

The EntreArchitect Community ANNUAL METING

The Business Conference for Small Firm Entrepreneur Architects

Nashville, Tennessee · October 23 - 25, 2024

Gaylord Opryland Resort & Convention Center

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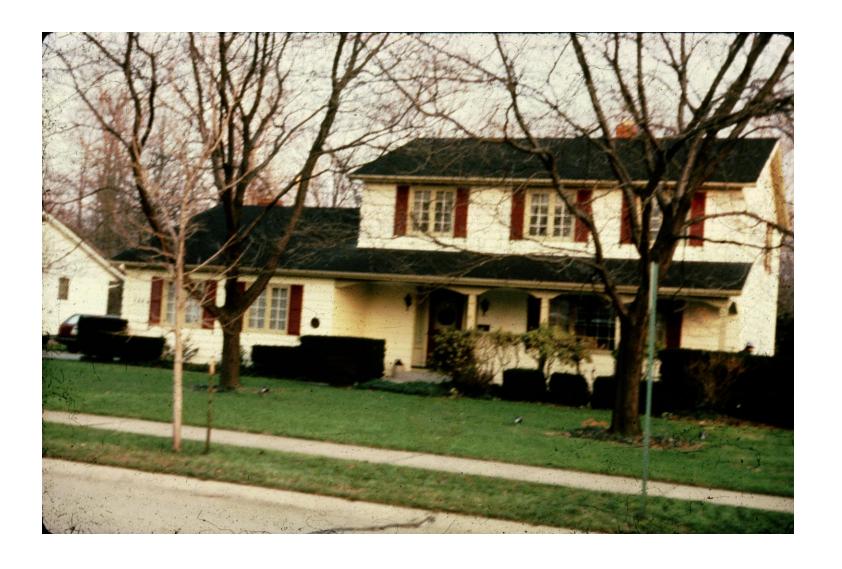
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There Is No Such Thing As A Free Thermodynamic Lunch

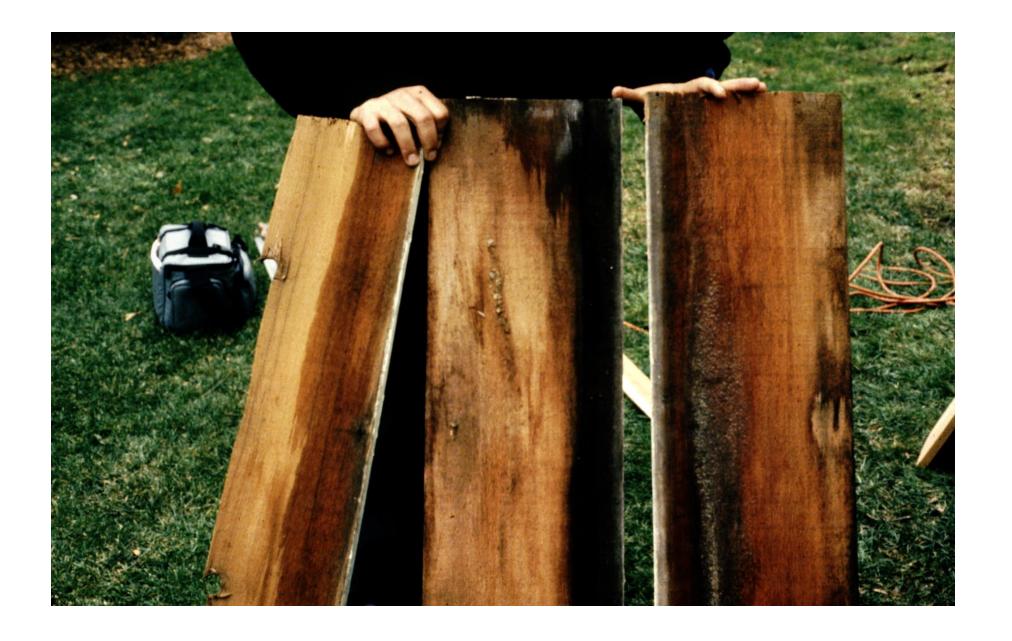
Joseph Lstiburek, Ph.D., P.Eng. ASHRAE Fellow

joe@buildingscience.com https://buildingscience.com

Energy Flow



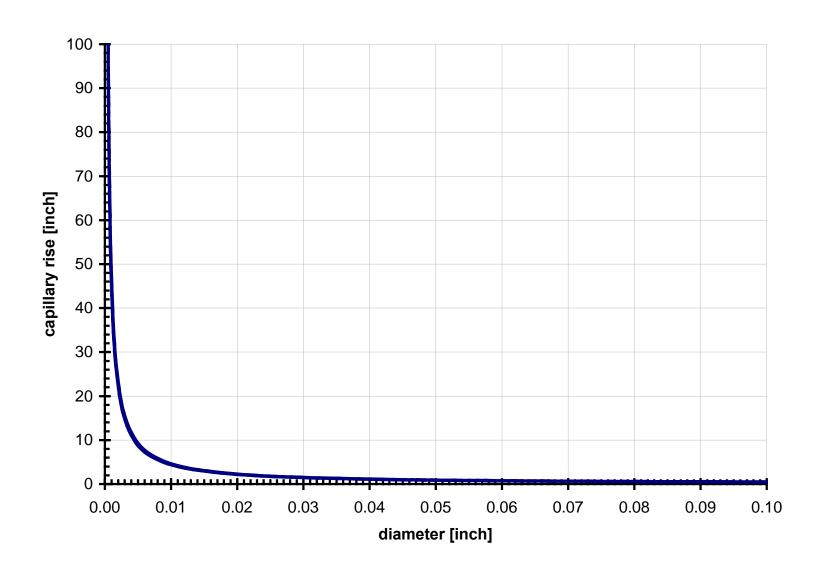


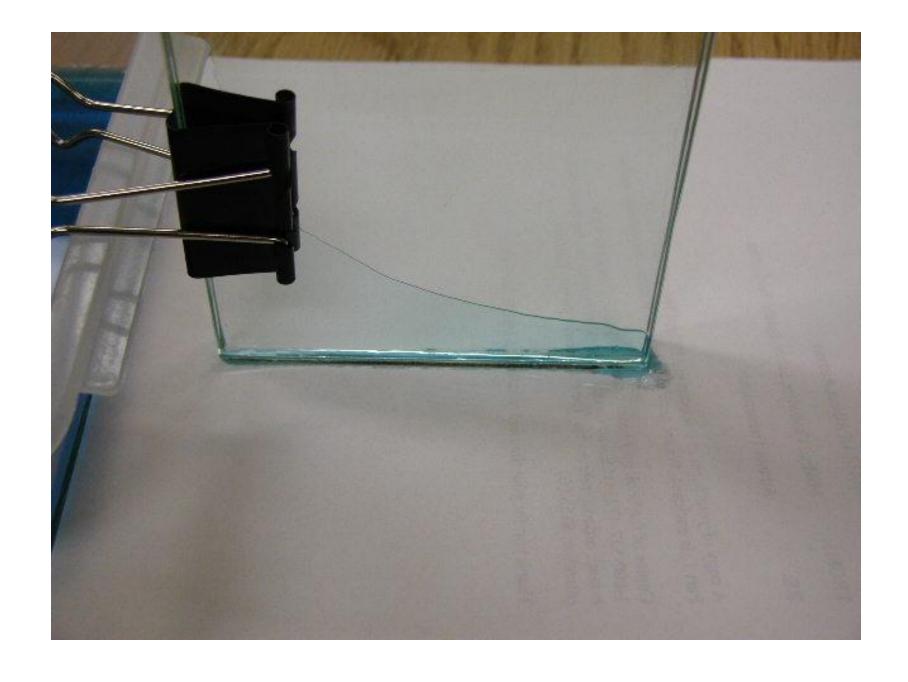


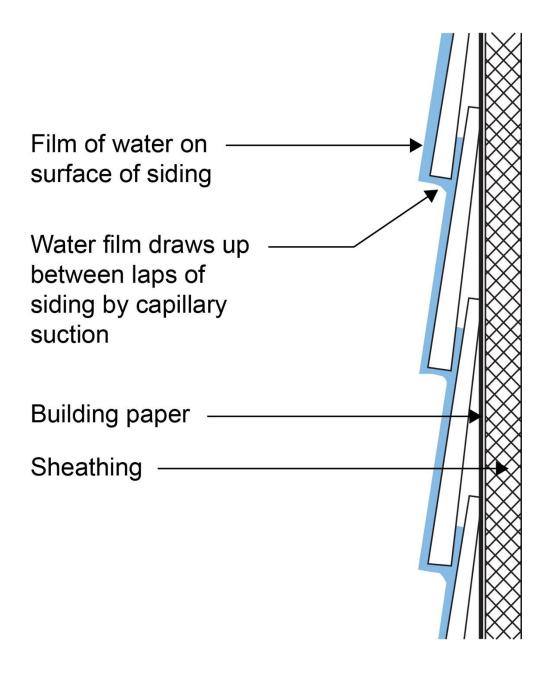


Capillarity

Capillary rise versus diameter









Attic Venting





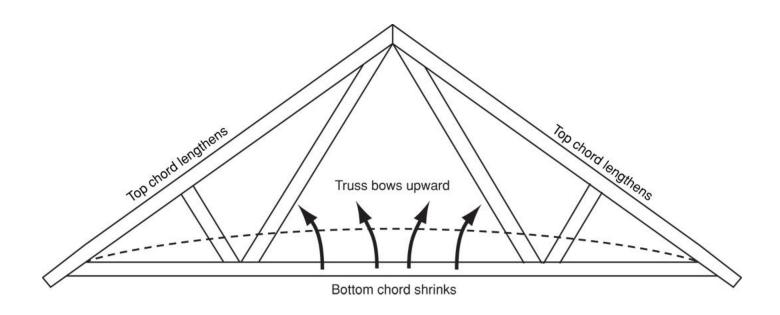
Vapor Barriers In the Wrong Place



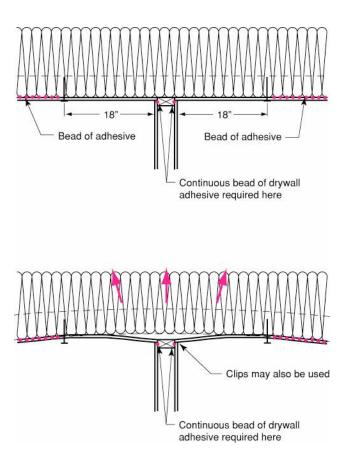
Truss Uplift

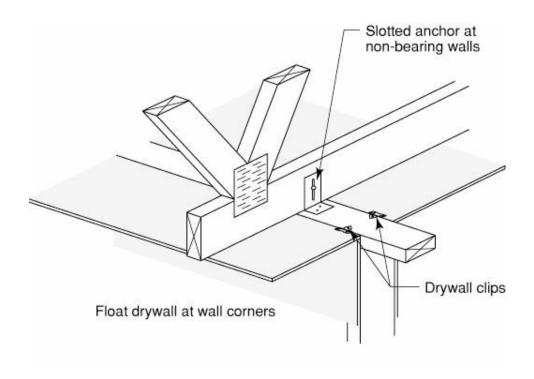












Stucco Failures

Exterior Insulation Finish Systems EIFS





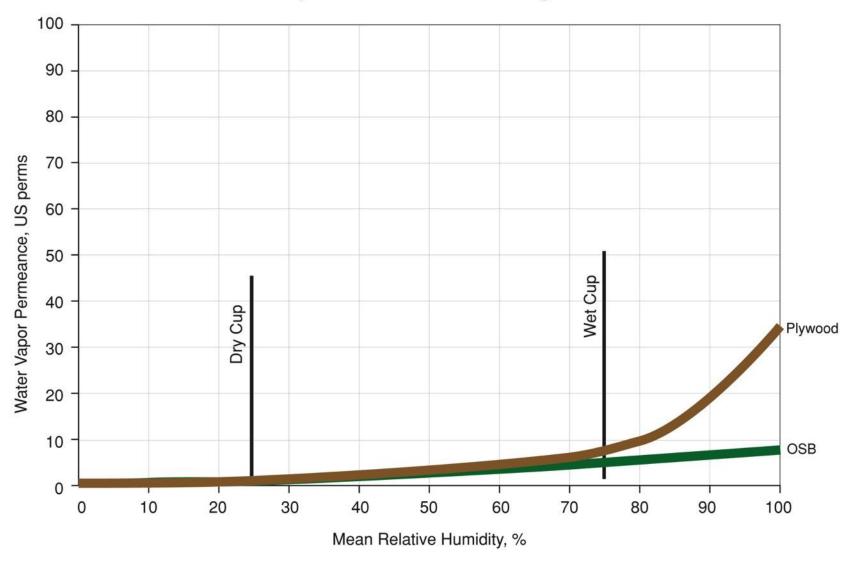




OSB



Water Vapor Permeance of Sheathing Materials



Side Trip To Vancouver....

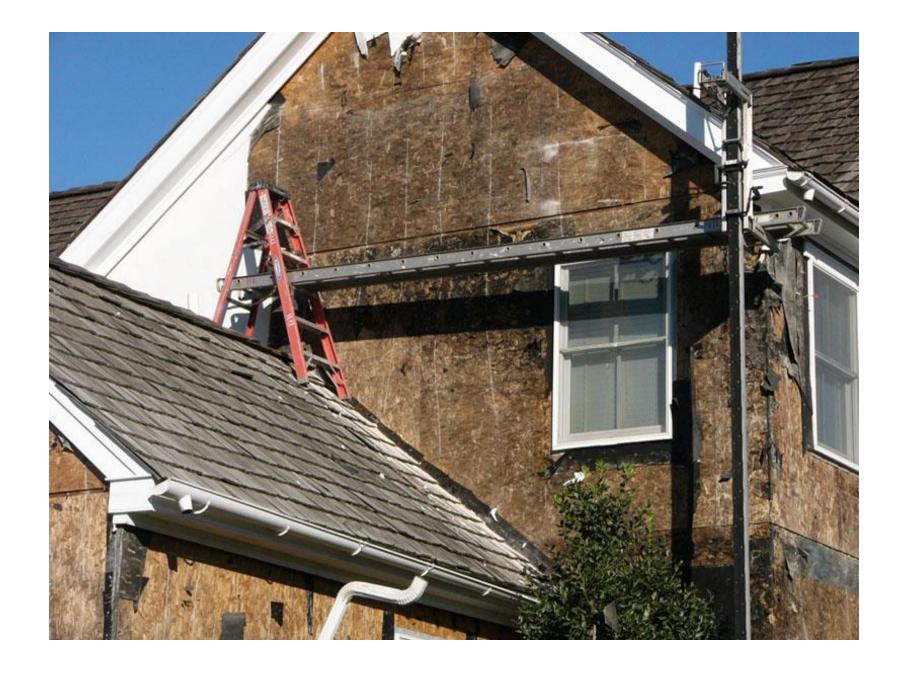




Back To America....Pennslyvania....

And Then Pretty Much Anywhere It Rains...

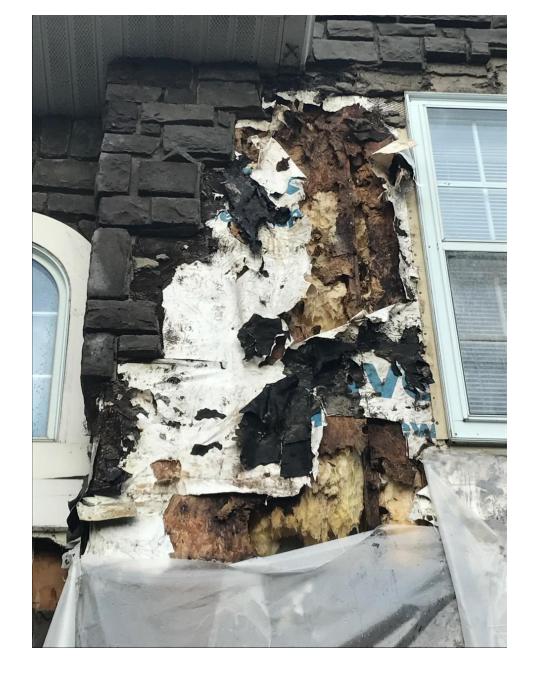




Back To Lumpy Stucco....

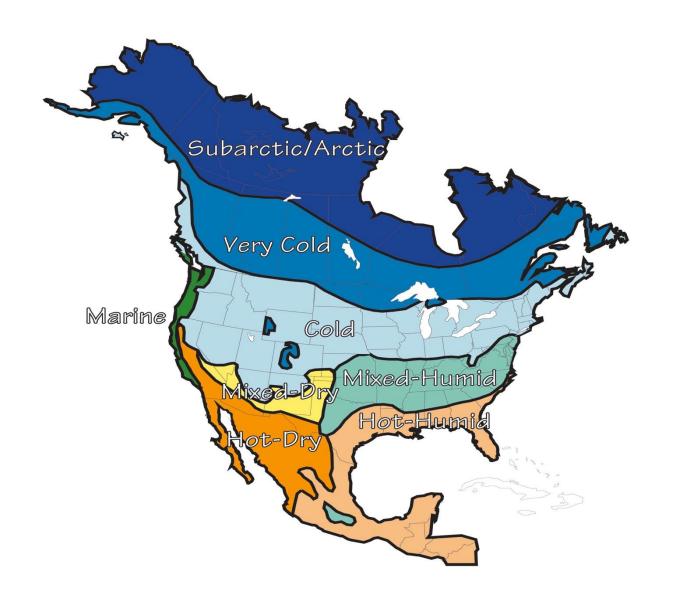


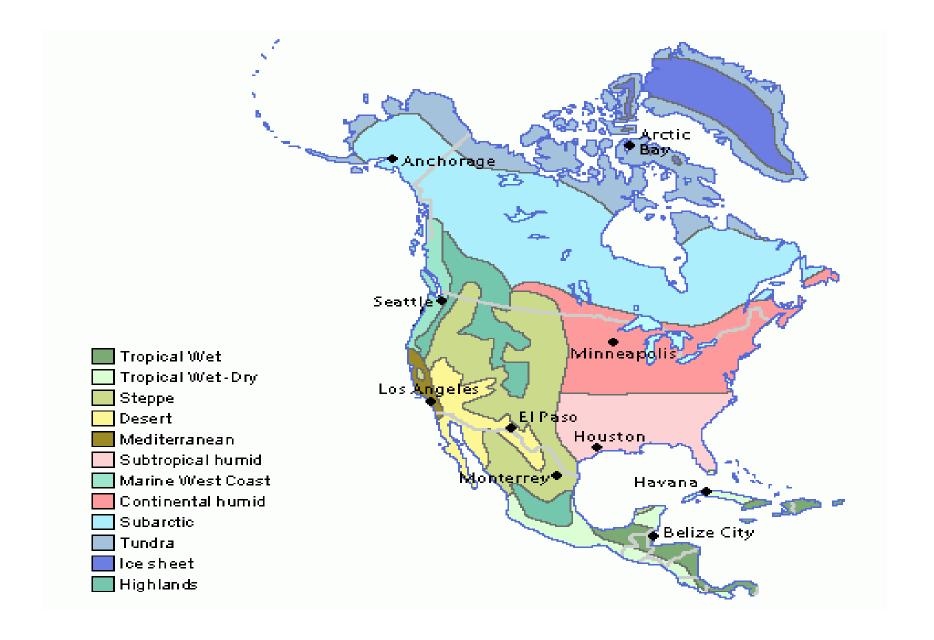


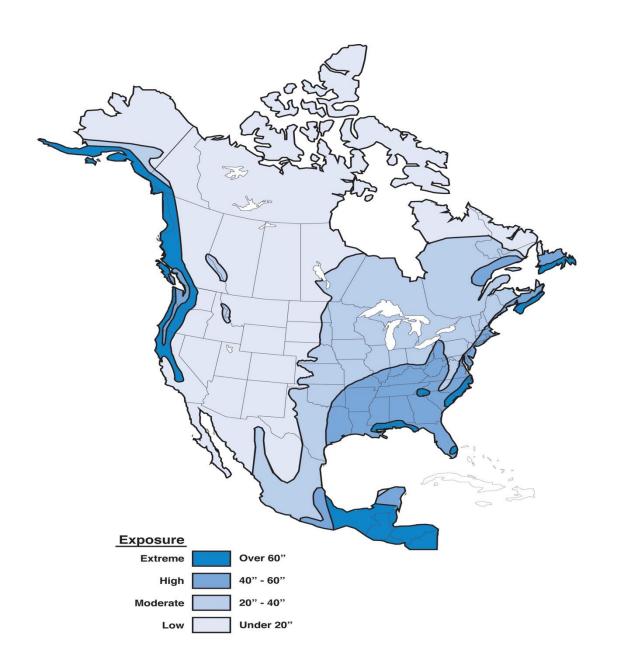




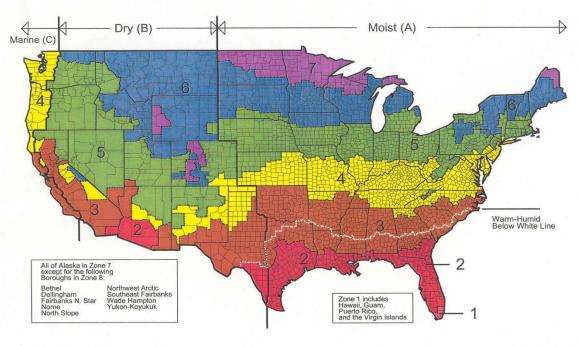
The Effect of Climate



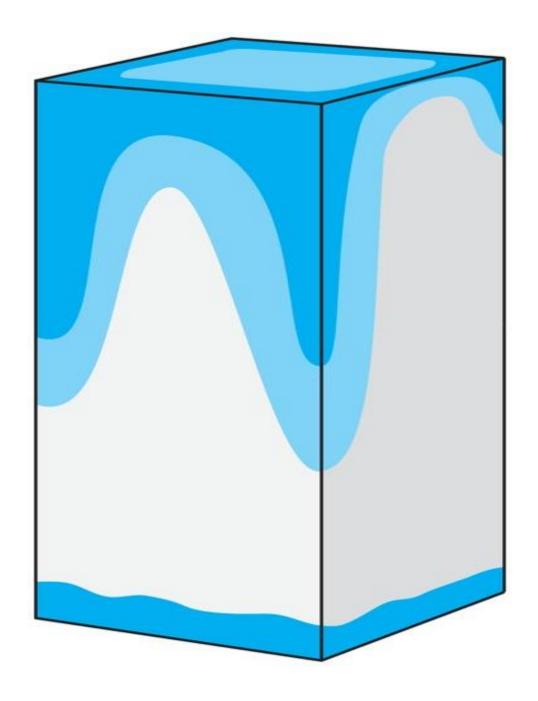


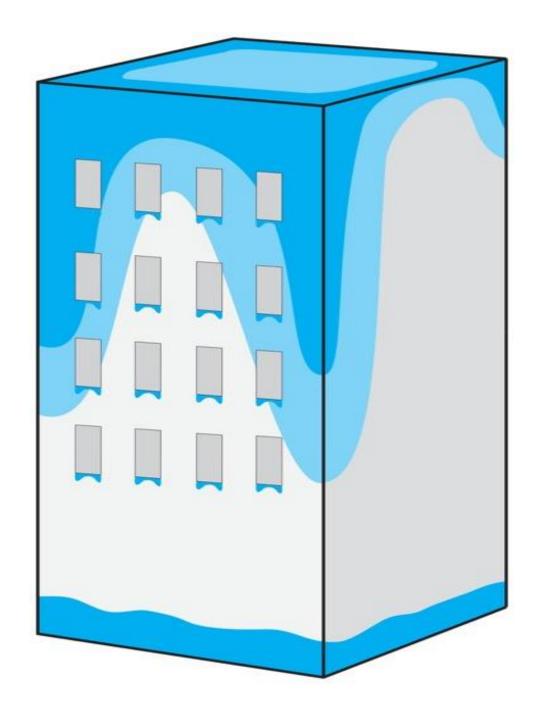


Map of DOE's Propused Climate Zones

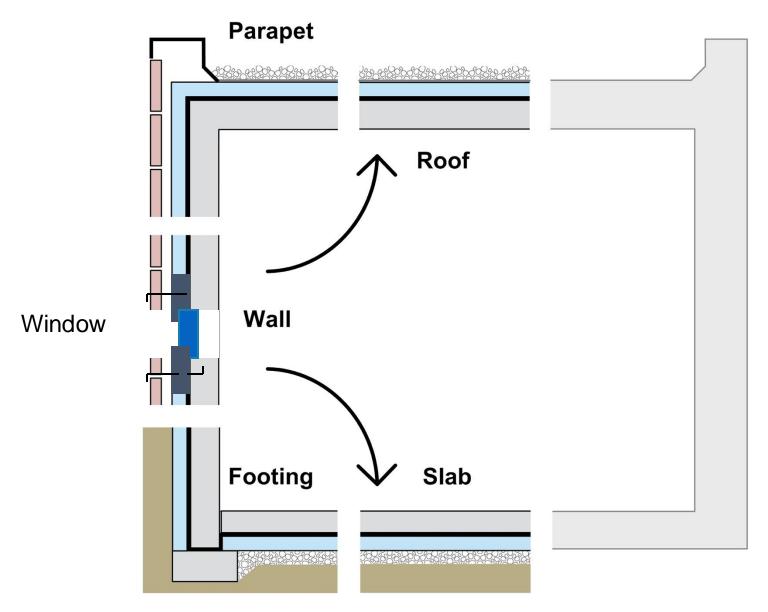


March 24, 2003



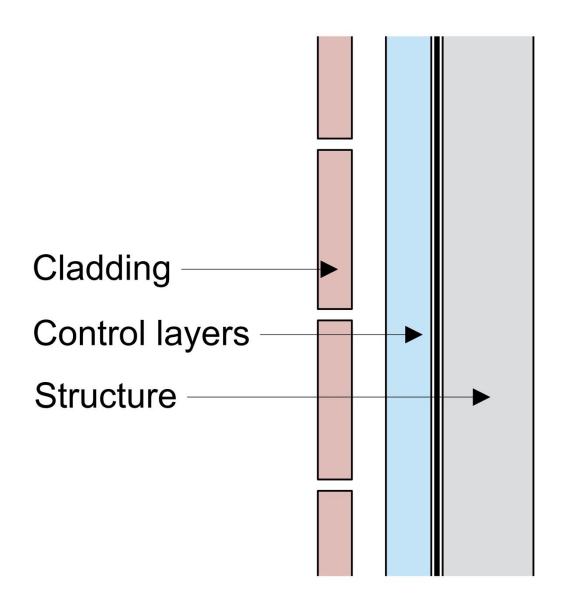


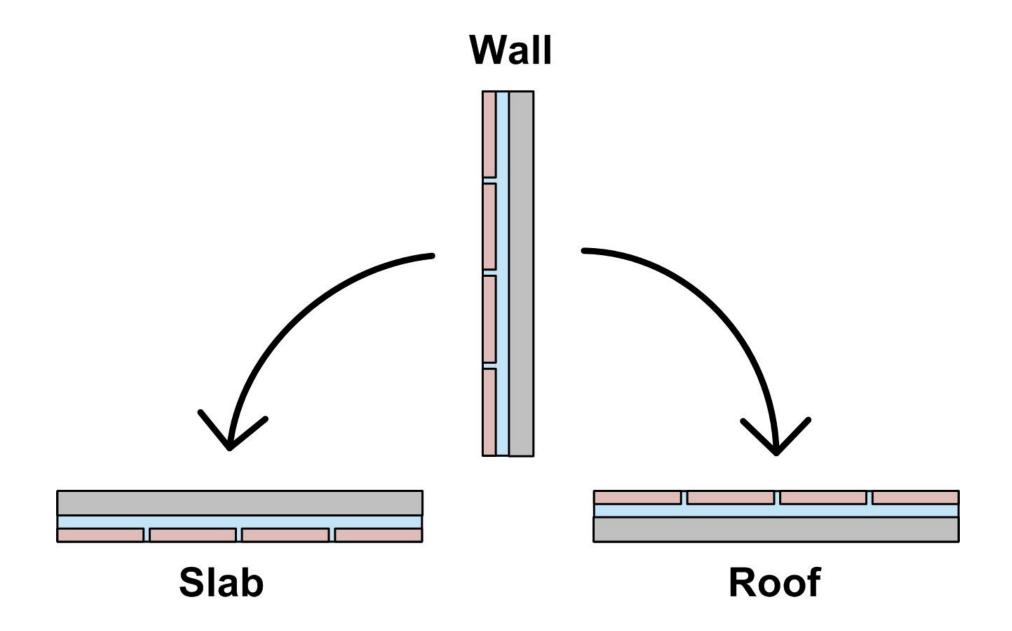
The Perfect Wall

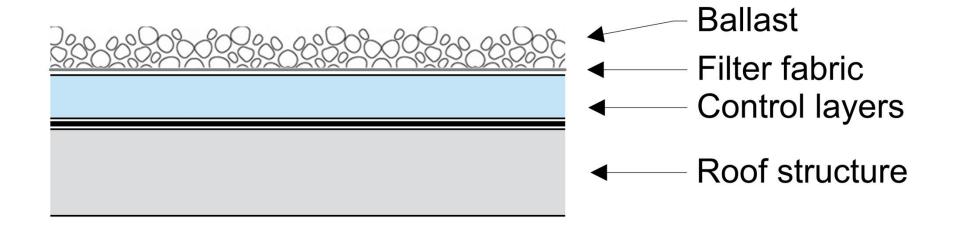


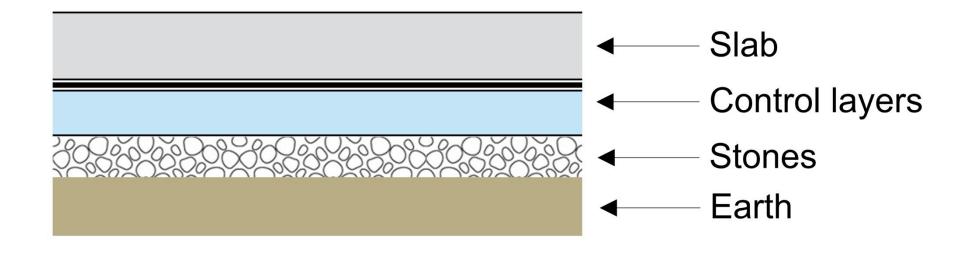
The Perfect Wall

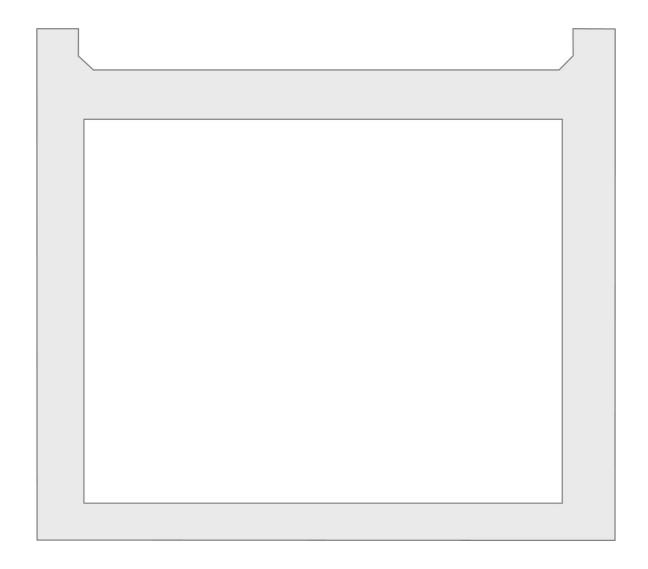
Water Control Layer
Air Control Layer
Vapor Control Layer
Thermal Control Layer

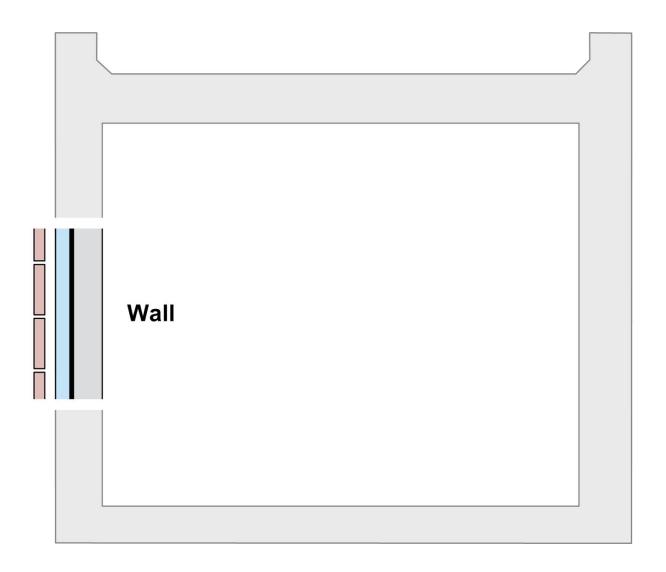


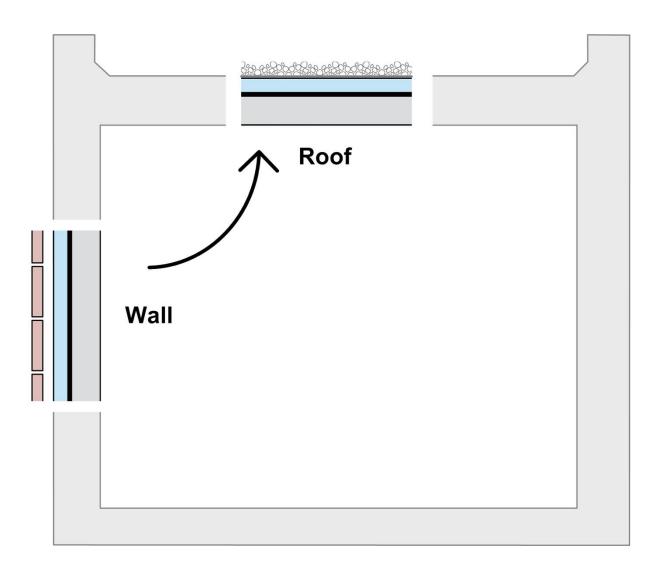


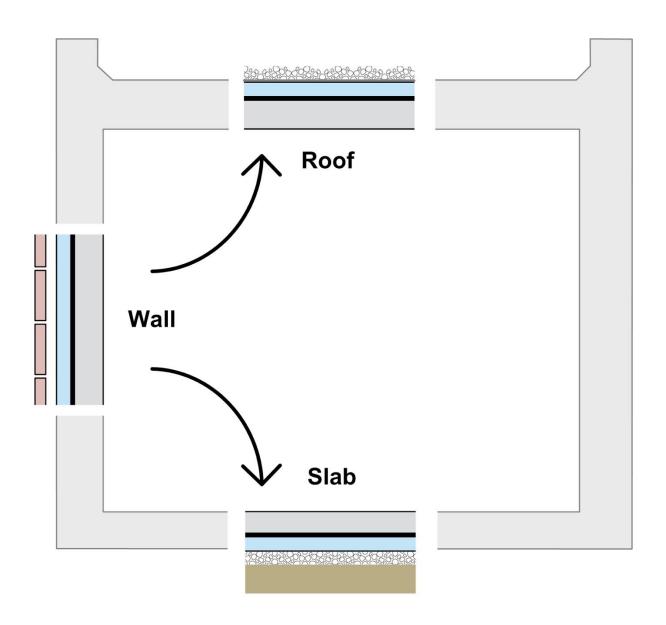


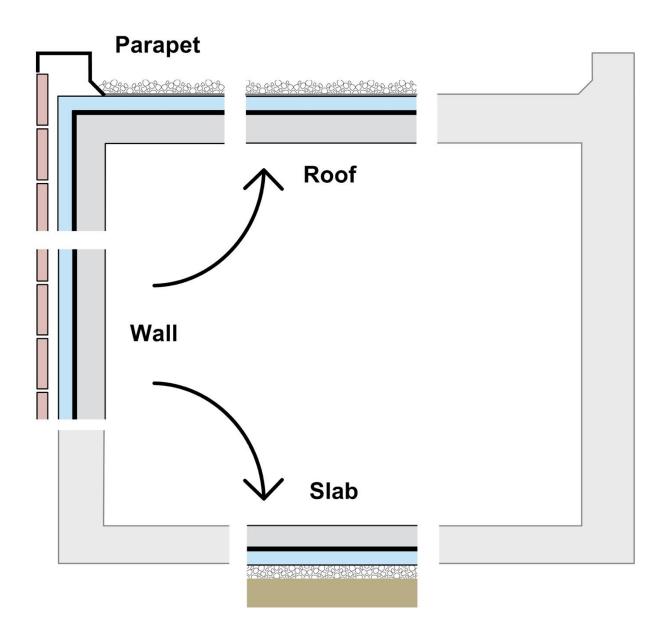


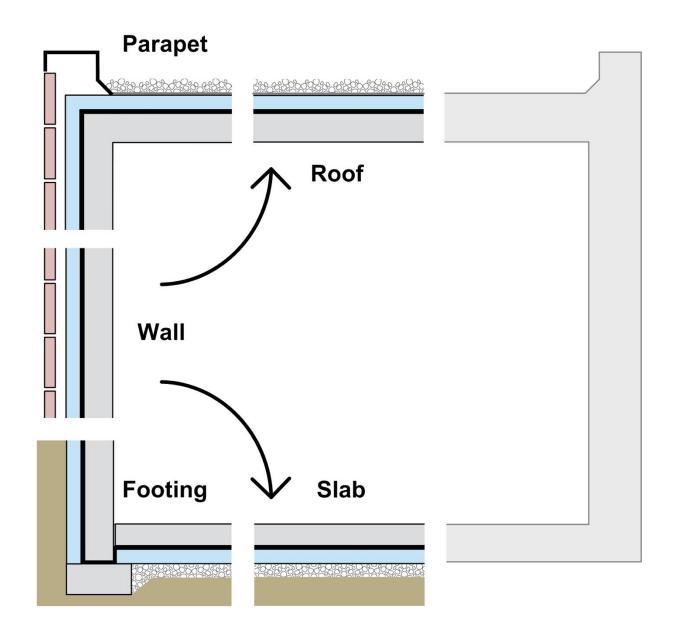


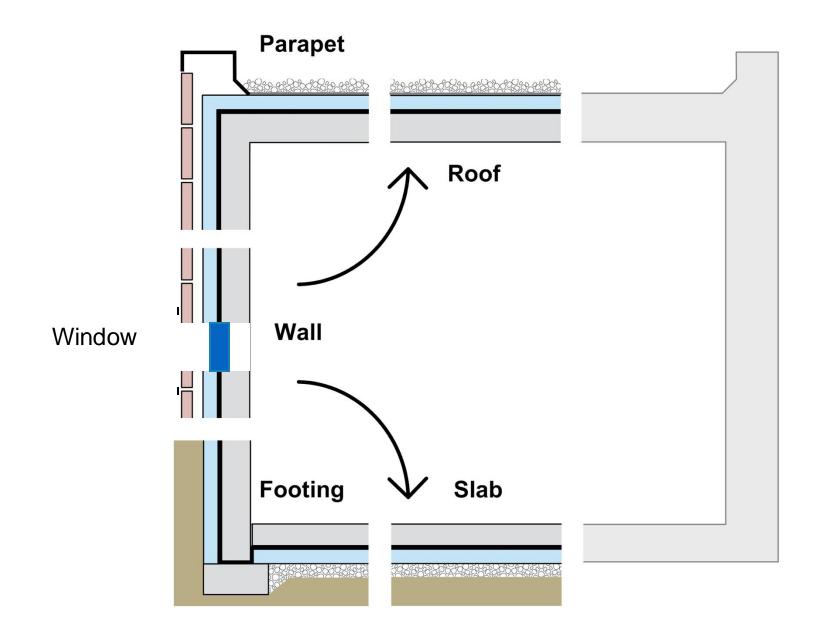




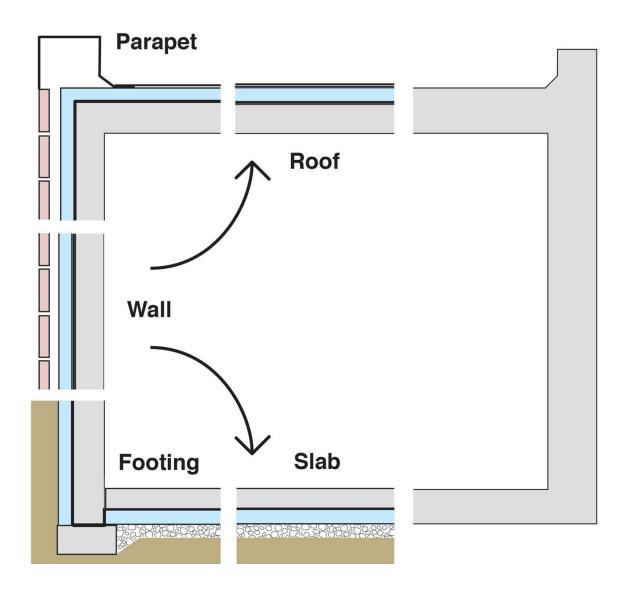


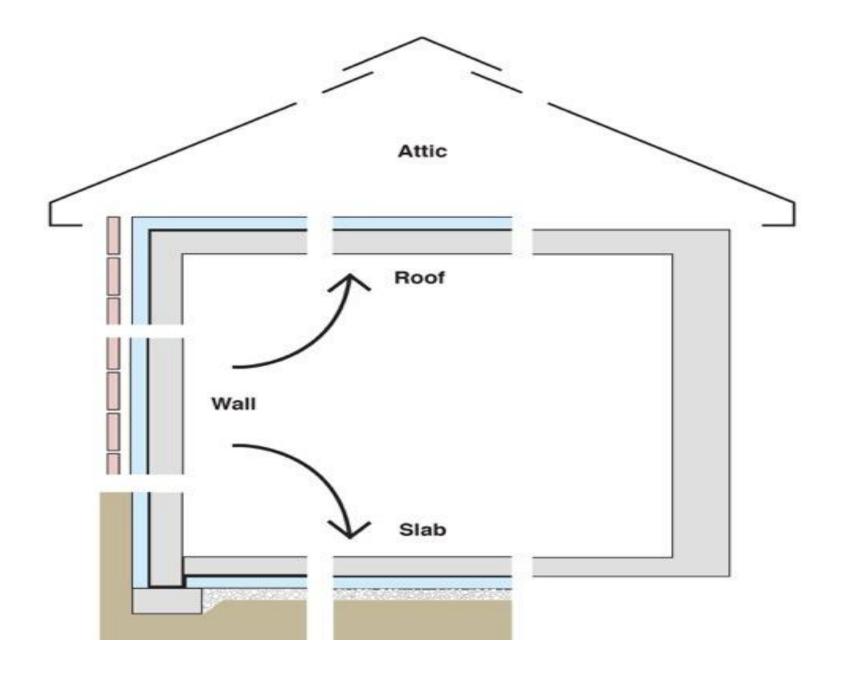


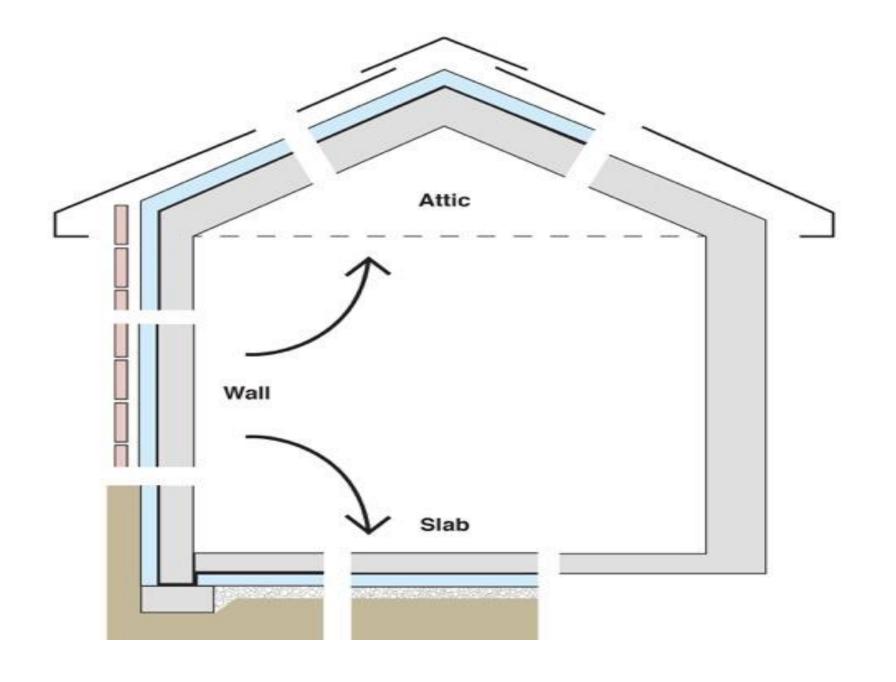


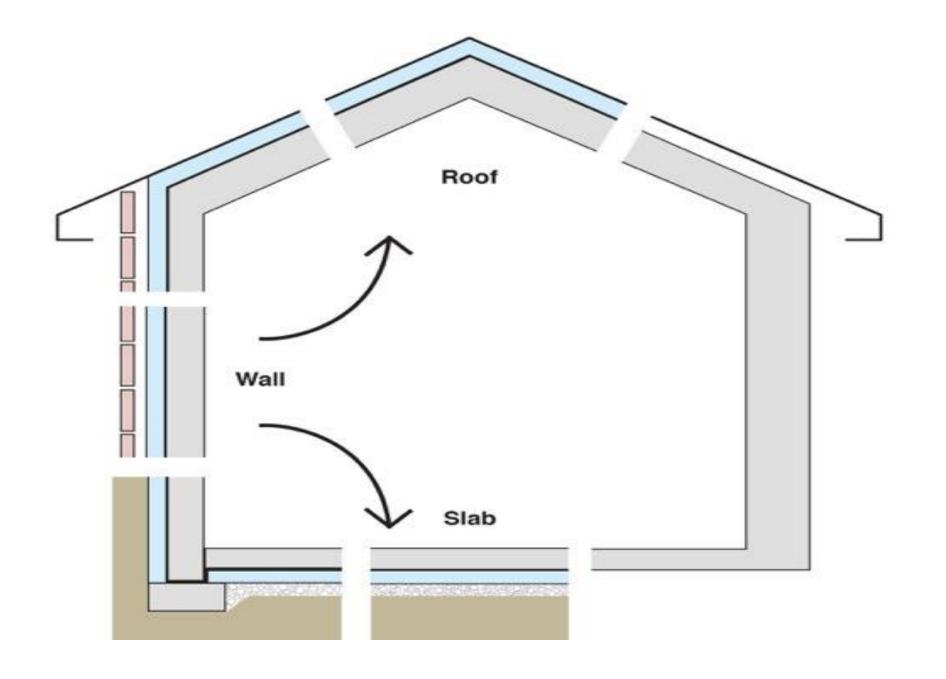


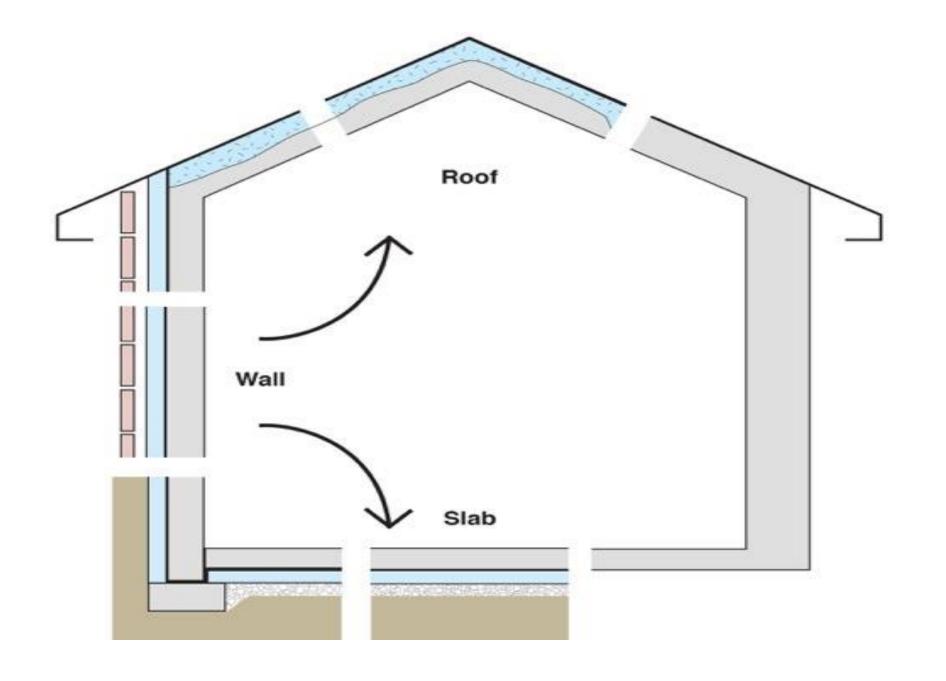




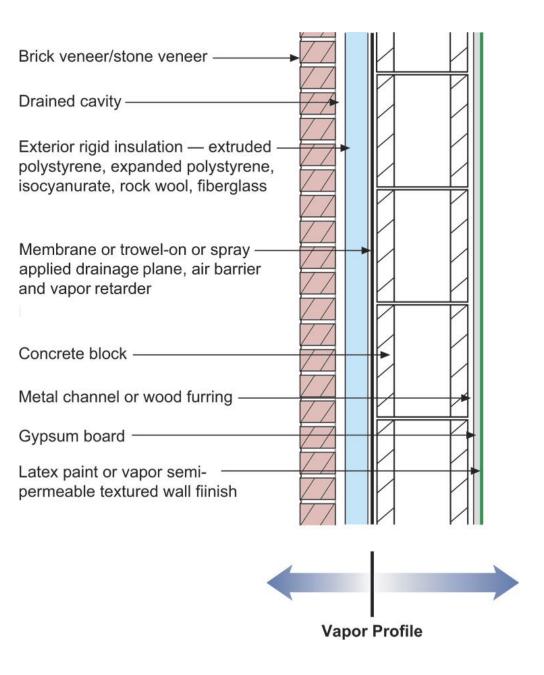


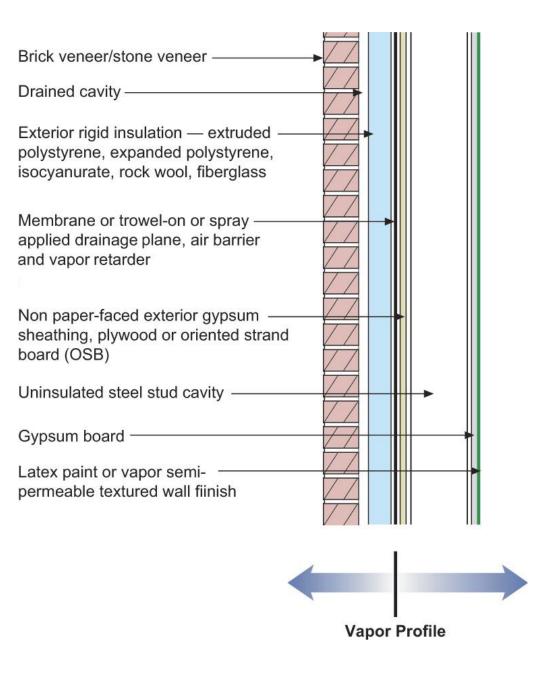




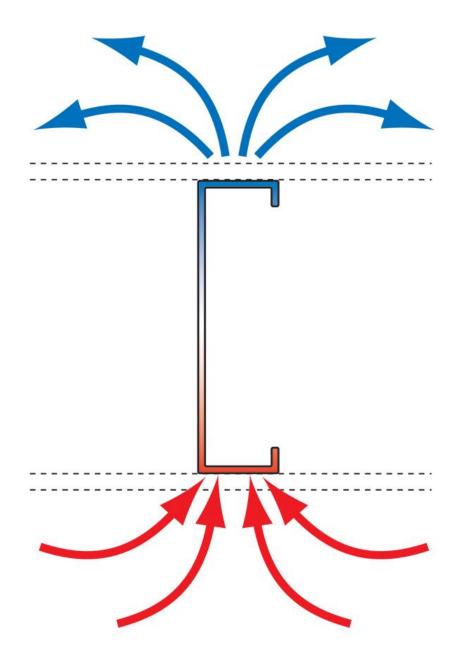


Configurations of the Perfect Wall

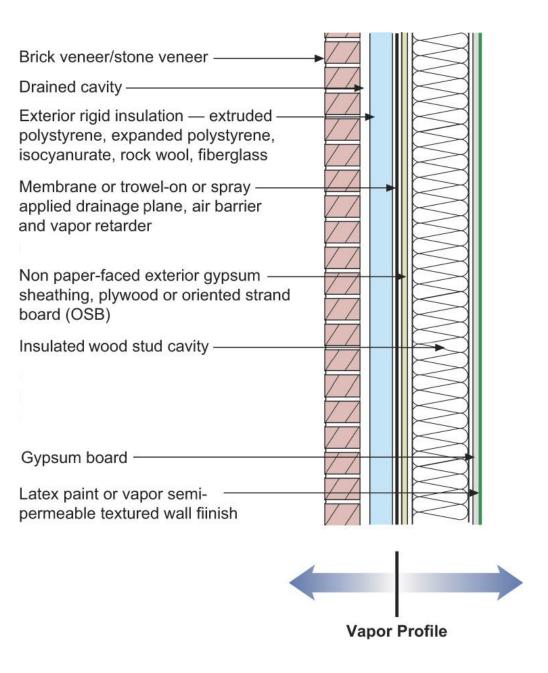




Don't Do Stupid Things







A Pretty Good Wall...

