

## SIP Problems

SIP problems are almost always related to sealant issues at the panel joints. Here you can see the concentration of damage along and at the top of the panel joints.



## SIP Problems

SIP problems are almost always related to sealant issues at the panel joints. In this project, ants at the ridge and along the soffits raised the alarm.

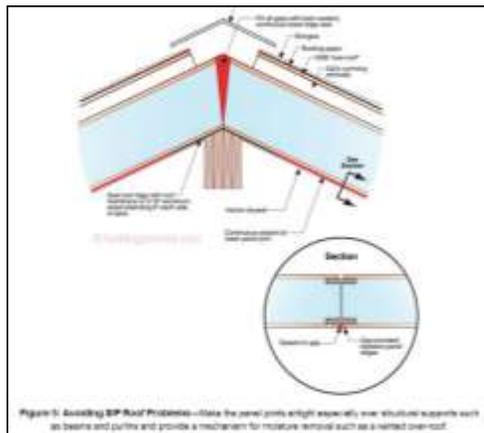
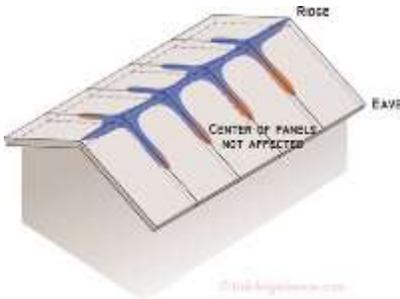


# SIP Problems

Here the panel joints are being enlarged and cleaned out to allow full-depth air sealing. The foam leakage at the interior verifies that the panel joints were the air leakage path that caused the moisture damage.



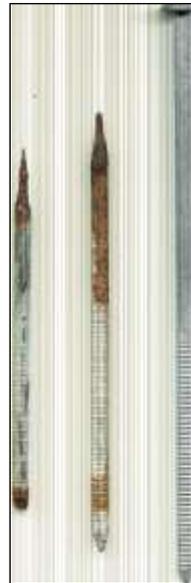
# Building Science on Panel joints



### SIP Problems



### Panel joint moisture failure



### Diagnostics on the fly



Stressed-skin panel failure

### Diagnostics on the fly





### Diagnostics on the fly



Finished (chainsaw)  
carpentry

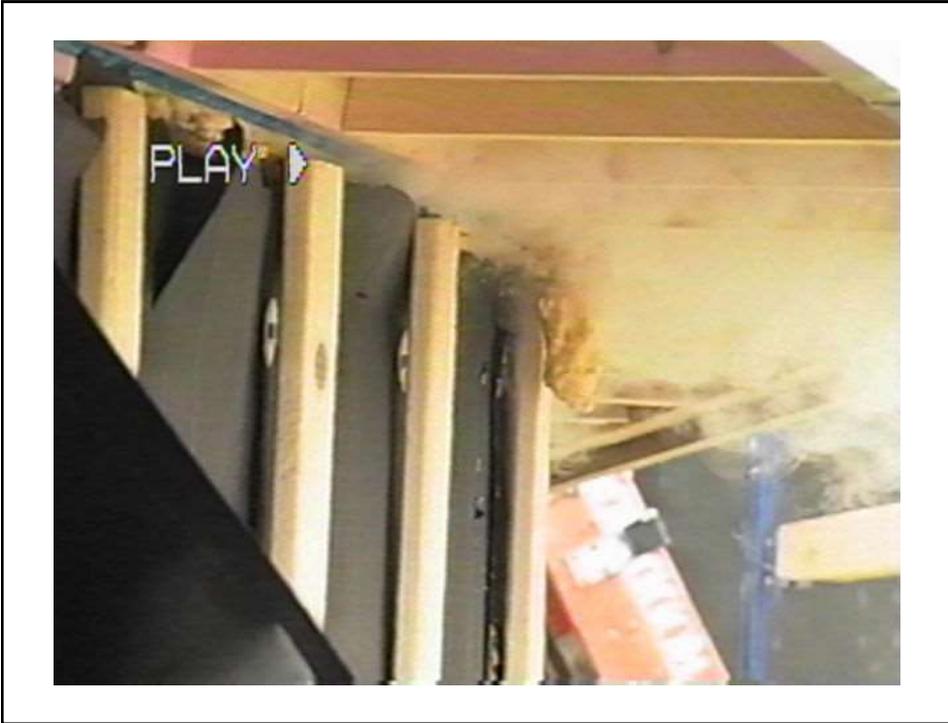


### Diagnostics on the fly



### Diagnostics on the fly





### Panel joint failure



## Tubes and extensions



1998

## Tubes and extensions

1998





### Tubes and extensions



Theatrical fog used for localized air-leakage diagnostics

## Tubes and extensions



Note: A 10' length of 1-1/2" PVC schedule 40 would work nicely here

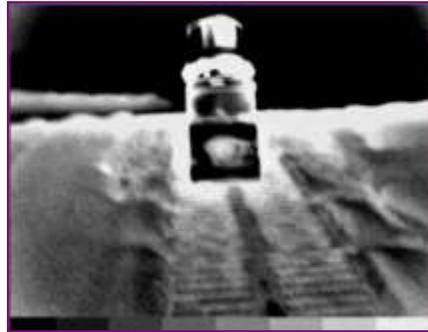




### Fill the interior volume approach



## Fill the interior volume approach



## Fill the interior volume, then pressurize

One classroom filled with fog and the blower window ready to pressurize the space

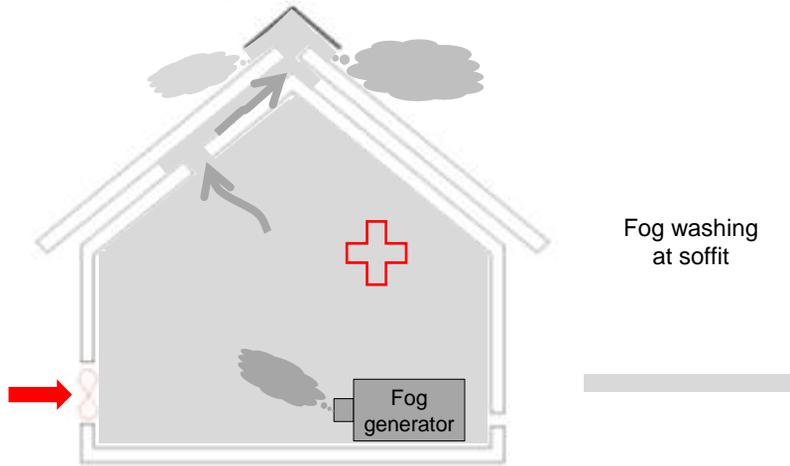


## Fill the interior volume approach

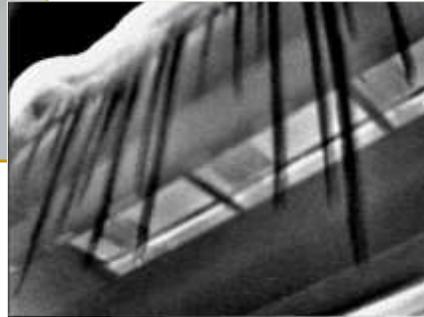


## Fill the interior volume approach

Verify air leakage is occurring from the interior up into the roof vent space

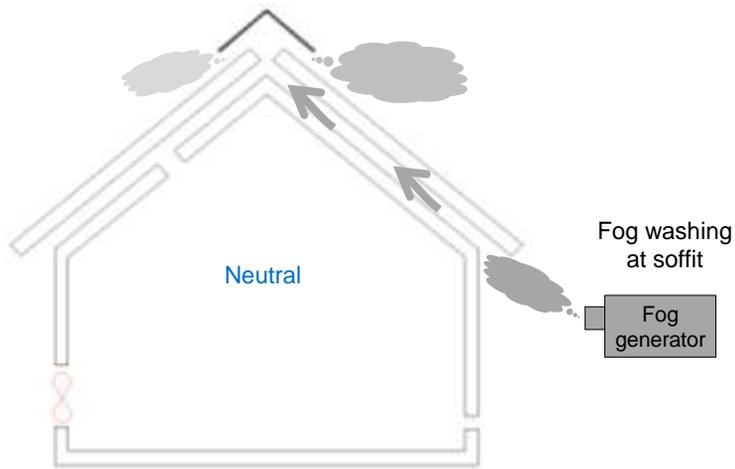


## Gravity flow approach for roof ventilation



## 3. Terminology

Timing roof vents to calculate the flow rate



### Testing roof vent chutes for flow rate



When you don't need them, roof vents work well!

