

HOOSIER SURVEYOR

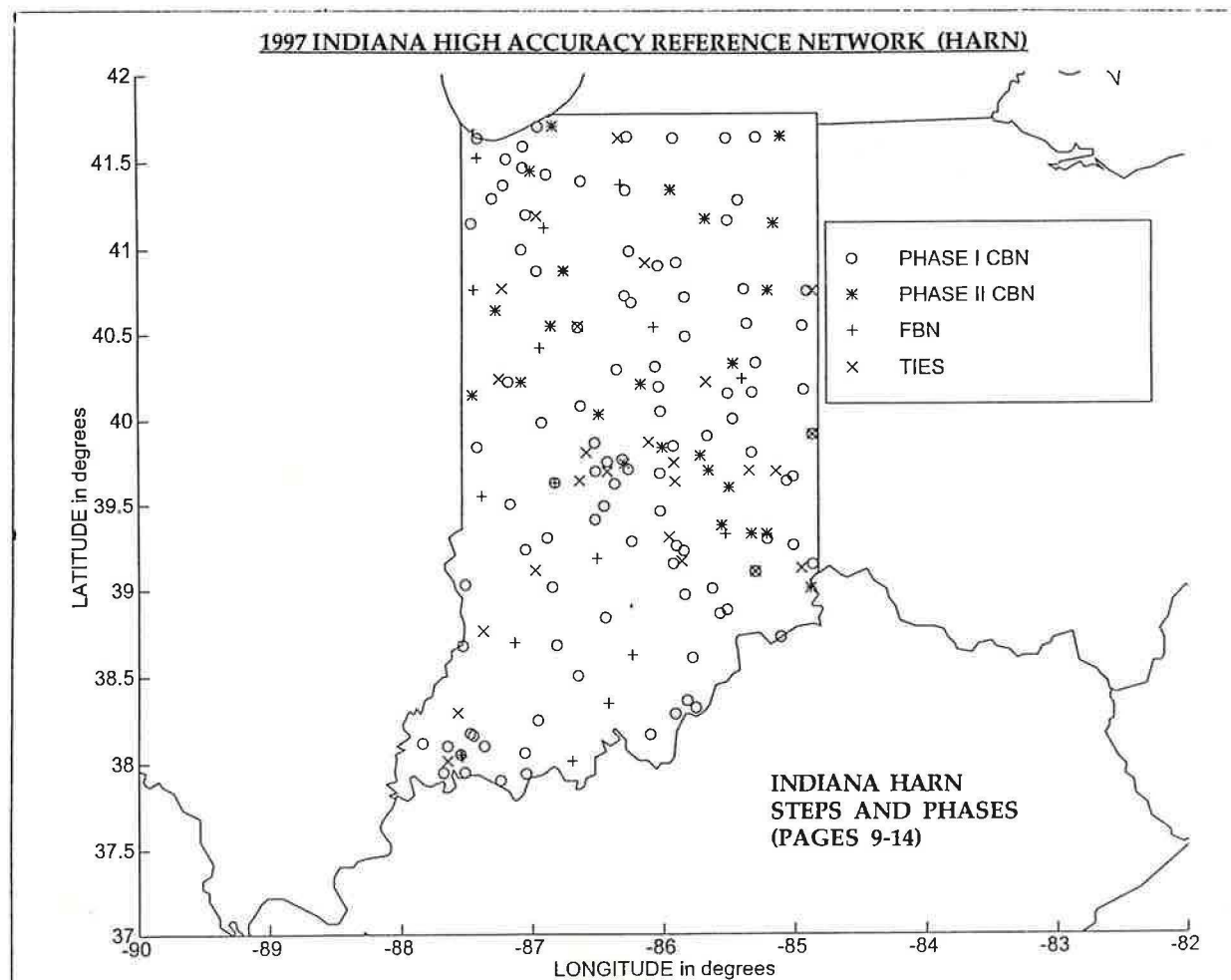


QUARTERLY PUBLICATION OF THE
INDIANA SOCIETY OF
PROFESSIONAL LAND SURVEYORS, INC.

VOLUME 24
NUMBER 4
SPRING 1998



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Deadlines for copy for various planned issues of the Hoosier Surveyor are as follows: Winter - December 31; Spring - March 31; Summer - June 30; Fall - September 30.

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.

Articles and columns appearing in this publication do not necessarily reflect the viewpoints of ISPLS or the Hoosier Surveyor staff, but are published as a service to its members, the general public and for the betterment of the surveying profession. No responsibility is assumed for errors, misquotes or deletions as to its contents.

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HOOSIER SURVEYOR

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PRESIDENT'S THOUGHTS

by Richard H. Miller, PLS, Indianapolis, IN

In the three months since the last issue of this newsletter many significant events have taken place. Through the actions of our committees, we have made progress toward several Society goals. I will use this forum to keep you informed as to the activities of the Board of Directors and various committees, as well as notifying you of future events and the direction of the Society.



The Chapters Committee has contacted the leadership of each chapter to schedule the Vision and Planning sessions that were discussed at the annual conference this past January. The Tecumseh and Central Indiana Chapters will have the first of two sessions in Lebanon on May 21st. Tentative schedules for the other chapters have been submitted and those meetings will follow throughout the year. It is important that as many chapter members participate in these local meetings as possible. Although the expense of these sessions is being funded by ISPLS their purpose is purely for the benefit of the chapters to help develop goals and action plans at the local level.

One of the outcomes of a similar Vision and Planning session conducted for the ISPLS Board of Directors a few years ago was a strategic change in the financial management of the Society's investments. As a result of our financial success we will realize another of our goals, that is the establishment of a Grant Program that we hope to have in place this fall. This program will be in addition to our existing scholarship program and will allow ISPLS to fund graduate research studies, survey education programs, survey history preservation, and many other projects of interest and benefit to the profession and our membership. More information on the establishment and administration of this Grant Program will follow in future issues of the Hoosier Surveyor.

Our Membership Committee has been busy researching additional benefit options to add to those we already enjoy. Every member should have received a questionnaire recently asking for information which will allow an ISPLS consultant to evaluate the degree to which our members will be able to participate in various insurance programs. As the committee's cover letter indicated a complete suite of insurance options are being explored including: PowerX Card (offering discounted Medical and Consumer Benefits), Group Health Insurance, Disability Income Insurance, Workers Compensation Insurance, and Professional Liability Insurance. Group insurance programs such as this may allow many small surveying companies to offer competitive benefits packages to their employees at costs that would otherwise be prohibitive.

The Board directed that a letter be sent to the chairperson of both political parties of each county asking that the party give preference to licensed Land Surveyors who are members of ISPLS when slating candidates for County Surveyor. The letter states that it is the opinion of the Board that although there are past and current County Surveyors who are not licensed professionals who have run

efficient offices, and who have served the public well, such circumstances are rare. The important role of this office demands professionally qualified candidates. In the few weeks since the letter went out the response from county chairmen has been very encouraging. Dianne has received calls from various county chairmen asking for the names of our licensed members who are residents of their county whom they solicit to run for this office. Others have called to inquire if their current County Surveyor or candidate is a member of our Society.

Our Survey Technician Committee has begun discussions with Vincennes University to explore the establishment of a program whereby college credits for certain surveying courses may be obtained based upon work experience. It is hoped that expanding non-traditional education opportunities and considering work experience credits will encourage more technicians to advance their careers. These discussions are in the very early stages but the receptiveness of VU toward this idea has been encouraging. More details will follow as the information becomes available.

The Government Affairs Committee has been monitoring changes proposed by the Indiana Department of Environmental Management (IDEM) to 327 IAC 3-6, Technical Standards for the Design and Construction of Collection Systems. The proposed changes in this administrative rule are intended to reduce the work load of IDEM personnel and improve the plan review and approval turn around time for sanitary sewer designs. We all agree that this process should be streamlined and the proposed rule intends to accomplish this feat by turning over the review and approval process for sewage collection systems designed by licensed professional engineers to local government agencies. This would eliminate one long step in the approval process for the engineers. Unfortunately, the same consideration is not proposed for licensed land surveyors. As the proposed rule is currently drafted, plans for local sanitary sewage collection systems certified by a licensed land surveyor would continue to require both IDEM and local review and approval. The Board of Directors feels that such a rule is biased toward surveyors and could create an unfair advantage for engineering firms who would be able to obtain faster sewer plan approval for their clients. The Government Affairs Committee has dispatched a letter to the IDEM Rules Development Committee stating our strong objections to this proposed condition. Representatives of ISPLS will attend the public hearing on this proposed rule on May 13, to further state and enforce our position on this matter.

On a more positive note, I wish to recognize Dianne Bennett on her tenth anniversary of service with ISPLS. As our Executive Director, Dianne is responsible for the day to day operation of the ISPLS office and many of our members regularly rely upon her for information and member services. Her knowledge and expertise together with her dedication to the Society is one reason we continue to be a successful and dynamic organization. Thank you Dianne!

Professionally yours,
Rick Miller, PLS, President ISPLS

ATTORNEY GENERAL JEFFREY A. MODISSETT'S CONSUMER PROTECTION DIVISION COMPLAINT PROCESS



Consumer files a complaint, in writing, with the Attorney General's office. To receive a complaint form, consumer may visit the State Information Center at:
402 West Washington Street
Room W160
Indianapolis, IN 46204
or
write to:
Indiana Attorney General
Consumer Services Division
402 West Washington Street
5th Floor
Indianapolis, IN 46204-6770
or
call: 1-800-382-5516
317-232-6330

Attorney reviews complaint; assigns case to Complaint Analyst.

Complaint Analyst contacts all parties.

BUSINESSES:
The Attorney General sends a copy of the complaint. The respondent is asked to explain its side of the story.

CONSUMERS:
The Attorney General sends a letter to acknowledge receipt of complaint.

By opening the lines of communication, the Attorney General's office resolves thousands of complaints. However, if the matter cannot be resolved through mediation, the complaint may be forwarded to an Investigator or an attorney.

The Investigator or attorney may discover that several consumers experienced similar problems; or, a pattern of deception is revealed. The respondent (business) could face legal action.

Attorney General Modisett requests the respondent (business) to sign an A.V.C., (Assurance of Voluntary Compliance). The respondent agrees to stop the deceptive activity and to pay restitution by signing the A.V.C.

If the respondent refuses to sign the A.V.C., Attorney General Modisett may take the matter to court asking for:
• Restitution
• Investigative Costs
• An Injunction

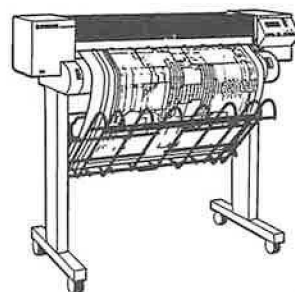
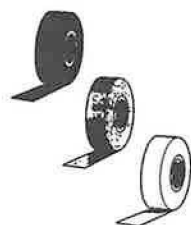
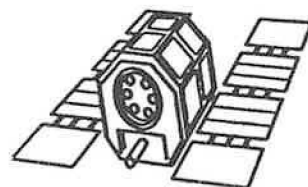
Indiana Consumer Protection Laws

BUSINESS OPPORTUNITY IC 24-5-8-1-21	CONSUMER PROTECTION DIVISION IC 4-6-9-1-7	DECEPTIVE CONSUMER SALES ACT IC 24-5-0.5-1-10	ENVIRONMENTAL MARKETING CLAIMS IC 24-5-17-1-14	HEALTH SPA SERVICES IC 24-5-7-1-18	HOME IMPROVEMENT CONTRACTS IC 24-5-11-1-14	HOME SOLICITATION SALES IC 24-5-10-1-18	LICENSED PROFESSIONALS IC 25-1-7-1-12	IDOMETER TAMPERING IC 9-19-9-1-7	PROFESSIONAL FUNDRAISERS IC 23-7-8-1-9	PROMOTIONAL GIFTS ACT IC 24-8-1-8	TELEPHONE SOLICITORS IC 24-5-12-1-24	TIME SHARES & CAMPING CLUB IC 24-5-9-1-36	UNLAWFUL VEHICLE SUBLEASING IC 24-5-16-1-19	CREDIT SERVICES ORGANIZATIONS IC 24-5-15-1-11	BUYBACK VEHICLE DISCLOSURE IC 24-5-13.5-1-14	GARAGE DOOR OPENING SYSTEMS IC 24-5-18-1-10	SALVAGE MOTOR VEHICLE IC 9-22-3-1-37	REGULATION OF AUTOMATIC DIALING MACHINES IC 24-5-14-1-13
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ISPLS BOARD OF DIRECTORS MEETING HIGHLIGHTS

by Dianne Bennett, Executive Director

January 14, 1998

The ISPLS Board of Directors held a meeting on Friday, January 14, at the University Inn, West Lafayette at 1:00 p.m. President Cloyd called the meeting to order. The minutes were reviewed and approved after revisions.

Change to the Agenda - Wes Day handed out copies of the proposed revisions to 865. The revisions are to be reviewed by the ISPLS board members and comments made to Wes Day.

Meeting adjourned at this time to view the video by Dr. Speth.

Return to Agenda - The treasurer's report was reviewed and approved.

Staff Activity Report - A written report was submitted and reviewed. The report is stated under individual topics listed below.

Chapters - The Northwest Chapter met in December and elected new officers.

Central Indiana Chapter - Are moving forward on the "Surveying History" seminar in April.

Northeast Chapter - Held a meeting and was very well attended.

No reports were received from Wabash Valley, Hoosier Hills, Initial Point, St. Joseph, Southwest, Tecumseh, Purdue & Vincennes Student Chapters.

Convention - The 1998 convention in Lafayette is in progress. Because the conventions are getting so large, it has been discussed at ISPLS may centralize the conventions to areas that can support them and allow the different chapters to sponsor them. This is just an idea for now.

The 1999 Convention - (Evansville) A contract has been received from the Radisson. A \$500 deposit is required.

Education - The education committee met and approved 26 members for the "Distinguished Surveyor". They will be announced at the convention.

A report from the Initial Point Chapter on the "Theory of Location Seminar" was submitted. Gross Profit was \$1,864.03, ISPLS (20%) = \$372.81 IPC-ISPLS (80%) = \$1,491.22.

ISPLS will have a workshop on Friday, May 15 on "Surveying in the Floodplain" by Joe Cummings, at the Holiday Inn Conference Center, Columbus, Indiana. The Education Committee have recommended that 6 PDH's be approved for this workshop. A motion was made and passed to accept the committees recommendation.

Business Management - The lease for headquarters will expire on November 30, 1998.

The new office furniture for headquarters has been delivered and setup.

Government Affairs - A letter was reviewed from the Illinois Professional Land Surveyors Association stating that IPLSA is considering legislation to fund a program for the perpetuation of land survey monuments. They were asking for a copy of the Indiana law.

Hoosier Surveyor - UPS has asked to insert a flyer in the Hoosier Surveyor like the last issue. They will pay for any extra cost. A motion was made and passed to allow UPS to insert a flyer

in the Hoosier Surveyor.

Membership - A motion was made and passed to accept the new applicants: Member - Donald W. Borches, Allan D. Frisinger; Junior - Marty J. James, Robert G. Seig; Associate - Robert E. Campbell, John W. Ross, Scott H. Huff; Firm - United Consulting Engineers.

Nomination & Elections - Doug Herendeen, Don Bengel and Rich Hudson were elected to the board.

Public Relations - The surveyors video has come in from the New Jersey Surveyors.

Great Lakes Council/NSPS Governor - The next NSPS Governors Conference will be in Baltimore, MD and will start February 28 and end March 5, 1998.

GIS/LIS - Minutes from the Nov. 5, 1997, ISPLS HARN Steering Committee was submitted for review.

Old Business - Foundation - Information on any possible tax benefit for the ISPLS Foundation was submitted for review. It was decided to send the information to Ron Hansell for review and to announce to the membership at the annual business meeting that the board is working on the possibility of setting up a foundation.

Dr. Speth will be traveling to the various chapters for goal setting sessions. A motion was made and passed for ISPLS to financially support the services of Dr. Speth to the chapters, those services to be determined by the board at a later date.

Announcements - Rick Miller wanted to recognize Jim Dankert for making and Dick Jacobson for furnishing the material for the BOD stakes this year.

Les Weber stated that since this is his last board meeting how grateful he was for being on the board and for the opportunity to work with everyone on the board.

February 28, 1998

The ISPLS Board of Directors held a meeting on Saturday, February 28, at ISPLS headquarters. President Miller called the meeting to order at 10:01 a.m. The minutes and treasurer's report were reviewed and approved after revisions.

Staff Activity Report - A written report was submitted and reviewed. The report is stated under individual topics listed below.

Officers Activity Report - Perry Cloyd reported on his attendance at the Ohio Surveyor's Conference.

Chapters - President Miller stated that Ted Darnall will coordinate Dr. Speth's activities with the local chapters and the schedule should be available by the next BOD meeting.

Wabash Valley - Wyatt Johnson reported on the preparation for the upcoming seminar March 28 on surveyor location reports.

Initial Point - Greg Eveslage reported on the ISPLS picnic plans. Meetings for the IPC are held the last Wednesday every other month.

Central Indiana - Mike Huter spoke about the upcoming seminar, April 15, on the history of land surveying in Indiana. Upcoming chapter meetings are scheduled for 3/17, 5/21, 7/21, 9/15, and 11/17.

Hoosier Hills - Jon Monies and Perry Cloyd said the HHC is

...continued Page 7



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MINUTES

...Continued from Page 5

checking on the French Lick Resort as a possible site for the convention they are planning to host.

No reports were received from the Northwest, St. Joseph, Northeast, Southwest, Tecumseh, Purdue & Vincennes Student Chapters.

Convention - Doug Herendeen reported an approximate \$25,000 profit for the 1998 convention. There were 236 PDH Certificates filled out for the convention. They were mailed out on Feb. 9 & 10th. The 1999 convention in Evansville is on track for all upcoming deadlines. Doug also brought up the new alcoholic policy for state parks, as it applies to ISPLS functions such as picnics, dinners, etc.

Education - The committee sent a letter recommending 6 PDH for the Wabash Valley seminar to be held on March 28. A motion was made and passed to accept the committee's recommendation.

Ethics - Perry Cloyd brought up an issue whereby one individual was upset about damage to trees done by blazing, vs. the possibility of painting of trees along a section line. Perry will follow-up with a contact to the surveyor involved.

Business Management - The office lease discussion continues. Among the issues included are the possibilities of more space, less space, office redesign or relocation, colors, etc.

Government Affairs - Action on a possible Civil Penalty Law is too late to effect this year, but it may be brought up for next year's General Assembly. The Senate bill concerning a drainage manual did not pass.

Hoosier Surveyor - The Winter issue is at the printer. This issue, 24-3, has the newly adopted ALTA/ACSM Land Title standards in it.

Membership - A motion was made and passed to accept the new applicants: Member - John W. Lyons; Junior - Tony Johnson, Brent A. Friend; Associate - Perry D. Osswald.

Discussion also included roster expansion, which might add e-mail addresses, facsimile numbers, etc. The 1998 roster will go to the printer next week.

Professional Practice - Discussion consisted of peer-review committee for surveyors on probation and its feasibility, applicability, etc. This may be close to our mentoring idea under consideration.

Public Relations - ACSM has a press release concerning "Matter of Survey" coverage. It was agreed to send this information to all county surveyors.

Copies of the New Jersey video will be given to the chapters, Purdue and Vincennes University.

Scholarship - P.U. and V.U. scholarship reports were reviewed and analyzed.

Standards - Rick Miller reported on Wes Day's revisions and changes for Rule 12. Discussion included the urging of individual letters to Wes Day suggesting ideas before publication of recommended drafts. This should be done before the end of March.

ISPLS Survey History - Brad Ott spoke of the traveling display and his discussions with the Children's Museum for a hands-on workshop for children to participate in.

Technicians - Bill Clark spoke about the need for seminars for technicians including assistance in certification, test-taking, etc. another idea being considered is a "Distinguished Technician" certificate.

County Surveyors - The county surveyors association next meeting is at the Purdue Road School in mid-March. Rick Miller is going to prepare a letter to send to chairpersons of both political parties of each county recommending the benefits of having a registered LS in the office of the county surveyor.

State Board of Registration - The State Board has a new board secretary, Rosalind Smith.

Indiana Historical Landmarks - Perry Cloyd brought up the efforts of Ohio to perpetuate the state line. It is hoped that individuals from Indiana can help in this project.

Old Business - Foundation - Dianne has talked with individuals concerning the possible formation of the ISPLS Foundation, and more information and research will be accumulated.

New Business - After discussion a motion was made and passed to give Ron Hansell \$75 for assistance in a seminar fee with the provision that he give copies of the handouts and a report on what was covered.

By a telephone vote, prior approval was given to grant \$1000 to the Purdue student chapter to help cover costs in attending the ACSM convention. The students will be leaving for the convention on February 28.

Announcements - The Purdue student banquet will be held Saturday, April 4th at the Holiday Inn, Lafayette, Indiana.



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STEPS AND PHASES OF THE INDIANA HARN¹

by Thomas A. Mahon and Boudewijn H.W. van Gelder

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Abstract

The field survey in support of the Indiana High Accuracy Reference Network was conducted during the months of August and September, 1997. Two state agencies, the federal government, private surveyors, equipment suppliers, and the HARN contractor took part in the survey. Together some 98 state (Cooperative Base Network) and 25 federal (Federal Base Network, airport navigation, bench mark tie) points were occupied.

The CBN points occupied in 1997 represent a large portion of all points which will ultimately make up the Indiana CBN. The remainder, some 25 or so points, will be occupied during a second field survey anticipated to take place in mid 1998.

The Indiana HARN field surveys have been broken down into two phases for a number of reasons. The biggest being that not all prospective CBN points were ready for occupation this past summer. Some were yet to be recovered, others still needed to be set. Another was time. There was insufficient time for interested contractors to put together enough field parties (up to 18 at any one time) to occupy all CBN points in one phase. Finally, a second field survey provides the flexibility of reoccupying any and all phase one CBN points which turn out to be problematic after phase one data processing.

The National Geodetic Survey has almost completed data processing of phase one data. It is anticipated that they will complete all data processing within nine months of the completion of phase one field work. Assuming we have to wait the entire nine months before the results are in, a final phase two point list could be available by early summer, 1998 with field work to follow.

The second HARN field survey will differ from the first in a number of respects. It will be smaller. NGS will not participate. The successful contractor may have to design an occupation schedule and perform all data processing using NGS' OMNI software. And it must be submitted to NGS in blue book format.

Introduction

A major step was taken in the realization of the Indiana High Accuracy Reference Network (HARN). In the Summer of 1997 crews from the National Geodetic Survey (NGS), Indiana State agencies, and private businesses measured a major part of the Federal Base Network/Cooperative Base Network (FBN/CBN). An update of the current status and an overview of the major steps leading up to the Indiana HARN follows.

The ever-increasing pressure on land use and concomitant requirements for accurate mapping is a worldwide phenomenon. In the U.S.A. and in our case, Indiana, the realization that the use of Geographic Information Systems (GIS) would be a powerful tool to keep abreast of developments of land use, or the maintenance of systems monitoring land use, took hold quickly. The backbone of any GIS is the spatial geometry of the map base, supplied by surveyors and non-surveyors alike. The versatility of GIS, or for that matter, any other survey application propels the

demands of the users for ever increasing positional accuracies. Correspondingly, the geometric backbone of the map base demands accuracy improvements as well.

The launch of the satellites belonging to the Global Positioning System (GPS) provides an accurate and cost-efficient means to do any positioning-related work, from navigation (e.g. Intelligent vehicle monitoring systems) to precise geodetic control surveys, on behalf of any surveying and mapping related activity. GPS started as a tool to update (inter)national and state reference frames in which GIS users, surveyors, etc. work.

The introduction of GPS, however, caused a dilemma: the best known locations available in any State were the benchmarks belonging to the National Geodetic Reference System (NGRS), created decades ago by the National Geodetic Survey (NGS). The 270,000 control points belonging to the NGRS were known, at best, with an accuracy of about 1:100,000. That corresponds to 10 centimeters over 10 kilometers, or 4 inches over 6 miles. This meant that the easily obtained accuracy of 1 ppm (1:1,000,000) of GPS surveys were corrupted as soon as the resulting GPS network were tied to the NGRS. A second item that became reality more recently, was the successful use of GPS as a three-dimensional technique: the NGRS was split up in horizontal control points, and vertical benchmarks. A new three-dimensional reference frame, the National Spatial Reference System (NSRS), had to be created.

Prior to 1990 a group of individuals realized that Indiana had to follow suit: a State Office of GIS (SOGIS), representing the State of Indiana, was formed. SOGIS created a Task Force to consider a statewide GIS. A part of this task force was assigned to the geodetic aspects of a reference network as a basis for a statewide GIS. This Geodetic Control Technical Advisory Task Force (GCTATF), consisting of public and private representatives, considered things such as network configuration, standards, methods and maintenance. Also the concept of a one-point-per-county was forwarded by this group. The results of the deliberations were published in a report "The Need for a High-Precision State-Wide Geodetic Control Network in the State of Indiana", see [Wilkinson et al., 1990]. The activities of the GCTATF together with its report's conclusions, which are still relevant today, ended after SOGIS lost legislative funding support.

Early Local Interest in the HARN

At the 1994 ISPLS conference in Louisville, Kentucky a paper, resulting from a study at Purdue University, was presented and distributed. It merely revived the Task Force's conclusions [Findorff et al., 1994]. During that conference NGS offered funding for a Geodetic Advisor in the State of Indiana, and the Board of Directors of ISPLS, following the advice of its membership expressed during the annual business meeting, assigned the existing GIS/LIS committee to pursue the preparation and implementation of the Indiana reference network. During HERPICC's Road School in March 1994 similar support was shown during the

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meeting of the Indiana Association of County Surveyors. A questionnaire distributed by E.R. Gray, III confirmed a large potential support among county surveyors.

Unfortunately, changing policies at the federal level in the early nineties, refrained NGS to financially support the Office of the Indiana State Geodetic Advisor (OISGA). However, Chuck Scholer recommended and the Advisory Board of HERPICC agreed starting January 1, 1995 to financially support, initially for one-and a-half year, the start-up costs of OISGA, with the understanding that financial support from State Agencies would be pursued at the same time, see [Cloyd et al., 1995].

Due to the intense lobbying efforts of House Representative Sue Scholer, the creation of the OISGA was signed into law by State Governor Evan Bayh on May 9th, 1995. The House Bill No. 1036, subsequently becoming House Enrolled Act No. 1036, not only created the OISGA at Purdue University, but also made it legally possible for county surveyors to financially support their efforts to create one or more HARN points in their counties with monies from the section corner perpetuation fund, see [House Enrolled Act No. 1036, 1995].

In August 1995 the Board of Directors of Purdue University approved the appointment of the second author of this article into the position of State Geodetic Advisor. This position is a state funded one, as opposed to the about 20 or so federally funded State Geodetic Advisors. NGS' program of State Geodetic Advisors is constantly under scrutiny, with the ultimate goal of shifting the financial burden to the respective states. The operation of OISGA was mainly funded through Purdue University (office space, telephone costs) and the Advisory Board of HERPICC (salary of the first author). Recently, the Indiana Department of Transportation (INDOT) also decided to contribute to OISGA's operating expenses.

At the same time the GIS/LIS committee, under the leadership of Perry Cloyd and since January 1997 under the guidance of Daniel Pusey, met monthly since the last four years to prepare the actual measurement of the Indiana HARN. The commitment of NGS was reinforced by the signing of the Indiana HARN agreement in early 1997 while the actual preparations of the measurement campaign were well underway [NGS and PU, 1995- 1997].

Gauging County Interest

E.R. Gray's questionnaire to county surveyors was followed up December 4, 1995. The follow-up was mailed to a representative of all counties. The letter was typically addressed to the surveyor with alternates designated by the counties themselves when no surveyor was available. The questionnaire asked such questions as "Will you recover and document existing National Geodetic Survey (NGS) control points?", "Will you set new points, if needed, in your county?", "Will you obtain a horizontal tie between existing NGS control points and your CBN using single frequency GPS receivers?".

The response was favorable. Two thirds of all counties expressed an interest in some 100 odd CBN points. In addition, the state was also expressing an interest in the HARN.

Instruction for HARN Sponsors

The interest in the HARN, as demonstrated by the response to the December 4, 1995 questionnaire was encouraging. The immediate follow-up to the response was a contract between Purdue University and the sponsoring county. It was mailed to all counties expressing an interest in sponsoring a HARN. The contract was to be returned to Purdue along with funds for the HARN points. These funds were stored in a temporary account at Purdue until such time as they were needed to pay HARN expenses.

Instructions for HARN sponsors were mailed to sponsoring counties in May of 1996. These instructions included the questionnaires, a HARN update, instructions to HARN sponsors, a copy of the questionnaire, a copy of the HARN agreement, station selection guidelines, and various point recovery forms to be filled out [HERPICC, 1996].

HARN Pre-Planning

The months leading up to the Summer of 1997 constitute the HARN Pre-planning phase of the project. Many activities were underway simultaneously. Some of those are described below.

Purdue University Participation and Contract Administration

The National Geodetic Survey (NGS) planned on performing the GPS field survey in support of the Indiana HARN during the months of July, August, and September, 1997. By April it looked as if we would have sufficient commitments for HARN sponsorship, along with state monies, to possibly establish at least one HARN point in each county in the state. It was time to secure a HARN contractor.

A HARN contract would be handled as a professional services contract and required developing a request for proposals (RFP), accepting proposals, evaluating those proposals, awarding a contract, and then administering that contract required outside expertise. Up until this point, all contract administration was handled through the Civil Engineering business office and the Office of Contracts and Grant Business Affairs (OSGBA). However, it was recognized that Purdue University's Office of Facilities Planning possessed this expertise.

Facilities Planning, through Mr. Daniel Pusey, accepted the responsibility for contract administration. Mr. Pusey served as Project Manager for the HARN and Facilities Planning provided these services free of charge as a service to the state. Without them we would most likely not have had a consultant under contract in time to co-observe with NGS.

Request for HARN Contractor Proposals

Facilities Planning developed the RFP with the assistance of HERPICC, Civil Engineering, and OSGBA. A pre-proposal meeting was held to discuss the project, proposals were accepted and reviewed, and a HARN contractor was selected.

Two proposals were submitted for consideration. One from

Woolpert LLP. The other from a team assembled by Schneider Engineering Corporation and Plumb Tuckett and Associates. The Schneider/Plumb Tuckett team was selected as the HARN contractor. The project manager for the contractor was Mr. Richard Rayback, LS, of Schneider Engineering.

The request for proposals included various items of work and estimated quantities for those items. Some of those included: occupation of CBN points; occupation of horizontal tie points; oversight of CBN related observations by others; recovering existing points; setting new points; and conversion of field notes into NGS' electronic point description format known as DDPROC.

Based on a number of factors, it was decided to contract with the team from Schneider/Plumb Tuckett for six field crews equipped with dual-frequency receivers for the anticipated five week duration of the HARN survey. Those factors included the number of CBN points yet to be recovered, the number of CBN points yet to be set, the coordination required of an extremely large field effort, and the ability of a contractor to outfit qualified personnel with the necessary dual-frequency equipment.

HARN PLANNING

Detailed planning of the Indiana HARN began with a trip to Washington, D.C. to visit with the National Geodetic Survey. This meeting took place in July, 1997, just prior to finalizing the HARN contract with the team from Schneider/Plumb Tuckett.

NGS Participation

The authors met with, amongst others,:

Name	Title
William T. McLemore, Jr.	Chief, Field Operations Branch
Stephen J. Frakes	Chief, Project Development Branch
Clifton S. Middleton	NGS Project Director
Doug Hendrickson	Engineer

At that meeting NGS agreed to perform all data processing including vector reduction, using NGS' OMNI software, and the HARN adjustment for all points included in the upcoming GPS survey. Should any of the Indiana CBN points not be included in the upcoming HARN survey they would have to be submitted to NGS in blue book format for inclusion in the national geodetic data base.

NGS was also asked to develop a preliminary GPS occupation schedule. In order to do this, they needed a preliminary CBN point list. The list was presented within days of the meeting and included some 120 points. NGS also agreed to finalize the occupation schedule shortly after receiving the final CBN point list.

The occupation schedule was based on the premise that NGS' six receivers would be used to occupy approximately 40 points. These points were to include some 20 FBN points within Indiana, vertical tie points, and various points in adjacent states. This meant the CBN points outnumbered the FBN points by a factor of 3:1. So as not to slow NGS' progress, they estimated we would need to field as many as 18 dual-frequency GPS receivers, or three times the six receivers NGS planned on using, simultaneously.

State Participation

The state of Indiana, especially INDOT, participated in the Indiana HARN in a number of ways. They occupied control points in Indiana during the Illinois HARN survey. They assisted in identifying areas for HARN point recovery. They actively recovered existing control points for use in the HARN when no one else was available to do so. They provided copies of recovery notes from previous work. And they trained their own personnel who were about to participate in the HARN GPS survey who were unfamiliar with the use of fixed height tripods.

State participation in the HARN began in early 1997 during the planning and point recovery stage. It was INDOT who suggested the state be subdivided according to INDOT maintenance districts. This would serve two purposes. One, it would facilitate the coordination of point recovery by the ISPLS volunteers. And two, it would make tracking of INDOT sponsored HARN points possible via an important subdivision of theirs. At that time, INDOT provided point recovery notes from previously recovered points and made suggestions for potential HARN points based on future highway construction activity.

State participation with field work began with actual point recovery. Steve Hull, Engineering Services Manager, Division of Design, agreed to make Henry Aldridge available for this task. Mr. Aldridge visited southwestern and south-central Indiana in search of candidate HARN points. Mr. Aldridge's activities helped fill a number of holes in the proposed HARN map.

State participation with field work continued when INDOT offered to assist NGS with the Illinois HARN survey. When NGS performs HARN surveys in a particular state, they routinely gather observations on selected control points in adjacent states. So when NGS began the field survey for the Illinois HARN, they needed observations on stations in Indiana. NGS asked for help with those observations and INDOT graciously responded sending a field crew out to occupy two different points, each for two five-and-one-half hour sessions.

The Indiana CBN portion of the HARN was aided tremendously by the state's commitment to the HARN. Between the Indiana Department of Transportation and the Indiana Department of Environmental Management the state was able to outfit four field crews, equipped with dual-frequency receivers, for the five week duration of the project. They also provided project management. Mr. Brian Murray of IDEM coordinated the activities of IDEM's crews while Mr. Aldridge coordinated the activities of INDOT crews, assisted IDEM with downloading data, and interacted with NGS. The two IDEM crews were made up of 10 different IDEM volunteers over the course of the project. The two INDOT crews consisted of the same two surveyors for the duration of the project. Without the state's help we would have observed significantly fewer points this past summer.

The Indiana Department of Natural Resources was also involved with the HARN. DNR was represented by the Division of Water. They are currently not big users of horizontal control but they use a lot of vertical control. They also have the capabilities to perform high accuracy differential leveling. As such, they volunteered to run level loops between existing bench marks and new

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HARN points whenever they are in the area and have free time. This service will be extremely valuable in time.

County Participation

The counties, or their agents, had been actively involved with point recovery for about a year at that point. The authors had been able to visit a number of those points, particularly the ones selected in 1996. However, so many of the most recently selected points were submitted for review simultaneously that verification was not always possible. Many counties were also busy obtaining approval for HARN participation from their respective county commissioners. Three criteria typically had to be met in order for a county to sponsor a HARN point. The county surveyor had to support the HARN. Sufficient funds were needed to pay for a HARN point (the funds could come from the corner perpetuation fund or some other source, but they had to be available). And the county commissioners had to grant permission for county participation.

Point Recovery

Point recovery was a lengthy process requiring the help of many, many different individuals and organizations. It began in the summer of 1996 when local HARN sponsors were asked to identify and recover the existing controls points they wished to use as their HARN points. And as the writing of this article, it is not yet done. Of the 25 or so points to be included in the next phase of the HARN, one fifth of them are yet to be recovered and/or set. One year ago, ISPLS President Perry Cloyd requested volunteers to help with the point recovery process. With the HARN survey only six months away, much work needed to be done. Local sponsors needed help selecting candidate points, locating those points in the field, and preparing the necessary paperwork to document their recovery.

The response to that request was impressive. The individuals listed below volunteered to coordinate point recovery activities. Eight people responded to the call.

To facilitate the point recover process, the state was subdivided into six regions corresponding to Indiana Department of Transportation maintenance districts. And for each district, we had at least one volunteer willing to assume responsibility. Those volunteers, along with their jurisdiction, were:

INDOT Maintenance District	Point Recovery Coordinator
Crawfordsville	Dale Grimes
Fort Wayne	Don Mason
Greenfield	David Smoll
LaPorte Northwest	Don Bengel
LaPorte Southeast	Larry Fisher/ Rusty Poort
Seymour	Vic McCauley
Seymour North	John Bauer
Seymour Southeast	Jeff Stenger
Vincennes	Bill Clark/Art Haase

These individuals devoted many hours to the task. And in

most cases resorted to actually recovering points within their jurisdictions when all else failed.

NGS sent two people to Indiana, in advance of their survey crews, to perform point recovery for the FBN portion of the HARN. These gentlemen used a state map and directions from headquarters to identify potential locations for FBN points. They then split up with one going north and the other south in search of these candidates. The two were typically looking for existing bench marks or points previously surveyed with GPS at publicly accessible airports. There were three reasons for this. Construction at airports was less likely than at non-controlled locations to disturb existing monuments. Obstructions such as large trees or buildings were less likely to block satellite visibility. And airports were fairly easy to find.

Even with the efforts of those listed above, we still had many points to recover as of late Spring. It was at that time that we got the idea to approach NGS looking for help with our efforts. NGS agreed to provide one of the two recovery personnel for up to five weeks for which we were charged with paying their per diem.

HARN Training and Coordination Meeting

The National Geodetic Survey held a two day meeting at Purdue on July 30 & 31, 1997. The first day consisted of a training session designed for persons intending to participate in the dual-frequency, B-order type of GPS HARN observations. This included state crews, contractor crews, and any volunteers who planned on operating dual-frequency receivers. It did not involve volunteers intending to obtain first-order horizontalties. The second day consisted of a coordination and planning session where volunteers were instructed as to how, when, and where they could assist during the HARN survey.

Invitation to these meetings was via letter. Letters were sent out to all parties who responded to an earlier inquiry made by Mr. Catlin of MSE. Respondents indicating a willingness and ability to operate dual-frequency receivers were invited to the training session. A representative of the volunteers expressing a desire to assist during the HARN survey was asked to attend the coordination and planning session. That representative could then relay information provided at the coordination meeting to others within his or her organization.

A mini meeting was held during the coordination part of the NGS meeting. The purpose of this meeting was to discuss the possibility of volunteers obtaining horizontal ties. Horizontal ties will be accepted by NGS for potential use with the statewide readjustment. However, they must be submitted in blue book format. It was stated at the meeting that anyone wishing to perform such work should do so and submit to OSGA by mid-October. Whatever ties are not obtained via volunteers would more than likely be included in the phase two work if they are deemed necessary. The necessity of these ties might be revealed by the results of the HARN adjustment. As of today, only Marion County has obtained ties for their CBN points.

Occupation Schedule

During the HARN coordination and planning session the preliminary HARN occupation schedule was finalized. Ninety eight CBN points made the first cut, now known as Phase I, while

approximately 25 were left to be picked up during Phase II. The 25 which were left off were typically in areas of a high CBN density such as northwestern and central Indiana where up to 18 receivers would have been needed at any one time.

PHASE I FIELD SURVEY

The HARN field survey commenced on Tuesday, August 4, 1997 and ran through Monday, September 8, 1997. Between the state and the contractor crews, the 98 CBN points were each occupied for an average of 2.6 days. Each day being five and one half hours long.

The six field contractor field crews were combined with the state's four for a total of 10 crews equipped with dual-frequency receivers concentrating on CBN points. At the same time, NGS provided six crews equipped with dual-frequency receivers concentrating on FBN related points. It was decided to concentrate on the CBNs during Phase I and attempt first-order horizontal ties at a later date. NGS would not be using these ties in the HARN adjustment but in the state-wide readjustment which was at least a year away.

NGS Field Crews

Actual field work by NGS involved a six person field crew and numerous support staff. NGS established a field office in Lafayette which they operated for the duration of the survey. There they received files from their own field crews, state crews, and contractor crews. Their intention was to archive files, check their integrity, and process base line vectors. However, they had gotten behind schedule slightly and spent much of their time archiving and checking files from both the Illinois and the Kansas HARNs. They did process some vectors with the remainder being processed back in their Silver Spring and Norfolk offices.

The NGS field crews yielded some 16 FBN points. They also established elevations via GPS leveling, assisted in the occupation of six CBN points, and occupied out-of-state FBN points in Michigan and Kentucky to be used in the Indiana HARN adjustment. The DOT's of Illinois and Ohio helped with the necessary tie measurements in their respective states.

State Field Crews

The State of Indiana collectively, through the Departments of Transportation and Environmental Management, provided four field crews for the five week duration of the HARN survey. Each crew was equipped with a Trimble 4000 SSI dual frequency GPS receiver, a fixed height tripod, and weather gear capable of measuring the appropriate atmospheric conditions. Together the four state crews were responsible for occupying 35 CBN points, for 36 % of the total CBN points occupied during the phase I survey.

Volunteer Field Crews

A number of volunteers assisted with CBN point occupations.

All individuals had access to dual frequency GPS receivers with antennas pre-approved by NGS. All attended the mandatory NGS training session prior to the survey where they received additional training from NGS. And all had access to the weather gear necessary to collect and record the proper atmospheric conditions.

Volunteers observing during the HARN survey represented four different organizations. G. Lengemann Co. sent a representative to occupy two CBN points in northwest Indiana over the course of five days. Chaffee and Associates, Inc., sent a representative to occupy one CBN point in Dearborn County over the course of three days. Bernardin (Lochmueller and Associates, Inc. sent a representative to occupy one point in Spencer County. And the Initial Point Chapter of ISPLS sent four different individuals to occupy the two Jefferson County points over the course of two days. Together the volunteers occupied 6 of the 98 CBN point.

Other Field Crews

The Marion County Surveyors Office also participated in the HARN. They occupied four points in and around Marion County over the course of three days. These points were submitted to NGS via the HARN contractor and should become B-order horizontal control points.

Coordination by Contractor and State

The Indiana HARN was to be the National Geodetic Survey's 48th HARN. By the time they got to Indiana they were able to perform these surveys with a minimum of day to day coordination. The occupation schedule was developed prior to the survey. Assignments were made, descriptions were provided, and their surveyors went from point to point with little input from anyone. The state's CBN effort, however, required a bit more coordination.

Two individuals were assigned responsibility for day-to-day coordination. Mr. Rick Rebuke of Schneider Engineering represented the HARN contractor and coordinated the activities of their six crews while Mr. Henry Aldridge of INDOT represented the state and coordinated the activities of their four crews. Volunteers were handled on an individual basis.

Handling of Data

All HARN data was funneled through one of two offices on its way to NGS. Schneider Engineering represented the HARN contractor and handled all CBN data not gathered by the state. INDOT, and Henry Aldridge, handled all CBN data gathered by the state crews. Both Schneider and INDOT packaged this data and sent it on to NGS nominally once per week. NGS collected all HARN data in their field office. There they checked it for format and completeness. And with sufficient time, they were to begin data processing.

In addition to handling all CBN data not gathered by the state, the HARN contractor also prepared point descriptions for virtually all CBN points. NGS wanted point descriptions to be entered into an electronic format. Paper copies alone were insufficient. As a result, the HARN contractor entered station descriptions into

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NGS's utility program DDPROC. The descriptions were gathered by the individual surveyors occupying CBN points (NGS performed this function at the time of point recovery). The complete CBN station description file was then sent to NGS where it was combined with the observation files in the data adjustment process.

Phase I Point List

PHASE I DATA PROCESSING

NGS is currently processing Indiana HARN data and they expect the HARN adjustment to be completed within seven months of the completion of field work.

Problematic Points

As of January 9, 1998 NGS has processed data from all but the last three days of observations. And of that data processed we only have one problematic point. The point in question was observed during two sessions by two different organizations using antennas from the same manufacturer but different models. One of the vectors into this point differed by approximately 10 cm from one day to the next.

The log sheets were reviewed but no discrepancies were found. The observation file was reviewed and again no discrepancies were found. As a result, it appears as if the station will have to be reobserved.

Based on preliminary discussions with NGS, reobservations would likely be limited to one session. The session would naturally involve the point in question. They would also involve up to three other adjacent HARN points. Details will be provided shortly.

PHASE II PLANNING

The second phase will most likely be awarded to a contractor who will be expected to blue book his work for submission to NGS. NGS will treat it as a typical submission whose aim is obtaining B-order positions for new CBN points.

The second phase of the Indiana HARN will differ from the first in a number of ways. First, the level of volunteer participation is anticipated to be much lower during the second phase although volunteers are still welcome. Second, NGS will not be processing vectors for the second phase as they did for the first. Processing must be done using OMNI prior to submission to NGS. If contractors are not interested in performing that portion of the work there may be an alternative. It may be possible for Professor van Gelder to have a graduate student process phase two vectors and fund that work from monies in the HARN account. This will be pursued further at a later date. Third, the successful contractor would be required to check all phase two HARN data very carefully. Because this is not a joint NGS/Indiana effort NGS will not be willing to provide as many checks as they did during phase one.

Anticipated Point List

It is anticipated that the CBN points will be established in the following counties during the second phase of the HARN project. Those counties include:

Counties with Phase II CBN Points			
Rush	Porter	Delaware	Wells
Benton	Hancock	Boone	Kosciusko(2)
Hamilton	Tippecanoe (2)	Decatur	Hamilton
Hancock	Decatur	White	Ohio
Franklin	Warren	Madison	Jasper
Hendricks	Vermillion (2)		

Anticipated Schedule

The second phase of the Indiana HARN is anticipated to take place during the summer of 1998. It is anticipated that points in the 22 counties listed above will be included. Added to this list will be any points which prove to be problematic after all data processing from phase one is complete.

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COMPUTERS CAN'T ALWAYS
THINK FOR US

by Michael J. Miller, LS

Arizona State Board of Technical Registration

Several years ago, a registrant asked me if I thought that the Arizona Board of Technical Registration would ever be proactive instead of reactive in the creation of rules. Over the years I have come to believe that as licensing boards, we must be largely reactive instead of proactive. The advent of rapidly changing technology leaves boards and the NCEES in a difficult situation in creating appropriate rules to cover all the new situations that arise.

Emerging technologies and markets are restructuring our responsibilities and how we operate. Each of our spheres of operation is becoming larger, while our overall knowledge of the project is often becoming smaller.

For example, a few years ago, I was asked by a registrant to take elevation shots over an approximately 17-acre parcel of land. Since this site was ultimately to be improved, he was going to do some preliminary work on a concept for the property. He requested shots on a 100-foot grid, with some extra shots near some existing improvements on the property.

I took the shots and provided the registrant with an electronic file of the information. I did not think about the project again until a contractor called and said he was 5,000, then 15,000, and ultimately 30,000 cubic yards short of material and wondered what we were going to do about it.

When I contacted the registrant about the information, he indicated that the shots had been given to a consultant to design the site. This consultant then gave the electronic data to yet another consultant, who designed the grading and drainage plans. The consultant who did the grading and drainage plans used the 100-foot grid points as a basis for contours on the property but had not performed the calculations to determine volumes. In addition, even though the registrant was within 10 miles of the project site, he never visited the site to see what it looked like. He put his complete trust in the information that was provided to him on a computer disk.

While this example ultimately ended up as much ado about nothing, I think it is an example of how technology is rapidly allowing data to be misused by others. A grid of elevations that was taken for preliminary planning purposes ended up being given to several other consultants and used for the basis of final plans. No one ever questioned whether or not enough information was shown on the grid. The registrant doing the design never even bothered to look at the site. If he had, this may have prompted a request for additional information. Everyone involved trusted the electronic data implicitly and without question. They all seemed to conclude that if it was in the computer, it must be infallible.

Information and data are being transmitted electronically between professionals at an ever-increasing rate. Disks can be delivered throughout the country overnight. The Internet allows data to be transmitted almost immediately. The need for professionals to be in the same city has disappeared. Many times, professionals do not believe that they even have to have a working knowledge of the project site to do their portion of the project.

Ultimately, common sense tells us that blind trust in elec-

COMPLETED CAREER

Lowell Pitser, PLS (1933-1997)

Anderson, IN

In November 1997 Lowell Pitser lost his battle with cancer. Lowell was a husband, father, grandfather or other according to your relationship with him. In my case he was a friend and fellow surveyor.

In 1959 Lowell was First Deputy or Party Chief for the Madison County Surveyor. My job as rodman in his crew was to try to figure what was on his mind. Lowell would finish a job then I would make him tell me what it all meant and why we were going to so much trouble. It was the best possible situation for me beginning a career in land surveying to work with someone who was always looking after the details rather than being fast.

Later as I began my party chief career, it was Lowell who was drawing and calculating from my field notes. He was as particular with what I gave him as he was with his own work. Frustrating but good for me.

Lowell spent 15 years surveying in Alaska. His work for the pipeline spanned from Pruedo Bay to the North Slope. During that time Lowell set the most northerly corner of the United States. Lowell also surveyed Native American land claims for the Bureau of Land Management while he was in Alaska.

I have spoken to several engineers and surveyors who preferred to hire Lowell on their project. The reason for the preference was not how quick or how cheap but that it would be done correctly and all the details would be taken care of. This is not something for us in the profession to forget. Really there is a desire from our clientele to care for the details, to be professional that Lowell exemplified.

You might remember Lowell at the Surveyor's Historical booth during conferences as the man wearing the 1830's outfit and conning people to contribute to the scholarship fund. It was Lowell's preference to spend his life primarily in field crews. He also was willing to share with or encourage anyone who would diligently try to do the right thing.

I feel the loss of a good friend and a fellow surveyor who I often ask myself "is this the way Pitser would handle it?" Not that I would do it his way but if I didn't, I might have to make my argument with him and that could prove embarrassing.

Sincerely,
Haldon Ashton, PLS

tronic information is going to result in situations that have significant impact on the health, safety, and welfare of the citizens that our boards serve. Unfortunately, there are no easy answers in how to deal with ever-changing technology and how it affects our professional practices.

As licensing boards, we do not want to micromanage the operation of individual professionals. However, as licensing boards, we must deal with the realities of the rapidly changing marketplace and technologies that are becoming dated within months. It is a fine line to walk. I hope that our collective wisdom will allow us to make timely policy decisions that are appropriate for a wide variety of situations and mediums.

...reprinted from the Licensure Exchange, Feb. 1998, NCEES, Clemson, SC.

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TAX ISSUES AND THE YEAR 2000 PROBLEM

If you have a year 2000 problem in your business and you incur costs fixing it, you need to know how to treat it for tax purposes. Currently, the tax law allows you to deduct most software development costs under Revenue Procedures 69-21 and 97-50.

These development costs are treated as research and experimental costs, which may be deducted currently or amortized over a useful life of five years or less, but the costs must be treated consistently.

However, not all costs involved in fixing the problem will be connected to software development. Some will be related to hardware, labor, and consulting, which may be more difficult to classify. Some could be considered replacement costs, for example, replacing a computer chip.

If you have to replace an entire system, the IRS may consider it as part of a renovation plan, and require the company to capitalize and amortize the costs.

The year 2000 problem presents a wide range of issues in a company, including tax, professional liability, and operations issues that need to be analyzed and addressed. For tax purposes, make sure any fixes to your computer system are well-documented and properly characterized.

...reprinted from Tax & Business Issues, Volume 198-2, Capin Crouse LLP, Accountants & Consultants. Tax & Business Issues is not intended to present complete discussions of each subject or provide specific accounting, tax or legal advice. If you have questions or desire specific advice in respect to these matters, please contact Capin Crouse, or other professional counsel.

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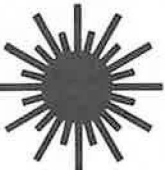
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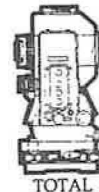


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that the "discounted" price that the company would be paying will periodically increase throughout the term of the agreement. This is due to the regular increases that carriers add to their base rate throughout the length of the contract term.

In other words, many companies will offer you an additional 20% discount on your long distance costs if you commit to stay with their service for a term of several years. However, it only guarantees the 20% discount, and **DOES NOT GUARANTEE** that their base rates will not increase.

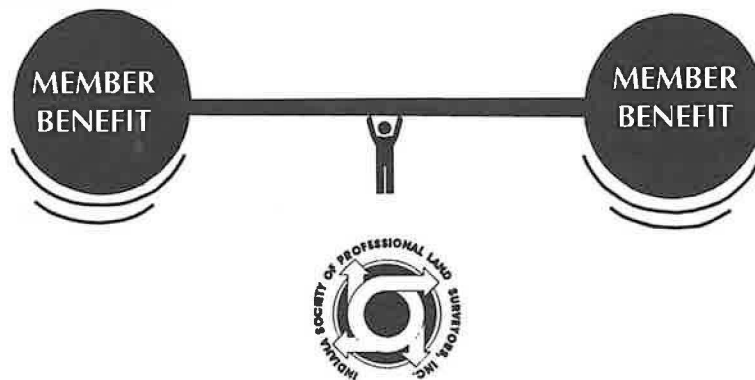
Let's assume that the carrier then raises

their base rates 3% each quarter for the next three years. At the end of a three year term, you are still getting your 20% discount, but the carrier has increased their rates 36% (or 3% per calendar quarter).

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PURDUE STUDENT CHAPTER OF ISPLS/ACSM SENIOR RECOGNITION BANQUET

The Purdue Student Chapter of ISPLS/ACSM held its annual senior recognition banquet on Saturday afternoon, April 4th. Nine senior students and two graduate students completing degrees in 1998 were honored. The banquet speaker was to be Mr. Walt Robillard, but unfortunately he was unable to travel on that day when the Atlanta Airport closed because of weather. However, Mr. Robillard graciously called the banquet room and spoke to the graduates and guests for several minutes via the telephone. His words to the graduates were most appreciated.

The 1998 Land Surveying Engineering graduates are:

Ryan Carrel	Fort Wayne, IN	BSLSE/BSCE, May 1998
Andrew Hagedorn	Ferdinand, IN	BSLSE/BSCE, May 1998
Andrew Kidder	Lexington, KY	BSLSE/BSCE, May 1998
Thomas Riley	Valparaiso, IN	BSLSE/BSCE, May 1998
Jason Sluzas	Flossmoor, IL	BSLSE/BSCE, May 1998
David Zientek	Joliet, IL	BSLSE/BSCE, May 1998
Aaron Braun	Fort Wayne, IN	BSLSE/BSCE, Dec 1998
Evia Cherk	Glenview, IL	BSLSE/BSCE, Dec 1998
Christopher Siebern	Angola, IN	BSLSE/BSCE, Dec 1998
Glen Boren	Schererville, IN	MS, May 1998
Jay Jones	Adams Center, IN	MS, May 1998



Graduating in 1998 are (standing, L to R) Glen Boren, Andrew Kidder, Aaron Braun, David Zientek, Andrew Hagedorn, Jay Jones, (seated, L to R) Thomas Riley, Jason Sluzas, and Ryan Carrel. Evia Cherk, and Christopher Siebern were not able to attend.



Randy Peterson was recognized as the John McEntyre Scholarship winner by Bob Gross, ISPLS Scholarship Committee chairman. The award was presented to Randy at the ISPLS Annual Convention in January.



Ryan Carrel received the 1998 Outstanding Senior Award from Prof. Van Gelder. The award includes a one-year ACSM membership donated by ACSM.



Bryon Motszko has recently entered the LSE program. He was presented with the 1998 Rouch Scholarship by Prof. Johnson. The award is presented to an outstanding sophomore each year and includes a \$100 stipend.



The officers elected to lead the ISPLS/ACSM Student Chapter for 98-99 are (standing, L to R) Kevin Krulik-President, Michael Williams-Vice President, and (seated L to R) Kyle Betz-Treasurer, Erica Pugh-Secretary.



Our student leaders include Ryan Carrel (right), president of Lambda Sigma Honors Society, and Thomas Riley (left), past president of Lambda Sigma, and immediate past president of the ISPLS/ACSM Student Chapter. Tom received the 1998 Faculty Recognition Award for scholarship, leadership, and contributions to the LSE program. The award includes a one-year ISPLS membership donated by ISPLS.

THE VINCENNES DONATION LANDS: AN ENIGMA

by David B.H. Best, P.L.S., Indianapolis, Indiana

PART I

The purpose of this article is to provide an overview of the means whereby lands were granted, of the succession of governments which governed the Vincennes area, and of the final determination of donation land ownership by the American government. Part I will address the historical perspective. Part II will explain the solution to the enigma which the donation lands in and around Vincennes presented.

A brief look at the accompanying map which depicts the Vincennes Donation Tract shows both order and continuity and a patchwork quilt of lots having no semblance of order. To understand the evolution of such an incongruous assembly of donation lots it is necessary to understand the change of ownership of these lands during the eighteenth century. This was a time of peaceful pursuit and a time of chaotic upheaval for the French inhabitants of Vincennes and later for the rugged Americans who settled the Northwest Territory.

Originally Vincennes was the site of a Piankashaw Indian village. This site was selected because it was on high ground and provided protection from Wabash River flooding. The site was also an important junction of the Buffalo Trail and the Wabash River which could be forded at this location. Indians and white trappers alike used the Trail which thousands of buffalo hooves had formed.

The French, to control their vast territory in North America, established forts from Canada to Louisiana, including Fort Ouiatenon near Lafayette, Fort Miami at Fort Wayne, and Post Vincennes. 1742 is the traditional date when the Piankashaw Indians conveyed a grant of land to the French for Port Vincennes. The boundaries were vague, extending about 42 miles along the Wabash River and approximately 72 miles east and west of the Wabash River. There is no evidence that a written deed was executed. For the French inhabitants the basic interest in the land was for its common use and not for individual ownership. In 1775 this same Indian tribe sold a large tract of land to Louis Vivant, the agent for the Wabash Land Company. Excepted from the sale was the original 1742 grant. The excepted tract of land was described as follows: "...the intermediate space of twenty-four leagues...being reserved for the use of the inhabitants of Port St. Vincent...between

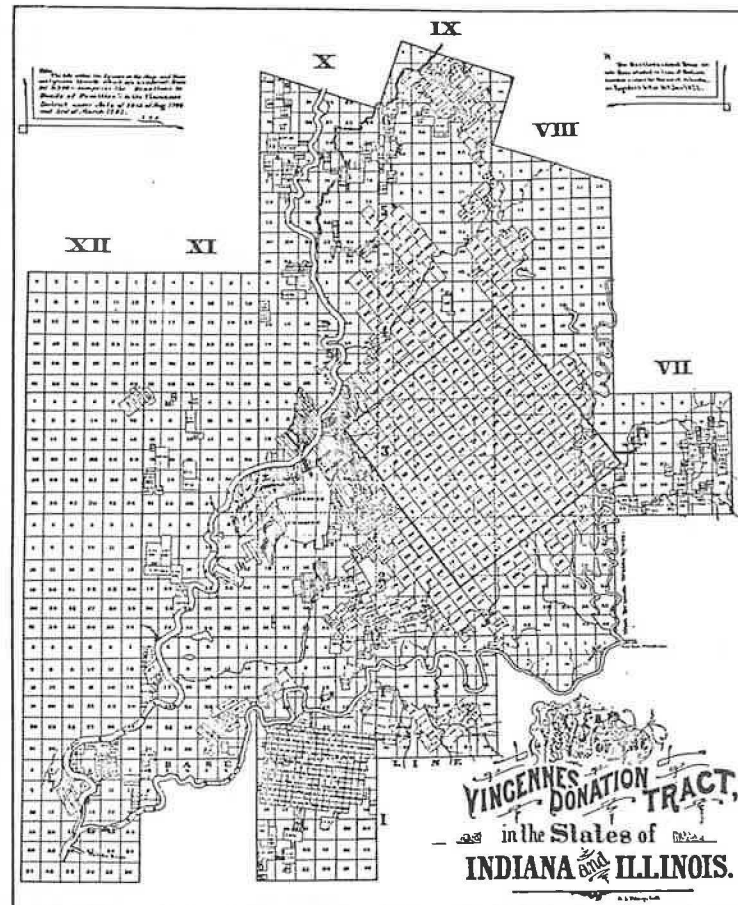
Point Coupee and the mouth of the White River...with the same width or breadth on both sides of the Ouabache River, as is hereby granted in the...several tracts of land above bounded and described."

The French commandants of Port Vincennes were given authority by the French government to issue grants of land to individual inhabitants. By 1772 at least 43 persons had received such grants. However, no written records exist of these grants.

In the early days two groups of Frenchmen resided in Port Vincennes. There were the rangers of the forest or fur traders, the *coureur de bois*, and the *Habitants*, the people who dwelt in the village. The system adopted was the French manorial system of the 17th century as modified by the system in effect in Canada. It consisted of a row of farms facing the river, in this case the Wabash River (see accompanying map). Each house was close to the river. This permitted easy access to the public road which was situated between the houses and the river. The dimensions of a typical farm was two arpents (one arpent = 63 1/4 yards) wide and 40 arpents deep. The inhabitants lived in the village and went out to the fields to farm.

The farms were located in what were known as the three prairies near Port Vincennes, Upper Prairie, Lower Prairie (six miles along the river), and Cathlinette Prairie which was east of the southern part of the Lower Prairie. The farms were not fenced. A large fenced commons area of about 5,000 acres was located south of the village. There was no propensity for the French inhabitants to build large individual estates as did the British in the colonies. In sum Port Vincennes was what could be called a happy, comfortable settlement.

The founder of Port Vincennes was Francois Margane Bissot, *Sieur de Vincennes*, who was known to have granted land to at least one person. His successor was Louis St. Ange de Bellerive who was commandant from 1736 to 1764. From 1749 to 1763 he granted land to 20 persons. His was a government of peace and goodwill for 30 years. However, St. Ange was not a good record keeper. His was a haphazard method of record keeping. The grants were usually noted on small scraps of paper, sometimes placed in a notary's office, but usually given to the grantees. Many grants were simply verbal in nature. In 1773 St. Ange interceded for the French whose titles to land in Vincennes was questioned by the British. St. Ange, by then was an old man, stated to the British: "I have conceded to many inhabitants divers lands and pieces of ground by order of



my...Srs. the Governor, in the name of His Most Christian Majesty:...in addition to this I have verbally permitted a number of individuals to establish themselves and cultivate the lands of which they have been in possession for many years."

One written concession by St. Ange can be found in Deed Record D, page 271 of Knox County, Indiana, Recorder's Office. It reads as follows: "We, Captain Commandant, of Post Vincennes certify having conceded to one named Pierre Codere a piece of ground twenty-five toises in width and twenty-four toises in depth going to the Glessis (glacis) of the fort bearing on one side to *Sieur Michel Dizi* and on the other to the street that goes to the glassis and the other face to the grand street which goes to the prairie, done and given at Post Vincennes this 2nd, May, 1751. St. ANGE." The vagueness of the description indicated how land was of secondary importance to the French.

When St. Ange left in 1764 the population of Vincennes was 300-400 people or about 60 families. By 1765 there were 80-90 families. In 1778 the population was 621.

The British control of Port Vincennes commenced in 1763 and continued until 1778. In contrast to the French the British government was less than competent. The British simply saw little value in Port Vincennes. In 1774 French law was restored by an extension of the Quebec Act of 1774 which applied to settlements northwest of the Ohio River.

In 1778 George Rogers Clark led his army in a conquest of the Old Northwest Territory. The result was political upheaval and economic ruin for the French in Port Vincennes, which became a battleground of two warring nations, Britain and Colonial America. The inhabitants of Port Vincennes suffered the hardships of a devastating war and had no interest in its outcome other than the hope for a peaceful restoration of their lives. Their valuable fur trade declined. Of greater importance was the introduction of a new form of government and the American way of life.

George Rogers Clark's conquest was in the name of the Commonwealth of Virginia. However, the Commonwealth was unable to maintain strong control over its remote settlements on the Wabash and Illinois rivers. Therefore, in 1781 Virginia offered to cede her western lands to the General Government. The conveyance which was confirmed in 1783 did not change substantially the situation in Port Vincennes. The result was one of financial depression and lawlessness for the inhabitants of Vincennes. Father Jean Francois Rivet, pastor at Vincennes from 1795 to 1804, described the state of the village after 1780 as one of decay: "I do not see any other cause for it than in the evils of every kind which they had to suffer from the American government and especially from the Indian war. It is certain that the state has cruelly mistreated them, that the country has been given to pillage...that they have made advances amounting to enormous sins, and immense works, and that nothing has been paid them, that the subsequent fall of bank notes completed the total ruin of the county...The lay clerk of the Church lost 25,808 piastres, and so it is with others. They have often been promised indemnification, and nothing has come of it."

Even Winthrop Sargent, secretary of the Northwest Territory from 1787 to 1797, addressed the difficult conditions faced by the troops of Virginia in the Territory when he wrote to President George Washington in 1790: "...there are...considerable claims for supplies furnished the troops of Virginia before and since 1783,

which no person yet has been authorized to attend to, and which is very injurious to the interests and feelings of men who seem to have been exposed to a variety of distresses and impositions by characters pretending to have acted under the orders of that Government."

Even more serious was the fact that there was a sharp decline in the Indian trade. When the Americans arrived, the Indians proceeded to leave. All sources of prosperity the Vincennes settlement enjoyed under the old French regime disappeared. Despite the hardships the population of Vincennes continued its slow growth, reaching by 1800 a total of 714 in the village and 819 in the surrounding area.

Of great significance was the fact that after the arrival of George Rogers Clark the French citizens of Port Vincennes took an Oath of Allegiance to the Commonwealth of Virginia. In October 1778 the General Assembly of Virginia created the County of Illinois for citizens of the Commonwealth of Virginia who lived west of the Ohio River. Colonel John Todd was appointed the first county lieutenant charged with governing the County of Illinois. To provide for peace and order in the County the Vincennes Court was organized in June 1779 with Colonel J.M.T. LeGras as its first president. This court adopted the customs and usages of the old French court which it replaced. A principal responsibility administered by the Vincennes Court was to carry out the practice of granting land to the French and American inhabitants of the County.

However, legally Col. Todd and his deputies had no authority to make land grants. In June of 1779 Todd issued a proclamation which required all persons who wanted to make new settlements on the Mississippi, Ohio, Illinois, and Wabash rivers must do so according to the custom of prior French inhabitants. Thus the Vincennes Court began to grant lands, usually 400-acre tracts, to every American immigrant who presented himself and who requested a tract of land. A total of 26,000 acres was granted from 1779 to 1783. From 1783 to 1787 an additional 22,000 acres was granted.

Winthrop Sargent questioned the right of the Vincennes Court to make concessions of land. In response the court replied to Sargent: "...the commandants have always appeared to be vested with the powers to give lands. Their founder, Mr. Vincennes, began to give concessions, and all his successors have given lands and lots. Mr. Legras was appointed commandant of Post Vincennes, by...John Todd, who was in the year 1779, sent by the State of Virginia for to regulate the Government of this country...In his absence, Mr. Legras, who was then commandant, assumed that he had the authority to give lands according to the ancient usage of the other commanders, and he verbally informed the court of Post Vincennes that, when they would judge it proper to give lands or lots to those who should come into the country to settle or otherwise, they might do it, and that he gave them permission so to do."

In Part II we will present the dilemma faced by the new American Federal Government as it proceeded to determine what persons were rightfully possessed of land in the area of Vincennes and to consider a request by the French for a large donation land to be composed of many individual 500-acre tracts. Thomas Jefferson, then Secretary of State, assumes a role in this issue. The Vincennes Donation Lands presented an enigma not easy of solution.

Reference: *The Vincennes Donation Lands* by Leonard Lux, O.S.B., published by the Indiana Historical Society in 1949.

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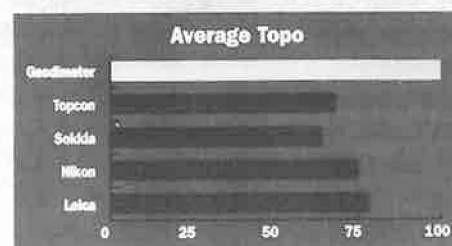
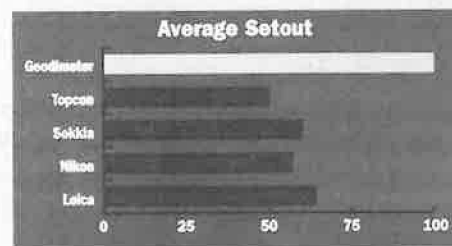


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ANATOMY OF AN IOSHA INSPECTION

by Ron Koons, RoSaKo Enterprises
Safety Consultants, Middletown, Indiana

Within the past few weeks I had the opportunity to go through an IOSHA inspection with one of my new customers. This business had a specific injury that was of the type IOSHA had to be notified. We knew the notification would result in an inspection. Prior to the injury the company had done some work with safety, but no formal program was established. They were probably a little ahead of the average business of their size (approximately 10 employees) in their safety effort. After contacting our company, we put together a complete Written Safety Program, Performed a Safety Audit, and conducted a 3 hour training class for their employees. This business really wanted to have a safe operation and made several changes based upon my recommendations.

Then came the day they knew would occur, but wished it wouldn't...the IOSHA Compliance Officer knocked on their door.

Then came the day they knew would occur, but wished it wouldn't...the IOSHA Compliance Officer knocked on their door. This business is only about twenty minutes away from our office so I had previously informed them to call me the minute the Compliance Officer arrived. When I arrived the IOSHA Official had just completed an Opening Conference and was headed for the facility inspection. According to the owner, the Compliance Officer performed his standard tasks during the Opening Conference. He identified himself, displayed his identification and informed the owner why he was there. They then headed for the owner's office. The Compliance Officer discussed their accident and obtained the intricate details. He asked to see any Written Safety Program the business used. When our complete Written Safety Program was presented the Compliance Officer went briefly through it and commented everything looked great. At this point a positive attitude has been established because the business had made a substantial effort to comply with the written program requirements.

Upon entering the facility the Compliance Officer was greeted by many positive points...aisles clear...proper exit signs...employees wearing all appropriate Personal Protection Equipment. Now the positive attitude keeps on going. When the actual scene of the accident was viewed and discussed, only a few questions were asked. Two employees were then interviewed. (You will not find out what was said during these interviews.) After the interviews were completed we then stopped in the break area and had a cup of coffee. We showed all of the equipment operator training sheets and he was again impressed. We then went into the owner's office for the Closing Conference.

The owner was informed of two areas that he was being cited. All of the company's rights were discussed and the Compliance Officer was on his way approximately 90 minutes after he arrived. The owner was extremely pleased. He had been inspected several years before and was cited for a number of items that had a total of several thousand dollars. At this point we don't know the dollar

amount of the citations, but we would both be surprised if they were high. The Compliance Officer seemed to have a positive attitude and just wanted to get onto someplace else where the "fishing would be better". In the previous inspection a Compliance Officer had been at the business the better part of an entire day.

One more interesting fact...a similar business just a few miles away had an injury almost exactly like the one that occurred with my customer. A Compliance Officer spent two days going over their entire facility. Knowing what to do when the Compliance Officer comes, having an effective Written Safety Program, Performing Employee Training, and Abating Recognized Hazards has probably saved this business owner thousands of dollars.

Obviously, the best way to do all of this is before you have a major injury. Look at your compliance efforts. Remember, it's not just if your name comes up for a scheduled inspection that can get you. There can be an employee complaint, a referral, or you could have the type of injury that requires notifying IOSHA.

Our customer is now anxiously waiting on his citation to arrive via Certified Mail. Once the citation arrives a decision will be made on requesting an informal conference to contest the citations. Put yourself in a proactive position with your safety efforts today. Maybe you can avoid that long, long wait to receive your citation.

Late Note: Just before press time the citation was received and it was for just over \$1,500.00. At a quick conference I informed the owner how to handle the situation. After doing exactly the right things...and by just making two telephone calls to IOSHA...the fine was reduced to just \$300.00. An 80% reduction! The owner is extremely happy, IOSHA is happy, and the employees are operating in a higher mode of safety. If that's not a win-win-win situation I don't know what is!

NEW ISPLS MEMBERS

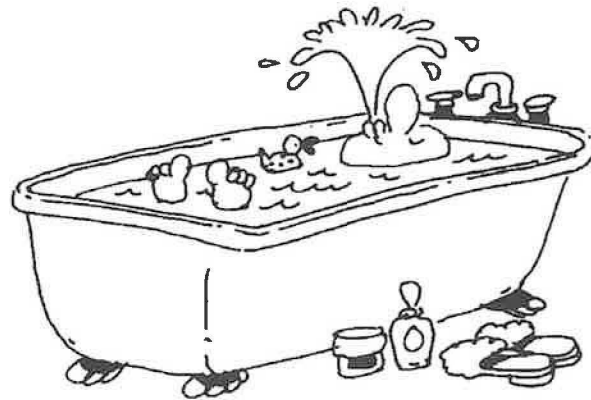
as of January 14, 1998

Donald W. Borches - Member
Allan D. Frisinger - Member
Marty J. James - Junior
Robert G. Seig - Junior
Robert E. Campbell - Associate
John W. Ross - Associate
Scott H. Huff - Associate
United Consulting Engineers - Firm

as of February 28, 1998

John W. Lyons - Member
Tony Johnson - Junior
Brent A. Friend - Junior
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NSPS GOVERNOR'S REPORT

by E. Donald Bengel, PE-PLS, Valparaiso, IN

As the new Indiana Governor for NSPS, I wish to thank the Board of Directors for the opportunity to serve the Indiana Society on a national level. It will be difficult to follow E.R. Gray's record of service. I want to publicly thank E.R. for his tenure as a dedicated Great Lakes delegate and NSPS Governor.

GREAT LAKES REGIONAL COUNCIL MEETING:

My introduction to national activities began with the Great Lakes Regional Council meeting in Baltimore. The Great Lakes Council is composed of Illinois, Indiana, Iowa, Michigan, Minnesota, North Dakota, Ohio, Pennsylvania, South Dakota, Wisconsin and New York. New York became a member of the Council at the February 28, 1998 meeting. The Council is a regional group of the Board of Governors.

New By-laws were introduced, amended and approved.

The Council moved to support the Canadian Membership modification. This would allow our Canadian colleagues to pay their ACSM dues with Canadian Banks drafts and to pay their ACSM dues in Canadian dollars. This would cost a paper loss to ACSM, but would most likely result in more Canadians joining ACSM.

Motions by the Council are submitted to the Board of Governors for support and approval.

BOARD OF GOVERNORS MEETING:

The Board of Governors operates as an advisory group to the NSPS Board of Directors. A majority vote by the Governors carries a good amount of power since the Governors number fifty-one members, more or less, and the Board of Directors only number fifteen, more or less.

Jerry M. Goodson of Texas was elected Chairman of the Board of Governors. Past President Tommy W. Brooks, Jr. moved to the NSPS Board of Directors.

Probably the most important motion passed by the Governors was one to create a NSPS Restructure Committee. This committee is to study the entire organization of NSPS and to recommend necessary changes. Personally, to me the organizational chart of NSPS seems to be somewhat unwieldy.

The General membership of NSPS can be thankful that many hours and days are spent by committee members working on the various concerns of surveyors from the U.S. During the year in subsequent editions of the Hoosier Surveyor, I will attempt to discuss some of the more important activities.

NSPS:

Robert R. Prescott of New York was installed as President of NSPS. The new President supported the Restructure Committee and made a commitment to complete appointments to the Committee.

CONVENTION NOTES:

As Governor there is little time to attend the various sessions at the Convention. There was only time to make two quick trips through the exhibits. Attendance seemed to be low with many planned sessions being canceled due to lack of participants. This was a shame since the Maryland Society members worked very hard to put on a good convention. The Convention Center was a great place to hold a convention.

If any of you have questions concerning the activities of NSPS, please contact me by phone or FAX, 219-462-0690 or E-mail, bengeles@mail.netnitco.net. A few inquiries have been made relative to the proposed changes in the NCEE tests. I will have more to say on this subject in the next issue.

The next ACSM Convention will be held in the second week of November in Fort Worth, Texas. Hopefully, some of our Indiana surveyors will be able to attend.

Thank you for this opportunity to serve you.

KENTUCKY PDH APPROVAL FOR 1998 INDIANA CONVENTION

NOTE: Surveyors wishing to claim the Kentucky PDH credits for their Kentucky Continuing Ed requirements must note the Course Number assigned by Kentucky on their course completion certificates.

Course #	PDH's	Title
98-063	1	Equipment Calibration
98-064	1	Indiana High Accuracy Reference Network
98-065	1	Tippecanoe County GIS and Public Land System Section Corner Perpetuation
98-066	1	Land Title Surveys
98-068	1	Debt Collection
98-071	1	Field Notes
98-070	10	Litigation & the Surveyor
Denied		Wellhead Protection
Denied		Subsurface Utility Engineering

NEW ISPLS LIBRARY BOOKS

The following six new books have been added to the approximately 250 books now in the ISPLS Kenneth S. Curtis library.

Brown/Robillard/Wilson, *Evidence and Procedures for Boundary Location*, third edition, 1994, Wiley, 496 pages.

Brown/Robillard/Wilson, *Boundary Control and Legal Principles*, fourth edition, 1995, Wiley, 410 pages.

Crawford, *Construction Surveying and Layout*, second edition, 1995, Creative Construction, 734 pages.

Minnick/Brinker, editors, *The Surveying Handbook*, second edition, 1995, Chapman and Hill, 1000 pages.

Van Sickle, *GPS for the Land Surveyor*, 1996, Ann Arbor Press, 209 pages.

Wolf/Ghilani, *Adjustment Computations*, 1997, Wiley, 564 pages.

The check-out policy, which is limited to four weeks with possible extension, can be obtained from Executive Director, Dianne Bennett, at (317) 687-8859.

CALENDAR

May 14, 1998

Indiana State Board of Registration for Land Surveyors Meeting, Government Center South, Indianapolis

May 15, 1998

ISPLS Seminar, "Surveying in the Floodplains" by Joe Cummings, Holiday Inn Conference Center, Columbus, Indiana.

May 21, 1998

Central Indiana Chapter & Tecumseh Chapter Joint Meeting, Time: 7:30 p.m., Where: Lebanon "Ponderosa" Exit 140 off of I-65 on S.R. 32. Program: Dr. Speth will make a presentation (including video) regarding organization objectives and goal-setting.

May 27, 1998

Initial Point Chapter Meeting

June 2-5, 1998

A/E/C SYSTEMS '98, McCormick Place Chicago, Contact Pat Smith (800) 451-1196.

June 6, 1998

ISPLS Board of Directors Meeting, Time: 10:00 a.m., Headquarters

June 19, 1998

Indiana State Board of Registration for Land Surveyors Meeting, Government Center South, Indianapolis

July 11, 1998

ISPLS Board of Directors Meeting, Time 10:00 a.m., Headquarters

July 17, 1998

Indiana State Board of Registration for Land Surveyors Meeting, Government Center South, Indianapolis

July 21, 1998

Central Indiana Chapter Meeting

July 29, 1998

Initial Point Chapter Meeting

August 4-7, 1998

Surveyors Review Course. Campus of University of Missouri-Rolla (UMR). Cosponsored by UMR and Missouri Association of Registered Land Surveyors. Topics: Exam Preparation, Legal Principles, USPLSS, Errors Analysis, GPS Surveys, Route Surveys, Celestial Observations, Instrumentation, Photogrammetry. State Plane Coordinates, Problems Session, Practice NCEES-like Exam. Instructors: Dick Elgin, David Knowles, Joe Paiva, Norman Brown. \$560.00. Contact Engineering Continuing Education: UMR; Rolla, MO 65409; 573-341-4132.

August 15, 1998

ISPLS Board of Directors Meeting, Time 10:00 a.m., Headquarters

August 21, 1998

Indiana State Board of Registration for Land Surveyors Meeting, Government Center South, Indianapolis

September 15, 1998

Central Indiana Chapter Meeting

September 18, 1998

Indiana State Board of Registration for Land Surveyors Meeting, Government Center South, Indianapolis

September 18-19, 1998

2nd Surveyors Historical Society Rendezvous, Paducah, Kentucky, Contact SHS, 300 W High Street, Ste 2, Lawrenceburg, Indiana 47025-1912, Phone: (812) 537-2000

September 26, 1998

ISPLS Picnic, Brown County State Park, Nashville, Indiana

September 26, 1998

ISPLS Board of Directors Meeting, Time: 9:00 a.m., Abe Martin Lodge, Brown County State Park, Nashville, Indiana

September 30, 1998

Initial Point Chapter Meeting

October 2, 1998

ISPLS Seminar, Topic to be announced, Abe Martin Lodge, Brown County State Park, Nashville, IN.

October 16, 1998

Indiana State Board of Registration for Land Surveyors Meeting, Government Center South, Indianapolis

October 24, 1998

ISPLS Board of Directors Meeting, Time 10:00 a.m., Headquarters

November 17, 1998

Central Indiana Chapter Meeting

November 20, 1998

Indiana State Board of Registration for Land Surveyors Meeting, Government Center South, Indianapolis

November 25, 1998

Initial Point Chapter Meeting

December 5, 1998

ISPLS Board of Directors Meeting, Time 10:00 a.m., Headquarters

December 18, 1998

Indiana State Board of Registration for Land Surveyors Meeting, Government Center South, Indianapolis

January 13, 1999

ISPLS Board of Directors Meeting, Radisson Hotel, Evansville, IN

January 13-15, 1999

ISPLS Annual Convention, Radisson Hotel, Evansville, IN

February 3-6, 1999

KAPS Annual Conference, Bowling Green, Kentucky.

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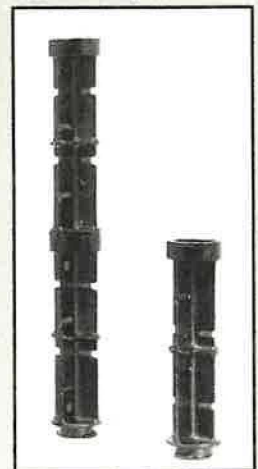
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