

MINUTES OF THE
MARICOPA ASSOCIATION OF GOVERNMENTS
BUILDING CODES COMMITTEE

August 17, 2005

Maricopa Association of Governments Office
Cholla Room
Phoenix, Arizona

COMMITTEE MEMBERS

Bob Lee, Cave Creek, Chairperson

*Dennis Dixon, Apache Junction

Ken Sowers, Avondale

Phil Marcotte, Buckeye

Mike Tibbett, Carefree

A - Alex Banachowski, Chandler

Art Swanson, El Mirage

*Peter Johnson, Fountain Hills

*John Smith, Gila Bend

*Jo Rene DeVeau, Gila River Indian
Community

A - Ray Patten, Gilbert

Jim Fox for Deborah Mazoyer, Glendale

Steve Burger, Goodyear

*Chuck Ransom, Litchfield Park

Tom Ewers, Maricopa County

*Brian Goble, Mesa

Armando Rivas, Paradise Valley

David Nakagawara, Peoria

*Tom Wandrie, Phoenix

Tim Wegner, Queen Creek

*Larry Francis, Salt River Pima Indian
Community

*Michael Clack, Scottsdale

*Forrest Fielder, Surprise

A - Michael Williams, Tempe

Mario Rochin, Tolleson

A - Lyle Murdock, Wickenburg

Bob Cooperider, Youngtown

Rachel Aja for Rus Brock, Home Builders
Association

*Those members neither present nor represented by proxy.

A-Those members participating via audioconference

V-Those members participating via videoconference

OTHERS IN ATTENDANCE

Cheryl Levandowski, Goodyear

Alan Money, AMMTec Consulting Inc.

Keith Mosier, AMMTec Consulting Inc.

Robert Palmer, Southwest Gas

Michelle Green, MAG

Steve Gross, MAG

Harry Wolfe, MAG

1. Call to Order

The Chairperson, Bob Lee, Town of Cave Creek, called the meeting of the MAG Building Codes Committee to order, at 2:00 p.m.

2. Introductions

Members of the Committee introduced themselves.

3. July 20th 2005 Meeting Minutes

Tom Ewers made a motion to accept the minutes; Tim Wegner seconded the motion. The chairperson asked if there were any comments. Staff noted that a comment was received via e-mail. The following comment regarding agenda item number 8 page 5 was read into the record for discussion by the committee: "Mr. Mundy also noted that the 1994 State Plumbing Code does not address dry systems which was the main reason Appendix F in the 1994 UPC was not adopted by the State Plumbing Code Commission." Tom Ewers said that the word "paten," should have been spelled patent.

Tom Ewers moved and Tim Wegner seconded the motion to accept the minutes as amended. The motion carried with two abstentions: David Nakagawara and Phil Marcotte.

4. Call to the Audience

No members of the audience asked to comment.

5. Comments From the Committee

The Chairperson asked Cheryl Levandowski to report on the meeting of the Regional Plan Review/Building Inspectors/Plans Examiners (RPR, BI, PE) group meeting of August 16, 2005.

Cheryl Levandowski began with a discussion of Post Tension Slabs, noting that there are some issues that building departments need to be aware of. She said that she would prepare a recommendation regarding requiring post-tension slabs for additions if the original structure was post-tension due to soils requirements (Type III). Post-tension is an engineered foundation and would also require an engineer to design for any additions or repairs that may be needed.

Ms. Levandowski also stated that weep screed at no step entries for post-tension foundations are being designed by an engineer for the City of Glendale and that she hoped to see it once it was submitted to Glendale.

Ms. Levandowski stated that the group discussed sediment traps in gas lines and that Section 2419.4 of the IRC could not be enforced due to the State Plumbing Code.

Southwest Gas has told the jurisdictions that that due to their gas supply being dry, no drip legs are required.

Steve Burger clarified that if the manufacturer requires them sediment traps to be installed then that supercedes the code. Ms. Levandowski concurred and said that would have to be confirmed by the inspector in the field.

Bob Lee added that there would be a presentation on this issue next month.

Bob Lee made the distinction between a drip leg and a sediment trap, referring specifically to section 2419.4 of the 2003 IRC.

Cheryl Levandowski noted that she would check on the requirements for propane.

Bob Lee asked Ms. Levandowski to discuss the concept of considering the garage wall as an exterior wall and the consequences of that concept.

The issue revolved around the definition of exterior wall coming from the energy code provisions of the code and defining exterior wall as surrounding conditioned space. The problem arises when an exterior wall of an unconditioned garage is less than three feet from a property line. Even though generally not allowed by each municipality's zoning code, it would be technically allowed by the IRC.

Cheryl Levandowski said that the standard bracing requirement verbiage is still appearing on plans in the general notes section although it is not consistent with the 2003 IRC. The group, she said, believed that it was not really an issue as long as the wall was actually designed properly.

Bob Lee stated that the issue has to be addressed so that no one relies on the notes.

Cheryl Levandowski asked about Goodyear's efforts to require fire sprinklers.

Steve Burger responded that the Goodyear City Council voted to require fire sprinklers in all new residential projects. He said that the issue is being put to a vote on September 13, 2005.

Ken Sowers noted that the Avondale residents would also be voting on the sprinkler requirement on September 13, 2005.

Bob Lee then referred committee members to an article that appeared in the Arizona Republic on August 10 entitled "Housing Inspectors Hustle to keep Pace." Bob Lee noted that the region led the nation in construction starts again this year.

Steve Burger announced that the Arizona Building Officials Institute AZBO Education Institute would be held from October 31 – November 31st. He added that a brief flyer is being developed to describe the Institute that can be forwarded to managers who can authorize staff participation in educational opportunities.

6. Fiber Reinforced Swimming Pools

Bob Lee introduced Alan Money and Keith Mosier of AMMTec Consulting Inc. Mr. Money indicated that company is developing a new technology that uses fiber to reinforce concrete for swimming pools.

Mr. Money explained that the technology was prompted by a client who was unable to obtain steel to reinforce swimming pools and that research and development is underway to test the resulting product.

Mr. Money explained that Polyethylene/Polypropylene was the fiber of choice that could be added to a concrete mix to reinforce it. Mr. Money said that his company is collaborating with Dalhousie University in Canada to test the product and four pools have been tested to date. He said that he is currently working on submittals and approvals for fiber reinforced pools in California, Nevada and Arizona.

Bob Lee asked if there were any problems getting the concrete mixed uniformly. Keith Mosier responded by stating that if the fiber is not added correctly, the mixture can be clumpy. Alan Money then added that the minimum mix time for the drum to be rolling is 10 minutes. He added that the 10 minutes resolves the clumping issue.

Armando Rivas asked about the life expectancy of the product. Keith Mosier responded that the life expectancy should be longer than steel reinforced concrete because there is no possibility of corrosion of steel in the mix.

Armando Rivas then asked about ground wire for the pool. Mr. Mosier responded by stating that they use #8 copper wire.

Armando Rivas asked if using this technology reduces the cost of the swimming pool. Mr. Mosier stated that the cost could be lowered by approximately \$400-600 dollars per pool a savings that he expected ultimately to be passed on to the consumer.

Alan Money added that another benefit of fiber reinforced concrete in swimming pools is the ease of installation. Ken Sowers commented that an engineer must verify the material to satisfy the requirements of the City of Avondale.

Cheryl Levandowski asked who sells the fiber.

Mr. Money replied that Dalhousie University holds the patent on the fiber and partners with the Euclid Company.

Phil Marcotte asked if the mixing of the material is time sensitive. Keith Mosier responded by stating that it no more time sensitive than any other concrete mix.

Bob Lee then asked how the concerns expressed by the City of Tucson were addressed. Mr. Money responded that Pima County is overseeing the construction of 10 pools and that if things go well, Tucson will approve the use of fiber-reinforced concrete in pools.

7. Rainfall Intensity

David Nakagawara presented to the Committee for review a rainfall intensity proposal and supporting documentation. The proposal changes the design rate of rainfall for sizing rainwater piping from 6 inches to 3 inches per hour.

Mr. Nakagawara explained that he understood that in past years there was a problem with roofs collapsing. He said that an engineer assisted in developing the design rainfall intensity that is used throughout the Valley today. Mr. Nakagawara proposed a new rainfall design intensity based on the following assumptions:

- That primary and secondary drainage systems are now the standard of design in the area.
- That the two systems are separate as required by current codes.
- Research shows that using 6 inches is over-designing. A probability analysis using an on-line tool at the NOAA website showed that there is a zero percent chance of that intensity of rainfall every occurring in the Phoenix metro area. Current knowledge and technology was used to derive the figure.
- The range of rainfall intensity is from 2-3 inches as published in the appendices to the current plumbing codes.

Mr. Nakagawara suggested that there may be other reasons for the roof failures. He explained that if you extrapolate from the 5-minute duration to a one-hour period, you exceed the amount of rainfall that would ever occur.

Tom Ewers then noted that engineers are designing stormwater flows based on the six-inch/hour rate of rainfall, which from their perspective is the equivalent of a 100-year storm event. Mr. Ewers continued by explaining that this method provides a safety factor of 2.5, which is considered normal. Mr. Ewers also pointed out that a couple of roofs collapsed two weeks ago during a storm.

Mr. Nakagawara stated that storm water management on the ground deals with concepts of detention, area served and other issues. He emphasized that the role of a Building Official is to make sure that roofs do not collapse.

Tom Ewers noted that the figures in the proposal do not account for a live load.

Steve Burger thanked Mr. Nakagawara for his work on this issue and noted that occupancy loads are designed that way, according to code. Mr. Burger then posed the question as to whether this committee can override the intent of the plumbing code.

Bob Lee asked for further information from Tom Ewers regarding the design issues. Mr. Nakagawara noted that the civil engineers at the City of Peoria agree with Tom Ewers. Bob

also asked for a formal resolution from David Nakagawa to be put to a vote. Steve Burger agreed to assist with drafting the resolution.

8. Building Codes Compilation and Web Addition

Michelle Green stated that the Building Codes Compilation project has been completed and is ready to be placed on the MAG web site. She added that the spreadsheet could be revised based on updates or other actions taken by the Building Codes Committee.

9. Service Entry Section Installation Practices

David Nakagawara reported that the amendment package including Mike Baker's proposal for SES Installation Practices will go before the AZBO Board in October.

Rachel Aja reported that the Home Builders Association of Central Arizona made a submission to the City of Phoenix on August 11, 2005. The submission, she explained, is a request to use the alternative means and methods section of the code to allow the installation of SES Panels.

11. Updated MAG Building Codes Committee Membership

No updates were provided.

12. Update Survey of Code Adoption

It was noted that Paradise Valley adopted the 2003 IFC.

13. Topics for Future Agendas

Topics for future agendas include but are not limited to a presentation by Paul Beach about Sediment Traps and Drip legs, the Rainfall Intensity resolution, and the issue of soils/compaction reports.

Michelle Green reported that she would be leaving MAG after August 31, 2005 and that Harry Wolfe would staff the Committee until a replacement can be found. She thanked the Committee for their support over the years and assured them that they would be missed.

15. Adjournment

Tim Wegner made the motion to adjourn, Tom Ewers seconded the motion, and the meeting was adjourned at 3:45 pm. The next meeting will be held on September 21, 2005 at 2 pm in the Cholla Room.