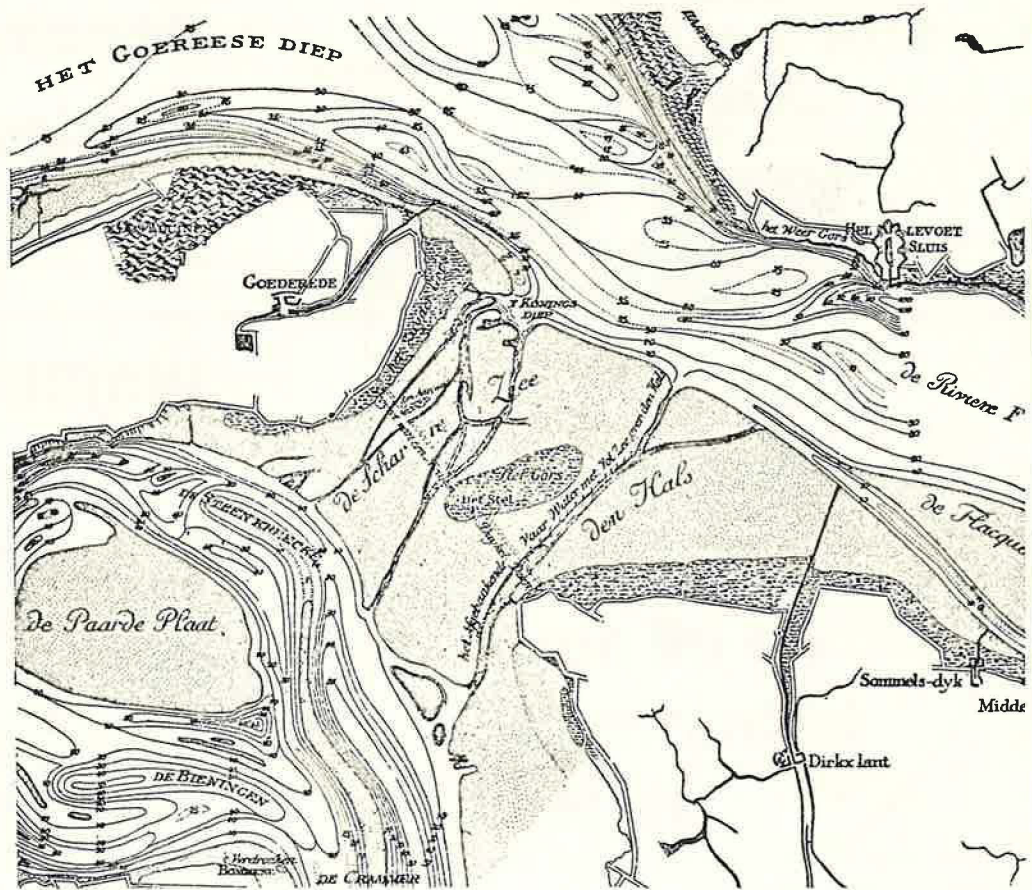


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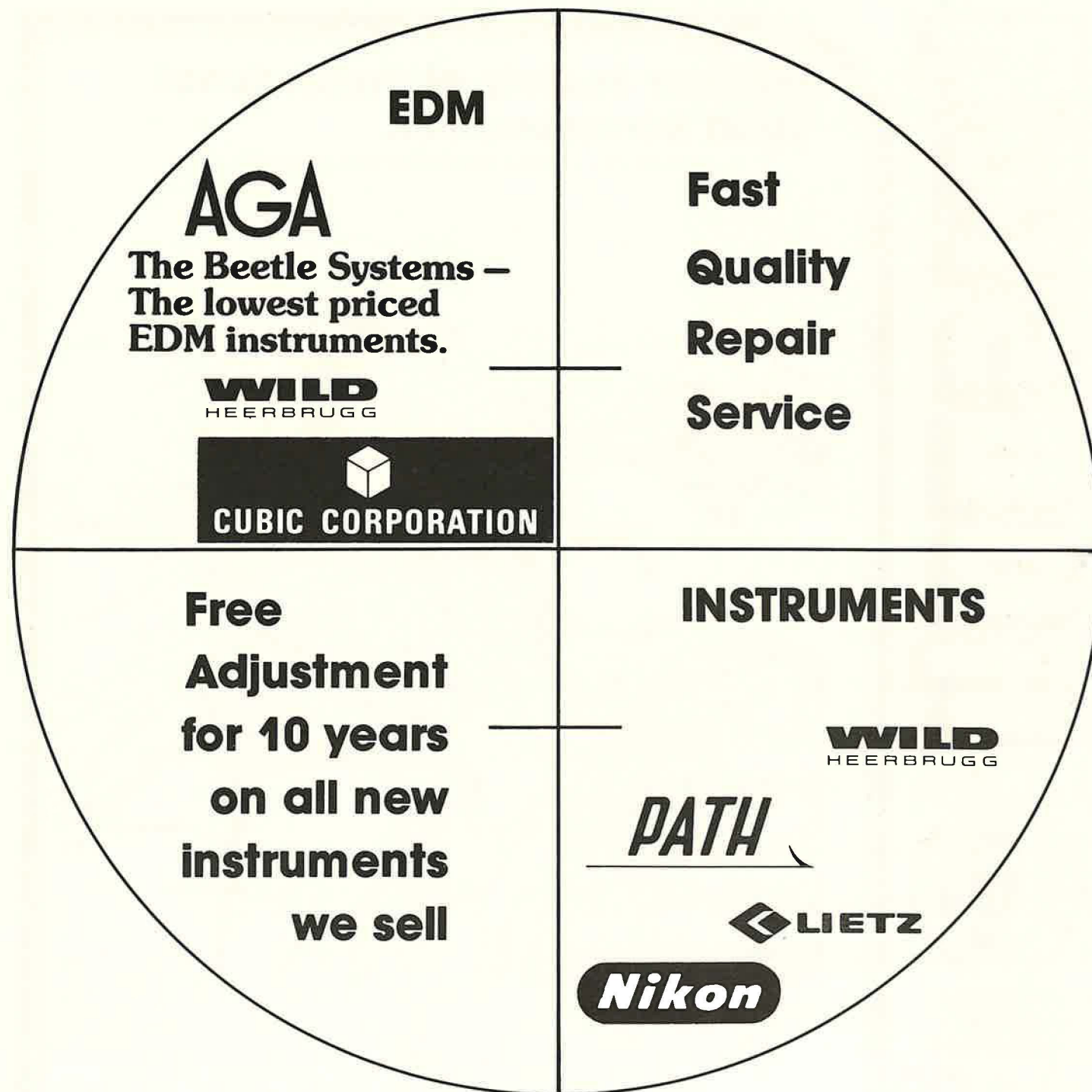
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HOOSIER SURVEYOR

VOLUME 5, NO. 2, SPRING 1978

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Editor's Note: The tardiness of this Spring issue is the fault of the editor and not the printer!

COVER: One of the earliest known maps showing contour lines. Reproduction of part of an eighteenth-century copy of a map by Nicholas Cruquius based on surveys in 1729 and 1731-1732, showing depths (in feet) in estuaries on the coast of the Netherlands. Scale: approximately 1:117,000. (From Tijdschrift van het kon. Nederlandsch Aardrijkskundig Genootschap 1890, Kaart IV).

EDITOR'S NOTE:

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

Winter issue - January 31
Spring issue - April 30
Summer issue - July 31
Fall issue - October 31

The HOOSIER SURVEYOR is reproduced by the Printing Department of Marbaugh Engineering Supply Co., Inc., Indianapolis, Indiana.

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Kenneth S. Curtis
Editor

THE PRESIDENT'S PAGE

INSPIRATION TO SURVEYORS

By Roger Woodfill

Although most duties of the president of I.S.P.L.S. are business oriented — conducting meetings, planning workshops, encouraging membership, etc.; there are opportunities associated with the office that use the philosophical, and emotional being. During the past week I was called on twice as your representative to be inspirational and human. The remainder of this column reports my performance, sufficient or inadequate, with those two situations.

Peggy called yesterday to relay the message that Ralph Higman, 59 of Bluffton, had passed away. I had talked briefly to Ralph at the Tri-State Convention, but my last connection with him was when he responded to my request to serve on an I.S.P.L.S. committee. His entire written response was as follows:

March 19, 1978

"Be happy to".

R.K. Higman

Although I could not word our feelings as concisely as Ralph's note, the society's sympathy to Mrs. Higman was expressed as follows.

Mrs. Higman,

I learned yesterday of the untimely passing of your husband. I want to express my personal sympathy and the united sympathy of the Indiana Society of Professional Land Surveyors, Inc.

Ralph was surely a credit to our profession. His work and attitude will not be forgotten by those who were privileged to know him. The two characteristics that I remember most about him were his insistency that the professional land surveyor closely supervise and review their employees work and of course his jovial personality.

Thank you for letting him participate actively in the society's functions. He was reliable, and he will be missed. If we, as a society, can be of any help to you, do not hesitate to call.

Less than a week earlier I had the opportunity to address other land surveyors at the beginning of their professional careers. My comments during the "swearing-in" of the new registrants at the supreme court chambers in the Capitol were as follows:

- 1.) A welcome to one of the artistic and specialized professions associated with engineering.
- 2.) A congratulations on passing an exam that continues to get more difficult each year.
- 3.) A statement that the certificate means State of Indiana recognizes the the new registrants have potential; and that the registrants are beginning a new phase of responsibility with an improved chance to use their judgement to better their communities.
- 4.) An Analogy of a Surveyor's life to metes and bounds description: Commencing at the recognition that the



Roger Woodfill
President

profession exists; thence along various courses of formal education and experience (these lead-in calls take several years and are different as the individual) to the point of beginning (registration by the state); thence you meander down various roads (sometimes on the centerline but often; sometimes we get a long straight open shot and go around smooth curves, but unfortunately it is easy to be out on a tangent in a briar patch); all of us encompassing different areas and effecting various adjoiners to our careers.

- 5.) An invitation to join I.S.P.L.S. with a statement of our leadership role and the advantages of membership.



DATES TO REMEMBER

October 16-20, 1978	Fall Convention of American Congress on Surveying and Mapping, Albuquerque, New Mexico.
February 15-17, 1979	Annual Convention of Indiana Society of Professional Land Surveyors, Airport Hilton, Indianapolis.
March 18-23, 1979	Annual Convention of American Congress on Surveying and Mapping, Washington, D.C.

MONDAY, MAY 1, 1978

Aided City, County Governments; Led in Saving Bridge; Fairview President

Ralph K. Higman, 59, Civil Engineer, School Board Member, Long-time Scout Leader, Dies Unexpectedly

An inestimable number of Bluffton boys learned over many years from Ralph Higman how to tie knots and lash with ropes and enjoy the out-of-doors during his seemingly endless years as a Boy Scout leader.

Beyond that, over an era when a lot of things went wrong, he made things go right in many youths' lives — introducing them to worthwhile interests, fortifying them with goals of personal and physical strength and instilling them with noble values.

Years afterwards, he was to be named to membership on the School Board, serving young persons in a different fashion, but with equal dedication and value.

A professional civil engineer and land surveyor by occupation, he was employed frequently for services by governments here, but far more often he was asked for counsel and advice, which he gave without compensation.

An active leader as well in preserving the historical treasures of Wells County amid a life of active service, Ralph Higman, 59, of 711 South Main St. died suddenly and unexpectedly at 12:30 a.m. Sunday in Wells Community Hospital of complications from gastrointestinal bleeding or a bleeding ulcer.

He had the ailment over a period of time, and he entered the hospital last Tuesday evening following a flare-up.

Reportedly Mr. Higman was considered progressing satisfactorily and had expected to be released from the hospital possibly Sunday.

When his wife, Marjorie, was in to visit him Saturday night, he was in good spirits and was considered as doing all right, although he noted that being up to shave seemed to wear him out.

When he was checked routinely by a nurse in the post-midnight period, she found him



Ralph K. Higman

dead.

Mr. Higman was born Jan. 21, 1919 in Wells County to John W. and Faith Kreigh Higman. His father died in 1960 and his mother, an active church and civic worker here for years, died last year.

Mr. Higman's marriage was on Jan. 3, 1958 at Petroleum to Marjorie King, who survives.

Also surviving are two sons, Ted, a Purdue student, and Jack, a junior at Bluffton High School.

Mr. Higman was the last of the family in which he was born.

He was a 1937 graduate of Bluffton High School, and he then earned a civil engineering degree from Purdue in 1942.

During World War II, Mr. Higman was an ensign in the U.S. Navy Sea Bees, serving from 1943 to 1945. Afterwards he was in China for a year with the United Nations in the tasks of post-war reconstruction and rehabilitation.

Mr. Higman additionally was employed for a time at the Crane Naval Depot for the DuPont Co.

He returned in 1947 to Wells County, where he became associated with Don Hammond and Frank Buckner (both now deceased) in an engineering firm.

Subsequently, Mr. Higman was employed with Reiff Construction Co. and affiliated with Vernon Bynum in a ditching business before operation in more recent years of his own civil engineering and land surveying service.

Through this career, his engineering skills were utilized frequently by the city and county governments.

Mr. Higman's interest in scouting started when he was a Boy Scout himself in Troop 141. He assisted afterwards on the staff of Camp Big Island, where his efforts served boys from many other locations as well as here.

After his return from World War II and post-war associated services, he resumed his Boy Scout activities as assistant scoutmaster for years, working with Frank Monroe in Kiwanis-sponsored Troop 140. Subsequently, he was an advisor here for the Explorer Scout program.

Mr. Higman worked in many county, district and council posts and assignments for the Boy Scout program and its camping-outdoor activities.

In 1967, he received the Silver Beaver award, the highest honor an adult scouter can be given at the Council level. It has been won by only a few from Wells County over the years.

Mr. Higman, as a senior in Bluffton High School, was awarded the coveted Emshwiller Cup award, considered by many as the top senior honor in citizenship and all-around service and achievement.

He was a past president of the Bluffton Lions Club and a member and past commander of American Legion Post III.

Mr. Higman served as president of the citizens committee which successfully negotiated with the Army Corps of Engineers to save the county's last covered bridge — before that bridge was destroyed by vandals more than a decade ago. He performed additional services through the years for the Wells County Historical Society.

Mr. Higman was elected not long ago as president of the Fairview Cemetery Association.

He was serving in addition as one of the junior class parents, along with his wife, on the committee for the Bluffton High School Junior-Senior All-Night Party committee.

His leading civic activity of the more recent years was his service on the Bluffton-Harrison School Board, to which he was elected by City Council first in 1972 and then re-elected in 1976 to another four-year term — both times unanimously. During the building period for the new Bluffton Junior High School and the High School Auditorium, he was the liaison of the School Board for the construction projects.

On the final night of Mr. Higman's life, a large crowd here Saturday participated in the benefits of this new auditorium for a program by the Ball State Singers.

Mr. Higman was a member of the First Presbyterian Church, serving for a time on the board of trustees there.

Calling is at Thoma-Rich Funeral Home, where services will be at 1:30 p.m. Tuesday with Rev. Philip Hazelton officiating. Burial will be in Fairview Cemetery. American Legion Post III will conduct graveside services.

Pallbearers will be the four remaining School Board members, Don Athan, Don McArdle, Dr. William Gitlin and Ned Carnall, plus past School Board members Charles Weterick and Robert Fritz.

Preferred memorials are to the Adams-Wells Special Education School or the Wells County Historical Society.

Hefty Damages Awards Upheld in R-O-W- Dispute

An appellate court of Indiana has affirmed awards of compensatory and punitive damages totaling more than \$110,000 in cases involving hasty action by a right-of-way survey crew.

The plaintiffs were two landowners in Clay County, Indiana, whose land lay in the path of a proposed 765-KV transmission line. In October 1974, Indiana & Michigan Electric Co. was surveying the proposed route prior to commencement of efforts to acquire the land.

Upon reaching the land of one plaintiff the crew found a crop of corn 10 to 12 feet high. In order to clear a path for their survey, the crew knocked down approximately 1800 feet of the cornfield, in a swath four to eight feet wide. On the land of another plaintiff the crew cut approximately 23 saplings out of a wooded area in order to obtain a line of sight survey. All of this was accomplished without authority or permission of any kind.

The landowners then sued for trespass and proved damages of \$120 and \$300, respectively. In addition to the actual damages, the jury awarded punitive damages of \$60,000 in the first case and \$50,000 in the other.

Upon appeal the court first held that the circumstances supported the conclusion that the crew had gone beyond the bounds of normal surveying when it cut the trees and crops. This action amounted to a substantial interference with the rights of the owners.

Next the court affirmed the award of punitive damages, over objection that the amounts were unreasonable and excessive. It conceded that normally punitive damages must bear some reasonable relationship to the actual damages. However, the wealth of the defendant is also one of the factors to be considered in an award of punitive damages. In view of the fact that the company had substantial assets and its year end income had amounted to more than \$43 million, the court did not deem the awards to be so excessive as to require that they be set aside.

(*Indiana & Michigan Electric Company v. Stevenson*, Ind. Ct. of App., 1st Dist., No. 1-776-A-121, June 15, 1977)

The Indiana State Board of Registration for Professional Engineers and Land Surveyors is seeking to fill two vacancies as follows:

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SUPREME COURT RULES AGAINST NSPE BAN ON COMPETITIVE BIDDING

WASHINGTON, D.C., APRIL 25, 1978 - - The Supreme Court of the United States has ruled that the National Society of Professional Engineers' (NSPE) ethical ban on competitive bidding for engineering services is not permissible under the Sherman Antitrust Act.

Following almost six years of litigation, the high court held that it would not sustain NSPE's contention that the rule on competitive bidding was within the "rule of reason" stating that while NSPE's ethical provision is not "price fixing" as such, it has an anticompetitive effect.

NSPE President Delbert A. Schmand commented:

"We are, of course, disappointed in the result of our longstanding and vigorous effort to uphold the principle that a bidding procedure for engineering services is contrary to the public interest. While we remain convinced of the soundness of our position from an ethical posture, we will obviously take prompt action to comply with the ruling.

"NSPE undertook this hard fight almost six years ago in the firm belief that the issue must be faced head-on, and that nothing less than a Supreme Court decision would be final and definitive. Now we have that final decision, disappointing though it be, and we have no regrets for the fight we waged for the profession, indeed for all the professions, with the dedicated backing of our membership. We are most grateful for that evidence of dedication to professional principles in the firm belief that our ethical standards have been, and will continue to be, grounded on protection of the public health and safety.

"Now we must further our continuing effort to convince legislative bodies at the state and local levels to support professional selection and negotiation procedures, as Congress has done for the securing of professional services for Federal agencies."

Responding to NSPE's argument that the rule was justified to prevent inferior work with consequent risk to the public health and safety, Justice Stevens, writing for the Court, said

"It may be, as petitioner (NSPE) argues, that competition tends to force prices down and that an inexpensive item may be inferior to one that is more costly. There is some risk, therefore, that competition will cause some suppliers to market a defective product. Similarly, competitive bidding for engineering projects may be inherently imprecise and incapable of taking into account all the variables which will be involved in the actual performance of the project. Based on these considerations, a purchaser might conclude that his interest in quality - - which may embrace the safety of the end product - - outweighs the advantages of achieving cost savings by pitting one competitor with another. Or an individual vendor might independently refrain from price negotiation until he has satisfied himself that he fully understands the scope of his customer's needs. These decisions might be reasonable; indeed, petitioner has provided ample documentation for that thesis. But these are not reasons that satisfy the Rule of Reason; nor are such individual decisions subject to antitrust attack."

The result of the decision is that professional societies may not bar competitive bidding procedures if those in practice wish to engage in such methods. The Court noted, however, that owners may elect not to use competitive bidding procedures, as Congress has elected for the Federal Government in enacting the Brooks Law.

The decision also makes clear that NSPE is free to attempt to influence governmental action at all levels in favor of non-bidding procedures under applicable laws.

Justices Blackmun and Rehnquist, while joining in the judgment of the Court, differed on that part of the opinion which held that any ethical rule with an overall anticompetitive effect adopted by a professional society is forbidden under the Sherman Act. They argued that professional ethical rules, even if anticompetitive, should be considered under a more flexible standard which allows professional ethical standards which have a minor impact on competition, such as standards of minimum competence for licensing which may lessen the number of entrants into a profession. Chief Justice Burger, while also supporting the judgment, dissented from that portion of the opinion which prohibits NSPE from "stating in its published standards of ethics the view that competitive bidding is unethical." The Chief Justice said that "The First Amendment guarantees the right to express such a position and that right cannot be impaired under the cloak of remedial judicial action."

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SUPREME COURT OF THE UNITED STATES

Syllabus

NATIONAL SOCIETY OF PROFESSIONAL ENGINEERS v. UNITED STATES

CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE DISTRICT OF COLUMBIA CIRCUIT

No. 76-1767. Argued January 18, 1978—Decided April 25, 1978

The United States brought this civil antitrust suit against petitioner, the National Society of Professional Engineers, alleging that petitioner's canon of ethics prohibiting its members from submitting competitive bids for engineering services suppressed competition in violation of § 1 of the Sherman Act. Petitioner defended on the ground, *inter alia*, that under the Rule of Reason the canon was justified because it was adopted by members of a learned profession for the purpose of minimizing the risk that competition would produce inferior engineering work endangering the public safety. The District Court, granting an injunction against the canon, rejected this justification, holding that the canon on its face violated § 1 of the Sherman Act, thus making it unnecessary to make findings on the likelihood that competition would produce the dire consequences envisaged by petitioner. The Court of Appeals affirmed, although modifying the District Court's injunction in certain respects so that, as modified, it prohibits petitioner from adopting any official opinion, policy statement, or guideline stating or implying that competitive bidding is unethical. Held:

1. On its face, the canon in question restrains trade within the meaning of § 1 of the Sherman Act, and the Rule of Reason, under which the proper inquiry is whether the challenged agreement is one that promotes competition or one that suppresses competition, does not support a defense based on the assumption that competition itself is unreasonable. Pp. 6-17.

(a) The canon amounts to an agreement among competitors to refuse to discuss prices with potential customers until after negotiations have resulted in the initial selection of an engineer, and, which it is not price fixing as such, it operates as an absolute ban on competitive bidding, applying with equal force to both complicated and simple projects and to both inexperienced and sophisticated customers. Pp. 12-13.

(b) Petitioner's affirmative defense confirms rather than refutes the anti-competitive purpose and effect of its canon, and its attempt to justify, under the Rule of Reason, the restraint on competition imposed by the canon on the basis of the potential threat that competition poses to the public safety and the ethics of the engineering profession is nothing less than a frontal assault on the basic policy of the Sherman Act. Pp. 13-15.

(c) That engineers are often involved in large-scale projects significantly affecting the public safety does not justify any exception to the Sherman Act. Pp. 15-16.

(d) While ethical norms may serve to regulate and promote competition in professional services and thus fall within the Rule of Reason, petitioner's argument here is a far cry from such a position; and, although competition may not be entirely conducive to ethical behavior, that is not a reason, cognizable under the Sherman Act, for doing away with competition. P. 16.

2. The District Court's injunction, as modified by the Court of Appeals, does not abridge First Amendment rights. Pp. 17-19.

(a) The First Amendment does not "make it . . . impossible ever to enforce laws against agreements in restraint of trade," *Giboney v. Empire Storage & Ice Co.*, 336 U. S. 490, 502, and, although the District Court may consider the fact that its injunction may impinge upon rights that would otherwise be constitutionally protected, those protections do not prevent it from remedying the antitrust violations. P. 17.

(b) The standard against which the injunction must be judged is whether the relief represents a reasonable method of eliminating the consequences of the illegal conduct, and the injunction meets this standard. P. 18.

(c) If petitioner wishes to adopt some other ethical guideline more closely confined to the legitimate objective of preventing deceptively low bids, it may move the District Court to modify its injunction. Pp. 18-19.

— U.S. App. D. C. —, 555 F. 2d 978, affirmed.

STEVENS, J., delivered the opinion of the Court, in which STEWART, WHITE, MARSHALL, and POWELL, JJ., joined, and in Parts I and III of which BLACKMUN and REHNQUIST, JJ., joined. BLACKMUN, J., filed an opinion concurring in part and concurring in the judgment, in which REHNQUIST, J., joined. BURGER, C. J., filed an opinion concurring in part and dissenting in part. BRENNAN, J., took no part in the consideration or decision of the case.

LAND SURVEYING STUDENT HONOR SOCIETY FORMED AT PURDUE UNIVERSITY

On Friday evening, April 28, 1978, initiation ceremonies were conducted at Purdue University for a new honorary land surveying society, Lambda Sigma. For three months, a constitution committee worked out the objectives and organization of the honorary which is open to distinguish land surveying students in the top quarter of the junior class and the top third of the senior class. The charter membership consists of nine juniors and nine seniors. Professors Ken Curtis, John McEntyre, and Warren Marks were elected associate members with Curtis acting as faculty adviser. Officers elected for the 1978-79 school year are Randy Sexton, president; Greg Kennedy, vice-president; Mike Bishop, secretary; and Pam Sostarich, treasurer.

The four-year professional land surveying program at Purdue is now in its seventh year and to date about 100 students have received the degree Bachelor of Science in Land Surveying. About 20-25 are graduating each year. A strong ACSM-ISPLS Student Chapter with about 50 student members is also active on the Purdue campus.



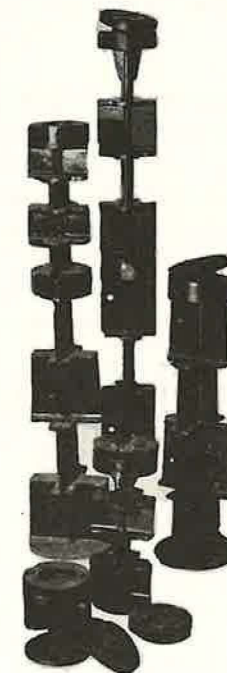
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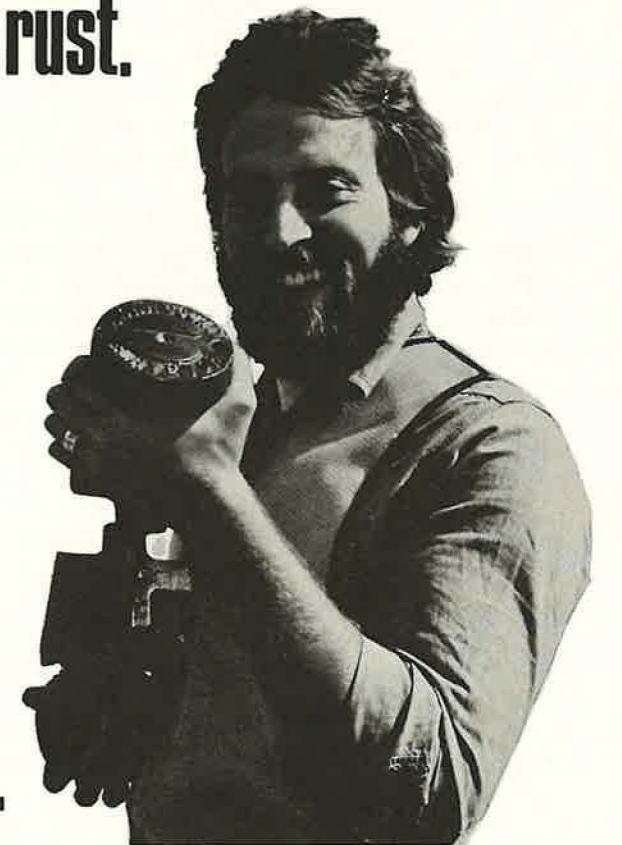


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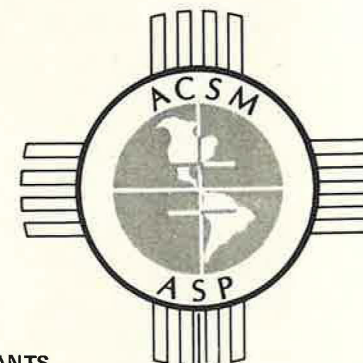
Using the instrument's self-check mode, field checks of the battery and electronics can be made quickly, assuring proper operation of the HP 3808A and minimum down time.

As with other HP distance meters, if a beam break occurs or atmospheric conditions prevent acceptable measurements, the instrument gives a flashing signal. When the obstruction is cleared or conditions improve, the battery powered instrument will automatically continue the measurement sequence.

The new distance meter's tracking mode enables the surveyor to make a distance measurement every 2 seconds to "track" a moving prism target out to a predetermined distance.

The price of the new HP 3808A Medium Range Distance Meter is \$9,450. The optional horizontal angle base adds \$1,600 to the instrument's price.

Hewlett-Packard manufactures and markets a full line of electronic distance meters, Total Stations and accessories.



1978 ACSM-ASP Fall Technical Meeting

October 16-20, 1978
Albuquerque, New Mexico
Convention Center

NEW LAND SURVEYOR (LS) REGISTRANTS

- S0312 Michael Lloyd Gill
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- S0313 Daniel G. Long
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- S0314 Ronald Errol Morrison
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- S77032 John W. Bauer
- S77033 Larry A. Fisher
- S77034 Dale L. Grimes
- S78001 David W. Drake
- S78002 John H. Stephens
- S78003 Jon R. Monies
- S78004 David L. Dahl
- S78005 Kelly D. Anspach
- S78007 David E. Penturf

REGISTRATION

GENERAL INFORMATION CONTACT:

Mrs. Ruth Riffenburgh
P.O. Box 2
Albuquerque, N.M. 87103
(505) 268-1840

EXHIBITORS

EXHIBITOR INFORMATION CONTACT:

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**HIGHLIGHTS OF 6TH ANNUAL RECOGNITION
DINNER OF PURDUE STUDENT CHAPTER
A.C.S.M. – I.S.P.L.S., APRIL 1978**



Ninety student land surveyors, faculty, wives or girl friends, and invited guests attended dinner held at The Trails, near Battle Ground, Indiana.



Prof. Warren Marks was cited by the students for his outstanding contributions to surveying education at Purdue. He is leaving Purdue in order to accept a position at Penn State University.



May 1978 graduates attending dinner included, seated left to right, Daniel Rice, Frederick Groth, Charles Forbush; standing, Randy Mull, Matthew Pietryka, and Michael Sexton.



Other May 1978 graduates attending dinner included, seated, left to right, Michael Buettner, Gerald McEntyre, Douglas Herendeen, Ben Bledsoe; standing, Gregory Eveslage, Philip Hoene, James Tolbert, and Stephen Schultz.



Guest speaker Ellsworth Stanley, past-president of the American Congress on Surveying and Mapping, from Rhode Island. He was introduced by Charles Forbush, student chapter vice president.



Matthew Pietryka, right, of Randolph, Vermont, receiving the Faculty Award from Prof. Curtis as the Outstanding 1978 Graduating Senior Award.



Several seniors will be graduating in December 1978. Attending the dinner were, seated, left to right, Donn Scotten, William Luecht; standing, Joseph Bishop, Greg Deeds, and Shawn Kane.



Mike Sexton was the recipient of the Curtis Procrastination Award in the form of a "French curve".



Greg Kennedy, left, of Versailles and Randy Sexton, of Kendallville receiving the ISPLS Scholarships (for Junior students) from John Fisher, chairman of the ISPLS Scholarship Committee.



Other outstanding seniors receiving ACSM membership awards were seated, left to right, Randy Mull, Spencerville; Greg Eveslage, New Salisbury; Gerry McEntyre, West Lafayette; standing, Mike Buettner, Lima, Ohio; and Charles Forbush, Cobleskill, New York.

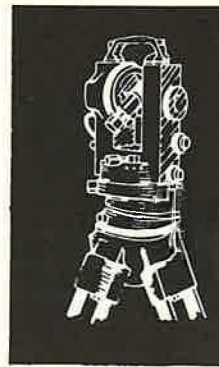


1978-79 school year officers of Purdue Student Chapter, ACSM-ISPLS, are, seated left to right, Steve Kopach, vice-president; Brenda Schollosser, president; Randy Brown, secretary; standing, Perry Cloyd, director; Randy Sexton, director; and Herschel Manhart, treasurer.



The Surveying and Mapping faculty at Purdue are, left to right, Warren Marks, Ken Curtis, Lloyd Kemmer, Edward Mikhail, John McEntyre, and Lassi Kivioja.

G. Lengemann Company

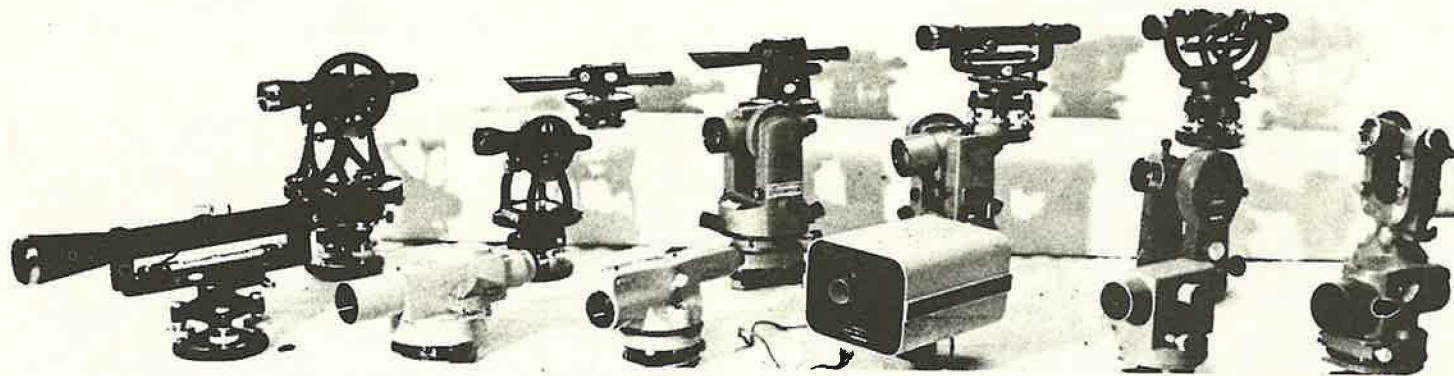


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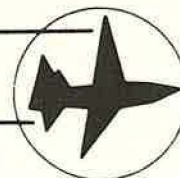
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ADOPTED JAN. 16, 1970 BY:

INDIANA SOCIETY OF PROFESSIONAL LAND SURVEYORS

ENDORSED OCT. 27, 1970 BY:

INDIANA LAND TITLE ASSOCIATION

MINIMUM STANDARD DETAIL REQUIREMENTS FOR INDIANA LAND TITLE SURVEYS

This certificate shall be executed by an Indiana Registered Land Surveyor and attached to and made a part of each Land Title Survey which is submitted for the purpose of inducing a Title Insurance Company to delete certain standard exceptions from Loan Policies (except single or double family residential tracts) or owners policies. The following survey instructions establish the basis on which the survey is to be performed and the certificate to be rendered.

1. Every parcel of land whose boundaries are surveyed by a licensed surveyor shall be made conformable with the record title boundaries of such land. When it is necessary or desirable to revise or modernize the record description, it should be certified on the plat of survey that the real estate in the revised or modernized description is the same as or lies entirely within the record description, or it should be noted that the record description is faulty or ambiguous and why.
2. Show all monuments, stakes or marks found or placed and note which were found and which were placed. Proof of establishment of all boundaries is of the utmost importance and it should be apparent, from an examination of the plat of survey, why the surveyor adopted the location delineated. This often requires a showing of actual measured distances and bearings around the entire block and any monuments found which indicate property lines. Where occupation alone is chosen as the best possible location, enough ties to buildings, walls, fences, surveyor's monuments, etc. and their actual or estimated age, must be shown to indicate the pattern of occupation within the block. Interior parcel lines must clearly indicate contiguity, gores, and/or overlaps.
3. When the surveyor has doubt as to the location on the ground of street or lot lines or monuments (for such reasons as street and lot lines being undefinable or indefinite because of insufficient monuments or markers in the ground or where errors are found to exist in the legal descriptions or recorded plats), the surveyor shall clearly indicate the nature of the difficulty and give his professional opinion as to range and scope of differences possibly involved and the effect of same on the surveyed positions.
4. Show any physical evidence at or near a boundary that is or appears to be a line of possession or occupation. This will include buildings, fences, hedges, etc. Where there is no physical evidence of possession along the record line the survey shall note along that line "no physical evidence of line."
5. Show the location, dimensions and type of all buildings on the surveyed property. Show their location by the shortest dimension to the exterior boundaries and their relationship to any known setback lines.
6. As a result of having viewed the property with reasonable diligence, show any physical evidence of possible easements, such as roads, rights of way, railroads, drains, telephone, telegraph, or electric lines, water, sewer, oil or gas pipelines, driveways, billboards, etc., if they are on or run across the surveyed property and appear to serve the public or adjoining property owners. If there are any surface indications of underground easements, such as manholes, pipe line markers, sewer or drain outlets, etc., on (or near if pertinent) the surveyed property, show them.
7. In built-up areas with walls on the property line, show them, and indicate whether they are or appear to be independent or party walls. Show location and thickness of these walls, and if a building on the surveyed property appears to use a wall of adjoining premises, show this.
8. Show by dimension the extent of any apparent encroachments by buildings or other improvements appurtenant to the surveyed property or the adjoining property.
9. As a result of having viewed the property with reasonable diligence, show any cemeteries and burial grounds located within the surveyed tract (i.e., "family" cemeteries), either with the boundaries accurately located or with as much information as possible and a note that the boundaries are uncertain, if that is the case.

10. Show the existence of any lakes, ditches, streams or rivers running through or bordering on the premises being surveyed. The detailed locations are required only when a boundary or property line is determined thereby.
11. Show any and all roads, streets, or alleys running adjacent to the boundaries of or partly or entirely on the surveyed property, with width, right-of-way lines, name and location clearly indicated. If the above cannot be determined, then this will be noted.
12. If the survey shows an easement that is established by a recorded instrument, the identification of the easement shall show the record reference of the instrument, and, unless otherwise noted, this showing indicates that the physical evidence and record description of the easement conform.
13. The accuracy of measurements and calculations performed in the preparation of surveys which accompany this certificate shall conform to professionally recognized standards as applicable to the type survey performed. Such standards have been adopted by the Indiana Society of Professional Land Surveyors. All field measurements must be balanced, both as to angles and distances, so as to provide a mathematical closure. Show the basis of bearings, assumed or otherwise, the scale of the plat and a north arrow. The plat of survey shall show the following information for any curve; length of arc, radius, central angle and bearing to the radius point from the beginning and end points of the curve.
14. All surveys must carry a date within 30 days of the date of this certificate. Updating of a survey by recertification is acceptable if conditions as of date of recertification are shown thereon.
15. Cite any qualification of the preceding requirements in the space below.

CERTIFICATE

This is to certify to ☐ Pioneer National Title Insurance Co.
☐ Lawyers Title Insurance Corp.
☐ Chicago Title Insurance Co.
☐

that the attached plat is a true and correct survey of the premises briefly described as:

Survey By (Co. Name) —
Date of Survey —
Job No. (If Any) —
Client's Name —
Brief Description —

and completely described on the attached plat.

I further certify that this survey was made in accordance with the instructions set out above and which are by reference made a part of this certificate.

Dated this _____ day of _____, 19____.
Seal

Signed: _____

Registered Surveyor No. _____



What is ACSM?

ACSM serves as the national professional organization for the land surveyor, the control surveyor-geodist, and the cartographer. Three ACSM Divisions within the national organization function in the specific interests of the three principal professional categories.

What are ACSM's objectives?

- to advance the sciences of surveying and mapping
- to promote public understanding and use of surveying and mapping
- to encourage improvement of university and college curriculums for surveying and mapping
- to speak on the national level as the collective voice of the professions embodied within ACSM
- to provide publications to serve the surveying and mapping community

What are the benefits?

- Technical Journals: *Surveying and Mapping*, quarterly; *The American Cartographer*, semiannually
- News-oriented quarterly: *ACSM Bulletin*
- Technical monographs and other publications
- ACSM-sponsored workshops on current and advanced state-of-the-art subjects
- National conventions, spring and fall of each year
- International meetings, through ACSM's national participating membership
- Group Insurance programs
- Opportunity to benefit from your contributions of experience and thoughts to the creation of both local and national positions on subjects of interest and concern to your profession

*Let
your voice
be heard
professionally
through the
collective
voice
of ACSM.
Become part
of your
national
organization.
Join ACSM now!*

AMERICAN CONGRESS ON SURVEYING AND MAPPING

Objectives

The objectives of ACSM are to: (a) advance the sciences of surveying and mapping in their several branches, in furtherance of the public welfare and in the interests of both those who use maps and surveys and those who make them, and establish a central source of reference and union for its members; (b) contribute to public education in the use of surveys, maps, and charts and encourage the prosecution of basic surveying, mapping, and charting programs; (c) encourage improvement of college curriculums for the teaching of all branches of surveying and mapping both in the technological sciences and the professional philosophies; (d) honor the leaders in the sciences of surveying and mapping; and (e) support a program of publications that will represent the professional and technical interests of surveying and mapping.

Membership in ACSM

The American Congress on Surveying and Mapping brings together three allied professional groups—the land surveyor, the control surveyor-geodesist, and the cartographer. Each of these professions is represented by a separate Division of ACSM. Membership in ACSM is through the Division, and each Division establishes the criteria for its membership. A prospective member must select *one* Division which represents his primary interest, and for which he can qualify for membership. Student members are entered in a separate non-Divisional category under criteria established by ACSM.

The objectives of ACSM, its organizational structure, and other information are provided on this page. The membership criteria and dues for each level of membership are indicated on the back of the membership application form. The status of *Member* is reserved for those who have attained the professional level. *Associate* membership is reserved for "in training" or technician level. *Student* membership is available for the periods during which individuals are undertaking full-time courses. *Affiliate* membership is available to those in scientific, technical, or professional fields which relate to or support ACSM member interests. Membership and dues are on a calendar year basis, but after July 1 each year, half-year memberships and related subscriptions are offered for one-half the annual dues fee.

ACSM members receive, without further costs, subscriptions to the quarterly *Journal Surveying and Mapping*, the quarterly magazine *ACSM Bulletin*, and *The American Cartographer* which is issued semiannually. Single copies of monographs are available to members free upon request, and other publications are available at special rates.

Membership also provides opportunity to participate in regional, national, and international conferences, and workshops and symposia. The quarterly publications list such meetings and report on the major events.

One of the benefits of membership in ACSM is the opportunity to apply for various forms of coverage in a group insurance program. The program is offered solely as a service to members. ACSM incurs no expense or financial responsibility and receives no financial or other direct benefits.

Benefits of membership also include the opportunity to participate in and to support the activities and functions of the organization. This includes the Sections and Affiliates at state and local levels, and the committees and offices of the selected Division and of the National Organization. Members are encouraged to participate in the activities of *all* Divisions. It is your opportunity to contribute to, and help to shape, the Congress which represents and supports members of the professional fields of Cartography, Control Surveying and Geodesy, and Land Surveying by working toward achievement of established ACSM objectives.

Reasons to Join a Professional or Technological Society

Improvement of anything requires wisdom, patience, and persistence. Such pursuit takes time, effort, and money.

Improvement of professional stature cannot be achieved without such sacrifice and contribution of time, effort, or money.

Neither can professional or technological stature be achieved alone. Association with others who are aspiring to improve the status is necessary for the exchange of viewpoints and knowledge.

The professional and technological society is therefore necessary as a forum for exchange and comparison of individual viewpoints and ideas, and for collective strength and influence in matters of mutual agreement. It also affords a collective strength of "wisdom, persistence, effort, and money." The stronger the membership—the stronger the collective influence in any mutual interest.

Membership affords an opportunity for participation and voice in shaping one's future. No member can ever get more from an association than he puts into it. To put in—or to take out—one first must join the activity—one must be a member.

It just naturally follows that as the profession improves in status, both the public at large and the professional and the technician are benefited, as also are those with associated interests.

By close association through such affiliations and working with other professional and technological organizations such as the National Society of Professional Engineers, American Society of Civil Engineers, American Society for Engineering Education, National Research Council, International Cartographic Association, and the International Federation of Surveyors—F.I.G. (the Federation Internationale des Geometres)—ACSM expands the influence and strength of purpose on matters of mutual pursuit, and adds strength and persuasion to the professional voice for surveying and mapping.

ACSM has served its membership since 1941. It is accepting increased responsibility for the activities of our profession. It offers an opportunity to pool our professional experience and our technical, scientific, and financial resources.

By joining ACSM a member can receive much helpful information from its publications and from its activities, in ratio to the effort expended in participation. A significant benefit and vital help is a sense of belonging; it is an instant source of professional contact, a means of consultation with fellow technologists and professionals.

ACSM is a source for varied and invaluable services to which membership is an introduction.

National Headquarters: 210 Little Falls Street, Falls Church, Virginia 22046

Telephone: (703) 241-2446



AMERICAN CONGRESS ON SURVEYING AND MAPPING

210 Little Falls Street, Falls Church, Virginia 22046

(Please read both sides of this application blank)
(Please typewrite or print)

APPLICATION FOR MEMBERSHIP

Name _____
(LAST NAME) (first) (middle)

Occupation _____

Engaged in: (private practice _____) (industry _____) (public utility _____) (education _____)
(agency of government: municipal _____; county _____; state _____; federal _____)
Other (describe): _____

Employed by: _____

[] Business address _____
street and number
City _____ State _____ Zip Code _____

[] Home address _____
street and number
City _____ State _____ Zip Code _____

CHECK THE PREFERRED Mailing-Plate address, for receiving ACSM Publications and Correspondence.

Date and Place of Birth: _____

Education: Years completed: high school _____; college _____; other _____

Diplomas, certificates, or degrees _____

Name of school _____

Experience in occupational field of interest:
Number of years: sub-professional _____; pre-professional _____; professional _____ (_____)
total

Professional Registration — if registered give State and registry number:

[] Land Surveyor _____ [] Engineer _____

[] Other _____

Membership in kindred national societies:

ASP _____; ASCE _____; NSPE _____ (_____) State _____; SAME _____; AGU _____; other _____

Membership in local surveying or mapping group: No _____ Yes _____ Name the group or organization _____

See Membership Qualifications and related dues structure on back of this form. Check membership applied for:

[] Member; [] Associate; [] Affiliate; [] Student.

Check the ACSM Division under which criteria you wish to be qualified. Check ONE only.

[] Control Surveys; [] Land Surveys; [] Cartography.

Check other interest: [] Education; [] Instruments; [] Computing; [] Marine Surveying and Mapping;

[] Other _____

Annual membership dues include \$12.50 (\$6.00, student) for one-year subscriptions to the ACSM periodicals: SURVEYING AND MAPPING, THE AMERICAN CARTOGRAPHER, and the ACSM BULLETIN.

Date _____ 19 _____ Signature _____

NOTE: (Inclusion of appropriate dues payment will expedite processing of application)

INDIANA SOCIETY OF PROFESSIONAL LAND SURVEYORS, INC.

3919 MEADOWS DR SUITE 103 INDIANAPOLIS, INDIANA 46205 (317) 545-8907



AMERICAN CONGRESS ON SURVEYING AND MAPPING Membership Qualification and Dues Effective January 1, 1978

MEMBER ANNUAL DUES \$30.00 Any person who has attained professional qualification by education and/or experience in any of the various fields of surveying, mapping or charting, the criteria for which will be determined by each Division of primary interest subject to approval by ACSM Board of Direction, and administered by the Committee on Admissions, may become a Member of ACSM.

DIVISIONAL CRITERIA FOR CORPORATE MEMBER CARTOGRAPHY DIVISION - Graduation with a Bachelor's or higher degree from an accredited college or university in a discipline or area of study which would qualify the applicant for a professional position in the field of mapping or charting

or eight years of active experience in mapping or charting, with a minimum of four years in recognized professional activities. The cited record of these qualifications having been verified and approved by the Cartography Division Membership Committee. Up to four years of higher education may be substituted for experience.

CONTROL SURVEYS DIVISION - (a) Any person may become a member who is professionally qualified in the mathematical, physical or applied sciences or engineering arts, with specialist interests in control surveys, geodetic or precise plane surveys, geodesy, geophysics, optical or radio astronomy, earth environmental or space physics, specialized precision measurements and related adjustments and computations, or the development of optical, electromagnetic, mechanical, photogrammetric or other appropriate means of metrology, and who (1) Has graduated with a Bachelor or higher degree from an accredited college or university in a discipline related to the fields noted in the foregoing item (a), or; (2) Is a licensed Professional Engineer, or a licensed Land Surveyor, or a licensed Photogrammetric Engineer, or a licensed Planner, competent and experienced in one of the fields noted in the foregoing item (a), or; (3) Has attained professional grade competence in one of the fields noted in the foregoing item (a) by specialized education or self study, with not less than 8 years experience in the fields of item (a) and the cited record of these qualifications having been verified and approved by the Control Surveys Division Membership Committee. Up to 4 years of higher education may be substituted for experience.

LAND SURVEYS DIVISION - 1. Any person registered to practice Land Surveying in those political areas where such registration is a legal requirement. 2. Any person practicing Land Surveying under an engineer's

registration in those political areas where such registration to practice Land Surveying is a legal requirement. 3. Any person practicing Land Surveying under an engineer's registration in those political areas where such practice is permitted under such registration and where such practice conforms with the guide lines established in 6 below. 4. Any person practicing Land Surveying in those political areas where no legal registration to practice Land Surveying is required who meets the guide lines established in 6 below. 5. Any person practicing Land Surveying by virtue of his employment in public services who meets the guide lines established in 6 below. 6. The phrase "practicing Land Surveyor" as used in 3, 4 & 5 above shall refer to one who has been in responsible charge for a period of not less than 8 years (up to 4 years of higher education of a satisfactory character may be substituted) in any field of service identified as Land Surveying in any existing or future State statute governing the registration of Land Surveyors. The cited record of these qualifications having been verified and approved by the Land Surveys Division Membership Committee.

FELLOW ANNUAL DUES \$60.00 Any corporate Member in good standing who has belonged to ACSM for 8 or more years may be invited to apply for the grade of FELLOW. Persons with records of outstanding service to the profession who do not qualify under the above may be invited to apply for the grade of FELLOW.

ASSOCIATE MEMBER ANNUAL DUES \$18.00 Any person with an associative interest in the profession of surveying, mapping and charting, the criteria for which shall be determined by each Division of primary interest subject to approval of ACSM Board of Direction, and administered by the Committee on Admissions, may become an Associate Member of ACSM.

DIVISION CRITERIA FOR ASSOCIATE MEMBER Any person with an associate interest or actively engaged in the scope of interest of a Division, whose qualifications do not meet the requirements of member, may become an associate member.

STUDENT MEMBER ANNUAL DUES \$6.00 Any person pursuing a course of study as a graduate or undergraduate student on a fulltime basis (at least 9 semester hours) leading to a career in the profession of surveying, mapping and charting.

INDIVIDUAL AFFILIATE MEMBER ANNUAL DUES \$24.50 Members of other allied professions or persons with scientific acquirement or technological experience in their special pursuit to qualify them to cooperate with Members of ACSM in the advancement of professional knowledge and practice in surveying, mapping, and charting, who might not otherwise qualify for corporate membership in ACSM.

REFERENCES (Persons in knowledge of applicant's qualifications)

Name Occupation and title Address street city state zip code Membership in ACSM [] or kindred society [] (indicate) If professionally registered, give State and Registry number. Land Surveyor [] Engineer [] Remarks:

Name Occupation and title Address street city state zip code Membership in ACSM [] or kindred society [] (indicate) If professionally registered, give State and Registry number. Land Surveyor [] Engineer [] Remarks: (Attach extra paper if required)

eff. 1/1/78

MEMBERSHIP APPLICATION

Member, Junior, Associate, Student, (check one.)

Annual dues payable on February 1, of each year are for: Member \$50.00 or Associate \$30.00, Junior \$25.00 and Student \$5.00.

Name Position Home Address Employed by City Zip Business Address Telephone (include area code) City Zip

Registration Status: (Give Reg. No. and Branch) (CHECK ONE) Business Phone (include area code)

S.I.T. R.L.S. R.P.E. Member of American Congress on Surveying and Mapping Yes No Member of a local chapter of ISPLS Inc.? Yes Which Chapter? No

MEMBERSHIP CLASSIFICATIONS

MEMBER ---- Registered in Indiana as Land Surveyor. Member is entitled to vote, hold office, and participate fully in the Society. JUNIOR ---- Actively pursuing the goal of becoming registered as a Land Surveyor. Junior is entitled to vote and participate fully in the Society, but is not entitled to hold office. ASSOCIATE -- Associated or affiliated with the Land Surveying Profession but is not qualified to become registered. Associate is not entitled to vote or hold office, but will receive newsletter and will be invited to participate in meetings. STUDENT ---- Same eligibility requirements as for Junior, except membership may be used only by full time students, and for four years only. Students are entitled to the same benefit as Associates.

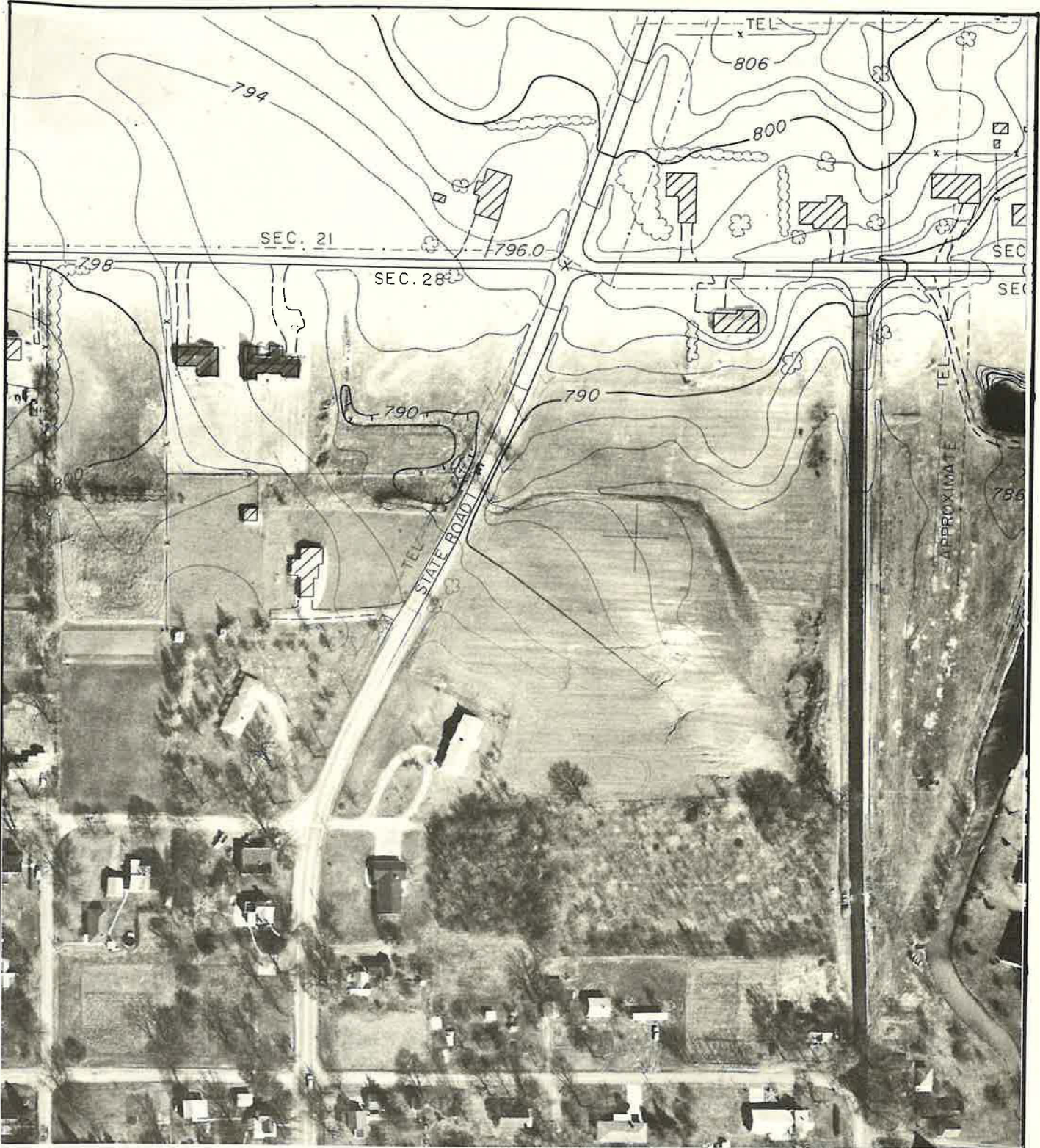
**PUBLICATIONS AVAILABLE FROM
ISPLS HEADQUARTERS
I.S.P.L.S. Surveying Publication Series**

Quantity	Publication	Cost to Member	Cost To Non-member
_____	Manual No. 1 - <u>The Perpetuation of Corners in Indiana</u> by John G. McEntyre (June 1972), 100 pages.	\$ 5.25	\$ 7.50
_____	Manual No. 2 - <u>The Indiana State Plane Coordinate System</u> by Kenneth S. Curtis (June 1974), 196 pages.	\$ 5.25	\$ 7.50
_____	Manual No. 3 - <u>Law and Surveying</u> (including Surveyor's Guide to the use of a Law Library and Indiana Statutes related to Land Surveying), by Darrell R. Dean & John G. McEntyre, (April, 1975), 120 pages.	\$ 5.25	\$ 7.50
_____	Manual No. 4 - <u>Meridian Determination by Solar and Polaris Observation</u> , by Kenneth S. Curtis, (June, 1975), 194 pages.	\$ 5.25	\$ 7.50
_____	Manual No. 5 - <u>Computer Programs (HP-65 Documentation)</u> by Charles C. Campbell (February 1976), 219 pages and contains 50 surveying programs.	\$30.00	\$45.00
_____	Manual No. 6 - <u>Establishment of Boundaries by Unwritten Methods</u> by John G. McEntyre (June 1976), 171 pages.	\$ 5.25	\$ 7.50
_____	Manual No. 7 - <u>Optical Distance Measurement</u> by Kenneth S. Curtis (June 1976), 169 pages.	\$ 5.25	\$ 7.50

\$1.50 postage to be added to each order.

Name _____
Street _____
City _____ State _____ Zip _____
Member ISPLS yes _____ no _____
Total Amount Enclosed \$ _____

Mail To: Indiana Society of Professional Land Surveyors, Inc.
3919 Meadows Drive, Suite 103
Indianapolis, Indiana 46205



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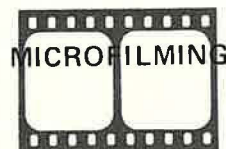
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