

# **STANDARDS** ISSUE Best Practice



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## Contents

	5	President's Message
	7	Technical Paper: A Laboratory Renovation
	19	The ASPE Standards Committee
	20	In Memoriam: Passing of ASPE Members
	21	Standards Committee Update
	22	New Standards Committee Member - Respect.
	24	6 Ways Mobile Tech Can Improve Sales Effectiveness
	28	It All Starts with the Invitation to Bid
	30	Advertiser's Directory / ASPE Member Benefits
	31	Message from the Executive Director
à	32	Membership Update / Message Board
	34	Upcoming Chapter Meeting Information

ASPE Annual Meeting & Estimators Summit June 24-28, 2015

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## ESTIMATING TODAY

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Editor Patsy M. Smith

Advertising Patsy M. Smith

**Design & Layout** Tanya Graham

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To serve Construction Estimators by providing Education, Fellowship & Opportunity for **Professional Development** 

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> Send Submissions to Patsy Smith, Editor Society Business Office psmith@aspenational.org

### Contact Us

### **Society Business Office:**

American Society of Professional Estimators 2525 Perimeter Place Drive. Suite 103 Nashville, TN 37214 615.316.9200 (Phone) 888.378.6283 (Toll Free) 615.316.9800 (Fax)

www.aspenational.org

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Doyle T. Phillips, FCPE

## Message From the President

### doyle.phillips@nabholz.com

### Time to Recharge!

June is upon us and thoughts start to fill with vacations and times with family. The sunshine has brought about new birth of plants and life. Many have celebrated new milestones of graduations, birthdays and possibly weddings. It is a time that runs in hurry up mode and quickly seems to slip away from us. One of the things I love most about summer, is the chance we all have to reunite with old friends and make new friends at our ASPE annual meeting.

The time is like a huge family reunion. We gather to swap stories of the past year and look towards what to expect in the future. We come together to celebrate, laugh, debate and learn. It is a time for interaction and to plan how we can work towards improvement of our group. The networking is a way we all expand our knowledge base. I cannot count the number of times I have been able to reach out to fellow members for assistance in pricing scopes that they have experience in and a working knowledge that I may not have run across yet. Since my initial involvement back in 1998, I have made many new lifetime friends and that list grows annually.

This year there will be professional development speakers and topics that I know will improve your life. You will have the opportunity to leave refreshed, recharged and motivated to excel during the coming year. I hope these continuing education tracks this year inspire some of you to move up into leadership positions at the local level and maybe even the national level. Local elections have taken place and officers are in place for next year, but there are committees and other ways to get involved there.

It is not too early to begin thinking about possibly running in a national election. I know nominations forms are not due until the end of January, but that time will approach quickly. You will have the opportunity at the Annual Meeting and Estimating Summit to meet with the current leaders, ask questions of them and gain an understanding of what is involved to be a leader within our great organization.

All of our leaders are willing to discuss, mentor and assist in any way possible. I encourage all of you to take advantage of that. Their dedication and passion for this society will rub off on you.

If you are ready to recharge your life batteries, grow professionally and get motivated, then it is time to pack your bags and head to San Diego. I will look forward to seeing you there. We are one big family and we like to help each other grow as much as we like to party. It's time for the beach!

God Bless!

Doyle T Phillips

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### HOW TO ESTIMATE THE COST OF . . .

### A Laboratory Renovation By: Jerome Brisson, CPE

### **ABOUT THE AUTHOR:**

Jerome Brisson, CPE is an estimator for civil, structural, and architectural aspects in the construction industry. Introduction to this industry began at Windham Regional Technical High School where Jerome studied architectural drafting (which included a course in estimating) and graduated as valedictorian. His further education includes a degree in Passive Solar Design from the school now known as Red Rocks College. Over the course of 30 years at Pelletier Builders, Inc., Senior Estimator and Department Head were achieved for estimating industrial, healthcare, and light commercial projects. Jerome is now a CSA Estimator at A/Z Corporation, which provides specialty construction services in the health care sector, pharmaceutical research and production as well as energy resources.



### **Table of Contents**

Section 1	Introduction
Section 2	Types and Methods of Measurement
Section 3	Specific Factors to Consider
Section 4	Overview
Section 5	Special Risk Considerations
Section 6	Ratios and Analysis
Section 7	Miscellaneous Pertinent Information
Section 8	Sample Sketches
Section 9	Sample Take-off & Pricing Sheets
Section 10	Conclusions
Section 11	Terminology/Glossary
Section 12	References / Copyright Releases

### HOW TO ESTIMATE THE COST OF . . .

### Section 1 – Introduction

Laboratory renovations are often performed in a unique environment with construction activities occurring adjacent to ongoing scientific research. The intent of this paper is to identify how construction activities will adversely affect laboratory operations, address means to mitigate the disruption, and ways to determine the costs of mitigation.

When laboratories are able to cease operations, allow routine construction access, and working environment, then undergo sanitization before commencing operations, cost is minimal and seldom requires in-depth estimating for determining additional cost.

When estimating renovation costs of a laboratory that will continue to maintain operations, many aspects must be taken into consideration. These include access to the work area and containment of the work area (commonly known as "temporary facilities") as well as utility outages and the overall ability for the laboratory to sustain functionality.

Two distinct methods exist for providing temporary facilities to achieve a successful outcome. The first method, which will be referred as "direct access," is typically least costly by providing direct access between staging area and work area where workers, material and equipment may pass freely. The second method, which will be referred to as "airlock access" requires workers, material and equipment to pass through controlled environment between the staging area and the work area. In this method, workers, material and equipment must be covered, contained or sanitized to meet requirements of the controlled environment. This process normally occurs within an airlock enclosure.

Although potential risk of impacting laboratory operations during construction is high, a proper procedure for installation, operation, and removal of temporary facilities is seldom included in the bid documents. This task is often left to the contractor to design and install with minimal oversight, few submittals, or a logistics plan. The lack of specified design for temporary facilities places the contractor at risk and introduces an additional task for the estimator to develop a conceptual method, and then quantify the cost.

### **Main CSI Divisions**

• 015600 Temporary Barriers & Enclosures

### **Main CSI Subdivision**

- 01 56 13 Temporary Air Barriers
- 01 56 16 Temporary Dust Barriers

### **Brief Description**

Formulation of an accurate estimate for the renovation of a laboratory requires the estimator to develop a conceptual process of logistics and the associated costs of additional temporary facilities to keep construction activities from contaminating the laboratory environment and to keep chemical or biological laboratory preparations free of cross-contamination and contained within the controlled environment.

### Section 2 – Types of Methods of Measurement

The majority of an estimate for a laboratory renovation will be similar to a typical renovation utilizing standard estimating procedures. A reduction in productivity for working within temporary enclosures must be taken into consideration. The difference between a typical renovation and a laboratory renovation will be centered on the cost of temporary facilities. When estimating the cost of constructing, maintaining and removing temporary facilities, common measurements include quantity, lineal footage, square footage and volume.

### Temporary Facility Common Units of Measure:

### Quantity

- Negative air machines
- Tack mats
- Airlock enclosures
- Temporary doors
- Cleanroom garments
- Sanitization units
- Lineal Footage:
  - Temporary plastic partitions
  - Hardwall partitions
  - Length of worker travel
- Square Footage
  - Floor protection
  - Temporary plastic partitions
  - Hardwall partitions
- Volume
  - Temporary enclosure
  - Adjacent Areas

### Additional Requirements of Measure May Include:

- Negative Air Design Requirements:
  - Rate of airflow commonly expressed in cubic feet per minute (CFM)
  - Quantity of air changes per hour (ACH)
  - Pressure differential expressed in pounds per square foot (PSF)
- Classification of Controlled Space and Containment:
  - GMP "Good Manufacturing Practice"
    - Guidelines recommended by agencies that control manufacture of food, drug products, and pharmaceutical products may have a significant cost impact.
  - ISO "International Standards Organization"
    - Indicates requirements of a clean room environment

### HOW TO ESTIMATE THE COST OF . . .

and may have significant cost impact. Two measurements of concern are as follows:

- Airborne Particulate Cleanliness Class Comparison expressed in an ISO classification
- Airborne Particulate Cleanliness Classes expressed in Number of Particles per Cubic Meter by Micrometer Size
- ICRA "Infection Control Risk Assessment"
  - Expressed as a matrix of precautions.
  - Established for hospital use, this will not have a cost impact on a laboratory renovation. This term is included since many ICRA requirements are similar in nature to those employed in a laboratory renovation and may be used as a source of reference.

"Negative Air Design Requirements" and "Classification of Controlled Space and Containment" are outside the scope of this paper and have been included as a notification to the estimator that additional investigation and associated cost must be included when these items impact the project or when the project must conform to the classification.

### Section 3 – Specific Factors to Consider

### Small Quantities vs. Large Quantities

Typically the unit cost of temporary facilities is not affected greatly by the quantity of temporary facilities installed.

### **Geographic Location**

Geographic location will similarly affect the cost of construction and the cost of temporary facilities with wage rates as the primary variable.

### Seasonal Effect on Work

Seasonal effect will have minimal adjustments on the cost of temporary facilities since the work is generally done within a tightly controlled environment.

### Access between Staging Area & Work Area

Work area access is one of the most significant cost impacts of a laboratory renovation. A relatively small cost involves the distance between the staging area and the conditioned space that must be taken into consideration for time spent moving materials and equipment as well as maintaining the route of travel in a clean and orderly manner. Security detail may be a requirement for access to the laboratory normally resulting in a small cost. A moderate cost involves establishing direct access between the staging area and the work area by installing temporary enclosures within the controlled environment. A substantial cost involves access between the staging area and work area that passes through controlled space requiring the construction of temporary airlock entrances, proper cleanroom garments of personnel, and sanitization of material and equipment.

### **Disruption of Facilities**

When a laboratory renovation occurs during a time of shutdown, the owner will determine whether temporary facilities are required to isolate construction areas. Occasionally, major renovations may be performed with minimal temporary facilities thus requiring extensive cleaning and sanitization at project completion. This type of renovation is outside the scope of this paper.

Laboratory renovations described in this paper will require temporary facilities to avoid costly cleaning and sanitization of adjacent areas. These facilities are typically installed whether the laboratory is shut down or will remain in operation. In an active laboratory, temporary facilities are often installed off-hours resulting in overtime costs. Equipment arrangement must be carefully reviewed to avoid temporary facilities restricting ongoing laboratory operations. Overcoming these restrictions while allowing access to work areas will involve significant costs by requiring airlock entrances and costly preparation prior to transport of workers, materials, and equipment through the controlled environment.

Scheduling of outages for utility connections often result in overtime or second shift costs needing to be captured in the estimate.

### Section 4 – Overview

The outlined approach to protecting a laboratory during renovation must be well planned since failure to provide adequate temporary facilities may result in costly or unrepairable damages.

### Labor, Material & Equipment

Temporary single-layer, fire retardant, plastic isolation barrier installation and removal are one of the basic procedures required for laboratory renovations. Prior to entering a laboratory for installation of temporary barriers, workers must have proper cleanroom garments to meet the requirements of the specific classification of controlled space. Fire retardant plastic barriers or "enclosures" are placed from floor to ceiling or underside of deck utilizing a sealant tape to maintain as close to an airtight barrier as possible. All piping, ducts, conduits and other utilities passing through the barrier must also be sealed. Once inside an enclosure with negative air equipment operating properly cleanroom garments are seldom required. Upon completion of work and after sanitization of the work area, removal of the barrier will proceed in reverse order of installation requiring proper cleanroom garments when

### HOW TO ESTIMATE THE COST OF . . .

workers are exposed to the controlled environment of the laboratory space.

Single-layer plastic isolation barrier is the most common form of temporary enclosure, but it is not suitable for operations that require cutting or chipping where a foreign object may penetrate the plastic enclosure. Work sites requiring additional protection may use temporary hardwall construction. Once the initial plastic isolation barrier and negative air equipment is installed, the construction of the temporary hardwall may begin. Metal studs and fire retardant plastic sheets resembling corrugated cardboard will often comprise the hardwall construction. Sealing of this wall is similar to the plastic enclosure with taping of joints, floor abutment, ceiling abutment, and all penetrations. Removal of the temporary hardwall will occur prior to removal of the outer plastic enclosure.

Negative air equipment is another of the basic procedures required for laboratory renovation. A negative air machine will be installed to provide negative pressure inside the temporary enclosure preventing dust migration from the work area to adjacent spaces. Negative air equipment is a blower-equipped with high-efficiency particulate air (HEPA) filtration and is preferably vented to the exterior. Many locations have no venting to the exterior and the filtered air will be recirculate within the facility. Negative air machines normally operate the duration of renovation and will require periodic filter replacement. Inspection and maintenance may be required during the weekend or full-time attendance during non-working hours may be required.

Prevention of contamination to adjacent areas is accomplished by placement of HEPA filters on building HVAC system return air ducts within the enclosed work area, airlocks, temporary enclosures and other locations which contaminants may be present. Cleanroom garments may include gowns, double gowns, booties, overboots, gloves, respirators, and self-contained breathing apparatus. The combination thereof is determined by the classification of the controlled environment.

Isolation of work areas in a laboratory allowing "direct access" between staging area and work areas is the preferred method of providing temporary facility. The most common approach to isolation of the work area from adjacent laboratory space comprises temporary "enclosures" sealed tightly to existing surfaces with negative air equipment to provide a slight negative pressure within the enclosure. Workers, material, and equipment may move freely and renovation work may be performed within the enclosed space without the use of cleanroom garments, bagging, or sanitization of materials or equipment with minimal risk of contaminating the adjacent laboratory.

Isolation of work areas in a laboratory requiring "airlock access" to pass through a controlled environment between staging area and work area is a sophisticated system requiring adherence to protocol of the controlled environment. A temporary airlock often comprised of a plastic enclosure with doors and negative air equipment will be constructed outside the point of entrance into the controlled environment. Line of demarcation placed within the airlock enclosure defines the dirty side and the clean side of the airlock. Within this airlock workers will dress in proper cleanroom garments prior to crossing the line of demarcation. All materials and equipment, whether for temporary facility or permanent construction, must be sanitized before entering the controlled environment. This may involve spraying or wiping each individual item with a sanitizing agent.

Workers with proper cleanroom garments, sanitized materials, and equipment will then enter the controlled environment and proceed to construct a plastic enclosure around the work area and a second airlock enclosure. Negative pressure inside the temporary enclosures will be required in both the work area and the second airlock. During construction garmenting and sanitization will continue to occur at the first airlock before entering the controlled environment. All will pass through the controlled environment and enter the second airlock structure. Within the second airlock structure, workers will put on an over-layer of cleanroom garments for use while performing renovation work. Material and equipment may be moved from the second airlock entrance to the work area with no further precautions.

Exiting the work area enclosure involves a similar process as entering the controlled area. Workers will remove the dirty clean-room garments and place them in a bin for disposal. A new set of secondary cleanroom garments may be required prior to exiting the second airlock into the controlled environment. Debris must be bagged and sealed; excess material and equipment must be bagged or sanitized within the airlock before exiting into the controlled environment. All will pass through the controlled environment and exit through the first airlock.

Upon completion of renovations all temporary enclosed space must be sanitized prior to removal of temporary facilities.

### **Indirect Costs**

Indirect costs are not easily defined since all temporary facilities may be viewed as an indirect cost. For purposes of this paper, indirect costs will be defined as occasional costs specific to a project that are not required by construction documents or work performance.

- General condition costs.
- Design of temporary facilities.
- Air quality monitoring validating effectiveness of containment.
- Surface testing for contaminants.

### HOW TO ESTIMATE THE COST OF . . .

- Engineering of negative design pressure.
- Movement of large equipment through controlled environment.
- Energy resources and fume control within enclosures.
- Security detail and overtime expense as previously mentioned.

Calculation of these costs is specific to each project and will often require subcontractor quotation or equipment rental costs. Overtime expense is based on required off hour work schedule to avoid disruption of the facility including installation and removal of temporary facility, passage through controlled environment and utility outages. Additional general condition costs include project management time for creating, conveying and refining the proposed concept of temporary facility to the owner as well as superintendent time to oversee implementation.

### Mark-Ups

In general, mark-up on temporary facility will be the same as the project mark-up. Laboratory renovation mark-ups tend to be higher than average due to greater potential risk.

### Section 5 – Special Risk Considerations

Risk involved in a laboratory renovation will depend on the function of the laboratory and preparations in use. Proper precautions are critical for a successful outcome.

Three examples of risk demonstrate why the magnitude of potential damage should be taken into consideration when conceptualizing a suitable means of temporary protection.

1. Dust may enter the laboratory, requiring the additional expense of cleaning and sterilization.

2. Dust from construction activities may contaminate a multi-generation biological preparation, destroying years of work.

3. Improper containment may cause release of pathogens into the environment placing workers lives at risk as well as the possibility of an epidemic.

Most laboratory processes with potential for great risk will be discontinued during renovations while others must remain operational without disruption. Consequences of improper isolation and containment facilities pose serious monetary and life safety risk.

### Section 6 - Ratios and analysis

Historical data is among the best tools an estimator possesses. The ability to compare costs from similar projects to the present estimate provides a degree of validation. Historical data may be a useful tool for analyzing cost however these costs are easily skewed in a laboratory renovation. Access to a particular area may increase the cost of temporary facility 1,000%. Diligence in project detail is crucial for accurate analysis.

Comparative historic cost analysis is useful for lineal feet of temporary plastic enclosure or temporary hardwall enclosure as well as the quantity of temporary airlocks.

Another useful comparative historic cost analysis is the overall cost of isolation through direct access. Comparison may be based on lump sum cost per project with adjustments for volume of enclosure.

Ratios become an important tool when comparing the amount of permanent material required on a project to the resources required for sanitization of materials passing through an airlock. Comparison of lump sum historic costs is not effective due to varying amounts of materials required on each project; instead historic unit cost data may be used. Ratios are then applied to validate overall sanitization costs.

See the Comparative Matrix for further information.

### Section 7 - Miscellaneous Pertinent information

Many companies that have laboratories as part of their operation also have their own safety policies that exceed OSHA requirements. The cost of adhering to company safety policies must be included in the estimate.

Companies that have laboratories as part of their operation are often involved in patented research. This may result in background checks being required, daily badging requirements, and sometime a security guard escort while within the facility. The cost of adhering to company policy must be included in the estimate.

Some laboratories work with explosive gases or materials causing part or the entire laboratory to be within a classified area requiring the use of certain tools that are less apt to cause a spark. Additional time spent using a tool, which is slow for the task being performed, must be included in the estimate.

The widespread use of cell phones for business communication may be curtailed within some companies that do not allow picture taking devices on company property. A phone with no camera must be purchased with the associated cost captured within the estimated.

### Section 8 - Sample Sketches

A laboratory renovation consisting of the addition of one sink is shown on the following sketches. The scope of work is to demolish a portion of the masonry wall at the utility chase, connect to existing piping, install carriers and a sink, repair masonry and paint disturbed area. Also

### HOW TO ESTIMATE THE COST OF . . .

### Section 8: Sample Sketches - Continued.

included in the scope of work is a generic specification 01 56 00 Temporary Barriers and Enclosures. The request for quotation indicates the laboratory will remain in operation during construction.

The following sketches indicate two methods of providing temporary facility to allow the laboratory to continue operation during construction.



### Direct Access

The sketch above allows the area around weighing table to continue in operation while the fume hood area is unusable during construction. This layout provides workers direct access from staging area (not shown) to the work area where sink is to be installed. In addition to the plastic enclosure separating work area from laboratory space, a hardwall enclosure is included due to the nature of masonry demolition. Negative air equipment maintains lower air pressure in the enclosure than adjacent laboratory and is vented to the exterior or non-controlled environment after passing through a HEPA filter.

### HOW TO ESTIMATE THE COST OF . . .



### **Airlock Access**

The sketch above allows continuous operation in all key areas of the laboratory by providing clear access between weighing table and fume hood area. This layout requires workers, material, and equipment passing through controlled space between staging area (not shown) and work area where sink is to be installed. Two temporary airlocks are constructed in addition to the plastic enclosure, hardwall enclosure and negative air equipment surrounding the work area. Airlock A with its own negative air equipment provides a space to dress in cleanroom garments as well as to sanitize material and equipment prior to entering the controlled environment. Airlock B provides space to dress in cleanroom garments, bag debris in tightly sealed containers, and sanitize excess material and equipment being removed from the work area prior to entering the controlled environment.

### Section 9 Sample Estimate - Take-off and Pricing Sheet

Three estimates follow along with a comparison matrix. The first estimate is for the installation of a sink in a non-laboratory environment. The second and third estimates are for the installation of a sink in a functioning laboratory complete with temporary facilities. The second estimate shows the cost of direct access to the work area while the third estimate shows the cost of accessing the work area through controlled space via airlock entrances.

### HOW TO ESTIMATE THE COST OF . . .

### Estimate #1

		R	enovation - P Non-Labora	rovide (1) No tory Renova	ew Sink Ition		
Description	Qty	/	Labor	Material	Equipment	Sub	Total
General Conditions	1	ls	\$2 <i>,</i> 450	-	-	-	\$2,450
Masonry	1	ls	-	-	-	\$5,000	\$5 <i>,</i> 000
Painting	1	ls	-	-	-	\$1,000	\$1,000
Plumbing	1	ls	-	-	-	\$5,000	\$5 <i>,</i> 000
Sub-Total:			\$2 <i>,</i> 450	-	-	\$11,000	\$13,450
						Permit:	\$188
Estimato #1.						Tax:	\$392
Non-Laboratory Renovation						O&P:	\$2,018
The estimate above indicates a t basis in cost comparison when w	xypical sin vorking in	k instal a labo	llation. The estim	nate may be us ent.	ed as a	Total:	\$16,048

### Estimate #2

	Ren	ovatio	on – Provide	(1) New Sir	nk		
Lab	oratory	with	Direct Acces	s from Stag	ing Area		
Description	Qt	y.	Labor	Mats.	Equip.	Sub	Total
General Conditions	1	ls	\$3,513	-	-	-	\$3 <i>,</i> 513
Overtime	1	ls	\$969	-	-	-	\$969
Temp. Plastic Enclosure	80	lf	\$682	\$160	-	-	\$842
Temp. Zip Door	1	ea	\$81	\$75	-	-	\$156
Negative Air Equip.	1	ea	\$162	\$50	\$750	-	\$962
Temp. Hardwall	36	lf	\$447	\$228	-	-	\$675
Temp. Door	1	ea	\$243	\$250	-	-	\$493
Floor Protection	420	sf	\$679	\$399	-	-	\$1 <i>,</i> 078
Tack Mats	1	ea	\$10	\$30	-	-	\$40
Masonry	1	ls	-	-	-	\$6,000	\$6,000
Painting	1	ls	-	-	-	\$1,500	\$1,500
Plumbing	1	ls	-	-	-	\$5 <i>,</i> 500	\$5 <i>,</i> 500
Sub-Total:			\$6,786	\$1,192	\$750	\$13,000	\$21,728
Estimate #2·						Permit:	\$304
Laboratory Renovation – Direct Access						Tax:	\$590
The estimate above indicates a sink installation	on while w	orking	in a laboratory e	environ-		O&P:	\$3 <i>,</i> 259
through controlled environment.	iig ai ea lO	the wo	n karea witilout	μασσιικ		Total:	\$25 <i>,</i> 881

### HOW TO ESTIMATE THE COST OF . . .

### Estimate #3

	Renova	tion -	– Provide (1)	) New Sink			
Laborat	ory Renov	ation	with Access	s through (2	) Airlocks		
Description	Qty	y.	Labor	Material	Equip	Sub.	Total
General Conditions	1	ls	\$5 <i>,</i> 550	-	-	-	\$5 <i>,</i> 550
Overtime	1	ls	\$901	-	-	-	\$901
Temp. Plastic – Airlock #1	60	lf	\$512	\$120	-	-	\$632
Temp. Zip Door	2	ea	\$162	\$150	-	-	\$312
Negative Air Equip.	1	ea	\$162	\$50	\$750	-	\$962
Floor Protection	150	sf	\$243	\$143	-	-	\$386
Tack Mats	2	ea	\$20	\$60	-	-	\$80
Temp. Plastic – Airlock #2	65	lf	\$554	\$130	-	-	\$684
Negative Air Equip.	1	ea	\$162	\$50	\$750	-	\$962
Temp. Hardwall	36	lf	\$447	\$228	-	-	\$675
Temp. Door	2	ea	\$486	\$500	-	-	\$986
Floor Protection	240	sf	\$388	\$228	-	-	\$616
Tack Mats	1	ea	\$10	\$30	-	-	\$40
Sanitize & Wipedown Mat'l.	1	ls	\$647	\$150	-	-	\$797
Bagging Mat'l. & Equip.	1	ls	\$485	\$50	-	-	\$535
Bagging Debris	1	ls	\$485	\$50	-	-	\$535
Personnel Gowning	1	ls	\$485	\$500	-	-	\$985
Consumables	1	ls	-	\$350	-	-	\$350
Masonry	1	ls	-	-	-	\$7,000	\$7,000
Painting	1	ls	-	-	-	\$2,000	\$2 <i>,</i> 000
Plumbing	1	ls	-	-	-	\$6 <i>,</i> 000	\$6 <i>,</i> 000
Sub-Total:			\$11,699	\$2,789	\$1,500	\$15,000	\$30,988
						Permit:	\$433
						Tax:	\$825
						O&P:	\$4,648
						Total:	\$36,894

Estimate #3:

Laboratory Renovation – Airlock Access

The estimate above indicates a sink installation while working in a laboratory environment. Access from the staging area to the work area requires passing through controlled environment.

**Comparison Matrix** 

### HOW TO ESTIMATE THE COST OF . . .

### Section 10 - Conclusion

	•••••••••••••••••••••••••••••••••••••••			
	<b>Renovation – Provid</b>	e (1) New Sink		
Description	Non-Laboratory	Lab Renovation	Lab Renovation	
	Renovation	Direct Access	Airlock Access	
General Conditions	\$2 <i>,</i> 450	\$3,513	\$5,550	
Overtime	-	\$969	\$901	
Temporary Enclosures	-	\$4,246	\$6,335	
Sanitization	-	-	\$3,202	
General Trades	\$11,000	\$13,000	\$15,000	
Sub-Total:	\$13,450	\$21,728	\$30,988	
Permit, Tax, O&P:	\$2,598	\$4,153	\$5,906	
Total:	\$16,048	\$25,881	\$36,894	

The matrix above compares the three previous estimates for installation of a sink in various environments. General conditions and overtime are indirect cost increases. The cost of general trades work increases slightly due to the restrictions of working within a temporary enclosure. The cost of constructing and maintaining airlock entrances is typically more than the cost of direct access enclosures.

### Cost Impacts affecting "Direct Access" Temporary Facility

The cost of direct access temporary facilities will be greatly affected by the volume of work area. Project duration, complexity, quantity of permanent construction material and the amount of debris generated will have minor cost effects.

### Cost Impacts affecting "Airlock Access" Temporary Facility

The cost of airlock access enclosures will be slightly affected by the volume of work area, project duration or complexity. Sanitization costs will have a direct correlation to the amount of material and equipment required on the project, the amount of debris generated and the project duration affecting the number of times workers require garmenting.

### Section 11 - Terminology/Glossary

Laboratory	An area of controlled environment for performing scientific or technological research.
Utility Outage	Temporary discontinuation of a utility for the purpose of tie-in or maintenance.
Temporary Facilities	The scope of this paper includes Temporary enclosures, controlling air pressure differential, temporary protective coverings and sanitizing equipment.
Direct access	Work area may be accessed directly from staging area without passing through a controlled environment.
Airlock Access	Work area is accessed from staging area by passing through a controlled environment.
Logistics Plan	Document indicating staging area, work area, routes of travel, temporary facility, impacts to client facility and other pertinent information.
Negative Air Machine	Equipment that reduces air pressure of a contained area minimizing airborne contaminants entering adjacent areas.

### HOW TO ESTIMATE THE COST OF . . .

Cleanroom Garments	Clothing such as gowns, booties, hairnets gloves as well as respirators or other breathing apparatus required to meet protocol of the controlled environment.
Sanitization	Spray or wipe of surfaces to eliminate contaminants.
Plastic Partitions	Temporary enclosures constructed of clean plastic with perimeter and penetrations sealed to create an air barrier.
Hardwall Partitions	Temporary enclosures constructed of metal stud and corrugated plastic sheets with perimeter and penetrations sealed to create an air barrier that is not easily penetrated.
Temporary Enclosure	Volume of space enclosed by temporary walls and/or ceilings.
Airlock	Volume of enclosed space with entrance and exit doors used to prepare for entering a controlled environment.
Line of Demarcation	In terms of an airlock, one side of the line is normal or dirty while the other side is clean to the standard of the controlled environment being entered.

### Section 12 - References / Copyright Release

- CSI Division The Construction Specifications Institute
- ISO International Standards Organization

- ICRA Infection Control Risk Assessment
- GMP Good Manufacturing Practice guidelines recommended by agencies that control authorization and licensing for manufacture and sale of food, drug products, and active pharmaceutical products.

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By: Robert A. Nidzgorski, CPE Standards Committee Chair CHAPTER #48 -TAMPA

## The ASPE Standards Committee

ASPE Standards Committee is responsible for the development and administration of the Society's Standard Estimating Practice publication.

When I decided I wanted to become a member of the standards committee I had no idea what I was getting myself into. I was actually informed that I was going to be the chairman at my first committee meeting at the ASPE national convention. "The new guy can do it", I was told. If I remember correctly, I was given the impression that all of the hard work for the ninth edition of the Standard Estimating Practice was done and I had nothing to worry about. Then I spent approximately the next two years working on it, alongside the other committee members.

It was rewarding and exciting to work with my committee members to publish the ninth ASPE Standard Estimating Practice and start the process to produce a textbook to educate future professional estimators in our industry. I am not alone on this journey, I thank my committee members Richard Miller, CPE, Bryan Mixer, CPE both returning from the team that helped publish the ninth edition. I also want to welcome the new members, Ron Svarc, CPE, and Ron Trawinski, CPE and our advisor and representative on the Board of Trustees 2nd Vice-President Bruce Schlesier, CPE.

When the time comes for the present committee members to leave after finishing their term, I ask our ASPE members to consider helping with future publications of the Standard Estimating Practice; either as members of the committee or by providing any other necessary assistance.

It was stated to me by a local DBE, M/WBE general contractor that because of my years in this business and relationship with ASPE, as well as other professional construction organizations, that I am considered an "expert" and they needed my help. They asked me to provide counsel to help improve their estimating process as they were a new general contracting company. Well, that expert title could not be further from the truth. I immediately had concerns; "Would I be able to provide any help?" "Could this be done within the time frame specified?" Because of the short amount of time given, and my real job, I decided it would be more beneficial to provide them with the essential resources needed to help them grow and become a successful company.

My first suggestion and most important was to join the local ASPE chapter and have the companies estimator become a CPE (Certified Professional Estimator). I explained to them that AS-PE provides education through the National Estimator Summit, local ASPE estimating academies, and they should network to learn from the experts in our industry. Estimating is like art, it is not a science, I alone cannot make their estimator a 90-day wonder, but the process I suggested of where to go for information, what to look for, and what questions to ask, can help them to become a professional estimator.

My grandmother would say, you cannot put ten pounds of kielbasa in a five pound casing (you will lose something in translation). Not all advise given is taken, but I am pleased to know that this contractor has taken my advice and has started their journey.

Professional estimators no matter how long in the business should continue to attend workshops and/or estimating classes. As a professional estimator when you attend a class, summit, or seminar, you bring new insight to the topic for the other attendees in class. We should never stop learning. Our industry is constantly changing; there are many new technologies in our industry that have replaced the old way of doing things. There is more to our profession that a number two pencil and a yellow pad of paper.



In Memoriam

## Robert Alan Kai'opua Fyfe, CPE

The American Society of Professional Estimators has lost one of its stalwart champions. Bob Fyfe, as we knew him in the 80's and Kai'opua Fyfe as we knew him after he moved back to Hawaii in 1986 transitioned and went to the ancestors as Hawaiians would say on May 4, 2015.

He was born in Alameda, California on November 20, 1942 and passed away at his home in Lihue, Hawaii. He is survived by companion Sabra Kauka, sons George Keith Fyfe and Erin Joseph Fyfe, sisters Sylvia K.M. Thacker and Carole A.K. Henderson, and four grandchildren.

As a longtime member of ASPE he served the Society as Chapter President of the San Francisco -Oakland chapter and West Governor as well as many National Committees. He worked extensively for FEMA. He also represented ASPE as a Panel Member on the Expert Panel on Cost Estimating for the Public Assistance Program This panel worked on setting estimating standards for FEMA Estimators responding to disasters.

He was in the process of compiling his documentation to apply for Fellow of ASPE. His estimating contributions would have exceeded the required point totals for those sections. When he would have compiled his community contributions, he would have needed many pages for his accomplishments. He was deeply and passionately involved in the Free Hawaii movement in Hawaii. He was a Director of the Koani Foundation.

As a descendant of Hawaiian ancestors who signed the Ku`e petitions, he was a strong proponent of a Free Hawaii which proposed an end to the illegal occupation of Hawaii by the United States. For the movement he testified before United Nations committees and attended many forums throughout the world.

Personally, I remember at the Tucson Convention, having a cook out after all the festivities were over, just relaxing and listening to some howls in the background. Close enough to be heard, far enough that the animal could not be seen. I asked him if he knew what type of animal was howling in the distance and he said they were Coyotes. The howling got louder and closer, but we did finish our meal without any unwelcome visitors.

Working with him as a member of the Board of Trustees was always a pleasure. He was a gentlemen and always showed people respect, even if he disagreed with their point of view

As a friend of many ASPE members, he will be missed! Respectfully submitted, Lewis Finkel, FCPE



Charles Anderson, CPE ME Member of Rio Grande #40 Member Since 1988.

### **STANDARDS COMMITTEE UPDATE**

By Ron Trawinski, CPE Standards Committee NE Region Representative CHAPTER 61 - PHILADELPHIA

The ASPE National Standards Committee is charged with the responsibility of maintaining the ASPE Standards of Estimating Practice (SEP) Manual. Similar to the other committees in our Society, Standards consists of a representative from each of our national regions. Our advisor and representative on the Board of Trustees is 2<sup>nd</sup> Vice-President Bruce Schlesier, CPE.

М

Now that we've gotten the basics out of the way, you may be asking yourself, "So, what does the Standards Committee actually do?" As this is my 2<sup>nd</sup> tour of duty on Standards, I know many of you envision this group sitting around a conference table correcting grammar in our Standard Estimating Practice (SEP) Manual. As is the case in many instances, perception is far from reality.

While we will be spending time cleaning up and reformatting the 9<sup>th</sup> edition of the SEP Manual, our intent is to include new "How to Estimate the Cost of" sections in the 10<sup>th</sup> edition. The 10<sup>th</sup> edition is scheduled to be published in time for the 2016 Estimating Summit. While this may appear to be a long time off, there are many time-consuming steps associated with this effort. So, in order to accomplish our goal, the Standards Committee is seeking volunteers in their respective fields of expertise to "champion" new sections to the book.

Like most of you, my spare time is at a premium. Therefore, the obvious question becomes, "What's in it for me if I spend the time/energy contributing to the SEP Manual?" Aside from the satisfaction of giving back to ASPE, there are additional incentives for contributing to this new edition:

- The author's name will appear as a contributor to the Manual.
- CPEs will obtain 10 PDUs towards their re-certification requirements.
- Members who are thinking of entering the CPE program may (with consent of the Certification Committee) be able to use this paper as their required CPE technical paper.

### AND

 The newly created Higher Education Outreach Committee has been tasked with selling our SEP Manual as a textbook for teaching estimating courses at the post-secondary school level. If successful, the SEP Manual will be a means of reaching out to potential future (i.e. younger) members to our Society.

If you are interested in contributing to the SEP Manual or need additional information, feel free to contact your region's Standards Committee representative or Patsy Smith, Executive Director. We look forward to hearing from you!

## New Standards Committee Member RESPECT

By: Ron Svarc, CPE (Lifetime), ASPE, FEWA, GC, MBA Southwest Representative Standards Committee CHAPTER 3 ORANGE COUNTY

On January 30th and 31st I attended my first National meeting as a member of the ASPE National Standards Committee. I was very impressed with the professionalism that each of the other representatives conveyed and the way they purported themselves. I remember feeling like I was in a very privileged gathering of professionals who had the highest respect for the subject we were to address. The Estimating Standards is for all estimators with different levels of estimating experience to utilize and better their skills. The Standard Estimating Practice is a guide, a tool, or a system to help contractors and developers become more efficient. Our objective in this subject was huge. We were to write an improved version of the ninth edition of the Standard Estimating Practice manual. We were to provide a more reader friendly format to share all of the estimating practices used by the Professionals in our industry.

As I looked around the room, I thought, isn't it a bit amazing that we are all doing this for no salary happily! What is it about each person, forming a tight, well-functioning team to spend countless hours of personal time, away from family, and do something quite difficult? By the second day it was clear, they all believed in Professional Estimating to the point of dedicating themselves and their time to improve a profession that has been extremely rewarding. I'm not alone in my love for what I do. Each of these people felt the same. To invest our time into doing something good for the betterment of our fellow colleges as well as our selves.

The estimating business has been around a long time. Long enough to distinguish itself as a vital part of every construction. To be a part of the sober effort to establish an Estimating Standard and dedicate so much time to keep improving it for the advancement of the estimator's career and growth of current construction technology is a true blessing. Ah, that's why we do it for no money. It's an investment in the estimating society. To establish guidelines and continue to refine them is a tremendous responsibility and honor that carries with it the highest integrity and ethics held in any professional industry. To be a member of this team stirs in your mind and heart a compulsive desire to do well, to do your part, and yes perform your profession the best way you've learned and with all your ability. Then reward is so great, you simply want to help the Society continue to grow along with the ever changing industry. I am proud to be a Professional Estimator and will work harder to give back what I have received.



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## 6 Ways Mobile Tech Can Improve Sales Effectiveness

By: Mac McCabe , VP of Sales JobFLEX

### Introduction

In fast-paced selling environments, using the time spent to generate quotes effectively is paramount to maintaining a competitive edge. Mobile sales enablement provides a strong solution, allowing the sales force to output more quotes in less time to positively impact bottom line revenues. But for small to mid-size firms who don't possess Chief Sales Officers, large sales forces, or significant budgets, mobile sales enablement may seem out of reach. Yet it's not beyond the capabilities of small to mid-size firms, and in many cases, it's even easier to implement on a smaller scale. This article examines the benefits of mobile sales enablement, the importance of proper implementation, and the solution for small to mid-size businesses.

### The Challenge

Increasing sales is a firm's greatest path to growth, no matter the organization's size. Whether small, mid-size, or large scale, generating more revenue is key to remaining competitive.

But some firms struggle with increasing sales more than others. Especially when it comes to time, staffing, and technology. Those firms tend to be small to mid-size firms, who typically cannot afford to implement expensive, complicated technology or processes that require capital, technical know-how to implement, and training time that just doesn't exist.

This becomes increasingly obvious when looking at companies with sales teams in the field. These teams are often stuck in the past when it comes to providing estimates: meeting with a client, discussing and documenting needs, then returning to the office to pull together the information and paperwork needed to reach back out to the customer with the quote - a process that could take days, and sometimes weeks depending on travel time.

When paper-pushing, travel time, and scattered information are at the helm, implementing a strategy to generate more sales by increasing market reach and quoting more customers becomes nearly impossible.

Critical to the success of these companies in a competitive marketplace is the ability to use simple, easy-to-implement technology that sparks an immediate impact on business in the field and back in the office.

### **Mobile Sales Solutions**

In a 2013 study run by Profitable Channels entitled *Best Practices in Mobile Sales Enablement*, 98% of executives interviewed stated that mobile devices will be essential to sales in the coming 18 months. Yet nearly 1/3 of those executives lack the business plan necessary to implement and deploy tablet technology.

For those early adopters who began using mobile technology in the field already, they've reported top and bottom business line results directly related to their investment in mobile sales engagement programs. According to the study, those early adopters tend to have common characteristics that make them even more open to the potential benefits of mobile tech:

- Highly mobile sales forces: consistently conducting sales on site;
- Pre-existing "channel ready" products: products that can be demonstrated, configured, or visualized digitally;
- Well organized, searchable digital content: best suited to tablets rather than paper;
- Pressure from competition and customers: to a.) use tablets in selling, and b.) differentiate the experience;
- Large product catalogues and offerings: serving as a crucial piece of the sales process;
- Order entry errors and fulfillment issues: inefficient processes that hinder revenue growth.

In the same study, Profitable Channels estimates that businesses will spend approximately \$26 billion on mobile application development and mobile process reinvention in the next four years - a staggering amount. But for small to mid-size firms who want to remain competitive, revolutionizing the sales process with mobile empowerment and engagement is a clear path to success, and fortunately, there are affordable ways to do it.

### Why Focus on Sales Effectiveness

Mobile solutions are entirely aimed at improving sales effectiveness to support growth. Cited in the Profitable Channels study are six reasons why sales effectiveness is the top challenge for Chief Sales Officers, as of 2012:



In the chart above are six persuasive arguments for why the sales process needs to be made more efficient in order to lead to impactful growth. Read on to find out more on how Mobile Quote Software can revolutionize your company's growth and revenue through increased efficiency.

### The Solution: Mobile Quoting Software

Mobile estimating software offers six ways to improve sales effectiveness, thereby directly impacting the bottom line revenues of an organization and providing optimum opportunity for growth:

**1. Mobile quoting software provides consistent execution of the sales process.** In order to implement a mobile quoting solution for in-the-field sales, companies must organize their existing sales and marketing content, and create what doesn't yet exist.

Creating, revamping, and confirming sales and marketing content will put the *same* selling assets at the fingertips of your entire sales force. In this aspect, mobile selling solutions act as the great equalizer among your sales team, providing an equal level of knowledge and the right assets at the right time. 51% of the organizations evaluated in the Profitable Channels study were investing in real-time assets, eliminating the costs of printing, storing, distributing, and updating printed sales collateral.

With the right information at hand, it also empowers your sales force to more easily cross-sell customers on other solutions.

### 2. Mobile sales enablement improves sales

**productivity.** The tedious, labor-intensive process of preparing for a sales call, traveling to it, meeting with the customer to determine needs, then returning to the office for hours of paperwork is eliminated when the sales force is empowered with mobile technology.

Quotes can be uploaded to a file directory right from the field or e-mailed to the office. With the right content and tools at the fingertips of the salesperson, turnaround time decreases significantly.

And for anyone in sales, it's known that quote turnaround is critical to quote conversion. After all, if you're late to the party, you may not get to play. While you're pushing papers back at the office, it's all too easy for a competitor to swoop in for the sale. Mobile sales enablement allows your team to be proactive, not reactive.

**3.** Mobile quote software enables the sales force to provide professional quotes on the spot. Not only is decreasing the turnaround time on quotes a significant benefit of mobile sales enablement, but turning around a *professional* quote on the spot is critical to the "wow" factor.

With the right software, this can be done in minutes in the field using pre-setup templates where preexisting

material and labor costs, product description, and other information can be easily populated. No more scribbling on napkins and delivering a sloppy first impression.

**4. Enabling the mobile sales process differentiates the customer experience.** Arguably the greatest benefit of mobile sales enablement and empowerment is the ability to differentiate the sales process to the point of positively impacting and differentiating the overall customer experience.

According to the Profitable Channels study, 60% of B2B purchasing decision-making is completed independently by the customer *before* the first sales call. This makes it increasingly important that the face-to-face time spent with the customer is impressive. With customers' expectations increasingly including a tech-savvy experience, it will take more than a uniform and a nice truck to stand out in the mind of your prospects.

It's about increasing the collaboration, providing an engaging interface, and upping the intimacy of the interaction.

**5. Mobile sales enablement improves bottom line profitability.** Companies focused on growing their business need to generate more revenue. Aside from raising prices, the easiest way to generate more sales is to quote more work.

By shortening the sales process through mobile enablement and empowering the sales force to turn professional, comprehensive quotes around on the spot, it creates the opportunity to generate at least 1-2 more proposals a day.

6. Empowering a sales force with mobile selling solutions improves sales retention. When less than 30% of the sales force's time is spent actually selling, introducing a process that eliminates unnecessary paperwork significantly decreases time spent on data entry and the chance for human error. Equipped with the proper tools to spend more time selling, there will be a happier workforce and in turn, higher retention.

### **Implementation for Success**

Here are four steps that should be taken to ensure success of mobile sales enablement:

1. Defining a vision and business case for enabling the sales process with mobile technology.

The macro vision of how mobile enablement will transform the sales process and customer experience.

2. Auditing and organizing sales content, technology, and training assets.

Where does the organization stand today? Conduct an inventory of content and assets and assess each piece's ability to support sales in mobile selling.

*3. Aligning assets with the sales process and buying experience.* 

This requires identifying the gaps - identifying content, training, and technology holes that can be filled to equalize the sales force and optimize empowerment.

4. Laying out a roadmap for measurably improving sales effectiveness, reducing cost-to-sell and differentiating the client experience.

Creating the business case to lay the foundation for a mobile sales program that improves sales performance, reduces the cost to sell, shortens the sales process, and differentiates the customer experience.

The focus of mobile sales enablement is to redesign the sales experience, providing benefits to the organization and its sales force, as well as the customer. Taking steps toward implementation betters the chance of reaching differentiation.

The race is on. Companies across the globe are using mobile technology and software solutions to revamp the sales process in ways that help differentiate the customer experience, drive organizational growth, and ultimately generate greater revenues.

Mac McCabe is the VP of Sales at JobFLEX, the easiest-touse estimating app that saves more time and closes more sales. To learn more about how JobFLEX empowers top sales performers, visit <u>www.job-flex.com</u>, speak to a Product Expert by calling 855.354.3539 or email <u>info@job-flex.com</u>.



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It All Starts with the Invitation to Bi

*"The more information you supply the more information you will receive in return".* 

By: Carl Cathcart, CPE President, CPE Estimating PRESIDENT CHAPTER 6 ARIZONA

 $\mathcal A$  simple statement that can be used in a lot of applications, but never as important as when requesting contractor/vendor bids on a project. I am always astonished when a subcontractor shows me an Invitation to Bid that they received and all that it contains is the name of the project, due date and where to go to get the bid documents.

In my opinion this is a very disrespectful approach of a vendor's time. The invitation to bid (ITB) is the foundation to requesting subcontractor/vendor quotes just as much as the foundation is to construction of the project. Providing missing or inadequate information at this stage will usually get you the same results in return.

We are all aware of the shortage in available manpower the construction industry faces these days. The last recession we suffered through really made an impact on our industry. Talk to most subcontractors and you will hear that they just cannot find good field personnel. The ones they have now are always a threat to leave because another contractor will pay a couple dollars more an hour to get that knowledgeable tradesperson over to their company. Those contractors that survived and remained in the industry are the ones that are busy. Most are so busy that they usually have enough work to keep the qualified tradespeople they have now busy. This lack of qualified manpower is starting to favor the subcontractors when it comes to quoting projects.

They are slowly getting back to the rates they used to charge (the profit however is still slim...for now) and with more projects coming to fruition, they will have the pick of what projects they actually want to bid on.

 So why would they even consider supplying a quote to a GC that provides an inadequate ITB? What interest do they have in your project if you don't even show any interest in it yourself?

Most ITB's are now sent via email through either a FTP site or a link that the vendor can click to download the bid documents. When faxing was the norm, an effective ITB was used. The ITB that was generated and sent via fax was a normal way of notifying contractors/vendors. This was the only way we could gather interest in our project and before that it was a phone call or a service that the subcontractor subscribed to and searched through a few times a week. But the beauty of that simple faxed ITB was that it was usually created with more time and detail because it was the foundation of the estimating process.

Nowadays it is a matter of various clicks through a template and a few words about the project and off it's sent to contractors & vendors. It is actually a lot easier these days with these templates to include more information, however there are still ITB's sent out that are so basic and simple that they do nothing to generate interest in your project. The time spent upfront to put together a quality ITB, as a supplement will result in favorable returns.

I have been involved in hundreds of ITBs' in my career and have learned that *the more information you supply the more information you will receive in return.* 

We all use an FTP site these days for document distribution. Adding all you can including Plans, Specifications, Addendums, Photos, Site map (Google earth) and a good ITB attachment will greatly peak interest in your project and will assist in the bidding process. I like to include a traditional ITB in the bid documents, usually in the specification section of the site. I want them to review this when they open up the link that we send them and notice it when they are reviewing the specifications.

### So what constitutes a good ITB?

Keep it simple and effective on one page with the following:

**Heading:** Company Name (preferably your logo)

**Title:** Invitation to Bid (a large font grabs their attention) **Project:** Name of your project

**Location:** Address and zip code

**Bid Due Date:** Day, month, year and time (an eye grabbing font color is good for this)

**Scope of Work:** This should be a brief description of the project. Simply describe the type of project and square footage (always include) along with a basic request in the scopes required.

I have seen ITB's that list every single trade or vendor required, but that really muddles up the read and will usually require it to go beyond one printable page. They would not be receiving it if you had not already reviewed the specs and drawings for the trades that will be requested to submit a proposal.

You want your invited vendors to review all the bid documents for their scope of work. Accidently not listing a specific trade or material vendor will result in a scramble come bid day.

**Site Visit:** Day and time of either the pre-bid meeting, site access or lockbox with code.

Most trades want to see the site; every effort should be made to allow them access. If you can schedule two times, that would even be more beneficial for those not able to attend one of the times.

**Bid Notes:** This information should contain any pertinent information that the contractors/vendors should be aware of: *Examples*: Responsibility schedule, alternates, addendums, national account pricing, prohibited contact with the owner or architect, RFI deadlines and whom they should go to, any owner provided items.... etc.

Anything that you can include here that will draw attention to important items that the contractor/vendor needs to include in the quote. This area could also contain an FTP site or link to access the bid documents.

Who gets the bid: name and email of person that is responsible for the bidding process and whom the quote needs to be sent too.

Email address, phone number & fax number (yes, some contractors/vendors still fax) of this person should be clear and concise.

Keeping this information to one page (see example) through a compilation of fonts and formats will allow the contractor/vendor to print it, post it or save as a PDF in the bid file. Even though the FTP site will have all of these templates when you set up the project, a separate ITB attachment will personalize the process to a degree.

We are fortunate to have the speed and efficiency of electronic information to do our jobs, but it sure is nice to get something we can print and hold on to once in a while. A good efficient ITB attachment to your project is like a letter. You took the time to write it to provide some information to which you share a mutual connection with.

Respect for our fellow tradespeople by providing as much information as we can will assist in a solid return on the investment in time.

(See Example Below)



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- Firestone Complete Auto Care and Affiliates: Offers exclusive savings on maintenance, repairs and tires from over 2,300 conveniently located Firestone Complete Auto Care, Tires Plus, Expert Tire and Wheel Works company-owned stores. Register Online, Choose your store, and Start Saving!
- Lenovo: 20% Discounts on notebooks, tablets, laptops, accessories and more. Includes FREE shipping on all web orders.
- Davis-Bacon Wage Rates Look up all 50 states. <u>www.constructionworkzone.com/wages/?source=EL11</u> Free online service from BNI.
- American Income Life: No-Cost Programs include:
  - 📮 Group Accidental Death & Death Benefit
  - Family Information Guide
  - Child Safe Kits
  - Health Services Discount Card

## MESSAGE FROM THE EXECUTIVE DIRECTOR



Patsy M. Smith Executive Director

## **Earn Certification Credits!**

## ASPE Annual Meeting & Estimators Summit San Diego, CA | June 24-28, 2015



### 2015 Estimators Summit Sessions:

### June 25, 2015

- Forecasted -vs- Actual Cost for Code Compliance for Hospitals
- Strategies to Win More Profitable Contracts and Get Off the Low Bid Treadmill
- Design-Build Best Practices for Estimators
- Selecting and Working with Estimators from the Lawyer's Perspective

### June 26, 2015

- What Estimators Need to Know About Specifications
- How Do You Rate Compared to Good, Better, or Best and Why Should You Know?
- Estimating & Managing Higher Education/ K-12 Construction Costs
- Understanding Generational Differences

### **Certification Credits Offered:**



**AIA**: 12 credit hours available to AIA Members.



**ASPE**: Up to 17.5 credit hours available to ASPE Certified Professional Estimators

**Other Organizations**: Attendees should contact their credentialing agencies for specific acceptance requirements.

Click Here To Register

### Membership Update

### **NEW MEMBERS**

Member	Chpt. Name	Chpt. Number	Member Company
John F. Bennett	Gold Coast	49	Coastal Construction Co.
Neil E. Smith	Greater D.C.	23	MGAC
Glenn E. Dillon	SE M-A-L	93	M.B. Kahn Construction
Jordan L. Gerding	Columbia-Pacific	54	Gerding Builders, LLC
Jesse Hutton	Columbia-Pacific	54	Ballard Marine Construction
Mike Wilson	Puget Sound	45	Deacon Corp of Washington
Marco Grossi	Gold Coast	49	Grycon, LLC
Kevin P. Brady	Golden Gate	2	Sundt
Scott P. Lovedahl	Roadrunner	47	General Services Administration (GSA)
Jesse D. Smith	Quad Cities	71	Bush Construction
Sukumar Potula	New York	10	Long Island Rail Rd
Traci K. Brower	Detroit	17	Clark Construction Co.
Rebecca A. Walker	NW Arkansas	79	Flintco
Kenneth A. Barnes II	Houston	18	VALERUS
Jeffrey R. Vinyard	Heartland	32	Sorella Group
Henry Rivas	Orange County	3	ARB Structures
Walter J. Aguilar	Gold Coast	49	Epic Construction Solutions, LLC
Kevin H. Wagoner	SE M-A-L	93	Progressive Concrete LLC
Jeff M. Haberberger	St. Louis Metro	19	Haberberger Inc.
Timothy M. Weddle	Middle Tennessee	34	Skanska USA Building
Nicole A. Adams	Middle Tennessee	34	Skanska USA Building, Inc.
James A. Castro	Middle Tennessee	34	Skanska USA Building Inc.

Invite a friend to become a member.

### **NEW CPE**s





## **Upcoming Chapter Meetings**

### ARIZONA

Arizona Ch. 6 Where: Doubletree Suites Phoenix Sky Harbor - 320 44th St., Phoenix Date: 2nd Tues. of the Month Time: 5:30pm Social Hour • 6:30pm Dinner • 7pm Meeting Contact: Paula Daly 602.296.1496 • pdalv@havdonbc.com

### Old Pueblo Ch. 53 2015 Info not submitted

### ARKANSAS

Arkansas Ch. 33 Where: American Pie Pizza Date: 3rd Fri. of Month Time: 12:00 Noon Contact: Chris Sublett, CPE • 501.666.4300 • csublett@cdicon.com

### NW Arkansas #79

Where: Varies - <u>www.aspechapter79.org</u> Date: 3rd Fri. of month (Sept - June) Time: 11:30am - 1:00pm Contact: Thom Thibodeau . thomas.thibodeau@walmart.com

### **CALIFORNIA**

Los Angeles Ch. 1 Where: The Barkley Restaurant, 1400 Huntington Dr., South Pasadena, CA 91030 Subject to change visit: www.laestimator.org Date: 4th Wednesday of month (expect Nov/Dec) Time: 6:00PM Social, 7:00PM Dinner; 8:00PM Program Contact: Scott Hubbard • 818.956.0533

scott@hopkinsconstruction.com

### **Golden Gate Ch. 2**

Where: AIA East Bay, 1405 Clay Street, Oakland, CA Date: Check with Chapter Contact below Time: Check with Chapter Contact Below Contact: Melissa Giordano • 510-735-6444 mgiordano@mticost.com or melissa.giordano@vanir.com

Orange County Ch. 3 Where: Ayers Hotel, 325 Bristol St., Cosa Mesa, CA Date:2nd Wednesday of the Month Time: 5:30 Social, 6:00 Dinner, 6:30 Program Contact: Tom Smithson • 310.427.7251 www.aspechapter3.org

### San Diego Ch. 4 Where: TBD Date: 3rd Tues. of Month

Time: 5pm Social • 6pm Dinner • 7pm Program Contact: Michael Moyers, CPE 858.737.7316 michael.movers@bestinteriors.net

### Sacramento Ch. 11

Where: Rancho Cordova City Hall, 2729 Prospect Park Drive, Rancho Cordova, CA 95670 Date: 2nd Friday of every month (excluding June, July, August) Time: 11:30 - Lunch Provided Contact: Natalie Ghilain • 916.441.6870 • nghilain@ottoconstruction.com

Silicon Valley Ch. 55 Where: Varies Date: 3rd Monday of Month Time: TBD Contact: James Moore · 408-279- 2277 jmoore@bothman.com

### **Inland Empire Ch. 68**

Where: Richie's Diner | 40651 Murrieta Hot Springs Rd., Murrieta Date: 3rd Tuesday of Month Time: 5:30pm Social • 6pm Dinner • 6:30 pm Program Contact: Todd Caha • 760.533.5296

tcaha@baker-electric.com

### COLORADO

**Denver Ch. 5** Where: Hodson's Bar & Grill 999 18h Street, Suite 101, Denver, CO 80202 Date: 2nd Tues of Month Sept. - May Time: 5pm Social • 6pm Dinner • 7pm Program Contact: Stacie Flynn • 720.570.5750 stacie@jordyconstruction.com

### CONNECTICUT

Nutmeg Ch. 60 Where: Confetti's Restaurant, 393 Farmington Ave, Rt, 10. Plainville, CT

Date: 2nd Wed, of Month Contact: Bogdan Jachimiec, CPE • 860.284.7446 bjachimiec@kbebuilding.com

### Yankee Ch. 15

Where: Varies Date: Non-Scheduled Contact: Bill Jacabacci, CPE • 203.257.3928 • iacabacci@gmail.com

### DELAWARE

**Delaware Ch. 75** Where: Varies Date: 2nd Wednesday of month Time: 5:30 pm Social • 6pm Dinner • 7:00pm Program Contact: Rob Belfiore • 302.421.5700 rbelfiore@ediscompany.com

### DISTRICT OF COLUMBIA

Greater DC Ch. 23 Where: Hill International, Inc. - 1225

Eye Street, NW, Suite 600 Date: 3rd Thursday of month Time: 6pm Program Contact: Keith Buchanan, CPE • 202, 408,3043 keithbuchanan@hillintl.com

### **FLORIDA**

Tampa Bay Ch. 48 Where: Brio-Tuscan, International Plaza, 2223 N. West Shore Blvd. Tampa Date: 3rd Thurs. every month Time: 5:45pm Social • 6:30pm Dinner • 7:15pm Program Contact: Steve Masucci • 941.587.5061 smasucci@manhattanconstruction.com

Gold Coast Ch. 49 2015 Info not submitted

### Orlando Ch. 50

Where: Cate Trastevere, 825 N Magnolia Ave., Orlando, FL 32803 Date: 3rd Tues. of month Time: 5:45pm Social • 6:15pm Dinner • 6:45 pm Program Contact: Danny Chadwick, CPE • 407.739.8912 • dkchadwick@bellsouth.net

### **GEORGIA**

Atlanta Ch. 14 Where: Cross Creek Café - 1221 Cross Creek Parkway NW, Atlanta Date: 3rd Thurs. of month Time: 12:00pm Lunch & Program Contact: Charles Carroll aspe14atlanta@gmail.com

### ILLINOIS

Chicago Ch. 7 Where: Brio Tuscan Grille - 330 Yorktown Shopping Center, Lombard Date: 3rd Thurs. of Month (excluding June, July, August and December) Time: 5:30 pm Social • 6:15 pm Dinner • 7pm Program Contact:Dave Westfall, CPE• 815.806.1705 dwestfall@aspendroup.com

### INDIANA

**Central Indiana Ch. 59** Where: Varies each month Date: 3rd Thurs. of month Time: 5:30pm Social • 6pm Dinner 7om Program Contact: Jeremy Adkins, CPE 314.462.9363 · jadkins@theadkinsgroup.net

### Old Fort Ch. 65

Where: TBD - www.aspechapter65.org Date: TBD - see website Time: TBD - see website Contact: Chad David • 260,490,7449 cdavid@weigandconstruction.com

### **IOWA**

**Quad Cities Ch. 71** Where: Granite City Food & Brewery -5270 Utica Ridge Road, Davenport, IA Date: 4th Tuesday of the Month (September - May) Time: 5:00pm Social • 6:00pm Dinner • 7pm Program Contact: Dave Furness • 563.386.5151 dave.furness@treiberconstruction.com

### Greater Des Moines Ch. 73

Where TRD month-to-month Date: 3rd Thursday of month Time: 5:30pm Social • 6pm Dinner Contact: Lee Holatz • 515.229.5291 • leeh@hansencompany.com

### LOUISIANA

New Orleans Ch. 9 Where: VooDoo BBQ & Grill, Severn Avenue, Metairie, LA Date: 2nd Wednesday of Month Time: 5:30 Social; 6:30 Dinner / Program Contact: Christine Barnhill 504.915.0647 . billbar1@bellsouth.net

### MAINE

Maine Ch. 37 Where: Embassy Suites Hotel -1050 Westbrook St., Portland Date: 1st Wed. in Oct., Dec, Feb, Apr & June Time: 6pm Social Hour • 6:30pm Dinner • 7:15pm Program Varies Contact: John Brockington, CPE • 207.774.2756 ext.3251 • jbrockington@woodardcurran.com

### MARYLAND **Baltimore Ch. 21**

Where: Varies Date: 2nd Thurs, of month Time: 5:30 pm Social • 6pm Dinner & Program Contact: Shana Carroll 410.458.0289 shana.m.carroll@gmail.com

### **MASSACHUSETTS**

Boston, Ch. 25 Where: Courtyard Marriot Cambridge, 77 Memorial Drive, Cambridge, MA Date: Third Wednesday of the Month Time: 5:30pm Social • 6:30pm Dinner • 7:00 Program Contact: Gail Cullatti • 617.394.6291 •

gcullati@bondbrothers.com

### **MICHIGAN**

#### **Detroit Ch. 17** Where: Varies Date: 2nd Thursday of each month Time: 5:30 PM Social; 6:00 PM Program Contact: Glenn Frank • glenn.frank@ymail.com

Western Michigan Ch. 70 Where: Grand Rapids BX - 4461 Cascade SE, Grand Rapids

Date: 1st Thurs. of Month Time: 7am Contact: Brent Balkema • 616.881.6252 bbalkema@rockfordconstruction.com

### **MINNESOTA**

Viking Ch. 39 Where: Varies Date: 3rd Thurs. of month Time: 5:30pm Social • 6pm Dinner & Program Contact: Rich Schwarzinger • 763.287.5156 • rich.schwarzinger@mortenson.com

### MISSISSIPPI

Magnolia Ch. 81 2015 Info not submitted

### **MISSOURI**

St. Louis Metro Ch. 19 Where: TBD month-to-month Date: TBD Time: Varies - Check with Contact below Contact: Jerry Dorhauer, Sr. • 314.446.4719 • jdorhauer@schneiderelec.com

### **Heartland Ch. 32**

Where: TBD month-to-month Date: Last Tuesday of the Month Time: 5:30pm Social • 6pm Dinner Contact: Kelly Jarman, CPE • 816.292.8671 • kelly.jarman@jedunn.com

## Upcoming Chapter Meetings

### NEBRASKA

Great Plains Ch. 35 Where: DJ's Dugout, 636 N. 114th St., Omaha, NE Date: 2nd Weds of the month, occasionally different based on speaker availability Time: 11:30am Contact: Jerry Onik • 402.905.4953 ijonik@heartlandscenic.com

### NEVADA

Reno Ch. 12 Where: TBD Date: TBD Time: TBD Contact: Neil DeMent • 775.745.8791 neil@ndireno.com

### Las Vegas Ch. 72

Where: Desert Pines Golf Course Date: 2nd Thurs. of each month Time: 5:30pm Social • 6pm Dinner • 6:30pm Program Contact: Terry Banes• 702.492.5335 • tbarnes@grandcanyoninc.com

### **NEW JERSEY**

Garden State Ch. 26

Where: Librettis Restaurant, 554 Nassau St., Orange, NJ 07050 Date: Call to verify dates Time: 6 pm Social • 7pm Dinner • Contact: Jeff Senholzi • 507-476-6907 • costnav@ptd.net

### NEW MEXICO

Roadrunner Ch. 47 Where: Fiesta's - 4400 Carlisle NE, Albuquerque Date: 1st Wed of month Time: 5:30pm Social • 6pm Dinner • 6:30pm Program Contact: Glynnette Hale,CPE• 505.823.4449 ghaleves@msn.com

### **NEW YORK**

New York City Ch. 10 Where: TBD Date: TBD Time: TBD Contact: Peter Wellstood • 914.665.0083 imagineering@verizon.net

### Empire State Ch. 42

Where: Reel Seafood, Wolf Road, Albany, NY Date: Sept 16; Dec 9; March 24; June 16 Time: 5:00 Social • 6PM Program• 7:00 Dinner/Program Contact: James Madison, CPE• 914.755.8994 [madison@arriscontracting.com

### Western NY Ch. 77

Where: Panera Bread, 1501 Howard Rd, Rochester, NY Date: Second Thursday of the Month Time: 8:30AM - 9:30 AM Quarterly Meetings: Verify with Chapter Contact Contact: Benjamin Nodine 585.720.5772 • ben.nodine@wegmans.com

### OHIO Buckeye Ch. 27

Contact: Tim Mescher • 614.754.8349 tmescher@thomas-marker.com

### Northeastern OH Ch. 28 2015 Info not submitted Southwestern OH Ch. 38

Where: Embassy Suites Hotel - 4654 Lake Forest Drive, Blue Ash, Ohio Date: 3rd Thurs. of month Time: 5:30pm Social • 6pm Dinner •7:00 pm Program Contact: Henry Frondorf, CPE • 513.861.8866 hfrondorf@hgcconstruction.com

### OKLAHOMA

Landrun-Oklahoma City Ch. 80 Where: Ingrid's Kitchen Date: 1st Wed. Of each month Time: 11:30am - 1:00pm Contact: John Smartt, CPE • 405.254.1050 ismartt@manhattanconstruction.com

### OREGON

Columbia-Pacific Ch. 54 Where: University Place - 310 SW Lincoln St., Portland Date: 3rd Tues. of month (except Dec & Jan. January is join with CSI) Time: 5:30pm Social • 6:15 pm Dinner & Program Contact: Curt Kolar, CPE 503.962.8840 kolarc@trimet.org

### PENNSYLVANIA

Greater Lehigh Valley Ch. 41 Where: Notices will be emailed. Date: TBD Time: TBD Contact: James G. Hanna, CPE 484.357.6466 • jgh@dhuy.com

### Three Rivers -Pittsburgh Ch. 44 2015 Info not submitted

### Philadelphia Ch. 61

Where: Double Tree Hotel - 640 W. Germantown Pike, Plymouth Meeting Date: 3rd Wed. of month Time: 5:30pm Social • 6:30pm Dinner/ Program (see website for topic and time) Contact: Nick Vermont • aspe61.Philadelphia@gmail.com

#### Central PA Ch. 76 Where: TBD Date: 2nd Wed. of Month Time: 6pm Social • 6:30pm Dinner & 7:00pm Program Contact: Daniel Dennis, CPE • 717.735.6010 dd@EGSConstruction.com

### TENNESSEE

Middle Tennessee Ch. 34 Where: Kraft CPA - 555 Great Circle Road, Nashville Date: 1st Fri. of Jan, March, May, August & October Time: 11am Social • 11:30am Lunch • 12pm Program Contact: Ricky Sanford: 615.895.9000 ricky.sanford@rogersgroupinc.com

### TEXAS Houston Ch. 18

Where: Spaagetti Western's, 1608 N. Shepard, Houston, TX 77007 Date: 2nd Monday of Month Time: 6 pm Contact: Dennis Pyland•832.888-9868 Dennis.pyland@amail.com

### **Rio Grande Ch. 40**

Where: Famous Daves, 1135 Airways Blvd., El Paso, TX • 915.843.8400 Date: 1st Thurs.of Month Time: 5:30 pm Board Meetingl • 6:00pm General Meeting Contact: Jesus Cardenas • 915.532.1735 email@elpasobid.com

### Dallas/Fort Worth Ch. 43

Where: Texo - Dallas AGC Office Date: 3rd Thurs. of each Month Time: 5:30 pm Social • 6:00pm Dinner 6:30 Program Contact: Chris Sonderby, CPE • 682.239.9657 cs6423@gmail.com • www.aspe-dfw.org

### UTAH

Salt Lake City Ch. 51 Where: TBD Date: Third Thursday of Month Time: TBD Contact: Daniel Miller • 801.680.0647 dmiller@suresteel.com

### VIRGINIA

Richmond Ch. 82 Where: Baskervill Architects - 101 15<sup>th</sup> St., Richmond Date: 4th Weds. of Month in Spring & Fall Time: 5pm Social + 5:30pm Dinner +6:00pm Program Contact: Wike Gray • 804.371.7545 michael.gray@dgs.virginia.gov

### WASHINGTON

### Puget Sound Ch. 45

Where: Hale's Ales, 4301 Leary Way NW, Seattle, WA Date: 3rd Tues. of Month (September - May, excluding December) Time: 5pm Social • 6pm Dinner • 7pm Program Contact: Mike Booth, CPE • 206.793.8504 electricbooth@msn.com

### WISCONSIN

Brew City Ch. 78 Where: Charcoal Grill - 15375 West Greenfield Ave., New Berlin Date: 2nd Tues. of Month (Sept - May) Time: 5:30pm Social • 6pm Dinner & Program Contact: Deanne Goodlaxson, CPE 608.838.2985 • dgoodlaxson@casgroupinc.com

> All Chapter Meetings are on a monthly basis unless otherwise noted.

If you do not see a Chapter Meeting listing in your state/area call 615.316.9200.

Chapter Presidents should contact the SBO with any updates as needed.

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Estimating Today 35



American Society of Professional Estimators 2525 Perimeter Place Drive, Suite 103 Nashville, TN 37214

## 2015 ASPE Annual Meeting & Estimators Summit

