

# Cactus Comments

June, 2006

## From the President

Ronald W. Hand, CSI, CDT, AIA, NCARB, LEED AP  
E/FECT. Sustainable Design Solutions

## Thank You for a Successful FY05/06!

We move into the month of June 2006 with our Chapter growing strong and preparing to celebrate our successful fiscal year 2005/06. Please join us for our June 14, 2006 Phoenix Chapter CSI Awards Banquet at The Charthouse in McCormick Ranch, Scottsdale, Arizona. We will have a great program and presentation by Valley Metro updating progress on the Phoenix area Light Rail Project currently under development. We will have music, great food, an enlightening program and, of course, an awards ceremony honoring our Chapter's outstanding achievements for the year. The event has been planned to appeal to our members, spouses and guests. Please plan to attend, bring your spouse, significant other and/or a guest. Let's make this an exciting and enjoyable event celebrating our Chapter!

Our May membership meeting was well attended and provided us with an in-depth look at the coordination of drawings and specifications. Thank you to our own Ron Geren, 1<sup>ST</sup> Vice-President, for an informative presentation.

At this juncture with my tenure as Chapter President coming to a close, I want to revisit our year's success in implementing the three areas of focus I charged our organization with at the beginning our CSI FY05/06: 1) **Membership**; 2) **Awareness and Participation at all Levels of CSI**; and 3) **Commitment & Involvement**.

I challenged you all in June, 2005 with increasing membership to 235 and 95% retention rate. Our **Membership** has experienced a constant and consistent growth in numbers, renewals, and member retention. Growth in these areas signifies a strong, healthy Chapter. The Membership Committee and Chapter leadership took to task the aggressive goals and our current membership is 207 with a 92.7% retention rate. Our Chapter growth is one of the strongest in our Southwest Region and our retention rate is extremely high. We have successfully updated our Chapter Strategic Plan (06-09) which provides the milestones to continue advances in membership growth and member development.

**Awareness and Participation at all Levels of CSI** has been an on-going endeavor in an effort to expand our knowledge, understanding, and participation at the Chapter, Southwest Region, and Institute levels. We continue to have Chapter members serve on Institute committees, take on Southwest Region Chair responsibilities and we have worked aggressively to grow our Chapter committees. We have responded as a Chapter to the SectionFormat proposed update and had strong representation at The 50<sup>th</sup> Annual CSI Show and Convention in Las Vegas, March 28 – April 1, 2006.

**Commitment & Involvement**, our third area of focus, will continue to be a challenge for our Chapter and all organizations in the construction industry. Our Phoenix Chapter received the bronze level Chapter Commendation award for our sixth consecutive year at the Annual Meeting of the Institute on April 1, 2006. The award is an indication of a Chapter's level of function/performance, positive contribution to CSI as an organization and outreach to the construction industry community. You are all to be commended for your contribution to a healthy, vital, and exemplary CSI Chapter. Please continue to volunteer and be involved on Chapter committees and outreach activities.

Let's continue on into fiscal year 2006/07 with the same heightened level of vitality and goal fulfillment. I thank you all for the opportunity to serve as your Chapter President this past year. I look forward to continuing on with the Board as your Past-President and to stay active with several Chapter committees. Your newly elected leadership (Board and officers), in conjunction with Committee Chairs, is positioned to facilitate positive Chapter development. We are fortunate to have a great group of people and leaders in the Phoenix Chapter CSI.

Make a **Commitment** and get **Involved**!

You are Invited to our  
**Phoenix Chapter CSI Annual Awards Banquet**

**The Charthouse Restaurant**  
*located on beautiful Lake Camelback*  
**7255 McCormick Parkway**  
**Scottsdale, AZ 85258**

**Date: June 14, 2006 (Wednesday)**

**5:30 PM - Social Hour**

**6:30 PM - Dinner**

**7:30 PM – Program: Valley Metro Light Rail project and Chapter Awards Ceremony**

**Spouses and Guests are encouraged to join us!**

**Cost for the evening is \$0.00 for Members – Spouses, guests and non-members \$45.00/person**

**Our Valley Metro Light Rail program presenter is  
Brian Buchanan, Deputy Project Manager – Facilities**

Brian has been involved with the Phoenix Light Rail Transit project since shortly after the passage of Transit 2000. Brian worked as part of the General Engineering Consultant team through Preliminary Engineering and worked extensively in the conceptual design of the Maintenance Facility. Brian then joined the agency in 2003 as a Project Engineer responsible for overseeing the design of Line Section 5 of the first 20-mile segment. Brian also managed the owner furnished track material packages for the entire 20-mile alignment. Most recently, Brian has taken on the role of Deputy Project Manager and is extensively involved in the day of day management of the current construction along with managing real estate acquisition, utility relocations, engineering and architectural staff.



Knowledge for Creating  
and Sustaining  
the Built Environment

**Ballot DIRECTORY 2006-  
2007**  
**Phoenix Chapter**  
**Construction Specifications Institute**

**Nominations and Ballot 2006-2007**

**OFFICERS AND DIRECTORS:**

|  |                            |              |                    |  |
|--|----------------------------|--------------|--------------------|--|
| President                              | George Wadding             | 602-944-3323 | Cell: 602-397-1650 | <a href="mailto:gwadding@staroof.com">gwadding@staroof.com</a>         |
| President Elect                        | Ron Geren                  | 602-234-1140 | Cell: 602-791-7016 | <a href="mailto:Ron.Geren@GouldEvans.com">Ron.Geren@GouldEvans.com</a> |
| 1 <sup>st</sup> Vice Pres (Ind)        | <b>Bruce<br/>Thornham</b>  |              | Cell:              |  |
| <b>2<sup>nd</sup> Vice Pres (Prof)</b> | <b>Cary Stoneman</b>       |              | Cell:              |  |
| <b>Secretary</b>                       | <b>Mary Grace<br/>Hime</b> | 602-307-5399 | Cell: 602-400-0655 | <a href="mailto:mghime@art-team.com">mghime@art-team.com</a>           |
| <b>Treasurer</b>                       | <b>Teri Hand</b>           | N/A          | Cell: 602-418-1268 | <a href="mailto:thand@tnemec.com">thand@tnemec.com</a>                 |
| <b>Director 06-08 (Ind)</b>            | <b>Tim Garver</b>          |              | Cell:              |  |
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| Director 05-07                         | Wayne Shirlaw              | 602-381-4747 | Cell: N/A          | <a href="mailto:wshirlaw@dfdarch.com">wshirlaw@dfdarch.com</a>         |
| Director 05-07                         | Terry Vaughan              | 602-569-9853 | Cell:              | <a href="mailto:tvaughan@cox.net">tvaughan@cox.net</a>                 |
| Past President                         | Ron Hand                   | 480-421-1419 | Cell: 602-549-8085 | <a href="mailto:rwhandca@cs.com">rwhandca@cs.com</a>                   |

## Phoenix Chapter Reviews Proposed Changes to *SectionFormat*

A national CSI task team made recommended changes to the *SectionFormat* to address the changing needs of the construction industry. They asked for feedback by the membership. Some of the proposed changes are radical. The original draft of the proposed changes is on the CSI Web site at [http://www.csinet.org/s\\_csi/docs/12600/12532.pdf](http://www.csinet.org/s_csi/docs/12600/12532.pdf).

On April 20<sup>th</sup>, a group of architectural specifiers met at The Reference Library to discuss the proposed changes, reach a consensus on the proposed changes, and drafted a response as a group representing the Phoenix Chapter. The response was sent to the Chair of the Task Team on April 27<sup>th</sup>. The report sent to CSI is as follows:

### Phoenix Chapter CSI Comments On Proposed *SectionFormat* Comments

The Phoenix Chapter had a meeting of architectural specifiers to review the proposed changes to the CSI *SectionFormat*. In addition to those who attended, we received input from specifiers who were not able to attend the meeting. Attendees included:

- Chuck Dahlen, CSI, CCS
- Neil Davison, CSI, CCS, CCCA, AIA
- Ron Geren, RA, CSI, CCS, CCCA
- Mike Haake, CSI, CCS, AIA
- Jay Norton, CSI, CDT. Assoc. AIA, LEED AP
- Harriet Redwine CSI, CCS
- Wayne Shirlaw, CSI, CDT, AIA
- Paul Simonsen, FCSI, CCS, CCCA, NCARB, LEED AP
- Don White, CSI, CCS

We started the meeting discussing the general philosophy about changes to the document. The group felt strongly that changes that would improve communication with the contractor should be encouraged and changes that were just a different way of doing the same thing with no improvement in communication should be avoided. Specific kudos and no-nos follow the general statements in the next few paragraphs

*MasterFormat* and PART 1 of the *SectionFormat* were coordinated years ago to present information in the same order. The *Project Resource Manual* (PRM) states “The administrative sections of Division 01 parallel the succession of titles in *MasterFormat* and the procedural sequence of PART 1, PART 2, and PART 3 in *SectionFormat* to lay out a consistent and logical organization of titles.” Further, the PRM states “the numbers and titles of Division 01 in *MasterFormat* have been arranged to parallel the sequence of information in *SectionFormat*. Figure 5.6-B shows the parallel organization of Division 01 titles to *SectionFormat*.” We noticed many items in the proposed PART 1 moved administrative items from PART 1 to PART 2 or 3. We suggest that these changes are simply a different way of doing the same thing, they do not improve communication, and they violate the previous stated practice in the PRM and therefore should not be implemented.

The group felt that the current purpose of PART 1 for administrative items, PART 2 for activities that occur in the shop, and PART 3 for activities that occur in the field should not be changed.

PART 4 was discussed with the conclusion that PART 4 should be considered an OPTION for certain instances when post-construction items need to be included. Items such as additional training for HVAC systems after 6 months of operation or adjustments to installed items after a period of operation. Since the contract documents address the contractor, the group felt that items for building operation should be included in an operations and maintenance manual and not in PART 4. PART 4 should not have any requirements that may obligate the design professional for services beyond expiration of the agreement

with the owner as well as not add any liability to the design professional beyond what they already assume under the terms of their agreement.

The group also feels that a little more consideration be given to sustainable design and products. We typically use a general statement in the beginning of PART 1 about sustainable requirements, a specific requirement in Submittals to verify compliance with the requirements, and a place in PART 2 for product specific sustainable attributes.

### **PART 1**

- The change in Article headings to match *MasterFormat* is a good change.
- Line 40 – Sustainable design submittals are more than just reports. We suggest either expansion of this title or addition of other titles for LEED type submittals.
- Line 42 – Project Record submittals are closeout submittals that occur at a different time than construction submittals, and therefore should have a separate Article coordinated with *MasterFormat* order near the end of PART 1 (where it currently exists).
- The group suggests keeping Quality Requirements in PART 1 for testing administrative requirements, field samples, etc.
- Line 53 – Group discussed purpose of “Reference Standards”. Many do not use this Article at all feeling it is simply a list and does not require compliance, but a properly edited spec should eliminate any references not included elsewhere in the spec. Some felt the Article is a useless antiquated article that takes up space, requires time to edit, and adds no real value to the project. No consensus was reached however on whether it should be eliminated.
- The group feels that PART 1 should continue as indicated in the PRM Figure 5.6-B to keep the administrative tasks in PART 1.

### **PART 2**

- The group has happy to see the addition of a Product Schedule article, but we suggest moving the schedule down the list after materials. We feel a description of materials should take place prior to establishing a schedule that is based on the materials.
- Should there be a separate Article or Paragraph for sustainable product information – recycled content, formaldehyde free, FSC lumber, etc.?
- The following line items are being relocated from PART 1 to PART 2. After consideration, the group felt these items were just another way to convey the same information, but not an improvement in communication and therefore should be placed back in PART 1 for the following reasons:
- Line 60 – The act of substituting materials is an administrative act and not a Fabrication or Material property activity and therefore should remain in PART 1.
- Line 61 – Source Qualifications – Administrative item that should be kept in PART 1 as part of Quality Assurance. Different way to do same thing with no improvement in communication.
- Line 64 – Description/Performance – after a lengthy discussion about the merits of having performance requirements for products in PART 2, the group concluded that the performance of a system generally depends not only on the fabrication of materials, but also the installation. Therefore, performance is a “requirement” that requires both fabrication and installation so the Requirement should be in PART 1 at a location to align with *MasterFormat* Section 01 80 00 Performance Requirements.
- Line 71 – Extra Stock – while the materials for extra stock is a PART 2 item, the group feels that since the extra stock material is NOT installed in the work but is actually a closeout submittal; therefore it should remain as is in PART 1. It could align with *MasterFormat* Section 01 90 00 for Life Cycle Activities and be located at the end of PART 1.
- Line 79 – Delivery, Storage, and Handling – same rationale as above, the requirement is an administrative item and not a PART 2 Product item about fabrication of materials; therefore should remain as is in PART 1. It could align with *MasterFormat* Section 01 60 00 for Product Requirements.

### **PART 3**

- Line 86 – Like source qualifications, installer qualifications is an administrative item that should be kept in PART 1 as part of Quality Assurance. Different way to do same thing with no improvement in communication.

- Line 90 – Relocation Environmental Limitations to PART 3 is GOOD!!
- Line 96 – Field Samples/Mock-ups have a main purpose to be a quality assurance activity and should remain in PART 1. The field samples may or may not be incorporated into the Work, but the approved sample will be used to judge the installed work. PART 1 activity.
- Line 97 – Location Schedules – GOOD addition and placement. Knowing what is to be constructed or applied by assembly (tile system, Paint system) is well located before the actual installation requirements.
- Line 106 – Construction Waste Management – After much discussion, the group concluded that while construction waste management appears to be a site activity, it really is an administrative requirement. Unlike cleaning, which is cleaning of in-place construction, construction waste is removal of left-overs NOT incorporated into the project and therefore is not a PART 3 item.
- The remainder of PART 3 appears good.

#### **PART 4**

- As stated earlier, the group feels there may be occasions when PART 4 would have validity. It would typically be the exception rather than the rule and therefore should be considered “optional” and not need to state NOT USED when omitted.
- We would not want anything in PART 4 that would extend liability of the design professional beyond their agreement time expiration.
- Since the contract documents address the contractor, only contractor obligation type items should be in PART 4 for the time period between final completion and expiration of the correction period.
- We do not see the need for Facility operation information as a part of the contract documents.

The Phoenix Chapter of CSI appreciates the opportunity to participate in the review of proposed changes to *SectionFormat*. WE hope our comments will be received in the spirit in which they are given – an attempt for improvement of an important document with a clear rationale for change, or not, if it is not needed.

Thank you.



Knowledge for Creating  
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Phoenix Chapter CSI  
Presents

## **Construction Document Technology Seminar: Construction Contract Documents for Readers and Writers**

**Date /time:** 3 consecutive days  
Thursday June 22 through Saturday June 24, 2006

**Where:** Location to be Determined Shortly

**Cost:** CSI members / non-members \$250.00  
Students \$75.00 (Carrying 12 + credits)

24 LUs qualifying for Health and Welfare Units, in the Welfare category, will be offered for this seminar.

### **Primary Presenters/ Instructors:**

Paul Simonsen, FCSI, CCS, CCCA, NCARB; Ron Geren RA, CSI, CCS, CCCA

### **Program:**

This course is designed for introductory level for readers and writers of written Construction Contract Documents. Each session is intended to be 8 hours in duration. The fundamental information is intended for readers and writers of construction documents and presents an understanding of how the documents are organized and specific procedures for following certain requirements.

This course is also beneficial to candidates taking the CSI Construction Document Technologist (CDT) exam. Contact Paul Simonsen at [paulsimonsen@msn.com](mailto:paulsimonsen@msn.com) or 623.412.2725 for additional information on the exams. Registration for the exams is independent of this seminar. The cost defined above is for this seminar only and does not include lunch or any fees for the certification exams, or for the CSI *Project Resource Manual (PRM)* which serves as source material for the exam.

Outline for Specification Seminar:

**Day 1: June 22**

- 1.0 Introduction
- 2.0 Project Conception
- 3.0 Project Delivery
- 4.0 Design
- 5.1 Construction Documents Overview

**Day 2: June 23**

- 5.2 General Conditions
- 5.3 Formats
- 5.4 Specifications
- 5.6 Warranties

**Day 3: June 24**

- 5.5 Document Modifications
- 6.0 Bidding/Negotiating/Purchasing
- 7.0 Construction
- 8.0 Facility Management

## Registration Form

Name: \_\_\_\_\_ Occupation: \_\_\_\_\_  
\_\_\_\_\_

Company: \_\_\_\_\_ Phone: \_\_\_\_\_ (V) \_\_\_\_\_  
(FAX)

Address: \_\_\_\_\_ City: \_\_\_\_\_ Zip: \_\_\_\_\_  
\_\_\_\_\_

E-mail address: \_\_\_\_\_

Registration: \_\_\_ CSI member \$250 \_\_\_ Non-member \$250 \_\_\_ Student \$75  
**\*Registration fee non-refundable DEADLINE FOR REGISTRATION JUNE 16, 2006**

(SEATING IS LIMITED)

This seminar will be based on, and supported by, the *CSI Project Resource Manual* and AIA General Conditions. Although study materials will be handed out in the seminar it is highly recommended that you purchase a copy of the *Project Resource Manual*. It is the essential study guide for the CSI certification exams and a valuable office resource. AIA Document A201 General Conditions will be a part of the handout materials. Information on purchasing the *Project Resource Manual* is available on the CSI web site at [WWW.CSINET.ORG](http://WWW.CSINET.ORG) and within the CSI catalog.

**Make Checks Payable to:**

**CSI Phoenix Chapter**

Send Registration and Checks to:

Paul Simonsen, FCSI  
TRC  
7180 West Surrey Ave.  
Peoria, AZ 85381

For Additional Information, Contact Paul Simonsen at [paulsimonsen@msn.com](mailto:paulsimonsen@msn.com) or 623.412.2725

## **Member Bios**

Jill Rehse, CSI  
The Reference Library

### **Michael R. Wadding**

Henry Company/Resin Technology Division  
602-375-0433 office  
602-524-5958 cell  
[mwadding@henry.com](mailto:mwadding@henry.com)

The Henry Company has been a part of the roofing industry since 1901. Resin Technology Division has always been an industry leader in polyurethane foam for roofing, wall insulation, and OEM foam applications. Their manufacturing facilities for foam and foam roof coatings are located in Ontario, CA.

Mike is the technical sales representative for Henry Company/Resin Technology and his duties include direct product sales. His territory includes: Arizona, New Mexico, Texas, Nevada, and Utah. Mike also assists in specification writing, field inspections, due diligent inspection, quality control of installed projects and even troubleshooting application equipment in the field with the contractor. The project is Mike is most proud to have worked on is the John Wayne Cancer Institute in San Monica, CA.

Following in his father's footsteps, it was Mike's goal to be respected in the industry for his knowledge of his trade and a reputation for integrity. He will not be untruthful to make a sale — if it doesn't fit the customer's needs, he's not afraid to tell them. In some cases, he will refer them to someone that can help.

Mike grew up in Phoenix, AZ where his obsession with motorcycles started. He began his collection of bikes in grade school with a mini-bike and has now owned seven other motorcycles through the years. Mike and his wife, Pam, currently own a Yamaha Royal Star Venture touring bike and enjoy riding in their free time. Mike is a member of the Star Touring and Riding Association and serves as the local Shepherd, Ride Committee Chair, certified ride captain/tail gunner, and Vice-President.

Mike has been a member of CSI for 6 years and currently is our "raffle man" at our monthly meetings. The Phoenix Chapter of CSI is happy to have Mike Wadding as a member of our chapter!!!

### **Joan Borter**

Arizona Masonry Guild  
602-265-5999  
[joan@masonryforlife.com](mailto:joan@masonryforlife.com)

The Arizona Masonry Guild (AMG) was formed in 1958 to educate and promote the masonry industry throughout the state. Joan has been Executive Director of AMG since 1991, overseeing all functions of the Guild. AMG has many important events throughout the year: Excellence in Masonry awards banquet, masonry classes taught at the state universities, conducting the "Masonry: It Makes a Village" competition, just to name a few. Joan is also involved on the ROC Industry Council, the Northern Arizona University (NAU) Construction Management Council and the National Concrete Masonry Association (NCMA) State Alliance Liaison.

Joan has grown to be very well known in the masonry industry and has helped grow the Guild to a very successful association. She has won many awards for her time and energy in the industry: AMG Bart De Duca Award (recognizes a notable and outstanding performance, service, or significant achievement in the masonry industry); NAU Resolution of Appreciation (commitment to the success of the Construction Management at NAU, over 10 years of support); and numerous state and regional CSI awards.

Joan has been a member of CSI for 20 years and has belonged to the Phoenix, Tucson, and Las Vegas Chapters. She is also very active regionally and nationally in NCMA, TMS, WSCPA, MGA, AIA, and

SEAOA. Joan has enjoyed her time in CSI; it has enabled her to meet key professionals and learn about the construction industry. She has also developed many friends across the country through CSI. Joan is especially proud of becoming the second industry and first women President of the Phoenix Chapter in 1991.

Joan grew up in Wheaton, IL and enjoys hiking, traveling, and reading. We are happy to have Joan Borter a member of our Chapter!

## **NEW MEMBERS**

Fred Brimhall, PA  
AAA Construction  
480/609-1445  
Owner/Estimator/Project Manager  
Fbrimhall2000@yahoo.com

Mr. Brimhall's hometown is Scottsdale, Arizona. He is a certified Electrician out of the Dell Webb School of Construction Management. Fred also is a member of ABA, AGC and Electric League of Arizona. AAA Construction specializes in commercial interior build-outs (TI).

Alexander Devereux, BS  
ITT Technical Institute  
602/437-7554  
Chair, School of drafting and Design  
adevereux@itt-tech.edu

Mr. Devereux's hometown is Chicago, Illinois. He has a Bachelor of Science in Computer Engineering and carries CD, CKEE, CKM Certifications. Alex is involved with Gazel, PUSD Commission, ADDA, ASCE, ASCM, APLS and loves to GOLF—Go Chuck!!

Rayhan (Ray) Majid, BS, MBA, EIT  
Hilti, Inc.  
800/879-6000x7017  
Senior Field Engineer  
Rayhan.majid@us.hilti.com

Mr. Majid's hometown is Gilbert, Arizona. He has Bachelor of Science (Civil Engineering). Ray also has an EIT Certification and is a member of Structural Engineers Association of Arizona (SEA). How many members can say they are from Bangladesh? Ray can!

Brandi Yantis  
Spectra Consulting, LLC.  
480/776-5885  
Specification Assistant  
brandi@spectraspecs.com

Her hometown is Chandler, Arizona. Brandi has a CDT Certification!

## **Membership Creates Sales and Marketing Committee**

Larry Gill, CSI  
Gill Consulting  
Membership Chair

In the upcoming year the Membership Committee has some new ideas to help promote our membership.

A survey about having an alternate meeting will be sent to you via email. The question was posed at the committee meeting about the options. We know this is a vital part of our membership and all input will be seriously considered. Please take the time to complete this survey. It's your club and we want it to work for the membership.

We will be updating our membership brochure to help sell our program.

We plan on initiating our Sales and Marketing program next year. The idea is to develop a sales/marketing/promotion group. While we have emphasized maintaining members through such functions as orientation, calling committees, awards, etc., this new sub-committee will be responsible for promotion through press releases and possibly advertising to further our recruiting goals.

We are always looking for assistance with our committee. Come join us and help to keep our existing members, get them more active and, of course, recruit new members.

## New Members

Timothy Alexander, PE, CSI  
ICI Paints N.A.

Steve Kellen, CSI  
Boice, Raidl, Rhea Architects

### Transfers

Wayne Skala, CSI, CDT  
Durrant

### Renewals

Luke Bowen, CSI  
Dovetail Design Build

Jana Carlisle, CSI, CDT, AHC  
ASSA Abloy

Angie France, CSI  
Sherwin Williams

Tim Garver, CSI, CDT  
Dunn-Edwards

Bonnie Glueckert, CSI  
Seneca Architectural

Robert Kangas, CSI, AIA

Robert Kubicek, CSI  
Robert Kubicek Architects

Ken Martinek, CSI, CDT

Arcadia, Inc.

Michael Moniuszko, CSI  
Opus West Construction Corp

Jill Rehse, CSI  
The Reference Library

Nicholas Sachleben, CSI, CDT, AIA

Robert Schill, CSI, AIA  
Schill Architects

Thomas Semonell, CSI  
Gensler

Paul Simonsen, RA, FCSI, CCS  
Technical Resources Consultants, Inc.

William Snyder, CSI  
W.R.S. & Associates

Don Stone, CSI, AHC  
Ingersol-Rand Security & Safety

Robert Strang, CSI  
BEMCO USA

Al Tarr, CSI, CDT  
The Noble Company

Duane Tuhy, CSI  
Southern Architectural Sales

Pat Wallace, CSI  
Wallace Sales

## **Education transcripts from The 50<sup>th</sup> Annual CSI Show & Convention and CSI University are NOW available online!**

Please note, if you are an AIA member and supplied your AIA membership number when you registered all credits have automatically been reported to AIA and should be available on your AIA transcripts within a few weeks.

How to access your education transcripts:

Click on the following link (or cut and paste it into your browser) <http://surveysupport.com/csi06>

Log in: email address associated with your show registration

Password: registration ID number printed on your badge

If you have forgotten your registration ID number, there is a link on the page to have it sent to you by email.

Thanks for attending – See you next year in Baltimore!

CSI Professional Development

P.S. Don't forget to **submit an education program** to be considered for The 51<sup>st</sup> Annual CSI Show & Convention in Baltimore, MD next year! June 30, 2006 is the last day to submit a proposal. Educate others within the construction industry in 2007 – Submit TODAY at <http://csi.abstractcentral.com>

Questions? Contact a CSI Member Services representative 8:30am - 6pm EST at (800) 689-2900.

## Tips for Painting Plywood and T1-11

Tim Garver, CSI, CDT  
Dunn-Edwards Paints

Plywood generally has a flat-grained surface that can fail quickly if painted improperly. Texture T1-11 or T1-11 board is exterior grade, rough sawn plywood, normally manufactured in large sheets of Southern Pine or Douglas Fir, with vertical grooves to simulate a board and batten pattern.

Problems to look for:

- Face checking of plywood panels is a normal condition that can lead to early paint failure.
- A type of plywood known as medium density overlay (MDO) has a paper treated with resin that is overlaid on plywood to create a surface that resists cracking. For this reason, it is not recommended to sand new MDO plywood prior to painting.

Helpful tips for a quality job:

- Plywood should never be left unprotected, even for short periods of time after installation.
- Inspect the surface to make sure it is sound, clean, and dry.
- Checking (surface cracking) can be minimized by properly sealing all the panel edges.
- Apply a high-quality caulk to corners, joints, seams, cracks and other gaps to protect the wood from water intrusion.
- Counter-sink and fill all nail heads.
- Prime all surfaces, edges and sides with a high-quality exterior acrylic wood primer.
- Two finish coats of a high-quality exterior acrylic paint over a primer will provide optimal performance.

These painting tips are in a series provided by Tim Garver, CSI, CDT – Dunn-Edwards Paint.

## THE CODE CORNER

### Allowable Building Area – Part 2

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

Last month we discussed the intricacies of calculating allowable floor area for buildings under the *International Building Code* (IBC) using the “nonseparated use” method. But, if using the nonseparated use method is too restrictive for your building, you can always revert to the “separated use” method.

The separated use method has been in the building codes for many years, and it requires that the various occupancy groups within a building be separated from each other by fire-resistance-rated assemblies. As a benefit of this “compartmentation,” the building code allows a building floor area to be determined based on the sum of the ratios of actual floor areas to allowable floor areas. In all cases, this sum of ratios cannot exceed 1.0.

We'll look at this separated use method using the fire station example used in previous articles. However, our owner has again decided to modify the building's programmed use by making this facility also the site of their fire department headquarters with the following increases:

| <u>Space</u>                | <u>Actual Area</u> |
|-----------------------------|--------------------|
| <u>First Floor</u>          |                    |
| Office Area - Station (B)   | 7,200 sf           |
| Office Area - HQ (B)        | 30,000 sf          |
| Auditorium (A-3)            | 1,400 sf           |
| <u>Apparatus Bays (S-2)</u> | <u>16,800 sf</u>   |
| Total                       | 55,400 sf          |
| <u>Second Floor</u>         |                    |
| Sleeping Area (R-2)         | 3,600 sf           |
| Day Room (A-3)              | 2,000 sf           |
| <u>Training Room (A-3)</u>  | <u>1,600 sf</u>    |
| Total                       | 7,200 sf           |

In last month's article, we determined that using the "nonseparated use" method for this project would provide an allowable floor area of 52,325 square feet based on Type IIIA construction and on the A-3 occupancy, which was determined to be the most restrictive. This allowable floor area included increases for fire sprinkler and frontage. Now that the building area has increased, the permissible frontage increase would likely be reduced (unless more land was acquired), thereby causing the previously calculated allowable floor to decrease, as well. Additionally, the owner and designer want to see if the building could be constructed using Type IIIB construction.

Regardless, the first floor area has increased beyond what was allowed for a nonseparated use, so we have to look at the other alternatives available to designer: either increase the construction type (either Type IIA or IB) or utilize the separated use method. And since the construction type is to be reduced to Type IIIB, the separated use method is the only choice. Now, some of you familiar with the code are probably yelling "add a fire wall to separate the two buildings!" Well, yeah, but that wouldn't illustrate the separated use method, now would it? (This is another example of how the building code provides the designer options; the key is in knowing how to use them and when).

To use the separated use method, the various occupancy groups in the building will need to be separated by fire barriers (Section 706) and horizontal assemblies (Section 711) that have fire-resistance ratings as established in Table 302.3.2. According to that Table, our occupancies in the fire station will need to have assemblies with the following fire-resistance ratings between them:

- B and A-3: 2 hours
- B and S-2: 2 hours
- B and R-2: 2 hours
- S-2 and A-3: 2 hours
- S-2 and R-2: 2 hours
- R-2 and A-3: 2 hours

Fortunately, the IBC allows a reduction in fire-resistance ratings by one hour since this building has a sprinkler system installed throughout (Section 302.3.2). Therefore, the required minimum fire-resistance rating for the fire stations fire barriers can be reduced to 1 hour.

The next step is to determine the allowable floor area for each occupancy group using the same equation introduced in the previous article. However, since the first floor is the largest floor area, and the R-2 occupancy is only located on the second floor, there is no need to calculate for that occupancy group.

$$A_a = A_t + \left[ \frac{A_t I_f}{100} \right] + \left[ \frac{A_t I_s}{100} \right]$$

Whereas:

$A_a$  = Allowable area per floor

$A_t$  = Tabular floor area per Table 503 (B=19,000 sf; A-3=9,500 sf; S-2=26,000 sf)

$I_f$  = Increase due to frontage

$I_s$  = Increase due sprinkler installation

The fire sprinkler increase will remain at 200% for multiple stories, and, to save a little time, we'll assume the frontage increase was reduced to 70% (down from 73.75% in the previous article). With that information at the ready, we can now calculate each allowable floor area:

B Occupancy:

$$A_a = 19,000sf + \left[ \frac{19,000sf \times 70}{100} \right] + \left[ \frac{19,000sf \times 200}{100} \right] = 70,300sf$$

A-3 Occupancy:

$$A_a = 9,500sf + \left[ \frac{9,500sf \times 70}{100} \right] + \left[ \frac{9,500sf \times 200}{100} \right] = 35,150sf$$

S-2 Occupancy:

$$A_a = 26,000sf + \left[ \frac{26,000sf \times 70}{100} \right] + \left[ \frac{26,000sf \times 200}{100} \right] = 96,200sf$$

Now that we've calculated the allowable floor areas for each of the first floor occupancy groups, we can add up the ratios to see if the sum is less than 1.0:

$$\frac{37,200sf}{70,300sf} + \frac{1,400sf}{35,150sf} + \frac{16,800sf}{96,200sf} = 0.529 + 0.040 + 0.175 = 0.744 < 1.0 \therefore \textit{okay}$$

The sum of the ratios is less than 1.0, therefore, the project can be built as a Type IIIB building with separated uses. But, the owner states that every fire station needs a pole from the second floor, so a 1-hour rated horizontal assembly at the floor just isn't going to work. He also wants the sleeping area to be open to the day room without a fire-rated door. This is a situation where using a combination of separated and nonseparated use methods can be considered.

By doing so, the station's office space on the first floor, the sleeping area, day room, and training room, which are located above the station's office area, are all now considered a part of the same fire area. Therefore, the most restrictive requirements will apply to the entire fire area. Again, the A-3 occupancy of the day room becomes the restrictive occupancy since its allowable area is less than all the other occupancies involved. As a result, the ratio calculation we completed above will now have to be redone, moving the fire station's office floor area from the B occupancy ratio to the A-3 occupancy ratio since it is now part of the A-3 fire area.

$$\frac{30,000sf}{70,300sf} + \frac{8,600sf}{35,150sf} + \frac{16,800sf}{96,200sf} = 0.427 + 0.245 + 0.175 = 0.847 < 1.0 \therefore \text{okay}$$

As you can see, by adjusting the project to the owner's requirements, we were able to remain in compliance with the building code. The second floor, which has a total area of 7,200 square feet, is less than the 35,150 square feet allowed for an A-3 occupancy, so all spaces on the second floor can be nonseparated (except where they adjoin the S-2 occupancy of the apparatus bay).

There are some cases where a building is in such a low fire-risk situation, that the allowable area can be considered unlimited without having to build the structure using Type I construction. Section 507 sets provisions that allow certain buildings to have unlimited area with the more common applications listed below:

1. Nonsprinklered, One Story Buildings: Any Group F-2 and S-2 building surrounded by yards or public ways that are immediately adjacent to the building with distances of 60 feet or greater.
2. Sprinklered, One Story Buildings: Any Group B, F, M, or S building that is sprinklered throughout (that means the entire building), and is surrounded by yards or public ways that are immediately adjacent to the building with distances of 60 feet or greater. Any Group A-4 building that isn't of Type V construction, complying with the same minimum sprinkler and yard requirements.
3. Two Story Buildings: Any Group B, F, M, or S building that is sprinklered throughout, and is surrounded by yards or public ways that are immediately adjacent to the building with distances of 60 feet or greater.
4. One Story, Group A-3 Buildings: A building used as a church, community hall, dance hall, exhibition hall, gymnasium, lecture hall, indoor swimming pool or tennis court of Type I or II construction provided it has no stage or platform, is equipped with a sprinkler throughout, has an assembly floor within 21 inches of street or grade level (with ramps to the grade or street level), and is surrounded by yards or public ways that are immediately adjacent to the building with distances of 60 feet or greater.
5. One Story, Group E Buildings: A building constructed of Type II, IIIA, or IV construction provided it has two means of egress from each classroom with one having direct access to the outside of the building, equipped with a sprinkler throughout, and is surrounded by yards or public ways that are immediately adjacent to the building with distances of 60 feet or greater.

For items 1, 2 and 3 listed above, the 60-foot yard or public way requirement may be reduced to 40 feet as long as the reduced open space applies to no more than 75% of the building's perimeter, and the exterior walls and openings facing the reduced open space have a fire-resistance rating of 3 hours.

As I just demonstrated in this article, the building code is there to be used as a tool during the design process. Understanding the building code's many provisions will open the door to its flexibility. With this knowledge, the designer can make critical decisions early in the design process, long before the project reaches the building official for plan review.

*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).*

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# Roofing Specification Complications

*By George R. Wadding, CSI*

Most of you have heard about many of the repercussions of the hurricanes that ravaged the southern part of the country last year. You may not be aware of one of the things which has impacted the construction industry in all parts of the country. Factory Global (almost all Arizona specifications still use the older, now incorrect name Factory Mutual) has changed the requirements for wind ratings as a result of its insurance company principals' losses during the past few seasons.

***For those who do not understand the preceding sentence, a few quick words of explanation is in order. Factory Global is a testing and approval organization which was established to minimize the sponsoring insurance companies' losses arising from roofing (and other) building subsystems failures during fire and windstorm conditions. The principal impact on roofing systems has been the development of mechanical fastening of rigid insulation and the development of edge details required to complement the fastening. These FG requirements are, in fact, only mandatory on projects to be insured by FG-affiliated insurers. Their use on non-FG buildings is not required.***

It had become common practice in Arizona to incorporate language referring to FM I-90 to establish a standard. This results in a higher cost than is required by Code. It also creates a somewhat ambiguous set of requirements when the language says something other than "mechanical fastening of roof insulation shall comply with the requirements—". Frequently the language used has said that the installation of the roofing will comply or the contractor will provide whatever is required to comply with FG.

Most specifiers are largely un-informed that the roofing will only comply only if the perimeter walls, wood nailers, and metal edging or coping meet the specific requirements of the details for those items as well. Most such construction in Arizona ignores those details.

The situation is now further complicated by the fact that the recent changes noted in paragraph one above has now resulted in all major roofing manufacturers warning that ratings of I-90 or higher cannot be attained. Consequently, you should anticipate that RSC and GC will be forced to exclude any provisions which include a provision which can no longer be met.

Since the manufacturers' warranty is the only actual assurance provided anyway, I recommend that changing your specification wording to require compliance with the selected manufacturer's fastening requirements would be a prudent course of action.

***About the Author: George R. Wadding CSI, President-elect is an estimator/project manager with Star Roofing, Arizona's only Sarnafil Elite Contractor (note the project in the Construction Specifier May 2006 page 34). A long-time member of Phoenix Chapter of CSI, he has been involved in the construction industry in Phoenix since January 1960 and served two term as President of the Arizona Roofing Contractors Association and served as Chairman of the ASUACE Subcontractors Forum.***