complete \$10 million of improvements annually. We strive to recruit and retain dynamic and well-rounded employees looking to make a difference every day!

A career with the MCHD can offer you:

- An AMAZING summer schedule - 4 day work weeks with Fri/Sat/Sun off March through October!
- Opportunities to be involved in a wide variety of projects.
- A good balance of office and field work.
- Strong support from experienced staff.
- Continuing training and professional development opportunities.
- Comprehensive benefits package including paid holidays; health, dental, vision, and life insurance; generous PTO program; extended sick leave program; inclusion into the South Dakota Retirement System (SDRS); and an optional deferred compensation plan.



The posting is open until filled with application review to begin on June 9th. The hiring range for this position is \$24.18/hr - \$28.76/hr with full earning potential to \$35.03/hr. Consideration for placement is dependent upon qualifications and experience. All applications must be submitted by 5:00 p.m. on the date the position closes.

EXAMPLES OF DUTIES INCLUDE:

Use AutoCAD/C3D to draft, design, develop, and update plans, maps, exhibits, and drawings. Prepare bidding documents. Use Microsoft products to conduct, improve, and maintain daily operations within the Highway Department.

Manage, perform, and document on-site inspections of construction projects including striping, chip seals, micro-surfacing, and overlays to ensure quality and compliance with standard specifications, procedures and construction standards. Direct and coordinate contractors. Establish and maintain effective working relationships with contractors, landowners, the general public, and county, city, and state government entities.

Process utility permits. Inspect and monitor utility installation in accordance with permit requirements. Collect, process, and manage traffic data. Inspect and quantify delivery of project materials and track timing and placement. Monitor and control expenditures within project budgets. Prepare reports and project documents. Prepare, estimate, and track project costs. Coordinate and receive material testing and make changes accordingly.

Assist engineering staff with a variety of data collection and assembly including gathering information, conducting research, and preparing reports and summaries. Provide supporting documentation and assistance regarding drainage permits administered by the Planning Department.

May assist with preparing and reviewing specifications and contract documents for equipment, materials, and construction in accordance with state and county purchasing policies and procedures. May assist with managing construction, testing, and staking needs. May assist with performing topographic surveys, boundary surveys, and courthouse research.

MINIMUM QUALIFICATIONS:

Two-year degree from a technical school in an engineering related field with three years of relevant work experience or a bachelor's degree in an engineering field and one year of design, construction inspection, and/or CAD experience. Comparable combination of education and experience may be considered. Possession of valid driver's license and must maintain a safe driving record with Minnehaha County. Must successfully complete pre-employment background process.

PREFERRED QUALIFICATIONS:

Five years of relevant work experience. Advanced drafting skills with proficiency using Civil3D, erosion and sediment control experience, South Dakota Department of Transportation (SDDOT) certifications in asphalt inspection, erosion control inspection, and/or grading and compaction testing. Knowledge of ESRI products. Knowledge in temporary and permanent traffic signs in accordance with the Manual on Uniform Traffic Control Devices (MUTCD). Familiarity with SDDOT standard notes, standard plates, and American Association of State Highway and Transportation Officials standards (AASHTO).

Minnehaha County is an Equal Opportunity Employer and does not discriminate on the basis of race, color, creed, religion, national origin, citizenship, ancestry, gender, gender identity, sexual orientation, marital status, pregnancy, age, disability, veteran's status, genetic information, or any other protected group in accordance with state and federal law. Arrangements for accommodations required by disabilities can be made by contacting Human Resources at (605) 367-4337.

APPLICATIONS MAY BE FILED ONLINE AT:

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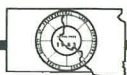
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Affiliate of the National Society of Professional Surveyors

APPLICATION FOR MEMBERSHIP

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Check one and sign below

Member (In-State w/NSPS):	___ \$175	Technician:	___ \$75	Life Member (In-State w/NSPS):	___ \$65
Member (Out of State):	___ \$125	Associate:	___ \$50	Life Member	___ \$25
LSIT:	___ \$100	*Student:	___ \$25	Sustaining:	___ \$250

*In-State classifications are determined by the home mailing address.
Fees for In-State Members (\$175) include NSPS membership.
Fees for Out-of-State Member (\$125) do not include NSPS membership.
In-State Life Members have the option of selecting NSPS membership (\$65)*

Member:

- a) Any person licensed to practice the profession of surveying, according to state or provincial statutes;
- b) A GS-1373 employee classified as a Land Surveyor or Supervisory Land Surveyor;
- c) An academician holding a bachelor's or higher degree and the rank of assistant professor or higher rank and teaching in an ABET accredited or a state land surveying registration board surveying program;
- d) A practicing surveyor or surveying teacher who has attained a minimum of six years experience in responsible charge of surveying activities or four years of education and two years of experience may submit credentials for consideration.

LSIT:

Any person who has successfully completed the LSIT examination according to state or provincial statutes.

Technician:

Any person who has successfully completed any level of the Certified Surveying Technician program as administered by and through the National Society of Professional Surveyors.

Associate:

- a) Pre-Professional: Any person who by their employment is actively engaged in a program leading to a career in the profession of surveying;
- b) Subscriber: Any person with an associative interest in Surveying whose qualifications do not meet the requirements of Member, LSIT, or Technician.

***Student:**

Any person who is a full-time student studying surveying or related fields.

Sustaining:

Any person or organization, either individuals, partnerships or corporations, who or which are engaged either in the manufacture or distribution of surveying instruments, equipment or supplies, or in the compilation or reproduction of maps, or in the performance of services for land surveyors.

Life Members:

Any person who has attained 60 years of age and has retired from active practice as a land surveyor and who has paid dues for each of the nine years preceding and also in the year which he or she attained such age or so retired, whichever is later.

Signature of Applicant

Date

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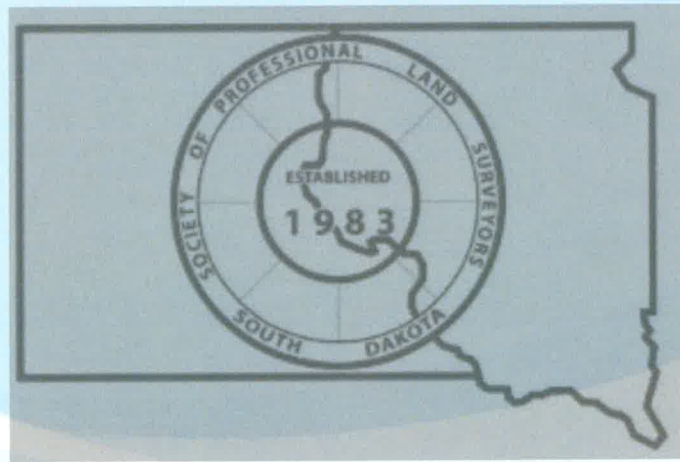
*Signature of Faculty Member (required for students)

Date

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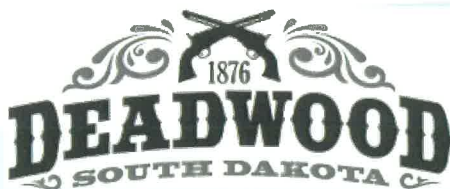
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Check out Mentoring Mondays!

Do you ever wish that you could have a weekly cup of coffee with like-minded surveying professionals? We are here to tell you that you can do just that – by participating in the virtual Mentoring Mondays program.

This fantastic program is a weekly Zoom meeting featuring live Q&A's on your favorite surveying topics. Every Monday, the forum is hosted by a rotating series of guest speakers who are among the best in the surveying business.

Think of Mentoring Mondays as the weekly “office hours” of the surveying profession. The meeting room is open and available to anyone in the profession who is looking to stay informed on current industry topics and trends or just needs a little more help understanding a specific topic within the profession.

Recent Mentoring Monday topics include “Practical Management of Field Surveys” with Landon Blake, PLS, “Star*Net Adjustments” with Tony Cuomo, PLS, and “Drone Surveying 101” with Logan Campbell, CEO of Aerotas. A full lineup of exciting topics is planned for the year ahead. Register for the free weekly meeting with the click of a button on the [Mentoring Mondays website](#).

Are you interested in attending but cannot make the meeting? All meetings are video-recorded and uploaded to the website upon completion so that you can watch past meetings at your convenience. However, we encourage live participation; after all, this program was created to be a live and interactive Mentoring Program.

While college students and young surveyors will benefit enormously from this program, do not assume that the word “mentoring” means this program is just for 20-year-olds. Instead, think of Mentoring Mondays as a free professional conference that goes on all year long.

Anyone in the surveying profession will benefit from these weekly meetings and the chance to network, stay informed, and bounce ideas and questions off of fellow land surveyors.

In addition to the weekly video feeds that are uploaded to the website, the site contains a wide array of podcast and book suggestions that any surveyor will find interesting and valuable.

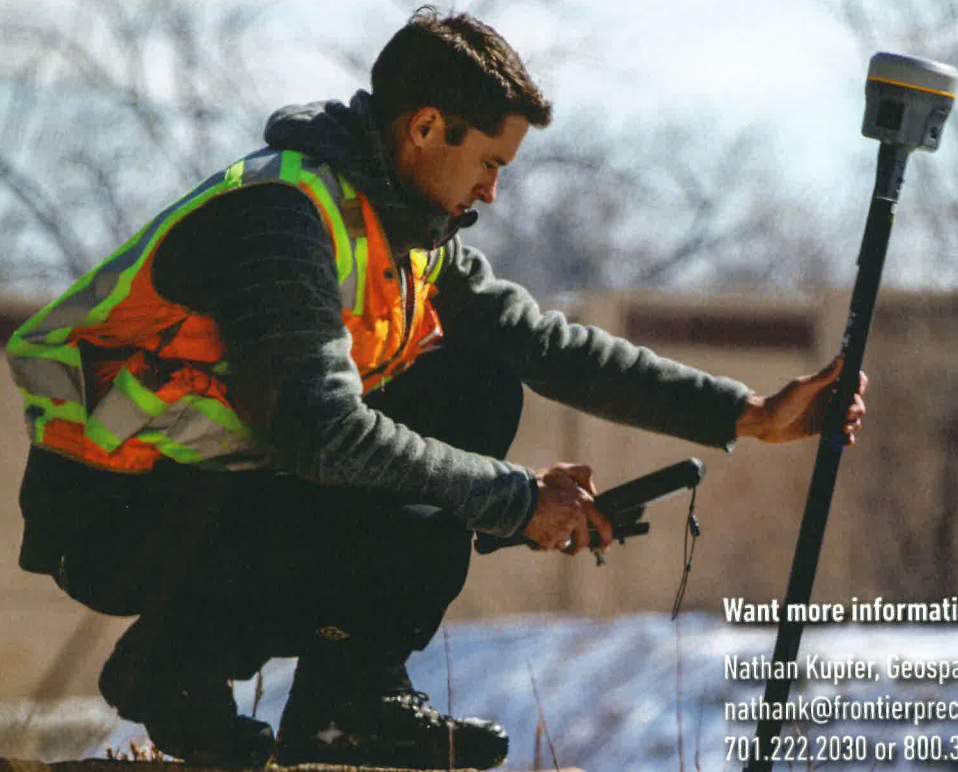
So, whether you are a freshman in college or a 50-year Professional Land Surveyor looking to contribute your wisdom and experience, we hope to see you at the next installment of Mentoring Mondays!

If you are interested in being a featured guest speaker on Mentoring Mondays, or you need help with a specific topic, please contact trent@mentoringmondays.xyz





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