Air-sealing a Flat Roof “Attic”

Jason Taylor
Byggmeister Associates
Green Jobs Academy
HEET
Jason.Taylor727@gmail.com
Why air-seal?
GRASP this:

- Building Science performed in 1992

- 40 buildings air-sealed and cellulosed vs. 40 buildings only cellulosed but no sealing

- No moisture issues even 25 years later—even on the un-air-sealed buildings
Get on your spelunking gear
Are you in shape?

• 10 sit-ups a day
• 1 push –up
• Get on the floor and start dragging yourself around by the arms for practice.
CAT WALKS?
Respirator, goggles, hat, gloves, HOP
You need this
And this

To Find the Leaks
Either this...
...or this

To Fix the leaks
Assist Wall
Chimney
The Thermal Boundary:

- Limits heat flow between inside and outside.
- Easy to identify by presence of insulation.
- The location of insulation in relation to other building components is critical to its effectiveness.
- Even small areas of missing insulation are very important.
- Voids of 7% can reduce effective R-value by almost 50%.
Bath Fan & Recessed light
Cellulose

- Dense-packing where access is too tight
- GRASP Project Energy Savings
- GRASP Project lack of moisture issues 25 years later!!!!!
10 from Jason’s Air-Sealing Check List

• 1. Chimneys
• 2. Recessed Lights
• 3. Bathroom Fans
• 4. Stink Pipes
• 5. Wet Walls/ All Wall Tops (Top Plates)
• 6. Duct Work
• 7. Attic Entrances
• 8. Gable Ends
• 9. Surprises
• 10. Junction Boxes
Vertical Thermal Boundaries
Dropped Soffits
Ceiling Height Changes
Knee-walled Spaces