

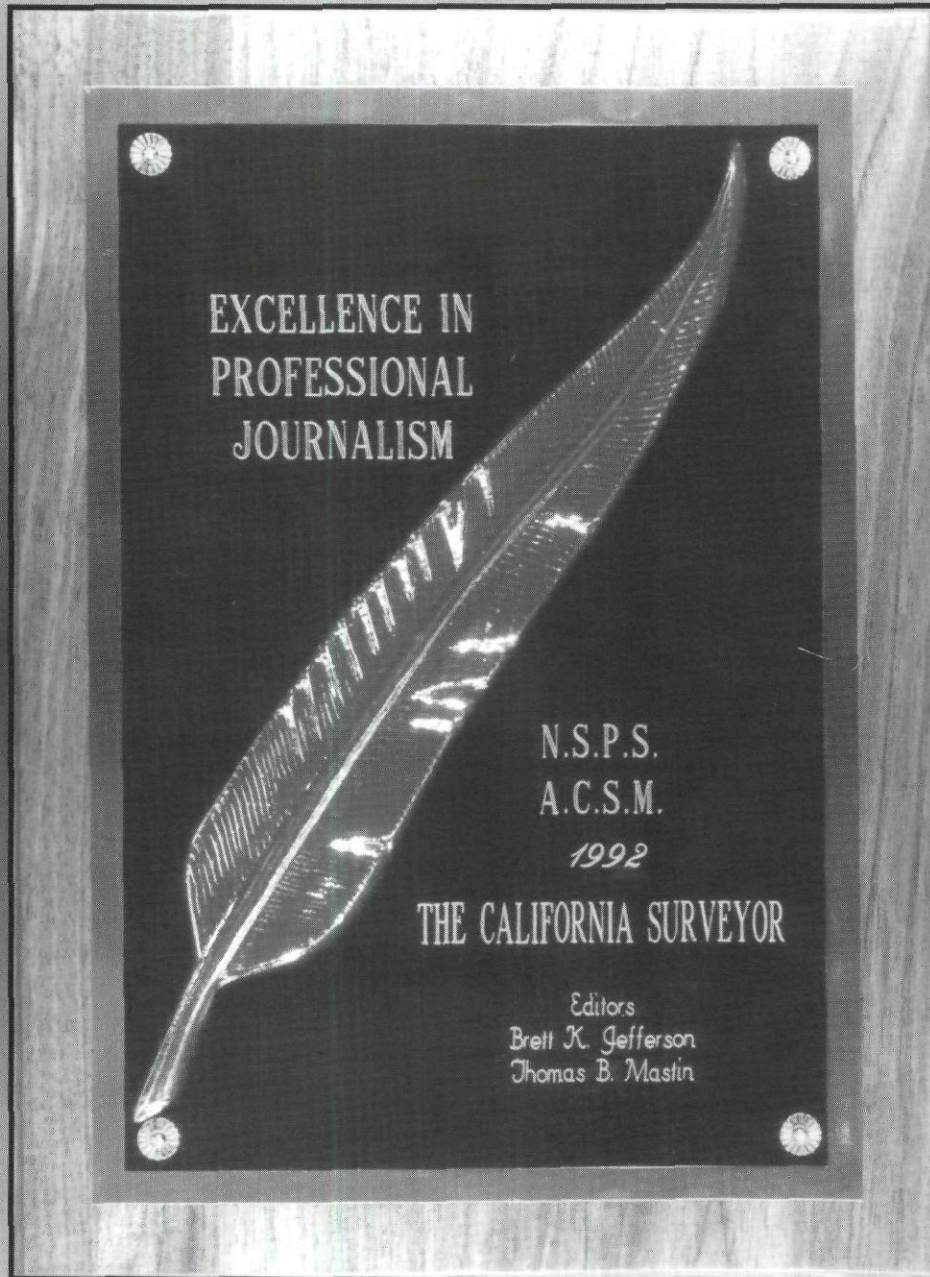
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The California Surveyor

NO. 100

The Voice of the Land Surveyors of California

SPRING 1993



IN THIS ISSUE:

THE LEGAL ASPECTS OF SURVEYING



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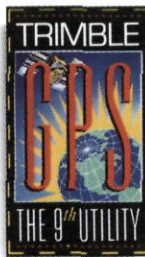


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"Recognizing that the true merit of a profession is determined by the value of its services to society, the 'California Land Surveyors Association' does hereby dedicate itself to the promotion and protection of the profession of land surveying as a social and economic influence vital to the welfare of society, community, and state."

"The purpose of this organization is to promote the common good and welfare of its members in their activities in the profession land surveying, to promote and maintain the highest possible standards of professional ethics and practices, to promote professional uniformity, to promote public faith and dependence in the Land Surveyors and their work."

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All articles, reports, letters, and contributions are accepted and will be considered for publication regardless of the author's affiliation with the California Land Surveyors Association, Inc. Contributions submitted on floppy diskette medium is encouraged. For compatibility, disks should be 5.25 or 3.5 inch, MS-DOS (IBM compatible) format. We can accept ASCII text files or word processor files from the following programs: WordPerfect, and Microsoft Word.

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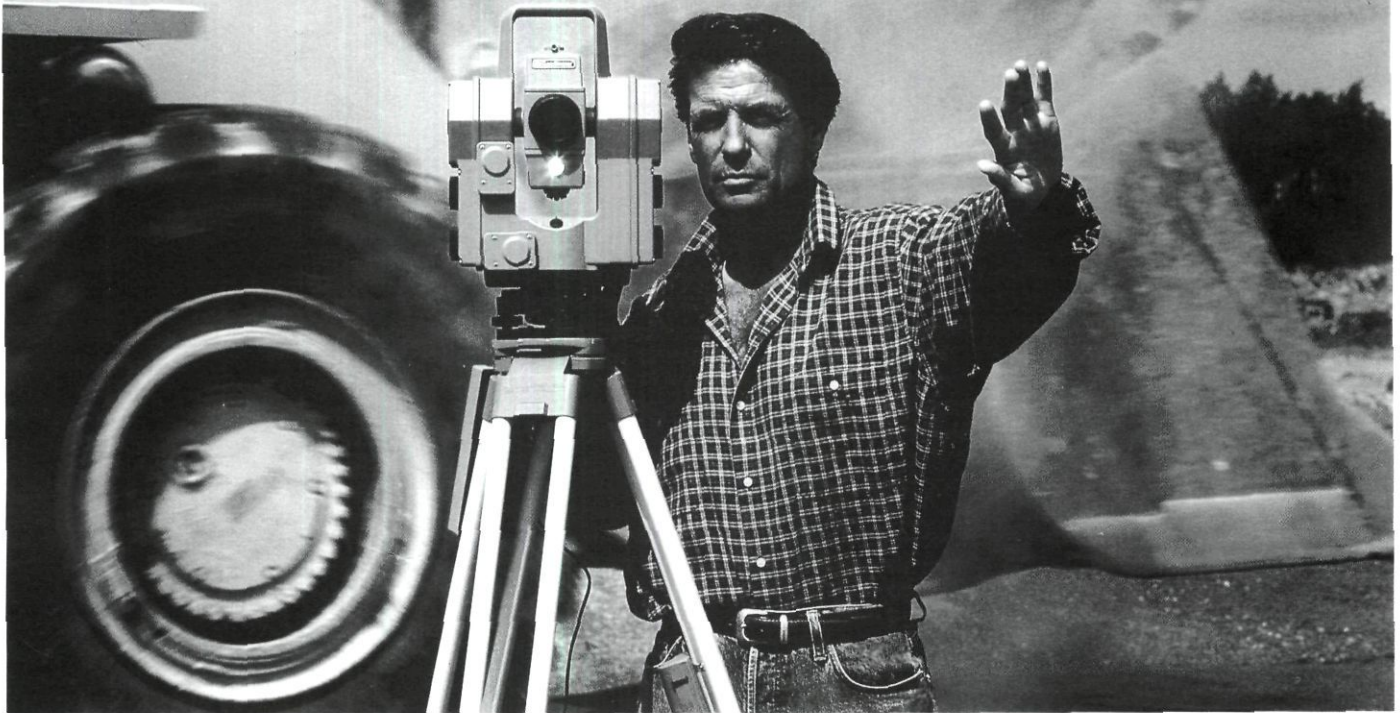
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FROM THE EDITOR

IS OXYMORON AN APPROPRIATE WORD FOR AN EDITORIAL?

By Tom Mastin, P.L.S.

THIS PUBLICATION MARKS the one hundredth issue of *The California Surveyor*. The magazine has a long tradition of presenting technical and controversial issues that concern the surveying community. It seemed appropriate to have for the theme of this issue "The Legal Aspects of Land Surveying." Although the theme can be interpreted to cover a wide variety of areas within surveying, we kept the articles to those dealing with boundary law and the consequences of boundary surveys. In some ways, the concept of legal aspects of surveying is an oxymoron in that the term would indicate there is some definitive boundary to the legal practice of land surveying. However, as we all know in surveying, we more often deal with the exception that proves the rule than the rule itself.

At one of our editorial staff meetings, it was brought to my attention that many boundary survey concepts we use without much thought may not be common knowledge to the newer surveyors or may be false beliefs. To remedy that, we felt we should publish articles that are accepted standards or ones that will challenge us to consider the day-to-day actions we take. We do hope the articles in this issue and all

issues of *The California Surveyor* will make some of you stop, think, and respond. As always, we much prefer the well-written response to the messages left on our answering machines.

It is important to remember that the rules of boundary retracements are no more written in stone than a set of improvement plans. We often cite quotes from either Brown's or Wattle's books as if they were in fact the law. We all know that most of the rules in boundary retracement are based on case law, and the principles laid out by Brown and Wattles are referenced to cases. However, how many of us have reviewed those cases or researched to see if later cases modified the principles? I, for one, haven't. We, as land surveyors, need to be more comfortable with law libraries and legal research. We don't often hesitate to worm our way into title company vaults, assessor's back rooms, clerks' old files, recorder's original documents, and other obscure places to do research for a survey. We must learn to be just as quick to exasperate the librarian at the local law library. It isn't difficult and just a little bit time consuming. Remember, don't always believe what you read and don't always read what you believe.

It is important that I thank some of

the many individuals that work to get *The California Surveyor* out each quarter. Those of you who get and read this every three months may not realize the effort it takes to get this puppy out the door. To those of us who work on it, it's the closest thing to painting the Golden Gate Bridge we will ever be part of. First, I want to thank both my Assistant Editors: Linda Richardson, PLS (Congratulations!), for her writing and for reading and reviewing the multitude of other publications, and Michael McGee, PLS, for his willingness to hound anyone he has contact with for an article (it's lucky he has a lot of friends, as he loses two for each article in *The California Surveyor*). I also want to thank Dorothy and Cheryle and the Central Office staff for first, giving me more information than I would ever care to see and second, for their ability to take all the information I give them and make a magazine out of it, not to mention coming up with a cover for that magazine. I also want to thank all the people who are willing to write and submit articles to me. Finally, a special thanks to my clients, who are willing to have completion of their projects delayed, so that I can do my part in getting out the magazine (however, they don't realize this is happening, so I won't mention that). ⊕

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LETTERS TO THE EDITOR

■ STANDING ON THE SHOULDERS OF A SMALL GIANT

In the Winter/Spring 1992 edition of *The California Surveyor*, Donald Bender talked of standing on the shoulders of giants when he spoke of men of our California surveying heritage, men of great stature like L.S. #1, Charles Terraine Healey and L.S. 18, George Hansen. But what of our elder contemporaries? How many surveyors of long standing are still out there working in the field.

I would like to submit for your appraisal, Tanni Stassi, L.S. 2231 born in Ingleville, Colorado, on March 26, 1901. Tanni is 91 years young and is still a working land surveyor. He has one brother, George, who is three years younger. George resides in Colorado and is also a California Licensed Surveyor.

Tanni came to California in 1906 with his parents and settled in the Escondido area. They later moved to the Boyle Heights area of Los Angeles. When Tanni was eight years old, he sold papers at the corner of Market and Spring where the City Hall now stands. He graduated from Los Angeles Polytech-

nic High School. In 1924, Tanni married Mary Ellen Adams. In 1925, they moved to the Chavez Ravine area until 1962. After being displaced by the construction of Dodger Stadium, they then moved to Alhambra, which he still calls home after 30 years. Tanni and Mary Ellen have two daughters, Mary Ellen McCausland and Loretta Ann Stassi and one son, Joseph Robert Stassi. They also have two grandsons and one granddaughter, two great granddaughters and one great-great granddaughter (about 18 months old). Tanni became a widower in 1985.

In about 1924, Tanni went to work for the Los Angeles County Road Department. Peter Bernal, a chief with the Road Department helped him get the job as a "Roady." He worked with Amos McNish. While working as a chainman, Tanni claims the best chief he ever worked for was Gary Rice. He worked for the Road Department for 15 years. He then went to work for the California State Division of Highways becoming an Assistant Highway Engineer in charge of the Coordinate Control Map Section until his retirement in 1960.

Tanni attained his license sometime in the early 1940s. Since his retirement in 1960, he has been a contract surveyor, working mainly on lot surveys and subdivisions. He worked for Harry Gilbert in the 1960s, primarily in the Malibu and Sand Canyon area. He worked for AMCO Engineering about 1964 and for two or three years was in charge of their Hollywood Office, working on the Porter Ranch. From 1970 until the early '80s, Tanni worked for Hanna Barbera Studios and for Lind and Hillerud of San Marino. Tanni has been a member of the Operating Engineers Local 12 since 1965 holding ticket number 1192584.

Mike Lazzaro, L.S. 3471, has worked with Tanni since about 1976. He says Tanni is a pleasure to work with because he knows all the little shortcuts to make the job easier.

The Los Angeles County Surveyor's Office believes that Tanni may be the most senior practicing field land surveyor in the state if not the nation.

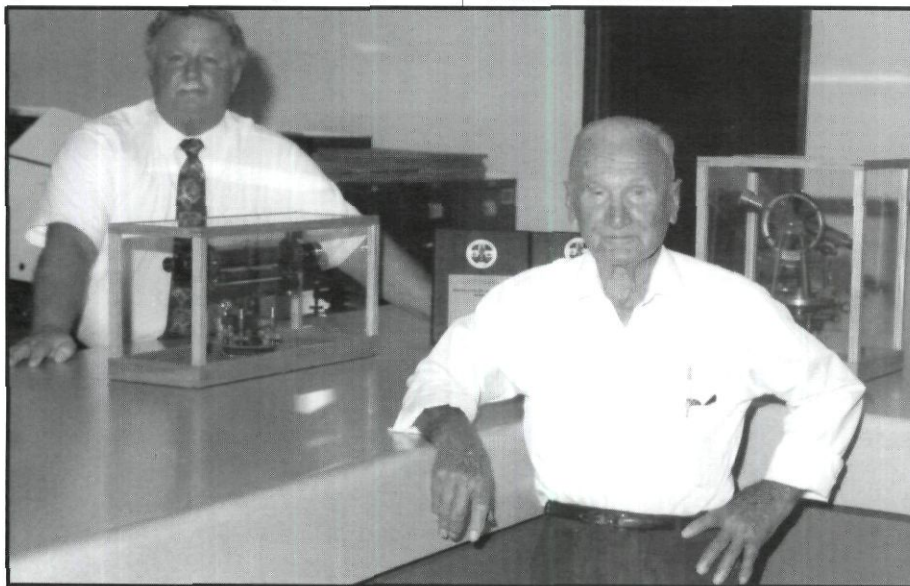
Those of us who have worked with and observed him, highly respect and admire his knowledge, wit, and strength of character. We see him, at 5'3" tall, a small giant among his peers and wish him many more years in the practice of his profession.

Lee Fisher, PLS

■ MORE DEBATE ON RECORD OF SURVEYS

Section 8762(e) of the Land Surveyors' Act must be either repealed or enforced!

The State Board of Registration for Professional Engineers and Land Surveyors does not seem to take it seriously. Of the complaints I know, the Board has resolved them by what I consider unorthodox methods, e.g., allowing the removal of points that required the filing of a Record of Survey [doesn't Section 8764(a) require filing a



Tanni Stassi – L.S. 2231 (right) and Robert Smith – Assistant Deputy Director, Department of Public Works, Los Angeles County (left).

Record of Survey for points removed?] after the property owner had already learned that the fence was not on her property and she didn't need or want to pay for any more surveys or maps! In another case, a Surveyor, whose stamp was affixed to a plat that obviously required the filing of a Record of Survey, was let off because the party chief who did the work "doesn't work here anymore"!

In the meantime I'm finding during discussions with other surveyors that there are many ingenious ways of not complying with the letter of the law, to wit:

- not tagging points. (Property owners aren't even saying who did their surveys when asked. Is that considered a conspiracy?) [a violation of Section 8772]
- setting "construction" stakes or "offset" stakes which just happen to fall at deed cut lines or other convenient places that preclude filing a Record of Survey! [a violation of Section 8772]
- unsigned, undated, unstamped plat; or worse, all plats dated prior to December 1984! [a violation of Section 8761]
- filing of a Corner Record in lieu of a required Record of Survey and not having the County Surveyor do anything about it [a violation of Section 8762(e)]
- pleading ignorance when confronted with the requirement to file a Record of Survey.
- setting "point(s) on line", but a line drawn between such "point(s) on line" defines a parcel "described in a deed or other instrument of title recorded in the county recorder's office [but] not shown on any subdivision map, official map, or record of survey." {Section 8762(e)}
- winking at violations
- completing ALTA (American Land Title Association) surveys without setting a single permanent point ("Set pencil" and "Set mark" do not qualify as permanent monuments!) although an ALTA survey requires "establishing" the boundary and Section 8762(d) covers "establishing" portions of lots not ascertainable without trigonometric calculations"!

I have even experienced outright refusal to comply with the law when a miscreant has been confronted:

- "I'd need a full time drafts[person] to do all that work."
- "I'm too old to start doing that sorta thing."
- "The client won't pay extra for that." (When you contract to do the survey you have implicitly contracted to comply with all provisions of the law pertaining to it)
- "I gotta make a livin."
- "There's no material discrepancy...it fits the fence." (Which side of the block or 4"x4"?)
- "It's shown on the assessor's map that way."
- The honest, law-abiding, professional surveyor is at a distinct disadvantage because he/she can't compete against the surveyors and civil engineers who ignore or flaunt the law.

No one person can catch all of the lawbreakers, but as a professional group we can work together to educate or eradicate the lawbreakers.

We have the choice of eliminating, changing, or enforcing the law!

The long term implications of Section 8762(e) are for the public good (imagine every lot shown on a Record of Survey!).

The sad part of the whole situation is that the public is unaware of the law and its implications; worse yet, it is to their economic advantage to skirt, ignore, or break the law.

Are we going to do something about this?

David L. Lindell, LS 4016

■ COMMENTS ON THE CALIFORNIA SURVEYOR

I don't believe it should be so easy for you to acknowledge so humorously in your editorial in the current *California Surveyor* that your English skills are poor, and then further along in the magazine write an article replete with awkward sentence structure, poor grammar, and poor punctuation. The article, "California-The Northeast of the '90s," is so poorly written that it is an embarrassment both to the magazine and to the profession of Land Surveying. It underscores the general belief that surveyors and engineers don't know how to communicate, either in speech or in writing.

On the other hand, Michael McGee seems to be a competent writer, as

witnessed by his letters in the Letters To The Editor section. If this is the same person whose name appears under yours on Page 3 as Assistant Editor, then it is Mr. McGee whose task it should be to take your writings and convert them into acceptable English. I also offer my services to you; send me your manuscripts and I gladly will proofread them and make necessary corrections.

Your magazine represents the profession of Land Surveying, even if so in an unofficial capacity. People other than surveyors read this magazine, and its editor cannot afford to be casual or uncaring about the quality of its writings. Does the magazine want to perpetuate the poor image land surveyors have historically burdened themselves with?

Jeffrey D. Black, P.L.S.

■ CALIFORNIA SURVEYOR COMMENDED

You and your fellow writers on the staff of *The California Surveyor* are to be commended for bringing out two consecutive issues of your publication in which each contained some professional and technical material.

In particular, the Fall 1992 issue had the "Report to GIS Task Force" by Joseph W. Betit. Joe covered a lot of ground, and made a plea for the use of geodetic coordinates instead of those coming from State Plane Coordinate or Universal Transverse Mercator systems. I would disagree; surveyors have enough problems handling plane x,y coordinates, much less those that arise when button pushing technicians pass themselves off as geodesists.

I agree heartily with his comments about the need to distinguish between measurements and pseudomeasurements, not only as applied to GIS, but the entire field of cadastral surveying.

Joe raised two other questions which caught my attention. The first was applying FGCC and other National Agency Standards. The caution implied by the article is most timely. The second was the clarification of "Standard" versus Standard Error. I would suggest that on this point most CLSA members would fall flat if called upon to express themselves. National Map Accuracy Standards, anyone?

Joe got a bit overly enthusiastic in his pitch for geodetic coordinates. The

NAD 83 datum which is mandated by statute will affect us in 1995. In our California Public Resources Code the specifics are spelled out - NAD 83 is based on the Geodetic Reference System of 1980 (GRS 1980), not the World Geodetic System of 1984 (WGS 84). Mike McGee discussed this to a degree beyond what many would ever care to know, except perhaps to impress friends and family. This was done most aptly in his article "GRS 80, NAD 83, WGS 84 - What's the Difference?" appearing in the Winter 1993 issue of *The California Surveyor*.

The subjects are deep, and time and space are limited. May your editorial skill continue as you develop further issues of your most professional publication.

Ira H. Alexander

■ HPGN UPDATE

The article in the fall issue of the "... Surveyor" included an informative article by Mike Stephens describing the recently completed California High Precision Geodetic Network (HPGN). We thank Mike on this effort to increase the awareness and knowledge of the HPGN. The following comments are provided to expand on Mike's information.

- Now that the Data Sheets are completed for the HPGN, Caltrans prefers that HPGN users contact the National Geodetic Information Center in Rockville Maryland, (301) 443-8631, for information. (Note: The Data Sheets provide complete information for each station, including historical data.)

Caltrans does not have the resources, systems, nor (at times) the information to ensure a timely and complete data distribution. For example, NGS recently added 16 NGS-surveyed stations to the California HPGN data base.

Thus, to ensure attainment of the latest and most complete HPGN information, contact the NGS Information Center as noted above.

- Although the GPS HPGN field observations were performed by Caltrans and NGS, others contributed to the overall success of the HPGN project - namely:
- Scripps Institute of Oceanography (Dr. Yehuda Bock)
- Los Angeles Water and Power
- Stanford University

- U.S. Geological Survey
- Trimble Navigation Corporation
- Ashtech Corporation
- San Bernardino County
- San Diego County

In addition, discussions were held with numerous local agencies to gain support and receive advice for the HPGN project.

- Recently, Caltrans distributed copies of the Data Sheets for the entire HPGN (as of July 1992) to County Surveyors and other HPGN supporters. Because of the size of the document (about 800 pages), distribution was limited to 100 copies. This was a one-time effort by Caltrans to expand the knowledge that the initial HPGN survey was completed and that the data is now available from NGS. Currently, Caltrans does not intend to make similar distributions for added stations, updates, etc.
- Recent earthquakes have already displaced HPGN stations near Ferndale and Landers making the current published coordinates incorrect. Caltrans is in the process of resurveying the Ferndale area. The Landers earthquake affected a large area. A resurvey of this area is scheduled for November 1992 and will involve NGS, Caltrans, and possibly others.
- In addition to Caltrans, some local agencies are involved in HPGN densification efforts.
- Finally, we would be remiss if Bob Nelson, a long-time Caltrans Surveyor, was not recognized for initiating, promoting, and coordinating the HPGN. Without Bob's persistence there would not be a California HPGN today.

Again, we thank Mike for his initiative in preparing the HPGN article which provides California surveyors with a good HPGN overview.

Additional questions regarding the California HPGN may be directed to the following:

- National Geodetic Information Center (301) 443-8631
- Don D'Onofrio, Caltrans NGS Geodetic Advisor (916) 739-4506
- John Fundus, Caltrans HPGN Coordinator (916) 739-4506
- The District Surveys Engineer for the local Caltrans District Office

*Lawrence R. Fenske, Chief
Caltrans Geometronics Branch*

■ 1991-1992 CSU, FRESNO SURVEYING ENGINEERING FUND DRIVE RESULTS

The faculty, staff, and especially the surveying students at CSU, Fresno, wish to thank you for contributing to our fund raising efforts during the 1991-1992 academic year. These funds made it possible for us to retain the services of Dr. Wes Parks for six classes during the year. Wes taught classes in the adjustments, labs and the GIS area, freeing up Bill Anderson, Dr. Nader and Dr. Crossfield for a more serious focus on required and elective land and boundary surveying and subdivision design courses.

CLSA came through when needed.

Many chapters and individuals within that organization contributed. The California Foundation for Land Surveying Education also made a nice contribution, but CELSOC, formerly CCCE & LS, contributed nothing. That state organization dumped the request into the laps of two or three of its valley chapters, and nothing was ever heard about it again.

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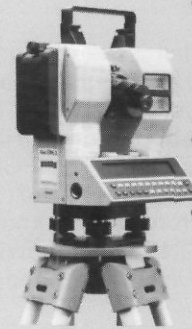
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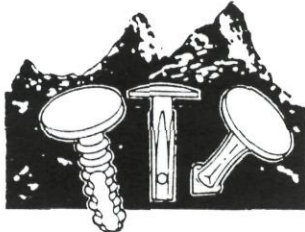
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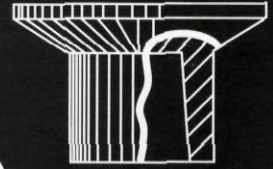


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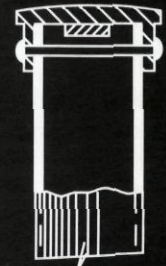
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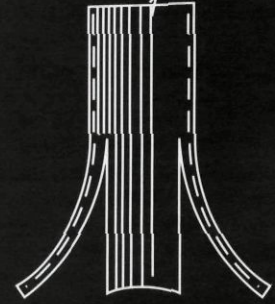


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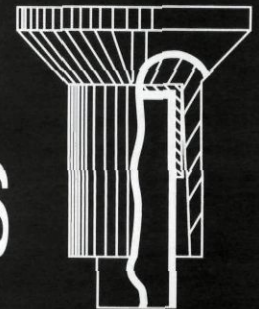


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BOUNDARY, BOUNDARY — WHICH BOUNDARY?

By Chuck Karayan, P.L.S.

WHEREVER SURVEYORS GATHER these days, whenever one of them writes an article for a "journal," there seems to be an almost endless stream of dissertation on professionalism, duty, and boundary. There are examples of error, cases of surveyor liability, and analyses of typical or theoretical problems. And still the discussion goes on. But rarely is the surveyor's duty with regard to boundary defined; or, for that matter, is the surveyor even told what a boundary is, where it is located, or when it is established. Rarely, if at all, have these basic professional issues been addressed; perhaps that is why the discussion goes on.

The boundary is a line, real or imaginary, which circumscribes a particular tract of land and limits it with reference to contiguous tracts.¹ It is the limits or marks of enclosure if possession be without title (of record), or the limits stated/implied in the controlling document if possession be under title (of record).² Surveyors sometimes call the boundary "the property line". Title people and lawyers sometimes call it "the line of ownership." Simply put, "the boundary separates yours from mine."

What are boundaries is a matter of law; where they are located is a matter of fact.³ The boundary is a line or object indicating (located at) the limit, or furthest extent, of a tract of land.⁴ These two concepts of boundary—what and where—produce the confusion and argument about surveyors' "establishing" a boundary. In the first instance—what—the surveyor cannot "establish"—only the law can; in the second instance—where—only a licensed surveyor can legally "establish."

As one reads the current periodicals, it appears that there are many schools of thought as to boundary and how surveyors should establish them. For most surveyors, the profusion of articles only serves to further confuse the question. And the discussion goes on. Some would have us delineate on the ground the line called for in "the deed." Implicitly, this theory says there

are many boundaries of a tract of land—but how can more than one be "the furthest extent"?

Some would have us monument the line of occupation or possession. This theory says the fence is the boundary—but whether or not the fence is the boundary ("what are boundaries") is a matter of law. Others, probably the majority, would have us locate and monument the record title line. This theory says that the boundary is the stated/implied line as described in the controlling document (of record) when such line is properly interpreted, construed, and applied. Clearly, this represents the "conventional wisdom" of our profession today.

To this end of proper interpretation, construction, and application, the "conventional wisdom" embraces surveying's standard texts. All of these books tell us the rules of law and prove their points by citing cases already decided by the courts. The conventional wisdom exhorts us to know these rules and admonishes us that our duty is to properly and correctly establish the boundary.⁵ What the conventional wisdom does not address are the questions of unrecorded and unwritten title.

The United States Constitution states that the jurisdiction of the Supreme Court shall extend to all cases at law and in equity.⁶ Because the basic nature of any case is either one or the other, the Supreme Court's review authority covers all cases. Since enforceable/protectable rights are either legal or equitable, the generic use of "record title" would include both. This line of reasoning would have surveyors include record equitable title and exclude unrecorded legal title.

Record equitable title can be exemplified by a real estate sales contract. The contract does not operate to transfer legal title. Since the purchaser generally goes into possession, the seller retains title as security. When the contract has been paid, the seller gives the purchaser a deed, and legal title is transferred between them. A contract purchaser who has fully completed the contract obligations would (absent other considerations) have an interest/

title protectable by a court's equity powers. If the contract and satisfaction have been recorded, the purchaser would not hold legal title until the seller signed and delivered a deed.

An equitable interest/title is a mere floating and ineffectual justness until such time as the court enters a decree actually subjecting the land to such claim.⁷ A record equitable title is "ineffectual"; the limit of such a title cannot become the boundary (effectual) until the court enters a decree.

Unrecorded legal title can be exemplified by a deed, properly executed and delivered, which the grantee stores for "safekeeping." The grantee's legal rights vest at the time of delivery; the boundary then exists and is unaffected by the trust/naivete evinced in the failure to record. (Recording a conveyance gives the grantee senior rights as against a subsequent conveyance of the same property from a common source of title.)

The Statute of Frauds⁸ (originally enacted in England) concerns itself with the need for definite proof of conveyance, requiring that every transfer of title be put in writing. While the statute is specific, it does not require that the writing be recorded. As between the parties, an unrecorded conveyance is valid.⁹

From the above, it is quite clear: Recording is not the basic issue. Neither the inclusion of record equitable title nor the exclusion of unrecorded legal title is supported by the courts. What, then, of unwritten title?

Unwritten equitable title can be exemplified by a fence which adjoining owners have recognized and acquiesced in as their adopted boundary (generally, for a period of time equal to the statute of limitations governing the recovery of real property). Whether written or unwritten, an equitable interest is a mere floating "justness" until such time as a court enters a decree actually subjecting the land to such claim.⁷ As applied to equitable interests/titles (only), the phrase, "It's not the boundary until the court says it's the boundary," would be appropriate.

Unwritten legal title can be exemplified by a fence which has stood as the

limit between adjoining owners for "time immemorial."¹⁰ More commonly known as the rule of ancient fences, the proper name for the doctrine is the rule of ancient boundaries. "By the sufferance of the adjoining proprietors, by the efflux of time, and by consequent operation of law," the boundary is established.¹¹ And although "it was not the original line .. whether .. erected .. deliberately as marking the boundary .. or by mistake as to location .. can make no difference..."¹¹

From the above, it is quite clear: Written documentation is not the basic issue. Neither the inclusion of unwritten equitable title nor the exclusion of unwritten legal title properly and correctly applies the rules as the courts have laid them down. The basic issue is not a question of written/recorded title but, rather, a question of legal (vs. equitable) title. The surveyor's duty is to properly and correctly establish the boundary (monuments) according to the rule of law.

The standard texts on boundary are very explicit. According to these texts, we are obligated to research the records, compare our client's description with each of the adjoining descriptions, and properly and correctly interpret/construe the record legal title. The conventional wisdom would have us stop there. The conventional wisdom would have us set our monuments at these corners. But the law presumes that our monuments are "landmarks established to indicate a boundary."¹²

The documents (both recorded and unrecorded) are not the title itself—they are evidence of title.¹³ Further evidence exists, generally, in the form of other surveyors' monuments, lines of occupation, improvements, etc. (either recorded or unrecorded). The surveyor evaluates the admissibility, relevancy, competency, materiality, credibility, and probative value of evidence every time one monument is "held" rather than another. If the surveyor did not utilize the "best evidence," how could the boundary be properly and correctly established?

The "acid test" of this concept—that the surveyor's duty is to establish boundaries in accordance with the rule of law—can be exemplified by "adverse possession." The conventional wisdom would have us believe that if title is based on written memoranda (or

monuments linked to it) the surveyor should establish the boundary according to such title; but if title is based on the rule of law (unwritten), the surveyor should not establish the boundary according to such title. This theory says that the method of acquiring title is critical.

The most imperfect degree of title consists in the mere naked possession or actual occupation...being distinguished in this respect from the "modus acquirendi."¹⁴ "...whenever you find a person in possession of property, that possession is prima facie evidence of ownership in fee; and that prima facie evidence becomes absolute when once you have extinguished the right of every other person to challenge it."¹⁵ The procedures, rules, and effects of law are such that under certain limited circumstances a person may come to be owner although no written memoranda exists. The method of acquiring title is not critical, according to the courts.

Since titles/boundaries are established (occasionally) by rule of law, the prudent surveyor must ask: "When does the fence become the boundary?" The only answer possible is: when a preponderance of the evidence indicates that the requirements of a particular rule of law have been fulfilled. "Title to property acquired by adverse possession matures...after the statutory...period has expired."¹⁶ "Nor is a judgment at law necessary to perfect a title by disseisin (adverse possession) any more than one by deed."¹⁷

From the above, it is quite clear: Unwritten legal rights do not need a court to vest the title and thereby establish boundaries. The court order serves to recognize and thereby quiet the title. The phrase, "It's not the boundary until the court says it's the boundary," would be inappropriate (as applied to vested legal rights).

When faced with unwritten legal title, the conventional wisdom withdraws and thereby denies its professional stature. The conventional wisdom asserts that surveyors are not attorneys—they do not determine questions of ownership; surveyors are experts at measurement—they gather evidence (but do not render judgment?). The conventional wisdom seeks to insulate surveyors by denying our duty to properly and correctly establish the boundary.

The conventional wisdom would have us believe that we must follow the rule of law with regard to written legal title, but may not with regard to unwritten legal title. But where did surveyors get these "rights"—the "right" to choose when we will and when we will not follow the law? and the "right" to choose which rule of law will be obeyed and which will be ignored? Therein lies the fallacy of the conventional wisdom. The surveyor is given no option as to which rules to apply or when. The surveyor may not "pick and choose" simply because it is more comfortable. The only option the surveyor has is to declare that, based upon the available evidence, no "major probability" exists—that the evidence does not preponderate in either (any) direction and that therefore no boundary will be established.

To justify the label "professional," a surveyor must bring to bear an ever-increasing body of knowledge and experience so as to establish the boundary properly and correctly. This can be done only through the appropriate application of the rules of law and science. Applying these rules, the surveyor renders judgment, forms a professional opinion, and sets monuments (which are landmarks established to indicate a boundary).

Boundary, boundary – Which boundary? The boundary of the legal title.

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- ¹Stone vs. Waukegan, 205 Fed. 495
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- ³Whittesley vs. Kellog, 28 Mo. 404
- ⁴Jackson Co. Pub Water Dist. vs. Ongz Aircraft Corp., 409 SW_{2d} 266, cert. den. 387 U.S. 919
- ⁵Highway Comm. vs. Beebe, 55 Mich 137, 20 NW 826
- ⁶Article III Section 2.
- ⁷Nelson vs. Nelson Neal Lbr. Co., 171 Wa. 55, 17 P_{2d} 626, 92 ALR 554
- ⁸The first statute was passed June 24, 1677. Since then, every state has adopted it either intact or with modification
- ⁹Mollendorf vs. Derry, 95 Ida. 1, 501 P_{2d} 199.
- ¹⁰American common law suggests three generations (60 yrs.), although some jurisdictions have invoked the rule where the fence has stood for less than 20 yrs.
- ¹¹Bayhouse vs. Urquides, 17 Ida. 286, 105 P 1066
- ¹²Witcomb vs. Milwakie, 61 Or. 292, 121 P 432
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- ¹⁴Ibid.
- ¹⁵In re: Jolly, 1 Chanc. 292
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WHOSE VIEW IS IT ANYWAY?

PRIVATE PROPERTY RIGHTS AND THE ACQUISITION OF PRIVATE VIEW EASEMENTS

PART I

By Michael J. Pallamary, P.L.S.

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"Where the telescope ends, the microscope begins. Which of the two has the grander view?"
— Victor Hugo

AS DEFINED BY THE FAMED legal scholar Blackstone, "Land," extends for an indefinite extent, upwards to the heavens and downwards to the center of the earth. Unlike the firmament, the airspace above has historically been treated as a migratory element, passing over one's land. Traditionally, airspace has not been considered as being "owned" until it has been reduced to either the possession or use of the surface owner.

Historical Background

When considering airspace rights, American courts have recognized that trespasses could occur when airspace has been encroached upon. Such trespasses may exist in the form of wires, eaves, shutters, walls, and other physical improvements which extend over a property line.

Airspace, like any other element of land is subject to separation as is the terra firma. In most states, private parties may either purchase or lease airspace such as is common in California where property beneath the freeways is leased to private parties.

Under the old English doctrine of "ancient lights," a landowner could obtain a prescriptive right in the nature of an easement to the free flow of light and air over a neighboring property after an extended period of use. Within the American jurisprudence system, this doctrine has not been accepted. Instead, landowners must secure airspace easement rights by either express grant or reservation. If acquired, the easement becomes a negative easement over the burdened property.

Because American courts will not honor the ancient lights doctrine, the courts are limited in their ability to resolve related disputes when they surface. Such remedies are typically resolved through the common law doctrines of easements and private nuisance.

Failure to obtain such an express easement can result in a complete loss of what was otherwise considered to be a natural property amenity. Perhaps the most well known case occurred in Florida when the Fontainebleau Hotel Corporation sued neighboring property owners the Forty-Five Twenty-Five Corporation (114 So. 2d 357 Fla. Dist. Ct. App. 1959). The lawsuit involved the construction of a high-rise addition to a luxury hotel. When completed, the new addition would cast an expansive shadow over the swimming pool and deck area of the Fontainebleau hotel during fall and winter months.

Faced with a potential loss of valuable recreation area, Fontainebleau Hotel argued ostensibly under the doctrine of ancient lights. The Florida court failed to find in their favor. Because the hotel had not obtained an express solar access easement, they could not prevail in their arguments. The adjacent hotel was allowed to construct and maintain its building.

Over the years to follow, the issue of solar access has increasingly drawn the attention of the American legal system. According to James Backman and David Thomas, authors of *A Practical Guide to Disputes Between Adjoining Landowners-Easements*, "...Recognition of the full range of property characteristics in airspace is a recent development, and...are among the newest topics in contemporary American law. Relatively little litigation has occurred in these areas."

The physical conditions which create this unique relationship within the United States are more the product of geography than ancient laws. Because of its proximity to the equator within the United States the sun is never directly overhead. As the sun follows a predetermined course, it reaches its highest position in the summer when it passes over the Tropic of Cancer and it's lowest, in the dead of winter, when it passes over the Tropic of Capricorn. As a result, sunlight must pass both across and through adjacent properties in order to strike the surface of any given parcel of land. During the winter months, when the sun is lowest on the horizon, the angle of intercept is very flat. Accordingly, the sun must pass over more land before it reaches the surface of the earth.

As modern development progresses and innovative architecture expands, the issue has become framed by public opinion. Modern environmentalism and efforts to develop alternate sources of energy have also altered the way in which sunlight is now viewed. And ever increasing legislation at all levels of government is rapidly altering the way in which airspace and access to it is perceived.

Typical of such legislative action is the requirement of the California Subdivision Map Act, which requires that each newly created parcel of land must provide a minimum of 100 square feet of solar access. Predictably, this legislative area will be revisited as solar energy devices become more popular and eventually required.

As physical laws dictate, the assurance of the right to sunlight results in the limitation on the range of uses open to adjoining property owners. Legal scholars believe that as the alternate energy continues that the scales of justice

will be tipped in favor of the property owner seeking access to natural sunlight. Eventually a constitutional question arises regarding the limitation of the adjoining property rights.

As early as 1928, American courts have recognized that there are certain rights inherent in property ownership relative to solar access. In a precedent setting case entitled *Dunbar v. O'Brien*, (117 Neb. 245, 220 N.W. 278), the court relied on the nuisance doctrine in ruling that, not unlike a "spite fence," an adjacent landowner could not unnecessarily limit sunlight to an adjoining parcel of land.

According to Blackman and Thomas, if the courts were to rely on the nuisance doctrine, they could do so only if it could be proven that the adjacent interference were substantial and unreasonable. The court would also have to determine at what point the interference had occurred. Did it occur during only part of the day or had it only obstructed a portion of the property? Would such an event be considered substantial or unreasonable? How does one measure compensation when the variable effects of nighttime, inclement weather and winter clouds enter the equation? What of air pollution? Can a factory be sued if its pollutants diminish the free flow of sunlight?

Lacking relief through conventional doctrines, private remedies are available. Such a device used to govern or limit adjoining landowner uses are private restrictive covenants. Not uncommon in upscale communities, private covenants are often imposed by the developer on an entire tract of land in order to insure that the tract maintains its value by assuring architectural homogeneity. Such a mechanism is typically used to restrict improvements on lots, whether it be landscaping or buildings. Most common of these restrictions is the limitation of building heights in order to preserve view corridors or access to sunlight. The restriction could also be used to promote aesthetics such as requiring that all homes be constructed with red tile roofs. These private covenants may also prohibit the construction of rooftop fixtures such as solar collection devices on the basis of their unsightliness.

Because of public interest in developing solar energy, the courts have begun overturning such restrictions. In a

case heard in the Los Angeles County Superior Court in 1979 (*Kraye v. Old Orchard Assoc.*, No. C 209 453), the court ruled that a property owner seeking to install rooftop collector plates for a solar water heater could do so even though it would be contrary with a private covenant prohibiting rooftop structures. As the basis for its reasoning, the court cited the necessity to promote public policy relative to solar energy.

With such precedents being established, private property rights continue to be forcibly altered by legislative actions. Many legal scholars predict that the states may resort to police power and the public nuisance theory to prohibit interference with solar access.

In New Mexico, the legislature has already established rights to solar access analogous to the appropriation of water rights within that state. If a landowner demonstrates a need for solar access, he may prohibit obstructions on neighboring land if the solar collection is installed prior to the erections or construction of the neighboring structure.

A related, but obscure area of potential conflict involves reflected sunlight. As early as 1929 in Kansas, a lawsuit was filed alleging a nuisance from the reflections caused by a silver colored municipal water tank. The affected property owner contended that the reflection was an unconstitutional taking of his property rights. On appeal, the

court held that if the glare materially affected the value of the property, a partial and compensable taking could be found.

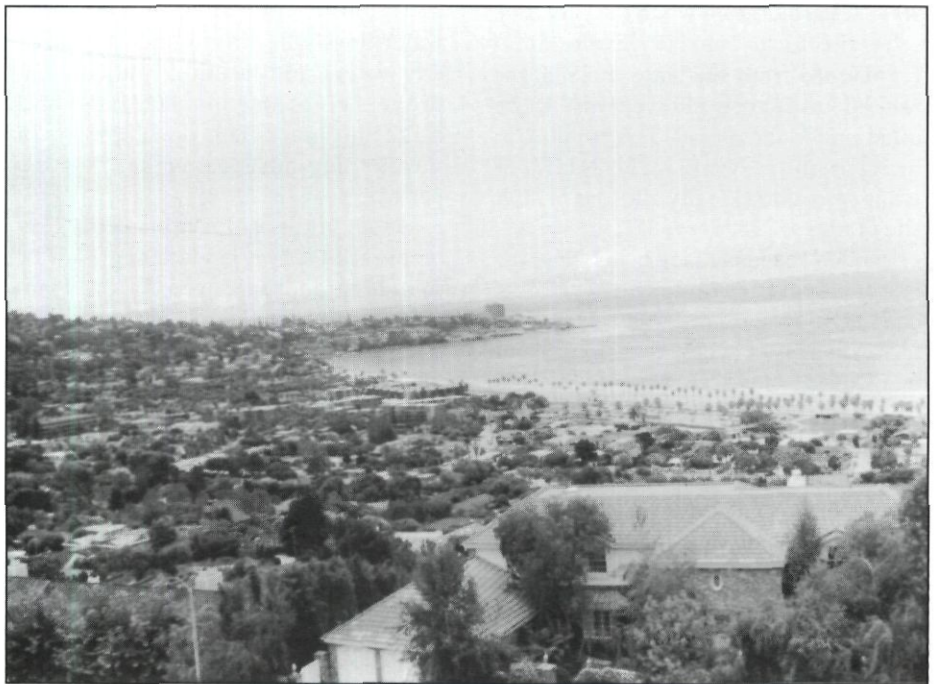
State of California Views on Views

Within the State of California, one finds an extraordinary set of rules, guidelines, regulations, permits, processes, hearings, committees, associations, commissions, councils and laws all designed to regulate the use of private property. Owing to the state's extraordinary topography and spectacular coastal views it is not surprising that today's property owner is more concerned with his view than with the location of his property boundary lines.

Such a concern is best exemplified in the state's California Coastal Preservation Act adopted by voters in 1972. Fearing the California coastline would end up looking like the Florida coastline, voters adopted the Coastal Act.

The act was far reaching in its scope. In addition to addressing the preservation of coastal views, areas such as the City of San Diego adopted rigid limitations on the allowable heights of new buildings. The City's measure, known as Proposition "D," laid the foundation for limits on coastal development by prohibiting construction of new buildings above a height of thirty feet.

As occurs with much legislation, the new law raised as many questions as it



With coastal views like this, it is no wonder that many landowners consider views their most precious resource.

answered problems. Twenty years later, the inherent confusion in applying the ordinance remained in controversy. According to City Officials there were several loopholes which allowed the ordinance to be exploited. Most obvious was the ability for an applicant to regrade the building pad so that it could be built up above preexisting grade.

Although on the face, the ordinance appeared simple enough — assuming one were dealing with a level piece of ground, how would the height be measured on a sloping site? Would the thirty foot restriction be based upon a measurement from the top of the site or from the bottom? If the building were long enough and the building was to be measured at the top how would one account for that portion of the building which extended over the sloped land? In commenting on one controversial development in the City's Del Mar Heights area, Richard Christopherson, head of the City building department stated that "You could pile in 1,000 feet of dirt if you wanted. That's what's in the municipal code."

When made aware of the problem, City planners added an additional restriction limiting the top of the building so that it could not be more than 40 feet from the bottom of the building. One ten foot step would be allowed. If viewed from the bottom, the over all height of the building would not exceed 40 feet. Furthermore when the City took over the local coastal development regulations from the state in 1988, the related ordinance allowed dirt to be piled under and alongside a building to bring it into compliance. Retaining walls were additionally allowed to alter site grades.

Under the mistaken belief that the Prop. D restrictions would protect coastal views, many local residents were distressed when they found out that "their" views were still being encroached upon. The result has been an outburst of emotional and personal confrontations heaped onto the overwhelming discretionary review process. To longtime residents, their view of the California coastline is an unalienable property right. To others, primarily those who have spent hundreds of thousands if not millions of dollars to purchase coastal properties, the right to a coastal view is an amenity that is purchased with the land.

Wesley Palms Case

Such was the case for the residents of the Pacifica subdivision tract located in the Pacific Beach section of San Diego. There homeowners enjoyed an uninterrupted panoramic view of the adjoining beach areas and the City's skyline to the south. The desirous community attracted many others including developers of a 40 acre tract of land who wanted to construct a private retirement community below the Pacifica tract.

The project, known as the Wesley Palms Retirement Community was granted a conditional use permit in 1958 to operate their facility on the property. In support of the issuance of the permit, the City was obligated to render certain "findings of fact." These included the finding that the project would "...not be detrimental to (the) health, safety or general welfare of persons residing or working in the vicinity, or injurious to property or improvements (existing or future) in the vicinity because a capable architect has designed attractive buildings and cottages which will be surrounded by a beautiful landscaped area....The buildings will be set back from the exterior boundaries of the 40-acre tract and will constitute a harmonious, well-designed unit, which will be more attractive than even a high-class subdivision, or an uncoordinated development of individual houses. The installation of sewer and water lines will directly increase property values and health conditions; improve fire protection facilities; and make the immediate development of surrounding areas easier and less expensive."

As an additional condition the City required that "...a landscaping plan be submitted and approved by the Planning Commission along with the final subdivision map with the entire landscaping plan to be completed within one year after the first building is occupied (and)...construction shall be substantially as shown on the attached plan, except that the proposed 7-story building shall be reduced in height by two floors, with a proportional reduction in total height."

Over the next twenty five years, the landscaping flourished until the eucalyptus and pine trees reached maturity and surpassed the height of the five story retirement building. In the pro-

cess the Pacifica homeowners' views were obscured.

Negotiations between the homeowners and the retirement home broke down and in February 1984, the Pacifica Homeowner's Association filed a lawsuit, alleging that Wesley Palms had interfered with an easement "to light, air and an unobstructed view created by the conditional use permit in favor of the Association."

The homeowners sought damages and injunctive relief, alleging the Wesley Palms property was burdened with a servitude in favor of the Association to not permit any obstruction exceeding the height of Wesley Palms' five-story building, and that they furthermore had a duty under the conditional use permit to maintain its land so as not to be injurious to the Association's property. They also alleged that the retirement community was creating a nuisance by allowing its trees to obstruct the Association's light and view.

Wesley Palms denied the charges and in September 1984 the court sustained the demurrer without leave to amend. A month later a judgment of dismissal was entered. The homeowners appealed.

In support of its defense, Wesley Palms argued that even if the permit contained a condition limiting the height of its trees, this condition could not be enforced by the Association. The Association countered with an assertion that the conditional use permit restricted the height of the Wesley Palms' trees to the height of its five-story building.

The homeowners argument relied substantially on the City devised language which stated that the permit would not be "...injurious to property or improvements (existing or future) in the vicinity." In response the court ruled that the language is contained in a finding of fact, not a condition. Such a finding, the court noted, is required for the issuance of every conditional use permit. Moreover, when read in context, the language did not imply a height limitation on trees in favor of the Association. A further analysis of the compatibility of the permit with the surrounding development clearly revealed that there were no conditions directed at protecting the Association's views.

In response, the Association contended that they had relied on the

requirement for the landscape plan. "Presumably," ruled the court, "Wesley Palms complied with this condition by submitting a landscape plan showing the eucalyptus and pine trees and obtaining the commissioner's approval of this plan...Thus, it must be inferred the planning commission approved the mature height of the trees since it attached no trimming or other height restrictions and this would naturally be a place for imposing such a restriction."

Because the permit required that the building be limited to five stories instead of seven, argued the Pacifica homeowners, a similar reduction was to be made to the trees. The court disagreed.

As the basis for its final ruling, the court relied on the City's Municipal Code which defined building height as limiting only the structure and appurtenances such as parapets, guard rails, elevator shafts, etc. The code contained no restrictions on surrounding trees and landscaping.

With regards to the trees, it was proven that if the City had intended to

limit the height of trees, it had done so in other instances. Another Municipal code provision provided that in airport instrument approach zones, "...no structure, building, tower, smokestack, overhead transmission lines, trees or any objects of natural growth, shall be erected, constructed, altered, moved in, enlarged or allowed to grow in such a manner as to create an airport hazard which obstructs the aerial approach to an airport or is otherwise hazardous to its use for airplane landing or taking off."

In other City ordinances there existed restrictions which limited the height of "major landscaping at maturity" in the context of solar access. In certain instances the City had required "shadow plans" to be submitted. Clearly, reasoned the court, if the City had intended to limit the height of the trees it had the mechanism to do so.

The most compelling justification for the court's ruling was the recognized precept that "A property owner has no natural right to an unobstructed view."

In the absence of any specific agreement, statute or governmentally im-

posed conditions on development creating such a right, the court ruled that Wesley Palms had not acted either in bad faith or that they had interfered with any right. They only did what the law allowed them to do.

The basis for the court's ruling regarding unobstructed views stemmed from a precedent setting case rendered several years earlier entitled *Venuto v. Owens-Corning*. In that dispute (22 C.A. 3d 116; 99 Cal. Rptr. 350) the court ruled that although the erection of a building may amount to a nuisance, the building could not be regarded as a nuisance merely because it obstructed the view from a neighboring property.

Michael Pallamary is the President of Precision Survey & Mapping and Land Survey Service of La Jolla. He is a regular contributor to the California Surveyor magazine and is currently writing a book with Roy Minnick and Paul Cuomo about the preparation of legal descriptions. Pallamary is authoring the sections dealing with preparing view easements and three-dimensional property descriptions.

[Next Issue: Part II, including the City of Rolling Hills Case, View taxes, nationwide interest in views, and determining view corridors.] ⊕

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IN MEMORIAM

John P. Pedri, PLS #3000

All members of the California Land Surveyors Association are deeply saddened by the death of John Paul Pedri, PLS, who passed away on Monday, December 21, 1992 at this home in Columbia, California. A native of Sunol, Alameda County, he had lived in Columbia for the past 33 years.

Long-time CLSA member, Mr. Pedri was 72 when he died. In 1980, he retired as County Surveyor for the County of Tuolumne where he served 21 years as County Surveyor. Perhaps the most celebrated survey Mr. Pedri handled as County Surveyor was the County Line Survey between Tuolumne and neighboring Alpine County. This boundary dispute involved 110,000 acres of disputed lands in the Clark Fork, Deadman Creek, and Emigrant Gap areas. Due in part to the efforts and research of Mr. Pedri, this 14-year-long boundary dispute, which culminated in a six week trial, ended in favor of Tuolumne County. He often served as an expert witness for the state in boundary disputes.

In 1972, he was appointed as the Land Surveyor to the State Board of Professional Land Surveyors and Engineers, Department of Consumer Affairs, by Governor Ronald Reagan.

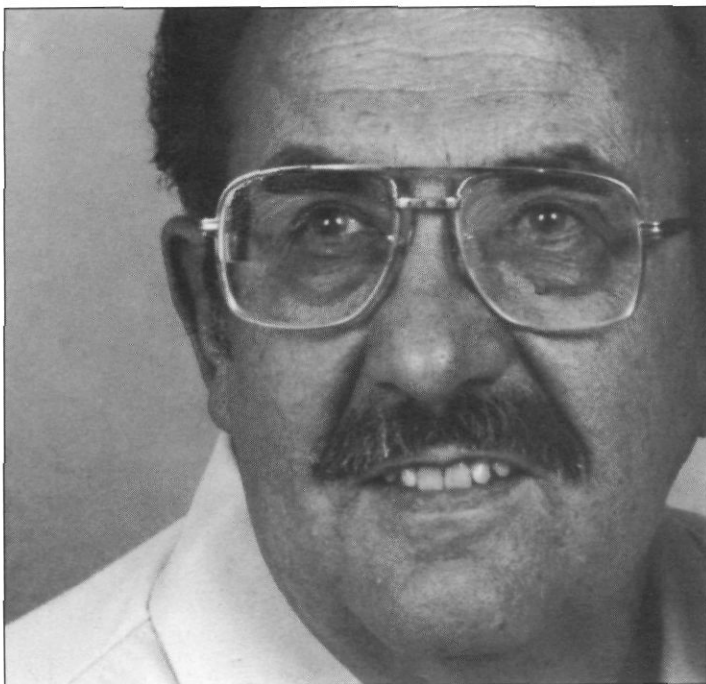
He helped set up the surveying department at California State University, Fresno and was a guest lecturer at numerous universities.

He was a life member of the California Land Surveyors Association and a member of the American Congress of Surveying and Mapping and the County Land Surveyors Association.

Mr. Pedri served in the Army Air Corps from 1941 to 1945. He was a B-17 radioman and flew 25 bombing missions as a member of the 508th Squadron with the 351st Air Group over Europe. He was awarded the Distinguished Flying Cross and cluster for his World War II service. He was a member of the Air Force Association and of his squadron and division organizations.

Mr. Pedri served on the Republican Presidential Task Force and was a member of the Republican National Party Committee. He was also active in many local organizations and causes.

All those who had contact with LS #3000 will always remember his willingness to help and his gregarious manner. All of us in The California Land Surveyors Association wish the best for his wife Rosalie and the rest of the Pedri Family and we are sure that he has gone to that great field in the sky where all traverses close and all boundaries agree.



John Pedri, PLS 3000.

Harold "Hal" Walker, Jr.

All members of the California Land Surveyors Association are deeply saddened by the death of Hal Walker, Jr., who passed away on January 6, 1993, in Santa Rosa, California. A native of White Plains, New York, he died at the age of 53. Mr. Walker was serving as Governor of the Faculty Association of the California Community Colleges.

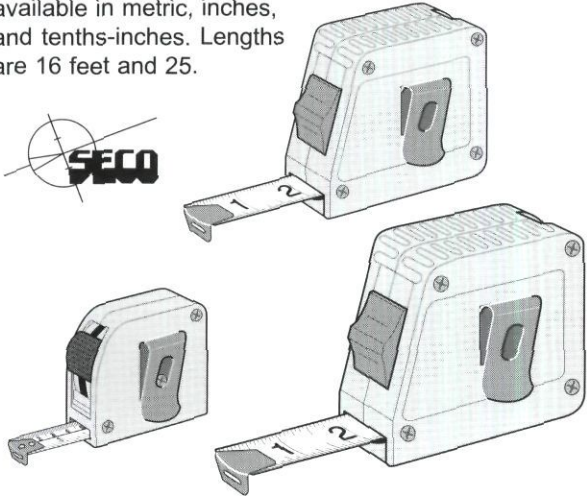
Long-time CLSA member, Hal was active in the Sonoma County Chapter of CLSA. He was known for his willingness and support of the Association and of Surveyors. His primary interest was the education of Land Surveyors and of those just entering the surveying profession.

Mr. Walker was also a member and former Vice-President of the Academic Senate at Santa Rosa Junior College. Mr. Walker was a veteran of the U.S. Navy, serving in Vietnam, Okinawa, and the Quake relief in Alaska.

If desired, donations in his memory may be made to the Harold M. Walker, Jr., Scholarship Fund; c/o S.R.J.C., 1401 Mendocino Avenue, Santa Rosa, CA 95404. ⊕

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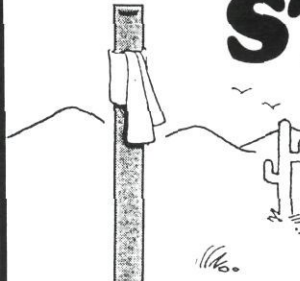
The heavy duty power tapes feature high visibility yellow cases with a positive thumb lock and release action. The graduations are printed in large, easy-to-read black numerals on a white blade. Graduations are available in metric, inches, and tenths-inches. Lengths are 16 feet and 25.



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PRESS RELEASES

Site Surveyor™ Provides Real-Time Centimeter-Level Accuracy For Control Stake Out and Topographic Mapping

TRIMBLE NAVIGATION, LIMITED (NASDAQ:TRMB) is pleased to introduce the Site Surveyor™ GPS Survey System, the world's first real-time kinematic (RTK) GPS survey system. A dramatic advance of GPS technology, the system combines carrier phase GPS receivers with TRIMTALK 900™ radio modems and the hand-held TDC1™ Survey Controller datalogger to display precise positions in real-time.

Easily Doubles Productivity

Now points can be measured to centimeter-level accuracy by simply walking from one to another and occupying the points. The range pole and antenna are placed at each desired point, in the same way that a prism pole is used. An operator knows, while measuring a point, whether or not it's correct because the reduction of observations happens immediately.

A single operator can place a control point precisely in just a few minutes, or make topographical mapping fixes in seconds. Station identification and entry of feature code are made by one person at the observation point. This speeds data collection, ensures observation of the correct point and guards against errors.

Perform Stake Out In Record Time

The system's TDC1 Survey Controller datalogger shows bearings and distance to desired points to be staked out on a



The Site Surveyor is a real-time, centimeter-level survey system for topographic, stakeout and control surveys. Using GPS and radio technology, it produces real-time output, so that surveyors simply walk to a point, and the measurement is known while observing the point

graphical guidance system display. So locating stakes at specific coordinates and subsequent relocation is easy. Equally important, the operator is free to move about the project and is not hindered by time-consuming multiple setups or the need for intervisibility. Its speed and ease-of-use means that survey grade accuracy is easily accessible at the work site. As a result, the cost of maintaining quality control drops significantly. Again, a single crew member can quickly achieve centimeter accuracy as often as necessary.

Compatibility with Other Systems a Plus

The Site Surveyor system can be used with Trimble's GPSurvey™ processing software and is compatible with traditional survey instruments such as total stations. This capability means that present equipment does not become obsolete but remains a protected investment. All system components are designed for rugged use and have waterproof cases for operation in all types weather.

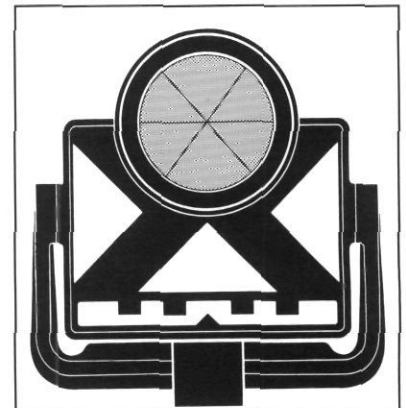
Trimble Navigation is a world leader in the emerging commercial market for satellite-based navigation and positioning products using the U.S. Government-funded Global Positioning System (GPS). Trimble designs, manufactures and markets electronic instruments and systems for navigation and determining precise geographic location. These products are sold in a variety of markets including survey and mapping, Geographic Information Systems (GIS), marine, aviation, vehicle tracking, military applications and differential GPS systems. Founded in 1978 and located in Sunnyvale, California, Trimble has been the leader in the commercial business of GPS since 1984.

Prism Assembly and Tripod

63-3010

CHICAGO STEEL TAPE CO. recently added a new prism assembly (Catalog Number 63-3010) to its EDM accessories product line. The 63-3010 prism assembly is fashioned after Leica's GPH1A holder and is compatible with Leica prism poles. Some of the features of this competitively priced prism assembly are:

- -34mm offset.
- Push button type mounting mechanism.
- High precision copper coated prism enclosed in hermetically sealed canister.
- Holder is made of impact resistant polycarbonate.
- Metal inserts are manufactured using stainless steel and high quality brass.



- Black 'Hi-Vis' lime green color combination.

Another quality product from the value leader in surveying supplies. No one compares ... Worldwide.

60-WDF20

A new state-of-the-art tripod from Chicago Steel Tape Co. CST's 60-WDF20 heavy duty wood tripod is designed for the discriminating professional surveyor. An excellent blend of the old and the new, its rugged construction is unparalleled in the tripod market. Tripod legs are made of the finest hardwoods available and the 1" (25.4mm diameter round dowels are made of a fiberglass and iso-poly composite, with an inner core running throughout. All die cast metal parts are painted using the latest in electrostatic powder coating technology. Add to this our new quick release single action clamping system and you have the following advantages:

- Quick and efficient clamping system.
- No shrinking or swelling of dowels.
- Wear-resistant metal painted parts.
- Fiberglass dowels eliminate the age-old problem of painted tripod legs sticking together.

Another quality product from the value leader in survey-



ing supplies. No One Compares Worldwide.

New All-Purpose GePoS Program System for Processing GPS Observations

CARL ZEISS has introduced GePoS (Geodetic Positioning System), a new all-purpose program system for processing GPS (Global Positioning System) observations. In conjunction with Ashtech GPS receivers, the new system provides the user with an easy-to-operate GPS measurement and evaluation system. Ashtech (Sunnyvale, CA) is a leading manufacturer of GPS systems which are distributed by Carl Zeiss. The modular design of GePoS permits the program system to be tailored to the user's specific requirements while at the same time offering maximum flexibility. GePoS can be used both in portable PCs for data monitoring in the field and in small high-performance computers for the professional computation of extensive, sophisticated GPS networks.

The support of different computers and operating systems and the RINEX interface included in the standard configuration ensure a complete, uniform data flow. The GePoS system guides the user by menu control through all stages of processing, from planning and the rigorous multistation-multi-session solution, up to coordinates for user-specific applications.

A salient feature of GePoS is the algorithmic approach for the use of undifferentiated code and carrier phase measurements, making the system an ideal tool for the processing of measured data for a wide range of applications. Not only static and kinematic measuring methods, but also the rapid static and stop-and-go techniques are optimally supported.

A comprehensive transformation and imaging module which also incorporates geoid information is available for the conversion of the geocentric GPS coordinates into the coordinates required for the specific application. Numeric and graphic documentation of the results is integrated as a standard feature. Context help functions and an on-line manual provide the user with additional information for more difficult problems. Selected keyword give access to all types of help menus.

For more information on Zeiss surveying and photogrammetric products and the GePoS system, contact the Surveying & Photogrammetry Division, Carl Zeiss, Inc., One Zeiss Drive, Thornwood, NY 10594. Call (914) 681-7303, or Fax (914) 681-7472.

Fuzzy Logic Trims Curvy Polyline

Today, TCI SOFTWARE announced the release of *Curvefit* v1.50, a new Artificial Intelligence application, which dramatically reduces the number of vertices necessary to faithfully represent Curvy AutoCAD polylines. It works with polylines containing either straight segments, bulge segments or a combination of both, turning them into polylines that contain the fewest possible number of vertices. The shape and absolute accuracy are guaranteed to remain within a Precision tolerance set by the user.

The *Curvefit* process is accomplished by creating a polyline containing mostly Bulge vertices (arc segments) yielding two very desirable results; *reduction* of drawing size and *smoothing* of the polyline shape.

Curvy Processing for a Curvy World

The need for this type of processing is very apparent for drawings which include Isolines, such as Contours that tend to be "Curvy" in nature. Conventional "weeding" removes so called "unnecessary" vertices but increases jaggedness. *Curvefit* uses Fuzzy Logic (an artificial intelligence technique) to reduce and enhance any drawing elements that are naturally "Curvy."

Drawing reduction can range from 10-50% for close tolerances, to over 1000% for looser tolerances. *Curvefit* can be used inside or outside of AutoCAD (processing DXF files). Operating modes include custom configuration and batch mode.

Curvefit is now available direct from TCI Software or from authorized dealers for \$359.00 (one copy — single user license).

A fully functional Demo disk, complete information and Benchmark data is available free from: TCI Software, Portland, Oregon, (503) 775-3197 or FAX name and address to (503) 775-8184.

Top Gun Total Stations from Nikon Now Shoot Further, Measure Faster

NIKON has upgraded its popular series of Top Gun total stations, incorporating new hardware and software that allows faster and further measuring than almost any competitive units.

Users of Top Gun total stations can now measure up to 8,900 feet (2,700 meters) with a single prism, and 11,800 or



Nikon's popular Top Gun total stations now measure faster and further than most competitive units.

more feet (3,600 meters) with a triple prism. Distance data can be displayed in increments of 0.001 feet (0.2mm). Operators can use the new, ultra-rapid FASTRACK mode to get measurements in under a half second. Those who want even greater accuracy can use the ACCUTRACK mode for .8 second measurements, or the standard mode for an extraordinary accuracy of up to $\pm (2\text{mm} + 2 \text{ppm})$.

Top Gun total stations are available in 1-second, 5-second and 10-second models, with either $\pm 2''$, $\pm 3''$ or $\pm 5''$ angle accuracy. All three models feature the LumiGuide red tracking light signaling system for easy stake-out and other operations. They also come with angle accumulation for averaging angle measurements, and a failsafe enter key to ensure that incorrect data is not accidentally entered into the system.

The new Top Guns provide about 4,200 standard distance and angle measurements, or more than four hours of continuous operation, from a single rechargeable on-board battery. The equipment features user-friendly controls, full numeric input capability and an easy-to-read, two line digital display.

"The new version of these high-powered total stations is everything the name Top Gun implies," said Robert Martin, surveying department manager for Nikon. "They are fast, sleek, accurate, and tough. They offer performance that we feel is unbeatable."

Horizontal and vertical angles can be read down to one second with the A5 and A10, and five seconds with the A20. A special feature ensures easy, accident-proof horizontal angle resetting to zero. Significantly, Top Gun instruments include a provision for the user to enter target and instrument heights for instantaneous computation and display of elevations.

Top Gun total stations offer both clockwise and counter-clockwise horizontal angle measurements. One-touch percent of grade calculation is also provided. All of the models offer selectable least count displays of angle and distance measurements to suit the varied precision requirements of surveyors. Both NK-NET and standard RS-232C interfaces are provided for downloading data to an electronic fieldbook or computer.

These Nikon total stations also include a number of convenience features, including a power saving mode, which turns off the total station after a user-determined number of minutes of non-use. Also, the instruments can instantly compensate for atmospheric changes if the user simply keys in the temperature and barometric pressure. The ppm chart is not required.

For more information on Top Gun total stations and other Nikon surveying systems and instruments, contact Nikon Inc., Instrument Group, Surveying Department, 1300 Walt Whitman Road, Melville, NY 11747. Phone (800) 231-3577.

Note: Please send all Nikon reader inquiries to:

Nikon Inquiry Response Center
101 Cleveland Avenue
Bayshore, NY 11706

Quick Release Prism Pole and Mini Prism System

#5052

SECO MANUFACTURING CO. of Redding, California, has introduced a European-Style 12-foot (3.6 meter) Quick

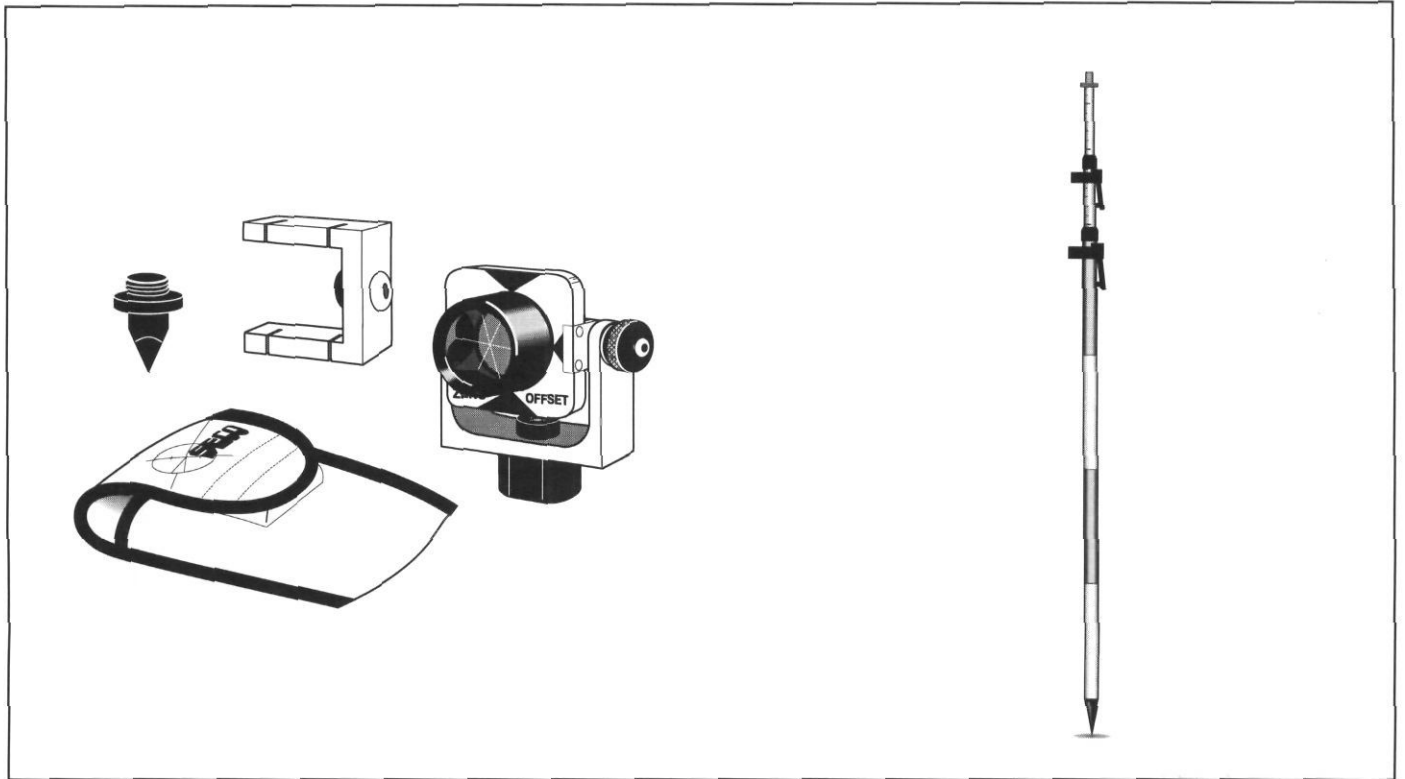
Release Prism Pole. The three section pole has permanent anodized graduations in both metric and English. The red and white striped outer is electrostatically powder painted. The on-board vial is adjustable and the hardened steel point is replaceable.

#6200

Seco has also introduced a new Mini Prism System. The precision ground 1" (25mm) cube is compact and convenient. The versatile system includes a water resistant Nylon

Cordura® carrying case with belt loop, a targeted tilting prism holder with a zero or — 30mm offset, and a plumb bob bracket. The system is available in Candy Apple Red, Orange, and H1-V12 Yellow.

For a catalog of Seco's full product line contact: Mike Dahl, Marketing Director, 2608 Hartnell Ave., Redding, CA 96002, 916/222-1440, FAX 916/221-7540 ⊕



NEW LEGISLATION FOR 1993 LEGISLATION RELATING TO THE GENERAL PLAN

1. Chapter 823 - Assembly Bill No. 908 (Farr)
Safety Element.
Chapter 823 amends Government Code section 65302 to require that the safety element of the general plan address geologic hazards such as liquefaction and other seismic hazards.
2. Chapter 1074 - Assembly Bill No. 2707 (Hunter)
Housing Elements.
Chapter 1074 adds Section 65583.1 to the Government Code to permit the Department of Housing and Community Development, in evaluating a proposed or adopted housing element for consistency with state law, to allow a local government to identify adequate housing sites by a variety of methods including redesignation of property to a more intense land use category and increasing the density allowed within one or more categories.
3. Chapter 837 - Assembly Bill No. 2797 (Chandler)
General Plans: Time for Preparation.
Chapter 837 amends Government Code section 65361 to allow the Director of Planning and Research to grant an extension of time for up to two years for the preparation and adoption of a general plan.
4. Chapter 1356 - Senate Bill No. 1711 (Bergeson)
Low- and Moderate-Income Housing.
Chapter 1356 amends Government Code section 65589.5 to define "specific, adverse impact" for the purposes of determining whether a local agency may disapprove a low- or moderate-income housing project to mean "a significant, unavoidable impact, as provided in written standards, policies, or conditions." This Chapter also amends Section 65589.7 to require that the housing element adopted by a legislative body and any amendments made to that element be delivered to all public agencies and private entities that provide water services at retail or sewer services within the territory of the legislative body. ⊕

THE SURVEYOR IN HIS LEGAL WORLD

Rules For Land Surveyors

By W.G. Robillard

[Editor's Note: the following was a copy of the outline of a seminar presented by Mr. Robillard to the California Land Surveyors Association in 1976.]

Rule One

To avoid liability the surveyor should err on the side of safety. Always try to do a little more than an ordinarily prudent surveyor would do under the circumstances.

Rule Two

It is the land surveyor's duty to correctly locate and mark property lines as described in a deed furnished him and to relate lines of possession to title lines. The surveyor cannot and does not assume the responsibility of proving that a given deed is correct and legal; that is a function of an attorney or court of law.

Rule Three

Search and search well! If it is there, find it. If it isn't, be able to say with certainty that it isn't there.

Rule Four

Liability results when the surveyor fails to do correctly the thing that he purports to do.

Rule Five

The surveyor is a fact finder. He goes upon the land armed with all the documentary evidence that is available and searches for markers, monuments and other facts. After all the evidence, facts, measurements and observations are assembled, the surveyor must come to a conclusion from the facts.

Rule Six

Never set a corner in disagreement with improvements without first satisfying yourself that you are not only right, but that your "right" will prevail in court if necessary.

Rule Seven

Discovery of a County Surveyor's monument does not relieve the surveyor of the obligation to look further. The County monument is only proof in the event that superior evidence cannot be discovered. Therefore, the surveyor must seek all other evidence and use the official monuments as though they were the last resort.

Rule Eight

The conclusions that flow from the evidence may produce proof. Evidence in itself is not proof of a fact; a conclusion or inference that may be drawn from evidence is the proof. In

coming to conclusions from evidence, the most important need of the surveyor is the ability to recognize and know what is the best evidence of that available.

Rule Nine

The best evidence of a monument's original position is a continuous chain of history by acceptable records, usually written and dating back to the time of the original monumentation. A found monument without a background history is of little value as evidence; and, a set monument is worthless if unidentifiable in the future.

Rule Ten

In civil cases having to do with land surveying and real property, it is only necessary to prove a "preponderance of evidence;" it is not necessary to prove "beyond a reasonable doubt" as in criminal cases.

Rule Eleven

It is of the utmost importance that a surveyor seek and find all of the evidence at the time of the initial survey, and this must be done irrespective of costs. The major cause of disagreement between surveyors relates to the lack of discovery of all available evidence. If every surveyor uncovered all of the evidence, differences would be reduced to a minimum, and their surveys would have a finality of location!

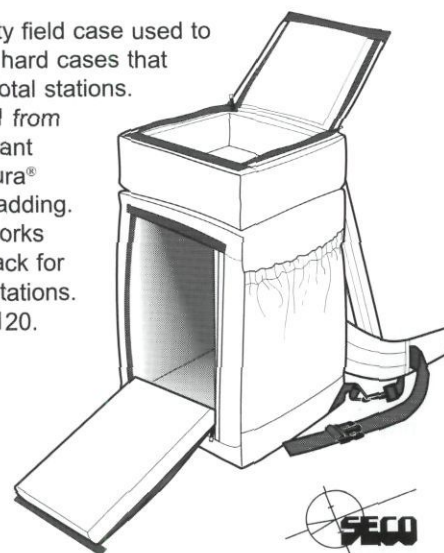
Rule Twelve

A surveyor may be able to compute, make drawings, use instruments and stake engineering projects, but, until he understands property line law and the law of evidence, he is not qualified to make property locations. ⊕

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CONSTRUING LAND DESCRIPTIONS (RULES FOR CONSTRUING DESCRIPTION OF LANDS IN CONVEYANCES)

[Editor's Note: the following is the current statute in California regarding interpretation of legal descriptions. It is printed here only as a reminder]

CALIFORNIA CIVIL PROCEDURES Section 2077

THE FOLLOWING ARE THE RULES for construing the descriptive part of a conveyance of real property, when the construction is doubtful and there are no other sufficient circumstances to determine it:

1. Where there are certain definite and ascertained particulars in the description, the addition of others which are indefinite, unknown, or false, does not frustrate the conveyance, but it is to be construed by the first mentioned particulars.
2. When permanent and visible or

ascertained boundaries or monuments are inconsistent with the measurements, either of lines, angles, or surfaces, the boundaries or monuments are paramount.

3. Between different measurements which are inconsistent with each other, that of angles is paramount to that of surfaces, and that of line paramount to both.
4. When a road, or stream of water is not navigable, is the boundary, the rights of the grantor to the middle of the road or the thread of the stream are included in the conveyance, except where the road or thread of the stream is held under another title.
5. When tidewater is the boundary, the rights of the grantor to ordinary high-water mark are included in the conveyance. When a navigable lake,

where there is no tide, is the boundary, the rights of the grantor to low-water mark are included in the conveyance.

6. When the description refers to a map, and that reference is inconsistent with other particulars, it controls them if it appears that the parties acted with reference to the map; otherwise, the map is subordinate to other definite and ascertained particulars.

[SEE ALSO: Government Code, Sec. 23071 through 23076 for definitions of particular words used in land descriptions; cc. 829, 830, 831.
Description in Deed as Relating to Magnetic or True Meridian (70 ALR 3d 1220)
Presumption that Grantee Takes to Center of Highway (5 CLR 71)
Description by Reference to Map, Plat, Sketch, or Diagram (130 ALR 643)]

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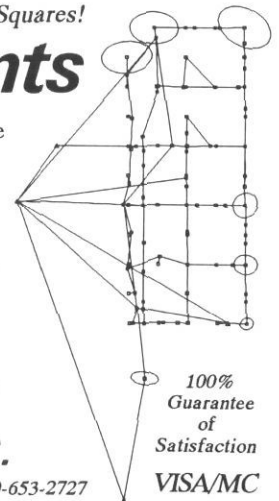
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on page 35

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C.J. Vandegrift, Chief of Land Surveys
District 4, Richmond Field Office

AN INTRODUCTION TO CIVIL PROCEDURE AND EVIDENCE FOR THE LAND SURVEYOR

By John Briscoe

The Course of a Lawsuit

1. The filing of a complaint begins a lawsuit. "Plaintiff" is the person or entity (partnership, corporation, state, federal government, etc.) who files the complaint. A "Defendant" is a party sued. In a dispute concerning land title or boundaries, the complaint alleges, in varying ways and degrees of particularness, that Plaintiff is the owner of the disputed land and Defendant is not.

There are different forms of actions (lawsuits) in which the title to or boundaries of real property may be determined. Some of them are:

- a) Quiet title: the most common form of title action. The action may be in personam (i.e., against named defendants only) or in rem (against all persons, known or unknown, claiming an interest in the real property). There are special kinds of quiet-title actions for suing government entities, because of the doctrine of sovereign immunity. See, e.g., 28 United States Code Sec.2409a (quiet title against United States).
- b) Ejectment: essentially to recover possession of real property; title must necessarily be determined, for if Plaintiff cannot show title in himself, he is not entitled to possession.
- c) Trespass: to recover money damages for injury to real property (e.g., flooding, removing coal, etc.). Title or boundaries may be placed in issue, since if Plaintiff does not own the land "trespassed" upon, he is entitled to nothing.
- d) Injunction: may be used to prohibit defendants from doing some act, such as asserting title to the

disputed land, removing timber or coal, etc.

- e) Declaratory Relief: may be used in many kinds of controversies, including disputes over title or boundaries. In many states, one advantage of this form of action is priority in getting to trial.
2. Answer and Cross-Complaint. The answer is Defendant's reply to the complaint; in a title case, it consists principally of a denial that plaintiff owns the property in question. A cross-complaint is frequently filed, for without one Defendant may defeat plaintiff's title but in many states cannot have title quieted in himself. (An exception exists in the case of a complaint for declaratory relief, for example.)
3. Discovery: procedures whereby each party can learn (with many exceptions) the other party's contentions and knowledge of the facts of the case. Frequently used discovery procedures:
- a) Interrogatories — written questions to other party, to be answered in writing, and under oath.
 - b) Depositions — the taking of the sworn oral testimony of a witness, without the presence of a judge.
 - c) Requests to Inspect Property — while not necessary for land surveyor in certain states (see, e.g., Calif. Civil Code Sec.846.5), useful in cases of other experts who don't enjoy the special status of surveyors.
4. Trial: Some of the proceedings and concepts of trial:
- a) Order of Proof (with vast discretion in judge): (1) Plaintiff presents his case first, then (2) Defen-

dant, then (3) Plaintiff ("rebuttal"), then (4) Defendant ("surrebuttal"). Rebuttal and surrebuttal are limited to matters raised by opponent during immediately preceding phase of case.

b) Burden of Production — To be distinguished from burden of proof. In general, burden to introduce the minimum evidence necessary to avoid a finding against you on the issue. A somewhat technical concept.

c) Burden of Proof (or of Persuasion) An example: To have title quieted in himself, plaintiff must establish each element necessary to his title (e.g., Government patent and chain of title through to himself) by a "preponderance of the evidence." Similarly, to have title quieted in himself, a defendant who has filed a cross-complaint must also establish each element necessary to his case (e.g., five years' possession, payment of taxes, etc.) by a "preponderance of the evidence." The degree of proof required in most civil cases, a preponderance of the evidence, is to be distinguished from the degree required of the prosecution in criminal cases: proof "beyond a reasonable doubt." Some issues in civil cases require a degree of proof somewhere between these two: "clear and convincing evidence."

d) Examination (questioning) of witnesses:

— Direct examination: by attorney calling the witness. No "leading questions" allowed, unless the witness is "hostile", i.e. somehow affiliated with the opposing party.

— Cross examination: by opposing attorney. Leading questions allowed. Limited to scope of direct examination.

— Re-direct examination: like direct examination; limited to scope of cross-examination.

— Re-cross examination: like cross-examination; limited to scope of re-direct examination.

5. Appeal. After judgment in trial court, loser may appeal to higher court. Generally limited to questions of law, and no new facts may be introduced, with one major exception:

facts which may "judicially noticed." Such "facts" include plats and field notes of government surveys, patents, etc.

General Comments for the Land Surveyor Preparing to Testify

1. Learn as much of the rules of evidence as possible. Your knowledge of these rules can help yourself as well as your attorney.
 - a) Hearsay — You contend the river cut through an oxbow during the 1860s, and you find a newspaper account of a devastating flood in 1865. How can this help you, if at all? On what matters may a surveyor reasonably rely in his profession? Definition of hearsay: Evidence of a statement made out of court, offered to prove the truth of the statement.
 - b) Best evidence rule — If a document you wish to introduce is a copy, where is the original? This rule prohibits the introduction of a copy of a document; it has several exceptions.
 - c) Authentication — How can you establish that a document is what you say it is (e.g., field notes of a particular survey)? Whenever you wish to introduce into evidence a government document, obtain a certified copy. Certification obviates authentication, best-evidence-rule, and some hearsay problems.
2. Insist that your attorney depose the

surveyor who will testify for the opponent. If you do not know the reasoning of your opponent, the results can be disastrous.

3. Do not let your attorney persuade you to testify beyond either your competence or your knowledge. Examples:
 - a) "My opinion is based in part on the instructions to the deputy surveyors" [which, not having been reviewed, turn out to have been burned in the San Francisco fire of 1906].
 - b) "My opinion is based in part on the Treaty of Guadalupe Hidalgo," etc.

Aside from damaging your reputation, such forays can destroy the otherwise solid aspects of your presentation.
4. In giving your qualifications, emphasize those that pertain most directly to the testimony you are about to give. If your testimony relates to the recovery of a government corner, it is not particularly important that you have done 200 site surveys for construction projects.
5. If you feel someone else is better suited to the task, e.g., a geologist, an expert in monument recovery, say so. Your candor will do far more for your esteem in the community than undertaking a project that may be beyond your competence. Also, when you later assert that a task is within your ability, you will have

the full confidence of your attorney and the other experts.

6. Perform the tasks requested, but don't hesitate to offer suggestions for investigation, argument, etc. The land surveyor's perspective can be extremely valuable to the attorney and to other experts.
7. When you are cross-examined, be direct. When appropriate, answer firmly, even when the answer may appear harmful to your position. "You are correct, sir." "Certainly." (That is not to say you shouldn't balk at a question which assumes something untrue: "Have you stopped beating your wife?") This kind of directness conveys your confidence in your position, and bolsters your credibility. In any event, thorough preparation should have disclosed any weaknesses in your position, and developed the best explanation for them.
8. Strive to be fully prepared on even picayune matters, but if your memory fails, admit it promptly. ("Sir, could you explain how mean sea level, Sea Level Datum 1929, and the National Geodetic Vertical Datum differ?")

(John Briscoe, 1981. This paper adapted from "An Introduction to Civil Procedure and Evidence for the Land Surveyor," by John Briscoe, ACSM Bulletin No. 73 (May 1981), pp. 27-28.)

John Briscoe is an attorney with Washburn, Kemp & Wagenseil in San Francisco. ⊕

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Here's Some Important Information About CLSA

The goal of the California Land Surveyors Association is to promote and enhance the profession of surveying, to promote the common good and welfare of its members, to promote and maintain the highest possible standards of professional ethics and practice, and to elevate the public's understanding of our profession. CLSA represents all land surveyors, whether they are employees or proprietors, whether in the public or the private sector.

Representation

- **LOCAL:** Your local chapter represents you in local issues. Through your chapter representative to the State Board of Directors, the individual member can direct the course CLSA will take.
- **STATE:** The surveyor is represented at the state level through an active legislative program, legislative advocate, and liaison with the State Board of Registration.
- **REGIONAL:** CLSA is an active member of the Western Federation of Professional Land Surveyors. This federation is composed of associations throughout the western United States and addresses regional issues.
- **NATIONAL:** Through institutional affiliation with the National Society of Professional Surveyors and the American Congress on Surveying and Mapping, CLSA is represented at the national level.

Education Opportunities

CLSA presents annual conferences which provide technical and business programs, as well as exhibits of the latest in surveying and computing technology. Seminars and workshops are presented to assist in continuing education. CLSA publishes the *California Surveyor* magazine and the *CLSA News* to keep the membership abreast of changing legislation, legal opinions, and other items which affect our profession.

Business and Professional Services

CLSA provides a fully staffed central office which is available to answer questions or to provide up-to-date referrals concerning legislation, educational opportunities, job opportunities, or other issues concerning our membership. Health and professional liability insurance programs are available to members.

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NATIONAL NEWS

1992 Semiannual Report to the Board

On August 28, there was a public dedication of the corner common to Idaho, Utah, and Wyoming. The ceremony took place at Cokeville, Wyoming, with Mayor John Bird officiating. Dignitaries present included Governor Sullivan (who proclaimed Cokeville to be Wyoming Capitol for the Day), Chief Cadastral Surveyor of the BLM Francis Eickbush, and leading personnel from the BLM cadastral survey organizations of Wyoming, Colorado, Utah, and Idaho. Other major participants included many local surveyors and leaders of the Surveyor Associations of surrounding states. The leader and coordinator of the field work involved in the restoration was Paul Scherbel of Big Piney, WY, President pro-tem of the Surveyors of The Sixth Principal Meridian.

By Arthur W. Hipp, PLS, Area 7 Director

On October 1, 1992, we traveled to Gainesville for a chapter meeting at which they were starting their annual Trig Star competition. This chapter has been sponsoring this within their area for a number of years. During the meeting the method by which they advanced and promoted Trig Star within the schools was reviewed. I spoke to the group about the importance of the Trig Star program and the advancing of the profession. With the question and answers, I presented the members with the challenge of developing a statewide contest. They were enthusiastic about accepting the challenge.

I then spoke to them about the necessity of developing Trig Star into a nationwide contest. I then went into some detail about what the possible effort would be to the profession. The chapter was willing to accept the responsibility for preparing the framework for developing a promotion plan for Trig Star. They are hopeful that they will be able to present a preliminary plan at the annual meeting in New Orleans. The proposal will come before the Board of Governors and be reported to the Board of Directors.

By Richard E. Lomax

20th Anniversary of the Brooks Act

On behalf of NSPS, Inc., I attended the reception for Jack Brooks, sponsored by the Committee on Federal Procurement of Architectural and Engineering Services (COFPAES). As one of the six members of COFPAES, and because NSPS member Paul Lapham is the current chairman, ACSM was a leader in putting together this reception and presentation for Rep. Brooks. The function was well attended by representatives of COFPAES members, as well as a significant number of Congressmen.

Surveyors received quite a bit of exposure during the ceremonies. We were mentioned along with architects and engineers as those whose services are to be procured based on qualifications instead of price competition. When Paul Lapham was called upon to present the commemorative medal, he was introduced as a surveyor. Paul asked individuals from the six

COFPAES member organizations to join him in making the presentation and I, as chairman of the NSPS Board of Governors, was asked to represent ACSM. For surveyors to receive as much exposure among other professionals as we did during this function is very positive.

This summer the culmination of NSPS' efforts in rewriting the requirements and procedures for achieving the Surveying Merit Badge was marked by the publication of the revised handbook. The handbook is now available from BSA to its distributors of materials. Some distributors have already acquired the handbook, while others are trying to reduce their current stock of the former edition before doing so. If those interested in participating in helping scouts to achieve this merit badge cannot get the new handbook from their local source, I suggest calling BSA Headquarters in Irving, Texas (214-580-2000).

The committee has been contacted by persons working on a surveying Merit Badge for Girl Scouts. We have forwarded to them our draft of the handbook and expect they too will utilize it for their purposes.

One of the best things about the revised handbook is that it encourages (almost requires) the participation of surveyors to serve as counselors when scouts attempt to achieve this badge.

By Curt Sumner, Chairman NSPS Board of Governors

TO: Honorable Ernest F. Hollings
Chairperson, Subcommittee on Commerce, Justice and State, the Judiciary, and Related Agencies
Senate Appropriations Committee
Room S-146A Capitol Building
Washington, D.C. 20510

Dear Senator Hollings:

The purpose of this letter is to bring to your attention a proposed reduction in fiscal year 1993 funding for the National Oceanic and Atmospheric Administration's (NOAA) budget for Geodesy programs under the National Ocean Service (NOS). The magnitude of the reductions as contained in the appropriations bill for the Departments of Commerce, Justice and State, the Judiciary and related agencies (H.R. 5678) would force NOS to make difficult choices about continuing key programs that benefit the user public, including the surveying community.

The National Society of Professional Surveyors is an association of professional surveyors with a membership of nearly 5500 members. Our membership is composed of persons employed by State and Local Governments as well as the public sector in communities as businesses and employers.

We have been informed that NOS is considering curtailment or elimination of the National Geodetic Reference System (NGRS) and the State Geodetic Advisors Program due to funding shortfalls. Both of these programs are administered by the National Geodetic Survey (NGS), and the agency within NOS.

We strongly urge you and your colleagues on the

Conference Committee to restore at least \$2 million to geodesy under NOS and specifically earmark these funds for the NGRS and State Geodetic Advisors Programs. This minimal amount would assure that these programs remain in existence.

The NGRS is a geodetic control network that is critically important to many federal, state and local organizations. The network provides a nationwide framework for all mapping, surveying and engineering programs. It is also widely used by states, counties municipal governments, utilities and the user-public as the basis for new computerized mapping technologies called geographic or land information systems. This network improves effectiveness, reduces duplication of effort, and permits better decision making and use of resources by public officials and the private sector.

Likewise, in jeopardy is the very successful State Geodetic Advisors Program. This program is funded on a 50-50 basis with participating states. At present 26 states participate in the program under cooperative agreements.

From our point of view, it appears that there is movement within NOAA to provide resources for Geodesy programs that are science-oriented while taking away resources that provide user services. While both of these programs are important it is clear that NGS geodesy programs affecting users are being shortchanged. Without the restoration of the necessary funds it is very likely that NGS will not be able to continue as a viable agency.

It is therefore, that we request that \$2 million restoration of funds earmarked for NGS geodesy user programs be made.

Sincerely,
Richard E. Lomax,
Professional Surveyor
President, NSPS

Notes on Metric

The General Services Administration, which serves as the "federal landlord", now has over \$1 billion in metric projects in the planning, design, or construction stages.

The National Institute of Standards and Technology is planning about \$1 billion in facilities work for its campuses in Gaithersburg, Maryland, and Denver, Colorado. Work is scheduled to be in metric.

Most of the Department of Energy's \$8.2 billion Super Collider project will be constructed in metric.

Two new Smithsonian Institution facilities with a total cost of over \$150 million will be built in metric.

The Army Corps of Engineers, Air Force, Office of the Secretary of Defense, NASA, and the Public Health Service are conducting over \$60 million in metric pilot projects with significantly more work in planning.

The \$400-\$500 million Defense Medical Facilities program for FY 95 is scheduled to be in metric.

The Department of State continues to build in metric with current projects totaling \$275 million. ☉

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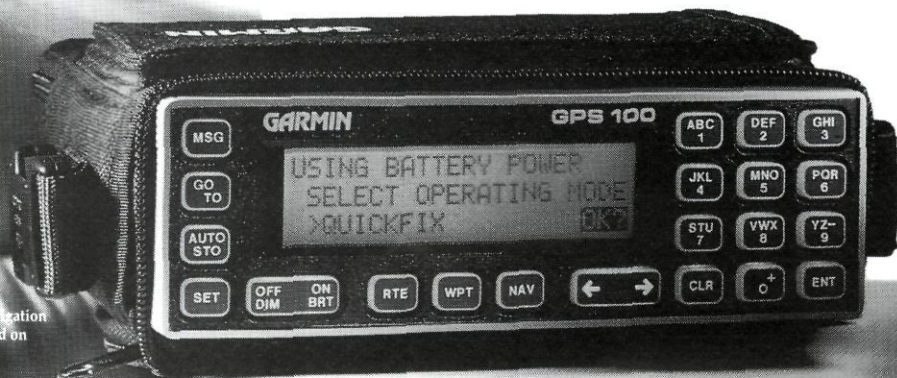
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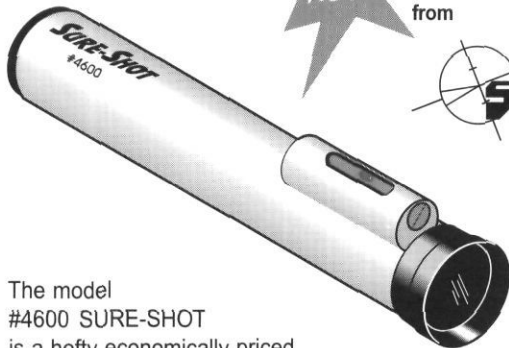
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BOARD OF REGISTRATION OF PROFESSIONAL ENGINEERS AND LAND SURVEYORS APPOINTS EXECUTIVE OFFICER

HAROLD L. (Hal) TURNER was appointed the Executive Officer of the Board of Registration for Professional Engineers and Land Surveyors at the Board's January 29, 1993, meeting. He has over 16-years experience in all aspects of managing an organization that conducted performance, fiscal, and investigative audits of government agencies and programs. He also has over 25-years experience in the application of computer technology to organizational management, financial systems, performance reporting, and auditing.

Until January 1993, Hal was a Deputy Auditor General with California's highly respected Office of the Auditor General. Prior to joining the Office of the Auditor General in 1976, Hal managed his own computer consulting firm, developed and conducted seminars in financial management and data processing throughout the United States, and designed and programmed management information systems on

large mainframe computers. He brings to the Board the broad base of management experiences necessary to guide its operations.

Active in the community, Hal is Treasurer of the Board of Directors of the Sacramento Zoological Society, coaches youth soccer, and is Past-President of the Board of Directors of the Sacramento Theatre Company, a professional theatre of significant stature in

California's Central Valley.

Hal holds a Bachelor of Science Degree in Business Administration from California State University, Sacramento, and a Masters of Business Administration from National University, Sacramento. He is a Certified Data Processor (C.D.P.) and a Certified Information Systems Auditor (C.I.S.A.). He is married to Ilah Tinsley Turner and has two children, Cameron and Courtney. ⊕



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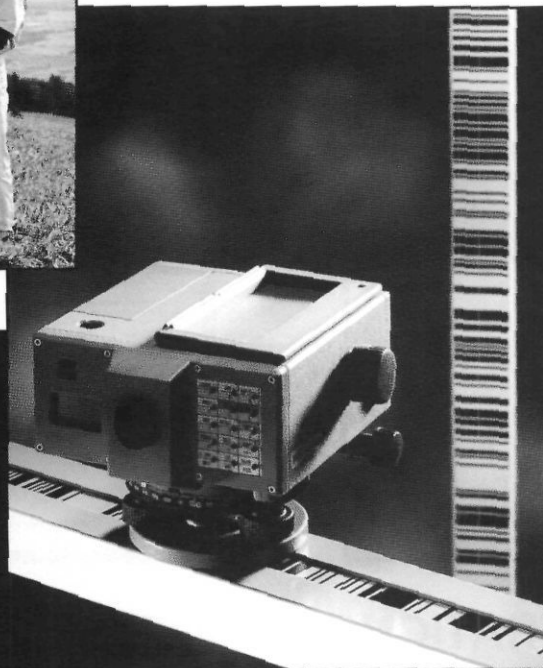
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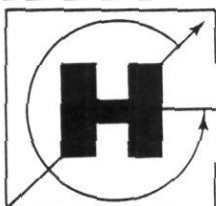
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