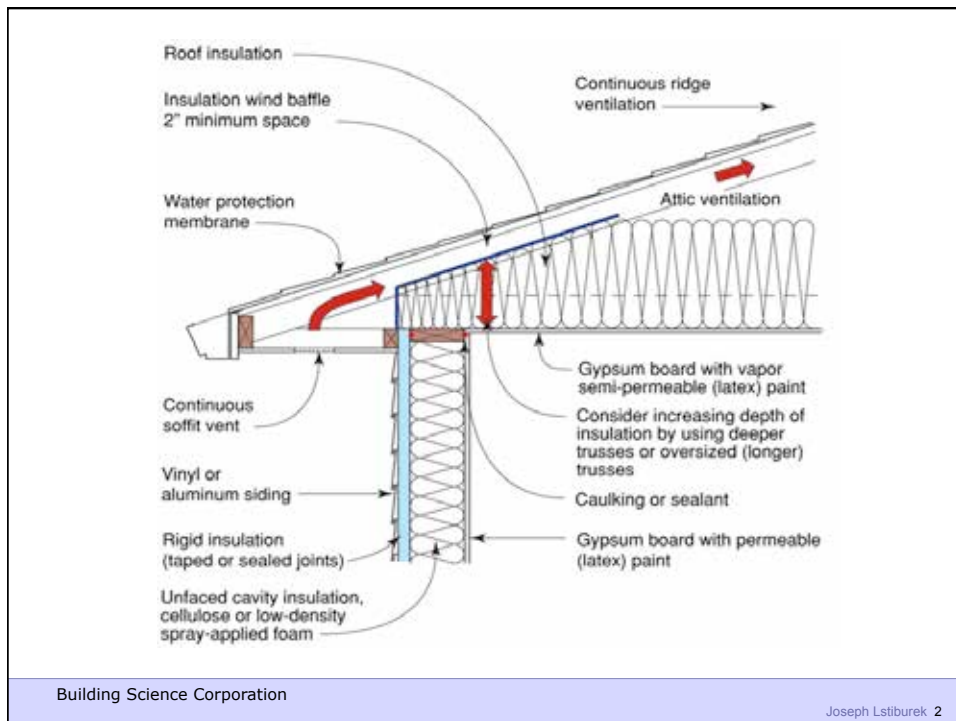


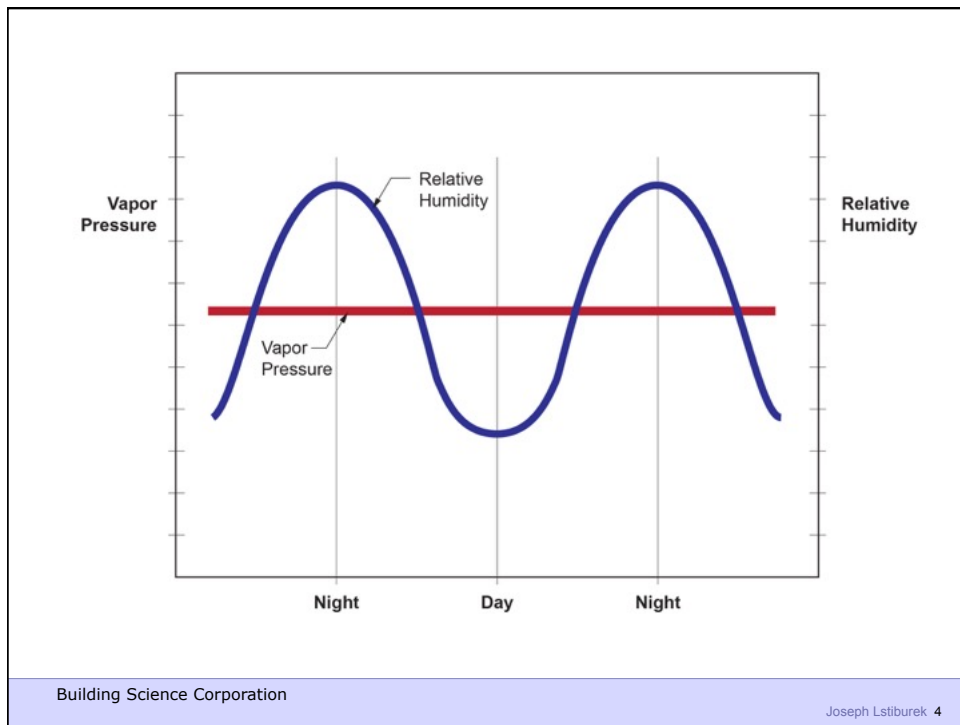
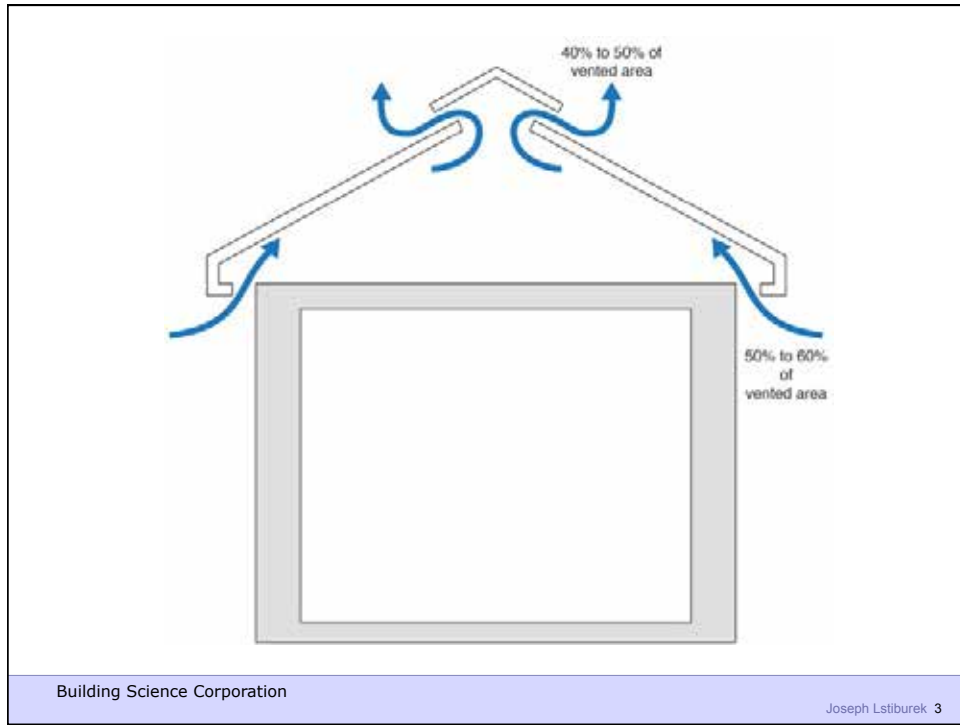
Joseph Lstiburek, Ph.D., P.Eng, ASHRAE Fellow

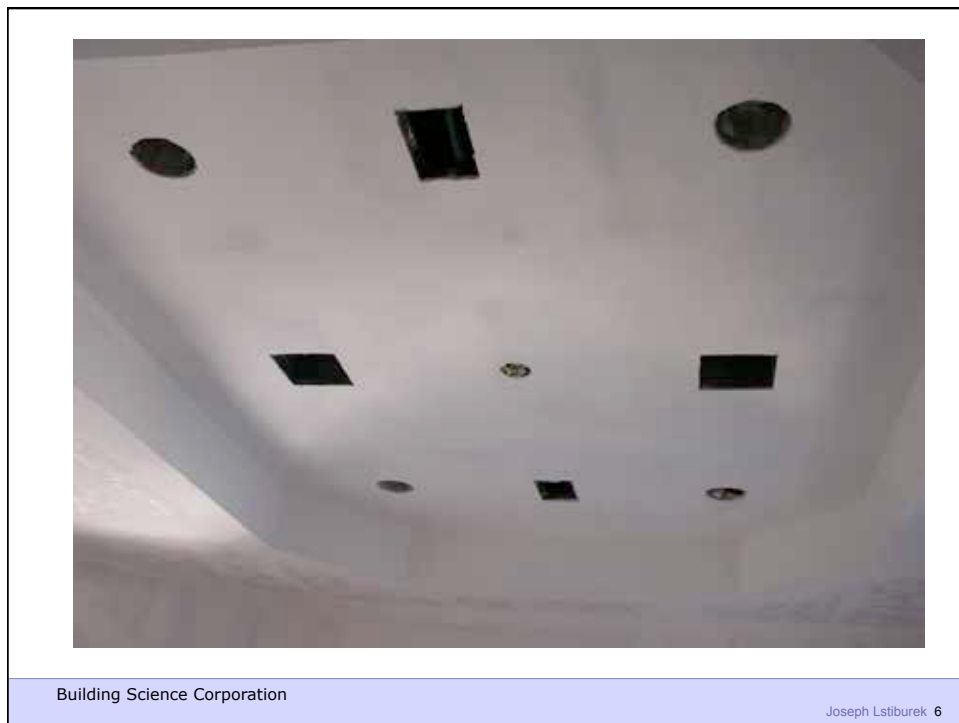
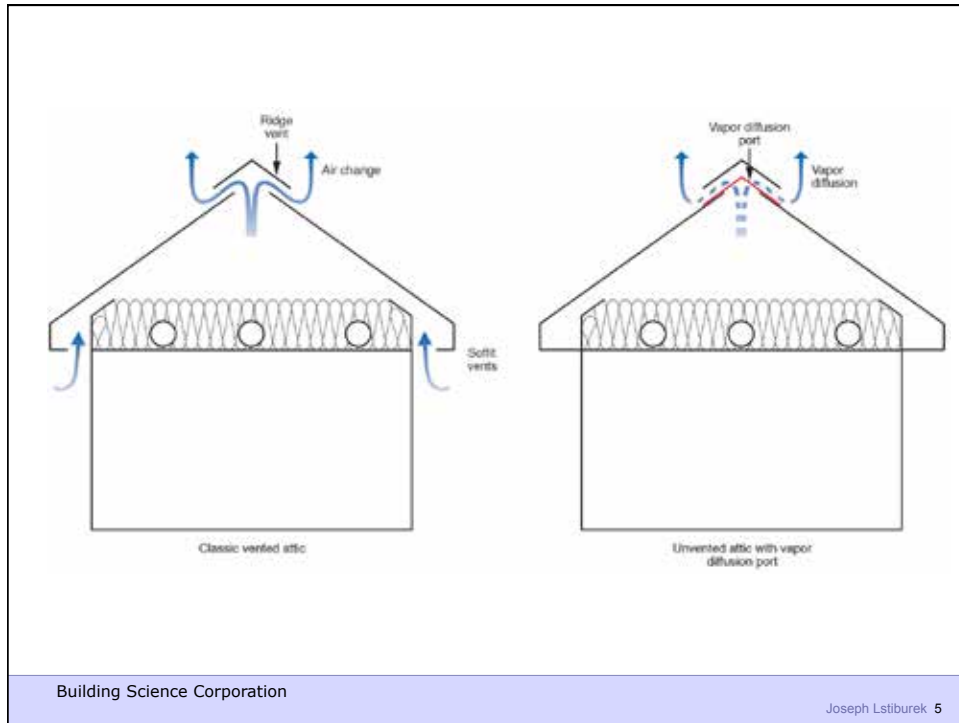
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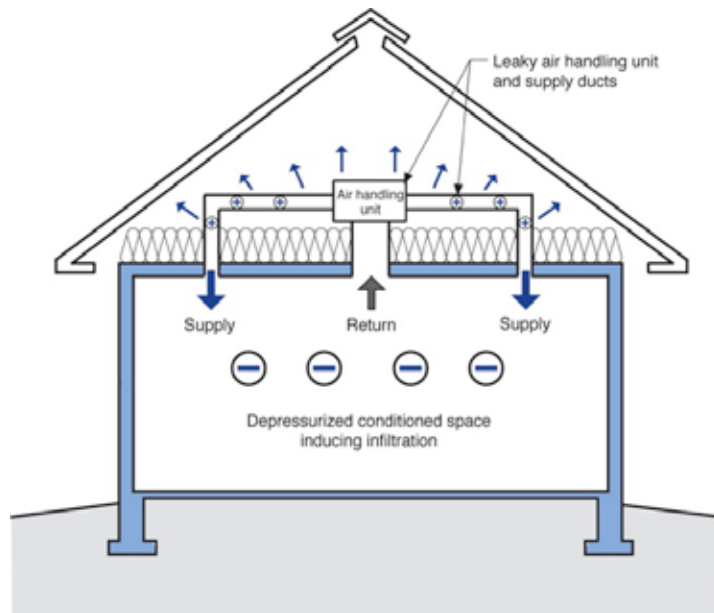






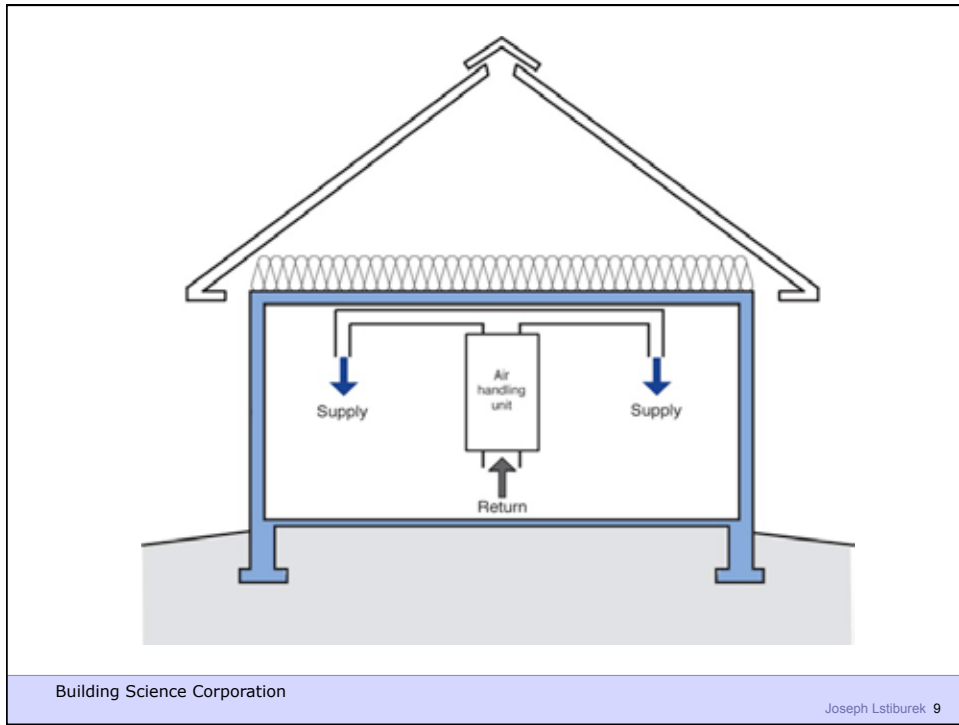
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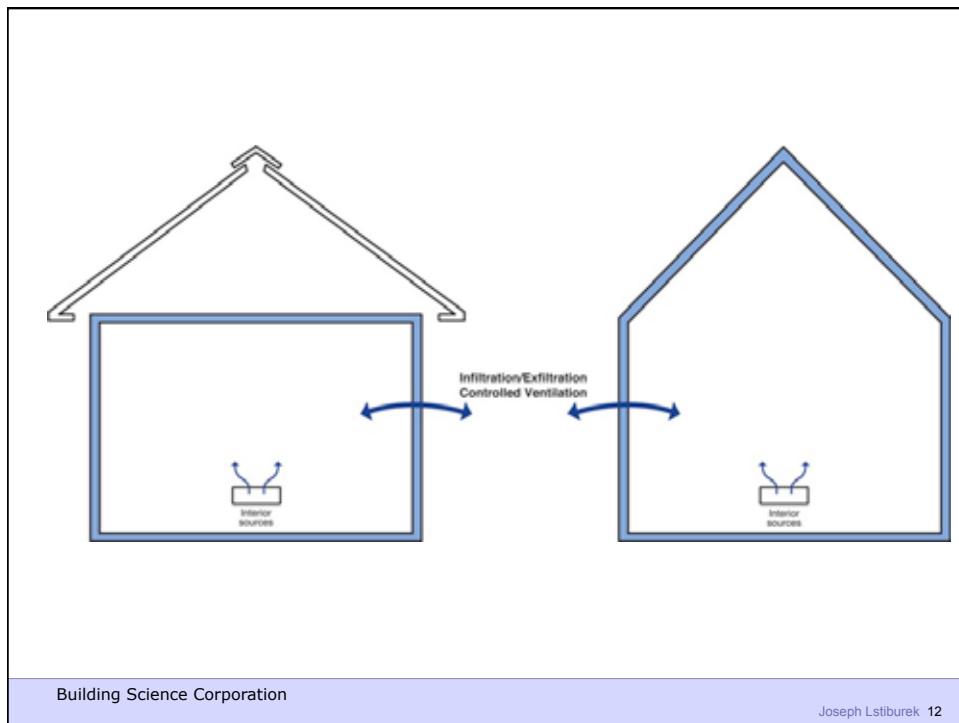
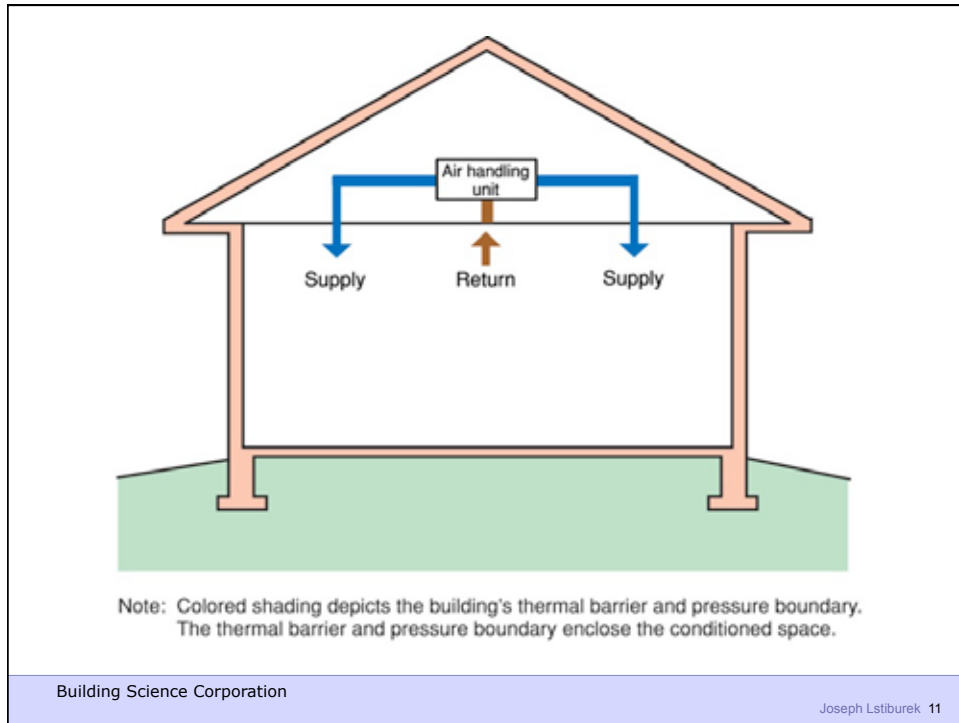
Joseph Lstiburek 7

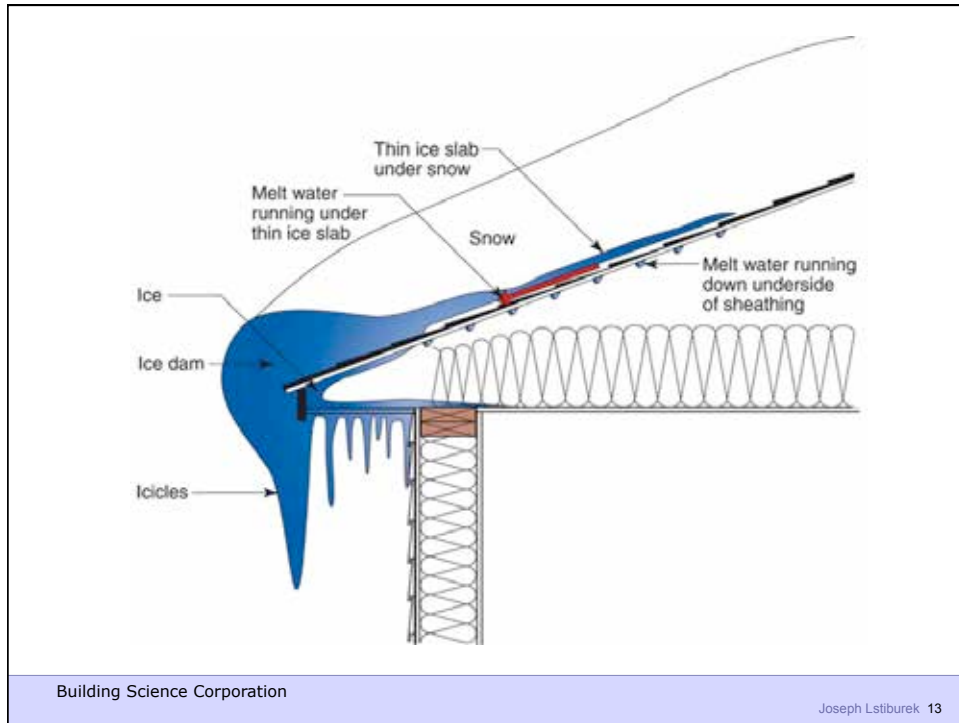


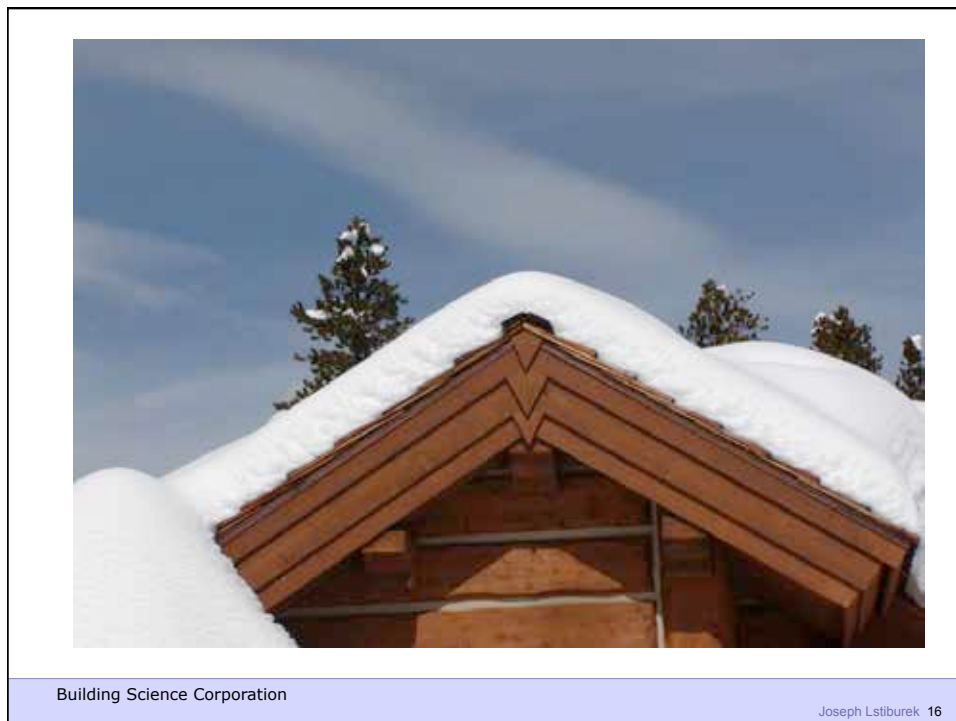
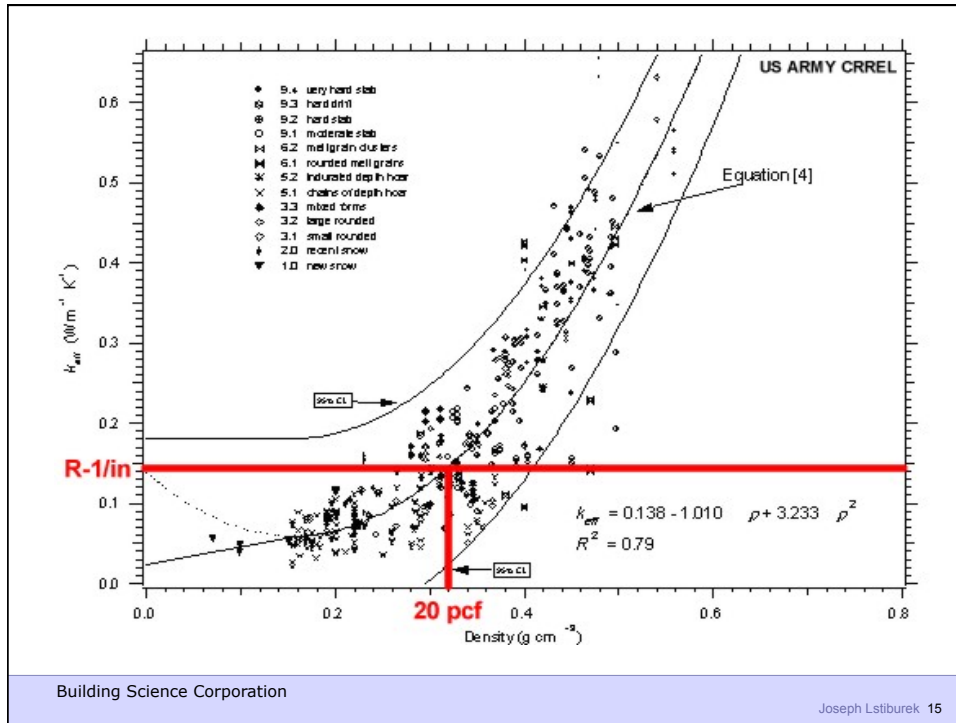
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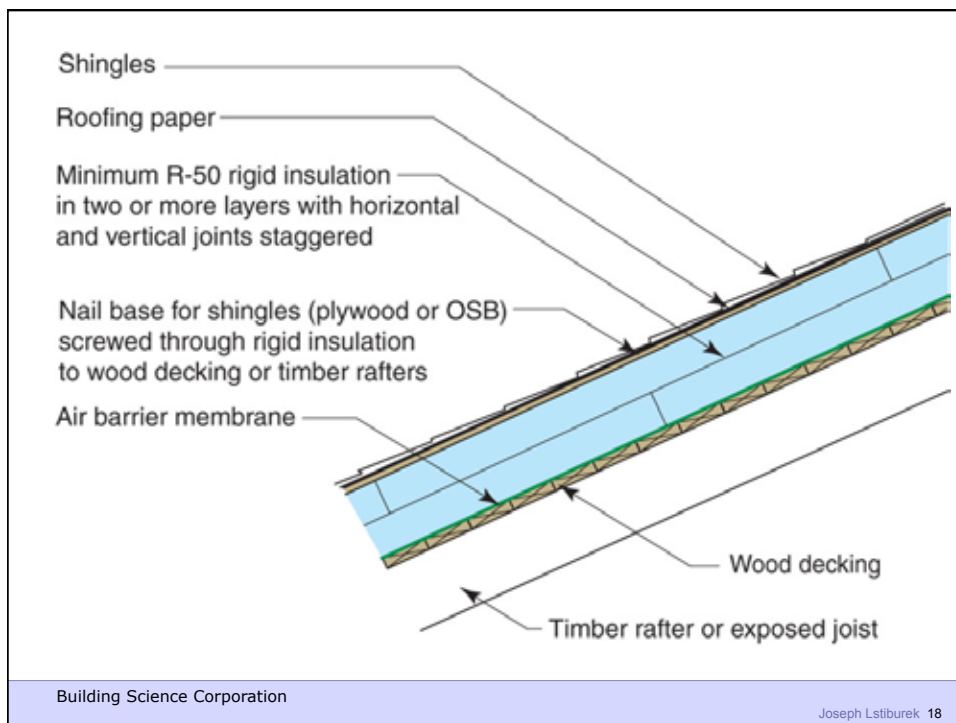
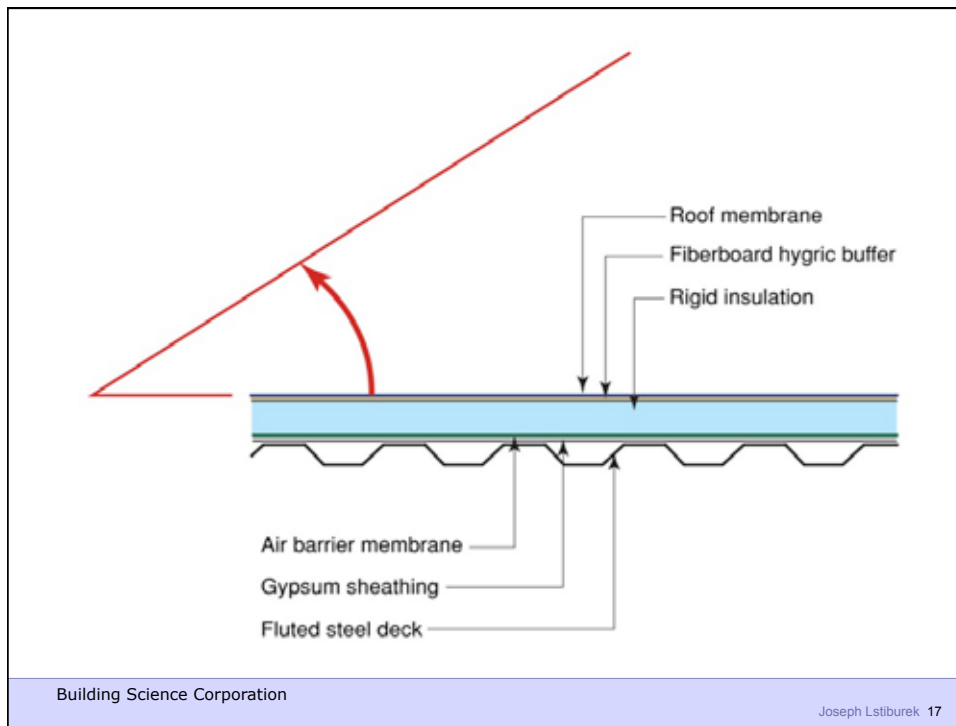
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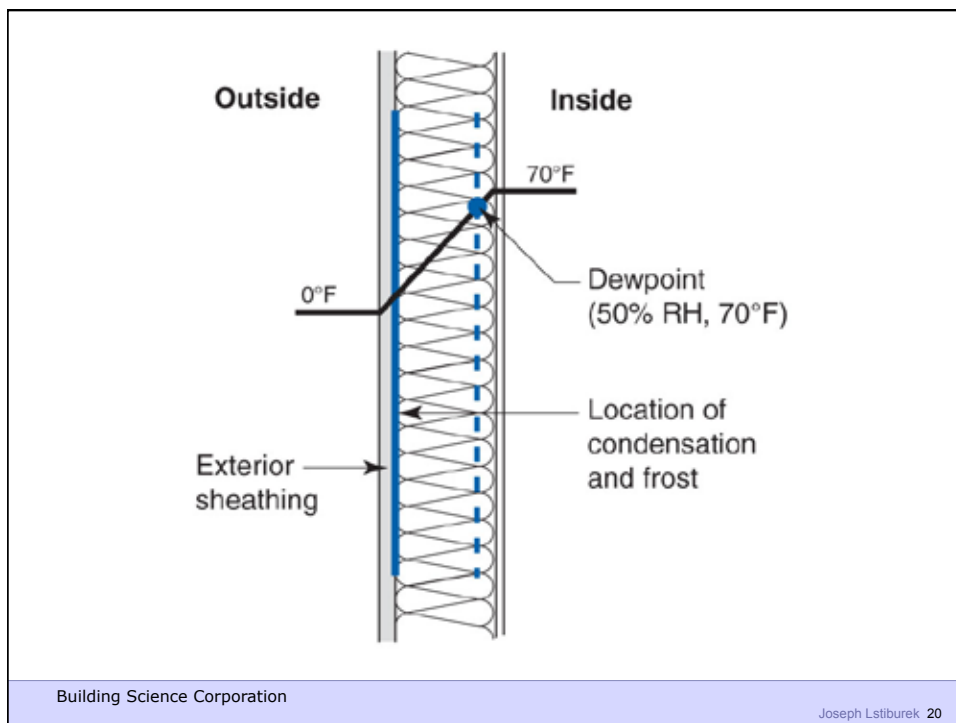
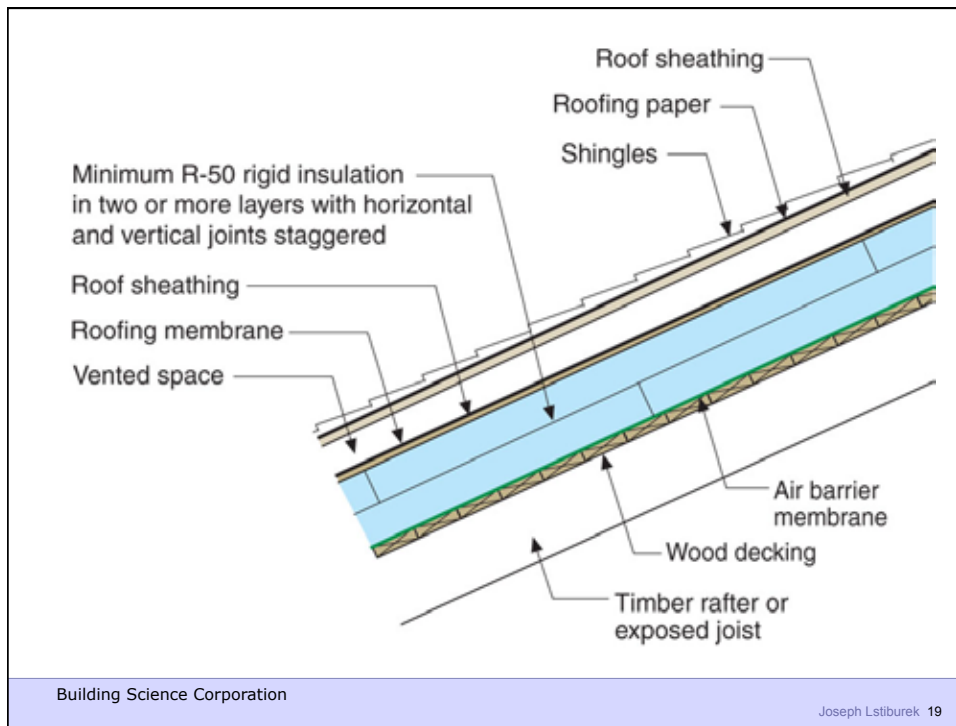








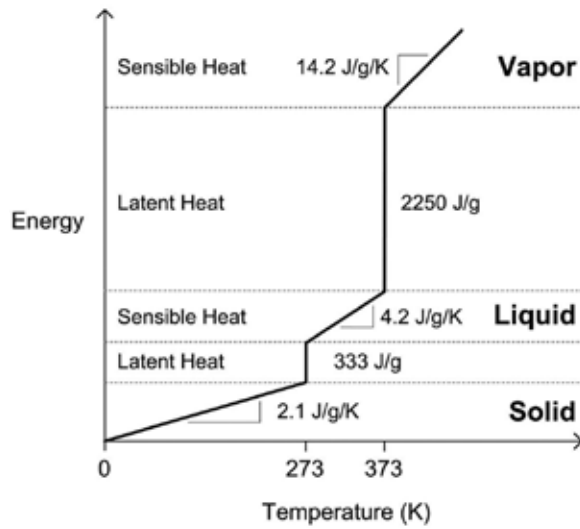






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Simple linearized energy-temperature relation for water
From Straube & Burnett, 2005

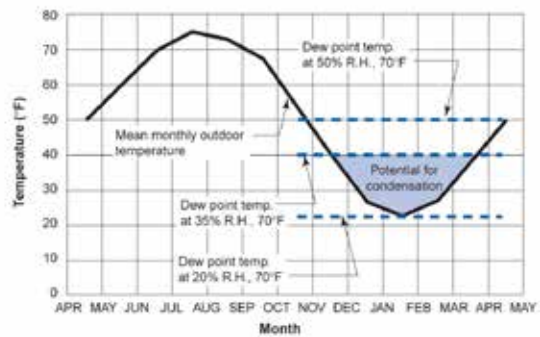
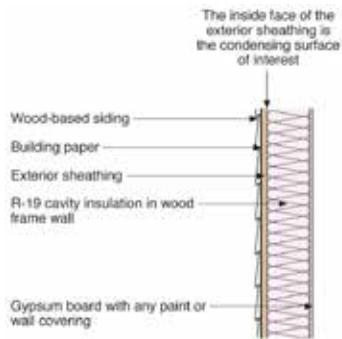
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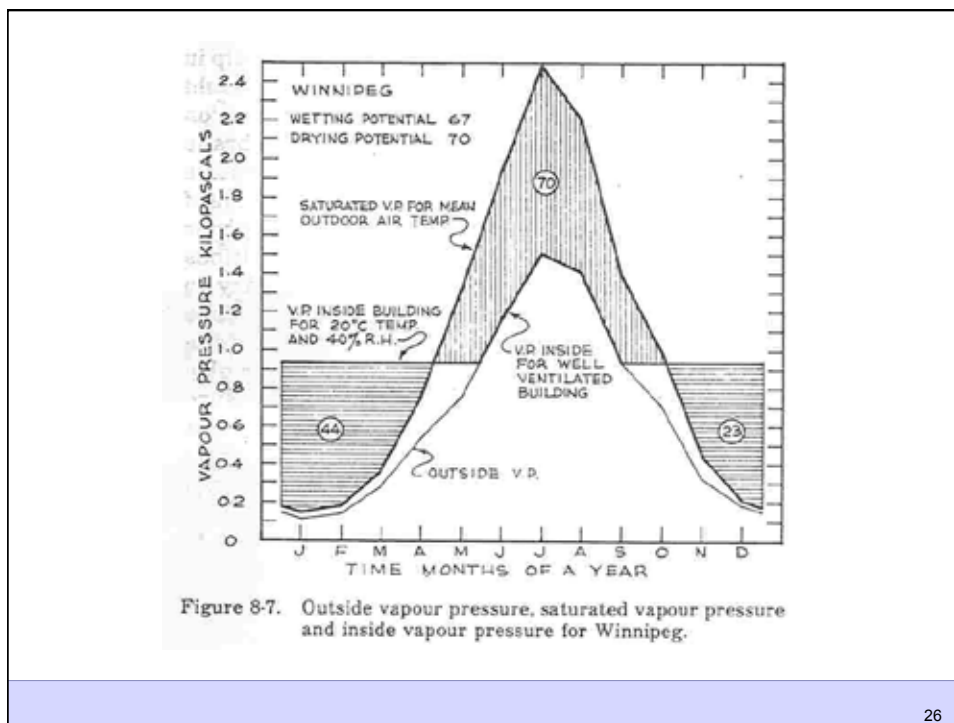
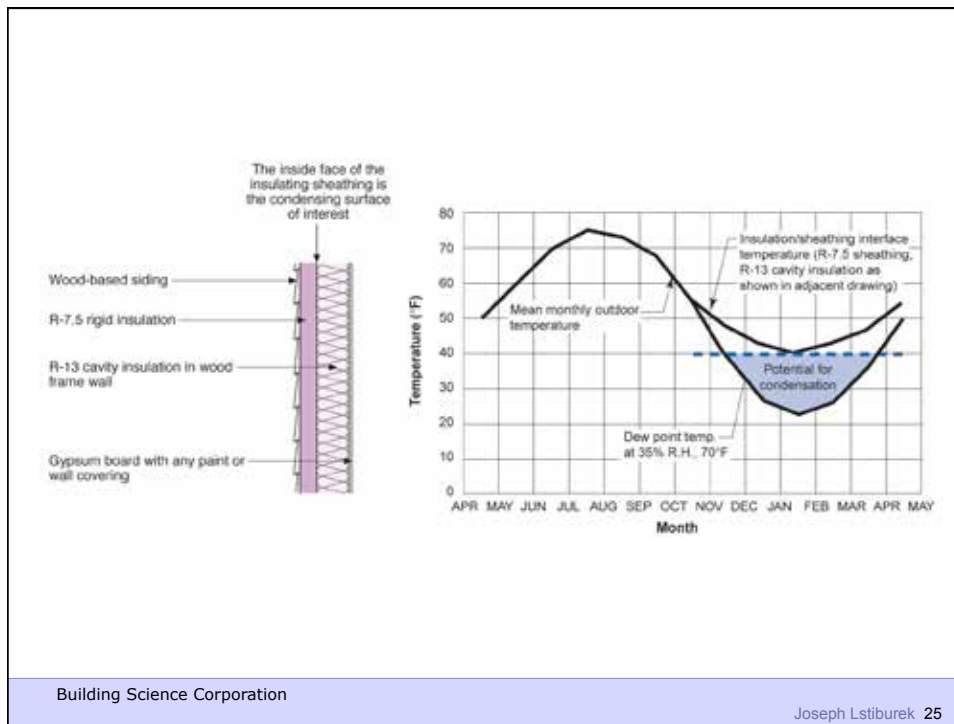
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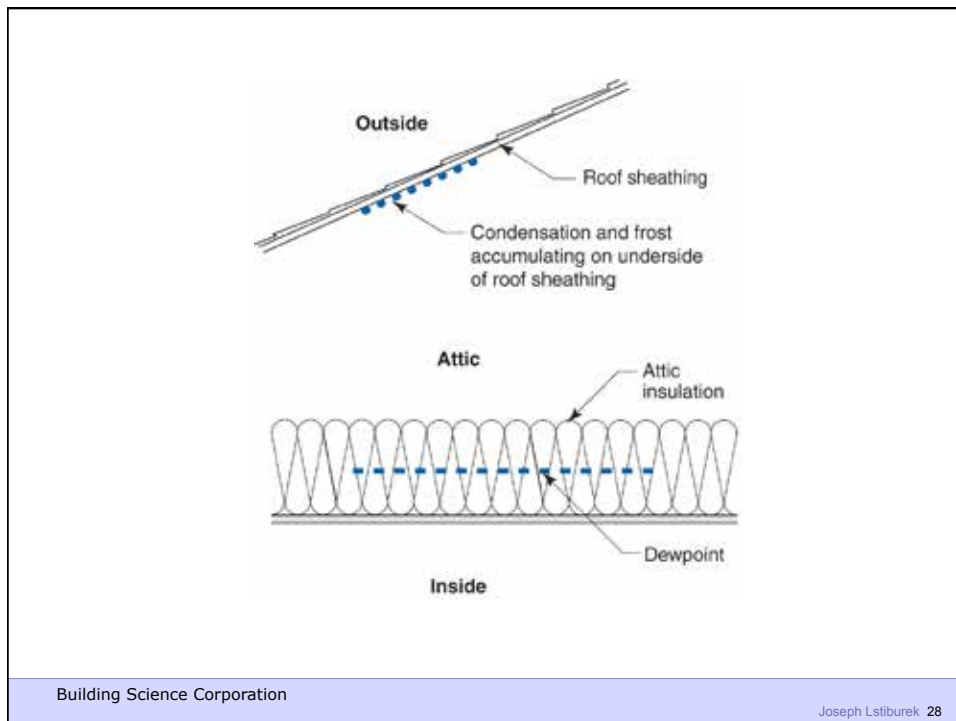
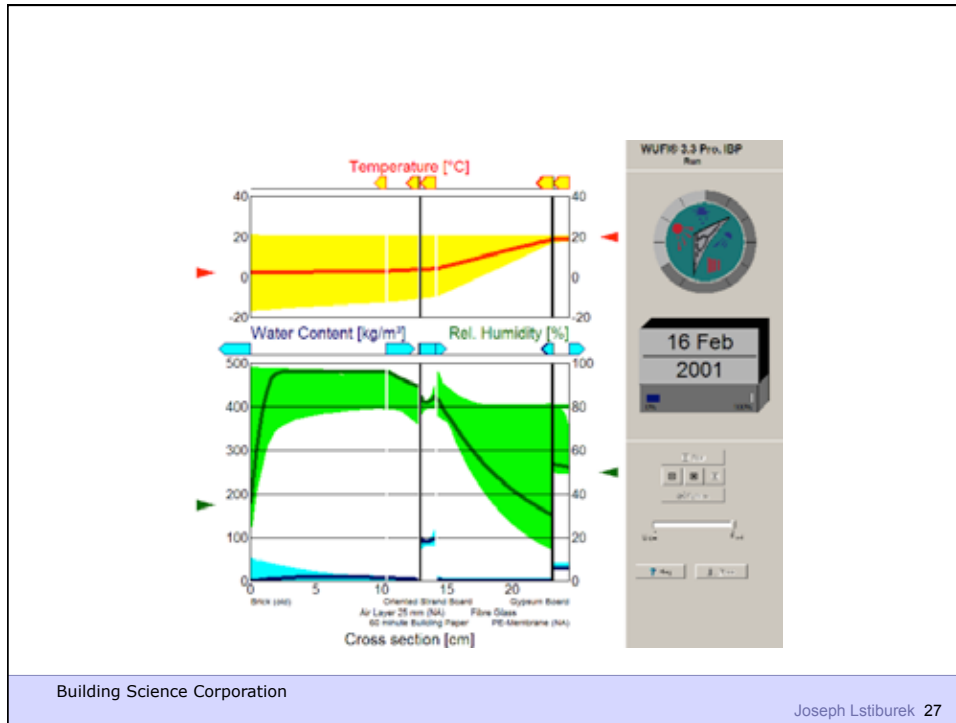
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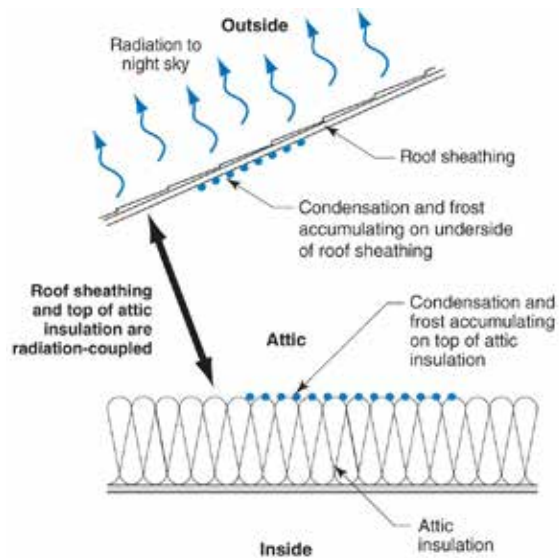






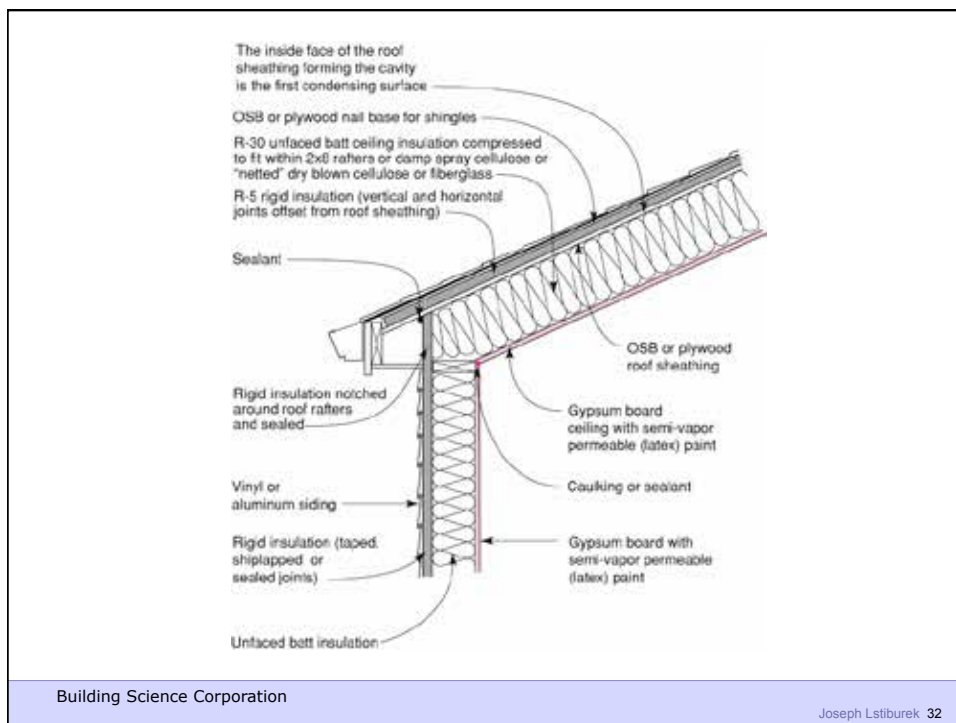
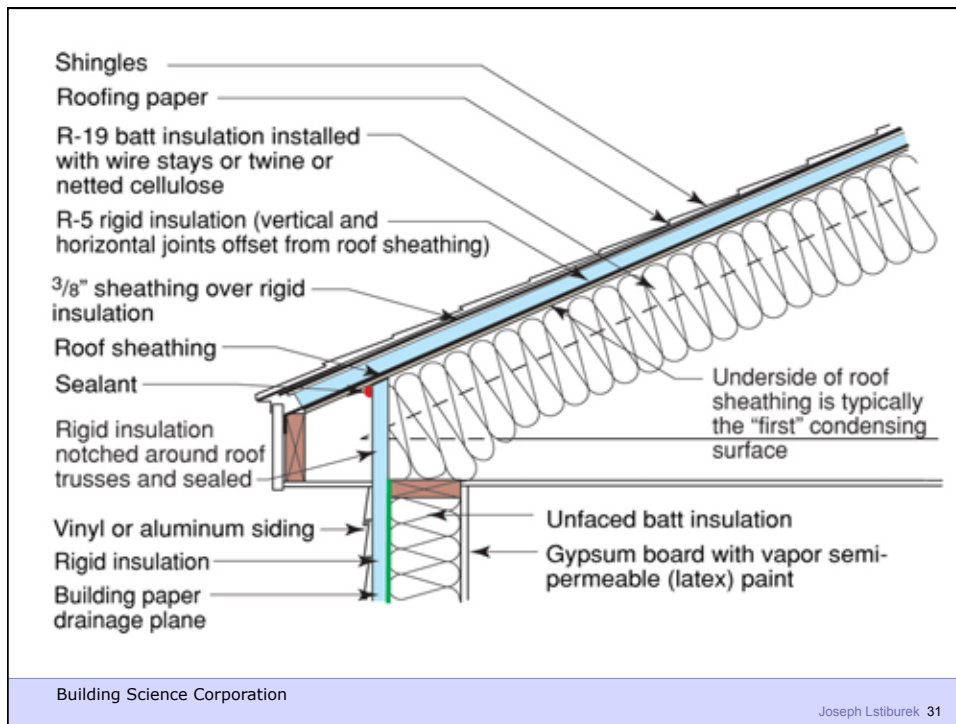
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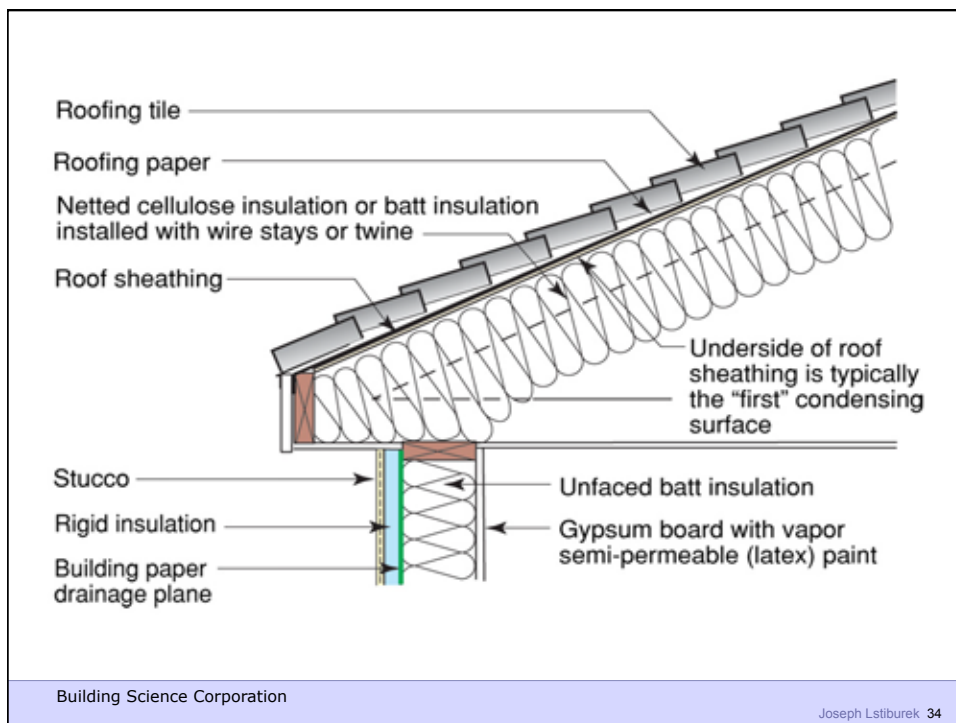
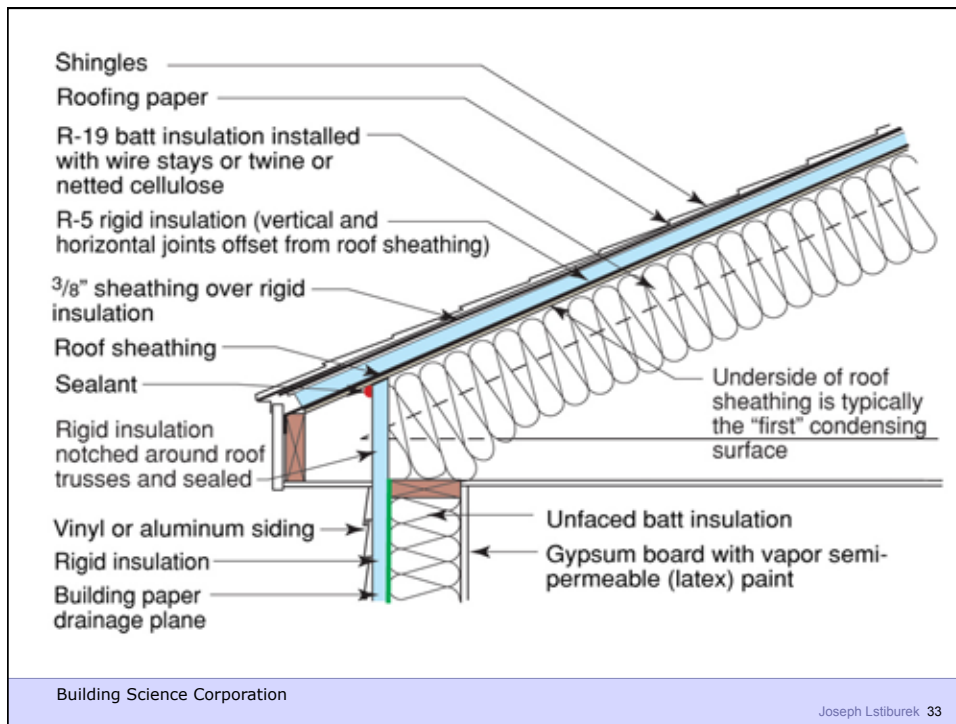
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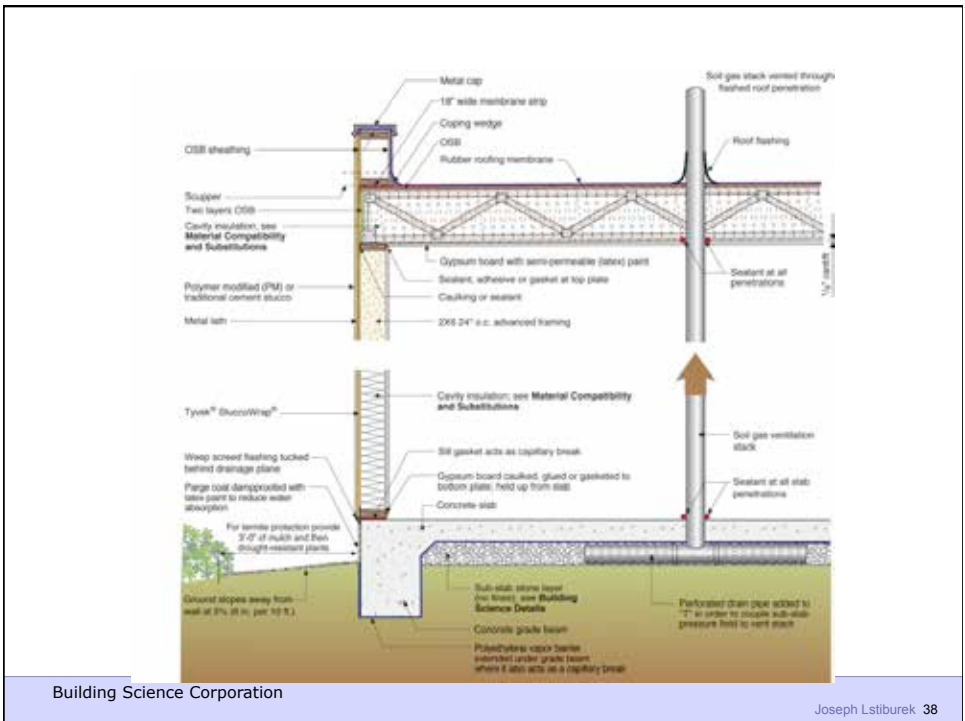
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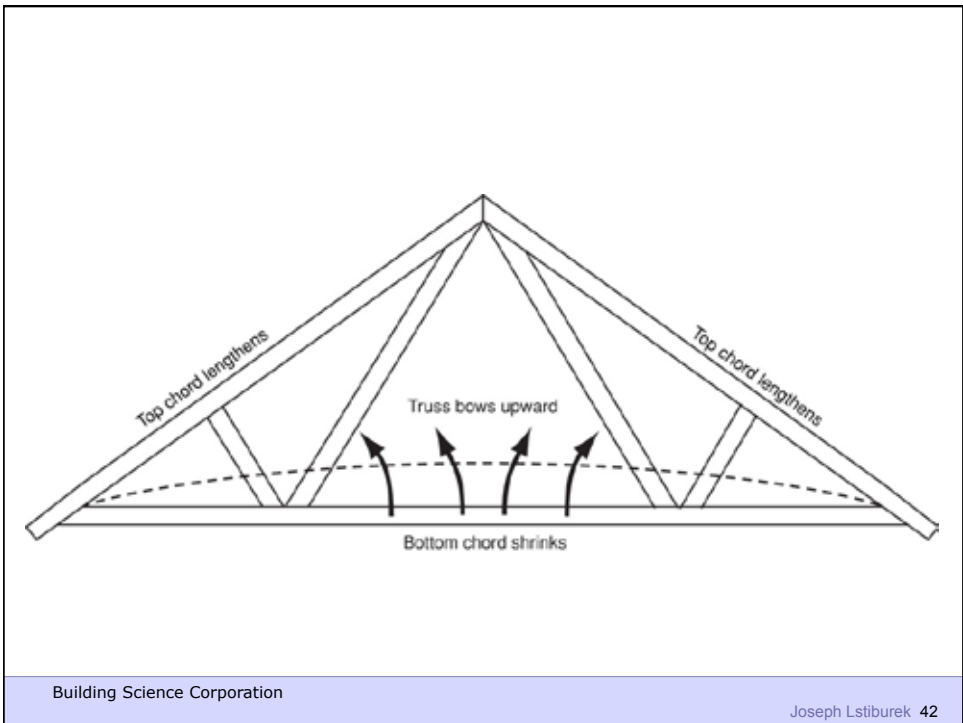


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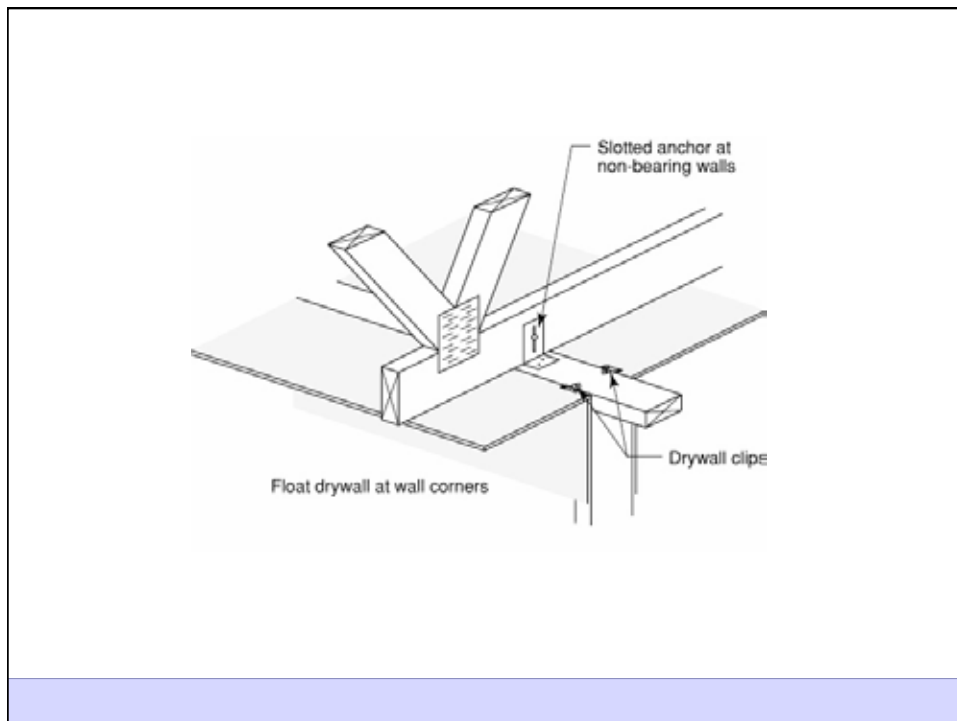
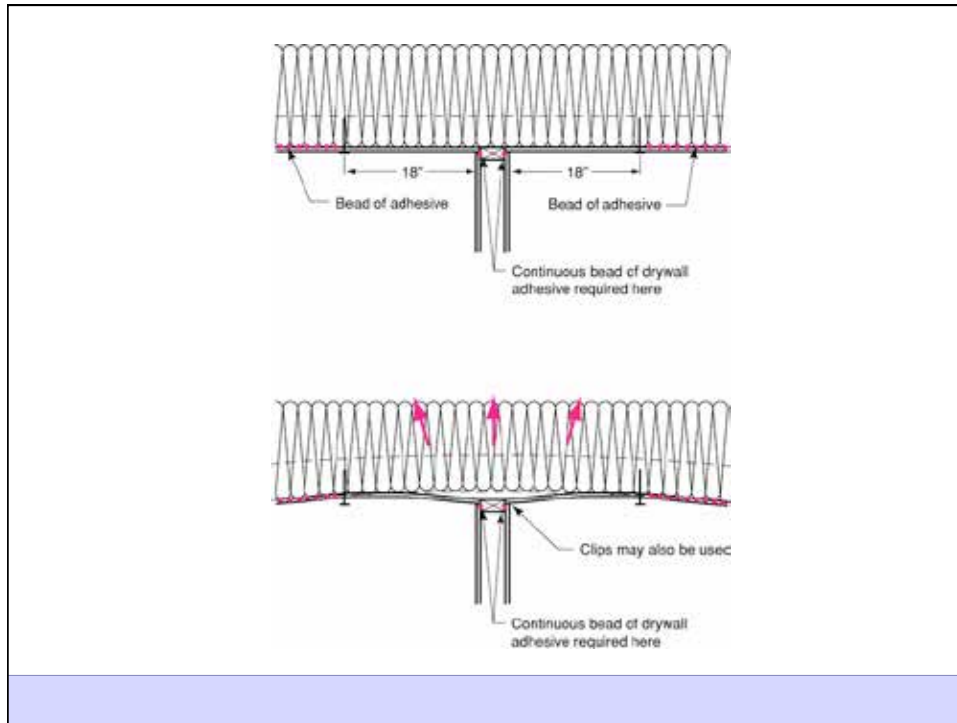


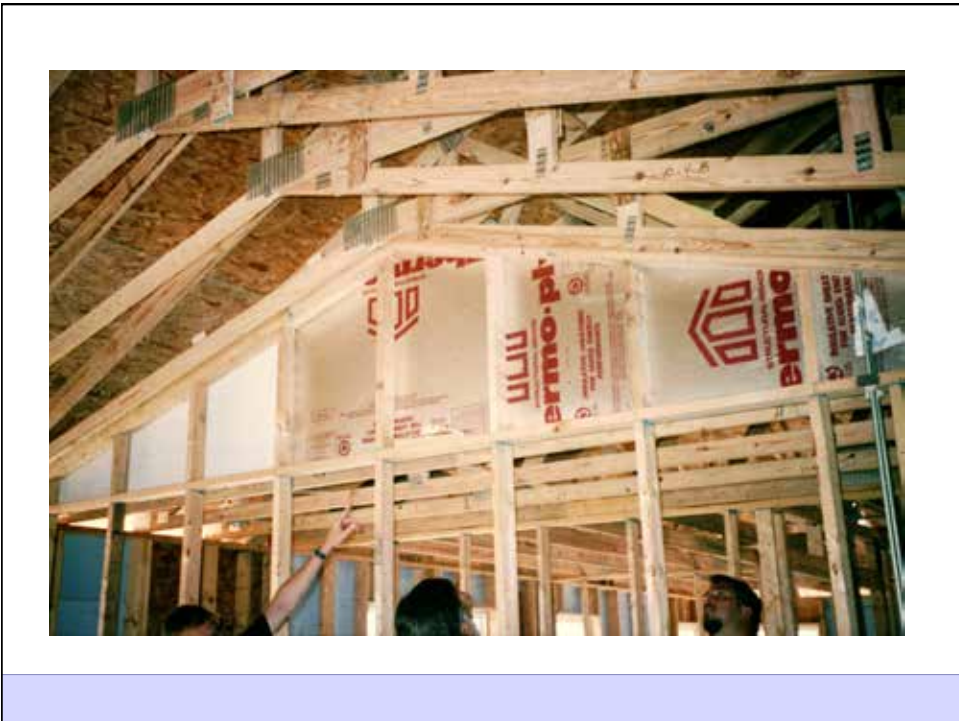


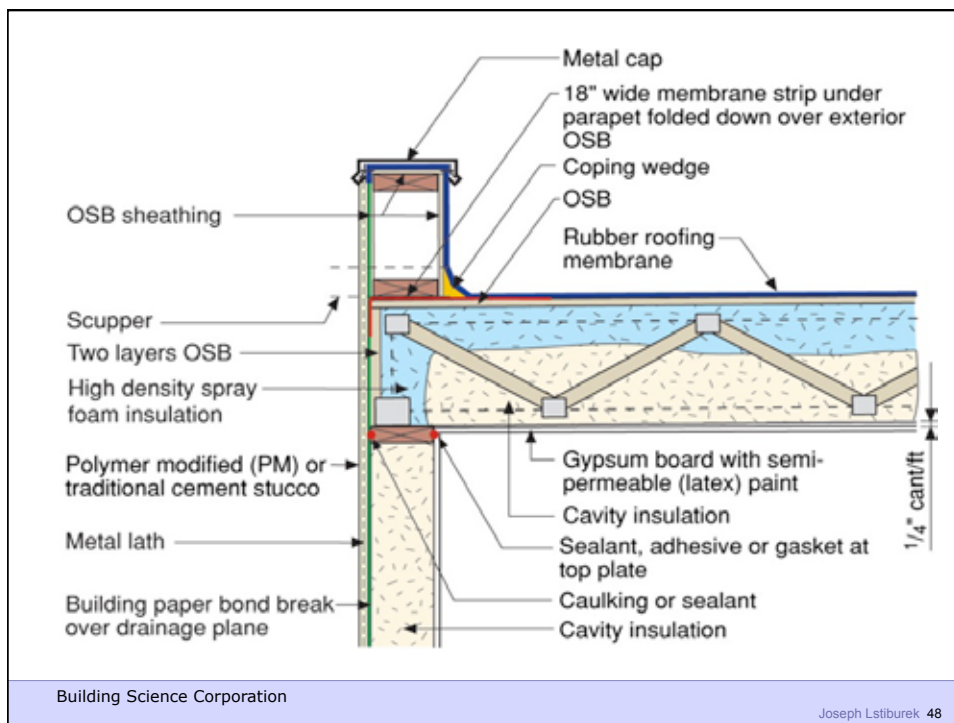
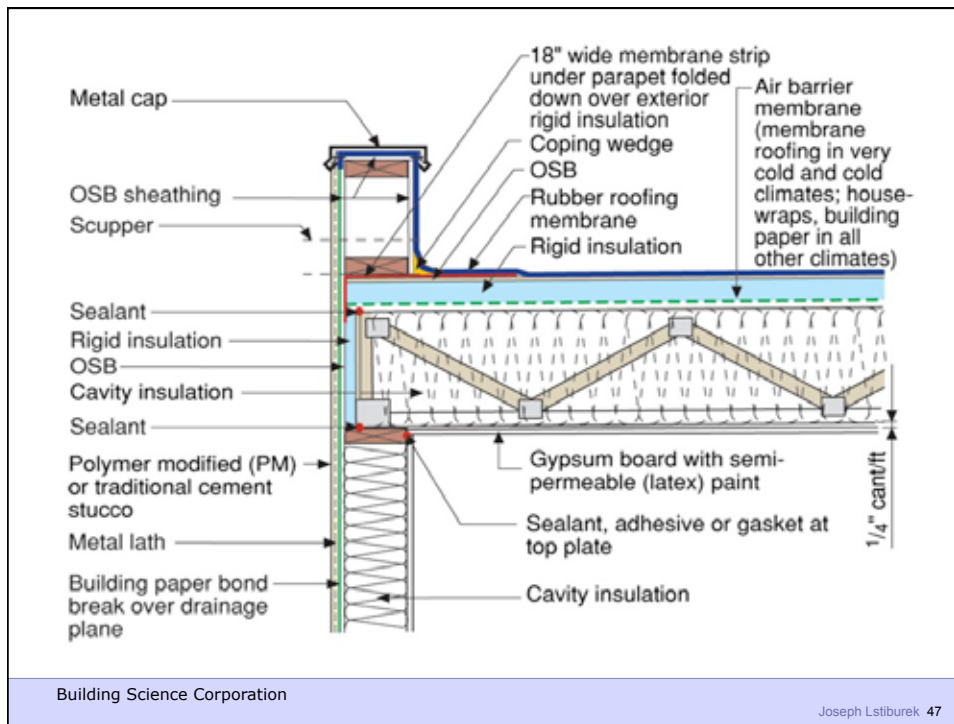


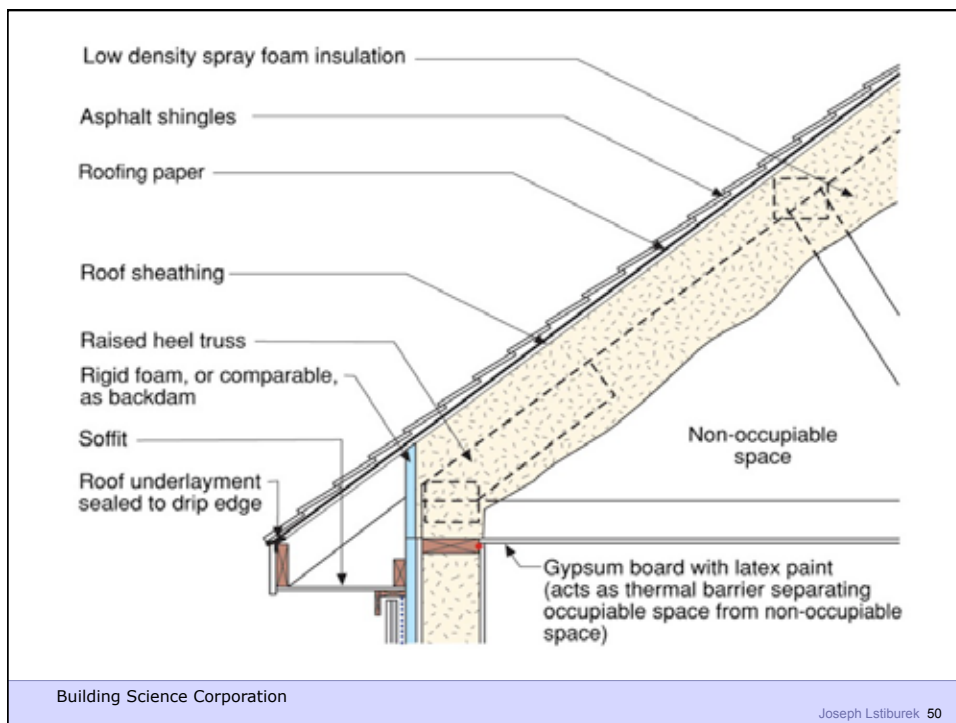
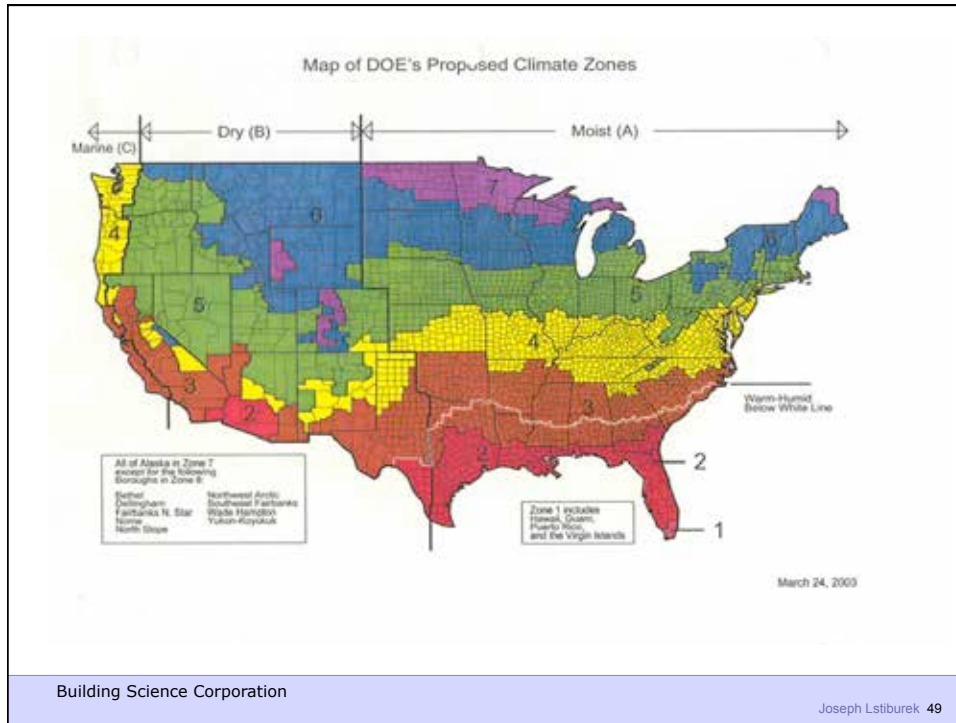
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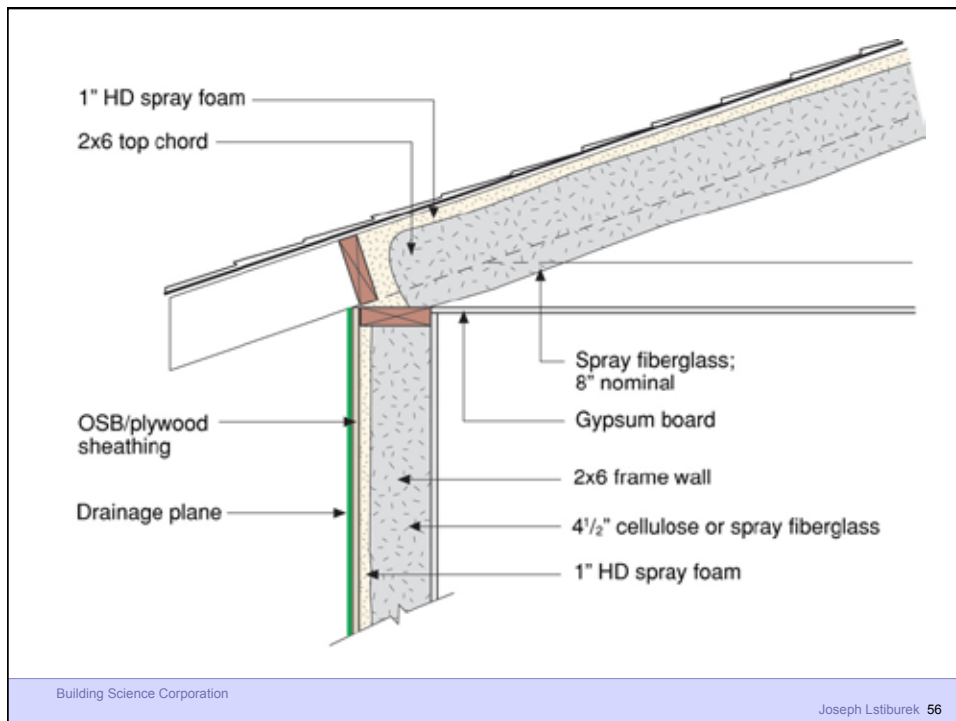
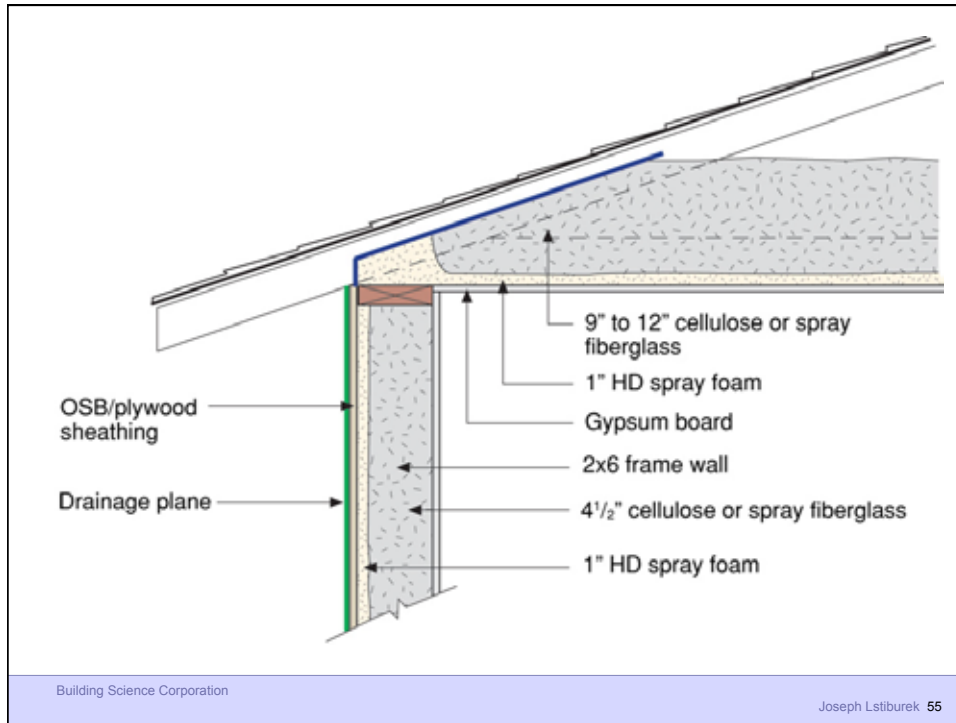
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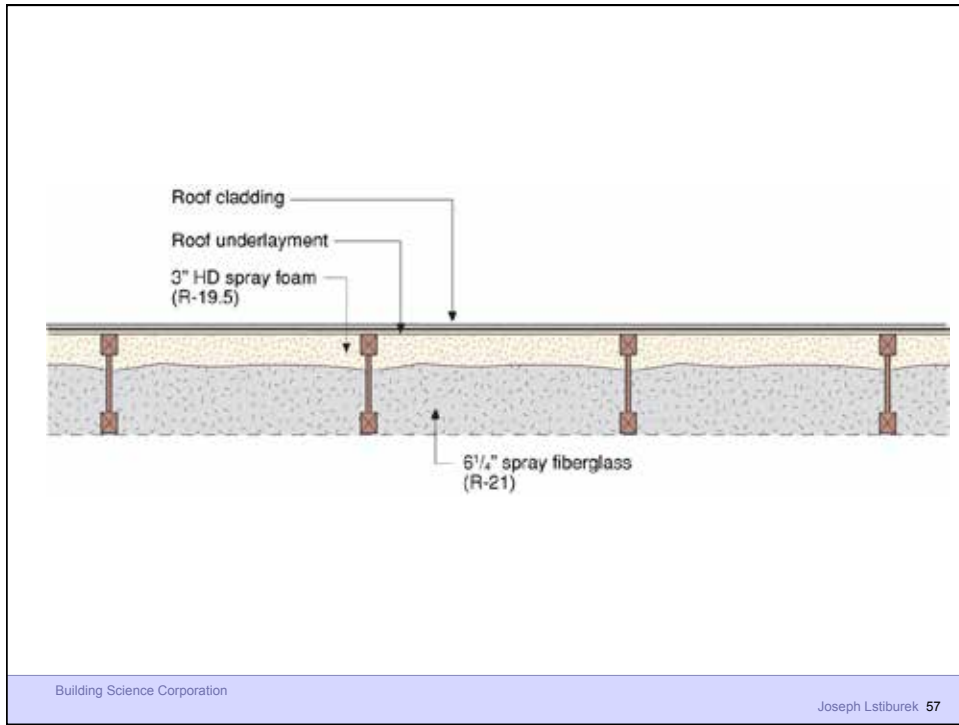
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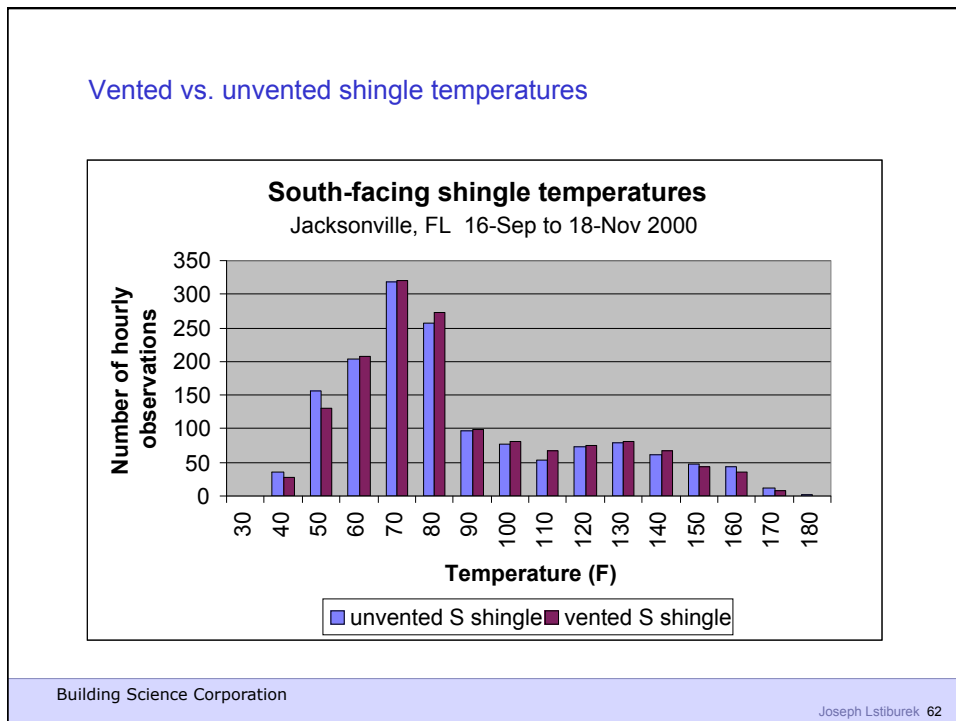
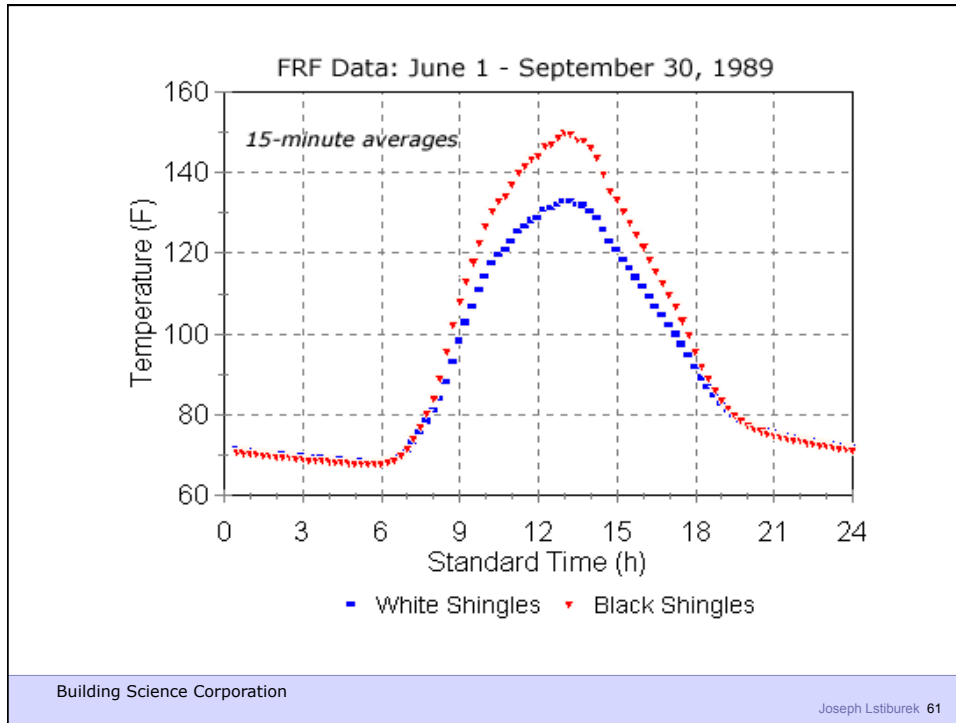
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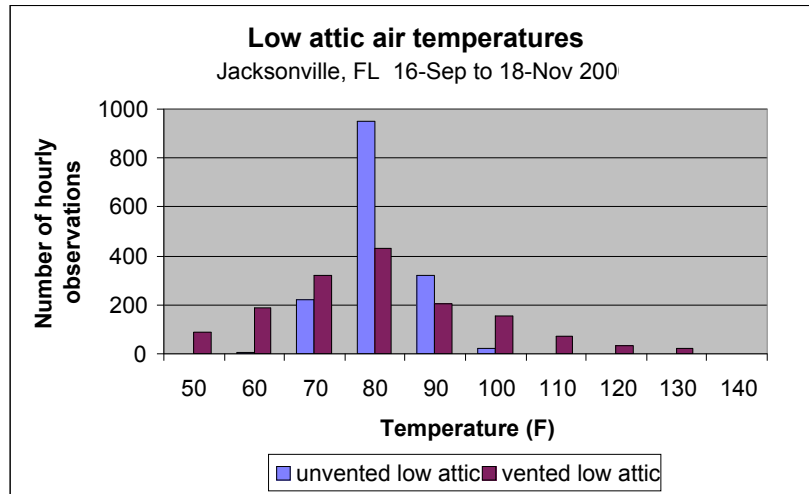


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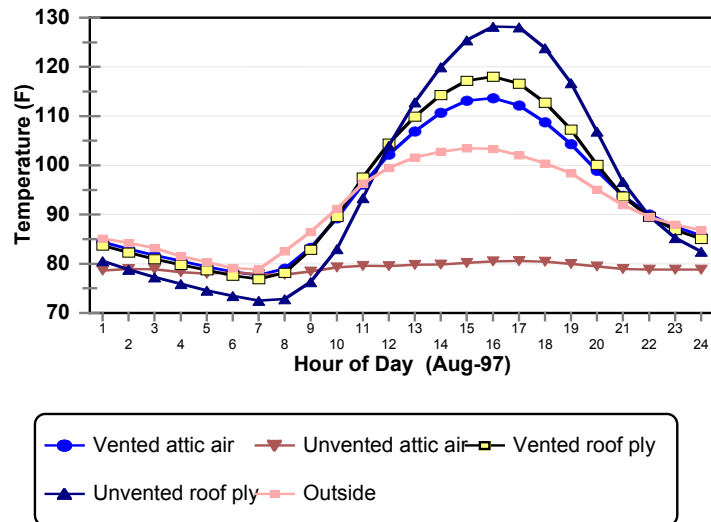
Vented vs. unvented attic air temperatures



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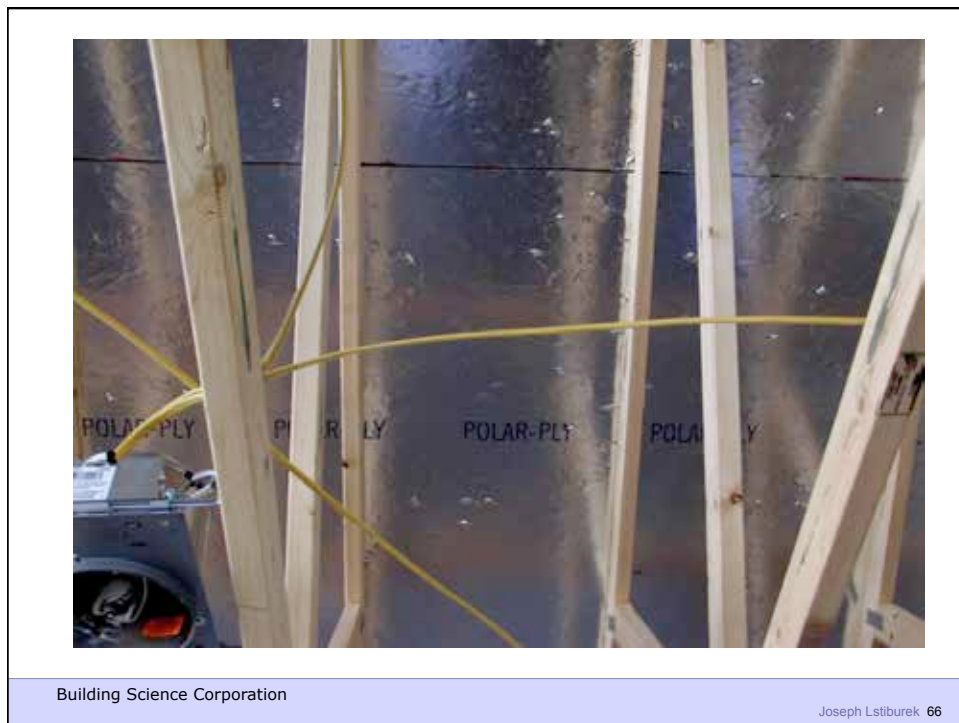
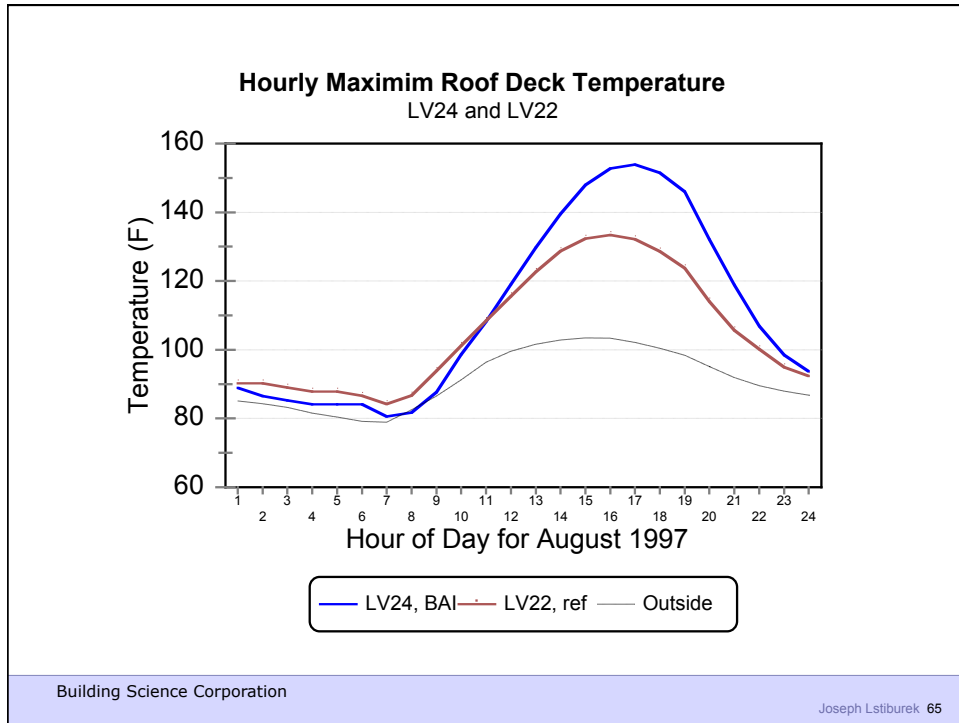
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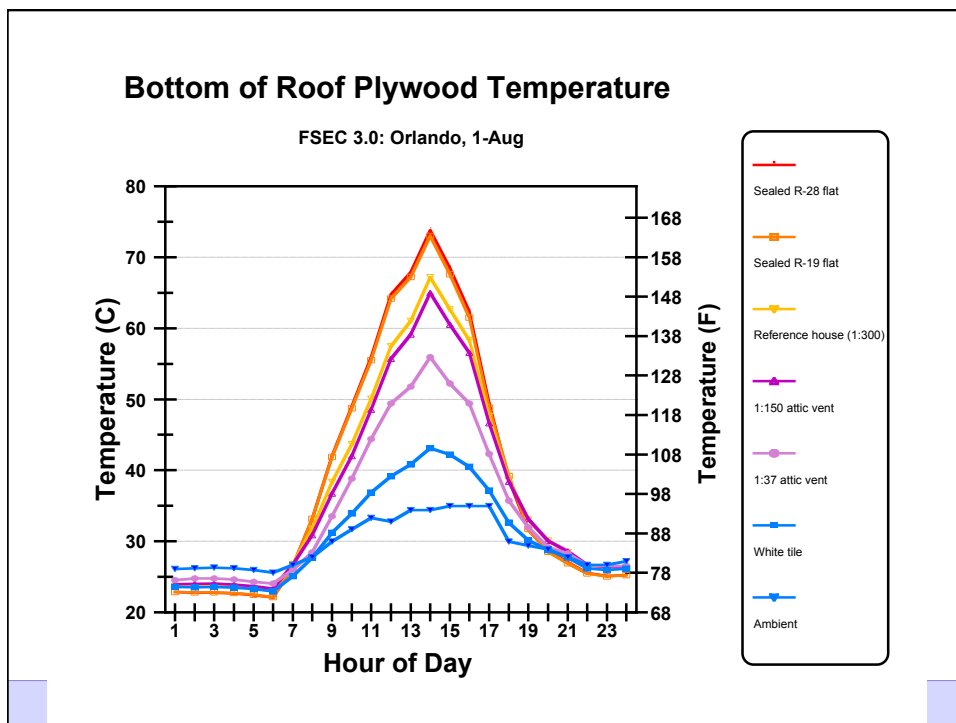
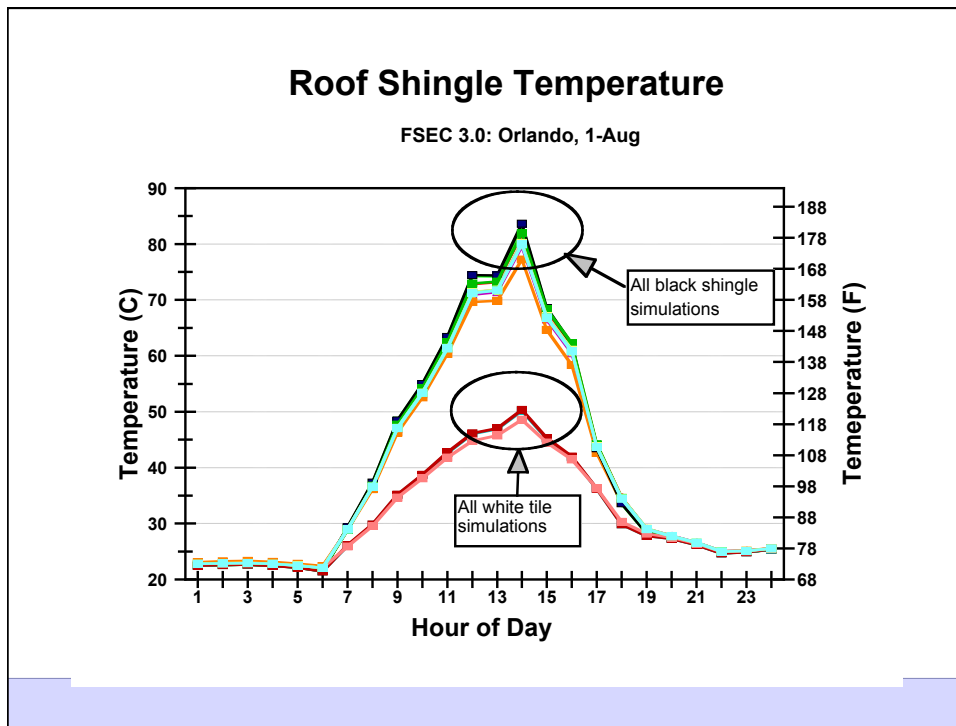
Average Temperatures Vented and Unvented Attics, Aug-97



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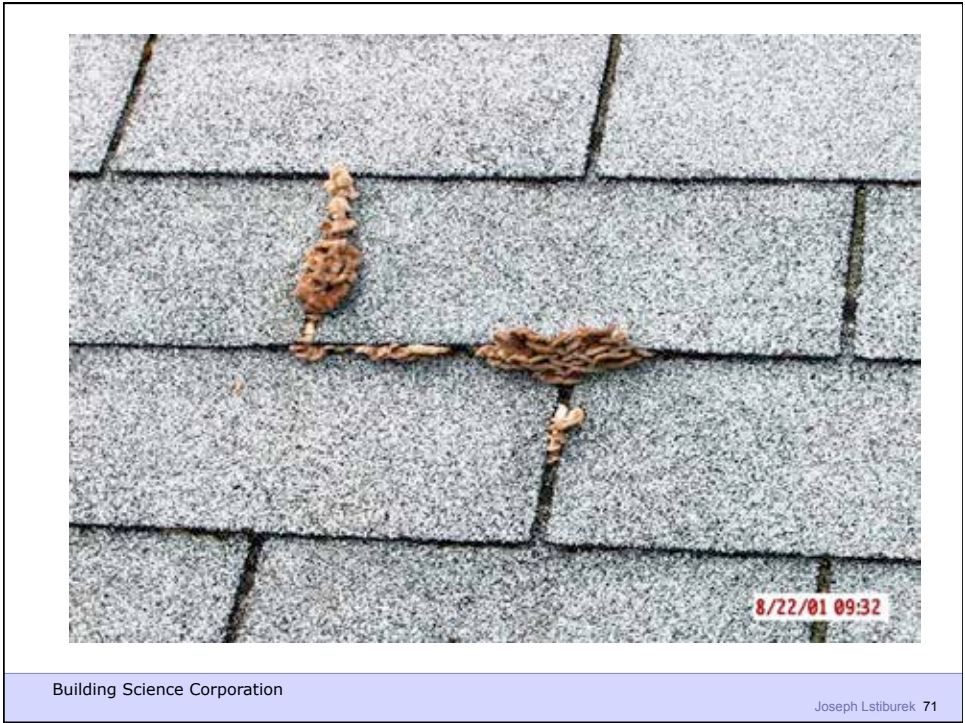
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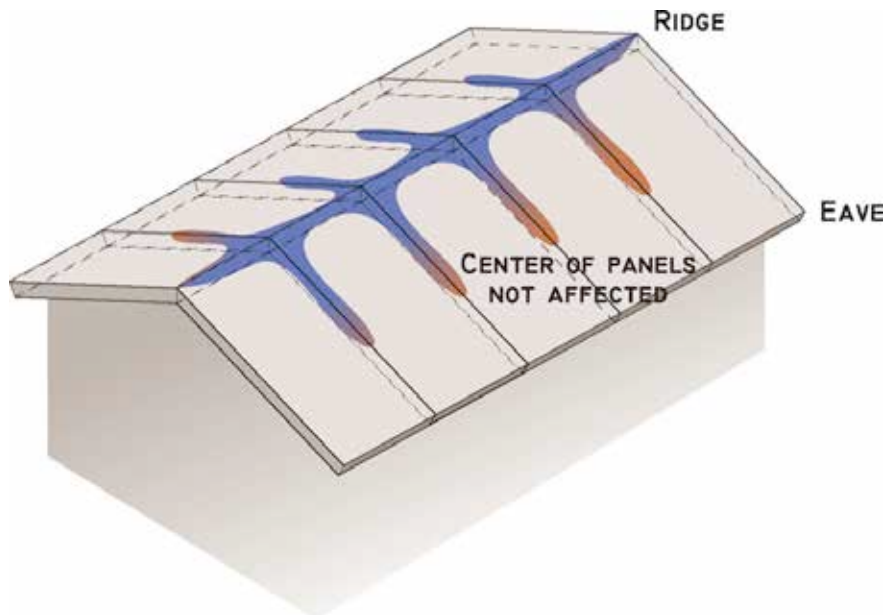
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Joseph Lstiburek 75



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Joseph Lstiburek 76



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Joseph Lstiburek 77



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Joseph Lstiburek 79



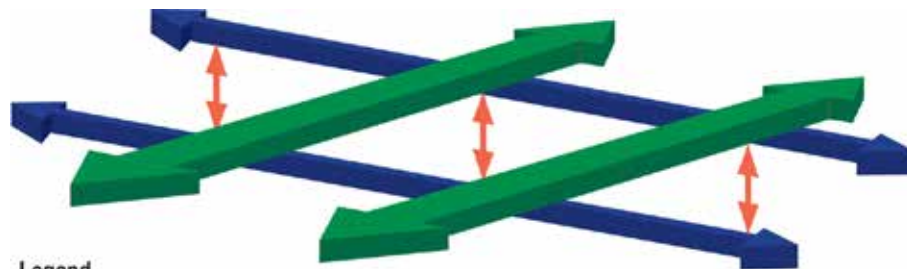
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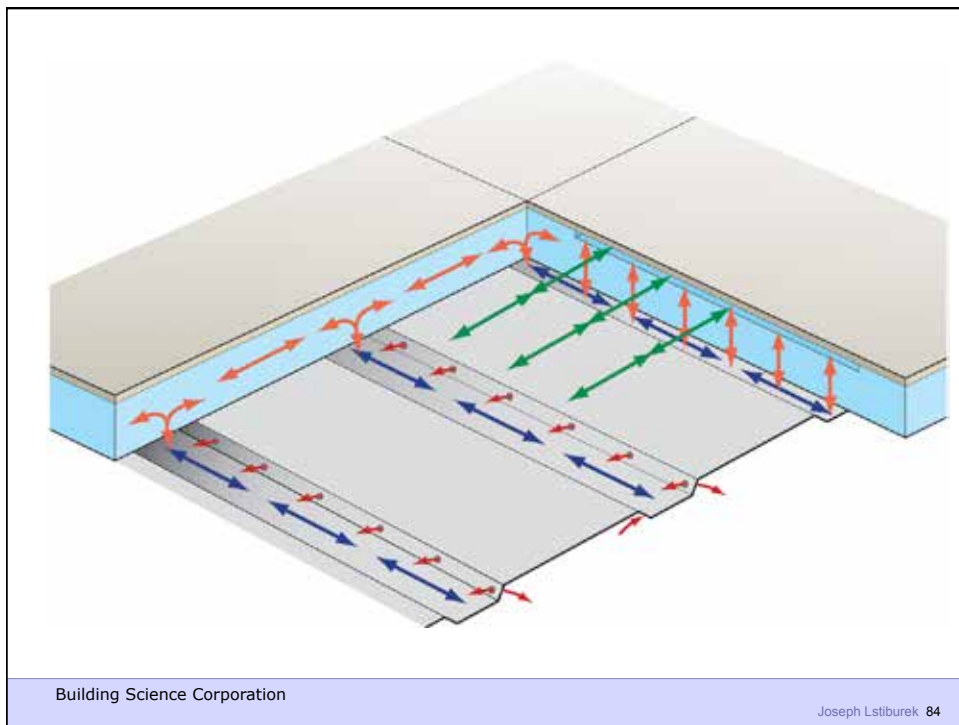
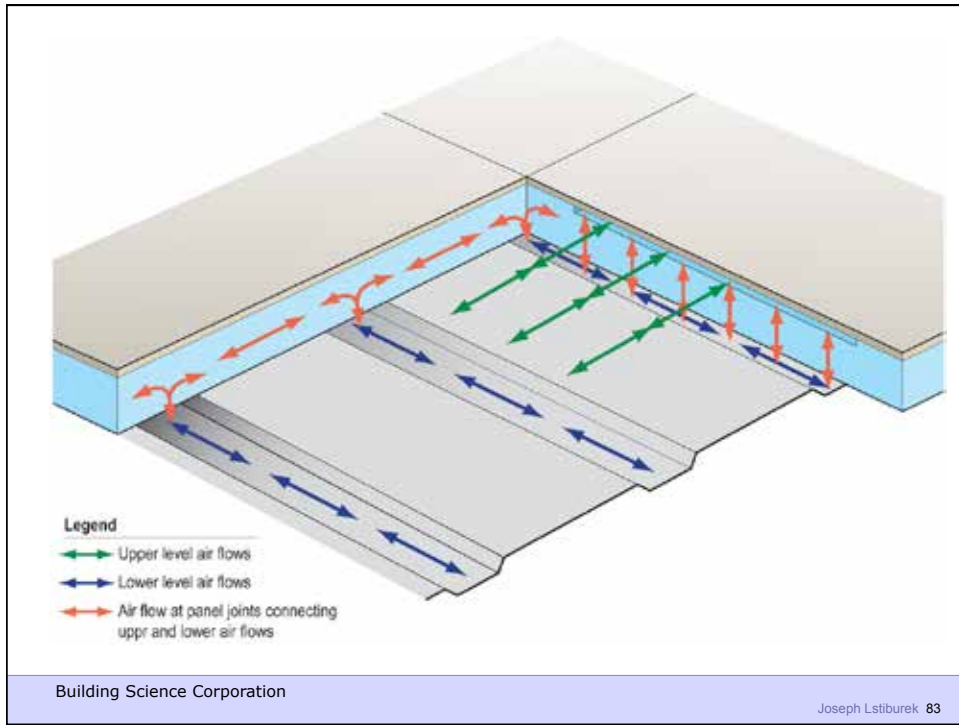


Legend

- ← → Upper level air flows
- ← → Lower level air flows
- ↕ Air flow at panel joints

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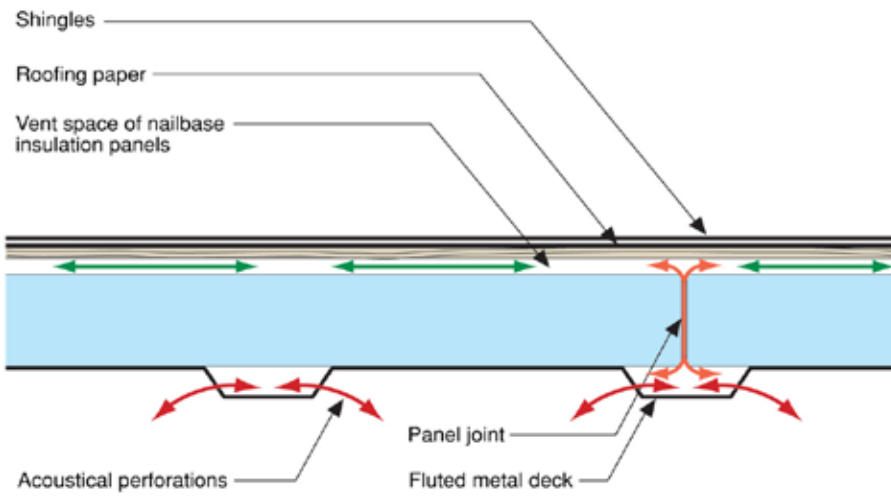
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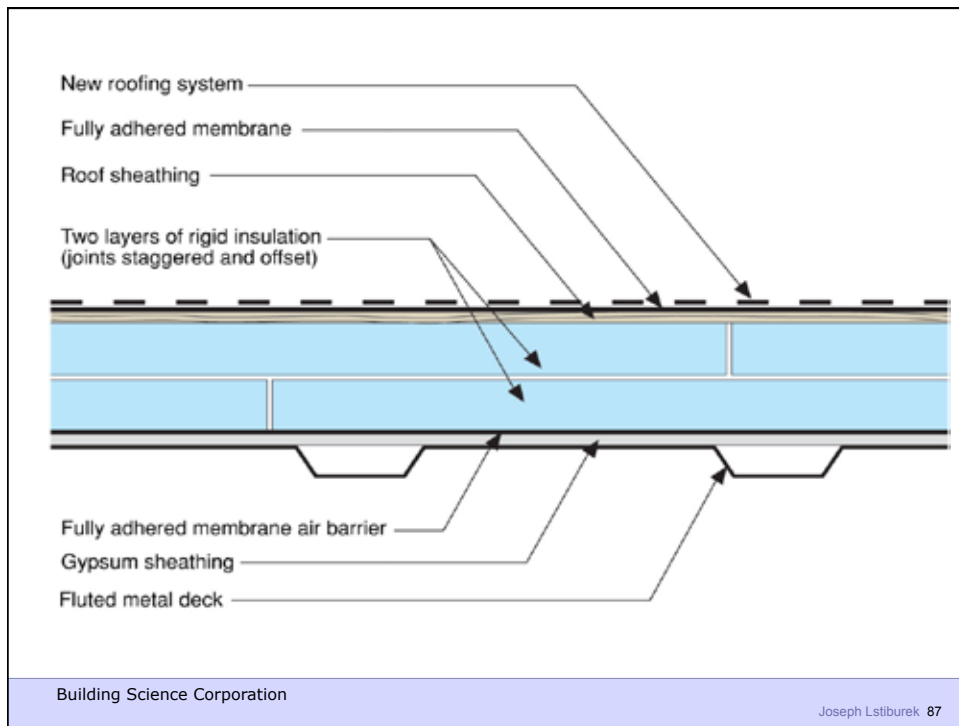
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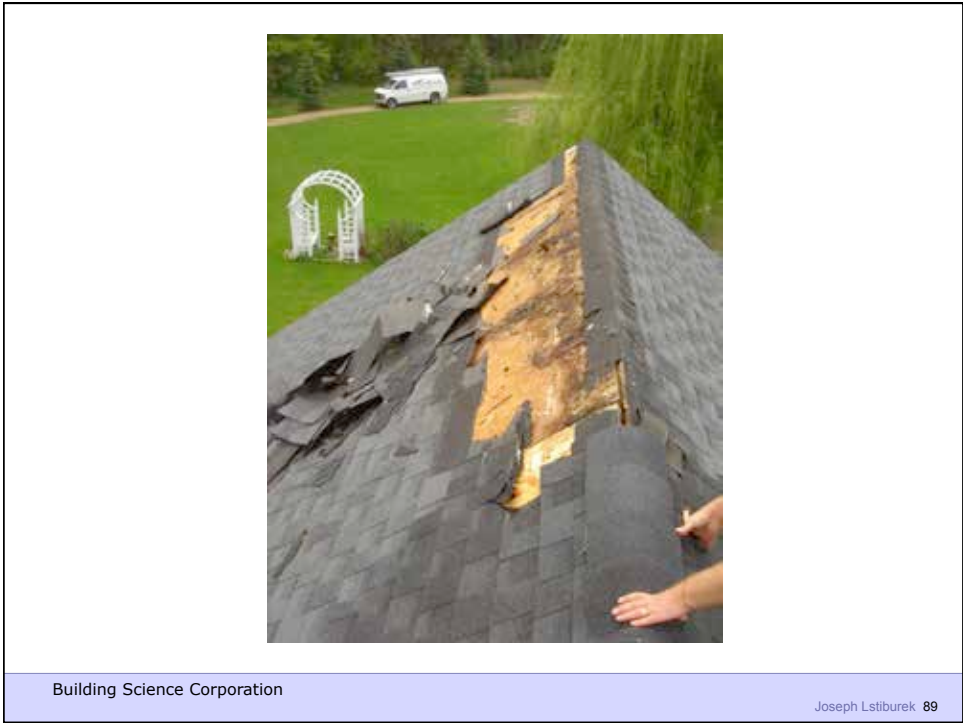
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Step 1
• Remove strip of OSB from each side of ridge
• Remove 1/2" of OSB from each side of ridge

Step 2
• Create air seal with strip of vapor open membrane (open seams)
• Vapor open membrane should extend to OSB with acrylic caulk sealant
• Heat vapor open membrane sheet in place with metal stripping
• Vapor open membrane sheet sealed to OSB with acrylic caulk sealant
• Metal strip capped over top of vapor open membrane sheet making an airtight seal
• Continuous bond of sealed between OSB and vapor open membrane sheet

Step 3
• Construct wood ridge vent with 2x2 furring
• 1/2" OSB
• 2x2 furring @ 12" o.c.

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Joseph Lstiburek 101



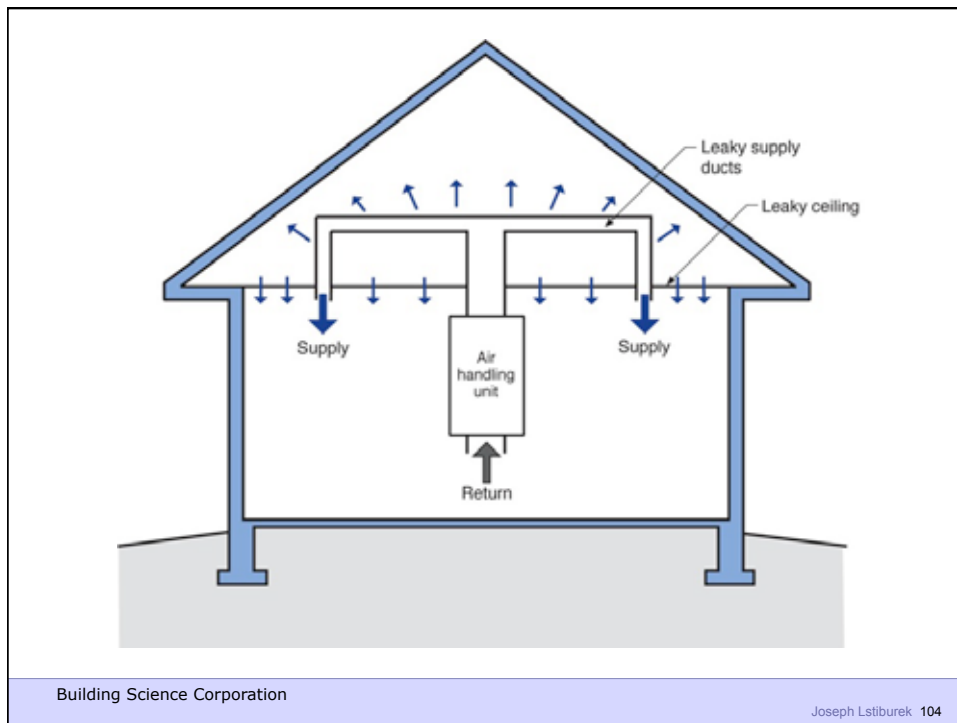
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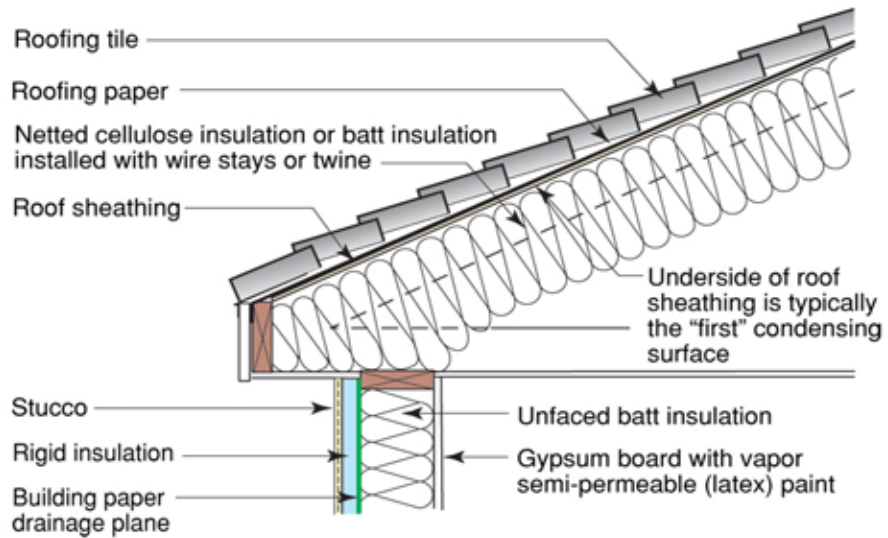
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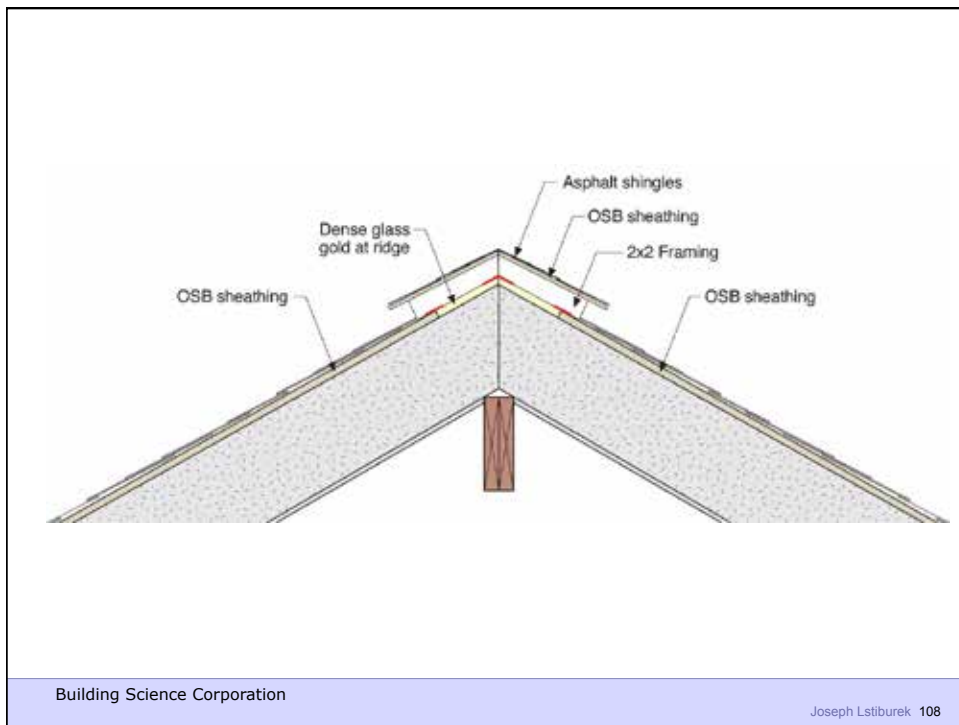
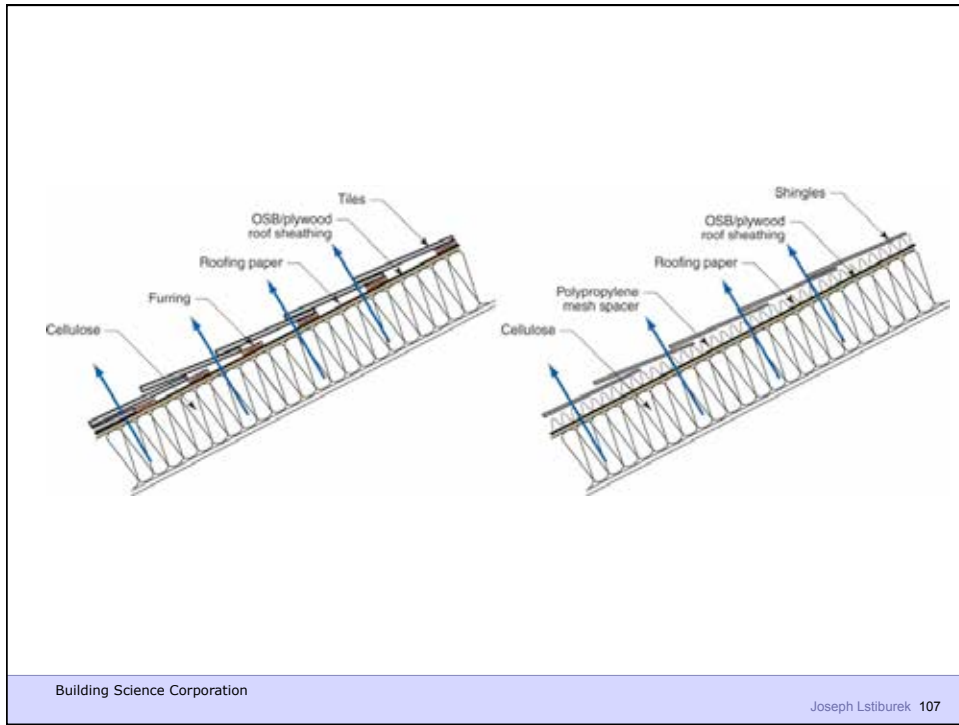
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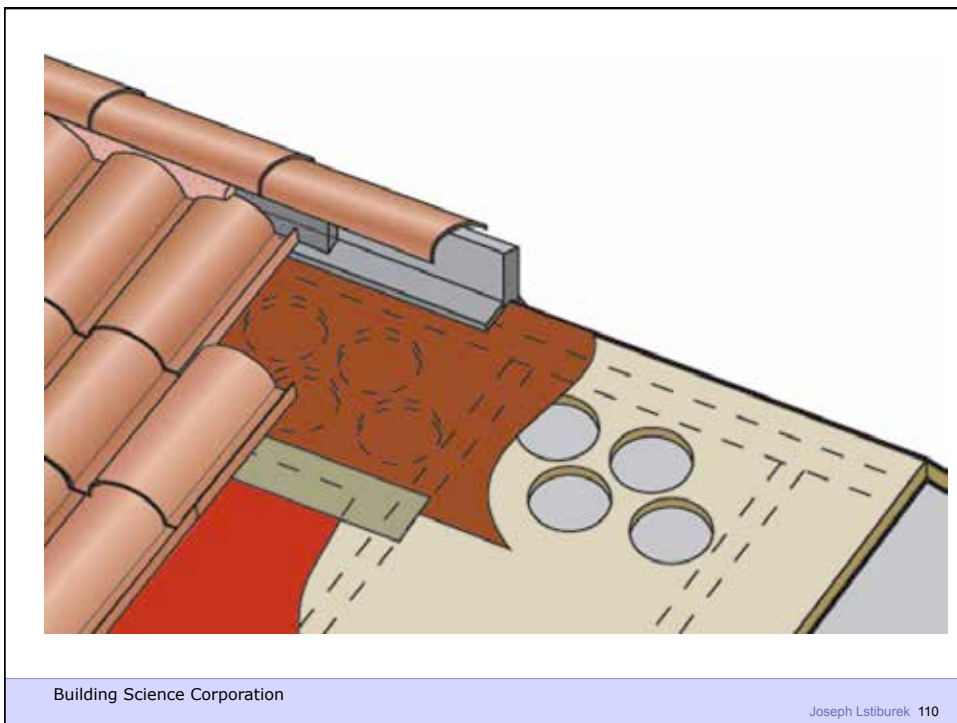
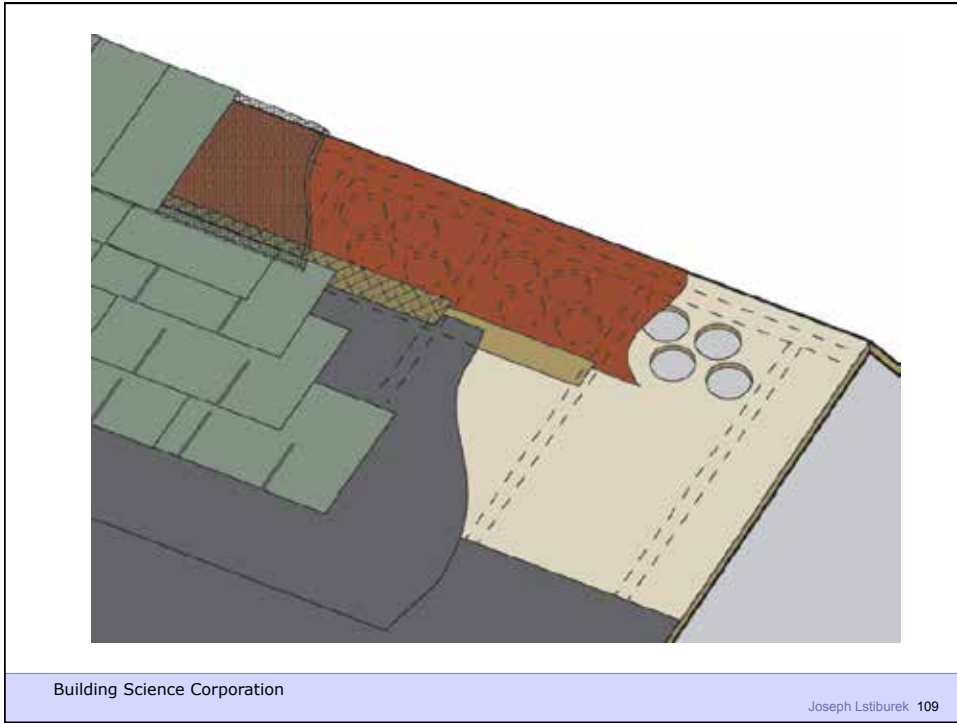
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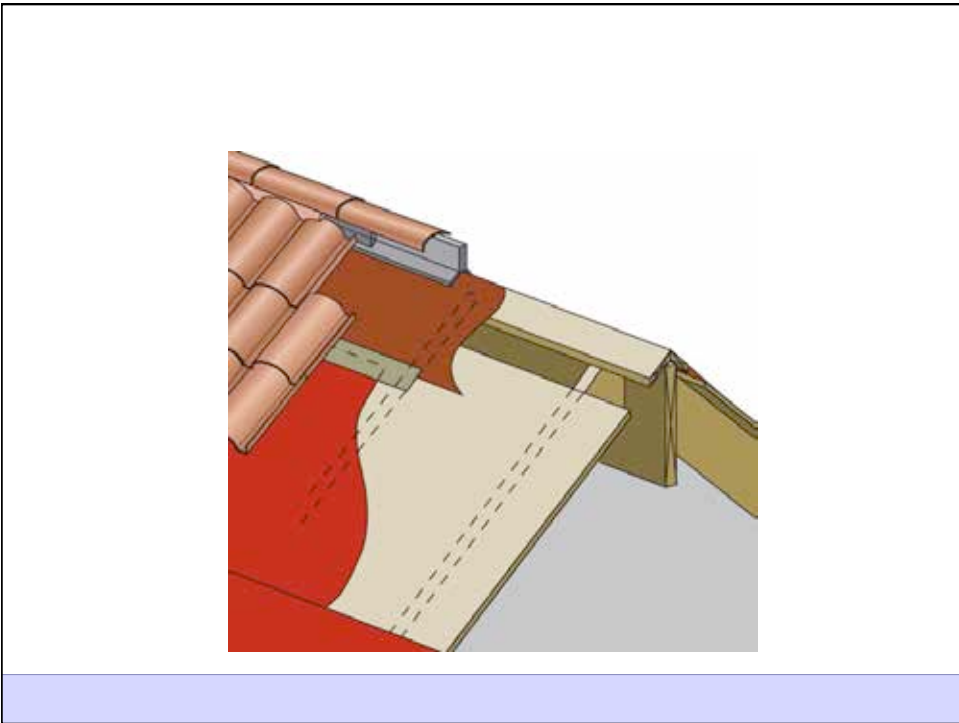
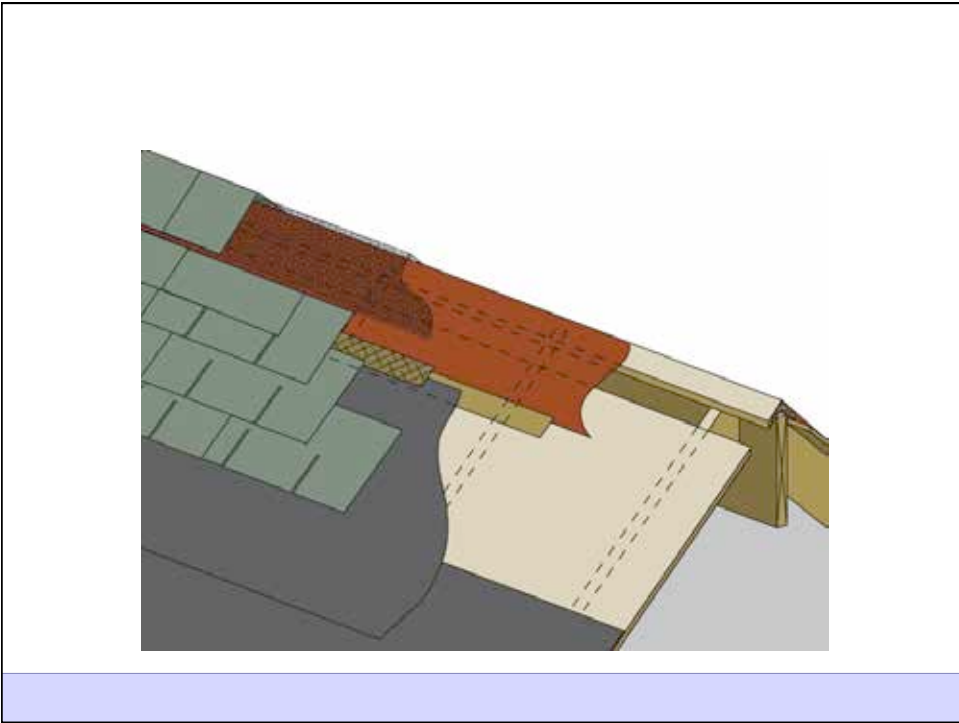


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Joseph Lstiburek 114



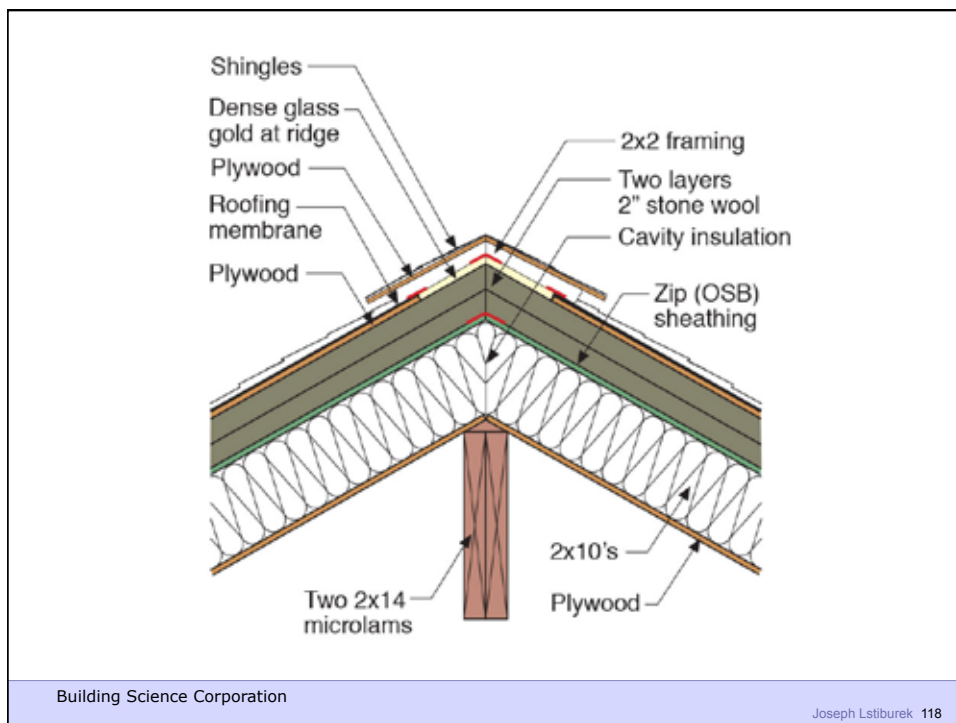
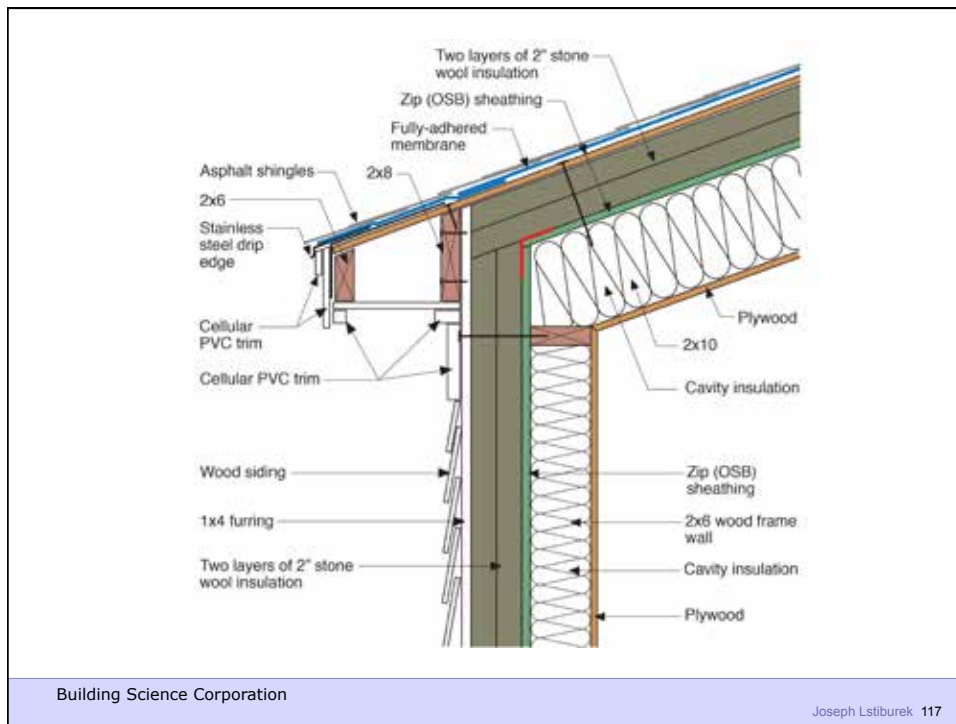
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Joseph Lstiburek 116





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Joseph Lstiburek 119



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Joseph Lstiburek 120



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Joseph Lstiburek 121



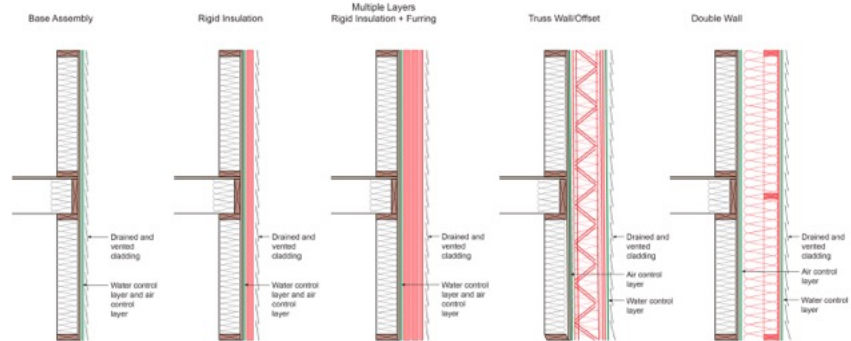
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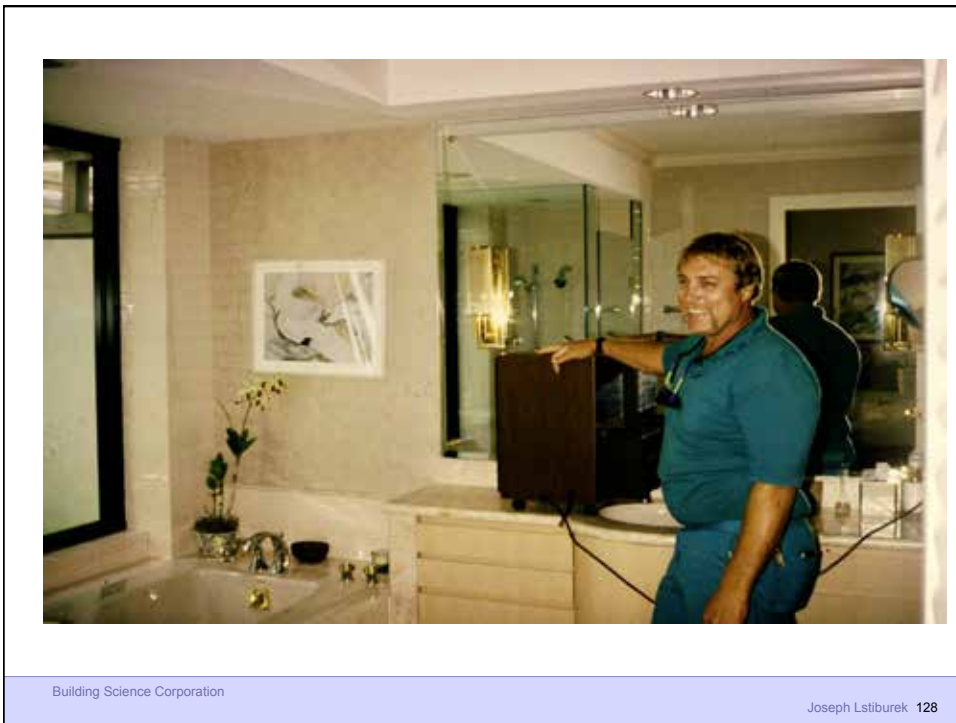
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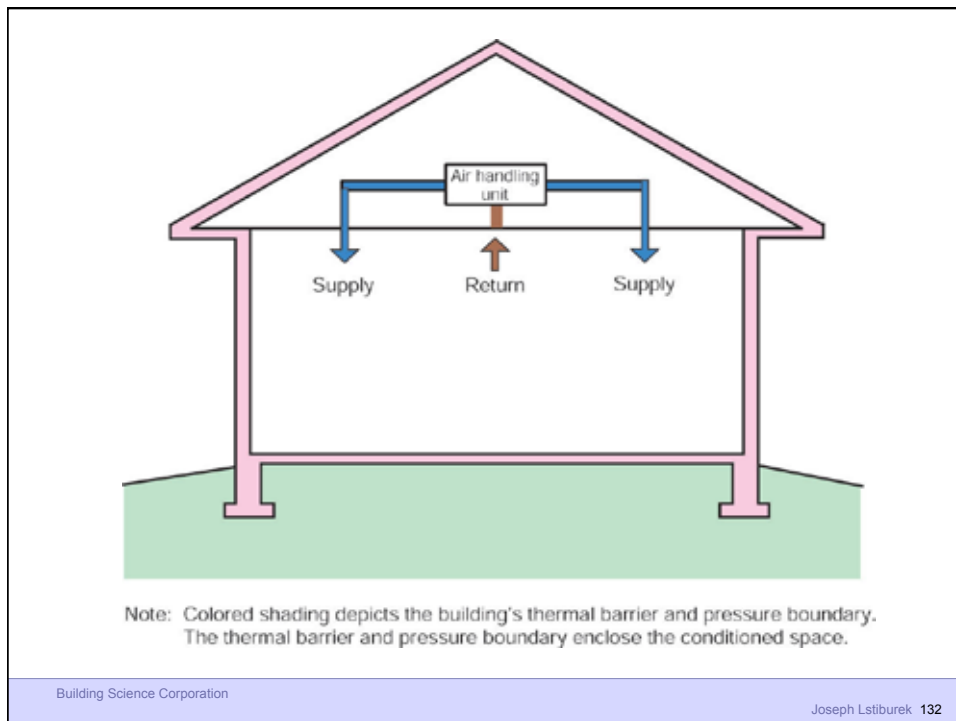
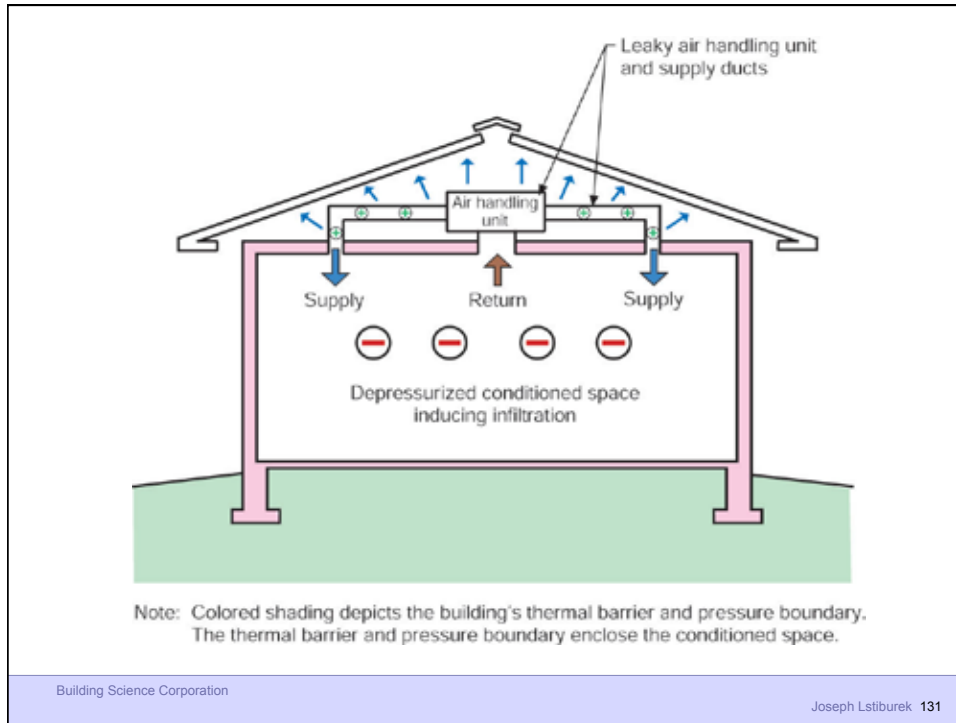
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It's OK to guess. Call it engineering judgement.
"a reasonable degree of engineering and scientific certainty"
Avoid "wag's"

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It's OK to guess. Call it engineering judgement.
"a reasonable degree of engineering and scientific certainty"
Avoid "wag's"
Use "swag's"

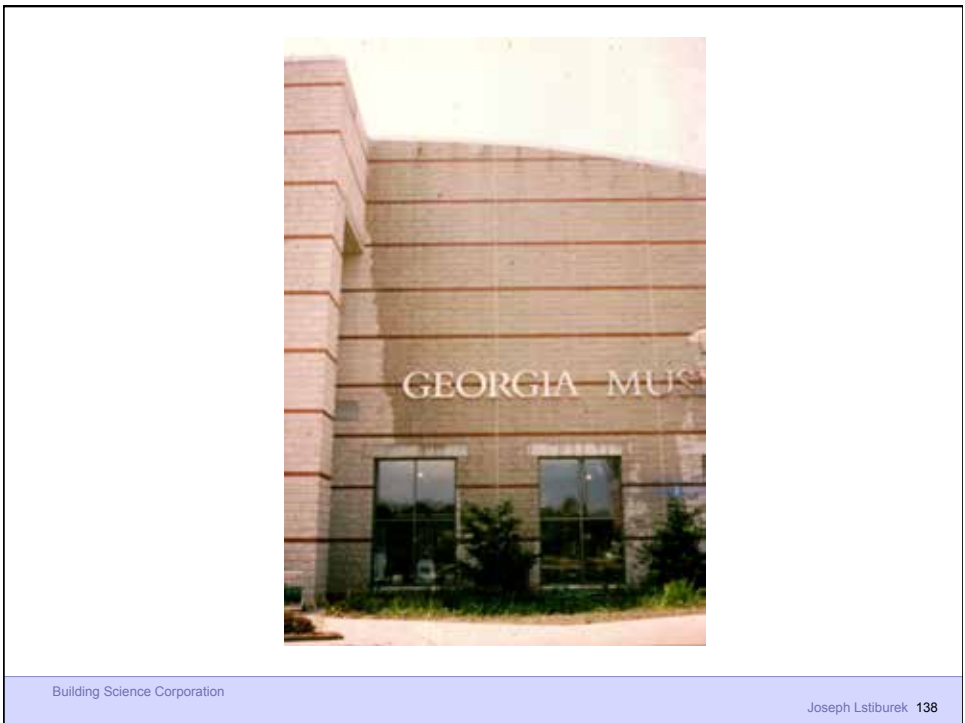
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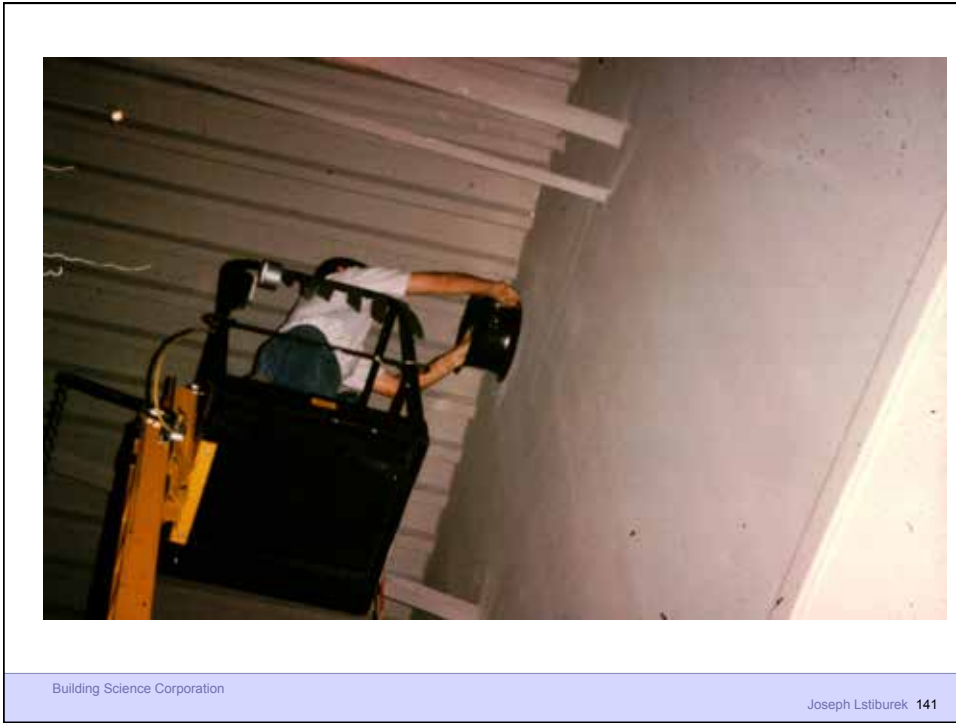
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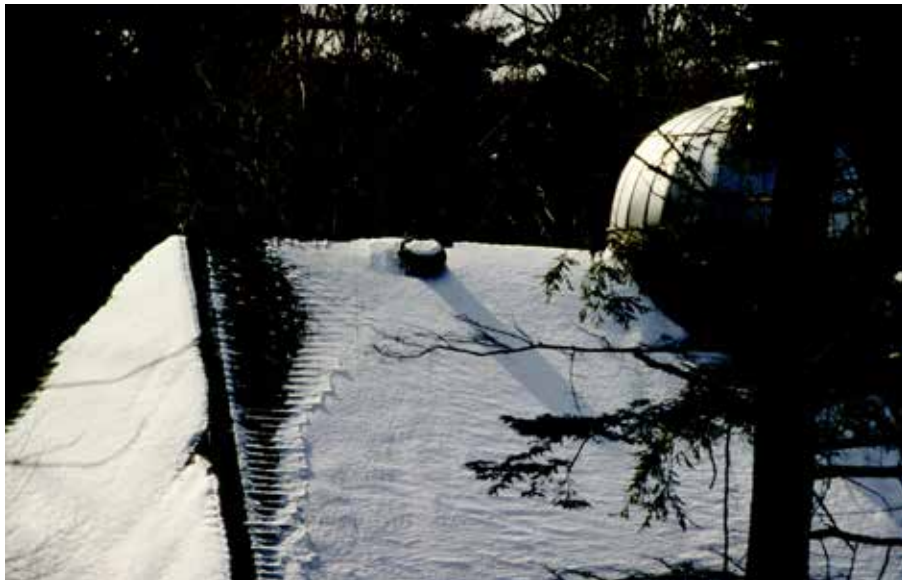
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