

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

Building Science

Adventures In Building Science

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Definition of a Problem

People

Pollutant (hot, wet, UV, ozone)

Path

Pressure



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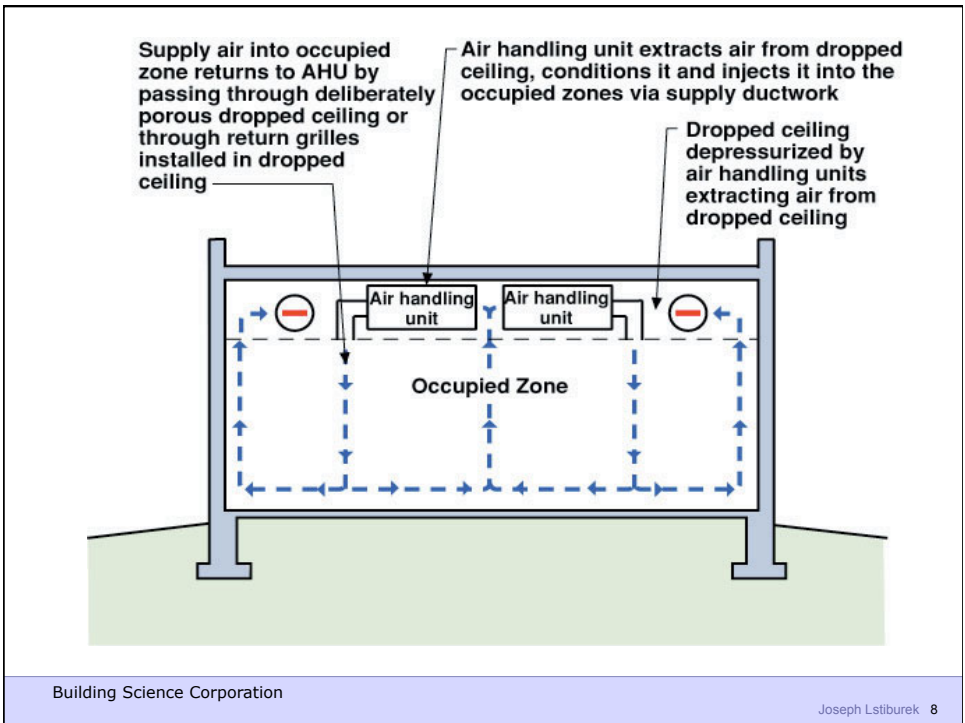
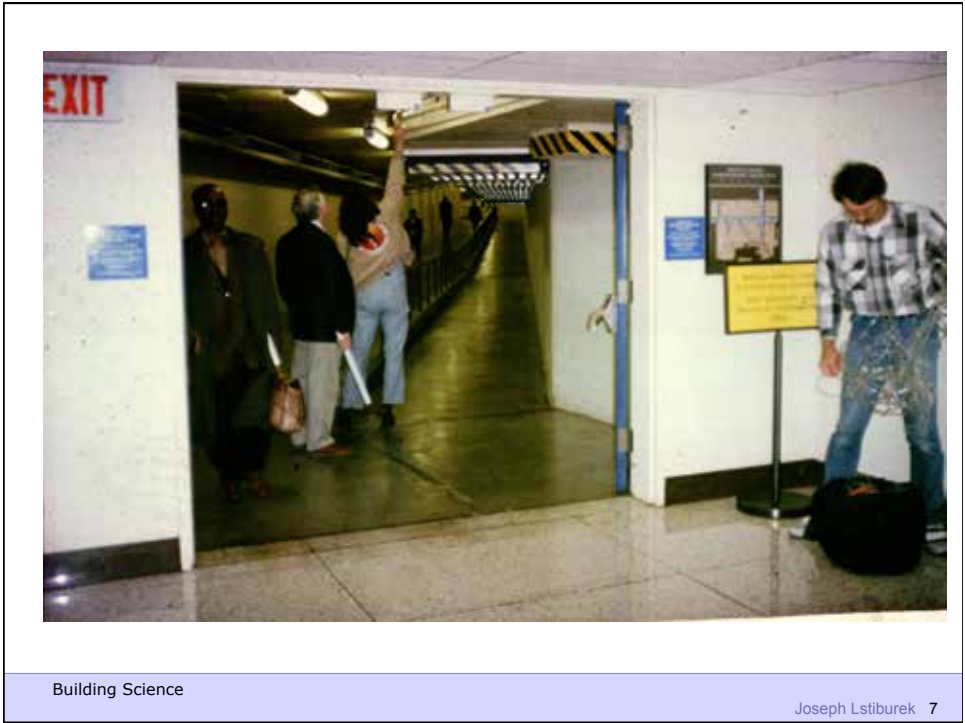
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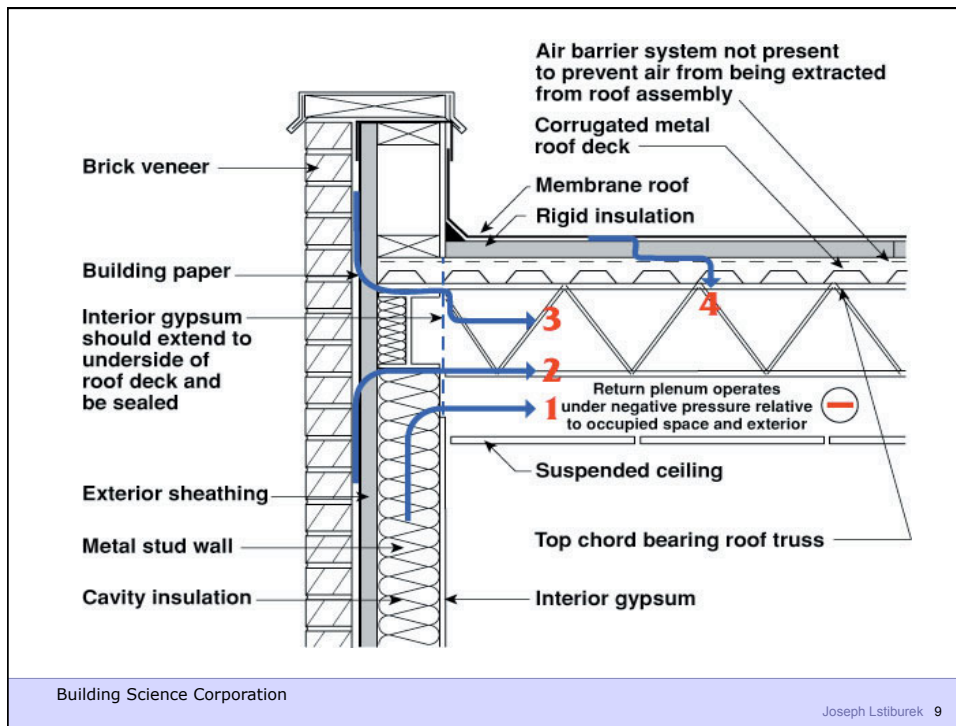
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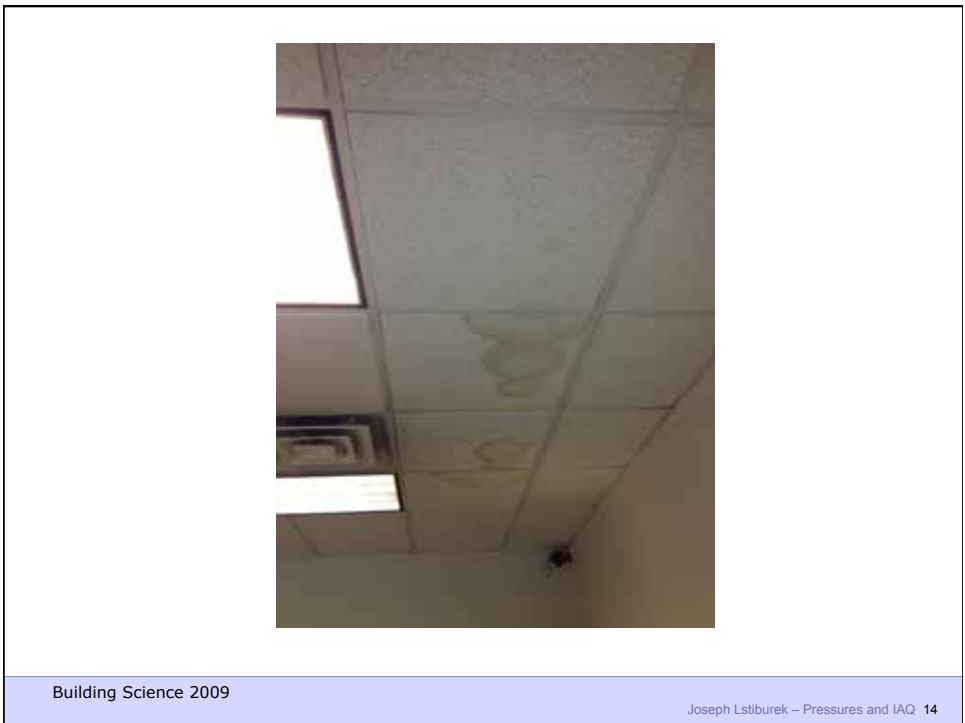
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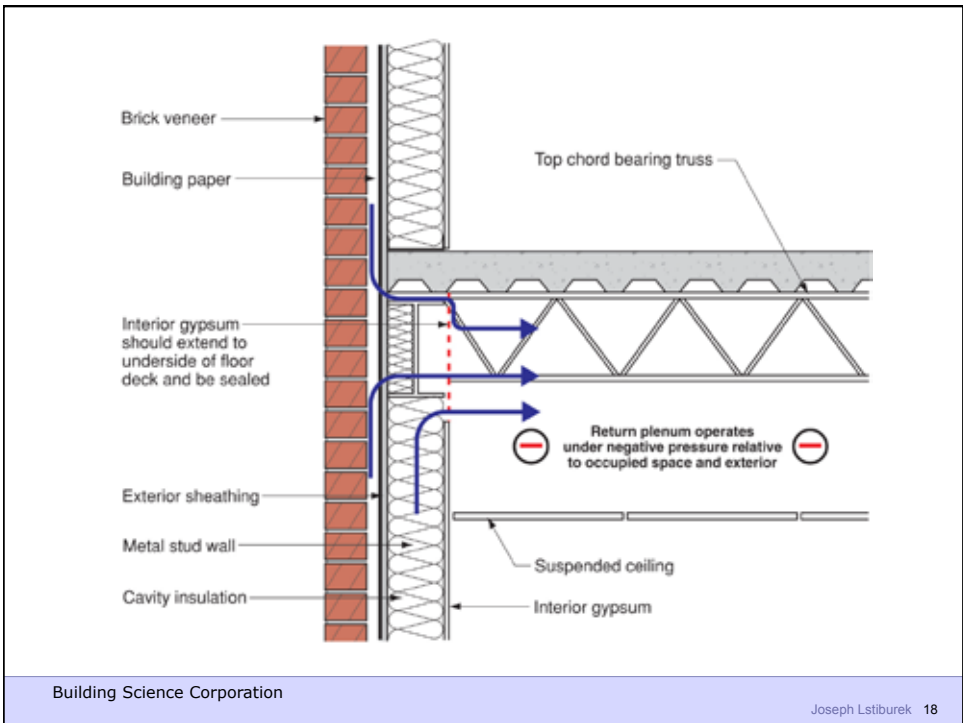
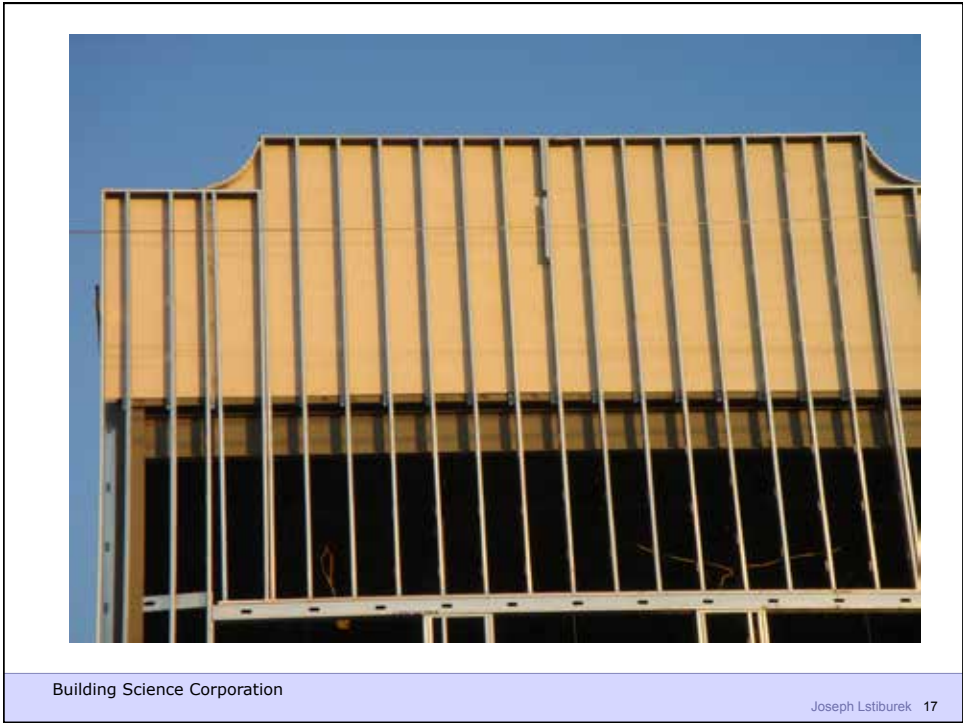
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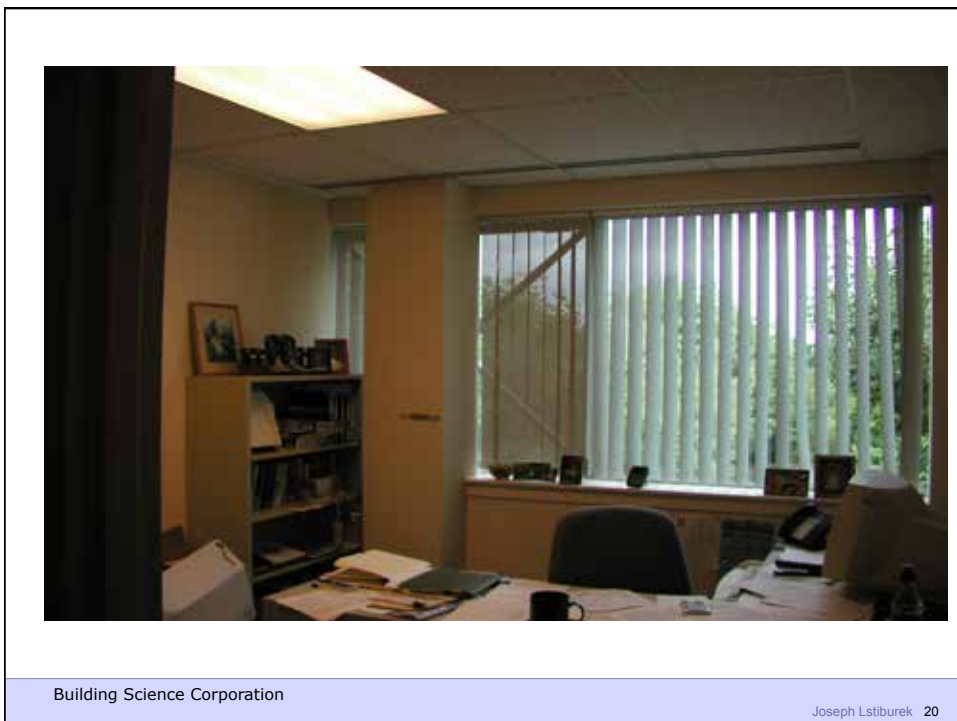
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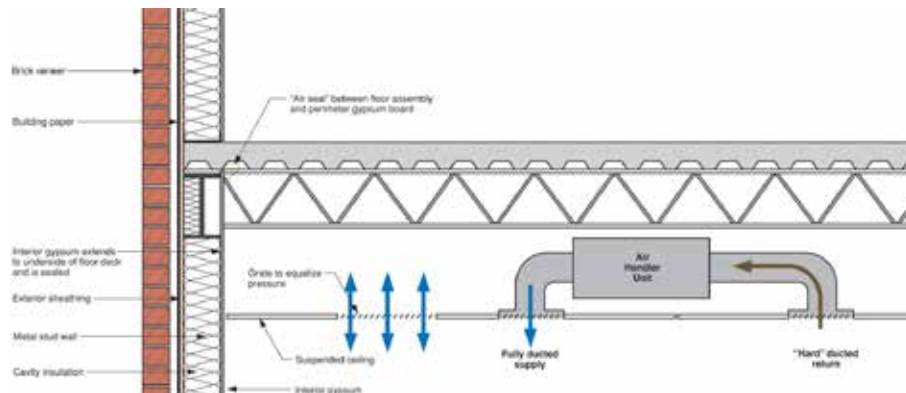


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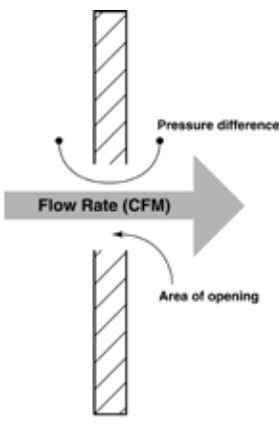
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Air Flow

- Air flow depends on size of hole
- Air flow depends on pressure difference
 $Flow = Area \times \sqrt{\Delta P} \times Coefficient$
- Air flows from higher pressure to lower pressure

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Figure 2.11
Three Dimensional Multi-Layer
Multi-Cell Analogue

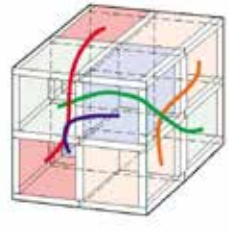
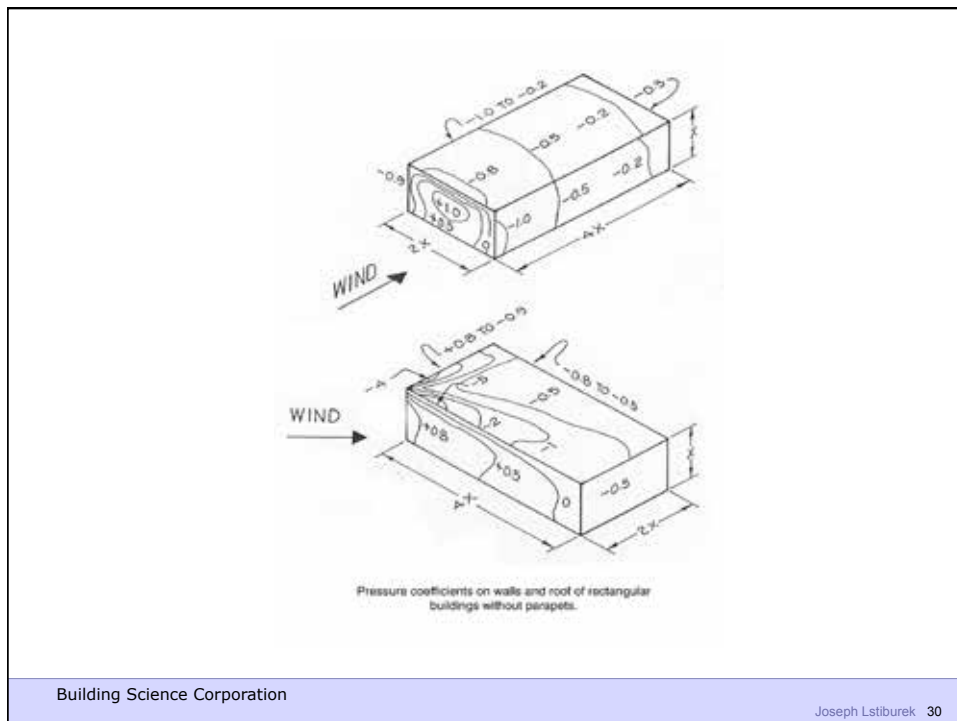
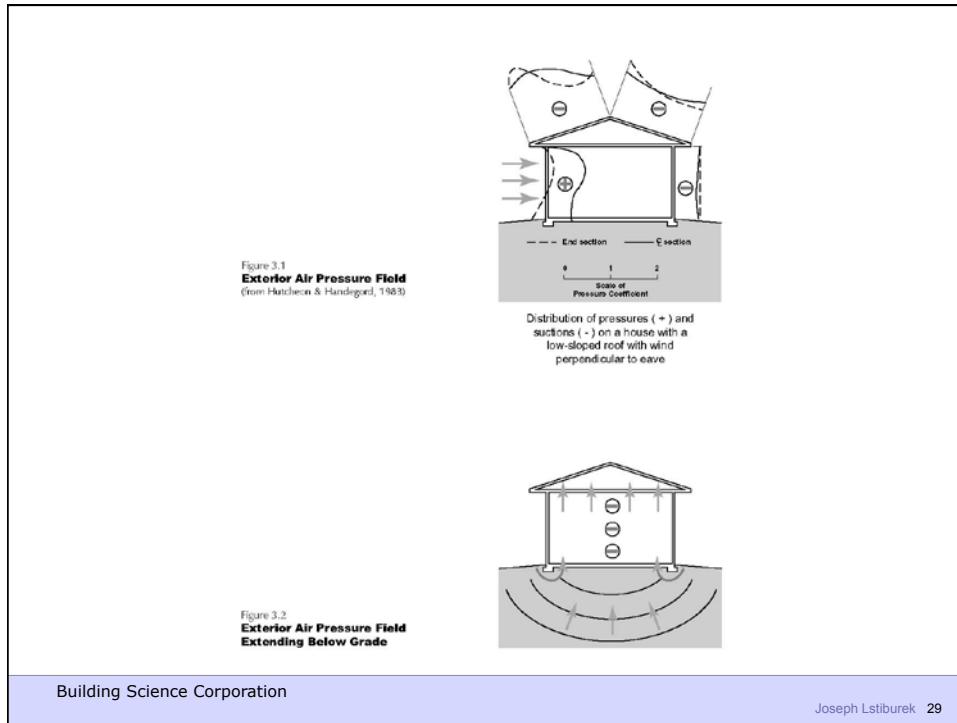


Figure 2.12
Three Dimensional Multi-Layer
Multi-Cell Non-Contiguous
Analogue

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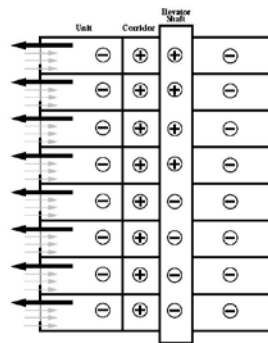


Figure 3.3
Interior Air Pressure Field

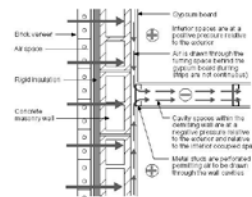


Figure 3.4
Interstitial Air Pressure Field

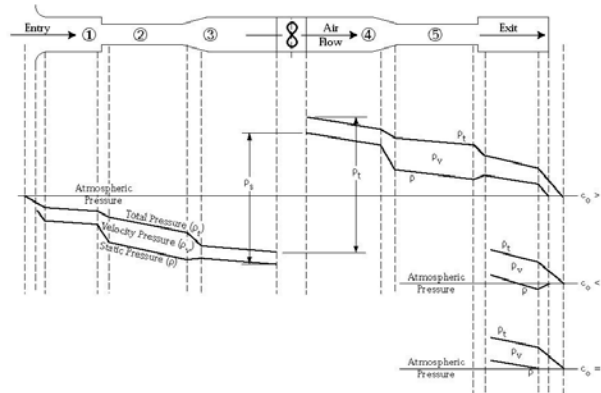
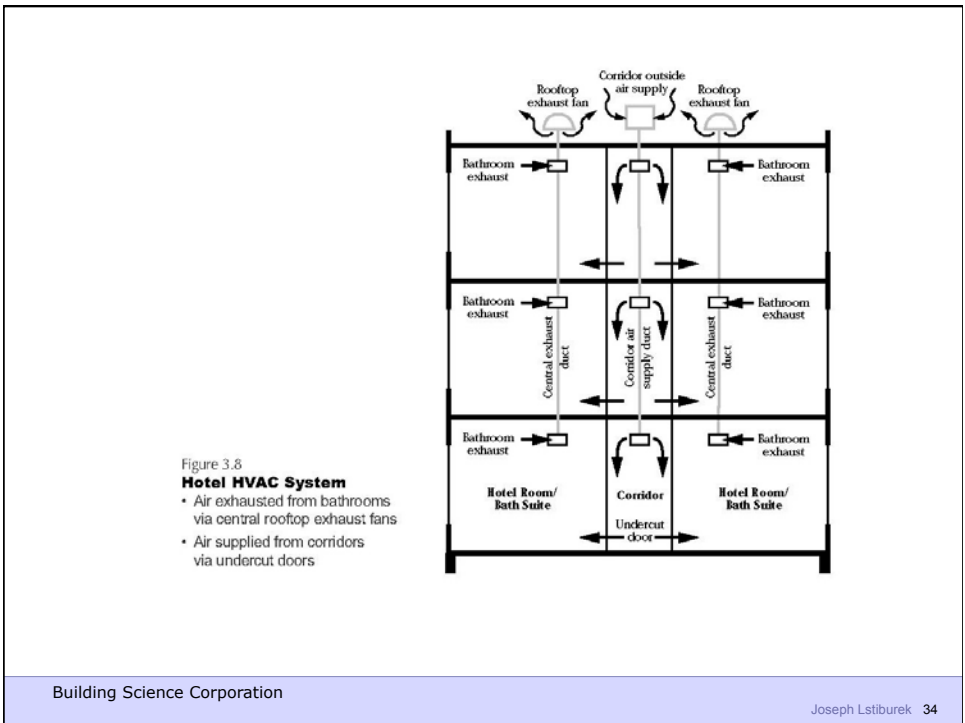
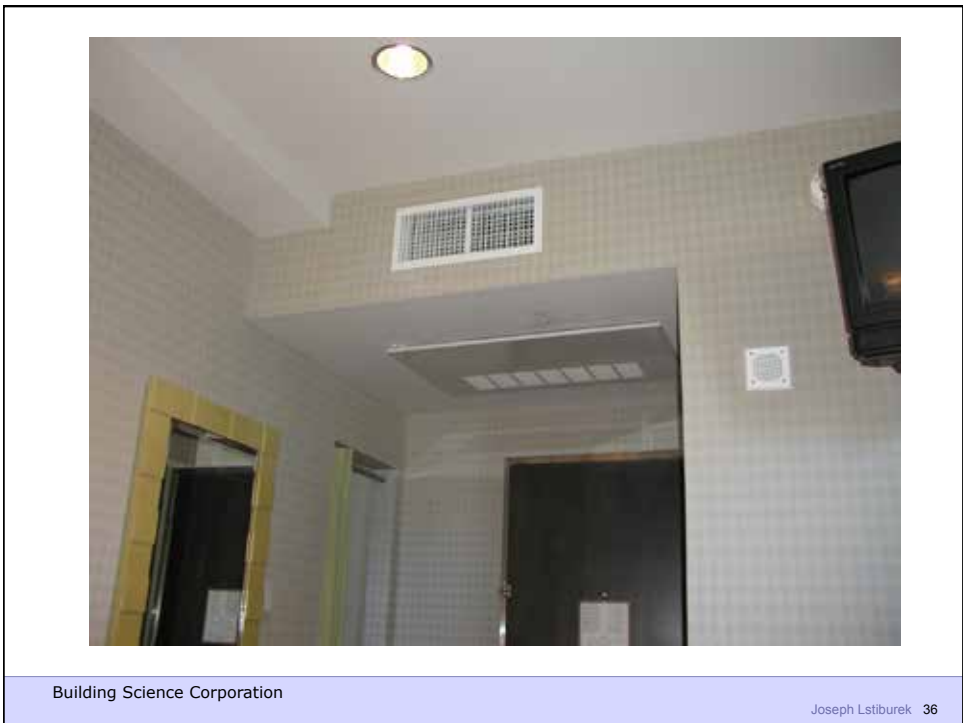
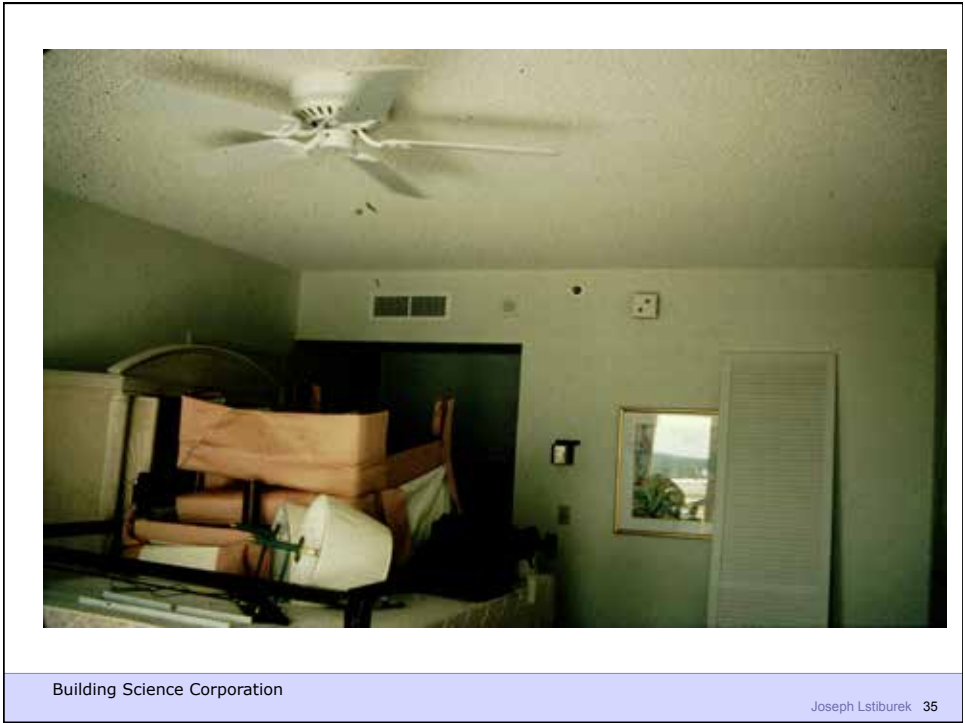
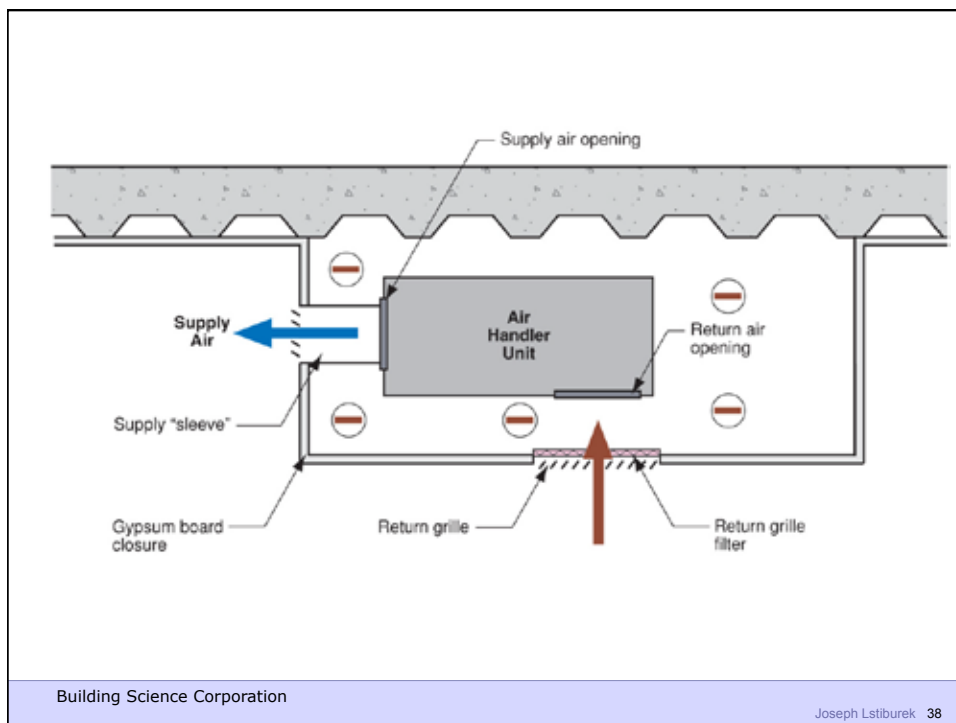
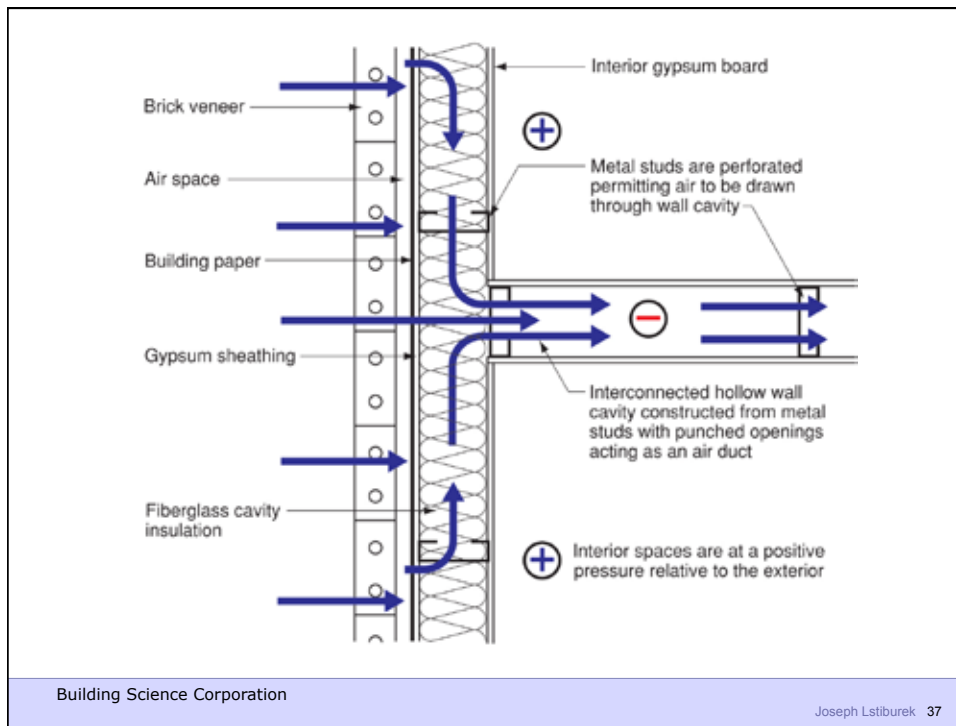
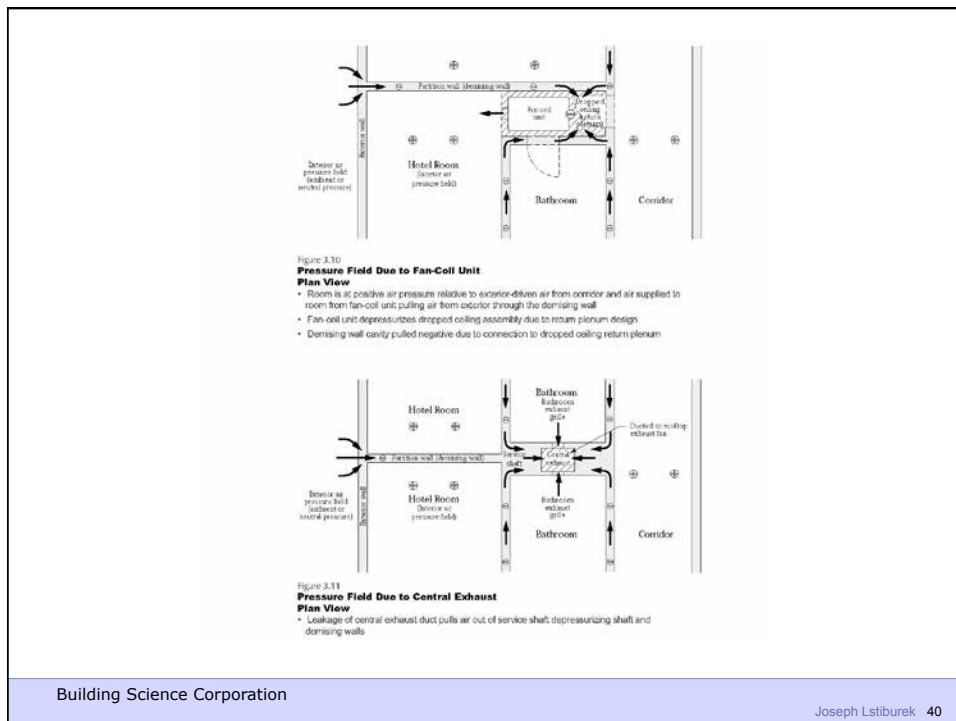
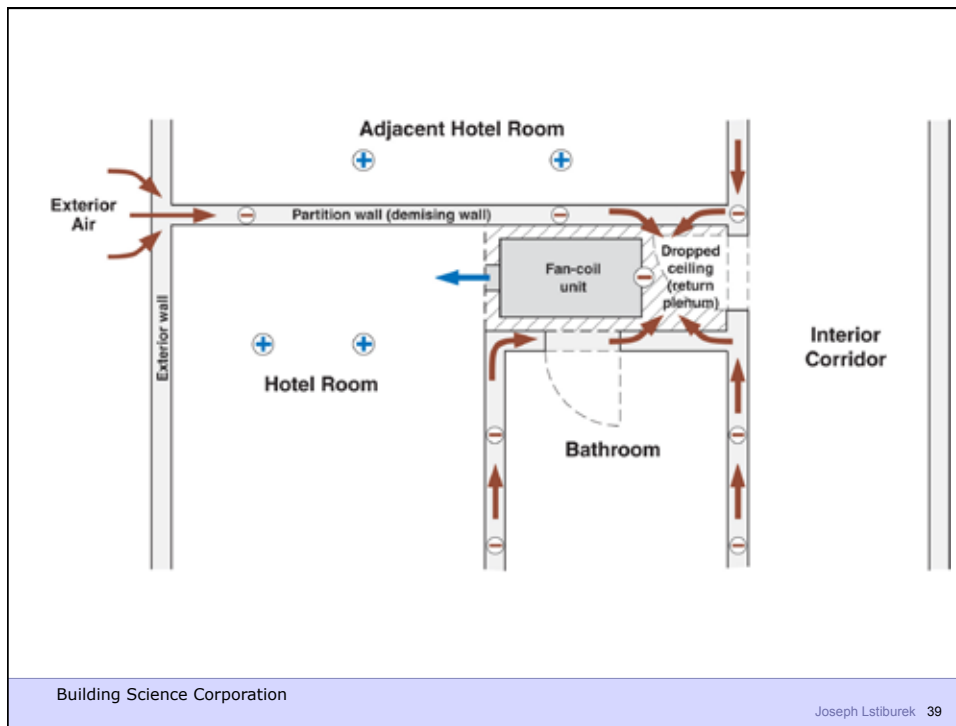


Figure 3.5
Air Conveyance System Air Pressure Field
(from Sauer & Howell, 1990)











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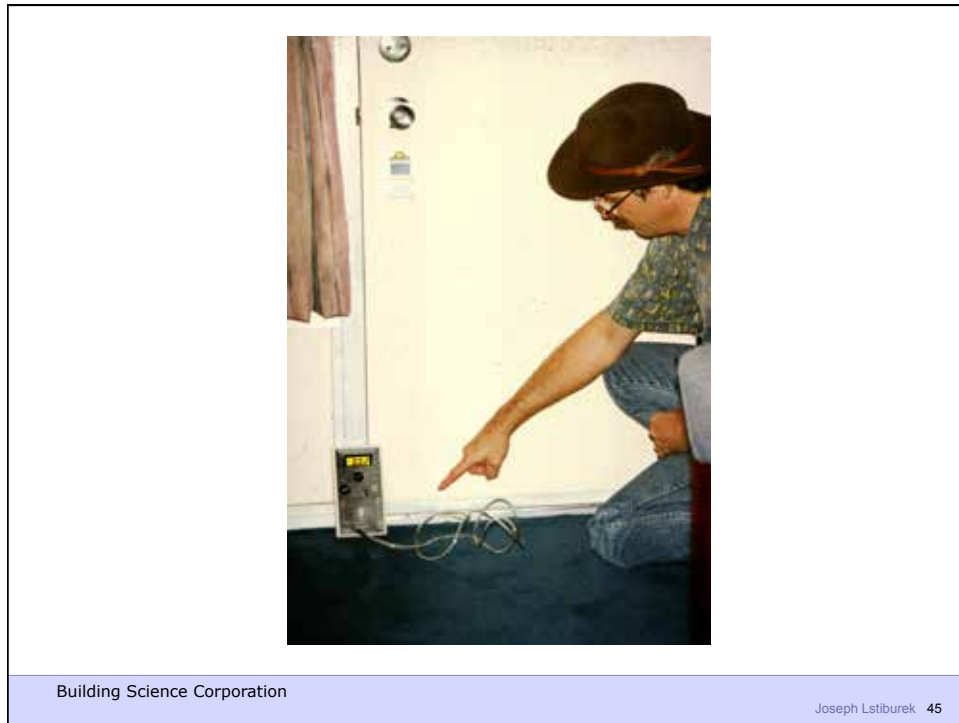
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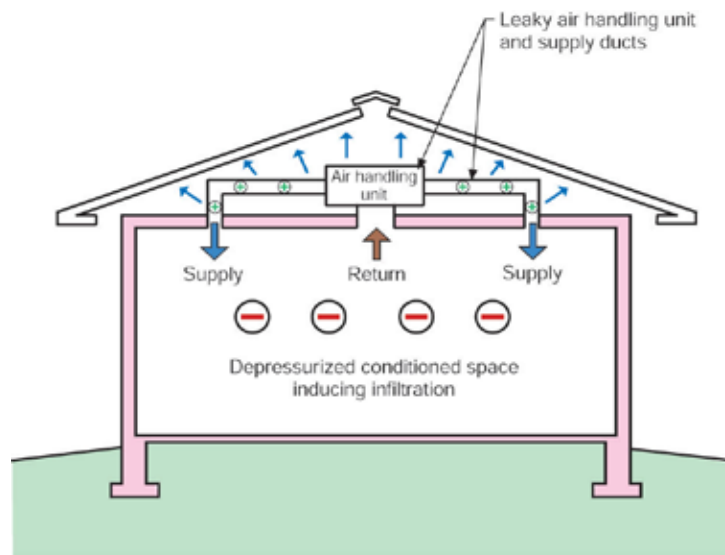
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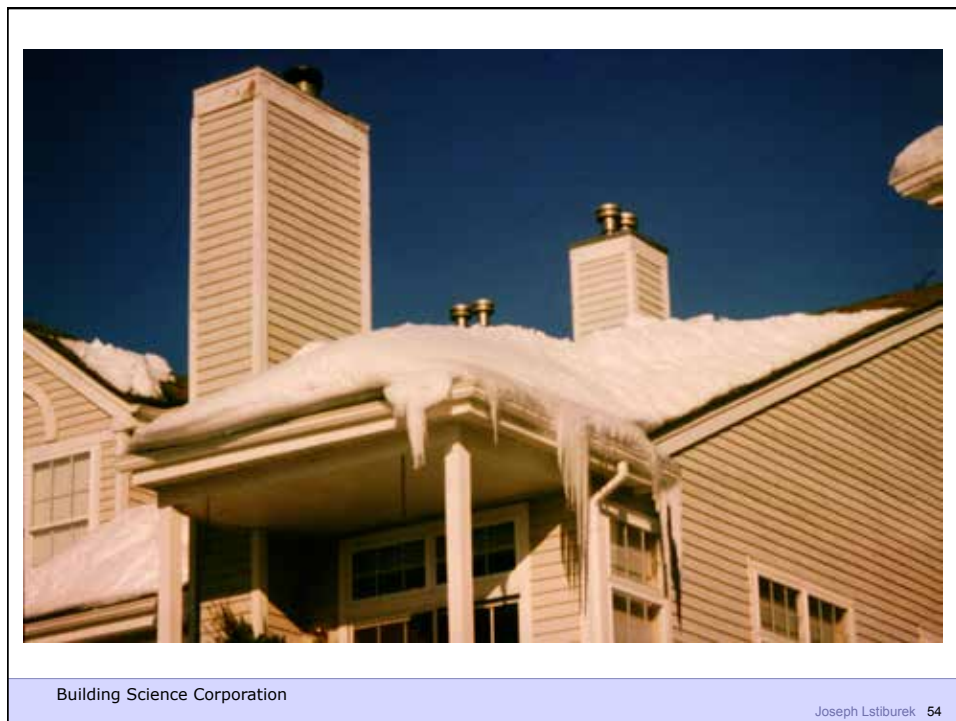
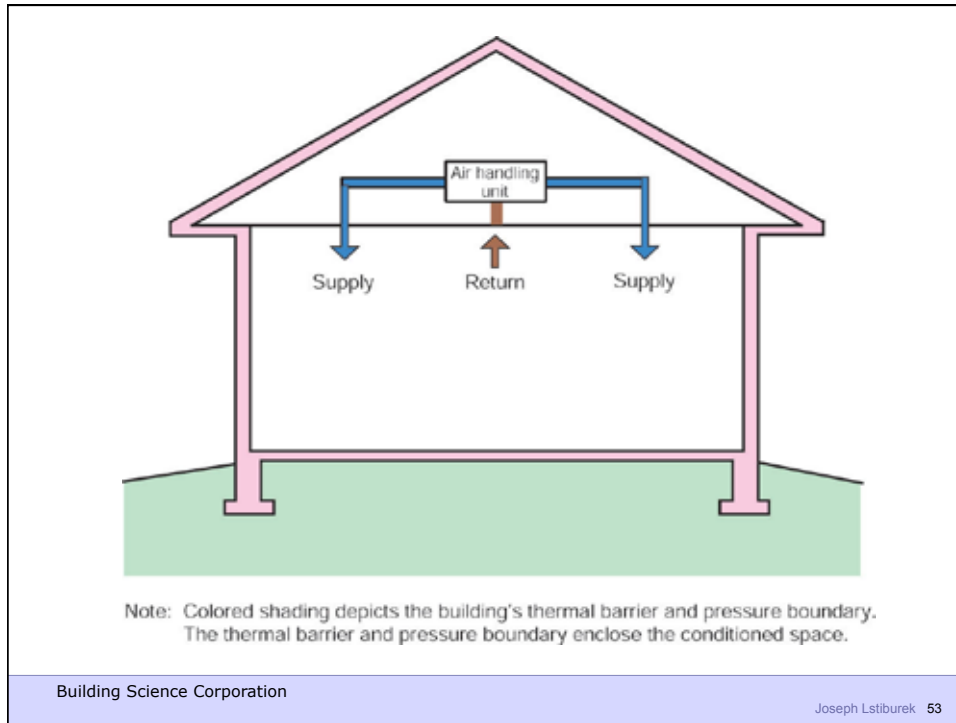
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Note: Colored shading depicts the building's thermal barrier and pressure boundary. The thermal barrier and pressure boundary enclose the conditioned space.

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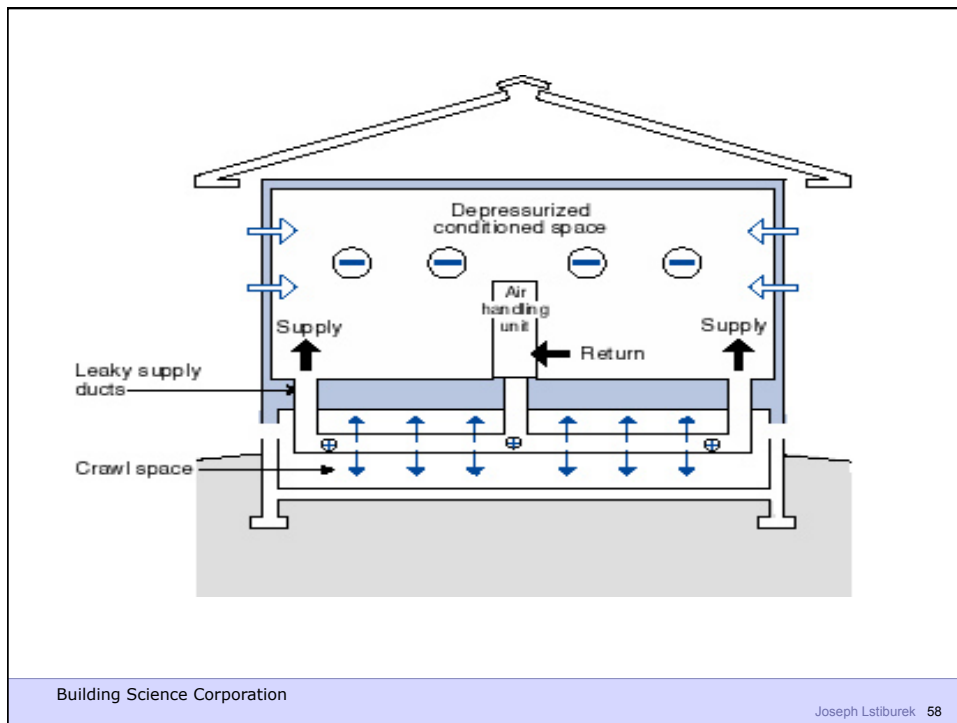
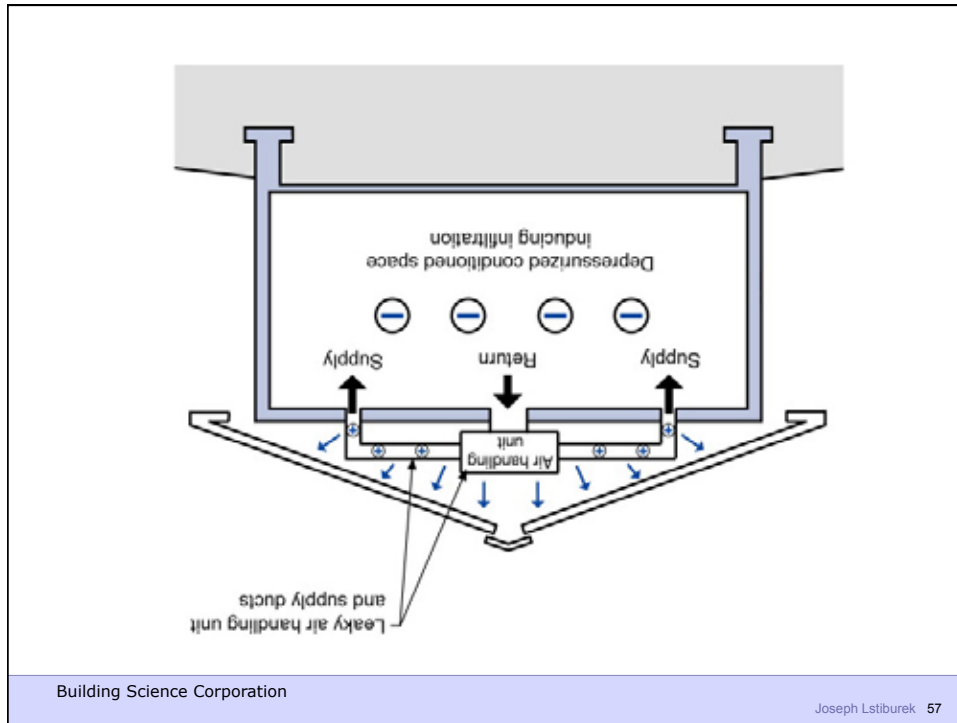
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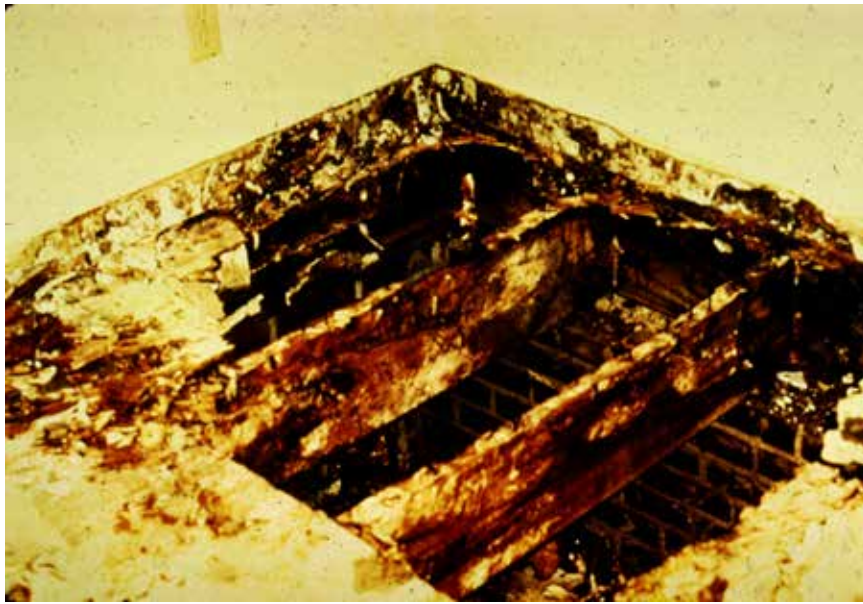
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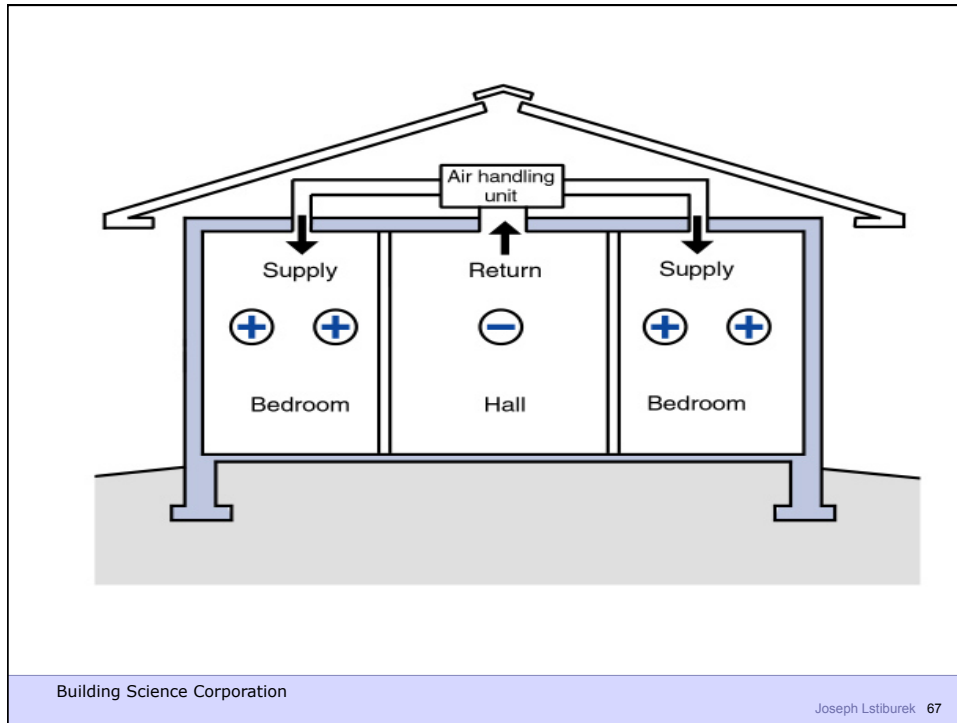
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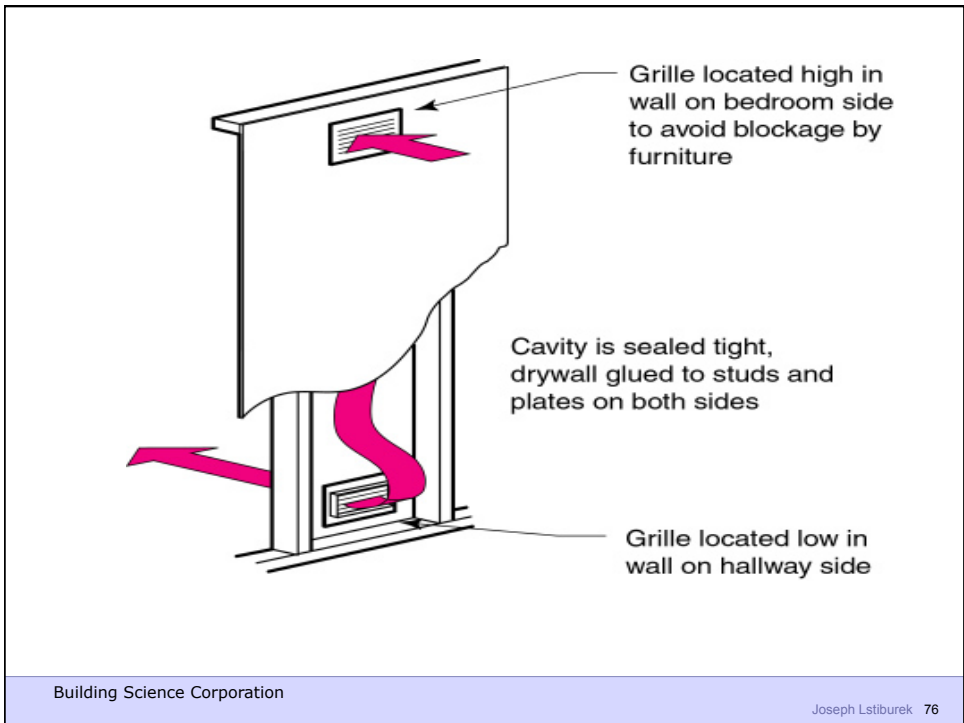
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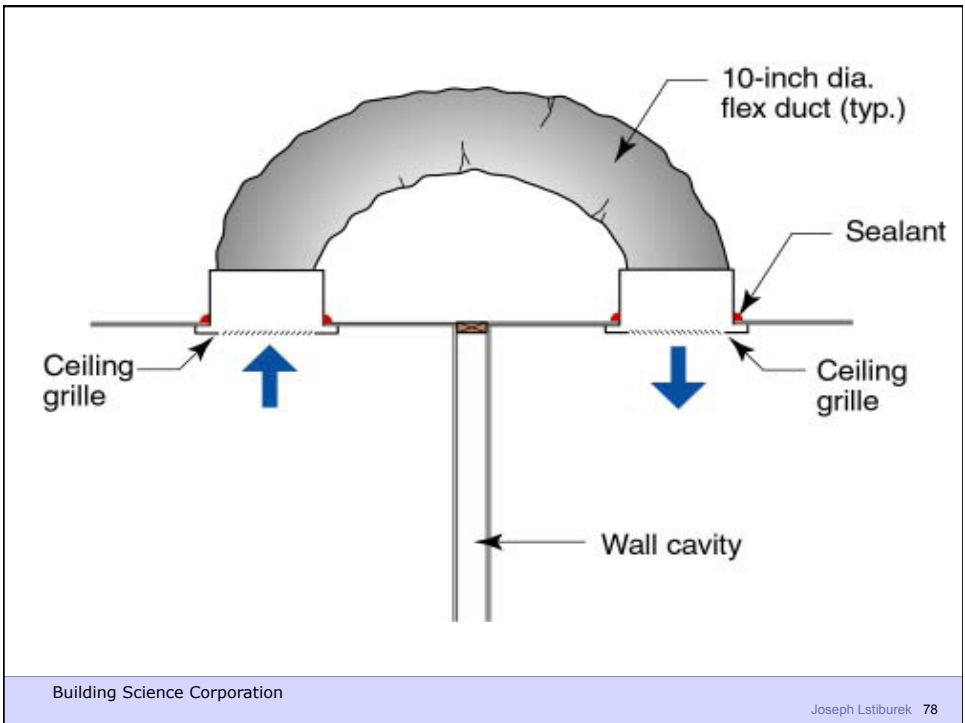


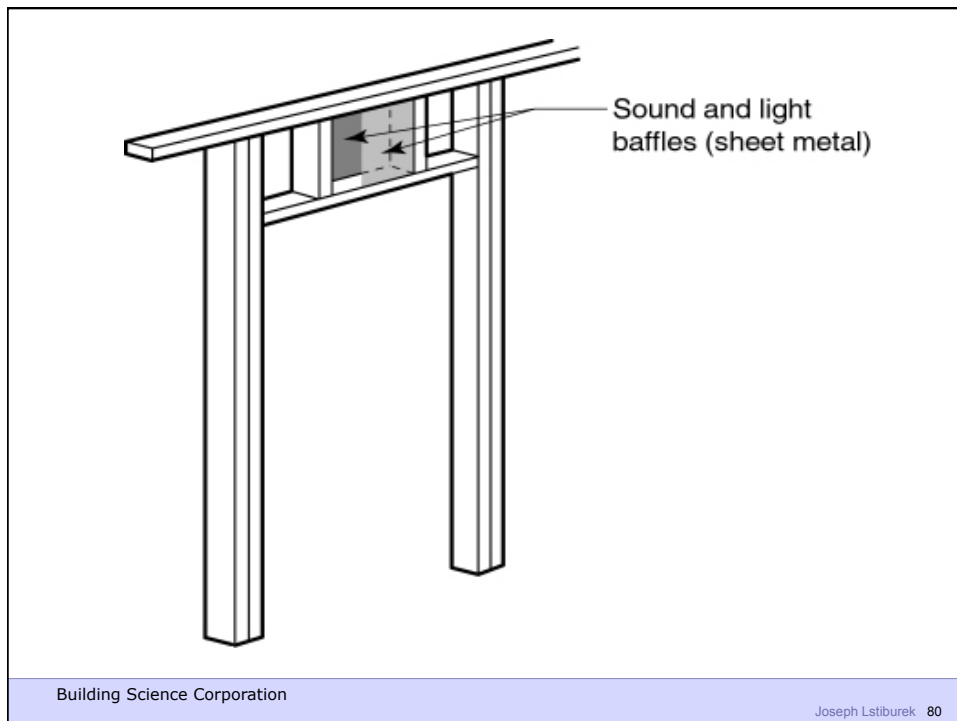
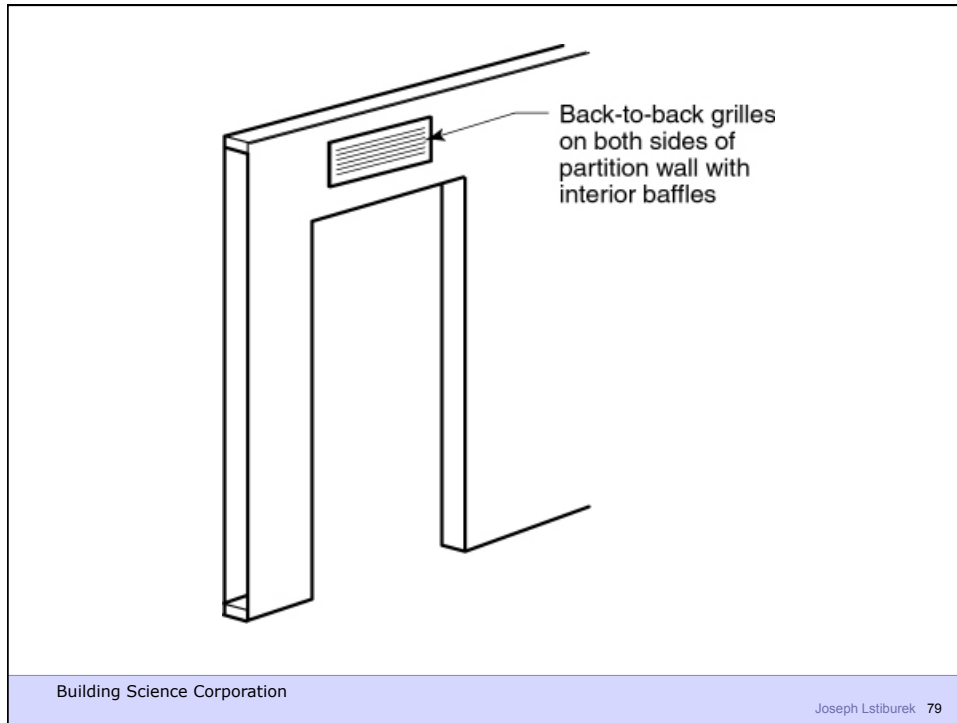
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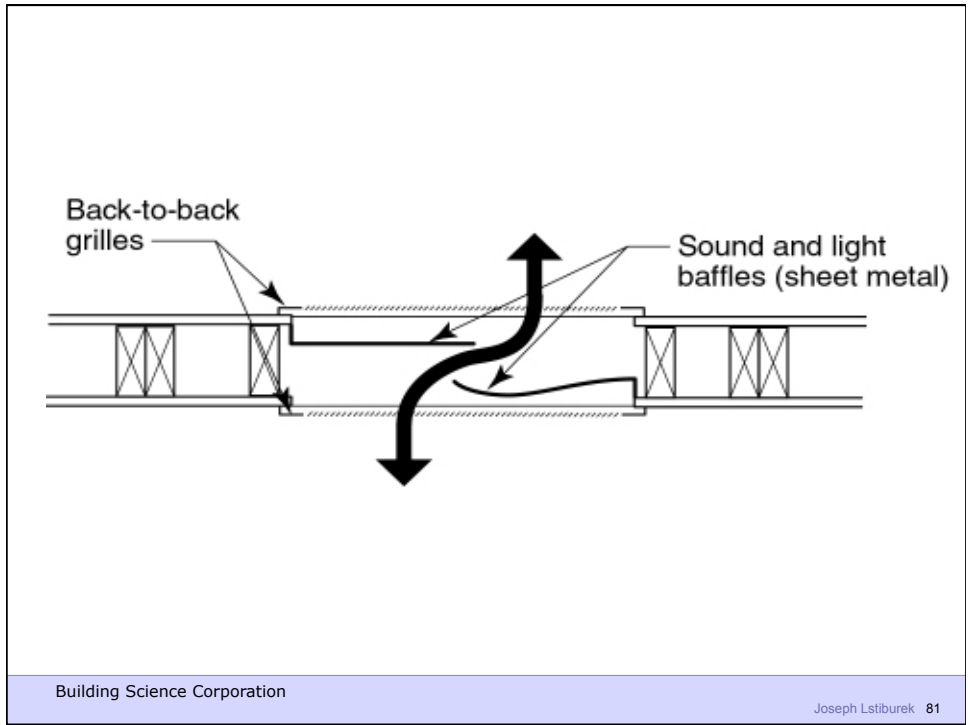
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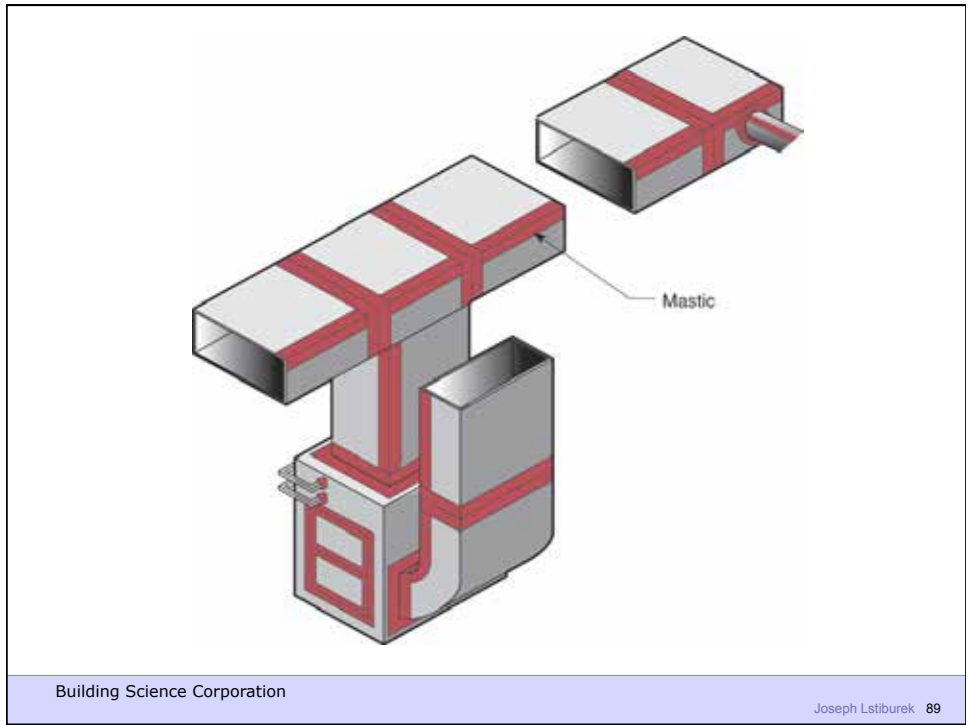
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