

SURVEYOR

HOODS



VOLUME 10
NUMBER 3
SUMMER 1983



Indiana Society of Professional Land Surveyors, Inc.

Affiliated with the American Congress on Surveying and Mapping and
the National Society of Professional Surveyors

THE COUNTY SURVEYOR

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- 36-2-12-2 Term of office
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THE SURVEYOR AS A CONTRIBUTOR TO SCIENTIFIC KNOWLEDGE

SUMMER PICNIC REVIEW

ISPLS SCHOLARSHIPS: REASONS TO GIVE

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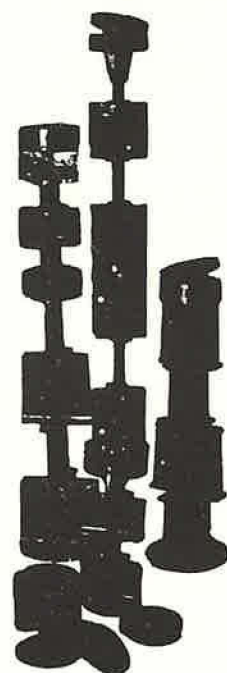


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HOOSIER SURVEYOR

VOLUME 10, NUMBER 3, SUMMER 1983

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EDITOR'S NOTE

Deadlines for copy for various planned issues of the *HOOSIER SURVEYOR* are as follows:

Winter issue - January 31 Summer issue - July 31 Spring issue - April 30 Fall issue - October 31. The *HOOSIER SURVEYOR* is composed and reproduced by Marbaugh Engineering Supply Co., Inc., Indianapolis, IN.

The *HOOSIER SURVEYOR* is published quarterly by the *INDIANA SOCIETY OF PROFESSIONAL LAND SURVEYORS*, to inform land surveyors and related professions, government officials, educational institutions, libraries, contractors, suppliers, and associated businesses and industries about land surveying affairs.

Editorial/Advertising Offices: 5355 E. 38th Street, Suite 209
Indianapolis, Indiana 46218
317/546-0188

Advertising rates, closing dates, circulation data on request. Contributed articles, photographs subject to space limitations.

Gary Kent
Editor

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PRESIDENT'S MESSAGE JULIAN S. "JUD" ROUGH

My message for this quarter consists of several different unrelated topics.

Those of you that were not at our summer family outing missed a fun and rewarding day. The dendrology workshop was superb. Your family would have enjoyed it with you. I do not believe that I have ever been able to get that much value out of five bucks before. We hope to have another next year.

Now is the time to consider making contributions to our scholarship funds. You control which school receives your donations. Remember that it costs you \$30, or less depending on your tax bracket, to contribute \$100 toward the education of a deserving surveying student. Where else can you get a bargain like that. The future of our profession can be greatly enhanced by our generosity.

As announced elsewhere in this issue your board of directors has endorsed an insurance program that we feel will be an asset to the members. We have spent several months comparing the attributes of various programs. Just one more example of your society working for you.

Our nominating committee will soon be considering members for nomination for election to the board of directors. If a member of the committee asks you if you would be willing to be a candidate, please give it careful consideration. Our society needs dedicated professionals that are willing to work for the good of all. Each and everyone of you can have a positive effect on the future of our profession if you are willing and are able to make the time commitments that this position requires. It does take a large amount of time and effort. If you are willing to put forth the time and effort, and are concerned about the future of surveying in Indiana, say yes to the committee. We need good hard working board members.

Some of our committees have been working hard and are producing concrete results. Others have been less effective. I ask all committee members to take a fresh look at your original charges as listed in last winters issue of this publication and consider if they are being carried out. If they are I congratulate your committee. If they are not, contact your chairman and discuss them with him. We are a volunteer organization. Progress will not take place unless each of us pitches in to complete our portion of the overall goal.

I want to remind you that our board meetings are open to any member. You would be welcome to attend. I encourage each member to attend at least one board meeting per year. Peggy always has the schedule of meetings a couple of months in advance and can advise you as to their time and location.

"Jud"

HIGHLIGHTS : From Board of Director Meetings

June 11, 1983: ISPLS Headquarters - 5355 East 38th Street, Indianapolis

Attending: Jud Rouch, Jake Hall, Gary Kent, Lee Bender
Pat Cunningham, Al McConahay, Ray Tappan,
Larry Manning.

Not Attending: Bob Bigelow, Carl Anderson, Jim Morley,
and John Whitlock.

- Signed agreement with ACSM & ASP with regard to 1985 Convention has been received and was reviewed. Discussion on ACSM's current policy on profit splits verses February 12, 1980 letter from Executive Director Radlinski proposing 50-50 split of profits.
- Special meeting is scheduled for July 9th to deal with 1985 ASCM-ASP Convention plans.
- Mr. Brown and Mr. Scarborough from Mid-South Benefit Plans presented insurance proposal.
- Vote to endorse Marktpac Insurance Program for ISPLS members.
- Summary of computer workshop showed \$12.92 net profit. Plymouth session was cancelled due to lack of registrants. Ten persons attended the Indianapolis session.
- Vote to set up an Audit Committee of three members of ISPLS and to employ Nobles Tax Service to assist in preparation of tax forms.
- Checks were set to Purdue and Vincennes to underwrite the respective scholarships per previous board action.
- Vote to adopt the position that candidates for County Surveyor should be registered Land Surveyors and that candidates should be active professionally as members of their professional organizations.

July 9, 1983: ISPLS Headquarters 5355 East 38th Street, Indianapolis.

Attending: Jud Rouch, Jake Hall, Bob Bigelow, Gary Kent,
Al McConahay, Lee Bender, Ray Tappan, Carl
Anderson, John Whitlock, Pat Cunningham.

Not Attending: Larry Manning, Jim Morley.

Also Attending: Roger Woodfill, Chuck Budnick, Orwic
Johnson, Phil Worrall, Dan Pusey.

- Lee Bender has resigned as Treasurer. Vote to elect Al McConahay as Treasurer to finish term.
- Discussion on NSPS request to send letters to Senators and Representatives asking them to co-sponsor the National Surveyor's Week Resolution.
- 1985 ASCM/ASP Convention discussion. Vote to name Chuck Budnick Director of the 85 ASCM/ASP Convention.
- 1984 ISPLS Tri-State discussion. Budget and profit split will be provided to Board.
- Vote to endorse Roger Woodfill as candidate for NSPS President.

DATES OF UPCOMING BOARD MEETINGS: October 7, 1983 - Indianapolis,
Airport Hilton 7:00 PM.
November 18, 1983: ISPLS Headquarters
Indianapolis 9:00 AM
January 7, 1984: West Lafayette, Civil
Engineering Bldg. 10:00 AM

ISPLS SCHOLARSHIPS - Reasons to Give

As the end of the year approaches, now is the time for ISPLS members to consider donating to the ISPLS Scholarship Fund at the University of their choice (Purdue or Vincennes).

When the facts are analyzed, it can be shown that a \$100.00 donation actually costs only about \$20.00 to give.

The 50% Indiana tax credit for donations to state universities automatically cuts your out-of-pocket expenses in half. The entire donation is then also a deductible expense on your federal tax form. If you are in the 30% tax bracket, then the \$100.00 donation breaks down as follows:

\$100 (initial donation) minus \$50 (Indiana tax credit)
minus \$30 (30% of \$100 donation- deductible expense)
equals an actual cost of \$20.

Consult with your accountant for your particular case. The Indiana tax credit is good up to a maximum credit of \$100.

Our scholarship fund at Purdue allows your donation to be designated to any of the regional campuses.

Those wishing to donate money towards the Scholarship at Vincennes should make their check out to "Vincennes University, Surveying Scholarship Fund" and send them to:

Foundation Office
Vincennes University
Vincennes, Indiana 47591

Those wishing to donate money towards the fund at Purdue should make their checks out to "Purdue University". They should also attach a letter to the check identifying 1) the ISPLS Scholarship Fund and 2) the specific Purdue campus to which they wish their funds be credited. The letter and check should be sent to:

Division of Financial Aids
ATTN: Ann Lyons
Purdue University
West Lafayette, Indiana 47906

These scholarships help some fine students through school and encourage them to become conscientious professionals.

PLEASE GIVE !!

1983 SUMMER PICNIC - a review

The ISPLS Summer Picnic , held at Fort Ouiatenon in West Lafayette on July 30th, had a little for everyone attending. A short tree identification course put on by newly retired Purdue Forestry Professor Bill Fix was informative and interesting, the food was great, and the "Surveyor's Olympics" were a source of fun and competition. Unfortunately, the weather was also incredible, with temperatures in the upper 90's.

Forty persons attended, representing (at least parts of) 17 families. One attendee of note was 78 year old Bob Fickle, a charter member of ISPLS.

The leftover food was donated to the St. Ann Church and Shrine's Matthew 25 Share and Care Kitchen in Lafayette. The Kitchen serves food to over 800 unemployed and/or senior citizens each day. Pastor John C. Duncan sent picnic committee-member Al McConahay a note expressing a great deal thanks for the gift of food.

Winners of the Surveyor's Olympics were as follows:

Competition	Winner	Estimate	"Correct" Answer
Pacing	Tom Newport	172.40'	172.40'
Height of tree	Jim Lietzan	83.0'	85'
Area of figure	Tom Newport	33,763 sq.ft.	34,417 sq.ft.
Distance along river	Jim Lietzan	980'	981'

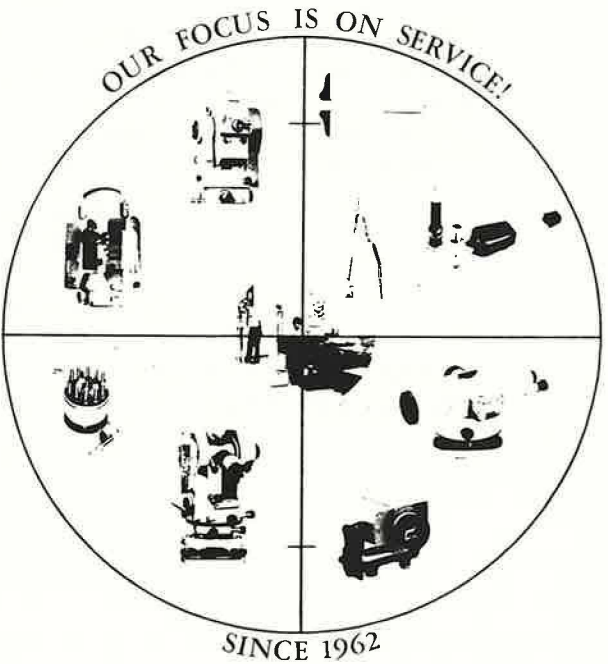
It should be mentioned that Bill Tanke's estimate on the pacing was 172.359 feet. Significant figures strike again!

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FALL 1983 WORKSHOP

SURVEY BOUNDARY CONTROL and LEGAL DESCRIPTIONS

by Gurdon H. Wattles, PE + LS

The Education Committee of I.S.P.L.S. is pleased to announce their Fall 1983 Workshop featuring Gurdon H. Wattles. This workshop is scheduled for October 7th and 8th at the Airport Hilton in Indianapolis. The seminar starts at 8:30 and ends at 5:00 each day.

The workshop is intended to help those who write and/or interpret legal descriptions. This two day presentation will consist of a study of land acquisition, land recording systems, description fundamentals, analysis and interpretation of descriptions, right of way problems, and public land surveys.

Various exercises in Mr. Wattles's workbook will allow participants an opportunity to analyse and discuss description solutions.

Enrollees should bring an engineer's scale, triangles, protractor, and calculator with them.

REGISTRATION FORM

FEES: \$110 I.S.P.L.S. Members (also, Members of other state societies)
\$ 90 I.S.P.L.S. Firm Members
\$130 non-members

Fee includes two lunches, coffee breaks, a copy of Writing Legal Descriptions, and handouts.

Name: _____ Employer: _____
Address: _____ Society Affiliation: _____

Telephone: _____

Mail form and check to: I.S.P.L.S., #209, 5355 E. 38th St., Indianapolis, 46218

LODGING

A block of rooms has been reserved at the Airport Hilton. Please contact the Inn directly. Be sure to identify yourself as a participant in the I.S.P.L.S. Workshop.

INDIANA SOCIETY OF PROFESSIONAL LAND SURVEYORS, INC. October 6-8

YOUR RESERVATION DEADLINE IS Sept. 23, 1983

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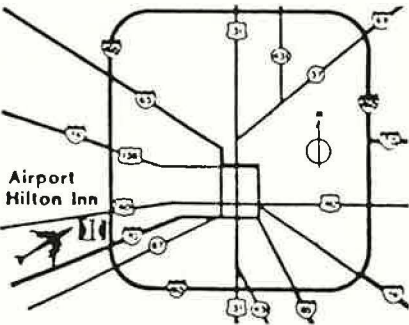
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DUTIES OF A GOOD PARTY CHIEF

- 1) Make every effort to be at work every day and arrive at work soon enough to get your materials and people ready to leave the office for field work by work time.
- 2) Remember that you are a supervisor and director of your group. Your value is measured by the success you achieve in motivating, training, teaching your assistants and developing smooth, efficient and accurate team effort. Accuracy and completeness of any task are essential.
- 3) See that you have the materials needed to do the job and use these materials efficiently.
- 4) Utilize the talents of your workers so that you get the most productive work accomplished.
- 5) Be able to plan your work ahead so that you know what the next move will be. Don't wait until one part of the job is done before deciding what to do next- think ahead.
- 6) Teach each person how to do the assigned job. Don't pretend that he already knows.
- 7) Teach each person in your crew to take pride in their work and to wear the proper clothing and maintain a neat appearance.
- 8) Keep a good set of notes. They should be easily read and not scrunched together. There should always be a neat sketch on the righthand side of the fieldbook showing your work.
- 9) Always be a little suspicious of using control set by others. Always check them out. Always have a way to check your work to make sure it is correct.
- 10) Try to put yourself in the person's place who is going to use your notes. Can your notes be plotted? Is the sketch properly oriented? Have you obtained enough information such as names of roads, houses, poles, trees?
- 11) Always remember that the company you work for must make a profit to survive. For you to survive, the company has to make a profit. The type and amount of services you perform determine your status with the company.
- 12) Do everything you can to improve yourself. Take the attitude that someone is just about to pass you on the road to success.
- 13) Do not take for granted that others have gotten permission for you to survey on private property. In each case, assume that it has not been obtained.
- 14) Be extremely careful about cutting line on the owners land. It will be more noticeable in the summer than in the winter.
- 15) Do not be afraid to tackle a job that is tough or that requires more experience than you have. If you are not sure how to do the job or what is wanted, ask questions. Remember that others have been in the same position you are in and they got the job done by getting a few pointers along the way.
- 16) If you will, take the attitude of always giving 100% on every job. There is a great demand for dependable, aggressive and hard workers. This type of person will always have a job and will have very little difficulty finding one if the need arises.

(from the Tennessee Surveyor and The Cornerpost, Dec. 1980)

THE INDIANA SOCIETY OF CIVIL ENGINEERS AND SURVEYORS

1889 - 1890

PAPERS

READ AT THE NINTH ANNUAL SESSION OF THE INDIANA SOCIETY
OF CIVIL ENGINEERS AND SURVEYORS.

THE SURVEYOR AS A CONTRIBUTOR TO SCIENTIFIC KNOWLEDGE.

BY PROF. C. A. HARGRAVE, OF THE DANVILLE NORMAL COLLEGE.

If we could divide scientific knowledge into three classes, viz: the work of professionals, accidental discoveries, and the result of the labors of amateurs, we would find the last to contain a great portion of that which is of the greatest use to man. Besides, much of that which is contributed by professionals they have learned from persons whose names never appear in scientific literature. Life is too short for a man to fully investigate all the species of birds, or fishes, or mollusks, or plants. It is also too short for an exhaustive study of all the geological formations, meteorological phenomena or topographical features of the earth. Special scientists must ever depend quite largely upon the observations of the people whom they meet.

For this reason scientists are urging all people who are in contact with animal and vegetable life in the field, and whose business puts them in relation with various geological formations, to employ scientific methods of observation and learn something special of Nature's ways. Surveyors are in a better position to take up this work than any other class of people, and knowing this I venture, at the risk of becoming tiresome, to call your attention to some things that we can do. I would not have you believe that I class myself with scientists. I am a mere beginner, having never made a single contribution to scientific knowledge. I am not even a

teacher of science. I present the subject because it is of great interest to me, and because I hope to be able to do something in the future.

If the surveyor were required by law to do certain work pertaining to a naturalist it would be looked upon as a hardship, and such it would be unless he were well paid for it, but every year many hours could be thus devoted and not missed. In fact, the greatest pleasure would be afforded. The sportsman will walk many miles for the ecstatic pleasure of shooting a wild turkey, or a deer, or a few insignificant quails. The fisherman will feel well repaid for his time if in a half day he catches two bass, the market value of which would not exceed twenty-five cents. The field work of the naturalist satisfies the same desires of man, and affords, I believe, even a greater degree of pleasure. If you are a sportsman you have no doubt felt many times, when unexpectedly starting game in the woods or fields, that you would gladly trade your transit for a shotgun or a pack of hounds, providing the transaction could be completed at once. Such power does the love of the chase have over its devotee. This power in some degree is exerted over every person, and more or less energy is expended in its gratification every year. Would it not be well to turn this energy to some good use, which at the same time would bring with it the same pleasure and the same valuable recreation? That it can be done there is no doubt. The delight of the naturalist on securing what is to him a new insect or a new plant certainly exceeds that of the sportsman who secures a turkey. My own experience, though limited in both pursuits, tells me this: Being interested in mollusca, I would rather find a *Helix multilineata* or a *Unio sulcatus* than to shoot a panther or capture a shark. The collector, like the sportsman, cares but little for the money value of his find. All he wants is to add a new species to his cabinet or fine duplicates for exchanging purposes. The geologist is satisfied when he finds evidence that fixes the geologic age of the outcroppings in his district, or when he finds the traces of the Glacial Epoch, or when he discovers surface indications of a mineral deposit below. The student of topography will ride or walk miles to trace the bed of an ancient lake or river, or to study with a geological eye a conical hill or a water shed. The hunter, the fisherman, the botanist, the conchologist, the geologist, the entomologist are all more or less impelled by the same desire, and all experience the same feeling of pleasure or disappointment, depending upon whether the expedition has been a success or a failure. There is this difference, however: The

sportsman may be out a day and experience no pleasure at all, while the student of nature can hardly fail to find something instructive. The former returns vexed with the world, the latter always filled with joy. The sportsman who turns his attention to the study of some branch of natural science can never regret it. He will go at once into the "Happy Hunting Ground." Understand, please, that I do not think that surveyors are all confirmed sportsmen. I present the subject in this way in an endeavor to show that the proposed study will not prove a task, but a very great source of pleasure.

If you were individually asked to study some form of animal or plant life, or some branch of geology, nine-tenths of you would say you did not know how to begin. I want to say that nine-tenths of you have already begun. Nearly everyone has especial interest in some certain class of objects about him, or in some kind of phenomena. The one who closely observes the order of leafing of forest trees in the spring has a good start in the study of a subject not any too well understood. The one who knows something of the habits of crawfishes could with a little study contribute valuable information. The one who has felt a kindly interest in the earth worm, his mode of travel, his habitation and his diet will have a field in which but little has been done since the great Darwin showed that all the soil in a few years passes through earth worms, and that without them the farmer would soon have a hard, clinging, unproductive substance in which to plant his grain. The man who knows our native birds and something of their migrations and nesting habits could easily make himself authority on the question, and his society would be sought by many an eminent naturalist. So we might proceed at great length. It is unnecessary, however. Everyone by this time has thought of his favorite line of observation and study. Why not go ahead and become at least local authority on the subject? You can easily do it, and it will not require labor, but be helpful recreation. All that will be necessary will be to adopt a more scientific method of observation than you may have used before. Books on the subject will be a great help, but not a necessity. One does not need to know scientific names in order to understand his subject. These will, however, be easily learned after they are once wanted in conversation.

I am glad to state that some of the members of our Association have already done much in this kind of work. At our last regular meeting Mr. Wm. M. Whitten, of South Bend, mentioned the fact that the soil in Northern Indiana dips down into the under-

lying clay in wedge-like processes, and that this is evidence of a great drouth many years ago in which the earth became so dry that the fissures extended several feet below the surface. When the rains came these fissures were filled with soil. The man who can thus explain a phenomenon will certainly be found to be a great source of information on many subjects.

Another member of our Association, Capt. John T. Campbell, Surveyor of Parke County, has contributed some valuable papers to the columns of the "American Naturalist." He had often noticed, as each one of you must have done, that in nearly all of Indiana the hillsides that face the south are much less abrupt than the opposite ones which face the north. He investigated the literature on the subject, and found that the current explanation was that since the sun's power was so much greater on the first named side, the alternate freezing and thawing had gradually worn away the abruptness. He seems not to have been entirely satisfied with the explanation, and was afterwards in position to disprove it. His work in running out a railroad line led him into several counties where one hillside was as steep as the other. This entirely disproved the thawing and freezing theory. He then set about to find the true explanation. The first fact he discovered was that the phenomenon he sought to explain existed only in that part of our country which at one time was covered by an immense glacier. A study of the action of glaciers soon convinced him that the great body of ice, moving nearly due southward, would grind away the abruptness of the hillside which faces the south, but would strike almost perpendicularly against the opposite one and not affect it at all. The theory carries conviction with the mere statement of it, and has not been opposed by anyone as far as I know.

Captain Campbell next turned his attention to the cause for the oblique position of trees which stand on hillsides. He was led to believe, by examination of many excavations, that the surface earth on a hillside is constantly but slowly slipping downwards, due to force of gravity, and that this prevents the tree retaining its natural, vertical position. I was told, when a boy, that the tree was attracted by the water in the stream below, and hence its leaning position. By means of this supposed fact, a "water witch" in the neighborhood explained his ability to locate a vein of water by the use of a forked switch. I am glad that Captain Campbell has overthrown the water attraction theory, for it leaves the "water witch" without a scientific basis for his business, and he is a humbug that ought to be suppressed.

Our friend has also done much in the study of the growth of trees. He was led to do this by his observations on witness trees. You no doubt have been astonished, many times, at the great difference in the present size of two witness trees of the same kind that are described in the notes of forty years ago as being of the same diameter. Captain Campbell has contributed some valuable information concerning favorable conditions for tree growth. He has demonstrated, by studying the annual rings of many hundreds of oak trees, which for ten years have been very rapidly cut out of Parke County for staves, that periods of slow growth are mainly due to injury to the tree itself, and not to seasons of great drought, as had been previously supposed. A moment's thought will convince one that a dry season can affect but little a tree whose roots penetrate deeply into the earth. Even a casual inspection of the stump of a tree will frequently show that it has had its periods of adversity as well as prosperity. It may be that its growth was checked suddenly, and that for ten or twenty years it grew but little. Captain Campbell says that an inspection of the top and body of the tree will show that at that time a great limb was torn away, or it was struck by lightning, or another tree in falling had removed the bark from one side. A tree, in many cases, fully recovers from such accidents and makes its usual annual growths. In this manner the life of a great forest tree can be accurately written.

Captain Campbell has also traced out and written the history of some great tornadoes that swept over this country at an early day. It is easy to follow the track of the storm by means of the young timber, but the problem is to fix the date of the disaster. In such cases there will usually be some small trees that will not be destroyed, and in the rings of these is recorded the date that is wanted; for such trees will most likely be severely injured by the falling timber, and hence grow but slowly for several years afterward. I have had one opportunity of testing Captain Campbell's method, and will take the liberty to insert the result here. The figures given may be slightly incorrect, since I very carelessly neglected to make a memorandum at the time.

In the summer of 1887 I attended a religious meeting in a grove of small timber near Clayton, in Hendricks County. But few of the trees were more than eighteen inches in diameter, and nearly all were much smaller. The surface of the ground was very uneven, owing to the great number of "Indian Graves," as I had been taught to call them when a child, which are left when a tree

is uprooted by a storm. It was evident that a great tornado had swept along there many decades ago. The mound and its accompanying depression always show the direction of the wind which overturned the tree. In this case it was easily seen that the destruction was caused by a whirlwind, and that its general direction was toward the northeast.

There were in the grove a few old trees that had certainly withstood the storm, but they were knotty and crooked. They clearly showed lives of hardship. Fortunately one of these had been recently sawed down, and I went at once to the stump to inspect the rings. The following facts were revealed: The tree was about 110 years old. [I say about, for you can seldom ascertain the exact age of a tree, since some of the first rings are usually obliterated.] When about twenty-five years old it received a great injury, and for fifteen years grew but little. After that time it seemed to have fully recovered, for it grew more rapidly than ever. Before the storm it was surrounded by large trees, which robbed it of sunshine and moisture, so that when twenty-five years old, it was a mere hand-spike. After recovering from its injury, it was the largest tree in its immediate vicinity, and monopolized both sunshine and moisture. Hence its rapid growth. The date of this injury, and hence of the storm, was some time in the first decade of the present century. Afterward, in conversation with an old gentleman, whose father was an early settler in the county, I learned that tradition puts the year of the storm as 1804. That tornado, I understand, can be traced as far as Indianapolis, and probably disturbed the timber on the ground on which this building stands.

As an example of great scientific work done, as recreation, we can find no better than that of Rev. Moses Ashley Curtis, of North Carolina. In 1835 he was given a missionary circuit in that State, and was compelled to work hard to meet his appointments. He was interested in botany, and, it seems, never lost an opportunity of securing specimens. As he returned from his visits to parishioners, he would collect plants from the roadsides for study at home. His leisure time was spent in the mountains searching for new species. He would lie for hours upon the ground, watching the famous insect-catching plant, *Dionaea Muscipula*, and he not only showed, by his observations, that it caught insects, but that it consumed them. He collected and classified for years, and eventually was recognized as the best living authority on the plants of his State. He enjoyed the correspondence and the visits of the greatest botanists, including Dr. Gray and Dr. Chapman. After his death, in 1873, the "American Journal of Science" said: "By his unremitting and well-directed labors, filling the intervals of honored and faithful professional life, he has richly earned the gratitude of the present and ensuing generations of botanists." [See "Popular Science Monthly," vol. 34, p. 410.]

Good amateur naturalists are numerous, and yet there ought to be 100 where there is one now. The great field of Nature is open to all, and no part of it has been exhausted. There is no branch of science to-day in which there is not more to do than has been done. The object of scientific research is to reveal truth. On truth depends the civilization of the world.

CALENDER

October 7-8, 1983	Gurdon Wattles Workshop, Indianapolis (see p. 7)
February 16-18, 1984	Tri-State and More in 84 (see p. 6 this issue)
September 8-13, 1985	ACSM/ASP Fall Technical Meeting, Indianapolis

CLASSIFIEDS - Help Wanted

Survey-Computer/Draftsperson: The Indiana Department of Natural Resources, Division of Water is seeking a person experienced in computing and drafting of survey notes for engineering and control surveys. Knowledge of 2nd Order geodetic surveying methods and computer programming is a definite plus. Must have a proven work record and good work references. Salary range between \$15,000 and \$16,000 per annum dependent upon qualifications. Interested persons should submit their resume as soon as possible to: C.A. Budnick, Indiana Department of Natural Resources, Division of Water, 605 State Office Building, 100 North Senate Avenue Indianapolis, IN 46204.

COMPLETED CAREERS

Longtime ISPLS member, John W. Yaw, died December 1st, 1982 in Indianapolis. Mr. Yaw was vice-president of Stone City Construction at Bedford. He was a former Linton City Engineer, Indiana State Highway Commission engineer, and was a member of ISPLS since 1964.

HOOSIER SURVEYOR AD RATES

	Sustaining Member	Non-Sustaining Member
Full Page	\$ 80.00/issue \$240.00/4 issues	\$100.00/issue \$320.00/4 issues
Half Page	\$ 50.00/issue \$150.00/4 issues	\$ 60.00/issue \$200.00/4 issues
Quarter Page	\$ 40.00/issue \$120.00/4 issues	\$ 50.00/issue \$160.00/4 issues
Eighth Page	\$ 30.00/issue \$ 90.00/4 issues	\$ 35.00/issue \$120.00/4 issues

Classifieds: \$5.00 per column inch.

See page one (1) of this issue for publication deadlines and mailing address.

THE COUNTY SURVEYOR AN OFFICE IN THE SPOTLIGHT

The three items following; an article from the Indianapolis Star on the Morgan County Surveyor, a court case involving the Warrick County Surveyor and an Attorney General's opinion regarding the LaGrange County Surveyor, along with the two new state laws affecting the county surveyor (see pp.16-19, Hoosier Surveyor Vol. 10, No. 2, Spring 1983), have put the county surveyors in Indiana in the spotlight.

One of the new laws (passed as H.R. 1564) provides for long-awaited funding for section corner perpetuation. The eyes of our Society and of all persons involved in real estate should be on their respective County Surveyors and County Commissioners to assure that these funds are provided and properly utilized.

The court case following was filed by Warrick County Surveyor Michael Feldbusch against the Warrick County Plan Commission, of which he is a member. The complaint is clearly explained in the text of the order, although most County Surveyors registered as Land Surveyors probably know without reading what the arguments are. The court's ruling should be read by all.

The Attorney General's opinion (pp.23-27) was requested by LaGrange County officials to resolve the question of who has authority over the construction of county "legal" drains and to clarify the role of County Engineers with regard to all aspects of legal drains. Warrick County has assigned the job of maintaining drains and ditches to the county's engineering department and Ronald Weaver, as new elected County Surveyor, was asking whether or not that was legal.

Although the opinion is relatively long and makes reference to numerous state laws, it should be read by all persons involved with "Legal" drains in the county level. The conclusion of the opinion is short and to the point, but the text must be read in order to follow the reasoning.

The final result of this series of laws, lawsuits, orders, and opinions is hard to visualize, but certainly a lot of "posturing" will be seen on all sides. Hopefully, we will eventually see greater respect and a greater role for the County Surveyor in Indiana.

MORGAN COUNTY SURVEYOR VOWS TO FIGHT COUNCIL

copyright the Indianapolis Star, Sept.13,1983

Martinsville, Indiana - Reginald L. McCracken has served three terms as Morgan County Surveyor, and this year his salary is \$7,370.

That's peanuts for someone with his credentials- he's a licensed engineer and land surveyor. The Marion County Surveyor is earning almost \$28,000. But McCracken stays in office because the work "is kind of fun".

Last week the Morgan County Council took steps to cut all the fun and virtually all the funding out of his proposed 1984 budget of \$28,454. When the surgery was over, McCracken was left with \$2,200 for next year- including a salary of \$2000.

The action brings Morgan County close to at least five other Indiana counties- Whitley, Fountain, Ohio, Vermillion and Tipton- that no longer budget money for a surveyors office.

"We're not being mean to him," said councilman Bill D. Gray of Martinsville. He also denied that the action was a backlash for a lawsuit that McCracken filed against the council in 1974. The suit challenged a previous attempt by the council to whittle the surveyor's budget.

"Maybe we're not giving him enough money, but you've got to take a stand one way or the other," Gray said. "But for \$23,200 (this year's budget), I felt we were not getting the job done. I want the people who pay the taxes to get their money's worth. That's putting it bluntly."

Gray says he has opposed the need for the office for several years, and council president Robert S. Gregory of Mooresville voices a similar sentiment.

"I have a real problem with the surveyor's office," Gregory said. "It's a constitutionally required office and we've got to have it, but I don't think we need it. There's not enough work for a full-time surveyor, so it can only go one way- part-time. And I've always been concerned whether we get efficient utilization of part-time employees who always have to be doing something else to make a decent living."

"I don't think we need the county surveyor on the ballot anymore."

McCracken disagrees and vows to go to court a second time to protect his job unless the council reconsiders.

In 1974, when councilmen first cut his budget, McCracken told them they were breaking a law requiring counties to pay a maximum prescribed salary to surveyors who also were licensed engineers. The council wasn't impressed.

He went to court, and an Owen County judge awarded back wages totaling about \$5,300.

He had no problems with councilmen again until this year.

"I know why they're doing this now; it's an election year, and they figured it's time to move," McCracken said. "They want to get rid of the office, and they're making the pay so low nobody will run."

Gray denies the council's decision was politically motivated, but McCracken said that previous "run-ins" with his fellow Republicans might explain the recent action.

He said a county commissioner asked him to resign after he was elected the first time so the office could be abolished.

"I told him 'no' in no uncertain terms. I told him I was a duly elected officer and that this was an office established by the constitution."

Shortly afterward, McCracken further irritated the party by announcing the appointment of Harold Collier, a Democrat, as his deputy surveyor.

Gregory admitted he is bothered that McCracken has taken a full-time job as a consulting engineer in Indianapolis, a job that could cut into his time as surveyor. He said he could understand if McCracken had taken part-time employment, but not full-time.

"That doesn't leave him ant time for his job here."

SALARY COMPARISON OF INDIANA COUNTY SURVEYORS NEAR MORGAN COUNTY

COUNTY	1983 Surveyor Salary	1983 Office Budget
Marion	\$27,941	\$287,017
Hendricks	\$13,564	\$52,956
Johnson	\$13,600	\$31,215
Putnam	\$11,352	\$16,956
Monroe	\$9,150	\$34,782
Morgan	\$7,370	\$23,220
Brown	\$6,725	\$12,370
Owen	\$2,400	\$4,750

Figures furnished by Association of Indiana Counties

(From the Indianapolis Star, September 13, 1983 issue)

A COURT ORDER : COUNTY SURVEYOR vs. PLAN COMMISSION

STATE OF INDIANA)
) SS:
COUNTY OF WARRICK)

IN THE WARRICK CIRCUIT COURT
1983 TERM

CAUSE NO: C-83-71

MICHAEL L. FELDBUSCH,)
Plaintiff)

VS.)

WARRICK COUNTY AREA)
PLAN COMMISSION,)
Defendant)

FILED

AUG 18 1983

Virginia Struble
Clerk, Warrick Circuit Court

ORDER

This cause is before the Court on both the Plaintiff's and Defendant's Motion for Summary Judgment.

The Plaintiff is the duly elected and acting Surveyor of Warrick County, Indiana. The Plaintiff is a member of the Defendant, Warrick County Area Plan Commission by virtue of his office. The plaintiff is also a Registered Land Surveyor in the State of Indiana and is engaged in the private practice of his profession in Warrick County, Indiana. In January, 1983, the Defendant Commission, passed a motion which basically states that the County Surveyor, and any of his associates, cannot represent clients before the commission. The plaintiff asserts that this action is contrary to law and asks for a judicial determination of his rights under the law. He seeks this Court to declare that he has the right to represent clients before the commission so long as he disqualifies himself from voting on any such matters, and such disqualification is noted in the minutes of the commission.

Support of plaintiff's position comes from three different sources. First Indiana Code 36-7-4-223 states as follows:

a) As used in this section, "Zoning Matters" does not include the preparation or adoption of a comprehensive plan, b) A member of a plan commission or a legislative body may not participate in a hearing or decision of that commission or body concerning a zoning matter in which he has a direct or indirect financial interest. The commission or body shall enter in its records the fact that its member has such a disqualification.

Secondly, an official advisory letter from the Office of the Attorney General of the State of Indiana, which is attached to the Complaint herein, concludes there would be a conflict of interest if a County Surveyor who is a member of the plan commission submitted to that plan commission a rezoning matter which he had prepared as a registered land surveyor in which he had a direct or indirect interest. It would also constitute a conflict of interest for a County Surveyor who is a member of a plan commission to participate in a hearing or a decision of that plan commission concerning a zoning matter if he had a direct or indirect interest in the zoning matter. Such a County Surveyor should vote on all matters where he does not have a direct or indirect interest. He should abstain from participating in a hearing or decision concerning matters where he has a direct or indirect interest.

Third, the plaintiff would cite the Court to the rules of the board, Indiana State Board of Registration for Professional Engineers and Land Surveyors, and in particular to Rule 11.

This sections of Rule 11 which are pertinent to this action are as follows: Section 11. The engineer or land surveyor will issue no statement, criticism, or arguments on engineering or land surveying matters connected with public policy which are inspired or paid for by an interested party, or parties, unless he has prefaced his comment by explicitly identifying himself, by disclosing the identity of the party or parties, on whose behalf he is speaking, and by revealing the existence of any pecuniary interest he may have in the instant matters. Section 17. When in public service as a member, advisor, or employee of a governmental body or department, the engineer or land surveyor shall not participate in considerations or actions with respect to services provided by him or his organizations in private engineering and/or land surveying practices.

It is clear that a member of the plan commission cannot participate in a hearing or decision of that commission concerning a zoning matter which he has a direct or financial interest. The statute cited and the advisory opinion of the Attorney General are correct in that regard. However, neither the statutes cited nor the opinion of the Attorney General state that a member of the commission should be allowed to practice his profession in front of said commission as an advocate. Rather, it is this Court's opinion that the statute contemplates isolated matters in which any member of the commission from time to time might have an interest. A member of the commission certainly should not be allowed to intentionally and continually create these conflicts by practicing in front of the commission as an advocate. The advisory opinion

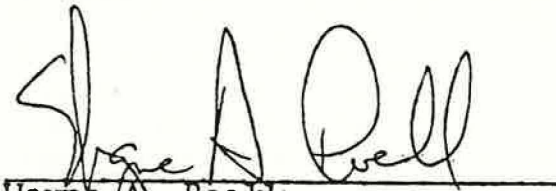
of the Attorney General recognizes that the surveyor as a registered professional land surveyor may submit occasional subdivision plats and zoning matters in which he has a direct or indirect interest. This is certainly not the same as saying that the plaintiff may fully practice his profession in front of the commission of which he is a member.

The plaintiff in his memorandum asks to be treated differently than attorneys for purposes of conflict of interest. This Court agrees that there are different standards for the two. However, there are certain standards and guidelines which must be met by all who hold public offices. The plaintiff is a duly elected public office holder. By virtue of his office, he is a member of the Defendant Commission. He certainly knew, or should have known, that fact before he asked the public to entrust him with the office of Surveyor of Warrick County. He is asking this Court to allow him to sit as a member of the Defendant Commission in one instance and then become an advocate in that commission in the next instance. Such activity on the part of a member of the commission could certainly undermine the public's confidence and sense of security in the commission. If such activity were allowed to occur, the public's confidence in its governmental bodies could certainly be weakened. The public could reasonably conclude that the commission has compromised its appearance as an impartial body by allowing one of its members to be an advocate before said commission.

The plaintiff and defendant agree that there is no factual dispute in this action. The question before the Court is whether the elected Surveyor who is required to serve on the plan com-

mission may practice his profession before the commission. This Court answers that question in the negative and declares that the plaintiff as the elected Surveyor of Warrick County, Indiana does not have the right to represent clients before the Warrick County Area Plan Commission on which he is required by law to serve as a member.

IT IS THEREFORE ORDERED by the Court that the declaration of rights as set out above be made the Order of this Court without further enumeration.


Wayne A. Roell,
Special Judge
Warrick Circuit Court

ATTORNEY GENERAL'S OPINION the Role of the County Surveyor

May 31, 1983

LEGISLATIVE ADVISORY LETTER

This is in response to your request for an opinion whether, in a county where the elected surveyor is neither a registered land surveyor nor a professional engineer, the elected surveyor is permitted to supervise construction of county "legal" drains, or change plans prepared by a qualified deputy hired by the County Ditch Board.

ANALYSIS

Your opinion request states that presently the County Board of Commissioners of a county that does not have a consolidated city employs a full time county engineer, as provided by Indiana Code Section 8-17-5-1 through 8-17-5-12, and as a part of the department of county engineering, a division of ditches and drains has been established, and said county highway engineer is a registered engineer and land surveyor.

Indiana Code Section 36-2-12-8 provides, if the surveyor is a competent civil engineer, he shall plan and supervise all surveying and civil engineering work of the county under the direction of the county board of commissioners, but, if the surveyor is not a competent civil engineer, the board of county commissioners shall appoint a competent civil engineer for each surveying or civil engineering project that the board orders or receives a petition for. If the executive refuses to appoint such an engineer for the project, the surveyor is entitled to a hearing in the circuit or superior court of the county to determine his competence to perform the project. The order of the court under the section is final and conclusive.

The appointment by the board of a person other than the county surveyor is a determination that the county surveyor is incompetent. Martin v. Board of County Comm'rs., (1917) 65 Ind. App. 375, 117 N.E. 517. The only remedy the county surveyor has where the board of commissioners has appointed another is a hearing under Indiana Code Section 36-2-12-8. He cannot proceed by injunction. Martin v. Board of County Comm'rs., supra.

Indiana Code Section 36-2-16-5 authorizes a county surveyor to appoint one first or chief deputy, if authorized by the county fiscal body, and also the number of other full-time or part-time deputies and employees authorized by the county fiscal body. A county deputy surveyor must be a competent civil engineer.

In Brane v. Kendall, (1914) 182 Ind. 436, 106 N.E. 690, the court held that deputy surveyors may perform the duties required of county surveyors in drainage proceedings.

The General Assembly has established a drainage board in each county. IC 36-9-27-4.

The County Drainage Board has jurisdiction over regulated drains in a county and assessment of private and mutual drains if the land is also drained by a regulated drain and they are subject to Indiana Code Chapter 36-9-27. See IC 36-9-27-15 through 36-9-27-19.

The General Assembly has specifically provided that the county surveyor is the technical authority on the construction, reconstruction, and maintenance of all regulated drains or proposed regulated drains in the county and that he shall investigate, evaluate, and survey all regulated drains or proposed regulated drains, and prepare all reports, plans, profiles, and specifications necessary or incident to any proposed construction, reconstruction or maintenance of regulated drains. He shall prepare and make public standards of design, construction, and maintenance that will apply to all regulated drains and their appurtenances... He shall supervise all construction, reconstruction, and maintenance work performed under Indiana Code Chapter 36-9-27. See IC 36-9-27-29.

Indiana Code Section 36-9-27-30 reads:

(a) Whenever the county surveyor is not registered under IC 25-31 (25-31-1-1 to 25-31-1-32) and IC 25-31 prohibits an unregistered person from performing any function that the county surveyor is directed to do under this chapter, the board shall employ and fix the compensation of a person who is so registered to work with the surveyor in performing those functions.

(b) The person employed by the board, who shall be known as a qualified deputy, shall file with the county surveyor the original of all plans, specifications, and other documents made by him in performing the work for which he was employed, and those plans, specifications, and other documents become a part of the permanent file of the board.

(c) The rate of compensation paid to a qualified deputy shall be assessed against the drainage project for which the deputy was employed. (Emphasis supplied)

Indiana Codes Section 36-9-27-31 authorizes employment and compensation of a surveyor or engineer only where there is no elected county surveyor.

Indiana Code Section 36-9-27-32 authorizes employment and compensation of contract deputies in an emergency. His employment includes supervision of the construction or reconstruction under the contract which must be for work on a specific drainage project. The compensation of a contract deputy shall be assessed against the drainage project for which the deputy was employed, and may be paid from the general drain improvement fund before the order for the construction or reconstruction.

There is absolutely nothing in the chapter authorizing the supervision of construction of county drains by the county engineer employed pursuant to Indiana Code Chapter 8-17-5. Indiana Code Section 8-17-5 specifically authorizes the employment of a full-time county highway engineer who shall be responsible for the supervision of the design, construction, planning, traffic, and other engineering functions of the county highway department under the policies and directions established by the board.

Indiana Code Section 8-17-5-7 mandates that a county engineer employed pursuant to Indiana Code Chapter 8-17-5 shall perform the duties of the office of county surveyor which relate to roads and bridges and to that effect and to the extent applicable Indiana Code Section 17-3-58-1 -- 17-3-58-8 and all acts supplemental thereto are incorporated into Indiana Code Chapter 8-17-5 for reference. Indiana Codes Sections 17-3-58-1 -- 17-3-58-8 are now complied in Indiana Code Sections, 36-2-12-2, 36-2-12-5, 36-2-12-6, 36-2-12-8, 36-2-12-9, 36-2-12-10, 36-2-12-14, 36-2-16-5, 36-2-17-2, 5-4-1-4 and 5-4-1-17. Indiana Code Section 5-4-1-17 has been repealed.

There is nothing in Indiana Code Chapter 8-17-5 that would indicate that it applies to the performance of any duties by a county engineer, or that it authorizes the performance of any purpose, other than for roads and bridges.

Indiana Code Section 8-17-5-10 provides that upon receipt of the certification from the county auditor, the state auditor shall distribute from the county highway engineer fund to said county units a grant-in-aid subsidy in the amount of fifteen thousand dollars (\$15,000) which total sum is to be applied exclusively toward the engineer's annual salary. This money comes from the counties' share of the April distribution of the motor vehicle highway account. See IC 8-17-5-8.

It is obvious that it was never intended that the motor vehicle highway account funds be used to pay county engineers for other than county highway engineering work relating to roads and bridges.

In fact, Indiana Code Chapter 36-9-27 specifically provides for payment of deputies hired under Indiana Code Section 36-9-27-30 when the surveyor is not registered under IC 25-31 as an assessment against the drainage board project for which the deputy was employed.

Indiana Code Section 36-9-27-33 gives right of entry upon land lying within seventy-five feet (75') of any regulated drain only to the county surveyor, the county drainage board, or an representative of the surveyor or the board acting under Indiana Code Chapter 36-9-27. The full-time county engineer (or a deputy) employed for highway and bridge purposes and subsidized by the State or paid from motor vehicle funds under Indiana Code Chapter 8-17-5 for that purpose has no authority to act under Indiana Code Chapter 36-9-27 and therefore no right of entry under Indiana Code Section 36-9-27-33.

In 1977 Ind. O.A.G. No. 23, p. 61 the Attorney General concluded that the costs of classifying all legal drains in the county under Indiana Code Section 36-9-27-34 came within the general duties of and were expenses of the county surveyor's office under Indiana Code Section 36-2-12-8. The Attorney General concluded that the county drainage board could not hire laborers or use county high labor to perform maintenance work under Indiana Code Chapter 36-9-27.

Although Indiana Code Section 25-31-1-19 does provide that no county shall engage in the construction or maintenance of any public work involving the practice of engineering for which plans, specifications and estimates have not been prepared, certified and sealed by, and the construction and maintenance executed under the direct supervision of a professional engineer and that any contract executed in violation of the section shall be null and void, the County Board of Commissioners has no authority under either Indiana Code Chapter 8-17-5 or 36-9-27 to employ the full-time county highway engineer or a deputy employed under Indiana Code Chapter 8-17-5 to supervise construction of county "legal" drains.

In addition, the General Assembly by Indiana Code Section 36-2-12-15(c), last amended by the 1983 First Regular Session of the Indiana General Assembly, recognizes that a surveyor who is not certified under IC 25-31 shall receive designated sums per mile if he describes and certifies the number of regulated drains in the county to the board of commissioners. This it had authority to do regardless of the provisions it had enacted by Indiana Code Chapter 25-31-1.

CONCLUSION

My research indicates that the full-time county highway engineer or a deputy employed under Indiana Code Section 8-17-5 has no general authority to supervise construction of "legal" drains.

However, an elected surveyor, who is not properly registered under Indiana Code Chapter 25-31-1, may not supervise construction of county drains.

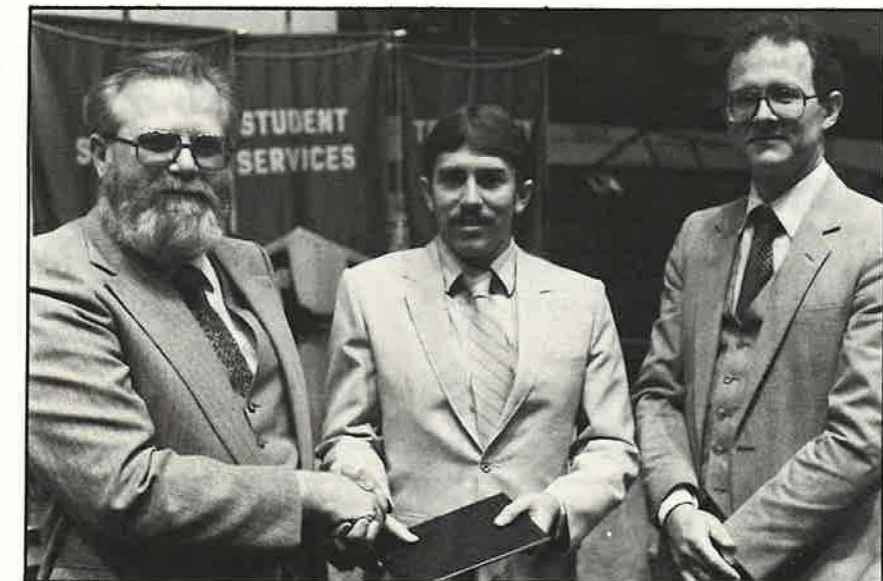
The General Assembly has established a County Drainage Board under Indiana Code Chapter 36-9-27 which in Indiana Code Section 36-9-27-30 provides that, whenever a county surveyor is not registered under Indiana Code Section 25-31, the County Drainage Board shall employ and fix the compensation of a qualified deputy to work with the surveyor and to file the original of all plans, specifications, and other documents with the surveyor to become a part of the permanent file of the County Drainage Board. The qualified deputy shall perform all the functions that the county surveyor is directed to do under Indiana Code Chapter 36-9-27. See IC 36-9-27-30. This would include construction, reconstruction, and maintenance work. See IC 36-9-27-29.

Plans prepared by or supervision of construction of county "legal" drains by a qualified deputy in a division of ditches and drains under the county engineer employed pursuant to Indiana Code Chapter 8-17-5 should not be used for county drainage projects unless the plans prepared and the construction are part of a highway or bridge project authorized under Indiana Code Chapter 8-17-5 because this could result in the unauthorized use of motor vehicle or other highway funds.

Respectfully submitted,

MARGARETT L. KNIGHT
Deputy Attorney General

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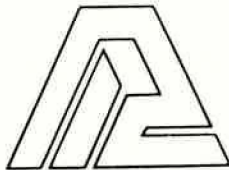
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3. Complete the Application for Membership.
4. Return the completed application to: ACSM
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5. Enclose the appropriate payment for dues with the application. Make check or money order payable to ACSM. (For applicants in foreign countries, please draw and remit in U.S. dollars payable at a bank in the United States.)

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ACA Bachelor's or higher degree in a field of study which would qualify the person for a professional position in cartography or related fields, or four years of active professional experience in cartography or related fields.

NSPS a) Any person licensed to practice the profession of surveying, according to state or provincial statutes; or
b) a GS-1375 employee classified as a Land Surveyor or Supervisory Land Surveyor; or
c) an academician holding a Bachelor's or higher degree and the rank of assistant professor or higher and teaching in an ABET or CAB accredited or a state land surveying registration board approved surveying program; or
d) a practicing surveyor or surveying teacher who has attained a minimum of six years experience in responsible charge of surveying activities or four years of education and two years of experience may submit credentials for consideration.

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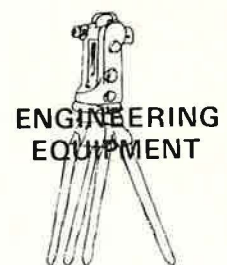
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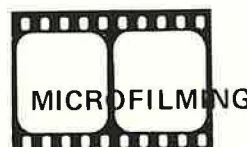
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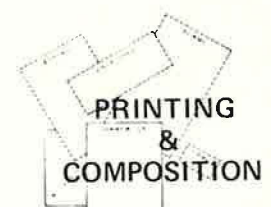
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