

February 2014

SIDE SHOTS

Professional Land Surveyors of Colorado

Volume 45, Issue 1



Brad Adams



Bryan Baker



Jim Claflin



Alisa Conner



Richard Elgin



Stan French



Pamela Fromhertz



Ken Goff



Earl Henderson



Gary Kent



Gene Kooper



Brennan O'Neill



Apostol Panayotov



Jay Parker



Dave Pehr



Joshua Vandiver



Brian Varrella



Dave Zenk

ROCKY MOUNTAIN SURVEYORS SUMMIT

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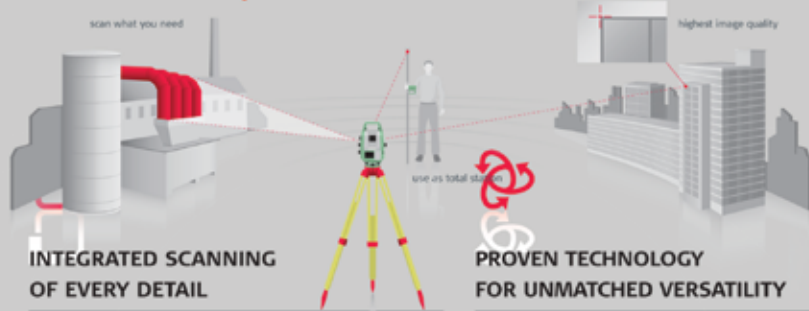
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O: (719) 590-9194

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SIDE SHOTS

FEBRUARY JOURNAL 2014

VOLUME 45

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*Side Shots is the official publication of the Professional Land Surveyors of Colorado, Inc.
and is published quarterly for the betterment of the surveying profession.*

Roger Nelson
President

Micheal Bouchard
Vice President

For Editorial Correspondence, contact:

John B. Guyton

Editor: Side Shots

5385 Centennial Trail, Boulder, CO 80303
303-443-7001 • jguyton@flatsurv.com

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**Deadlines for editorials, articles, pictures and advertising are January 1, April 1,
July 1 and October 1. All material received after the current deadline will appear
in the next issue of Side Shots.**

We would like to invite anyone who is interested to advertise in Side Shots.

*Do you have something you want to sell, trade or buy? Why not use Side Shots for your
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OFFICERS

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VICE PRESIDENT
O: (719) 590-9194
mbouchard@f-w.com

TOM ADAMS
PAST PRESIDENT
O: (719) 546-5454
tom.adams@plsc.net

ROGER NELSON
PRESIDENT
O: (303) 353-3916
roger.nelson@merrick.com

TERRY MAW
SECRETARY/
TREASURER
O: (719) 590-9194
tmaw@f-w.com

BECKY ROLAND
EXECUTIVE DIRECTOR
O: (303) 551-3266
broland@plsc.net

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By the time this letter is published we will have closed the year of 2013 books and will be off and well into the year 2014. I would like to reflect on the Professional Land Surveyors of Colorado, Inc. (PLSC) and look forward with anticipation to the many challenges to come.

In the last year the PLSC has overcome financial challenges through diligent monitor of our budget, expenditures, and execution of a successful Surveyors Summit. The sale of the Stollard home, which was willed to our organization, has been completed. There is still considerable work to be done financially such as getting all of our chapters to participate in annual membership drives, continued vigilance of the PLSC's budget and expenditures, successful administration of the 2014 Surveyors Summit and planning for upcoming elections so that there is continuity when transitioning to new leadership. The PLSC also revamped our website last year and is striving to maintain accurate, relevant and timely information post. I encourage each of you to use this medium to advertise upcoming events, available internships, jobs, equipment sales, or to notify our survey community of stolen equipment.

Looking forward, there is work to be done by each chapter to determine how best to administer the PLSC- approved Certified Federal Surveyor scholarship application process and fund disbursement. The PLSC is also facing a challenge regarding the Colorado Spatial Reference Network (CSRN) chapter of the PLSC. I have been informed that it has been difficult to find willing candidates to run for offices that are soon to be vacated within this chapter. The PLSC Board will be discussing how best to address the CSRN chapter challenges at our next Board meeting. The PLSC also needs to address some of our communication issues to make sure information is cascaded down to our membership in a timely fashion and feedback is received and contemplated in an efficient manner. We also need to encourage members to serve on Chapter Boards and the PLSC Board. If you are interested and want to get first-hand experience, please consider attending monthly chapter meetings or quarterly PLSC Board meetings.

I am looking forward to reconnecting with existing contacts and meeting new faces at the annual Surveyors Summit, see details contained within this publication.

Let's elevate the Survey Profession together!

Sincerely,

Roger D. Nelson, PLS, CFedS





It's time again to register for the biggest PLSC event of the year, the 2014 Rocky Mountain Surveyor's Summit, held from February 27th to March 1st at the Arvada Center. This increasingly popular event, which attracts surveyors, instructors, vendors and others from across Colora-

do, is undergoing final preparations at the time of this writing, and promises to be another successful meeting, full of new learning opportunities and camaraderie. I will again be serving as proctor for the Chapter Summit meeting on Thursday evening, and hope to see many of you there. Check out the latest program in this issue, and visit the PLSC website for the latest syllabus and, of course, to register for the event.

It's not too late to sign up for one of the remaining Refresher Courses being held at the Jefferson County Courthouse in Golden, as advertised in this issue. Interest in the courses for Colorado survey law has been particularly strong by those preparing for the exam. A particularly impressive assemblage of faculty this year is a great advantage, one we hope will continue next year as well. Thanks again to the faculty who are lending

their time and expertise, and the students who are participating.

This issue includes a poignant article from Dean Glorso, including an excellent idea of preparing a monument for one of the Vietnam Veterans that you may know, to be placed in their hometown parks. I hope this idea catches on. There is an article by Earl Henderson about the hazards of using your professional stamp as a surveyor on certain grading and drainage certifications that are demanded by local jurisdictions, well worth a careful reading. Warren Andrews has a new installment of Control Points, raising some pertinent questions about what surveyors should do when features of the earth change, questions for which there are no easy answers. And we conclude this issue as always with the interesting news from our PLSC Chapters.

There is a membership application in this issue. Your enrollment or renewal can also be done quickly and easily on line at www.plsc.net. If you know someone in Colorado who is employed in surveying, licensed or not, who is not a member of the PLSC, please act as our ambassador, and encourage them to give it a try.

See you at the Summit.
JB Guyton, Editor, *Side Shots*

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FEBRUARY 27 & 28, MARCH 1, 2014

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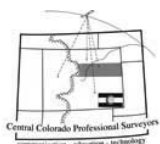
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The Professional Land Surveyors of Colorado (PLSC) invite you to be a part of the 4th Annual Rocky Mountain Surveyors Summit being held February 27-March 1, 2014 at the Arvada Center in Arvada, Colorado. We have combined all of the front range conferences into one event with state-of-the-art presentations and displays from the top suppliers in the industry. Four of our chapters, the Central Colorado Professional Surveyors (CCPS), Colorado Spatial Reference Network (CSRN), Northern Chapter — PLSC (NC/PLSC), and Southern Chapter Professional Land Surveyors (SCPLS) have all joined together to bring our profession the best education and networking event in the State.

- Discounts are available for PLSC Members, Early Registration and Students.
- A full program of speakers that earn you continuing education units.
- Outstanding networking opportunities with colleagues from across the region.
- Displays by industry suppliers and professional service providers.

Go to www.plsc.net for complete information and plan on joining your colleagues February 27- March 1, 2014!



COLORADO SPATIAL REFERENCE NETWORK
A Chapter of the Professional Land Surveyors of Colorado



4th ANNUAL ROCKY MOUNTAIN SURVEYORS SUMMIT

Courses and schedule subject to changes; please go to www.plsc.net for updated information and to register online.

PRELIMINARY PROGRAM:

THURSDAY, FEBRUARY 27TH

PROFESSIONAL TRACK 1

7:30 a.m. – 5:30 p.m. **Mr. Gary Kent, PLS**, "Easements and Rights of Way"

PROFESSIONAL TRACK 2

7:30 a.m. – 11:30 a.m. **Mr. David Pehr, Esq.**, "Fixing The Boundary"

1:00 p.m. – 3:00 p.m. **TBD**

3:30 p.m. – 5:30 p.m. Survey Symposium, "Panel discussion of "Plot Plans-A Construction Document We Can Live With"

BUSINESS & GENERAL TRACK

1:30 p.m. – 3:30 p.m. **Dr. Richard Elgin, PLS**, "Surveying Instrument Road Show"

TECHNICIAN TRACK

7:30 a.m. – 11:30 a.m. **Mr. Earl Henderson, PLS, Joyce Young, Christy Thomas**, "Survey Plats from the Colorado Board of Registration Perspective"

1:00 p.m. – 3:00 p.m. **Mr. Lonnie Koyama, SBA Colorado District Office**, "Over view of SBA Programs and Services"

3:30 p.m. – 5:30 p.m. **Mr. Brian Thompson, Mr. Brad Adams** "Laser Scanning for Surveyors 101"

TECHNICAL\GIS RELATED TRACK

7:30 a.m. – 5:30 p.m. **Mr. Dave Zenk, NGS**, "OPUS Projects Workshop (Day 1 of 2 day workshop)".

LUNCH: Keynote Address- **Mr. Curt Sumner, PLS**, NSPS President, Introduction of PLSC Board of Directors, Exhibitor Introduction

EXHIBITOR SOCIAL 5:30 p.m. – 7:00 p.m.

PLSC CHAPTER SUMMIT MEETING 7:00 p.m. – 9:00 p.m.

FRIDAY, FEBRUARY 28TH

PROFESSIONAL TRACK 1

7:30 a.m. – 5:30 p.m. **Mr. Gary Kent, PLS**, "Title VS Survey-Statutes, Standards and Boundary Law Principals"

PROFESSIONAL TRACK 2

7:30 a.m. – 11:30 a.m. **Mr. David Pehr, Esq.**, "The Plat Thickens"

1:00 p.m. – 5:30 p.m. **Mr. Apostol Panayotov, PHD**, "Datums, projections, coordinate systems, and their purpose"

(continued on next page)

4th ANNUAL ROCKY MOUNTAIN SURVEYORS SUMMIT

TECHNICAL TRACK

7:30 a.m. – 5:30 p.m. **Mr. Dave Zenk, NGS**, "OPUS Projects Workshop (Day 2 of 2 day workshop)".

BUSINESS & GENERAL TRACK

7:30 a.m. – 10:00 a.m. **Dr. Richard Elgin, PLS**, "Improving Your Firms Office Practices"

10:30 a.m. – 11:30 p.m. **Dr. Richard Elgin, PLS**, "Evolution of Surveying Instruments"

1:00 p.m. – 3:30 p.m. **Dr. Richard Elgin, PLS**, "Marketing Your Surveying Services"

4:00 p.m. – 5:30 p.m. **Alisa Conner, Ripple Effect Marketing**, "Do It Yourself Web Site Optimizing for Marketing"

LUNCH: PLSC Business Meeting, PLSC Awards, Trig Star Winner, Scholarship Winner

SATURDAY, MARCH 1ST

PROFESSIONAL TRACK 1

7:30 a.m. – 11:30 p.m. **Mr. Jim Claflin, PLS, BLM**, "Public Land Survey System Practicum: Decisions and Calculations"

1:00 p.m. – 5:30 p.m. **Mr. Stan French, PLS, BLM**, "Public Land Survey System Case Study: Review of Protest to a BLM Survey"

PROFESSIONAL TRACK 2

7:30 a.m. – 5:30 p.m. **Mr. Gene Kooper, PLS**, "Mineral Retracements"

TECHNICAL TRACK

7:30 a.m. – 11:30 a.m. **Ms. Pamela Fromhertz, NGS Colorado State Geodetic Advisor** "Enhancements to NGS Tools, Products and Services"

1:00 p.m. – 3:00 p.m. **Mr. Ken Goff**, "Introduction To Utility Locates"

3:30 p.m. – 5:30 p.m. **Mr. Brennan O'Neill**, "Machine Control and Guidance Technology"

BUSINESS & GENERAL TRACK

7:30 a.m. – 10:30 a.m. **Mr. Brian Varrella, Colorado Association of Stormwater and Flood Plain Managers**, "Elevations Certifications & Common Mistakes, Base Flood Elevation Determination in Zone A"

10:30 a.m. – 11:30 a.m. **Mr. Bryan Baker**, "Introduction to Unmanned Aircraft Systems (UAS)"

1:00 p.m. – 3:00 p.m. **Mr. Alfred Zarlengo**, "Understanding the Dynamics of Risk in the A/E Industry"

3:30 p.m. – 5:30 p.m. **Mr. Steven Pasma, CPA**, "Introduction to the Affordable Health Care Act and What it Means for Small Business"

LUNCH: Survey Olympics Winners, Chaining Contest Finals

FEE SCHEDULE 2014

(same pricing as 2008 and adding full day)

PLSC MEMBER: \$ 200 One Day - \$ 375 Two Days - \$550 Three Days

NON-MEMBER: \$ 300 One Day - \$ 475 Two Days- \$650 Three Days (2014 PLSC Members save \$100)

STUDENT: \$ 75 One Day - \$ 125 Two Days- \$200 Three Days

EXHIBITORS: \$ 400 3 Days + \$230 for 2014 Sustaining Membership

4th ANNUAL ROCKY MOUNTAIN SURVEYORS SUMMIT

An additional \$25.00 will be added to registrations received after February 18th, 2014. Catered breakfasts & lunches will be provided on all days. Online registration will be available at the PLSC web site (www.plsc.net).

GENERAL INFORMATION

SILENT AUCTION

We will be holding a silent auction during the conference. If your equipment room is cluttered up by equipment you are no longer using, please consider donating an item or two to the PLSC silent auction.

EXHIBITORS

In keeping with our traditional practice, our Sustaining Members and other exhibitors have been invited to display their latest products and services. Exhibits will be in the Arvada Center entrance hall adjacent to the classrooms. Please visit their displays and show our appreciation for their continued support.

TRANSPORTATION TO\FROM CONFERENCE HOTEL

There will be a shuttle bus to and from the conference hotel each day. Pick up and drop off times will be announced prior to and at the conference.

SCHEDULED PRESENTATIONS

Gary Kent, PLS—*Easements and Rights of Way and Title VS Survey-Statutes, Standards and Boundary Law Principles*

Gary Kent is chair of the NSPS committee responsible for the ALTA/ACSM Land Title Survey standards, and is liaison serving in the same capacity for the American Land Title Association. He is a certified instructor for the International Right of Way Association and writes regular columns for American Surveyor Magazine.

Dr. Richard Elgin, PLS—*Improving Your Firm's Office Practices, Marketing Your Surveying Services and Evolution of Surveying Instruments*

A second generation surveyor, Dr. Elgin was raised in St. James and in his late parents' surveying business. He coauthored Legal Principles of Boundary Location for Arkansas. He is the author of The U.S. Public Land Survey System for Missouri.

Pamela Fromhertz—*Latest Developments in the National Geodetic Survey*

Pam has been the NOAA National Geodetic Survey Colorado State Geodetic Advisor since 2004 and interacts with the geospatial community at the local, state, and Federal levels, as well as with private industry. A variety of subjects will be discussed.

Dave Pehr, Esq—*Fixing the Boundary and The Plat Thickens*

Dave Pehr began surveying in 1965 and was licensed as a Land Surveyor in 1972. Dave has practiced law in Westminster since 1976, emphasizing real estate and boundary litigation, as well as representing land surveyors in disciplinary proceedings and civil negligence suits.

(continued on next page)

4th ANNUAL ROCKY MOUNTAIN SURVEYORS SUMMIT

Jim Claflin, PLS, BLM Cadastral Branch Chief Montana/Dakotas—*Public Land Survey System Practicum: Decisions and Calculations*

This presentation will discuss existant and obliterated corners, restoration of lost corners and subdivision of sections.

Stan French, PLS, BLM Cadastral Branch Chief Idaho—*Public Land Survey System Case Study: Review of Protest to a BLM Survey*

This presentation will consist of discussions related to a review of a protest to a BLM survey.

Dr. Apoltol Panayotov—*Datums, Projections, Coordinate Systems, and Their Purpose*

This class will be a general description of Datums, projections, coordinate systems, and their purpose.

J E Parker, Jr.—*Reexamining the Centerline Presumption – Asmussen v. United States*

This session analyzes this decision, its affect on adjacent landowners, boundary law and title research and reporting going forward.

Gene Kooper, PLS—*Mineral Survey Retracement*

This presentation will focus on mineral surveys with topics ranging from basic concepts to case histories. There will be something for everyone regardless of prior experience in retracing mineral surveys.

Mark Armstrong—NGS OPUS Projects Manager 2 Day Workshop

NOAA's National Geodetic Survey offers a network processing option for Online Positioning User Service (OPUS) known as OPUS Projects. OPUS Projects allows the processing, adjustment and publishing of multiple stations over multiple days collectively known as a project.

Ken Goff—*Underground Consulting Solutions—Knowledge of Utilities and Advantages of Utility Locating*

Presentation on utilities, physical utility features in the field and markings on the ground. Advantages of locating within ROW and easements

Earl Henderson, PLS—*Colorado State Board of Registration Member, Plat Requirements From the Colorado Board of Registration Perspective*

Discussions will include what are some common problems with plats that are reviewed by the Board.

Joshua Vandiver & Brad Adams, Leica Geosystems—*Laser Scanning for Surveyors 101*

This presentation will be an introduction to the technology of laser scanning and position processing. Static and mobile scanning technology will be discussed.

Urban Drainage & Flood Control District- Resources & Issues Pertaining to Drainage and Flood Plains

Colorado Association of Stormwater and Flood Plain Managers—*Elevation Certifications & Common Mistakes, Base Flood Elevation Determination in Zone A*

Bryan Baker, Frontier Precision—*Introduction To Unmanned Aircraft Systems (UAS)*

Alfred Zarlengo, CIC, AAI—*Contract Negotiations*

TBD—*Discussion of the Affordable Health Care Act and How It Affects Colorado Businesses*

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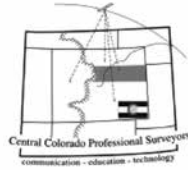
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2014 Colorado Land Surveying Refresher Course

The Professional Land Surveyors of Colorado are offering a comprehensive Land Surveying Refresher Course beginning January 8, 2014. This course offers a review and self-study plan for those taking the National Council of Examiners for Engineering and Surveying (NCEES) **Fundamentals of Surveying (FS)** and **Principles and Practice of Surveying (PS)** examinations. The course is designed to aid candidates in developing and expanding exam-taking proficiencies. The Wednesday evening classes will be 3 hours in length, starting promptly at 6:00 PM. Demand among test takers for Colorado Survey Law, starting March 12th, has been especially strong. It's not too late.

Fundamentals of Surveying

Session	Date	Topic	
1	Wed., Jan. 8	Overview of NCEES Examination	Alan Blair
		Use of Calculator/Basic Calculations	Joseph Stice
2	Wed., Jan. 15	Fundamental Survey Calculations I	Joseph Stice
3	Wed., Jan. 22	Fundamental Survey Calculations II	Jan Van Sickle, Ph.D.
4	Wed., Jan. 29	GIS, State Plane, Geodesy	Jan Van Sickle, Ph.D.
5	Wed., Feb. 5	Public Land Survey System I	Randy Bloom
6	Wed., Feb. 12	Boundary Law I	John Guyton

Principles and Practice and Colorado Specific

7	Wed., Feb. 19	Boundary Law II	John Guyton
8	Wed., Feb. 26	Public Land Survey System II	Randy Bloom
9	Wed., Mar. 5	Colorado Survey Law I	Roger Nelson-Todd Beers
10	Wed., Mar. 12	Colorado Survey Law II	Roger Nelson-Todd Beers
11	Wed., Mar. 19	Professional Practices	Alan Blair
12	Wed. Mar. 26	Mock PS and FS Examinations	Randy Bloom-Alan Blair

The Wednesday evening classes will be 3 hours in length, starting promptly at 6:00 PM.

Registration, Fee, Location

The fee for the entire course is \$400, or \$75 per 3-hour block taken individually. Registration is open beginning November 1, 2013. See <http://www.plsc.net/> for registration information. Classes will be held in one of the conference rooms at the Jefferson County Courts and Administration Building (Taj Mahal), 100 Jefferson County Parkway, Golden, CO. Use the parking lot and main door on the east side of the building. Signage will lead you to the classroom. For questions, contact Becky Roland, Executive Director, PLSC, 303-551-3266, broland@plsc.net. Visit the NCEES site at <http://ncees.org/exams/> to learn more about the FS and PS examinations.



FACULTY: Randy Bloom, Roger Nelson, Alan Blair, Dr. Jan Van Sickle, Mike Greer, JB Guyton, Gaby Neunzert (Professor Emeritus)

Professional Land Surveyors of Colorado, Inc. Membership Application



The PLSC represents land surveyors' interests in the State, proposes new legislation and changes to existing legislation as the industry's needs change, and works with the State Board of Licensure as an advocate for Land Surveyors. PLSC Chapters include: Central Colorado Professional Surveyors (CCPS), Colorado Spatial Reference Network of the PLSC (CSRN), Northern Chapter—PLSC (NCPLSC), Northwest 1/4 Colorado Land Surveyors (NW1/4CLS), Southern Colorado Professional Land Surveyors (SCPLS), Southwest Chapter PLSC (SWPLSC) and Western Colorado Land Surveyors (WCLS).

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(Please check.)

Included Chapter: ☐ CCPS ☐ CSRN ☐ NCPLSC ☐ NW1/4CLS ☐ SCPLS ☐ SWPLSC ☐ WCLS
(Each membership includes one free Chapter membership. Please check—see above for descriptions.)

Additional Chapter: ☐ CCPS ☐ CSRN ☐ NCPLSC ☐ NW1/4CLS ☐ SCPLS ☐ SWPLSC ☐ WCLS
(additional Chapter memberships are \$20 each. Please check.)

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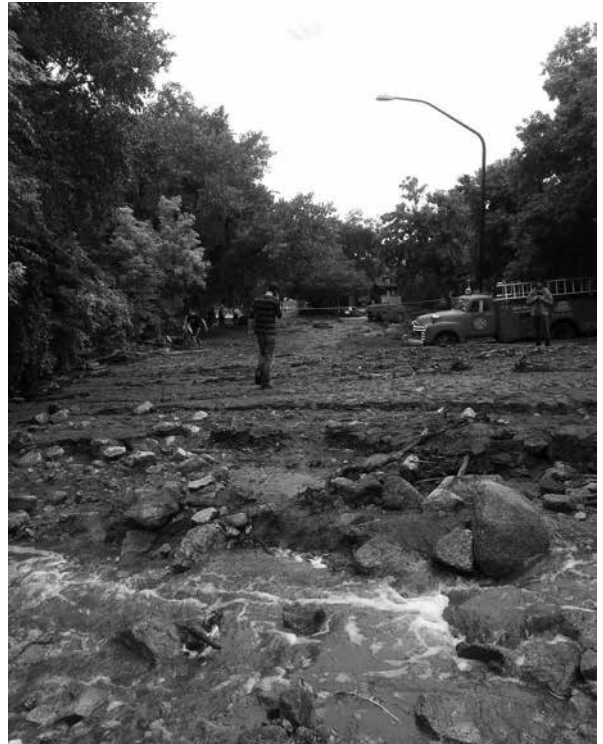
By Warren Andrews, PLS

What do you do when the property description says to the center of the North St. Vrain River and the 2013 Colorado floods moved the river 30 feet south? Do you try to reconstruct the original center of the river and set offset property corners appropriately? Or do you go by the new river location where somebody gains and somebody loses? What's fair and what's logical? What's reasonable and what's practical? It reminds me of the old country song of the poker player teaching his son the game. "You got to know when to hold 'em and know when to fold 'em."

And then there's the problem of earthquakes and ground movements. The San Andreas Fault in California is notorious for this, the displacements in land boundaries. In a local example, the Coast and Geodetic Survey precision base line on the Colorado School of Mines plane surveying field straddles the main Golden Fault. Professor Henry Babcock told me the records he had of the old CSM 2700 foot base line from 1950-on showed the fault was spreading about 0.01 foot per year. Finally the Geodetic Survey abandoned their base line because of this.

An extreme example of man-made ground change is in the Long Beach, California area where petroleum pumped out of the underground oil field has caused a vertical drop of some 27 feet and up to 7 feet horizontal movement. A natural movement is the present elevation of Mt. Everest, which has grown some 25 feet higher than it was in 1850.

Case law is not unambiguous on the known shoreline problems of accretion and avulsion, the gain or loss of desirable property. But does a surveyor have the right to recommend a solution in these varying situations or should he just keep quiet?



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Near Jamestown, Colorado

Land Surveyors Can Make A Difference For Vietnam War Heroes

By Dean Glorso, PLS

It was long after General Winfield Scott's Army of reinforcements headed southwesterly from Chicago, to help defend the Illinois settlers from the Sauk Indian Leader, named Blackhawk. And long after the American Civil War. And long after my grandfather, Oscar Jackson fought in the trenches during the First World War. And not too long after my Father, Samuel S. Glorso returned from fighting in the Second World War. And only a few years after I saw Korean War soldiers bivouacked along the highways on the way into The City of Chicago. But before my childhood friend Richie Mullin joined the United States Marine Corps. And before many from this little Town of Keeneyville, Illinois served in Vietnam. And before Andy Warhol painted 32 portraits of Campbell's soup cans, and before Arlo Guthrie sang about the Illinois Central trains "Rolling along, past houses farms and fields," and before I started putting survey monuments across this land. As a boy in my hometown of Keeneyville, I peered across a Campbell's Soup tomato farm through a surveyor's "Dumpy Level" for the first time in my life. It was a memorable moment for me, as it was the beginning of my fascination with my surroundings, and the technology that I would soon use in a Land Surveying career spanning more than 45 years. Now I realize Land Surveying is a career, where we can make a difference by literally putting a mark upon the world.

The Dumpy Level, with optics I had never witnessed, was set up by surveyors laying-out the new construction of Case Foundation Company's industrial machine shop, only 30 feet or so East of our tiny home along U.S. Highway 20, about 25 miles West of Chicago, Illinois. This was the start of big changes for the little Town of Keeneyville, and it would also be the start of my adult life where I would begin thinking about the future, and taking note of construction techniques, procedures, and technology that would make all these changes to Keeneyville possible. This moment in my life was also the beginning of a transition from being a child happy to spend summer days swinging on a rope tied high from a cottonwood tree at the place we called "The Laughing Place", to being an adult.

In adult life, I would find myself yearning for the days I spent with my friends there, and use the changing technology to my advantage, by starting a "Facebook" group page, called "Keeneyville Swamp Rats" to reconnect with people from my hometown. The naming of the Facebook page was easy, as it represented "Baby Boomers" from this little town of lowlands and ponds. A name given to us by the more affluent children of Lake

Park High School established some miles away from our town, but just across the street from a very posh, well known country club and golf course called "Medinah". The condescending name Keeneyville Swamp Rats stuck with us, and today it is a name we wear with pride, and it reminds us of the wonderful little town that was long ago swallowed up by the expanding metropolis of Chicago-land.

One Swamp Rat that I reconnected with is Doug Ehorn. Doug, also a writer and veteran, had written a book called, "Keeneyville Kids". Doug's book reminded me of the many wonderful people I grew up with, and he also recently started a list on Facebook of Military Veterans who served from our home town. The name of Richie Mullin was put at the top of the list of Marines who served. Richie was the only one of us from Keeneyville who was killed during the Vietnam War. I remember Richie well, as he was a fellow Swamp Rat who lived closest to the old Laughing Place, a place now converted into a wonderful DuPage County Forest Preserve, called Mallard Lake. With Doug being, an Air Force Vet, retired Environmentalist, and fellow Swamp Rat who wanted to have a memorial service meeting at Mallard Lake for Richie on this Veteran's Day, I came up with a land surveying idea for our fallen Veteran Hero.

I've used this idea before, and wrote about it in Colorado's Professional Land Surveyor's magazine, *Side Shots* Volume 33, Number 2, May Journal 2002 in an article called "One of Colorado's Prides." In the article I described placing a survey monument at Red Rocks Amphitheatre, in Denver, Colorado. I named the survey control monument "Tony Shiya", after a young surveyor employee who was killed in a car accident during the Red Rocks renovation and new visitor center construction project. This is an idea that I presented to Doug Ehorn and we decided to use it for our friend Richie Mullin, by placing the monument this Veterans Day as pictured on the next page. Doug will place it at or near the place we called The Laughing Place. Later a licensed land surveyor, registered in Illinois will establish GPS coordinates for



the position and record the "control" monument with the appropriate agency. The 3-1/4 inch bronze monument reads: "**RICHIE MULLIN USMC, WELCOME HOME, THE LAUGHING PLACE, KEENEYVILLE SWAMP RATS**".



Most everyone in the Baby Boomer Generation has someone they know who was killed in the Vietnam War. It is my hope that other Land Surveyor/Veterans will take the time to look up at least one of the 58,272 names on this web site www.vvmf.org and prepare a monument named in the veteran's honor. Placement is up to the Land Surveyor, but I believe hometown parks are a wonderful place to welcome home our Vietnam War heroes. The memorial monument set flush with the ground takes up no more space than a sprinkler head. Besides, as every land surveyor knows, the more control points and benchmarks we have the better we like it.

Semper Fidelis,

Dean F. Glorso, Veteran
USMC Vietnam 1968 – 1969
Colorado Professional Land Surveyor
or PLS# 16109 (Active)
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Grading and Drainage Certifications

By Earl Henderson, PLS

How many PLS's reading this right now, and you know who you are, and I have heard through the fence-line there are many of you, are stamping and signing Grading and/or Drainage Certifications that read something like: "I certify the lot grading has been constructed in *substantial accordance with the approved drainage plan...*" or "*The Grading and Drainage Design for the lot shown hereon accurately reflects the design intent of the approved area Grading Plan...*"? (emphasis added) That's scary stuff. If you're stamping and signing these certifications you are taking a big risk, in my humble opinion, and here's why. This reads to me as the practice of engineering. So you're putting your license at risk. Plus your insurance probably doesn't cover you for anything outside the practice of land surveying. Read that second one again. It starts out by saying the plan you have just stamped and signed is a "Design". Common sense says that is not land surveying but engineering. Both of the statements quoted above mention that the plan you show topography on is either "in substantial accordance with" or "accurately reflects" the design intent or plan. Again, common sense tells me that if I am not qualified

to create such a design intent or plan then how could I possibly be qualified to determine if the finished grading matches those qualifications? But so far only common sense has been called in for use here and we all know that common sense isn't all that common, right? So let's break it down legally.

I'm not going to fully quote all the statutes and rules that I reference. They can all be read on the DORA website. But I will describe their intent as I view them. From the Land Surveying statutes consider 12-25-202(6)(a)(III) which is the part of the definition of "Professional Land Surveying" that includes "Determination of...elevations of land parcels" within our purview as licensed professionals. So the showing of topography on a Grading or Drainage Certificate for a particular day is the practice of land surveying. But the statute does not include the analysis of the topography as it relates to the intent of an engineered plan. Furthermore, Rule 6.2.3 requires that we use our own judgment when determining the extents of the topographic survey to be used on a Grading and Drainage Certificate. Rule 6.2.3 still doesn't allow us

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to perform any analysis as it relates to the engineering plans, but it requires that we not allow ourselves to be limited by someone else telling us “Don’t include that settlement pond and 15’ deep irrigation ditch.” or “Pay no attention to the man behind the curtain.” We are required to use our own judgment without allowing others to influence us in this way.

Now, to borrow from Gene Roddenberry, I’m going to go where no PLS has gone before. I’m going to review a couple of statutes that apply to engineers, so brace for impact. 12-25-102(4) defines “Engineering” in part as “analysis” and 12-25-102(10)(a) defines “Practice of Engineering” in part “...to evaluate compliance with plans and specifications...”. So it seems quite clear, even if the subject isn’t directly addressed in the surveying statutes, that it is in the engineering statutes and that analysis of topography as it relates to the intent of a design or plan is expressly included in the definitions of engineering. The AES Board further defined the situation in Rule 5.2.3 Grading and Drainage Certificates, when it stated that “Professional engineers who provide grading and drainage certifications are responsible for reviewing *the data provided to them by land surveyors* (emphasis added) and personally visiting the area to be certified.” And again in Rule 5.3(a) wherein the AES Board has directly addressed Construction Observation to be “...to monitor general compliance with the plans, specifications, and *the intent of the design.*” (emphasis added yet again)

How much more clear can it be? Signing a certification statement similar to, or exactly like those quoted at the beginning of this article is the practice of engineering and not land surveying. But we still have a problem. We have a client that needs a certification done and a municipality that is insisting that the certification be stamped and signed by a Professional Land Surveyor. What can we do about that? Well, I’m not here just to complain. I’m also here to help with a solution.

First it’s important to remember that you cannot be forced to stamp and sign anything. I know what kind of pressure is exerted on us not only by the client and municipality but by ourselves too. I want my clients to be happy with my services and I’m sure you all do too. It’s hard to say no. But signing a statement like that above is taking the very real risk of endangering your license. Those statements include the practice of engineering and 12-25-208(1)(g) forbids us from “Performing services beyond one’s competency, training, or education.” and unless you are also a PE then engineering is obviously beyond your training. But let’s not forget 12-25-202(6)(a) (III) which, as stated above, includes the determination of elevations as part of land surveying and Rule 5.2.3 for engineers which stated that they were “...responsible for reviewing the data provided to them by land surveyors...”? Just as the analysis of the data is the practice of engineering, the collection and demonstration of that data is the practice of land surveying. So we’re left with

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a quandary. The PE can't measure the elevations since that is outside their area of practice while the PLS can't analyze the elevations relative to the design since that is outside their area of practice.

Rule 6.1.5 gives us the opportunity to provide all the services we can in this situation without endangering our licenses. "Rule 6.1.5 Limiting Scope of Responsibility. To limit a professional land surveyor's scope of responsibility on a document, the licensee shall include a written statement *or certification* (emphasis added) that defines the surveying services performed under his or her responsible charge. All aspects of the professional land surveyor's work shown on that document shall be sealed, signed, and dated by the licensee in responsible charge." So as a PLS we shouldn't be stamping and signing the certifications as written at the beginning of this article, but we can write our own certification statement outlining what we are able to attest to as shown on the grading and drainage certificate and then pass that on to a PE who can write their own certification statement (Rule 5.1.5 for PE's) and stamp and sign the same grading and drainage certificate. Between the two, all the attestations that the municipality wants in

their certification statement can be covered and hopefully they'll be happy. If not, I still strongly suggest that you not succumb to the pressure by signing statements as a PLS similar to those quoted above. You will be endangering your license to practice land surveying.

One of the goals for us in this situation should be to educate all the municipalities and departments that are insisting on certifications such as those above. They don't know the statutes and rules we are governed by. They just want a stamped and signed certification. They need to be told that they are requesting either the PE or the PLS to attest to conditions beyond their licensing restrictions. Hopefully, just a short explanation of why you can't sign such a statement will be enough to let them know that what they're asking is inappropriate. Make copies of this article and hand them out. Point them to the DORA AES Board for additional explanation. It will take time. But if we all work together and provide a common front then they will learn and it will change. It has to if we just plain refuse to sign their certifications. We can all back up each other.

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December 27, 2013

Mr. John B. Guyton, Editor
Side Shots
3825 Iris Ave.
Boulder, Colorado 80301

Dear Mr. Guyton:

This letter is to inform you of official BLM cadastral surveys in Colorado that have been accepted and officially filed from August 5, 2010, through November 4, 2013, and are now available in the Public Room, Bureau of Land Management, Colorado State Office, 2850 Youngfield Street, Lakewood, Colorado 80215. The surveys will also be available at <http://www.glorerecords.blm.gov>.

The accepted surveys are listed below by township, range, meridian, group number, type, approval date and number of plats.

<u>Township</u>	<u>Range</u>	<u>Meridian</u>	<u>Group No.</u>	<u>Type</u>	<u>Approved</u>	<u>Plats</u>
T. 9 S.	R. 93 W.	Sixth	1543	Plat & Notes	08/05/10	1
T. 7 S.	R. 74 W.	Sixth	1421	Plat & Notes	10/18/13	1
T. 8 S.	R. 69 W.	Sixth	1483	Plat & Notes	10/29/13	1
T. 49 N.	R. 5 ½ W.	NMPM	1338	Plat Only	11/01/13	1
T. 9 S.	R. 70 W.	Sixth	1585	Plat & Notes	11/04/13	1

As other surveys are completed, I will advise you of their acceptance. You may circulate this letter among the membership of the Professional Land Surveyors of Colorado.

Sincerely yours,

Randy Bloom
Chief Cadastral Surveyor for Colorado



WHEREAS, there are over 45,000 professional surveyors in the United States; and

WHEREAS, the nature of surveying has dramatically expanded to include hydrographic surveys, engineering surveys, selection and design for engineering construction, geodetic surveys to determine precise global positioning for such activities as aircraft and missile navigation, and cartographic surveys used for mapping and charting; and

WHEREAS, professional surveyors provide important services through the use of legal principals, procedures, sophisticated surveying equipment and techniques, including satellite-borne remote sensing devices and automated positioning, measuring, recording, and plotting equipment; and

WHEREAS, the role of the surveyor has been, and remains, of vital importance in the development of Colorado and the United States; and

WHEREAS, Coloradans are encouraged to recognize professional surveyors and important work provided for our communities and this state, and to reflect on the historical contributions of surveying and the new technologies that are constantly modernizing this appreciated profession;

Therefore, I, John W. Hickenlooper, Governor of the State of Colorado, do hereby proclaim March 17-23, 2014, in honor of

NATIONAL SURVEYORS WEEK

in the State of Colorado.



*GIVEN under my hand and the
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A handwritten signature in black ink, reading "John W. Hickenlooper".

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CHAPTER NEWS

CSRN

The Colorado Spatial Reference Network continues its presence in Colorado. Over the past few months, CSRN has lost some of its board members due to term limits, and we are seeking to replace the positions of President, Vice President, Secretary, and Treasurer.

The CSRN chapter could re-emerge with a new direction if you look at its name. Colorado, representing this fine state, Spatial, three dimensional relationships in space, Reference, comment that specifically mentions or calls attention to somebody or something, Network, a system linking a large widely distributed group of people or things to each other. This chapter is not one dimensional and can branch out in many directions of interest. The original reason for the organization

was to promote a statewide GPS network for land surveyors to use. That has been achieved when a variety of GPS manufacturers put up their networks up across the state. That achievement leaves an opportunity for new ideas to challenge the CSRN as a chapter. The direction is wide open for the membership to consider.

The membership must step up and give guidance where the board cannot. Please email your ideas to the PLSC board and Roger Nelson so the CSRN can re-emerge as a vital, functioning chapter in Colorado.

Jan Sterling, PLS
Past President, CSRN

NC-PLSC

The Northern Chapter has had a couple presentations since the last *Side Shots* submittal. The Octo-

ber Meeting was a presentation on Machine Control provided by Joe Schneiderwind with Geoshack. At the November meeting we had a hands-on demonstration at Larimer County Clerk and Recorder's Office. Our December meeting was the annual Christmas party at Abbondanza Pizzeria.

We have several upcoming presentations which are most interesting. John Hunt will be joining us to speak about floodplains, floodplain mapping & modeling, impacts of recent flooding, etc. We're also anticipating Frank Kochevar, Surveyor with Mesa County to speak about the expanding VRS network on the Western slopes in addition to his other initiatives in Mesa County. Look out for our meeting announcements for details.

A scholarship sub-committee has been formed and charged with

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outlining what our criteria will be for accepting and evaluating applications for the Northern Chapter sponsored CFedS Scholarship. The sub-committee has agreed that we'll award two applicants with scholarships covering half the cost. This will allow us to help more of our constituents.

Paul Bacus continues to lead the charge on the legislative committee. Laine Landau is directing an effort on TrigSTAR. Larry Pepek has taken on our latest project which involves establishing a custom NGS monument at the new Student Center at CSU.

Kayce D. W. Keane, PLS
Northern Chapter President

NW 1/4 CLS

Greetings from northwest Colorado! Here's wishing you all a prosperous New Year. Well, the snow is deep up here, but we aren't just sitting around polishing our plumb bobs. With an improving economy comes demand for our services even in mid-winter.

Not a lot of news from this neck of the woods. We held our last chapter meeting for the year on December 12th. The meeting was well attended, and Brian Kelly discussed several survey issues that had come to his attention in the latter half of 2013, including new GPS technology and the need to pay attention to what our equipment is telling us and where those solutions are coming from (think scale factors, State Plane coordinate conversions, Glonass vs. GPS vs. Galileo, etc.) We also talked about the apparent decline in people signing up for the NW1/4 Chapter, and the PLSC association with NSPS.

Once again, Happy New Year from the NW1/4. See you all next year!

Jeff Gustafson
NW1/4 Secretary/ Treasurer

SCPLS

The November board meeting was held in Pueblo. Discussions included the budget for 2014 along with board and officers elections. The President and Vice President positions and board of directors openings are up for election. Our election ballots have been sent out and results are not yet available at this time.

Numerous potential presentation speakers were discussed for future membership meetings to be held during the year 2014. Note: Scholarship funds are available without college level applicants. Discussions continue for applicants interested in the program.

On December 13, 2013, our Christmas Party was held at the La Renaissance Restaurant in Pueblo. This was one of our largest dining turnouts. A white elephant gift exchange was held after dinner which ended a fun night. Nathan Lair was given an honorary board of director membership. Nathan has been the chair of the successful Christmas party each year.

Calendar updates included the 2014 board of directors and membership meeting dates.

Joseph Alessi, PLS
President, Southern Chapter

SWC-PLSC

The SWPLSC held our most recent chapter meeting on Tuesday, November 12 in Durango. We had a good turnout for this meeting, though no speaker.

The 2013 Colorado Land Surveying Refresher Course is now available to surveyors in the SW Chapter area. This course offers a review and self-study plan for those taking the National Council of Examiners for Engineering and Surveying (NCEES) Fundamentals of Surveying (FS) and Principles and Practice of Surveying (PS) examinations. These courses are on DVD,

available at plsc.net, and being offered to the Chapters at a 25% discount. Please contact Parker Newby at pnewby@goffengineering.com with questions or to request an enrollment form.

Our seminar committee is preparing for this year's Four Corners Survey Seminar to be held Friday and Saturday, June 13 and 14, 2014 at Fort Lewis College in Durango. We should have our list of speakers scheduled and on the website soon.

Our next meeting is scheduled for Tuesday, January 14 here in Durango. Our meetings are the second Tuesday of every other month. Look for guest speaker information, time and location in the upcoming email. Southwest Chapter members are encouraged to show up and receive a copy of Paul Bacus' Colorado Land Surveying Laws Booklet.

Joshua J. Casselberry, PLS
President, SWC-PLSC

WCLS

WCLS met on November 13th for our Chapter meeting. Thanks again Peter Krick for the excellent dinner. We appreciate the time and effort.

Begin the year right and attend our next scheduled meeting on January 8th. We will be installing new officers at this meeting. If you haven't submitted your ballot it's not too late.

We are always looking for interesting topics and presentations for our meetings. If you would like to share something with us at our meetings please contact one of the officers.

We voted and will sponsor PLSC's 2014 Surveyor's Summit with two \$500.00 donations. If you haven't attended a Surveyor's Summit it is worth the time and money.

We discussed the issues of joining NSPS and decided to send out ballots to the membership. We will count the votes at our next meeting

CHAPTER NEWS

and submit the results to PLSC.

WCLS has scheduled our spring seminar for May 16th at the Grand Vista Hotel in Grand Junction. Mr. Vannozzi will be our presenter. He is an Assistant Professor for Civil Technology/Surveying at the Thompson School of Applied Science, University of New Hampshire.

Look for additional information to come.

Our next Chapter meeting will be January 8th at City of Grand Junction building. Dinner at 6:00 and meeting starts at 6:30. See you there.

I want to thank each and every one of you for your efforts in keep-

ing the WCLS going over the last couple of years. I have enjoyed my time and look forward to the future.

Richard Bullen, PLS
President, WCLS

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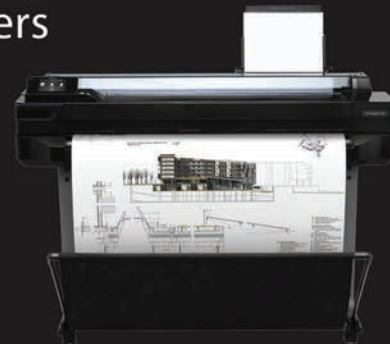
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