



# Cactus Comments

August, 2006

## MOVING ONWARD

George Wadding, CSI  
Star Roofing

### MEA CULPA (sort of)

First, let me apologize to those few who were disappointed by the cancellation of the July Family Outing. Fact is, however, that we didn't even come close to the minimum required for the discounted rate. We will note and pass on the lesson that July-Phoenix- outdoors (even around water)-social are four words that do not fit together very well.

Second, the program committee, including me, had some real enthusiasm for the proposed tour of the new Convention Center. Regretfully, those various people who were contacted by our representative did not respond directly, seeking only to avoid any responsible reply. During the course of my participation with the Alliance for Construction Excellence, we found out the hurdles that would have to be overcome and gave some thought to trying to "piggyback" on their efforts to arrange a tour. Ultimately, since there would have to have been a fairly substantial event charge or the assumption of some financial risk to the chapter combined with the twin impediments of a breakfast meeting on a different meeting day and insufficient time to promote the idea, the program committee decided to just let August be a vacation month (for everyone except the Board).

Lesson learned: when dealing with people who have no "investment" in CSI, we have to get things firmed up well in advance or just move on to another possibility.

### CHANGE

Last month I spoke of change being a "constant". However, change for the sake of change has no intrinsic virtue, unless we are talking about underwear. To have validity or worth, the change must result in a more efficient process, a more durable and cost-efficient (not cheaper) product, a more accurate end-result.

Bearing in mind that the Eleventh Commandment ("Thou shalt remember the 4 Cs \* and apply them to all thy work") should be an over-riding concern for every one in the Construction Industry(CI), we can review, evaluate and critique some of the changes we are seeing.

CAD certainly has introduced a new ease of preparing the graphical representation of the designer's product. It is hard to imagine that the volume of drawings needed for our current level of activity could be produced using drafting tools and pencils. But a precautionary note is in order, in that the ease with which text can be placed on the drawing, often tends to present conflicts between the documents. The description of the Products used and the Execution of their assembly is the responsibility and province of the specifier. The drawings are intended to show the location and relationships of those items. When CAD operators (because it's so easy) add keynotes, pagenotes and labeling describing Products & Execution, all 4 of the 4C's are usually violated.

Lesson: CSI needs to recruit and educate CAD specialists. Few, if any, have the ambition to someday be a designer. Equally importantly, CSI needs to educate more principals about the effort wasted in putting this unnecessary, often conflicting information in the wrong document.

Recently I picked up the documents for a retail development. Fortunately, the GC had a hand truck sitting right there to use in transporting them to my pickup (probably a good thing since they would not have fit in a trunk). Each set contained 50-70 pages (Civil, Landscape, Fire Protection, Structural, Mechanical, Plumbing, Electrical, oh and yes, Architectural. To estimate the quantities and cost of this project I have used, at most, an approximate average of 10: Title Page (listing and project summary), 4-5 Architectural, 1 Structural, 1 each M\PE.

Yes, I understand that their lawyers insisted that their subcontracts list every last one of them and I've been bitten when only a fraction of the roof-penetrating or roof-mounted items were shown on the Roof Plan and we were only furnished A sheets. I would be the last to argue that subs should not have access to all of the information. I just wonder who paid for all that reproduction work and how many trees got killed?

By contrast, a month ago I picked up a similar project which was contained on one CD and the GC's hard copy "front ends"(roughly the size of a project manual, circa 1970).

Suggestion for a LEED criteria: incorporate some value for electronic distribution of the construction documents.

Lesson: the same technology that provides CAD and other digital data processing could ensure that all the information is distributed easily and much more economically.

Comments? Surely someone wants to take issue.

\* Clear, Concise, Correct, Complete

## **2006 – 2007 Programs**

September	Construction Scheduling
October (dual topic)	Introduction to the new Arizona Masonry Guild Manual Qualifications-based contracting of Subcontractors\Specialty Suppliers\Vendors
November	Warranties
December	Holiday Party
January	Materials Testing & Approvals
February	Construction Manager @ Risk as seen by the owner
March	CSI Awareness \ Future Cities \ Imagination Cube
April	Building Information Modeling
May	Construction Insurance \ Construction Bonding
June	Awards Dinner

### **From the Editor**

Pamela Bir  
Your Computer Lady

Thank you to the volunteers who helped with our all-volunteer-newsletter experiment. We learned a whole lot and the Publication Committee has made plans to improve the newsletter, web site and the publishing process for the next year.

We're going to rotate the Editor on a 2 or 3 month basis to give a volunteer time to really dig into the process and get comfortable with electronic publishing. This month Mary Grace Maglio is assisting.

PayPal

The board has decided to start using PayPal for credit card processing. This will allow guests for monthly meetings to pay in advance for their meals. It will allow members and guests to pay for seminars, MVE I green sheets, shirts, hats, etc.

For those of you who haven't used PayPal, we have a link from Kim Komando's newsletter specifically addressing security.

The Publications committee could use your assistance. We have a large job to do every month with the newsletter and the web site. "Many hands make light work" so we would like for you to join us! Our monthly online meeting is the first Thursday of each month at 8 am. Call or email me to let me know you want to attend! 480-929-0335 or Pamela@YourComputerLady.com

## **Shopping for Moisture Control Systems**

**Lance Neff, CSI**

Having spent the last three years immersed in the subject of moisture problems in concrete and how to best control them, I have had the privilege of learning from and lecturing along side the most esteemed experts on this subject in both the concrete and flooring industries. I thought it would be of value to sort through what the experts consider the most important parameters a remediation system must have. Since so many industry experts have their own lists of what the systems have to do and how they have to work, I have consolidated these items into a "shopping list" that more clearly identifies the key parameters to be considered when selecting a moisture control system.

### **#1 - Pay attention to what the moisture control system manufacturer says about how much moisture the system can handle after installation.**

Various manufacturers will say that their system works up to "X" pounds of moisture. What we have learned is that, since the surface of the concrete is invariably drier than it is 4 or 6 inches down, once a vapor retarder material of any value less than ~1.0 perms is applied, the amount of moisture at the surface of the concrete will increase. So what may have been 8 pounds at the time of the test will climb to 10 or 12 or more. What the system can handle after it is installed – that's what really counts!

### **#2 - Make certain that when selecting a remediation system, the one to be used will perform in an environment with high pH.**

Using the concept as provided above, when the moisture within the concrete migrates upward toward the surface so does the pH. What may have been a benign 9 or 10 pH on the surface of the relatively "dry" concrete can increase to 12 – 13 as the moisture rises. Much in the same way that adhesives break down in the presence of high pH so can some of these latex-based remediation systems. Find out what the manufacturer has to say about the performance of their system in a high pH environment.

### **#3 – Select a system that can be easily applied completely and uniformly over the entire area and to the specified thickness.**

The manufacturer of the system will require that the material be applied to a uniformly specified thickness to achieve the laboratory measured perm rating. While there are a few prefabricated membrane systems out there, most of the materials are in liquid form and applied on site. To that end, how easy is it for a contractor to "paint" the concrete to a uniform thickness over the entire area – especially in light of the fact that the concrete has been mechanically cleaned by shot blasting and thus has small highs and lows throughout. I don't know about you, but no matter how hard I try, I can't paint my living room walls in one coat and achieve full and uniform coverage. And that's over a very smooth surface. It is even more difficult on a moisture remediation project.

### **#4 – If you don't have a moisture emission problem, one coat of virtually any system will work fine. If you have an actual moisture emission problem, two coats is the best way to get the protection you need.**

This may sound ridiculous, but having heard enough of the horror stories about failed systems, the experts have convinced me that two coats are essential for a couple of reasons. The first is reflected in #3 above. Two coats of paint on my living room walls are a sure bet that I'll get the coverage I'll need for a uniform appearance. Two coats of a remediation system on my slightly roughened concrete is a much better bet that I'll have enough of a vapor retarder there to slow down the moisture to an acceptable level. The second reason, and the one that makes item #4 not so ridiculous is manufacturers that tell you to install their product in just one coat, but then require you to test the surface again after installation. First of all, this adds 3 days of additional down time waiting for the results of the new calcium chloride tests. Then, if you find out there is still too high a level of emissions, you'll need a second coat, and another retest, and in some

cases a third coat. Realistically, all things being equal, think about this: if one coat of a waterborne product actually doesn't increase the moisture and pH at the surface of the concrete and the flooring doesn't fail, it means that you didn't have excessive moisture emissions in the first place. We all know that the calcium chloride tests can be manipulated quite easily by changing the temperature and humidity in the space. Even though this is against the ASTM procedures, its done all too often – often unwittingly. Once again the experts agree – there are some systems being used today that only work because they weren't needed in the first place.

**#5 – How well can the remediation system stand up to traffic from other trades after it is installed?**

While this may not appear to be an important item, it cannot be overlooked. If I put the remediation system down and then install the floor covering right away, there's no concern. However, we have all been involved in enough actual jobsite situations to know that in spite of our best efforts to plan ahead, there's always the case that the flooring may not be installed immediately and other trades need to proceed to do their work as well. While this isn't the fault of the manufacturer or installer necessarily, traffic can damage the installed system making it incapable of performing. For this reason, consideration must be given to the construction schedule and the system's ability to remain intact should it need to be trafficked over by other trades until the finish flooring is installed.

**#6 – If the flooring contractor needs to change his usual flooring installation procedures, make certain that the new instructions are clearly understood and can easily be followed.**

The most common substrates over which flooring is installed are porous: either concrete or wood. By installing a moisture control system, you end up with a nonporous surface, or at least one that is less porous than it was. That same adhesive you use day in and day out may not be appropriate over a non-porous substrate. And, if it is, the installation instructions have to be carefully understood. Since waterborne adhesives are the most common in use today, their installation instructions are directly tied to the porosity of the substrate to include the size of the notches in the trowel, and allowing longer open times before actually placing the flooring into the adhesive. While these installation instructions are made widely known by adhesive manufacturers, it remains that the contractor using them has to be aware what was once porous concrete now isn't.

**#7 – Check the warranty being offered very carefully and make sure you're being fully covered and for the full term of the warranty period.**

If there is a failure and the moisture level does not exceed what the manufacturer recommends for the system installed, what is actually covered? In some cases, the manufacturer will replace the product only. Does additional warranty coverage come with additional costs? Who gets the warranty? What is the length of the warranty? Can the owner pass it on should they sell the building? What about tear-out, reinstalling a new system, the patch or leveling compound, the adhesive, and the floor covering? And who is responsible for the labor to do all of this? By the way, is the warranty prorated such that it loses value each passing day? The installation of a properly formulated moisture control system should flat out perform for the full length of the warranty period. Owners expect warranties that will protect them from future outlays. They've already spent good money to solve a problem. They should only have to pay for it once.

## **THE CODE CORNER**

### **Fire Sprinkler Systems**

*By Ronald L. Geren, RA, CSI, CCS, CCCA*

This year marks the 200<sup>th</sup> anniversary of the automatic fire sprinkler system. In 1806, an Englishman by the name of John Carey, developed the first automatic fire sprinkler system by connecting a series of perforated pipes to an elevated water tank. The water, under pressure due to the tank elevation, was held in place by closed valves. Combustible cords connected to weights held the valves closed. When a fire would burn through the cords, the weights would drop, opening the valves, thereby allowing water to enter the perforated pipes and extinguishing the fire. Crude, but it was only the beginning.

Although the first sprinkler head was invented in 1864 by Major Stewart Harrison of London, the first practical modern sprinkler head was developed ten years later by Henry Parmelee of New Haven, Connecticut. Upset with the extremely high insurance rates of the time, Henry Parmelee developed his sprinkler head to protect his piano factory rather than pay for insurance coverage. Later, he teamed up with Frederick Grinnell, who owned a steam and gas plumbing company at the time, to install the sprinkler systems in other factories at their request. Over 130 years later, the automatic fire sprinkler system remains the leader in fire protection systems.

The success of automatic fire sprinkler systems created another problem: consistency in installation. To resolve this problem, a group of men, the majority of which represented insurance companies, gathered in Boston in early 1895 to discuss this very issue. Later that year, they met again in New York, and the beginnings of a new sprinkler standard, and an association to maintain this standard, started to develop. By March of 1896, they developed a set of sprinkler installation rules and set in motion the development of an organization to administer them.

In November 1896, the National Fire Protection Association (NFPA) was organized, and the sprinkler installation rules eventually became known as NFPA 13, *Installation of Sprinkler Systems*. Although NFPA 13 has become THE standard for sprinkler systems, many people don't really understand when fire sprinkler systems must be installed.

NFPA 13, or amended versions of it, has been referenced in the building codes for many years, as well as its sister document, NFPA 13R *Installation of Sprinkler Systems in Residential Occupancies Up to and Including Four Stories in Height*. It wasn't until the publication of the 2000 *International Building Code* (IBC) that the third fire sprinkler standard, NFPA 13D *Installation of Sprinkler Systems in One- and Two-family Dwellings and Manufactured Homes*, was referenced in a building code. Although the standards establish *how* the sprinkler system is to be installed, it doesn't dictate the conditions *when* a sprinkler system is required to be installed—that's left to the building code, or, in some case, local ordinance, which will be discussed later.

In the IBC, there are two ways that fire sprinklers may be required in a building: through either a direct requirement and or an indirect requirement. A direct requirement is one that the designer has little to no control over such as one based on an occupancy group. On the other hand, an indirect requirement is one that the designer does have control over, such as allowable building area and occupancy separations.

In the IBC, sprinkler system requirements are found in Chapter 9, and, it is in Section 903 that you'll find most of the direct requirements for automatic sprinkler systems. For example, in Section 903.2.5, it states that fire sprinklers "shall be provided throughout buildings with a Group I fire area." Another example of a direct requirement—and one commonly misunderstood—is the requirement for a sprinkler system in all buildings with a Group R fire area. Some have mistakenly applied this requirement to all residential buildings; even detached one- and two-family dwellings and multiple single-family dwellings not more than three stories in height. The *IBC Commentary* clearly states that the *International Residential Code* (IRC), which is applicable to those building types, is considered a separate code, and that the requirements of the IBC do not apply. Conversely, if a building of any of those types does not meet the requirements for application of the IRC, then the IBC will apply and a sprinkler system will be required.

Additionally, there are other areas in the IBC where direct requirements for sprinkler systems are set. In Chapter 4, covered mall buildings must have a sprinkler system installed throughout, as well as high-rise buildings and in atriums. In Chapter 26, freezers, coolers, and the parts of the building where they're located, must also be protected with sprinkler systems.

As for indirect requirements, the most common is the installation of a fire sprinkler system to obtain an area increase, a height increase, or both. The reason this is considered an indirect requirement is that alternative design approaches, other than the installation of a fire sprinkler system, can be incorporated to achieve additional floor area or building height. For example, a higher construction type may be used, providing separated occupancies, incorporating fire walls to separate large buildings into two or more smaller buildings, or a combination of any of those methods.

Other indirect requirements can be found when incidental use areas are included in a building design. Incidental use areas are spaces that could be classified within a separate occupancy group from the main occupancy, but are incidental to the main occupancy and, therefore, can be classified under the main occupancy. These areas, which are listed in Table 302.1.1, have options that either requires a fire barrier separation, the installation of a sprinkler system in the incidental use area, or both.

There are numerous other instances in the IBC where the installation of a sprinkler system—considered an active fire protection system—is permitted to reduce passive fire protection such as fire-resistive construction and finish classification; or increase other aspects of the code such as maximum allowable hazardous material storage, unprotected opening area, and maximum travel distance for egress. These are what the building code community calls "sprinkler trade-offs" and have been included in building codes for 50 years.

When the IBC was being developed, there was a mild uproar about the number of sprinkler trade-offs that the code included, and it still continues to this day. The uproar comes from many directions: firestop contractors and material suppliers, concrete manufacturing organizations, fire marshal associations, door hardware manufacturers, wall and ceiling contractors, and several other groups and individuals. Most of these opponents are looking for an approach to fire safety that uses a balance of active and passive fire protection measures, rather than relying heavily on sprinkler systems, which some argue has a history of unreliability. This might appear to be a concern based on the number of recent recalls on popular sprinkler heads, but a report by the NFPA released in August 2005, states that "sprinklers failed to operate in 7% of structure fires" between the period of 1999 through 2002<sup>1</sup>; to turn that around, sprinklers were 93% effective—a reasonable performance. Although it isn't the intent of this article to get into the sprinkler trade-off debate, it could be expected that, over time, a balance between passive and active fire protection will work its way into the building code to some degree; probably not to the satisfaction of those listed above, but presumably enough to temper the debate somewhat.

Any article on sprinkler systems in building codes wouldn't be complete without a discussion on the word "throughout." The IBC uses this word in conjunction with many sprinkler requirements, such as that for area and height increases. In Section 506.3, it states "Where a building is protected throughout with an approved automatic sprinkler system in accordance with Section 903.3.1.1 [NFPA 13], the area limitation in Table 503 is permitted to be increased..." When the code uses that "throughout," it literally means it. However, like most aspects of a building code, there are exceptions.

Since the building code requires systems to be installed in accordance with NFPA 13 (or one of the other two codes, if permitted), then if the standard allows omission of sprinklers from a certain area, it is still considered sprinklered "throughout." Additionally, the IBC has inserted some exceptions of its own. In Section 903.3.1.1, the section that applies NFPA 13, the IBC permits excluding sprinklers in the following areas:

- In areas where the use of water creates another fire or life safety hazard.
- In areas where it is considered undesirable to have sprinklers due to the nature of the areas' contents, when approved by the building official.
- In generator and transformer rooms when separated by 2-hour fire-resistive assemblies.
- In areas of noncombustible construction with entirely noncombustible contents.

Lastly, the IBC permits the installation of alternative automatic fire-extinguishing systems in place of the sprinkler systems required in Section 903. These systems include wet-chemical, dry-chemical, clean-agent, foam, carbon dioxide, and halon extinguishing systems. It is important to note that the installation of these systems, when used as an alternative to sprinkler systems, must be approved by the building official. However, they can not be a substitute for sprinkler systems installed for the purposes of exceptions or reductions allowed by other requirements of the code (i.e. substitution for one-hour construction in Type IIA, IIIA and VA buildings).

According to the NFPA report, "the chances of dying in a fire are reduced by one-half to three-fourths, and the average property loss per fire is cut by one-half to two-thirds, compared to fires where sprinklers are not present."<sup>1</sup> Because of this potential, some jurisdictions have made fire sprinklers mandatory. The City of Phoenix, through its Bret Tarver Sprinkler Ordinance<sup>2</sup>, now requires fire sprinkler systems installed in buildings of all occupancy groups, except for R-3 occupancies less than 5,000 square feet. But, Phoenix wasn't the first: in 1986, the City of Scottsdale required sprinkler systems in ALL construction—including one- and two-family homes. It's in one- and two-family homes where fires have cost the most in number of lost lives; and, it's also where the fewest sprinkler systems are installed.

For those who use building codes, they know that the codes only provide the minimum standards for building construction. There is nothing in the code that prevents an owner from exceeding the code requirements. This includes installing sprinkler systems when not required or implementing compartmentation (separation of spaces with fire barriers) even when a sprinkler system is installed. A prudent owner, knowledgeable in the fire risks associated with their building type, knows that they could save more money than the initial costs of installing fire protection, not to mention lives, if a fire event should occur in their building with the added fire protection.

<sup>1</sup> *U.S. Experience with Sprinklers and Other Fire Extinguishing Equipment*, "Executive Summary," National Fire Protection Association, August 2005, page i.

<sup>2</sup> Named for Bret Tarver, a Phoenix fire fighter who lost his life during a supermarket fire March 14, 2001. The supermarket had no fire sprinkler system.

*To comment on this article, suggest other topics, or submit a question regarding codes, contact the author at [ron.geren@gouldevans.com](mailto:ron.geren@gouldevans.com).*

## **ROOFING--- FYI**

George R. Wadding CSI

Several roofing manufacturers have now issued Technical Bulletins regarding the Factory Mutual revision to 1-29 dated January, 2006. The primary change relates to fully adhered (built-up, modified bitumen and single ply) systems applied over insulation which is mechanically attached to the substrate. It applies to all types of adhesion, mopping, cold process or torched.

Essentially, the use of 1-90 now requires that the perimeters must meet FM-150 and the corners FM 1-225. Practically speaking, these ratings are not attainable with mechanical fastening, especially with steel decks. At the least, they would require higher yield strength steel and screw attachment of that deck to the structural members. However, compliance under those conditions is unproven at the moment and may simply not be possible.

A side note here - few if any, of the wood decks we see in Arizona meet FMG regardless of how the roof cover is applied.

The roofing industry and its associations' technical committees are following this issue and discussing it with FMG, but for the time being if your specification calls for 1-90 you can expect that the Roofing Contractor has provided a conditional proposal to the General Contractor which has excluded compliance with 1-90.

The fact is that under the former prescriptive calculations and wind charts, the use of 1-90 was not required in Arizona. FM 1-60 or FM 1-75 would probably be more than sufficient to meet the required uplift pressures.

Several suggestions:

1. If the building is not to be insured by Factory Mutual, do not specify compliance with FMG ratings.
2. If the building is FM insured, contact Factory Mutual for their assistance in determining the required wind rating.
3. If you are specifying a manufacturer's warranty, disregard FM and contact that manufacturer for their requirements for the project. All manufacturers have a Technical Group separate from their sales and marketing staffs.
4. If none of the above are satisfactory to you, specify FM 1-60 which provides a prescriptive assembly which can be attained.

If you have a manufacturer whose systems you prefer, you should visit their web site for a more comprehensive discussion of this issue.

## **Member Bios**

Jill Rehse

Jennifer Neuville, CSI  
Architectural Representative  
Frazee Paint and Wallcovering  
602-725-2163  
[jneuville@frazee.com](mailto:jneuville@frazee.com)

Since 1896, Frazee Paint has grown into a leading manufacturer and retailer of paint and coatings throughout California, Arizona and Nevada. The Frazee product line consists primarily of architectural, commercial, industrial and government specification coatings. In addition, Frazee offers an extensive line of nationally recognized wallcovering brands, spray equipment and painting tools. The Frazee corporate offices, manufacturing facility and main distribution center are located in San Diego, California. From this facility, Frazee produces more than 12 million gallons of paint each year.

Jennifer's responsibility at Frazee is to work with architects and designers in the Arizona market to supply them the tools and information necessary to write their painting specifications.

In late May, Jennifer joined the Frazee Paint team and began her CSI membership soon after. Since she is new to the construction industry, Jennifer hopes to learn from CSI about the industry and meet new people in the field.

Jennifer was born and raised in Phoenix and received her undergraduate and graduate degree from Arizona State University. Can you believe that Jennifer is a third generation of Arizona natives?

Since completing her MBA in June, Jennifer has been able to rediscover some of her old hobbies, such as yoga and reading.

We are pleased to have Jennifer Neuville as a new member of our CSI Chapter. Jennifer would like to extend the opportunity for a presentation on Frazee paints and/or high performance coatings for any firm interested.

Rick Armstrong  
e group inc., Landscape Architects  
602-462-9000  
[rick@egroupinc.com](mailto:rick@egroupinc.com)

e group inc. is a firm that specializes in landscape architecture, land planning, environmental and urban design for resorts, hotels and golf courses. They also work on master planned communities, municipal parks, Sports/Recreation, Commercial/Retail, Luxury Multi-Family Residential and project Theme Design/Graphics. Currently Rick is working on: Zanjero in Glendale at 91<sup>st</sup> Ave north of the Arena/Stadium; Washington Corporate Center adjacent to the light rail in Phoenix; Las Vegas Springs Preserve and University of Nevada Las Vegas Student Recreation Center; Montelucia in Paradise Valley and various resorts in Mexico and Panama. Rick says he's generally considered as "The Old Man" in their office.

Rick grew up in Tulsa, OK and graduated from Oklahoma State University - "The Cowboys." He joined CSI in Tulsa in 1976 and has been involved in CSI ever since in many towns: Dallas, Alexandria, Los Angeles, Tampa and now Phoenix.

After Rick read the 2" thick Project Manual from SOM (his first introduction to specs), he became very interested in CSI. Rick attends our monthly meetings regularly.

Some of Rick's most memorable vacations were with family. He enjoyed visiting his daughter in Gig Harbor, WA while she was training for the Olympics in kayaking and the Outer Banks, NC with family.

**ARIZONA MASONRY GUILD,  
PHOENIX CHAPTER CONSTRUCTION SPECIFICATIONS  
INSTITUTE  
and  
ARIZONA AIA**

**THE 2006 IMAGINATION CUBE**

**Competition:** Sponsored by the Phoenix Chapter, Construction Specifications Institute, this award recognizes imaginative investigation and creative design that explore the potential of a building product. A different building product/manufacture is chosen each year from within the CSI's membership and the companies they represent.

This year's product/material sponsor is the **Arizona Masonry Guild**. The featured material is **Concrete Masonry Units and/or Glass Block**. The competition welcomes any imaginative, design-related exploration appropriate to these materials: functional, technical, spatial or artistic. The design must fit within the cubic dimension of 48' x 48' x 48' and must use **Concrete Masonry Units and/or Glass Block** as its primary components.

**Prize:** In addition to the Trophy Award and Certificate, the winner will receive a 3-night trip for two to Chicago with hotel and airfare included and a travel stipend.

Images of the competition winner will be featured during the AIA Arizona Design Awards Banquet, November 4, 2006 at Bentley Gallery in Phoenix's warehouse district.

**Eligible:** Arizona Residents

**Jury:** Matthew Salenger, coLAB Studio  
Matthew Trzebiatowski, Blank Studio  
A Member of the Arizona Masonry Guild

**Format** Design proposal shall be submitted in a PowerPoint format. Provide a maximum of 10 slides. The PowerPoint file size must not exceed 20MB. The file name shall be saved as "2006 icube submittal number.ppt". The PowerPoint file shall be submitted on a CD using a PC format with the submittal number clearly noted on the CD. A submittal number will be given to entrants once registration and payment is received by the AIA. The Concealed Identification Sheet which shall be sealed in an envelope and be included with the CD. The identity of the designer should not be present anywhere within the submittal except for the concealed identification sheet within the sealed envelope. Any entry that displays the identification of the entrant will be disqualified.

**Slide 1 and/or 2** - shall be the title slide(s) and should include the title of the project, a brief summary of the design concept and approach, exploring the functional, technical and aesthetic possibilities of **Concrete Masonry Units and/or Glass Block** along with a specification describing the use, application and quality. The specification may be any format chosen by the entrant. A specification **MUST** be submitted to qualify for judging. We encourage the entrants to be creative with the use of their specification.

**Slides 3 thru 10** – drawings, diagrams, images, renderings, etc. that convey the design intent of the project

**Release  
Waiver:**

By submitting an entry, entrants take full responsibility for the accuracy of all information provided and warrant that all necessary permissions have been obtained from owners, photographers and others who may have rights to the project. Entrants further acknowledge that no royalty or compensation is due, hold AIA Arizona, it's sponsors, staff and members harmless from all liability, and grant AIA Arizona the non-exclusive right to publish, reproduce, and distribute copies of the original entry.

**Deadlines:**

September 1, 2006	Registration due
October 2, 2006	Submittals due at 4pm
October 2006	Jury meets
November 4, 2006	Winner announced at the awards banquet presentation at the Bentley Gallery in Phoenix's warehouse district

**Deliver or  
send to:**

AIA Arizona  
30 N. 3<sup>rd</sup> Avenue #200  
Phoenix, Arizona 85003  
(602) 252-4200

**Fee:**

\$35 (\$25 for students)

**Questions:**

Mark Roddy, AIA  
mark.rodny@smithgroup.com

**2006 IMAGINATION CUBE COMPETITION  
REGISTRATION FORM**

Complete this registration form and mail with \$35.00 (\$25.00 for students) by September 1, 2006 to:

AIA ARIZONA  
30 North 3<sup>rd</sup> Avenue #200  
Phoenix, AZ 85003  
(602) 252-4200

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Name Firm Name

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Address

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City, State, Zip

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Phone Fax

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Email

# 2006 IMAGINATION CUBE COMPETITION

## CONCEALED IDENTIFICATION SHEET

**SUBMITTAL NUMBER** \_\_\_\_\_

(you will be issued this number once your registration and payment is received by the AIA)

**Project Name:**

**Entrant:**

**Address:**

**Telephone:**

**Email:**

**Other Credits (If Applicable):** Consultant(s), Team Member(s), etc

## **CSI Phoenix Chapter's Imagination Cube Design Competition 2006**

The I-Cube Committee is soliciting Co-Sponsors. This is the 7<sup>th</sup> year of competition and contributions have grown each year.

Co-Sponsorship is \$100.

The major goal of this competition is to increase awareness of the organizations and companies involved.

The money awarded to the individual winner or team may be spent at their discretion. In the past, it has been spent during the trip which is funded by the Featured Product Sponsor. It has also been used to purchase professional tools.

Whatever the case, the extra money is greatly appreciated. Let's make the total contribution this year the best yet!

To become a Co-Sponsor, please contact Tim Garver, CSI, CDT  
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