

# AZBO News



Arizona Building Officials

March 2017

## Message from the Chair

Greetings,

I just want to bring to your attention to some dates for AZBO events and changes coming to AZBO this year.

We are preparing for the Spring institute in Tucson that will begin April 3<sup>rd</sup> and run thru April 7<sup>th</sup>. In addition to some new training, we have some of the basic update classes offered. On the Wednesday evening event of the institute, the Southern AZBO chapter will be hosting a trip to Trail Dust Town <http://www.traildusttown.com/> for food and entertainment.

We are busy planning the AZBO Annual Business Meeting (ABM) for July 25<sup>th</sup>, 26<sup>th</sup>, & 27<sup>th</sup> at the HonDah Resort and Conference Center in Pinetop, Arizona. This getaway to the cool pines will include the annual golf tournament, a day of professional development, the AZBO awards banquet, and the annual business meeting where we will be presenting the 2017-2018 budget and installing a new Board of Directors.

A significant change coming to the 2017 Fall institute is a \$25.00 increase in class fees. The fee has not been adjusted since 2004 and as we all know, the price of everything has gone up. The costs of quality venues and meals are the largest expenditures for an institute, but as past surveys indicate, they are also what students consider to be very important. In the past, the institutes have been able to survive by using contingency funding and the generosity of sponsors. For the future success of the organization, an increase in fees is required. Even with the adjustment, AZBO remains the most affordable code related training available.

The Fall Institute will be held in late October and will be in Mesa, Arizona. The Education Committee has been working hard on securing venues and creating the class schedule with plans to begin advertising it in April. The early release of the schedule should help jurisdictions with travel plans and training budgets prior to the new fiscal year.

In closing, I want to Thank Patti Schechter for her dedication to AZBO and her many years of diligence in compiling this newsletter. Patti has nudged (kicked) me when I needed it, she has provided AZBO history when I asked about it, and offered her opinion when I was not seeing the obvious. I truly appreciate her assistance and her heartfelt dedication to the organization. Thanks Patti!

Regards,

Don

Don Brown

Chairman – Arizona Building Officials (AZBO)

*\*\*Thank you Don\*\**

*~Patti*



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The **Independent Electrical Contractors** invited building officials and inspectors to their annual banquet at Pro Bass Shops in Mesa for a great dinner and an opportunity to get to know each other and to provide updates on what's happening in their jurisdiction. The main point of the inspector's comments was "come talk to us" as we want to help make your job go smoothly. **Michele Gilbreth**, and electrical inspector from Peoria, alerted everyone to an issue of SES and solar risers separating and losing their water tight condition. She also won the raffle for the gift basket provided by SRP. **Jeff Fleetham** from the ROC was there as well as **Sharon Bonesteel** from SRP.



**BUILDING  
SAFETY  
MONTH**   
**MAY**  
INTERNATIONAL CODE COUNCIL

**Week One ~ May 1 thru 7, 2017**

Mentoring the Next Generation of Building Professionals

**Week Two ~ May 8 thru 14, 2017**

Building Design Solutions for All Ages

**Week Three ~ May 15 thru 21, 2017**

Manage the Damage – Preparing for Natural Disasters

**Week Four ~ May 22 thru 28, 2017**

Investing in Technology for Safety, Energy & Water Efficiency

What is your jurisdiction/company doing for Building Safety Month?

Take pictures and send info to be featured in the June AZBO Newsletter to:

[patti@brownandassociates.net](mailto:patti@brownandassociates.net)

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## AZBO's Spring Education Institute

On behalf of the Arizona Building Official's Education Committee we would like to invite you to attend our 2017 Spring Education Institute in scenic Tucson Arizona. Courses will be held April 3<sup>rd</sup>-7<sup>th</sup>. We have a diverse range of subject matter as well as classes for those just beginning their careers to those needing a little refresher.

As a member of ICC's Preferred Provider Network all courses you attend will provide you with CEU's for ICC certification renewal. For more information, visit our website at [www.azbo.us](http://www.azbo.us).

If we can be of further assistance, please let us know. You may contact us through the website above. We look forward to seeing you there.

Sincerely,

The AZBO Education Committee

The Southern Arizona Chapter will be hosting the Wednesday Night Special Event at the Fall Institute at:

Trail Dust Town, Pinnacle Peak Steakhouse

6541 E Tanque Verde Road, Tucson, AZ

6:00 p.m. until 8:00 p.m.

There will be an optional Wild West Stunt Show at 8:00 p.m.

The cost is \$15.00 per person for the first 50 reservations;

\$25.00 per person from 50-100.

The optional Stunt Show/Gun Show is an additional \$5.00 per person.

Menu options are Steak, Salmon, Grilled Chicken, Ribs, Burger or Garden Burger. All entrees include salad, bread, beans and baked potato; coffee, tea or soda.

Prizes will be awarded for most authentic men's and women's western wear!

Also, if you wear an old neck-tie to commemorate your visit to Pinnacle Peak, they will ceremoniously cut it off and nail it to the rafters.

50/50 raffle will also be available at the restaurant.

Trail Dust Town offers shops and family related amusement. Check their website for more information: [www.traildusttown.com](http://www.traildusttown.com).



There are still some spaces available at the \$15.00 rate so be sure to make your reservations with the AZBO Registrar at [registrar@azbo.us](mailto:registrar@azbo.us).



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Wishing **Mike Scheu** an enjoyable retirement and good luck chipping away at the Honey-Do-List!



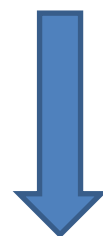
Congratulations to **Amy Palmer** on her promotion to Building Official.



At the Central Arizona Chapter Meeting March 14, 2017 Bob Lee (Town of Paradise Valley) demonstrated the use of DRONES during inspections.



And speaking of Drones



## Code Geek

### From Bob Lee, Town of Paradise Valley: DRONE as Inspector



One of the most dangerous parts of an inspector's duties is performing a roof nail inspection. Walking on a sloped surface often covered in saw dust can result in slips and falls. The classical solution used by fat guys and old guys was to poke at the roof sheathing with a 2" x 4" from below. Now there is a technological solution and that is an unmanned aerial vehicle (UAV) or drone.

There are a couple of things a drone operator must know when flying in Arizona. Flights of drones are limited to line of sight and 400 feet elevation. Because the control system of the drone is much like that of a video game it is all too easy to get caught up in flying the drone simply by looking at the video screen. This could lead one to fly beyond where the drone is visible to the operator.

On the most professional model of drones the altitude is a programmable number that can be set during initialization. 400 feet is quite high anyway. And Arizona law prohibits drone flights over nature preserves.

There are a number of options that should be considered in selecting a drone. The three most significant are stability, collision avoidance and camera resolution. Stability is achieved in hobbyist models by a gyroscope that will return the drone to a level position. In more professional models this stability is achieved by communication with Global Positioning Satellites (GPS). The advantage of this system is that it not only knows what level is but it also knows the starting point of the flight. This can be a good feature that will return the drone to the starting point as the battery life erodes.

Collision avoidance is achieved on the hobbyist models, if at all, by a ring around the blades. This works well enough if the drone flies into a hard vertical surface like a building. Not so well if it flies into a tree or bush. This collision avoidance is handled quite differently on the professional model. It is done by some combination of stereo vision and infrared sensors. This not only detects and avoids buildings but also vegetation.



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Most importantly is camera resolution. If the drone is going to be used as a substitute for the inspector's eyes, the camera resolution should be as good as is available. Models are currently available that have a 20 megapixel capability and can take 4K video at 60fps.

So not only can you see as well as being on the roof but it can record the visual image either as a video or as a still photograph.

Multi-tasking is always a good thing. So not only can the drone be used for roof nail inspections, it can assist with fire investigations and with wash mapping. It may be of use to police departments also.

Of course any tool is not without limitations. Even though the professional model drones are quite stable in moderate winds, either high winds or gusty winds can present issues. This is especially true when operating close to a building or to a building component like a parapet or chimney.

Because the communication with the drone is by radio, there may be times when the signal experiences interference. Professional model drones attempt to overcome this by operating on multiple frequencies and transferring seamlessly between them.

The drone also communicates with the GPS satellites. Generally it won't allow operation without being in contact with at least ten different satellites and it prefers a dozen or more. But again there are circumstances where that communication can be interfered with. As long as the 10 satellite minimum is maintained, the drone should operate normally.

Then there is the physical limitation of sight. The gimbal on the drone can pivot between horizontal and vertically down with a simple switch on the control panel. But it cannot rotate above the horizontal so fire investigations can be limited as looking at the ceiling or the underside of the roof isn't possible.

But even with these limitations a drone can be a useful tool to lessen inspector risk and increase inspector efficiency.



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## **Nominations for Awards**

Nominate your peers who are deserving of an AZBO Award. Awards will be presented at the AZBO ABM which will be held at the HonDah Resort, July 25<sup>th</sup> through July 27<sup>th</sup>.

Nomination form is on AZBO's website: [www.azbo.us](http://www.azbo.us) (upper right corner next to Member Login "Awards")

## **RECORDS RETENTION SURVEY RESULTS**

Of those who responded to the survey (thank you for your time) most follow State Guidelines.

*Paper Submittals* (as amended from State Guidelines):

A few keep Commercial submittals permanently.

A couple keep everything for three years.

One keeps documents for six months.

*Electric Submittals:*

Documents are kept indefinitely.

### State Guidelines in a nutshell:

#### Plans

Construction plans, specs, standard plans, etc.

6 months after work is completed.

Demolition Permits

Permanently

#### Inspection Records

Single Family Residential, Commercial/Industrial

3 years after work is completed

Porches, signs, detached patios and fences

1 year after work is completed

Special Inspection Certificates and Final Inspection Reports

3 years after work is completed

#### Pools

Residential

6 months after work is completed

Commercial

5 years after work is completed

#### Registers of Permits

Permanently

~Source (for more information and details)

Arizona State Library, Archives and Public Records

General Records Retention Schedule for Counties and Municipalities

Building Safety and Inspection Records

Schedule Number: 000-12-38



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## Efficiency First Arizona (EFAZ) would like to thank AZBO for being an educational partner for the Proof is Possible Tour!

Special thanks to SRP, APS, City of Phoenix, Michael Grubbs, Don Brown, Sharon Bonesteel, Chris Baggett and all the other building officials that helped make a week-long event a great success. We held a training with building officials and contractors at Phoenix City Hall, one with realtors-contractors-officials, a networking mixer with the AZ Green Chamber, daily consumer tours at Phx Public Market and much more. It was all about better AZ homes & buildings. More events & training to follow in 2017.  
[www.proofispossible.com](http://www.proofispossible.com)





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Table 1: Overview of impacts of improved energy efficiency on health and well-being

| Energy Efficiency Measure | Primary Housing Effect                             | Secondary Housing Effect   | Expected Health Outcomes   |
|---------------------------|--|--|--|
| Insulation                | Heating/cooling retained within dwelling           | <ul style="list-style-type: none"> <li>Comfortable indoor temperatures</li> <li>Lower indoor relative humidity</li> <li>Reduced allergens</li> </ul>             | <ul style="list-style-type: none"> <li>Reduced deaths due to temperature extremes</li> <li>Reduced symptoms of respiratory disease</li> </ul>  |
| Air Sealing               |  |  |  |
| Improved Heating Systems  | Heating provided to whole dwelling                 | <ul style="list-style-type: none"> <li>Comfortable indoor temperatures</li> <li>Reduced gases and particulates</li> <li>Increased usable living space</li> </ul> | <ul style="list-style-type: none"> <li>Reduced deaths due to cold</li> <li>Reduced symptoms of respiratory disease</li> <li>Reduced stress and infectious disease</li> </ul>   |
|                           | Cleaner burning heating systems                    |  |  |
|                           | Combustion by-products properly vented to outdoors |  |  |
| Improved Cooking Systems  | Cleaner-burning cooking systems                    | <ul style="list-style-type: none"> <li>Reduced gases and particulates</li> </ul>   | <ul style="list-style-type: none"> <li>Reduced symptoms of respiratory disease</li> <li>Reduced risk of cancer</li> </ul>  |
|                           | Combustion by-products properly vented to outdoors |  |  |
| Improved Ventilation      | Increased air flow within dwelling                 | <ul style="list-style-type: none"> <li>Reduced gases and particulates</li> <li>Reduced dampness</li> <li>Reduced mold</li> </ul>                                 | <ul style="list-style-type: none"> <li>Reduced symptoms of respiratory disease</li> <li>Reduced risk of cancer</li> <li>Reduced symptoms of cardiovascular disease</li> <li>Reduced arthritis</li> <li>Reduced depression</li> </ul> |

Wow!!!

Adapted from Table 4.1 of the International Energy Agency report: *Capturing the Multiple Benefits of Energy Efficiency*.

## ENERGY EFFICIENCY HAS HEALTH BENEFITS

DOE even says so in a report released December 2016. It's not just about IECC code compliance.

Building codes like IECC are amazing guides that help make our homes and buildings safer, healthier, more efficient and just plain better. People talk a lot about the money and energy saved, but when it comes down to it, energy efficiency saves lives. Building officials are key to getting the word out. Put on your superhero cape today and explain why codes like IECC are really important.



**Home Rx: The Health Benefits of Home Performance**  
A Review of the Current Evidence

Jonathan Wilson, National Center for Healthy Housing (NCHH)  
David Jacobs, NCHH  
Katherine Reilly, NCHH  
Peter Kain, U.S. Environmental Protection Agency  
Jonathan Cohen, U.S. Department of Energy (DOE)  
Ely Jacobowitz, DOE

December 2016

**Download the Report Here:**  
<https://energy.gov/eere/buildings/downloads/home-rx-health-benefits-home-performance-review-current-evidence>

Thank you Heather

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