FLORIDA BUILDING COMMISSION

ATTIC VENTILATION WORKSHOP

FACILITATOR’S REPORT OF THE
MARCH 16, 2005 WORKSHOP

MIAMI, FLORIDA

Meeting Design & Facilitation By

Florida Conflict Resolution Consortium

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OVERVIEW
At the March 2005 Commission meeting, Chairman Rodriguez announced he was appointing a workgroup to review the research and make recommendations to the Commission on whether the Florida Building Code should allow the use of unvented attics and if so, under what conditions should this be allowed.
To that end, a workshop was convened on March 16, 2005 to present research in support and opposition to this consideration. The Workshop provided an opportunity for expert presentations related to the research, as well as providing a forum for questions and answers from participants and Workgroup members.
Following the presentations, participants identified issues that will need to be addressed in order to develop recommendations on whether to allow unvented attic spaces in the Florida Building Code.

WORKGROUP MEMBERSHIP
From the Energy TAC: Steve Bassett, Ron Bailey, Philip Fairey, and Richard Reynolds.
From the Structural TAC: Do Kim, Craig Parrino, Chris Schulte, and George Wiggins.
Representing the Fire perspective: Nick D’Andrea (who will also serve as the chair).

MEMBER’S IN ATTENDANCE

WORKSHOP OBJECTIVES
✓ To Review and Approve Workshop Agenda
✓ To Identify Issues and Scope of Workshop
✓ To Propose Options for Identified Issues
✓ To Evaluate and Rank Proposed Options in Turn
✓ To Assess Level of Consensus on Proposed Options
✓ To Review Needed Next Steps and Any Assignments

PRESENTATIONS
Pros of Unvented Attics by Dr. Joe Lstiburek
Cons of Unvented Attics by Dr. Wendell Porter
IDENTIFICATION OF ISSUES
Following are the considerations/topics and related issues identified by participants that must be considered in order to develop recommendations:

1. Structural
   a. life of materials
   b. wind
   c. integrity
   d. aerodynamics
   e. soffits
   f. high humidity
   g. temperature gradient differences between two systems
   h. impacts on connectors and fasteners with regard to two systems

2. Construction Process/Practices
   a. Potential delay to construction process
   b. sheeting nails that back out because of thermal movement
   c. Poorly sealed ducts

3. Water Intrusion
   a. Soffits
   b. Roof vents including ridge and off ridge vents, sidewall
   c. gable end vents
   d. roof leaks
   e. roof penetrations
   f. insect damage

4. Humidity
   a. Condensation control
   b. Mold & mildew
   c. Internally generated humidity
   d. Moisture removal
   e. Corrosion
   f. Effect of air tightness of building

5. Energy
   a. Apparent benefits
   b. Air conditioning downsizing
   c. Effect on peak loading
   d. Alternate options that could save more energy (separating effects of system from energy savings regarding construction practices)
   e. Effect on latent load contribution
   f. Effect of air tightness of building
6. Health  
   a. Indoor air quality  
   b. Rodent & pest issues  
   c. Mold  
   d. Duct sweating  
   e. a/c registers sweating stains  
   f. attic ahu filters more likely to be changed  
   g. effect on air tightness of building

7. Economics and Quality of Life  
   a. Duct sweating  
   b. Storage  
   c. Shingle life  
   d. Energy cost  
   e. Indoor comfort (mean radiant environment, humidity control)  
   f. a/c downsize  
   g. cost of foam vs. other insulation (include area)  
   h. recovery temperature time  
   i. cost savings from not having to vent roof, other construction cost such as sealing  
   ceiling penetrations  
   j. re-roofing issues  
   k. effecting repairs (including insulation after repair)  
   l. warranty concerns of roofing manufacturers & contractors & consumers  
   m. power attic vents not covered by code

8. Building Inspection  
   a. Ease/difficulty of inspection for foam product  
   b. Termite inspection  
   c. Quality control inspection and manufacturer’s certification for installers

9. Code Issues  
   a. Fire code (foam needs to be protected, does ceiling provide required protection  
   or not)  
   b. Possible impacts to current & future legislative mandates  
   c. High velocity hurricane zone requirements  
   d. Some assurance that insulation be replaced during reroof  
   e. Will concerns on beach vs. inland locations be included  
   f. Does code allow engineered vs. unengineered unvented attics R-values  
   g. Will it change fire classification of roofing coverings (testing)

10. Moisture Content of Building Materials  
    a. Possible shrinkage from dehumidification  
    b. Possible swelling due to moisture absorption  
    c. Seasonal and annual data on issue  
    d. Material degradation due to possible excessive moisture content
General Suggestions:
1. Use known problems of technology as a basis for evaluating the issues.
2. Possible increase in efficiency of ventilation systems when tested to TAS 100.
3. Large database of existing buildings, possibly study to see how performing.
4. Any information on whether negative effects with unvented attics outweigh the benefits of vented attics so new problems not created.
5. Context of law: does evidence of problems with unvented attics substantiate contradiction of the law, which states that the code shall not discriminate against materials & products.

NEXT STEPS
Second workshop will be held after the May 11, 2005 Commission meeting in Orlando. The list of considerations will be refined and options developed.