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# HOOSIER SURVEYOR

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QUARTERLY PUBLICATION OF THE  
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PROFESSIONAL LAND SURVEYORS, INC.

VOLUME 34  
NUMBER 4  
SPRING 2008



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## Indianapolis International Airport Expansion

Pictured with two FedEx planes in the background at the expansion of the Indianapolis International Airport is Sean Murphy (second from right), USI Consultants, Inc. party chief, with members of a Shiel-Sexton, Inc. crew laying out anchor bolts for a secondary building. Not shown is Jason Diewert, USI instrument operator for the Trimble 5700 total station shown in the foreground and photographer for this image. (see pages 13-14)

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# HOOSIER SURVEYOR

VOLUME 34 NUMBER 4 SPRING 2008

## CONTENTS

Masthead.....	1
President's Thoughts.....	2
ISPLS Board of Directors Meeting Highlights.....	3
ISPLS Couple Volunteers for Restoration Project.....	5-7
Lincoln's Last Survey.....	7-11
USI Consultants Mark Fourth Year of Airport Survey Work.....	13-14
Recovery Efforts of Original 1827 Survey Markers Along the Indiana & Michigan State Line.....	15-21
Meet A Member.....	23
How Safe Are Your Crew Vehicles?.....	25
Calendar/Sustaining Members/New ISPLS Members.....	26
Firm Members.....	27-29

## EDITORS NOTE

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.

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# PRESIDENT'S THOUGHTS

by Mark Isaacs, PLS, Brownstown, Indiana



Greetings to all:

Finally Spring has arrived! I didn't think it was ever going to quit raining. I think people at times are so comical. It appears some of our clients sit around all winter long thinking about what they need to have surveyed and designed. Then they all pick the same warm, sunny day when the trees are budding to call or to come into the office to request that we begin work for them tomorrow. Some things

never change. The ISPLS Board of Directors (BOD) has been busy in recent months working on several issues that affect ISPLS members. These include the 2009 Convention, the legislative agenda for future ISPLS goals, and the 2008/2009 annual budget.

Preparations and planning for the 2009 Convention are well under way. The convention will be held at the Marriott East Hotel in Indianapolis. The convention committee and the BOD are considering several innovations for the convention. ISPLS will continue to focus each year on ways to improve the Convention and enhance its value to ISPLS members in future years. The annual convention continues to be one of the highlights of the ISPLS organization.

The ISPLS 2008-2009 legislative agenda will propose legislation or suggest ideas for future legislation considered to be beneficial to ISPLS members. Charges for the ISPLS Legislative Committee include the following: a) Provide the Indiana State Board of Registration for Land Surveyors with authority to act upon non-licensed individuals practicing land surveying in Indiana; b) Require corner perpetuation information to be submitted to and accepted by county surveyor offices; c) Assist land surveyors with trespass rights; d) Create uniform requirements for recording surveys in all Indiana counties; and 3) Reduce a land surveyor's liability by creating a statute of limitations.

The Professional Land Surveyors Political Action Committee (PLS-PAC) contributes to members of the Indiana legislature who support issues of importance to land surveyors in Indiana. Each year bills are introduced in the legislature promoted by special interest groups that often are not in the best interests of the surveying profession or surveying businesses. By supporting legislators sympathetic to small business and the surveying profession PLS-PAC can open doors and establish effective relationships that will provide a means of opposing legislation considered being detrimental or supporting legislation deemed to be beneficial to the surveying profession. I know many surveyors who individually support incumbent legislators or legislative candidates, but are looked upon as simply "concerned citizens" and not as "concerned land surveyors." The purpose of PLS-PAC is to pool funds and resources and establish land surveyors as a source group. PLS-PAC uses the funds it re-

ceives to make relatively small contributions ranging from \$150 to \$300, rarely up to \$500, to the political campaigns of key legislators in both parties and in both houses of the Indiana legislature throughout the state. Those receiving PLS-PAC donations are legislators who listen to the concerns of land surveyors and who support the issues important to ISPLS members. The recipients of PLS-PAC donations are selected annually by the PLS-PAC board members based upon the recommendations of our paid lobbyist who currently is Michael O'Brien. ISPLS chapters can make a difference with annual donations to PLS-PAC of \$300 to \$500. If all chapters contributed annually the result would be a significant amount. The BOD hired Michael O'Brien to demonstrate its ongoing commitment to become more of a presence in the legislative arena. If ISPLS chapters and individual ISPLS members increased donations to PLS-PAC from the present total of \$6000 to \$10000, I think this would make a significant impact on legislation affecting land surveying in Indiana.

The 2008-2009 annual budget is in its rough draft state. The budget will be approved at the May BOD meeting. The Finance and Planning Committee is working on the proposed budget with input from members of the BOD. Providing tremendous assistance is Dennis Grumpp, ISPLS treasurer.

I will continue from where I left off from my last President's Thoughts article about what is going on in my life outside the realm of ISPLS. Currently I am playing and coaching volleyball. I play on a men's team based in Indianapolis that competed in a regional tournament on April 5th sponsored by United States of America Volleyball. We won the tournament and qualified to play in the Nationals in Atlanta, Georgia later this year. I began playing organized volleyball fifteen years ago. I really enjoy the competition and find the exercise invigorating. Several years ago I became involved in coaching volleyball. I am the freshman coach at Brownstown Central High School. With a record of 18-4 our team celebrated a very successful season last year. Coaching is something that I didn't think I'd ever do. I enjoy coaching a much, if not more than playing. I think it is great to help develop young kids in a sport and see them improve and succeed and learn the values of responsibility and discipline that will sustain them throughout their lives. I am also involved with the Brownstown Christian Church where I serve as an elder. An elder for the past five years I now serve as the chairman of the Board of Elders. I have had great opportunities in recent years to talk to people about my Christian faith. I believe God will open doors in order for Christians to be effective witnesses in whatever setting we find ourselves.

Let me close with this quote by Abraham Lincoln: "Nearly all men can stand adversity, but if you want to test a man's character, give him power." **Have a great summer!**

Mark R. Isaacs, PLS

# ISPLS BOARD OF DIRECTORS MEETING HIGHLIGHTS

by Dianne Bennett, Executive Director

## January 16, 2008

The ISPLS Board of Directors met on Wednesday, January 16, 2008 at Adam's Mark Hotel. President Ed Sweetland called the meeting to order at 9:08 a.m.. The minutes and treasurer's report were reviewed and approved.

Adjustments to Agenda - Discussion of "on call" attorney, open board set and constitution.

Staff Activity Report - A written report was submitted for review.

Communication - Membership - The BOD reviewed and approved the membership applications submitted by the membership committee.

Hoosier Surveyor - Articles for the Winter issue need to be submitted by January 25th.

Professional Development - Education Committee - The 2008 Convention as of 1/15/08 had 627 registered. An update on the convention was reported by Doug Herendeen.

Scholarships - An update on the Purdue Scholarship was presented. Mark Isaacs and Ed Sweetland will meet with attorney Don Meyers to discuss the Purdue scholarship.

Government Affairs - Board of Registration - A report was given from the January 11, 2008 board of registration meeting. The next board meeting is April 11, 2008.

NSPS Governor/Great Lakes Council - The national NSPS and ACSM Convention is March 5th through the 9th in Spokane, Washington.

Legislation - An update was presented on HB 1265.

Internal Affairs - By-Laws - A motion was made and passed to accept the revised 2008 Constitution.

Chapters - The Purdue University Student Chapter discussed the upcoming ACSM Convention March 4-9, in Spokane, Washington. A budget was presented and a request for assistance from ISPLS. A motion was made and passed to give the Purdue student chapter \$500 to attend the ACSM 2008 Convention and includes: a report back to the board at the April board meeting, their participation with other Student Chapters at the convention and the money will be returned to ISPLS if the Student chapter does not attend the Convention.

Nominations - The BOD election results were tabulated. The three members receiving the most votes were: Perry Cloyd, Frank Ballintyn and Dennis Grumpp.

Announcements - Next BOD meeting will be March 1, 2008 at ISPLS headquarters at 9:00 a.m.

## March 1, 2008

The ISPLS Board of Directors met on Saturday, March 1, 2008 at ISPLS headquarters. President Mark Isaacs called the meeting to order at 9:03 a.m. The minutes and treasurer's report were reviewed and approved with amendments.

Adjustments to Agenda - Discussion of "Convention Overview".

Wallington quarterly report was presented by Jeff Dowden and Chris Marten.

Staff Activity Report - A written report was submitted for review.

Communication - Hoosier Surveyor - The deadline for submitting articles for the next issue is April 15, 2008.

Membership - The BOD reviewed and approved the membership applications submitted by the membership committee.

Professional Development - Education - A motion was made and passed to hold an ISPLS seminar on May 9, 2008. Topic will be a repeat of the "Mock Trial".

LS/SIT Review - The review will be held March 29, 2008 at IUPUI-Ft Wayne .

Scholarships - Purdue and Vincennes interviews will be March 28, 2008 at ISPLS headquarters.

Government Affairs - Board of Registration - The next scheduled meeting is April 11, 2008.

NSPS Governor/Great Lakes Council - The National NSPS and ACSM Convention is March 5th through 9th in Spokane, Washington.

Legislation - There is nothing affecting land surveyors left in this session.

Internal Affairs - Finance and Planning - The financial statement prepared by Capin Crouse, LLP from July 1, 2006 through June 20, 2007 were reviewed.

A meeting is scheduled with the Ad Hoc Committee "Chapter Convention Profit" for March 7, 2008 at ISPLS headquarters.

Old Business - ISPLS 2008 Committee Charges were presented by Mark Isaacs.

Pudue Scholarship meeting with Bose McKinney and Evans. A motion was made and passed to engage BM&E and to prepare an estimate of cost for the Purdue Scholarship solution.

Announcements - Next BOD meeting will be April 12, 2008 at 9:00 a.m., ISPLS headquarters.

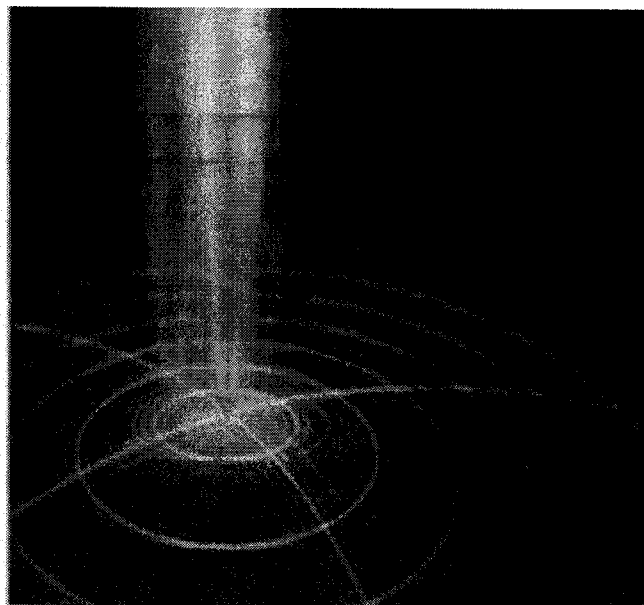
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# ISPLS Couple Volunteers for Restoration Project

By David B. H. Best, R.L.S.

On May 5, 2007 an EF-5 tornado struck a devastating blow to Greensburg, Kansas. The home of elderly widow Dolores Stevens was one of many homes totally destroyed by the tornado. Coming to the aid of distraught homeowners was the Friends Disaster Service (FDS) of the Friends (Quaker) Church. Learning of the disaster, Donald W. Wimmer and his wife Lisa, members of the Friends Church in Marion, Indiana, decided to become part of an FDS Restoration Team. Don, an Indiana registered land surveyor and a member of the Indiana Society of Professional Land Surveyors (ISPLS), and Lisa, an associate member of ISPLS, decided to go "on vacation" November 3-10, 2007 as members of their church's Mission Team.



*Lisa Wimmer, ISPLS Associate Member, sweeps the basement floor of the reconstructed home of Dolores Stevens in Greensburg, Kansas. The home was destroyed by a May 5, 2007 tornado. Image is courtesy of Donald W. Wimmer, PLS.*

This was not just a passing interest for Don and Lisa because both have ties to Kansas. Don is a native of Wichita, Kansas. Lisa attended Barclay College, ten miles east of Greensburg. Both Don and Lisa have degrees, MS and BSN, respectively, from Pittsburg State University in Pittsburg, Kansas.

With schedules arranged for an eight-day hiatus from Wimmer Land Surveys, they joined other members of the Mission Team and flew to Greensburg on November 3rd. FDS estimated that it would require three months to rebuild the Dolores Stevens home. Not only did the Restoration Team include members of Friends Churches, but also many others who simply "cared" about their neighbors. The 15-member team Don and Lisa worked with ranged in age from twelve to eighty-one. It included the children and grandchildren of Dolores Stevens who worked on the project in between their school and job commitments.

When Don and Lisa first appeared on the job the site leader quizzed them about their construction experience and then assigned them to jobs accordingly. The principal requirement was simply a willingness to work. For most it was a "learn by doing" experience. Lisa said, "We were willing to learn to do just about anything to help out."

Each day after breakfast at a local college Don and Lisa arrived at the work site to receive their job assignments. Supplies were always on hand at the work site. A mid-morning break was always scheduled each day. The break included time for devotions for members of the FDS faith-based organization. Dolores and her family always provided lunch for the work team. The jobs assigned to Don and Lisa during their week-long stint included painting the interior and exterior walls, staining wood and trim, putting polyurethane on siding, installing tongue and groove siding, building steps and railings, applying and sanding drywall mud, blowing in insulation, installing receptacles and lights, and, of course, cleaning up the construction site.

Don and Lisa emphasized that FDS is a growing organization with branches in several states, including Indiana. When a need is identified, private individuals, community organizations, churches, the Red Cross, and FEMA contact FDS. Through local FDS branches plans are made for teams to proceed to disaster sites in the United States, North and South America, and other overseas locations.



*Installing ceiling insulation in the reconstructed home of Dolores Stevens in Greensburg, Kansas are Friends Disaster Service team members (left to right) Donald W. Wimmer; L.S. ISPLS member, Amada Ridge, Lisa Wimmer, ISPLS Associate member, and Dolores Stevens' grandson Brennan and Jimmy. Image is courtesy of Lisa Wimmer.*

...continued Page 7

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# LINCOLN'S LAST SURVEY?

by Daniel W. Stowell, Director/Editor

Ed. Note: The following article, transcription and images are reprinted with permission of The Lincoln Legal Papers from its July-September 2007, Number 83 issue of the *Lincoln Legal Briefs*, a Quarterly Newsletter of the Lincoln Legal Briefs, 82 Old State Capitol Plaza, Springfield, IL 62701-1512

Abraham Lincoln worked as a deputy surveyor in Sangamon County, Illinois from 1833 to 1836. Lincoln surveyed the towns of Bath, Huron, New Boston, and Albany, Illinois. In the spring of 1837 he began the practice of law in Springfield as the junior partner of John T. Stuart, and his surveying career largely ended. However, Lincoln used his knowledge of surveying in his law practice and at least on one occasion,

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## Restoration Project ...continued from Page 5

FDS coordinates each work project and determines a project's time frame. Don and Lisa's church underwrote the expenses for its Mission Team.

Don and Lisa define "volunteer" as meaning "I don't HAVE to help. I WANT to help!" They both find that helping a person in need is a very good feeling. There's no substitute for being an actual participant at a disaster scene. Both Don and Lisa feel that the result of their experience in Greensburg, Kansas provides them with something that money cannot buy: real contentment. When asked if they would do it again they reply, "Absolutely! Yes, we would!" They then add, "Who knows? Maybe some day we will need a helping hand!"



Donald W. Wimmer, P.L.S. ISPLS member (left) and Dolores Stevens' grandson Brennan install the devetailed wood ceiling in the porch of the reconstructed Stevens' home destroyed by a May 5, 2007 tornado in Greensburg, Kansas.

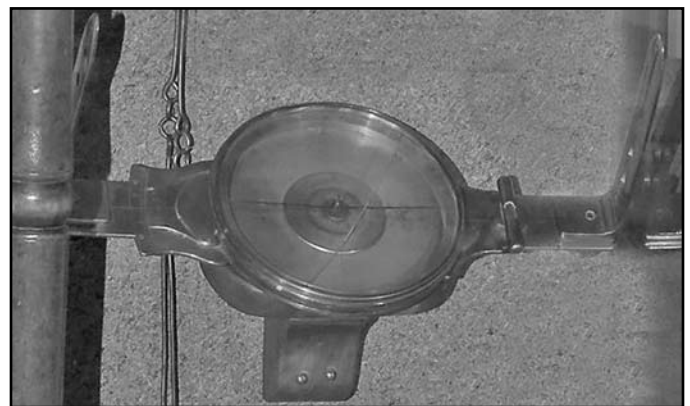
the court commissioned him to survey a disputed section of land.

William Butler and William Tilford both claimed a tract of eighty acres of land in Sangamon County. After taking the matter to court, Butler and Tilford reached an agreement in which Tilford agreed to convey ten acres to Butler, and Butler could buy more of the land at \$1.25 per acre. Butler bought an additional fifteen acres. Tilford later sold tracts of land that included Butler's property to William Smith and William Whittington, and others to obtain a survey and proper titles to the land. In July 1839, the court appointed Lincoln to survey the seventeen acres of land in dispute. Lincoln surveyed the land in August and made his report to the court. When the court reconvened in November 1839, the defendants did not appear, and the court ruled for Tilford. The court appointed Lincoln as a commissioner to convey the seventeen acres from Tilford to Butler. Lincoln received \$7 for preparing the survey and an additional \$5 for acting as commissioner.

*The Law Practice of Abraham Lincoln: Complete Documentary Edition (2000)* included the case of *Butler v. Tilford et al.*, but without the surveyor's report made by Lincoln.

In July, Editor Daniel Stowell visited with David H. Leroy, an attorney in Boise, Idaho, who is also a former Lieutenant Governor of the state. Leroy has an impressive Lincoln collection, including the surveyor's report made by Abraham Lincoln in August 1839 for the case of *Butler v. Tilford et al.* The document quite possibly reflects the last survey Lincoln prepared. It also fills an important gap in the documentary record of the case. The following page is the documentary record of this case.

...continued Page 9



Compass Lincoln used as a Surveyor in New Salem  
Image courtesy of the Abraham Lincoln Presidential Library.



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Superior Circuit Court  
William Butler }  
                  as } In Chancery -  
William Helges }  
I Abraham Lincoln having  
been appointed by the Superior Circuit Court to  
make a survey of a part of the North half  
of the North East quarter of Section Six in  
Township Eighteen North of Range Seven West  
of the Third Principal Meridian, in accordance  
with a bond filed in the above entitled cause,  
do hereby report, that I have made said sur-  
vey in accordance with said bond and find the  
land there to contain thirteen acres and twenty  
two hundredths of an acre, and to be bounded as  
follows, to-wit: Beginning at the North West corner  
of said half quarter section, thence East two  
chains and fifty four links to a rock at a point  
interesting a fence owned by William Butler in his  
lifetime, and being thirty three chains and fifty four  
links West of the North West corner of said  
half quarter, thence South two degrees, West twenty  
nine chains and twenty links, to the Southern bound-  
ary of said half quarter, thence West three  
chains and fifty four links, to the South West  
corner of said half quarter, thence North twenty  
nine chains and sixty four links to the beginning -  
August 26<sup>th</sup> A.D. 1839 - Abraham Lincoln

Surveyor's Report, written and signed by Abraham Lincoln  
August 26, 1839  
Image courtesy of David H. Leroy, Boise, Idaho.



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## Surveyor's Report

### Sangamon circuit court.

**William Butler**

**VS**

**William Tilford** }

In chancery

I, Abraham Lincoln, having been appointed by the Sangamon circuit court to make a survey of a part of the North half of the North East quarter of Section Five in Township Fifteen North of Range Seven West of the Third Principal Meridian, in accordance with a bond filed in the above entitled cause, do hereby report, that I have made said survey, in accordance with said bond; and find the land therein to contain Seventeen acres and Seventytwo hundredths of an acre; and to be bounded as follows, towit: Begining at the North West corner of said half quarter section; thence East Six chains and fortyfour links to a rock at a point intersecting a fence owned by Elkanah Butler in his lifetime, and being Thirtythree chains and forty-nine links West of the North East corner of said half quarter; thence South two degrees West Twentynine chains and seventy links to the Southern boundary of said half quarter: thence West Five chains and fortyone links to the South West corner of said half quarter; thence North Twentynine chains and sixtyfour links to the begining.

August 26<sup>th</sup> A.D. 1839 .

A. Lincoln

### *Lincoln's Surveying Tools*

The surveying equipment (pictured at right) that Lincoln used during his time as a surveyor in New Salem, Illinois, is on display in the museum at Lincoln's New Salem Historic Site. The equipment includes a Rittenhouse compass, six-foot staff, chains, and the saddlebags used to carry the instruments. The instruments were manufactured in Pennsylvania in the late 1700s.

In 1834, the Sangamon County Circuit Court ordered the auction of Lincoln's tools to cover a debt resulting from the failure of the Lincoln & Berry store in New Salem. A friend purchased them at auction and returned them to Lincoln, who continued to work as a surveyor until he moved to Springfield to become a lawyer.



*Lincoln's Surveying Tools*  
Image courtesy of David H. Leroy, Bosie, Idaho.



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*I'm a Consulting Surveyor and I wouldn't have it any other way. Things change and my business will change right along with them. The keys are motivation, support and always remembering that the harder we work, the more luck we have."*

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# USI Consultants Mark Fourth Year of Survey Work for Indianapolis International Airport Expansion

by David B. H. Best, R.L.S.

Recently the Hoosier Surveyor editor met with Ryan Swingley, L.S., Tim Brown, Sean Murphy, and Jason Deiwert of USI Consultants, Inc. to discuss the surveying services USI provided for the expansion of the Indianapolis International Airport. The four USI employees randomly provided responses. Interview credit is extended equally to all. Ryan provided tech support and surface monitoring for the project. Tim as project manager provided office support, calculations, and control for construction work. Sean serves as the party chief. Jason is the instrument man on the two-man field party.

## Q.: When did your work on the project begin?

A.: It was in 2004. We are now in our fourth year on the project working on a daily basis. Sean and Jason have worked the past three years as USI's two-man field party on the project.

## Q.: How did USI become involved in the project?

A.: USI was the successful bidder to do the mass grading surveying work for Gradex. In one year about one million cubic yards of earth were moved. Later we provided surveying services for other contractors, including HIS Contractors, the contractor for the midfield terminal.

## Q.: What problems, if any, have you experienced on the project?

A.: Early in the design phase revisions occurred with changes in elevations. This required a redo of much of our work for cut and fill. Building elevations were both raised and lowered.

## Q.: What was the area of the airport expansion project?

A.: Approximately three square miles.

## Q.: How long is the new runway?

A.: Two miles.



Sean Murphy of USI Consultants, Inc. is checking the centerline stationing and the as-built information from the south to the north of the 2014-foot long Indianapolis International Airport utility corridor tunnel. Image is courtesy of USI Consultants, Inc.

## Q.: How many USI survey parties were involved in the project?

A.: Sean and Jason's two-man field party worked on a daily basis. On occasion we used two and three additional field parties.

## Q.: How did you establish vertical and horizontal control for your work on the project?

A.: A network of control points lining the perimeter of the project was in place when we began our work. It was a matter of continuously checking these control points and working off of them every day.



George Starks (left) of USI Consultants, Inc. and project contractor confer on the Indianapolis International Airport expansion mass grading construction staking. Image is courtesy of USI Consultants, Inc.

## Q.: How many surveying firms were working for the different contractors?

A.: Including USI there were five surveying firms working on the project. The perimeter control system was available to all of the surveying firms. We calibrated all of the control points from our GPS. About 95% of the work we do on the project is GPS generated. Because the perimeter control was so tight vertically and horizontally it allowed us to do our own work so much more efficiently than you'd expect on a construction site. We'll be on site until the official opening of the new airport terminal facility in October.

## Q.: What unique feature is there on this project that you've never encountered on any other construction project?

A.: It's the 12-foot diameter utility corridor tunnel extending a half mile underneath taxiways A and B and the new two-mile runway. The length of the tunnel is 2,014 feet. During its construction we checked surface elevations daily to assure ourselves that there was no subsidence in the runway or the taxiways. The Bowen Engineering Co. was the tunnel contractor. A Bowen subcontractor operated the boring machine.

...continued Page 14

**Q.: What problems did the tunnel work present?**

**A.:** Our tunnel surveying work was a daily logistical nightmare as we crossed the runway taking shots. The new runway was an active runway with planes landing and taking off at frequent intervals. If our survey data didn't check, we had no time to recheck. Therefore, we utilized digital levels to minimize human error. We were pleased with how tight we maintained the control. The tunnel work was a busy nine-months project.

**Q.: Describe the underground tunnel work.**

**A.:** Once the tunnel work started the contractor's laser beam was effective to about 400 feet. We'd enter the tunnel and the contractor provided us with a welded target. We essentially were extending the tunnel blindly while relying on the accuracy of our instruments.

**Q.: When you reached the end of the tunnel after a bore of more than 2000 feet what did you find?**

**A.:** It was a monumental day! Local TV stations televised the event. They showed the drill head coming through a big 12-foot concrete wall with no reinforcement. A target was painted on the concrete wall. We were less than an inch off the center of the target. We experienced a sense of real satisfaction for a job well done.

**Q.: You refer to the "new" runway when in fact it was not new, was it?**

**A.:** No, it was actually the old one-mile runway extended to a length of two miles about seven or eight years ago. This is why the designers located the new terminal where it is to reduce taxi time.

**Q.: Will you comment on your relationship with the other surveying firms?**

**A.:** We never experienced a problem with any of them. There is a real sense of cooperation and of working together. If we find something that doesn't make sense, we look up the surveyor we think might have been involved. Memos are circulated to all of the surveying firms regarding a bust. There is not only a strong feeling of camaraderie among the surveyors, but also between the contractors. This has become our favorite job.

**Q.: Another feature of this airport expansion project is its lengthy force main. What is the purpose of the force main?**

**A.:** This is a four-mile long force main extending from the terminal's de-icing area to a pond at the FedEx facility. Residue from the de-icing chambers is forced all the way to the FedEx pond. This was also a continuous bore project. We had to show them where the bores began and locate all of the existing taxiways under which the force main ran.

**Q.: What statistics about the airport expansion stand out?**

**A.:** We understand that the terminal will be the third largest in the world. The new parking garage will be the eighth largest in the world with space for 7300 vehicles. The parking garage is connected to the terminal by automatic transfer walkways all under a common roof.

**Q.: What surveying equipment have you used for this project?**

**A.:** Our GPS instruments are the Trimble 5800 RTK rover and the Trimble 5600 robotic instrument. The use of this equipment has increased our efficiency and speeded up our daily construction staking process. We've probably saved an hour and a half daily in set up and tear down time by employing Seiler's's MWRTK VRS network instead of using a stationary base.

**Q.: What other equipment innovation has improved your efficiency?**

**A.:** It's the use of a four-wheel drive Yamaha Rhino. This side by side vehicle is brilliant! Before many of the roads were in place it was almost impossible to get from one side of the project to another. This all-terrain vehicle makes things a breeze. It has a big bed in the back for stakes, lathes, and instruments. We installed a big box in the back for our equipment and supplies. It's a real time saver for us.

**Q.: What final comments do you have?**

**A.:** We felt that this project was proceeding from rumor to reality. Initially we were doing the stakeout work for the mass excavation during our first winter on the job fully expecting the project to be put on hold again. Then one day we saw tents set up with the governor and a large group of people at a dedication ceremony. We knew then that it was a "go" project. Perhaps the scariest thing was setting stakes in that immense open field and hoping that we'd set them in the right place. It was difficult to visualize what the finished project would look like while standing in that huge open space. Now we see the terminal in place with its 7300-car parking garage. There's a lot of satisfaction in knowing that those first stakes we set were, in fact, in the right place. The importance of the role that surveyors play in construction projects, whether large or small, cannot be over-estimated.



*Sean Murphy waits for a D9 dozer to extract the USI Consultants, Inc. Yamaha Rhino from a Indianapolis International Airport wetlands area. Image is courtesy of USI Consultants, Inc.*



# Recovery Efforts of Original 1827 Survey Markers Along The Indiana & Michigan State Line

Compiled by: Norman Caldwell, PLS

## Professional Surveyors:

Indiana-Michigan State Line Committee Members

Jack N. Owens, Chairman

John McNamara, Indiana Vice-chairman, St. Joseph Co., IN  
Wayne Mostrom, Michigan Vice-chairman, St. Joseph Co., MI

John Quine, Board Liaison to Michigan Society of  
Professional Surveyors

Chris Marbach, Board Liaison to Indiana Society of  
Professional Land Surveyors

John Kamer, Berrien County, Michigan

Roger Stephenson, Cass County, Michigan

Edward Reed, Branch County, Michigan

Michael Lodzinski, Hillsdale County, Michigan

Hans Mussen, Elkhart County, Indiana

Robert Przyblynski, LaPorte County, Indiana

Rex Pranger, LaGrange County, Indiana

Larry Gilbert, Steuben County, Indiana

Norman Caldwell, Secretary



*Assembled on April 3, 2008 behind the newly-set monument marking the northeast corner of the State of Indiana are members of the Indiana-Michigan State Line Committee. Pictured to the right of the newly-set monument is the USGS triangulation station "Corner 1946" that is described as being "close to the Indiana northeast corner." The leaning pipe to the left of the newly-set monument is a USGS monument set by a traverse in 1911 to mark the Indiana northeast corner. Pictured above kneeling are Norman Caldwell (left), Committee recording secretary, and Jack N. Owens, Committee chairman, and standing (left to right) Stephen Brown (DABEC), Christian Marbach (ISPLS liaison), Rex Pranger (LaGrange Co. Surveyor), Ross Ruckel (Steuben Co. contractor), Larry Gilbert (Steuben Co. Surveyor), Duane Brown (DABEC), Daniel Brown (DABEC), Jack Carpenter (DABEC), John Kramer (Berrien Co. Surveyor), Tom Stephenson (Cass Co.), Glen Richard (Lenawee Co. Surveyor), Dave Rigney (NGS Michigan Advisor), Professor Sep Humphries (Ferris State University), Donald Andrews (Kalamazoo Co.), and Edward R. Reed (retired Branch Co. Surveyor). Blain Williams (Survey Assistant for LaGrange Co.) is not in the photo. Image is courtesy of Duane Brown, P.E., L.S.*

During the first meeting of the committee on 28 October 2004 several items were agreed upon.

Private sector surveyors are restricted to recovery of existing or obliterated Mile Posts where a monument is recovered or, where accessories, acceptable supplemental survey records, physical evidence or testimony is available.

Mile Posts that are "lost" (no physical object, evidence or testimony) are to be restored through authorization by joint action of the Indiana and Michigan Legislatures or the United States Supreme Court.

The committee has been proceeding as a private sector activity with volunteer services of professional surveyors. Their efforts have included the recovery, documentation, monumentation, peer review and recordation of existent or obliterated Mile Posts. The group will request participation of the Indiana and Michigan legislatures which will include using two existing statutes, explained below, to accomplish not only recovery of existing Mile Posts but reestablishment of lost Mile Posts.

The Indiana and Michigan PLSS subdivisional surveys that closed upon the State Line between 1828 and 1832 will assist in recovery and verification of the State Line Mile markers.

Public awareness is important. To accomplish this, letters were submitted to Township, County and State officials, plus news media and selected citizens. As a result, local surveyors are finding governmental and public encouragement to locate Mile Posts and properly define the Indiana/Michigan State Line. Press releases to the media are encouraged, particularly upon recovery and documentation of an original Mile Post.

Indiana County Surveyors have budgeted funds available to support their statutory activities. Indiana "Remonumentation" of PLSS monuments is supported by a surcharge collected on documents recorded at the County Recorders Office and retained locally for that purpose.

Michigan County Surveyors operate in the private sector (no local funding) but do have State Remonumentation funds available. Michigan has a statewide statutory Remonumentation Program supported by a surcharge on recorded documents. Funds collected are deposited with the State, then redistributed to Counties at the will of the Legislature.

The use of remonumentation funds is appropriate in the search for, and recovery of, Mile Posts.

Mile Posts define a "Senior Line" (being the State Line) and are, therefore, required when properly defining the intersection of subsequent subdivisional lines with the State Line. Title lines terminate at the "State Line", therefore the Mile Posts are essential for proper depiction of private lands.

Starting with these items as guides, the committee has made considerable progress in research, recovery and verification of several Mile Posts.

...continued Page 16

**Indiana & Michigan State Line**  
**...continued from Page 15**

In March, 2005, the committee met at Hillsdale, Michigan. After a short business meeting the group visited the location of the northeast corner of Indiana and searched for a monument. There is a record of the original post having been recovered, along with several original bearing trees, by the Hillsdale County Surveyor, George Mark, in 1871 and again in 1905.

There are two geodetic markers within a few feet of the site. The oldest being Michigan Primary Traverse Point #27 (a pipe & bronze cap set in 1911), the second being USC & GS geodetic station "Corner (established and observed in 1946).

Research indicates that these monuments do not occupy or represent the State Line angle point.

A subsequent search by committee members Lodzinski & Reed located pieces of plank and wood scraps probably the remnants of a Bilby tower that was constructed on the USC & GS monument during the 1940's and 1950's.

Michael Lodzinski, the current Hillsdale County Surveyor, has processed the PLSS section corner positions in Section 20 (at the Angle Point) for the Michigan remonumentation program. Recovery of the George Mark monuments of 1871 and 1905 have provided an accurate search location for the State Line angle point.

November 1, 2007, a sub-committee again visited the site armed with the recent additional research information provided by Lodzinski. The committee members were able to recover and identify the stained soils remnants of the original 6 inch square wooden post placed by U.S. Deputy Surveyor E. P. Kendrick on or about 30 October 1827.

To preserve and perpetuate the original position, a standard monument consisting of a 4" bronze cap encased in a concrete



*Mounted temporarily on a short wood beam for the purpose of imprinting the monument identification for Indiana and Michigan is the 4" diameter bronze cap that will mark the northeast corner of the State of Indiana.*

*(Image is courtesy of Duane Brown, P.E., L.S.)*

cylinder is being installed at the site on Thursday, 3 April 2008, by committee members, County Surveyors, and interested individuals.

Dave Rigney, the Michigan State Advisor from the National Geodetic Survey/U.S. National Oceanographic & Atmospheric Administration, will be present and obtain latitude and longitude values using G.P.S. procedures.

The committee has established a protocol to be followed in the search for, and recovery of, Indiana/Michigan State Line Mile Posts.

The committee stresses that at least two surveyors witness any recovery, one from Indiana and one from Michigan, simultaneously if possible. These persons are to be responsible for preparing the reports and recordation documents and then presenting the material to the local Peer Review group.

Precise Geodetic values for the monument, digital photographs of the site showing before, during and after views, affidavits (Michigan) and survey reports (Indiana) along with all research material and the appropriate official recordation form for each State shall be provided and included in a Mile Post dossier' for each State.

**...continued Page 19**



*Norman Caldwell, Recording Secretary of the Indiana-Michigan State Line Committee, on April 3, 2008 is shown very carefully pressing the 4" bronze cap into the wet concrete to remonument the northeast corner of the State of Indiana. Located immediately below the concrete-encased monument is a subsurface 4" bronze cap with the same markings set atop a 3" diameter pipe 12 inches in length. Image is courtesy of Duane Brown, P.E., L.S.)*



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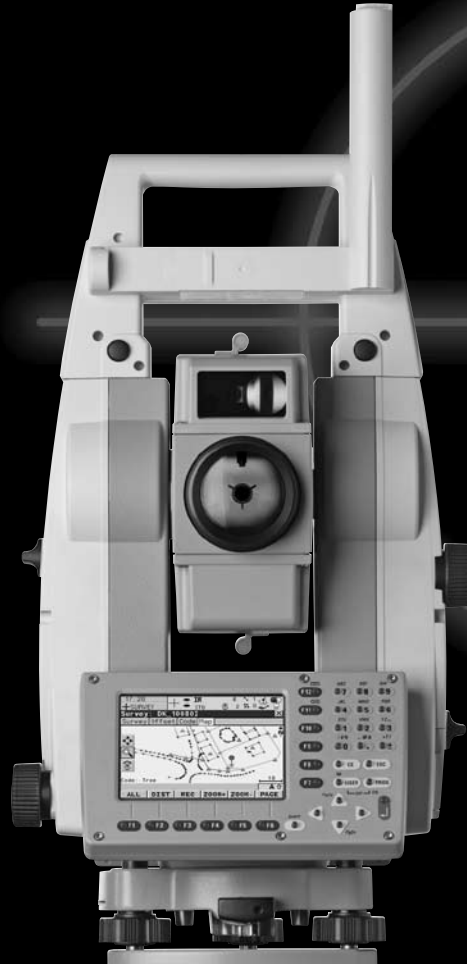
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## Historical Review

On the 8th day of October 1827, Eleazer P. Kendrick, a United States Deputy Surveyor under contract to Edward Tiffin, Surveyor General of the Northwest Territories, began a compass and chain traverse from a post at the southern extremity of Lake Michigan that was established by William Harris in July, 1817.

Kendrick was instructed to run and physically mark a line establishing the northern boundary of Indiana, which was located 10 miles north of and parallel with the previously surveyed Harris Line.

In compliance with his contract, Surveyor Kendrick traversed northeast along the Lake Michigan shoreline to a position he calculated to be 10 miles due north of the Harris line. At this latitude, he ran East 2 1/2 chains (165 feet) to a 10-inch diameter Pine tree at the top of the first sandbank and marked the tree as "Mile Post 0" for the Indiana and Michigan boundary line.

During the evening of 11 October 1827, Surveyor Kendrick made celestial observations and determined the local magnetic variation (from true north) to be 6 degrees and 10 minutes East. The magnetic compass was then adjusted and Kendrick, with his assistants, began running and marking a parallel of latitude easterly along the line in compliance with his contract.

Along the route, he would establish 105 Mile Posts at 1 mile intervals, make 11 celestial observations to determine changes in magnetic variations, cross the Galena, St. Joseph, Pigeon and Fawn Rivers (10 different crossings), cross 9 major lakes and struggle through many swamps and grassy wet prairies.

On the 13th, having just passed through a marsh area and Tamarack swamp, placing Mile Post 6 and marking the required reference trees, they would make camp. During the evening Kendrick would make another celestial observation to verify the magnetic variation. Finding it to be 6 degrees and 30 minutes, the compass would be adjusted and line continued.

14 October 1827, after crossing several swamps and 4 creeks, the post for Mile Post 10 was placed and marked. The crew camped that evening at the 6-foot wide stream just 100 feet from the Post and Kendrick again performed his ritual of making celestial observations. Being only 5 miles from the prior observations, the variation remained as 6\*30'.

The next day (15th) the crew pressed forward, crossing through a "wet prairie" with a flowing spring, 6 flowing streams, and two Tamarack Swamps (now known as "Davidson Lake" and "Spicer Lake") where, after marking an 18" Beech tree as Mile Post 16 the crew again made camp. Another set of celestial observations indicated the variation had changed to 6\*10'. For the previous days, the crew had struggled through extremely difficult terrain, making only about 5 miles per day (daylight to dark).

On the 16th, after making adjustments to the compass for a new magnetic variation, the crew entered higher ground and began making better progress. Two streams were crossed, along with the Indian Trail known as the Chicago Road, Clear Lake, and several open dry prairies until camping for the night on the west bank of the St. Joseph River near mile 23 1/2 and a north/south Indian trail.

(now Linden/Copp Road) Another celestial observation was made, finding that the variation had changed to 5\*50' east.

The surveyors may have 'laid over' a day at the River as the next entry is for 18 October where, after crossing the St. Joseph River and pressing eastward the crew made a dry camp near Mile Post 37. Kendrick observed for variation at this location, finding that it was now 5\*12' east.

On the 19th the survey crossed Cobus Creek and continued through Oak and Hickory timber, dry prairies, where, just east of Mile Post 50, they camped at the edge of a wet prairie and observing the variation to again be 5\*12' east.

In the next 5 days, they would run line, place Mile Posts and mark reference trees on 30 miles, cross Indiana Lake, Trout Creek, St. Joseph River, an unnamed Marshy Lake, Fish Lake, numerous wet marsh lands, Pigeon River, Fawn River (7 times), the Fort Wayne Indian Trail and make camp at Mile Post 80 near the western edge of a large swamp. Kendrick would make an observation at this camp on 24 October 1827 and determine the variation to now be 5\*10' east.

On the 25th, they would cross the Fawn River for the last time (40 feet wide), Lakey Marsh, a stream and Pleasant Lake where they would camp on the East shore near mile post 90.

By evening of 26 October 1827, the survey had crossed Hog Lake, several swamps, Lake George and progressed to the edge of a marsh east of Mile Post 97. The crew camped there for the evening then on the 27th began the last segment of the east/west line.

Upon reaching 105 miles, the crew walked south about 10 miles to find the previously surveyed intersection of the Harris line at the First Principal Meridian.

Upon verifying the location, the surveyors returned north, noting the Ohio/Michigan line at 5 miles +24.64 chains and extending the line to 9 Miles and 64.21 chains at the intersection with the north line of Indiana. This measurement was 15.79 chains (1042 feet) short of the intended 10 miles, or, for practical purposes, it was accepted that the northerly line of Indiana was parallel with the previously surveyed Harris line of 1817. The intersection was found by Kendrick to be at 104 miles and 49.55 chains on the Indiana/Michigan boundary or, 552,390 feet, east of the Pine Tree on the shore of Lake Michigan.

Surveyor Kendrick does not record the date he established the "Angle Point" but, a careful evaluation of his progress leads an observer to believe this occurred on or about 30 October 1827.

If correct, this results in the official recovery of the position by the Indiana/Michigan State Line committee to be 180 years and 2 days after it was established.

Data from the current Indiana/Michigan State Line "Summary Report" was evaluated, disclosing that the latitude near Mile Post "O" (41\*615') and the northeast corner of Indiana (41\*45.610) appear to be 0.005 Minutes different, or, about 30 feet. The alignment was reportedly run with a magnetic compass and adjusted by 11 celestial observations during the 16 days the 104 mile north line of Indiana were being surveyed.

A 2007 summary report is attached, indicating the quantity of Closing Corners and Mile Markers recovered to date, plus those that have had precise geodetic values determined.

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**Indiana/Michigan  
State Line Committee  
2007 Closing Corner Summary**

<b>COUNTY</b>	<b>Total Corners</b>	<b>Recovery as of 2006</b>	<b>Recovery as of 2007</b>	<b>Co-ords as of 2006</b>	<b>Co-ords as of 2007</b>
BERRIEN, MI	60	60	60	17	54
BRANCH, MI	43	11	11	0	0
CASS, MI.	44	41	41	13	34
ELKHART, IN	40	5	18	0	3
HILLSDALE, MI	2	0	2	0	0
LaGRANGE, IN	47	15	15	0	0
LaPORTE, IN	31	1	14	0	14
STEUBEN, IN	38	6	6	0	0
ST. JOSEPH, MI	51	11	11	0	2
ST. JOSEPH, IN	48	31	33	31	33
Mile Posts	110	5	13	0	12

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# MEET A MEMBER

by David B. H. Best, PLS, Indianapolis

Three presidents of the United States, George Washington, Thomas Jefferson, and Abraham Lincoln, actively engaged in the practice of land surveying before entering the field of politics. Of the three only Mr. Jefferson maintained a current interest in surveying throughout his some forty-five years of public service. Last November when the votes were counted the Indiana Society of Professional Land Surveyors discovered to its great pleasure that one of its members, Bradford R. DeReamer, an Indiana registered land surveyor, had been elected the mayor of Greenfield, Indiana. To find out what prompted him to run for political office we contacted Mayor DeReamer (“I’ll always be ‘Brad’ to my fellow surveyors”) at his office in the Greenfield City Hall. This is what we found out:

**Q:** You were elected mayor of Greenfield, Indiana last November and assumed the office in January. As an Indiana registered land surveyor and a member of the Indiana Society of Professional Land Surveyors what led you to seek the office of mayor?

**A:** As a typical entrepreneur I thought I could do a better job than the existing administration. I had retired by selling all of my businesses five years ago. I thought the area where I could give back most effectively with all of my experience would be as the mayor of Greenfield. I won the May primary by nine votes (officially after the recount it was seven votes). I won the November election by 266 votes. We definitely proved that every vote does count!

**Q:** Describe a typical day on the campaign trail.

**A:** Last year campaigning was a full time job. Each day I always tried to meet someone for a breakfast meeting, a lunch meeting, a Starbucks meeting, and a dinner meeting. It did get expensive paying for all of the meals and keeping my weight down from all of the eating.

**Q:** What is your greatest challenge as the mayor of Greenfield?

**A:** The biggest surprise when I took office was to find out the lack of proper training for department heads and the people in management positions. We had to hire several different consultants to come in for staff training in the areas of human resources regarding hiring, interviewing, disciplining, terminating, dealing with sexual harassment, providing good customer service, understanding personnel policies, creating job descriptions, and training on State and Federal laws and guidelines.

**Q:** What do you enjoy the most about being the mayor of Greenfield?

**A:** The most enjoyable part of being mayor is being able to truly make a difference and watching the changes in the department heads as they assume leadership roles that are needed to run the City.

**Q:** What do you like least about being the mayor of Greenfield?

**A:** I think it’s being micromanaged by the public and the local newspaper on every decision I make. The paper always has to look for the negative angle to the story and never the positive. The public is part of the CAVE (Citizens Against Virtually Everything) people. I work thirteen-hour days, six and a half days a week. There never seems to be any time to do or complete projects I really enjoy. I end up delegating the projects so that they can be completed. The last mayor only worked a few hours a day. I must be doing something wrong!

**Q:** Do you have political aspirations beyond your present office?

**A:** No! I think being mayor is the closest thing to running a pri-

vate business. Anything beyond that would not give me the daily satisfaction of getting something accomplished.

**Q:** By profession you are an Indiana registered land surveyor. What circumstances led you into this profession?

**A:** I worked for an engineering/surveying firm to get myself through college. After receiving a B.S. degree in mathematics from Purdue University, I taught high school math but was not happy doing that. I was then activated to active duty with the National Guard. While in Ft. Leonardwood, Missouri during boot camp, I called Professor Ken Curtis at Purdue and asked if I could come back and get a B.S. degree in surveying. He explained that Purdue would prefer that I get an M.S. degree instead of working for another B.S. degree. I then called my previous bosses asking for an honest opinion if I would make a good surveyor. The answer was positive. After serving my active duty in the National Guard I reenrolled at Purdue and got my M.S. degree in Surveying and Mapping. I then started my surveying career.

**Q:** What comparisons can you draw between operating a land surveying business and running a city the size of Greenfield?

**A:** Actually, it is very comparable to running a private business. That is the way I have been running the City so far. The mayor is like the president of a company. The ten department heads report to the mayor. We have 17,000 citizens to take care of with 190 employees and a budget of about \$13 million on the civil side of the City. We also own our own utility companies – water, electric, wastewater, and storm water – for which I am responsible as the mayor.

**Q:** What were the planks in your platform when you ran for mayor?

**A:** I ran on five issues: a. Replace the existing police chief; b. Establish thoroughfares; c. Revitalize Greenfield’s downtown area; d. Totally reorganize the animal control department; and e. Rid City government of the “good ole boy” system.

**Q:** Tell about your family, your interests, and your hobbies.

**A:** My wife Sharon and I have been married for 28 years. We have five children and 13 grandchildren. Last fall during the campaign a granddaughter was born on October 11<sup>th</sup>. Triplet grandsons were born on October 27<sup>th</sup>. And then I won the election on November 6<sup>th</sup>. It was a very busy fall last year. My interests and hobbies have always been more work. I try to get in some golf in the summer.

**Q:** After three months plus in office what do you consider to be your greatest successes?

**A:** My goal was to reduce the existing budget by one million dollars. So far we have reduced the commercial insurance premium by \$100,000. We raised ambulance fees to increase income by more than \$150,000. We reduced the payroll by \$411,000 by initiating a reduction in the workforce. We are investigating ways to reduce the major-medical insurance premium that should result in a substantial reduction. We have found additional savings by reducing the use of take home vehicles, cell phones, internet usage, overtime, and summer help. I consider the appointments of the fire chief, police chief, the animal management director, and the existing department heads to be a real success. These people have all stepped up and taken charge of their departments very effectively. They are learning how to efficiently manage their departments to increase productivity and to be more fiscally responsible.



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# **How safe are Your Crew Vehicles?**

**By Ronald E. Koons, RoSaKo Safety**

When we complete a Written Safety program for Surveying/Engineering firms one of the key elements is the safety audit. As a part of the safety audit I always check out the field crew vehicles to make certain they are in good working condition. By good condition I don't just mean mechanically, but are they user friendly? Your crews spend a large portion of their time each year in their vehicles. It is important to make certain the vehicle is adequately outfitted for the jobs they will be performing and the conditions they will encounter. Let's cover the basics and see how your vehicles stack up in the user friendly department.

One of the first items that may seem basic, but I see problems with at many firm's is how many employees will be riding in the vehicle. I see today's field crews anywhere from one to three workers on a regular basis. A regular pickup truck with two bucket seats may be fine for one or two workers, but is really problematic for three. A situation that I see many times is a two-seat van with three workers traveling to a jobsite. The golden rule is that there should be no more employees in a vehicle than you have a DOT Certified seat in which they can sit and use a seatbelt. Drywall mud buckets, instrument cases, bags of concrete mix, and folding lawn chairs don't count as appropriate seats.

Smoking in field vehicles is an issue that flares up tempers in many companies. There are both health and safety issues involved with smoking in a vehicle. The health issues have been well covered by the media for over 40 years. While an individual may have the right to smoke as he or she wishes, your company has the right to determine if you will allow smoking in a company vehicle. While a one person crew may not bring up second hand smoking issues, the two and three person crews most certainly can breed problems. Many crew members will not say anything to a fellow crew member about smoking while they really hate to be exposed to the smoke. They don't want to offend the other workers or start an argument. Aside from the health issues come two other points. The first is purely safety. A loose cigarette in a vehicle can start fires and if you have any flammable or combustible liquids in the passenger compartment it can be downright dangerous. Vans are particularly dangerous since there is no good place to carry your flammable liquids without exposing workers to a hazard. While not a safety issue, in the long run you also need to look at the trade-in or resale value of your field vehicle. Many dealers now tell me that they give less trade-in value for a vehicle that has obviously been exposed to a lot of smoking. Getting the odor out costs time and money and is not always totally possible. Many drivers will not purchase a vehicle that smells of smoke.

CDL required vehicles such as semi trucks and many delivery vehicles are required to do daily pre-operational vehicle checks. We can learn from the professionals and perform a pre-operational check on field crew vehicles each day. Many times in our self serve gasoline society we neglect to check even the basic fluid levels. How long has it been since the parking brakes were checked on your vehicles? A simple list with boxes for checking off the items can be an invaluable tool to keep vehicles in top operating condition. Items as simple as a brake squeal can be noted and may prevent braking problems for the next person who drives a vehicle. Checking the battery terminals for corrosion may save a jump start down the road which can sometimes lead to dangerous sparking of a battery. A vehicle in top operating condition is a safe vehicle.

Indiana just changed it's laws to require the wearing of seatbelts in pickup trucks. There is just too much data to prove that seatbelts prevent some serious injuries and many times may even save a life. It should be a company policy that all employees wear seatbelts whenever their vehicle is in motion or on a public highway. Just two weeks ago I was on a rental car shuttle bus from the Raleigh airport when I overheard a conversation between two people from Indianapolis. One of the people said that he had been in an accident a couple of years before in a relative's van. He was in the passenger seat and when he went to fasten the seatbelt it was caught behind the seat. The driver asked if he should stop and he said he would just ride without the seatbelt. A few minutes later a young lady pulled in front of their van on I-69 and they hit her vehicle doing over 60 mph. The driver had very minor injuries and the passenger had serious injuries. He told everyone that taught him a lesson and now he never rides or drives without fastening his seatbelt. Emphasize the importance of seatbelts to all of your employees.

We can't forget the basic safety items of a fire extinguisher and first aid kit. You must have both in every vehicle. A 5- pound abc extinguisher is always my recommendation for the minimum size. A gasketed first aid kit helps keep dust and moisture away from the included first aid items. Remember that gloves need to be changed out at least once per year. Latex gloves can deteriorate at temperature extremes and may not properly protect a worker when needed. I also recommend that you include some of the other basic items that can help in the event of an emergency. Jumper cables, a cheap emergency blanket, three triangles or other safety devices, a roll of duct tape and a few basic tools may be invaluable when problems occur. Checking your vehicle for the tools to change a flat tire should be part of that daily pre-operational check as should be occasionally checking the pressure of the spare tire.

The last major item is how your tools, equipment, and other materials are stowed in a vehicle. Always make sure that any tool chests or carriers are secured to the frame of the vehicle or are some how arranged so they can't come loose during an accident or sudden stop. A rebar flying through the air at 70 mph can be a deadly projectile. The tops of all tool cabinets need to have a lid or some way to prevent materials from becoming dislodged during sudden braking events. Everything should have a place in your storage system and everything should be in its place. Even spray paint should have an appropriate location so other materials can't puncture or otherwise damage the cans. There are many ready-made manufactured inserts for vans and pickup trucks. Some are made specifically for surveying applications. If you make your own box consult with your employees and let everyone have input on what is needed. Your field crew workers know what they need and may have better input than the owner of a firm. The storage needs may have changed since your were in the field full time. All vans should have some type of protection shield between the storage compartment and the passenger compartment. Even pickup trucks may need a screen over the window of a cap to prevent projectiles from penetrating the window.

I hope this has given you an idea of some basic vehicular safety items. Remember, the #1 cause of death in the workplace is motor vehicle accidents. With the amount of driving your employees undertake in a year it is critical they are properly protected.

## CALENDAR

### May 17, 2008

ISPLS BOD meeting, 9:00 a.m., Headquarters, Indianapolis

### June 21, 2008

ISPLS BOD meeting, 9:00 a.m., Vincennes University, Vincennes

### July 11, 2008

State Board of Registration meeting, Room W072, Indiana Government Center South, Indianapolis

### August 9, 2008

ISPLS BOD meeting, 9:00 a.m., Headquarters, Indianapolis

### September 14, 2008

State Board of Registration meeting, Room W064, Indiana Government Center South, Indianapolis

### September 20, 2008

ISPLS BOD meeting, 9:00 a.m., Headquarters, Indianapolis

### September 20, 2008

South Dakota Society of Professional Land Surveyors 25th Anniversary Celebration, Mt. Rushmore National Memorial. For more information contact: Janelle Finck, (605) 348-1538 or janelle.fiskls@midconetwork.com

### November 8, 2008

ISPLS BOD meeting, 9:00 a.m., Headquarters, Indianapolis

### November 9, 2008

State Board of Registration meeting, Room W064, Indiana Government Center South, Indianapolis

### December 6, 2008

ISPLS BOD meeting, 9:00 a.m., Headquarters, Indianapolis

### January 14, 2009

ISPLS BOD meeting, 9:00 a.m., Marriott East Indianapolis

### January 14-16, 2009

ISPLS 57th Annual Convention, Marriott East Indianapolis

## WELCOME NEW ISPLS MEMBERS

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Keith Ethridge - Student	Todd Nordyke - Associate
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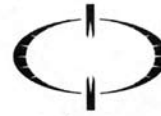


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