



St. Louis Metro A.S.P.E. Chapter 19

The Gateway Estimator

Volume 11 Issue 4 ■ January 2009

www.stlouis-aspe.org

2008 - 2009

Officers and Board

Board Meetings

First Tuesday of the month at 5:30 p.m.

Officers & Directors

Brad Davis, Musick Construction - President
Mark Uthe, Biddata LLC - 1st V.P.
Bob McCann, Hallmark Stone - 2nd V.P.
Colleen West, N.B. West Contracting - Secretary
Jim Stukenberg, GRS Construction Co. - Treasurer
Matt Ford, Universe Corporation
Bob Partl, Jarrell Contracting
Rich Ullrich, Everest Estimating Services
Fred Waldrop, Murphy Company
Kyle Hoefel, Bazan Painting
Ivan Beskorovany, Henges Interiors
Paul Hanson, McCarthy
Dan Davenport, McCarthy - Past President

Committee Chairs

Membership

Mark Uthe 314-434-0444

Education

Brad Davis 314-781-7005

Scholarship

Bob Partl 314-291-0100 x157

Awards

Matt Ford 314-439-2800

Newsletter

Mindy Funk 314-596-7695

Certification

Fred Waldrop 314-997-6600

Important Numbers

President

Brad Davis 314-781-7005
BradD@musickconstruction.com

Executive Director

Mindy Funk 314-596-7695
mindyfunk@stlouis-aspe.org

From the President



With the construction market tightening up many contractors are hard-bidding projects that they might not have been interested in a year ago. We all have to find ways to fill the backlog and be more competitive. I

think this is a fitting time to bring back the Bid Day Simulation, presented by Becky Wall-Schultz, Vice President of Preconstruction at Paric Corporation. The simulation will be at our February 26th dinner meeting at Pujols 5 in Westport. The Bid Day Simulation is a fun and enlightening crash course on the bid day process. Any general contractor knows that bid day can be stressful and at times chaotic. For an owner, architect or specialty contractor this is your opportunity to experience the fun first hand. In years past this is a well-attended event so be sure to sign up early. To pre-register, send an email to Cyndi Walker at cyndiw@golterman.com. Please pass this information on to your architects and engineers!

Don't forget about the "Gotta-Be-There-To-Win" prize. Last year Ivan Beskorovany of Henges Interiors won \$500 cash. Thanks for having great attendance Ivan!

With the Highway 40 closure we've decided to hold our dinner meetings at Pujols 5 in Westport Plaza. We appreciate the service from Pat and the crew at Maggie O'Brien's over the past few years. Hopefully the Westport location will better serve the membership. Breakfast meetings will still be held at the Original Pancake House in Chesterfield. Let me know your feedback on these locations. We're open to suggestions.

From the President

Continued from Page 1

Planning for the 2009 ASPE National Convention in St. Louis is under way. The Convention will be held at the Sheraton City Center downtown on July 22nd, 23rd, 24th and 25th, and the President's Party will be at the City Museum on Saturday night. We still have some fundraising yet to do. If you, or your company, are interested in being involved with the convention, feel free to contact me. We have some great opportunities, big and small, for sponsorship and recognition.

I'd like to take this opportunity to thank Joe Graney, our Central Regional Governor. Joe's term is ending this year. We appreciate your service and leadership, Joe!

Let us know about what's going on with you. Have you been promoted? Did you get LEED Accredited? Have you spoken or presented to a class or group? Are you out of work? Maybe you ASPE Chapter can be of service. I'd love to hear from you.

Do you have any other bright ideas? How about sharp words of criticism? Let it fly; I'm all ears. You can reach me at 314-781-7005 or bradd@musickconstruction.com.

Take care and good luck,

Brad Davis
Chapter President

Meet A Student Member

SUZANNE SHAFFER

Happy January to all ASPE members! Starting off this year I would like to introduce myself as a new-comer. My name is Suzanne Shaffer and I am an estimator for The Korte Construction Company, located in Highland, IL. My construction career began subsurface testing for Shively Geotechnical, almost four years ago. I have worked my way through college and just graduated this past December from SIU-Edwardsville. I was also this past year's recipient of the ASPE scholarship award.

I started in the Survey department part time in August of 2007. I then moved to the preconstruction department and completed my internship the summer of 2008. I began working at The Korte Company full time December 2008.

The Korte Company is a general contractor that has completed work in 38 states. In my short time here thus far, I have worked on the USPS Distribution Center, Richmond, VA, NAVFAC Hangar Renovation, Whidbey Island, WA, and just finished up working



on the West Point Motor Pool Facility, West Point, NY. I am currently working on a small project located in St. Louis, which will be the first project I am the lead estimator. This is a great learning opportunity for me and will certainly add to my knowledge of estimating.

Now, for a little of my own personal history. I was raised in Ellis Grove, IL on my family's hundred acre farm. I enjoy spending time with my family and going to my cabin on weekends. I also enjoy going to NASCAR races, I will be going to the Las Vegas and Atlanta Motor Speedways this year. I have two great yellow labs, Annie and Maggie. The best two duck hunters I know. I currently live in Godfrey, IL with my significant other, Steven.

I can not wait to attend my first ASPE meeting as a full time estimator, and to meet more of my fellow members.

Chapter 19 Meeting Prepay Option

Chapter #19 is now offering all ASPE members an option to prepay for all eight 2008/2009 monthly meeting dinners for \$240.00 (\$30.00 per meeting). Some members have requested this option as a way to cut down on the number of times they must submit for re-imbursement from their employers. Your employers may like this option, also, as it will cut down on the number of checks written. This option is available only to ASPE

members in good standing. If you have not paid your renewal dues, please get them up to date. If you have not joined ASPE yet and would like to take advantage of this payment option by joining our organization, call Mark Uthe at 314-434-0444 with your name, company address, phone number and e-mail address or fax number to receive a membership application.

If you are current in your membership and wish to prepay for this year's meetings, fill out the form below and mail with your check (made out to ASPE) to:

ASPE c/o GRS Construction
Attn: Jim Stukenberg
808 S. Main, Suite D
Columbia, IL 62236

2008/2009 MEETING PREPAYMENT

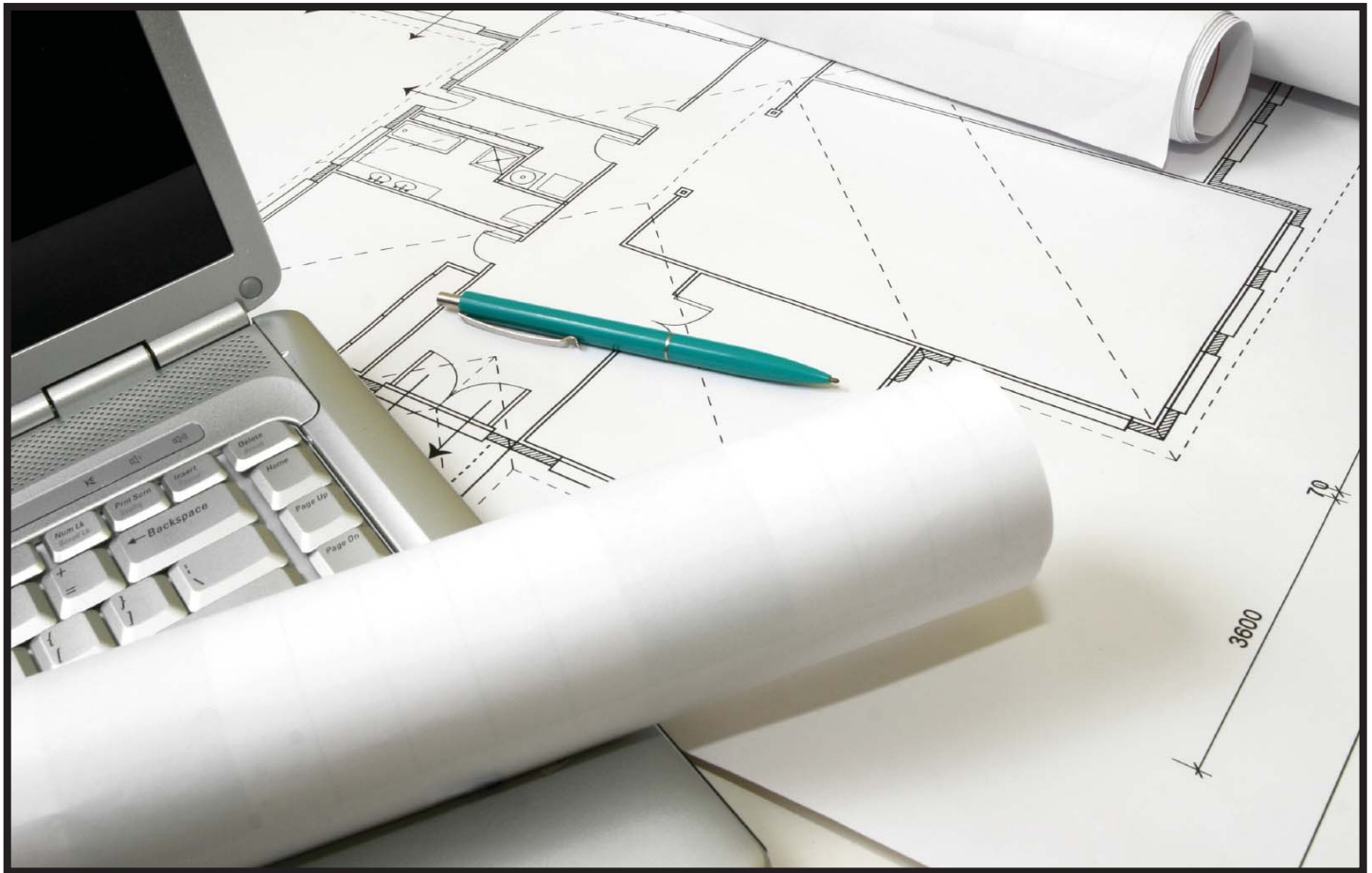
Enclosed please find my payment of \$240.00 for payment of all eight ASPE meetings offered this year.

Name: _____

Company: _____

E-Mail Address: _____

Although you are paying for all eight monthly meeting, please RSVP to Cyndi Walker each month so we have an accurate reservation with Maggie O'Briens. We look forward to seeing you at our meetings this year.



BID DAY SIMULATION

by Rebecca Wall-Schultz,
Vice President of Preconstruction, Paric Corporation

The bid's due. The rush is on to assemble all of the numbers and submit by the deadline. What assumptions should you make for incomplete plans? How do you evaluate bid numbers from subcontractors? What's excluded? What should you do about extras and alternates?

Experience the throes of submitting a bid on bid day. Assess what you can do in your organization to improve your next project with better bids.

THURSDAY, FEBRUARY 26

Where: PUJOLS 5 WESTPORT GRILL
342 Westport Plaza

Time: 5:00 p.m. Networking
6:00 p.m. Program
6:45 p.m. Dinner

Members: \$30.00 **Guests:** \$35.00

Reservation Form
on Next Page

hosted by:
American Society of Professional Estimators
St. Louis Chapter 19

Bid Day Simulation REGISTRATION FORM

Reservation Deadline: Friday, February 20 at NOON

ASPE: To register, contact **Cyndi Walker** by faxing the reservation form to **314-781-3836** or by mail:

Cyndi Walker
Golterman & Sabo
3555 Scarlet Oak Blvd.
St. Louis, MO 63122

Members: \$30.00
Non-Members/Guests: \$35.00

- * Please mail the check, payable to ASPE, with registration or pay at the door.*
- * Please make cancellations by RSVP date or you will be invoiced.*

Name _____

Email _____

Company _____

Guest's Name _____

Company _____



THE
BASICS OF
COMMERCIAL
HVAC
SYSTEMS

Tuesday, February 10
8:00 am - 12:00 pm
Construction Training
School of St. Louis
6301 Knox Industrial Dr.
St. Louis, MO 63139

Presented by:
HVAC Training Institute

in Conjunction With:
ASPE St. Louis
Chapter 19



"The Basics of Commercial HVAC Systems"

**Tuesday,
February 10, 2009
8:00 am – 12:00 pm**

*Construction Training
School of St. Louis*
6301 Knox Industrial Dr.
St. Louis, Missouri 63139

**Continental breakfast will be
served at 7:45am**

4 hours of AIA *Health,
Safety & Welfare & SD*
credits available!

**Class registration is
\$199 per person.**

**Request a registration form or
download one from our website.**

**Please pay with check in advance:
*The HVAC Training Institute
4010 Red Grape Drive
Raleigh, NC 27607***

This half day program created especially for **Construction Professionals** will provide you with a broad understanding of the Basics of Commercial HVAC Systems. AIA Continuing Education Credits available.

Class Topics

- How to heat and cool building air
- How air is delivered to the space
- How to ventilate a space
- Why did they pick *that* system?
- How to read "M" drawings

- Common HVAC systems and how they work
 - Constant volume package units
 - Constant volume split systems
 - Variable air volume (VAV) rooftop systems
 - Water source heat pumps
 - 4-pipe systems

- What the GC missed on bid day!
- Did your superintendent see this??
- Common value engineering ideas
- Green HVAC – LEED points with the HVAC system

Call today or visit our website, for more information concerning this upcoming class or to schedule training for your company!

919-510-4061 voice – Chris Grawburg

919-896-6189 fax

www.hvactraininginstitute.com





"The Basics of Commercial HVAC Systems"

Registration & Payment Form

Tuesday

February 10, 2009

8:00 am – 12:00 pm

*Construction Training
School of St. Louis*

6301 Knox Industrial Dr.
St. Louis, Missouri 63139

Continental breakfast will be served at 7:45am

4 hours of AIA *Health, Safety & Welfare & SD* credits available!

Class registration is \$199 per person.

Request a registration form or download one from our website.

Please pay with check in advance:
*The HVAC Training Institute
4010 Red Grape Drive
Raleigh, NC 27607*

Company Name: _____

Address: _____

Phone & Fax: _____

Names of participants	AIA Number (if applicable)	Cost
1st		\$199
2nd		\$199
3rd		\$199
4th		\$199
FREE		FREE
Total :		\$

Make checks payable to: The HVAC Training Institute

You will receive a faxed confirmation of your registration within one week!

Call today or visit our website, for more information concerning this upcoming class or to schedule training for your company!

919-510-4061 voice – Chris Grawburg

919-896-6189 fax

www.hvactraininginstitute.com



Life Safety Issues: *Firestopping*

by Rich Ullrich, CPE LEED AP
Everest Estimating

The most important issue in the design and construction of the built environment are Life and Safety Issues. Current building codes are written and enforced to protect and save lives.

As an industry, both in design and construction, art and science we need to be ever so vigilant in protecting life.

As estimators and construction managers, where we are consistently tasked with delivering a quality product on a challenging budget, codes should never be taken lightly and compromise never a consideration. In these difficult economic times we often question how our competitors can possibly deliver everything per plans and specs for their quoted price. We rarely know the answer to that question. I'm not sure how they do it, but what every general contractor, sub-contractor and design professional ought to know is that the responsibility for design and installation deficiencies rests squarely on the construction professional regardless of government inspection, review and approval.

Building fires and fire deaths occur daily in the United States. Designers and contractors need to be aware of their potential liabilities, if life safety issues are not properly provided. If a contractor fails to install a product according to the manufacturer's specifications, the contractor and sub-contractor could face significant liability for both property damage and personal injury.

There is legal precedent. Building professionals and ALL contractors should study the applicable building codes and be certain to include all requisite firestop measures. Past legal cases tell us that a contractor's violation of building code requirements WILL lead to liability in the event of fire damages. Recent legal history also says that relying on building official(s) or the fire marshal's oversight and approval for compliance is misplaced. Therefore,

Rich Ullrich is a Certified Professional Estimator and a LEED Accredited Professional with Everest Estimating Services. Everest provides pre-construction services to Owners, Developers and Design Professionals for Commercial and Industrial type projects. Rich can be reached at richu@EverestEst.com or (314) 306-7535. Comments Encouraged.

building professionals should carefully perform and inspect their work to comply with all known codes and regulations.

While we cannot prevent all building fires, fire safe building measures should minimize loss of life and property damage. The greatest risk to occupants and the leading killer in fires is smoke and toxic gases. While fire protection systems provide suppression, they do little to prevent the migration of smoke. Fire alarm systems provide detection but they are not truly effective unless the people smell smoke or are told to exit. Most people ignore fire alarms or walk around and ask what is that? Smoke can travel 120 to over 400 feet in a minute and most fire deaths occur away from the fire's room or origin. Nearly three quarters of all fire deaths are caused by smoke inhalation. Most survivors caught in a fire could not see further than 12 feet in front of them. Therefore containing smoke & gas is critical in fire protection and life protection.

Areas that allow fire and smoke to spread are unsealed floor & wall joints, unsealed pipe and duct penetrations, unsealed cable penetrations and doors and windows. By containing the fire and the smoke and the gases to the room or origin for enough time, you give the occupants precious minutes to exit, and the firefighters time to do the job they do so well. The IBC, International Building Code is one document that most states have adopted, providing consistency in how firestop issues should be addressed.

Compartmentalization is a commonly applied principle for fire safety. It is restricted by dividing a building into separate compartments with fire resistive walls and floors, increasing the odds for adequate escape routes. The components in fire rated compartments are fire-rated assemblies, fire-rated doors, air ducts with fire dampers and firestop systems.

Life Safety Issues

Continued from Page 10

Firestopping then involves providing a measure of fire containment to the walls and floors that include all joints, gaps or penetrations made during construction, both vertical and horizontal in rated building systems.

Firestop Systems are single materials or a combination of materials used to create a firestop assembly capable of limiting the spread of heat, fire, gases or smoke through the opening in a wall or floor. Firestop products do not have fire ratings. Only firestop systems get fire ratings.

Smoke Partition is an assembly with no rating designed to resist the passage of smoke.

Smoke Barrier has a 1 hour fire resistance rating also designed to resist the passage of smoke.

Fire Wall is a fire-rated partition that runs continuous from foundation up to or through the roof. Fire walls have structural stability to allow collapse of building on either side without the wall collapsing. Fire Barrier is a vertical or horizontal assembly that restricts the spread of fire. Barriers go from floor to underside of the structure above, continuous through concealed spaces, intermediate fire blocking as required.

Fire Partition(s) are a vertical assembly that has a fire resistance rating. Partitions go to the underside of the structure above.

In existing buildings, you can identify fire rated walls by the walls that may be thicker, where concrete block construction is used in non load bearing conditions. Also you can verify fire walls by any wire glass in the wall or by looking for the door plates on the buck side of doors.

As construction estimators our challenges have always been to identify, quantify and qualify all building pieces and parts, components and assemblies. To do so within an acceptable range of magnitude at the level of the estimate requires education and experience. Learning to accurately price Firestopping systems can be as complex as pricing the various interior partitions found on the partition schedule.

Firestopping systems have many factors that affect performance and pricing. Variables include size and type of penetrating item(s), size and shape of opening(s), size of annular spaces, floor and wall types, ratings and thicknesses. An accurate quantity per type of system is always important but location, access difficulty and distance off the floor can greatly affect labor productions.

If you are uncomfortable in quantifying and pricing firestopping systems, seek the help of a Qualified Specialty Contractor. Firestop Contractors are Specialty Contractors that are knowledgeable in the selection and install of firestop systems to meet code, Architectural, Owner and Insurance specifications and requirements.

UL, Underwriters Laboratories, Inc. has a Qualified Contractor Program. The UL Qualified Contractor Program assesses installation contractor firms that install fire resistance materials and systems. Firestop and Spray-Applied Fire Resistive Material (SFRM) contractors can differentiate themselves in the marketplace through this third party assessment. UL has been classifying firestop and SFRMs for many years now.

One suggestion is to enlist the assistance of a Firestop Contractor if the planned facility has a 24 hour use, such as a facility that has a bed in it; Medical, Skilled Nursing, Hotel, Student Housing, Assisted living Facility etc.

A single source Firestop Contractor is always a preferred method of delivery for consistency and single source responsibility. One contractor can take care of all firestop assemblies for Drywall, Glass & Glazing, Plumbing, HVAC, Fire Sprinklers, Electrical and Low Voltage requirements.

We all need continuing education on life safety issues. As a building professional do not underestimate the importance of your due diligence in addressing such matters of detail.

Do not neglect! The health and well being of your business and livelihood may very well be at risk.

2008 ASPE Regionals Recap

by Ivan Beskorovany & Jim Stukenberg

October 16th, 2008

It was a beautiful fall afternoon as I waited to board my flight at Lambert International Airport. It was 61 degrees and the skies were clear. I was in a particularly good mood because minutes before, I was able to enjoy a nice long smoke at the terminal smoking area. My designated smoking area was a mere 11 feet away from my boarding terminal and I knew from here on out: this was going to be a wonderful day. As I stood at the back of the line, I noticed my boarding pass was curiously marked B-1. As I looked around and waited, I was soon delighted to realize that this meant I could go to the front of the 2nd boarding line. Apparently, in the hierarchy of my fellow passengers, I was ranked #1 of the non-priority boarders. I could only grin shamelessly as I contemplated all of the possible privileges and powers that were about to be bestowed on me.

Low and behold, I was entitled to a majestic meal of peanuts and a really cold bud-light. I did offer to purchase the beer, but the stewardess (no doubt smitten with my mischievous eyes and warm smile) told me that, "This beer is on us." Then, she handed me an extra packet of peanuts which I was sure to hide from my jealous fellow passengers. As my flight descended, I could only contemplate what was in store for my grand adventure. As I was ushered off the plane I headed for the luggage rack. I quickly noticed that there were no specially designated smoking areas nearby. I figured, "Why Not", and I headed outside to grab a quick smoke. As I walked through the automatic door, I was nearly knocked to the ground by the Arctic blast of wind that ripped through my body like thousands of shards of sub-arctic ice-needles. I quickly assessed the temperature and decided that it surely must be near -100 degrees and that I had just landed somewhere in the far reaches of Antarctica. I quickly ran back inside for fear that I may lose my extremities.

Once I had everything in stow, I whistled for a cab and when it came near the License plate said "Fresh" and it had dice in the mirror. If anything, I could say that this cab was rare but I thought nah, forget it, "Yo homes to my hotel." I pulled up to the front about seven or eight and I yelled to the cabbie "Yo homes, smell you later." Once I was all checked in and I had been fully introduced to the Women's Swedish Swimsuit Team, I capped the evening with a pricey room-service dinner, a couple of cold bud-lights, and a very convenient viewing of Hancock (which was still playing in theatres) on my in-room big screen T.V. All in all, I can say that Day 1 was awesome if you forget about the horrible and expensive taxi-ride and the arctic temperatures.

October 17th, 2008

On Day Two, we were treated to several interesting seminars by an assortment of leaders in the estimating and construction industry. This was all done following an excellent breakfast of fresh fruit, eggs, bacon, sausage, pastries, and some awesome hash-browns. All of which, we washed down with a variety of different cold juices and hot coffee.

A presentation was held by Bob Banka with Ohio Ready Mixed Concrete Association on pervious concrete. Bob Banka is the President of Concrete Solutions, Inc., a consulting firm to ready mix producers and contractors. Bob has been in the ready mix industry for 28 years as a producer, contractor, and consultant. A founding member of the Tennessee Ready Mix Concrete Association, Bob has been in the development of and education about pervious concrete since 1990.



Bob Banka, President of
Concrete Solutions, Inc.

Regionals Recap

Continued from Page 12

Using this experience, Bob helped create the first certification program for pervious concrete contractors in Oregon in 2003 and helped fuel the pervious concrete market in Washington State and Oregon. His current focus is in promoting the use of pervious concrete in the Northeast and Midwest where harsh winters are a concern. He recently oversaw the installation of a 7,500 square feet pervious parking lot in Williston Virginia using various technologies to determine which one worked better than the others.

At the regional meeting in Cleveland, Bob discussed its history starting in Florida to its expansion into Georgia with its failure due to the regional dirt sub grade differences from Florida and to its acceptance in municipalities for road construction. New research and design was developed to combat the problems in Georgia and has now been approved for colder climates.

With the ongoing water retention requirements, permeable concrete has been reviewed to help in water retention thus reducing the retention basin areas. It does require a bit of maintenance over conventional concrete or asphalt paving. He also stated that the pervious concrete acts as a filter for the rain water thus eliminating oil, antifreeze and other impurities before it seeps back into the aquifer below grade. For additional benefits and information of pervious concrete, you can go to the websites of: www.perviouspavement.org and www.ohioconcrete.org.

Another great presentation was from Steve Warfle with Insite Software.

I have included a copy of Steve's newsletter to better explain the program and what was discussed. His software package and presentation was first class. If you have not had the luxury of seeing this amazing software package, please contact Steve for more information and in-house demonstration.

October 17th, 2008 – Continued

After the presentations were complete and we were treated to a nice lunch of fresh cold cuts and some tasty little deserts, we headed off to the Cleveland Museum of Art. The tour of the museum was provided by the local contractor that was working on the additions and renovations.

We toured the remodeled original structure, which was constructed in 1912. The building had an extensive amount of marble and stone restoration. The roof structure was completely removed and rehabbed to include the original designed opaque roof structure. The guide indicated they had to build a temporary roof structure to allow for the remodeling of the structure.

An interesting small addition was done out of structural glass to house special art objects. It was three sides of structural glass with a glass roof. No steel was used in holding the roof structure. The tour guide indicated that all the glass came from Germany. Our guide also went into the details of the schedule and extensive phasing required for the project which started in 2006 and will be completed in 2012.

October 18th, 2008

Day 3. After our delicious breakfast, we began by giving formal introductions of all the present members. We each discussed our chapter's accomplishments, member status, and our own personal backgrounds. Then we got down to the meat and potatoes (not literally, since we had just had that delicious breakfast).

Regionals Recap

Continued from Page 13

I won't go into the complete details of the meeting, but I will discuss some of the things that I felt were of interest. We discussed the ASPE certification program and how it had just been accredited. Everyone was excited by the prospect of this and how it could help elevate our members and our chapters. A few people brought up the fact that several states were implementing bills that would require most federal, state, and municipal projects to receive preconstruction estimates from at least one C.P.E. Someone from the Cleveland chapter also mentioned that in Ohio this is already a part of the criteria and that the awarded General Contractor is also required to have a C.P.E.. We all agreed that this is something that the National Board should pursue with state and federal legislators to make this mandatory throughout the country.

After that, we had an interesting round table discussion on chapter participation and what everyone was doing to try and elevate member participation at monthly meetings. Several ideas were discussed and I heard some very interesting ideas. One chapter stopped holding evening meetings every month. In lieu of those meetings, they began having 1 hour luncheons at a local contractor's board room. They would bring in sandwiches and soda and charge a reduced price. Each meeting would have a key-speaker and they would hear the presentation while they ate. For that chapter, this has helped increase their member participation greatly. Many of the chapters were intrigued by the idea of our breakfast meetings and said they would also try that out. Another Chapter found that by changing the venue every month, they increased attendance very well. All in all, I think the main consensus was that by mixing things up and having a good selection of topics and speakers, this was the way to increase attendance for the monthly meetings.

As I said earlier, I won't try and rehash everything that was said at the business meeting but I did want to hit the key areas that interested me. After all, it was a 4 hour meeting and I have certainly bored most of you to tears already. I will say though, that despite the cab rides and the freakishly cold weather...I truly enjoyed my experience in Cleveland. I came away with a much better understanding of our organization. I was also exposed to many new ideas and perspectives about, not only estimating, but about the industry, economy, and the importance of our careers as estimators. Oh, and I also got to go through a corn maze in the middle of nowhere. Nothing says Ohio like a good old corn maze.

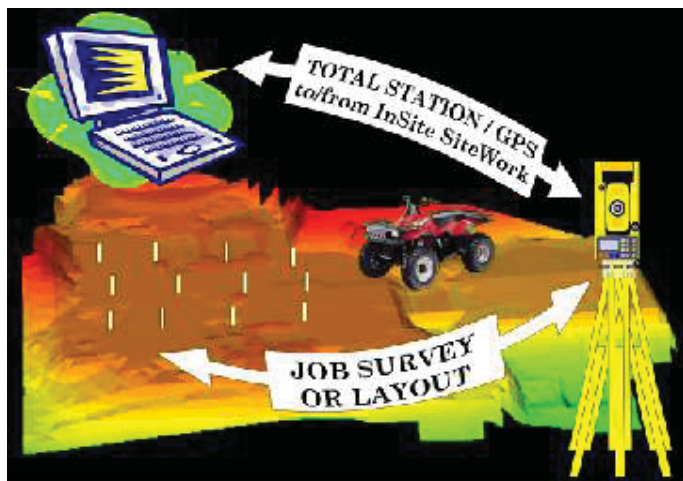
Ivan Beskorovany
Henges Interiors, Inc.

Editor's Note: Some credit should go to Jim Stukenburg for his written contributions. All parts of this article that you find corny, offensive, or boring should be directly credited to Jim.

FieldLink[™] 101

the basics

What is it? InSite SiteWork's FieldLink allows import and export of elevation data to survey and machine control equipment. The first version of FieldLink was released in August of 1996. It allowed field shots to be imported into InSite for grade verification, and digitized data to be exported to a total station for rough grade layout. Version 5.0 adds the ability to use accurate CAD based layout data for precise placement of



curbs, building corners, etc. and export a triangulated surface for machine control. The following is a general guide on how this technology can benefit your company.

Data Collection and Layout Equipment

The basic piece of equipment that can measure and collect data for precise placement is the **Total Station**. A two-man crew is used. During data collection, one of the crew moves a prism rod to a spot to be recorded, and the other person uses the Total Station to record the data. For Layout, the total station is loaded either directly from InSite SiteWork or through an intermediate piece of hardware called a data collector. Each individual layout point is retrieved, and the prism rod person is instructed, usually by a two way radio, where to move to set the point, or collect a point.



A **Robotic Total Station** allows the same accuracy as a total station in a one-person solution. The Total station tracks the prism rod automatically, some at speeds up to 45 miles an hour. The controls and the coordinate data display are at the prism rod. Because of the high tracking speed and instantaneous readout at the prism rod, this method can collect and layout points much faster than a two-person system. Traditional and Robotic Total stations require a line of sight to be maintained between the total station and the prism rod.



GPS (global positioning system) units are one person solutions that can also be used for data collection and layout. Because they do not require a line of sight, they are more usable in a situation where line of sight is difficult to maintain, such as before clearing. With increasing accuracy, and decreasing prices, these are becoming more popular.

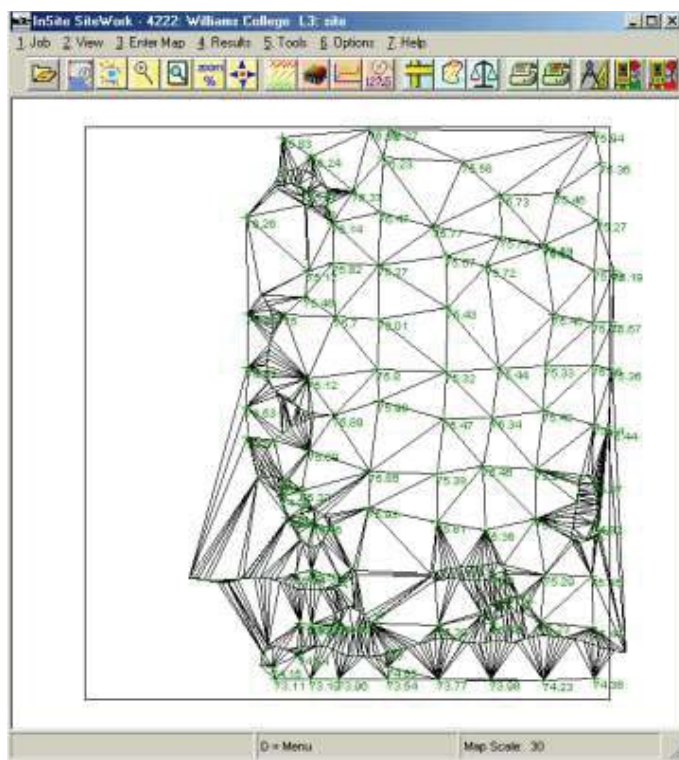
Importing Data for Site Verification

Imagine being able to collect enough data points in a short time to verify the existing topographic data on a bid before bid day, or before construction. A robotic total station or GPS unit allows data to be collected very quickly by one person. A popular method is to mount the GPS unit or prism rod onto a pickup or ATV and drive up and down the site collecting points.

To import this data into InSite SiteWork, record at least two spots out in the field that you can identify on the site plan. Record enough points to accurately reflect the topography of the site. Download the collected data



into your PC, and import this data into InSite SiteWork by indicating the file name, and which points to use for alignment. Digitize the location of the points on the site plan, and all of the rest of the points are automatically imported. InSite then triangulates the site, and creates a



surface model into whichever layer (existing or proposed) you choose. Here are a couple of examples of how you could use this feature:

- Use the job copying Utility to copy your supplied existing grades to a new job. Import the shots you took into proposed. The Cut & Fill Shading will show you the difference between the supplied topo and your actual field data.
- Jobs done in stages such as mining reclamation and landfills can benefit from this technology. At the start of the project, import the first set of

Regionals Recap

Continued from Page 16

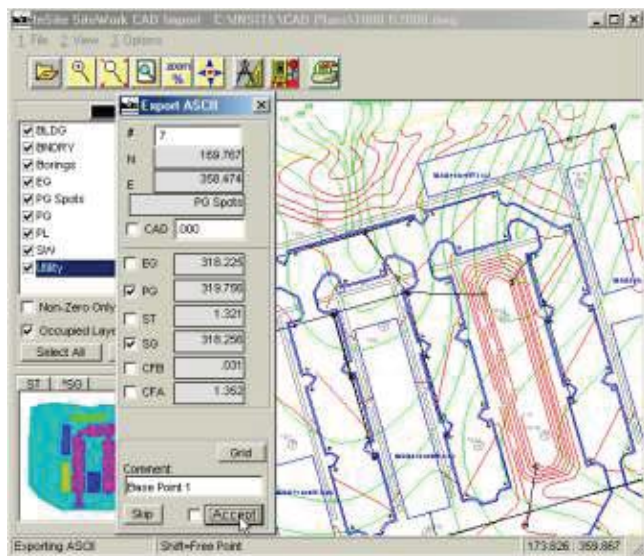
points into existing. After the first period of work, import the newly taken shots as proposed and use the report and graphics for payment. Then create a new section, and copy Proposed from the first section to existing in the new section. After the next period of work, re-shoot the job and import as proposed into the new section. Repeat for each time interval.

• This technique can also be used during excavation of a project, in addition to load counts, to prove the amount of material moved. Shoot the job at the existing stage, and then after stripping, subgrade, etc., and run calculations for each using the same technique

Exporting Data for Site Layout

Digitized data can be used for rough grade stakeout. A file is prepared in InSite SiteWork, containing individually digitized points, and/or a grid of points. This data is exported to the total station or GPS, and the points are staked out. Keep in mind that a pencil width on a 50 ft/in plan represents approximately a foot so a digitized plan is useful for rough grade staking only. It is useful for getting the site close to final grade before the final survey is done.

CAD based take-offs, imported from a CAD file drawn to scale, can provide the accuracy necessary for finish grade layout. Version 5.0's CAD import utility allows CAD points to be selected for precise X and Y (northing and easting) placement, and the choice of any



elevation, including the CAD files elevation, existing, proposed, stripping, subgrade, and Cut & Fill before and after stripping.

Machine Control

InSite SiteWork version 5.0 supports a special file format that provides a triangulated surface for automated machine control.

Products like Trimble's SiteVision GPS grade control system allow this triangulated surface from InSite SiteWork to be loaded into an on-board machine (dozer, grader, etc.) control. The GPS unit supplies the X and Y (northing and easting)



InSite SiteWork version 5.0 supports Trimble's SiteVision GPS

coordinates, and the triangulated surface provides the elevation data. The on-board readout shows how high to raise or lower the blade for stake-less grading. Total Station and GPS based units working on the same principle are available from Leica, Laser Alignment, Topcon, SMI/Zeiss.

InSite SiteWork User Tips!



Cut & Fill Colors!

"Cut yourself and see red blood."

If that's the way you learned cut & fill staking, click on **6.Options / 7.Setting / 6. Set Cut/Fill Shading Scheme**. InSite SiteWork will update all the jobs on every accessible drive.



Support for Windows 95

Microsoft has announced it is dropping support for Windows 95, as of December 31, 2001. For details directly from Microsoft, check out the address below on the World Wide Web (internet)

<http://www.microsoft.com/windows/lifecycleconsumer.asp>

Because of this development, we have stopped testing new versions of InSite SiteWork on Windows 95, and can only provide support on issues that do not involve the operating system.

Load the latest version!

All InSite SiteWork customers eligible for the Windows version should have received version 4.2.8. This version is not for Windows 2000 or Windows NT. Customers current with their software maintenance will have version 4.4.2 or version 4.4.4 and will receive Version 5.0 with this newsletter.



To check what version is installed on your system, click **7.Help / 1. About InSite SiteWork**. A list of features added to each release is available on our website

(WWW.INSITESOFTWARE.COM) under the **User Icon**

It is important to load the latest version you are eligible for. We are constantly tweaking performance, fixing bugs, as well as adding features. So even if you aren't planning to use a newly released feature, at the very least, load the software.

Dual Monitors!

Ever wish you could see your spreadsheet or estimating program, while looking at InSite SiteWork? And without shrinking each window small enough to fit on a single screen?

The solution is to use two monitors on a single computer. It's pretty simple, and is supported by Windows 98, ME, and Windows 2000. You'll need a non AGP video card and an extra monitor. In a nutshell, you plug in the video card, attach the second monitor, and let Windows detect the new hardware.

In the control panel, click on the display icon, and click Settings. Enable the second monitor, and that's it. Now you can drag programs from one monitor to the next. Pretty neat! If you have any questions regarding this set-up, please consult your local computer technician.



Digital Solutions: From CAD to Grade



by Steve Warfle
Product Manager
SRW@INSITESOFTWARE.COM

These are exciting times in the earthwork industry. Traditional methods of data collection, layout, machine control, and quantity verification are being quickly replaced. We've already seen the first wave of labor saving devices with laser guided machine control, and we're riding the second wave of robotic and GPS control. As mass acceptance of this technology brings hardware prices to a more affordable level, InSite Software Inc. is taking the

responsibility of keeping our customers informed of the latest trends, while keeping InSite SiteWork equipped to be the technological heart of the successful excavating contractor.

Call it the paperwork reduction act for contractors. Last Fall, we shipped Version 4.4, with true 32 bit triangulation. This was just the stepping stone to Version 5.0, with it's sophisticated CAD import wizard. InSite has had a CAD and ASCII import function since 1994, but these new tools make it simple to take an engineers plan, generate earthwork quantities, rebalance sites, and go directly to the field with the data. Without ever tracing a plan!

All this technology starts with a properly prepared CAD plan. We are seeing more and more plans with the 3D elevations properly assigned to the contours, but we are far from 100%. There are still a few plans without assigned elevations, and many engineers and architects are reluctant to release plans in digital format. This means that for the near future at least, you'll still need a digitizer, but hopefully, it won't be long before the dust on your digitizer may be as thick as the dust collecting on your old transit.

Stay Tuned!

InSite SiteWork

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(877)746-7483 WWW.INSITESOFTWARE.COM



ASPE Certification Program

It's Time To Start!

The American Society of Professional Estimators (ASPE) offers a certification program for qualified applicants.

Applicant must have at least five (5) years of estimating work experience to be accepted into the program. Workshop application forms must be completed and sent to either the ASPE Chapter Certification Chair, Fred Waldrop, at Murphy Company, 1233 North Price Road, St. Louis, MO 63132, or a regional member of the National Certification Board by October 1st each year. Certification workshops are held each year at the chapter level during November and early December.

Fees for the ASPE Certification Program are as follows:

ASPE Member - \$350.00 Total

There are three (3) cycles – standard, accelerated and convention.

1. Standard - starts Oct. 1, 1st year and ends Dec. 30 the following year.
2. Accelerated - starts Oct. 1 1st year and ends Aug. 15 the next year.
3. Convention - starts Oct. 1 1st year and ends July 15 the next year.

To obtain a Workshop Application Form go to:

<http://www.aspenational.com/form-certworkshop-member.pdf>

For information on Certification contact Chapter 19 Certification Chairman:

Fred Waldrop, FCPE
Senior Project Manager
Murphy Company
1233 North Price Road
St. Louis, MO 63122
Office phone: 314-692-1646.
E-Mail: fwaldrop@murphy-stl.com

Attend Five ASPE Chapter 19 Meetings. To Be Entered In \$500 Random Drawings.

All ASPE Chapter 19 members with current year's dues paid are eligible to enter a \$500 random drawing. To be entered members must pre-register for and attend a minimum of five (out of eight) Chapter 19 monthly meetings from September 2008 to April 2009. In addition, you must be pre-registered for and attend the May 2008 meeting to win and accept the cash prize. (The May meeting does not count as one of the five meetings.)

For every meeting that a member pre-registers for and attends, the member will receive one entry into the drawing. Attending more meetings increases your chances to win. A member will receive an additional entry for bringing one pre-registered guest to ASPE meetings.

50 / 50 DRAWING NEXT MEETING!

Attention Members:

Keep ASPE Informed

If you (or your company) have information of interest to your estimating peers, please send it to Chapter 19. Jobs acquired, completed, promotions, awards, etc!

Send your information to Mindy Funk at mindyfunk@stlouis-aspe.org to be included in the next Gateway Estimator.

Industry-Related Web Sites

National ASPE
www.aspenational.org

National ASPE Education Board
www.aspeeducation.com

Association for Advancement of Cost Engineering, St. Louis Section
(AACE)
<http://web.networkusa.net/aacestl>

American National Standards Institute
(ANSI)
www.ansi.org

American Society of Civil Engineers
(ASCE)
www.asce.org

Association of General Contractors of St. Louis
(AGC)
www.agcstl.org

ASA Midwest
www.asamidwest.com

Greater St. Louis Chapter of the Construction Specifications Institute
(CSI)
www.stlcsi.org

National Association of Women in Construction
(NAWIC)
www.nawic.org

Related Local News

NAWIC News

NAWIC Chapter 38 hosts a business meeting every third Thursday of the month. To register please contact Dana Horstmeier at dandh@championprecast.com.

For additional information visit their web site at <http://www.geocities.com/~nawic>. To learn about the National Association of Women in Construction visit nawic.org.

St. Louis AGC Events

2nd Friday of each month at 7:30 AM at the AGC Office
6330 Knox Industrial Drive, Ste 200
St. Louis, MO 63139

For chapter meeting details visit www.agcstl.org.

ASA-Midwest Council

For details and a reservation forms, contact Reba Gillick at reba@asamidwest.com or 314-214-1664. Visit www.ASAMidwest.com.

AACE News & Events

The Association for the Advancement of Cost Engineering invites ASPE members to attend their meetings. Please e-mail David Motherwell, CCE at david@ameren.com for details.

ASPE MEMBER COMPANIES

Ahal Contracting Co., Inc.
Alberici Constructors Inc.
Architectural Systems
Bangert Computer Systems
Bazan Painting Company
Biddata, L.L.C.
C & R Mechanical Co.
CRB Builders
CE Jarrell Mechanical Contractors
Century Fire Sprinklers
Clayco Construction
Commercial Document
Solutions, Inc.
Condaire, Inc.
Golterman & Sabo, Inc.
E. Meier Contracting
Everest Estimating Services
GRS Construction
H & G Sales Inc.
H & K Construction, LLC
Hallmark Stone
Henges Interiors
HOK Design Build
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Jacobs/Sverdrup Civil, Inc.
Jim Taylor, Inc.

Joseph Ward Painting Co.
K & S Associates, Inc.
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McGrath & Associates, Inc.
Michael Latas & Associates
Millstone Bangert, Inc.
Morrissey Construction Company
Murphy Company
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pany
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R.G. Ross Const. Co., Inc.
Ravensberg, Inc.
Rebar Specialist, Inc.
S.M. Wilson Co.
Sachs Electric
Tarlton Corp.
Taylor Excavating Company
The Stovey Co.
Universe Corporation
Volk Construction Company
Wachter, Inc.
West Contracting
Wiegmann Associates

A.S.P.E. Chapter 19

The Gateway Estimator

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