

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

Building Science

Retrofit Case Studies

presented by www.buildingscience.com



Building Science Corporation

Joseph Lstiburek 2



Building Science Corporation

Joseph Lstiburek 3



Building Science Corporation

Joseph Lstiburek 4



Building Science Corporation

Joseph Lstiburek 5



Building Science Corporation

Joseph Lstiburek 6



Building Science Corporation

Joseph Lstiburek 7



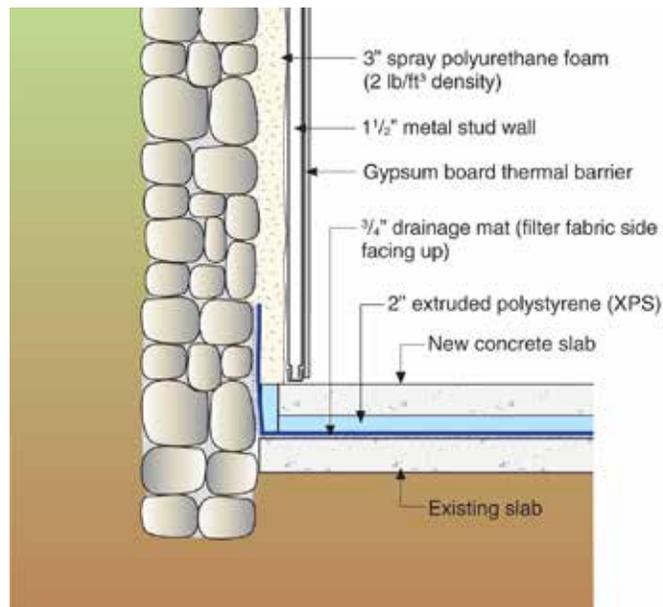
Building Science Corporation

Joseph Lstiburek 8



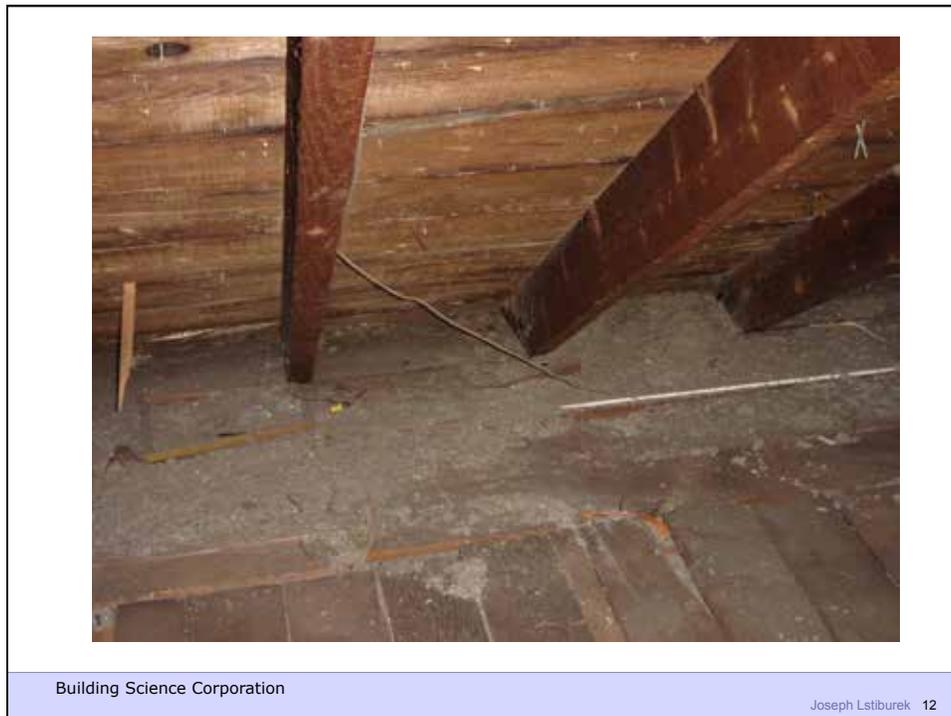
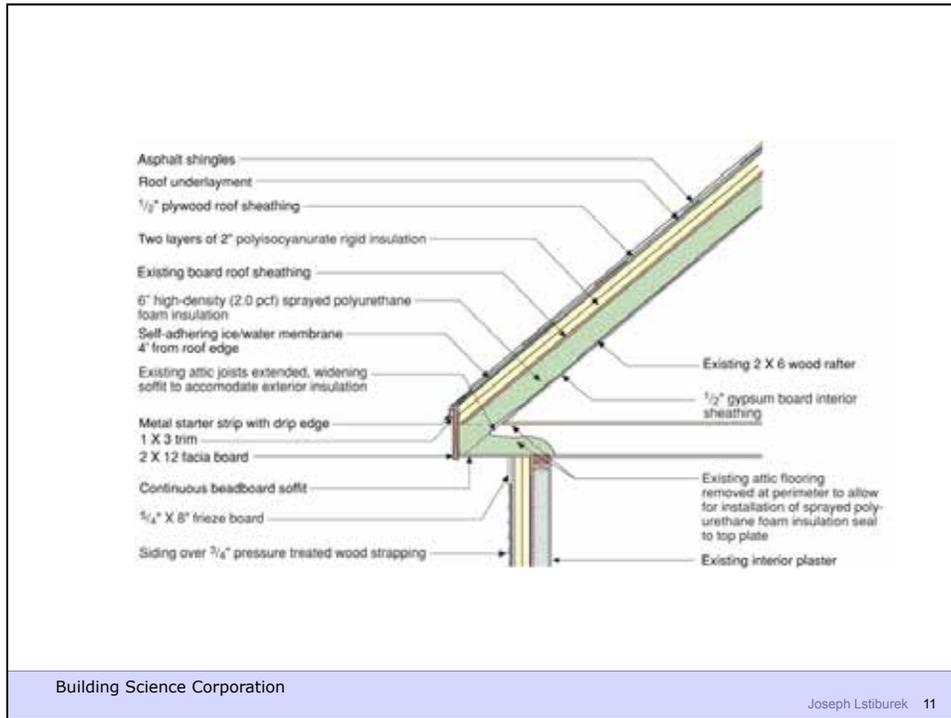
Building Science Corporation

Joseph Lstiburek 9



Building Science Corporation

Joseph Lstiburek 10





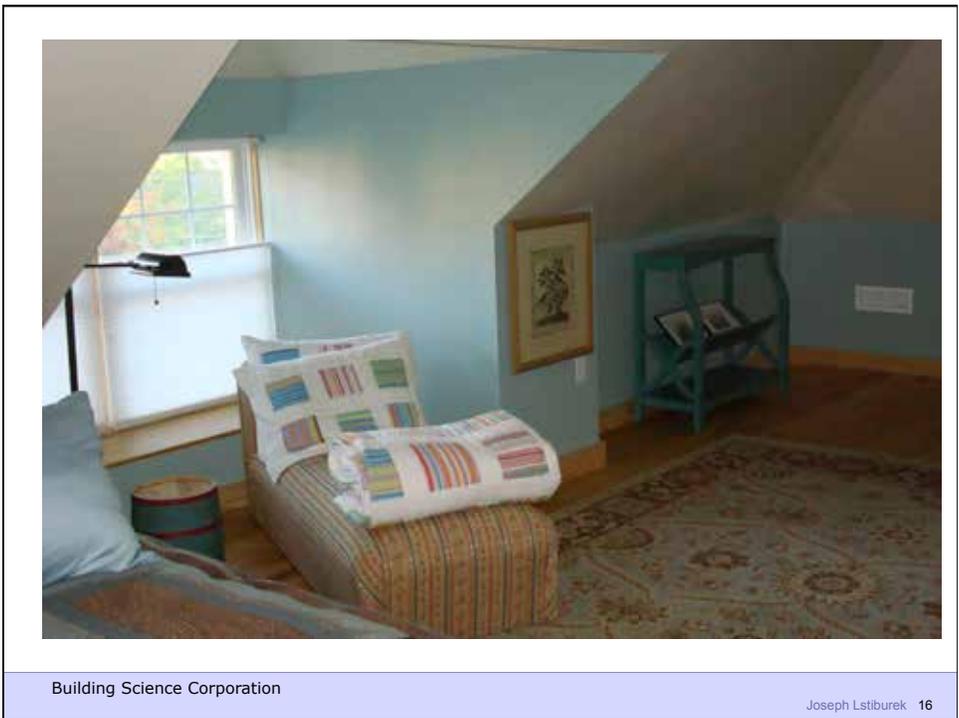
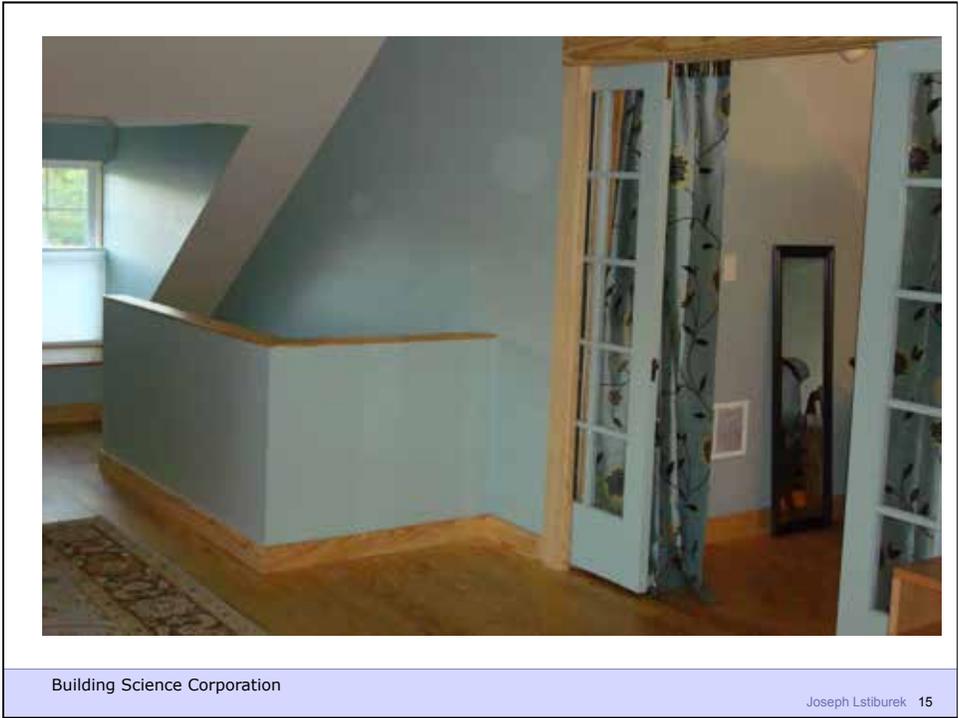
Building Science Corporation

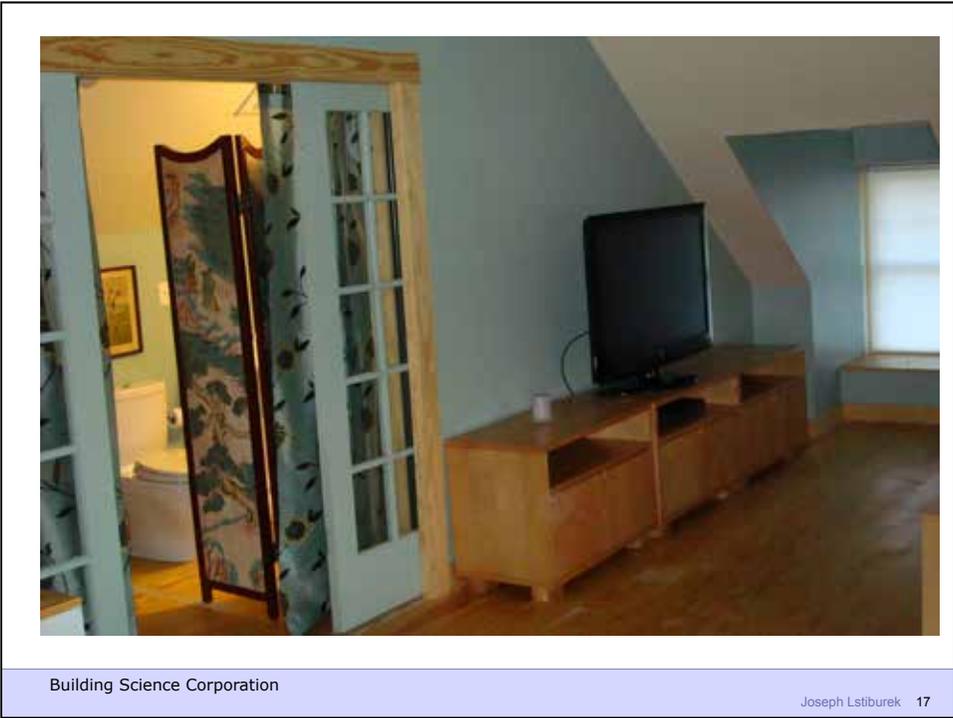
Joseph Lstiburek 13



Building Science Corporation

Joseph Lstiburek 14







Building Science Corporation

Joseph Lstiburek 19



Building Science Corporation

Joseph Lstiburek 20



Building Science Corporation

Joseph Lstiburek 21



Building Science Corporation

Joseph Lstiburek 22

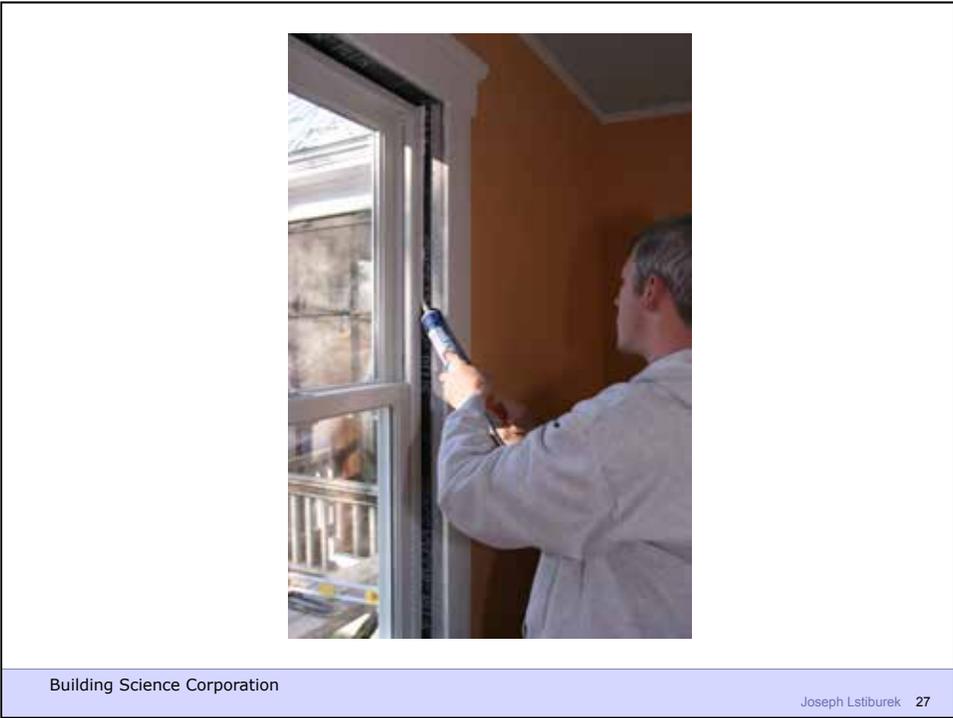


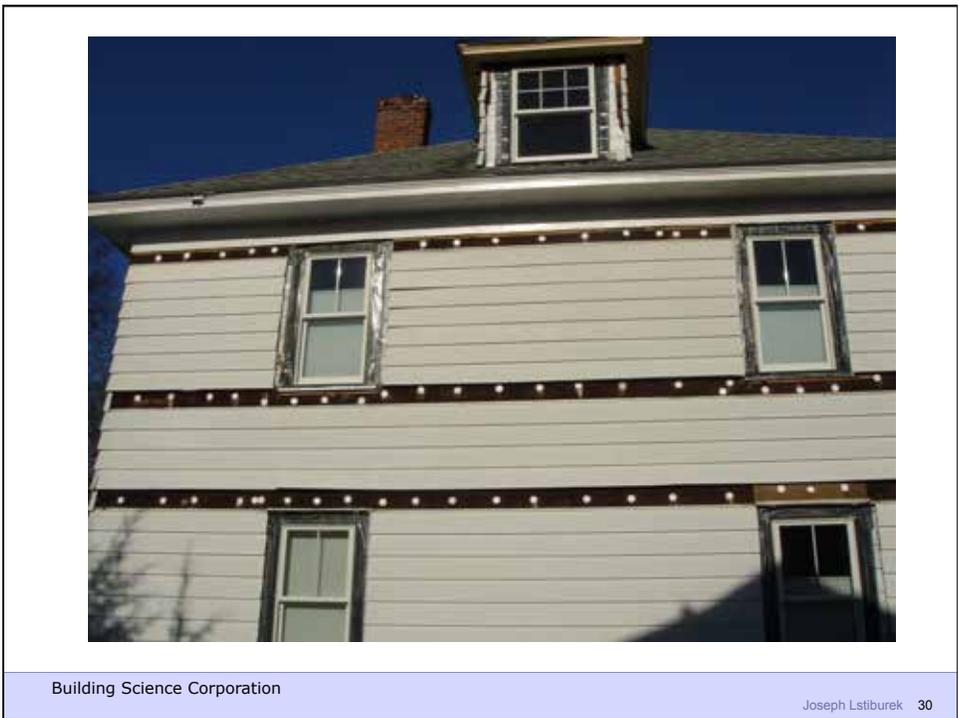
Building Science Corporation



Building Science Corporation











Building Science Corporation

Joseph Lstiburek 33



Building Science Corporation

Joseph Lstiburek 34



Building Science Corporation



Building Science Corporation



Building Science Corporation

Joseph Lstiburek 37



Building Science Corporation

Joseph Lstiburek 38



Building Science Corporation



Building Science Corporation



Building Science Corporation

Joseph Lstiburek 41



Building Science Corporation

Joseph Lstiburek 42



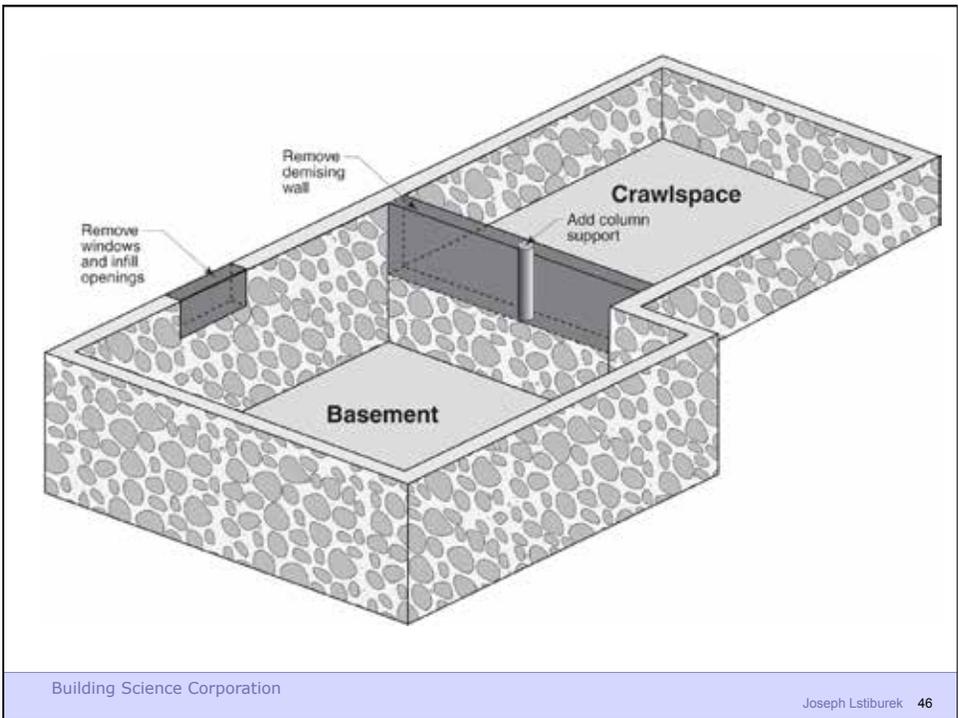
Building Science Corporation

Joseph Lstiburek 43



Building Science Corporation

Joseph Lstiburek 44

















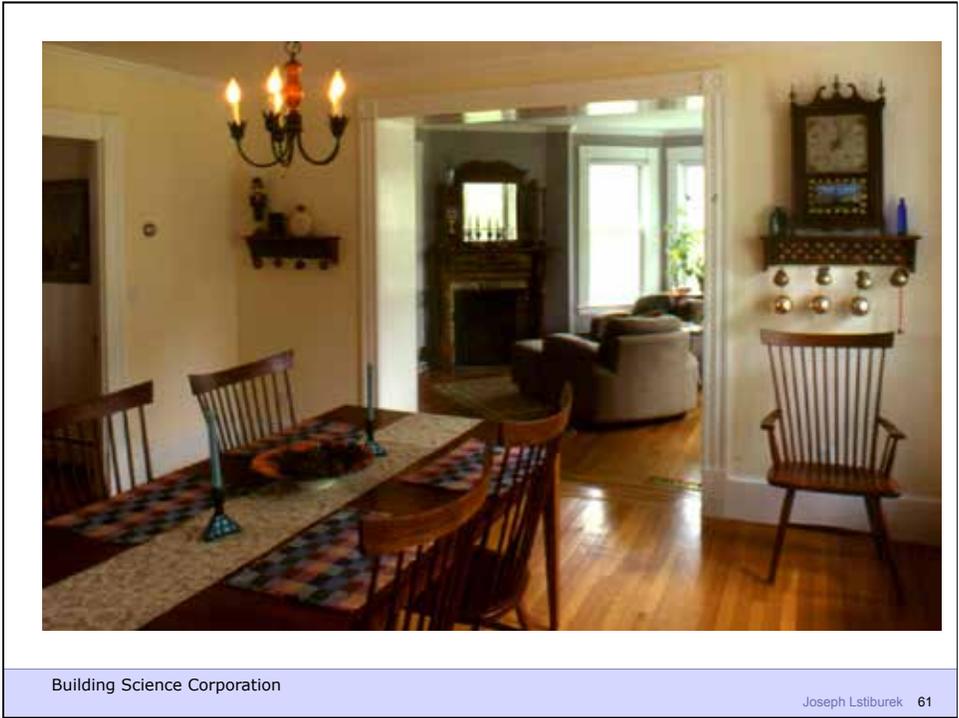
Building Science Corporation

Joseph Lstiburek 59



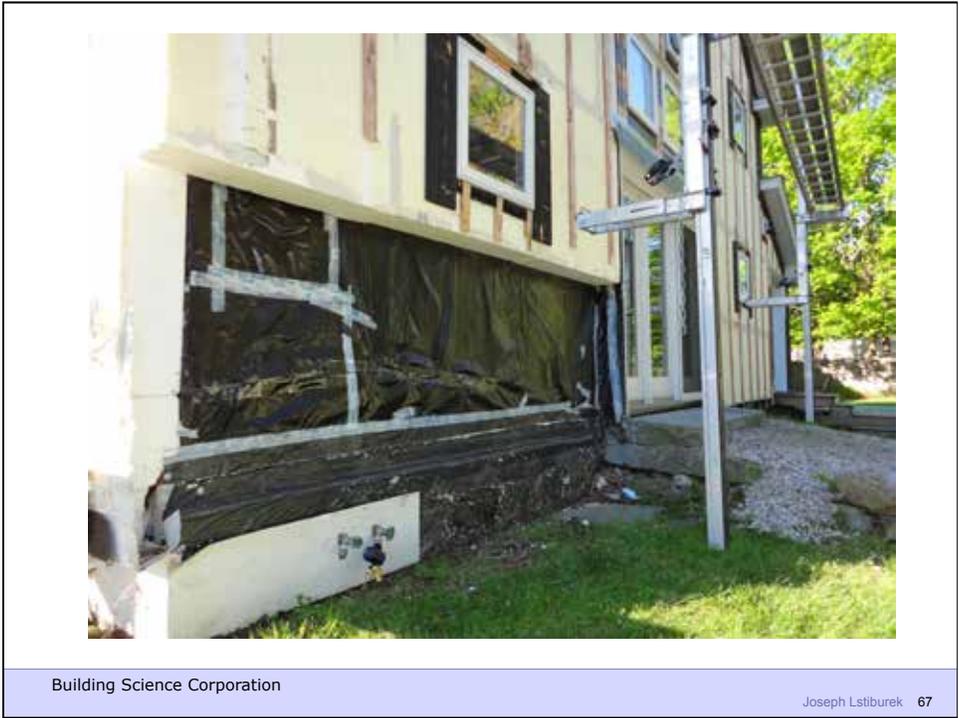
Building Science Corporation

Joseph Lstiburek 60

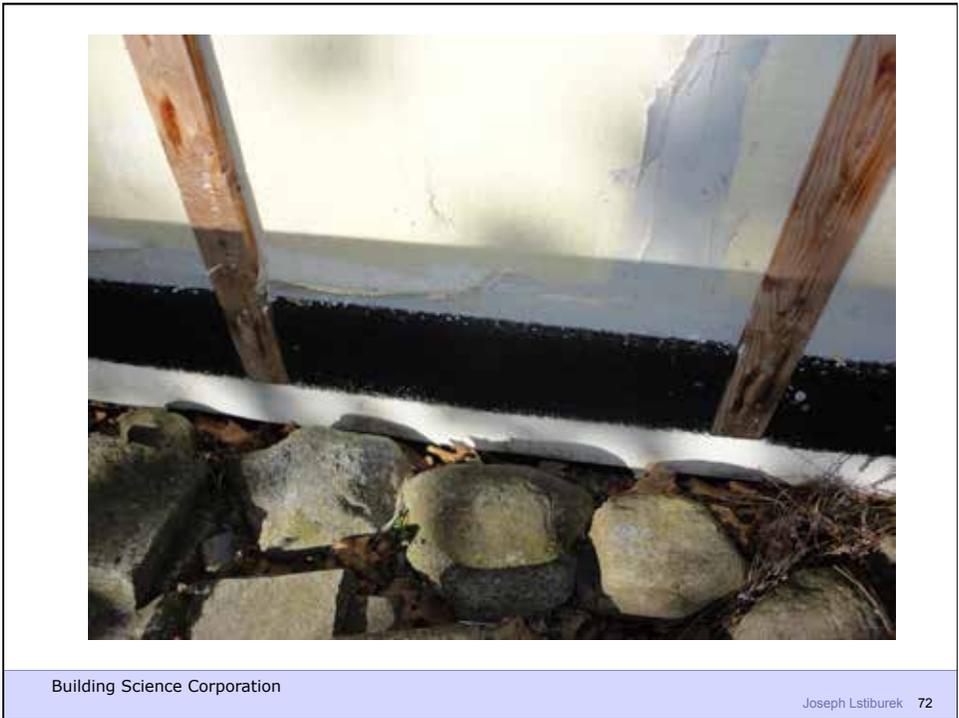








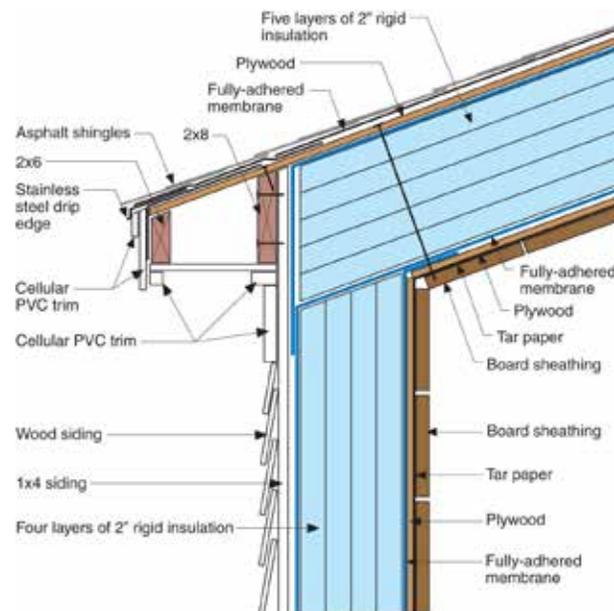






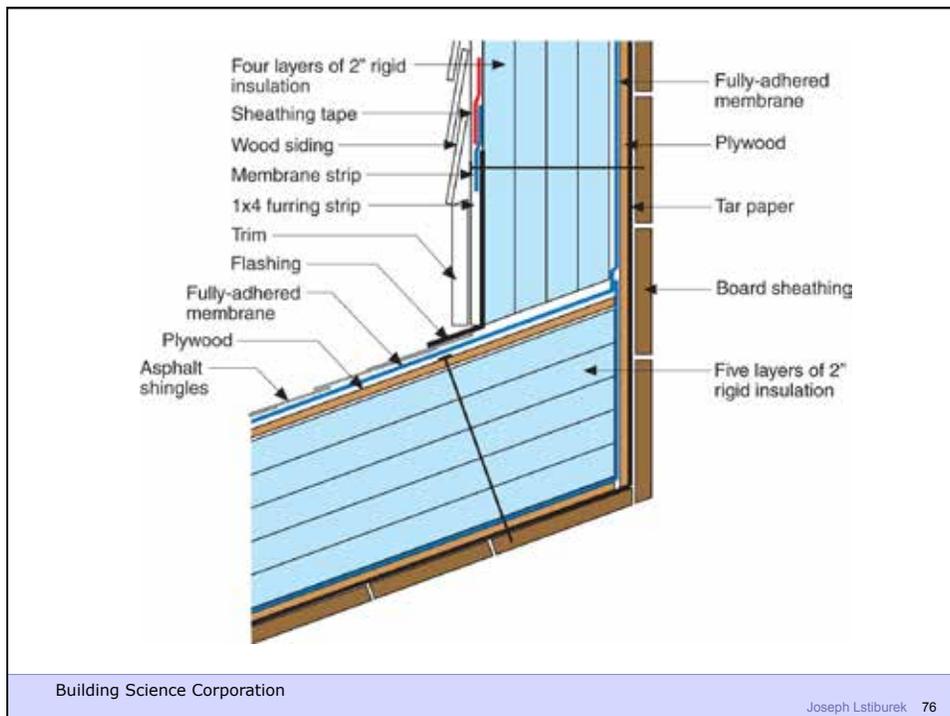
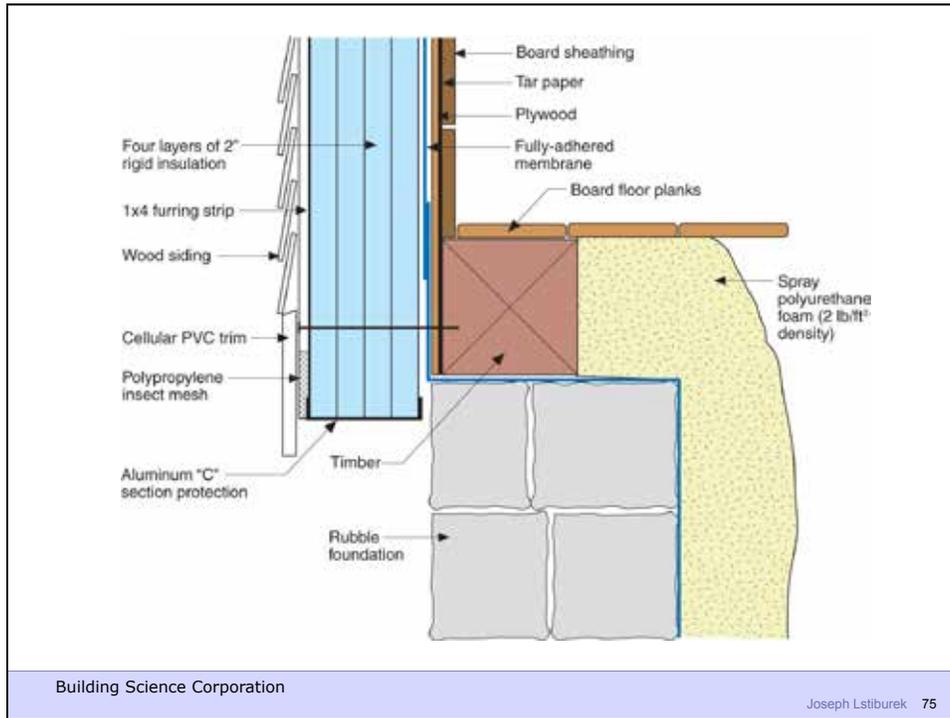
Building Science Corporation

Joseph Lstiburek 73



Building Science Corporation

Joseph Lstiburek 74











Building Science Corporation



Building Science Corporation



Building Science Corporation

Joseph Lstiburek 85



Building Science Corporation

Joseph Lstiburek 86



Building Science Corporation



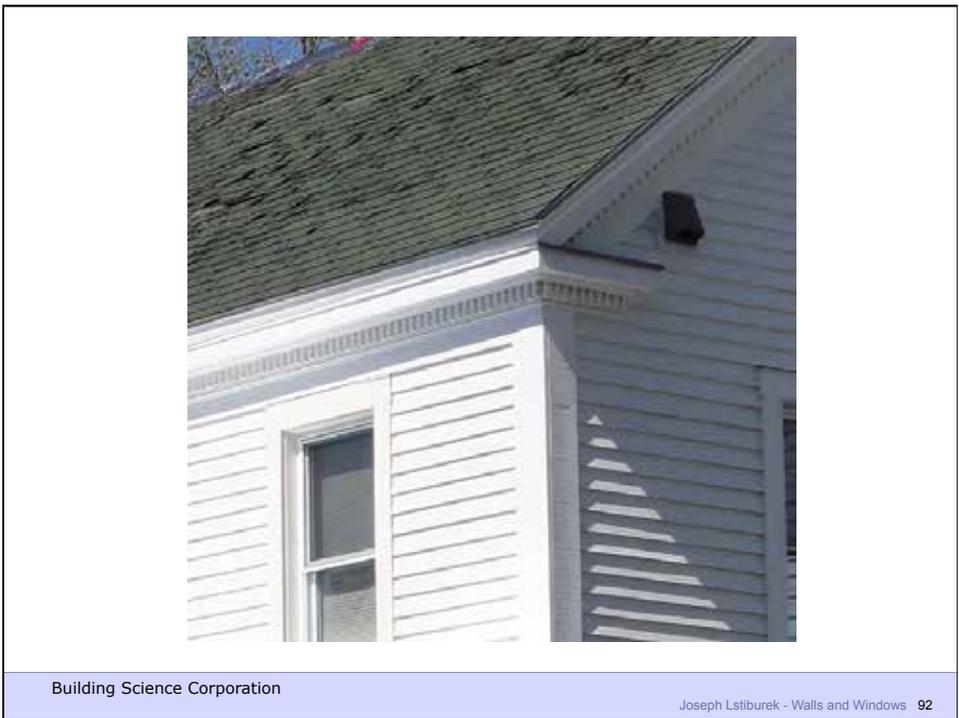
Building Science Corporation



Building Science Corporation



Building Science Corporation





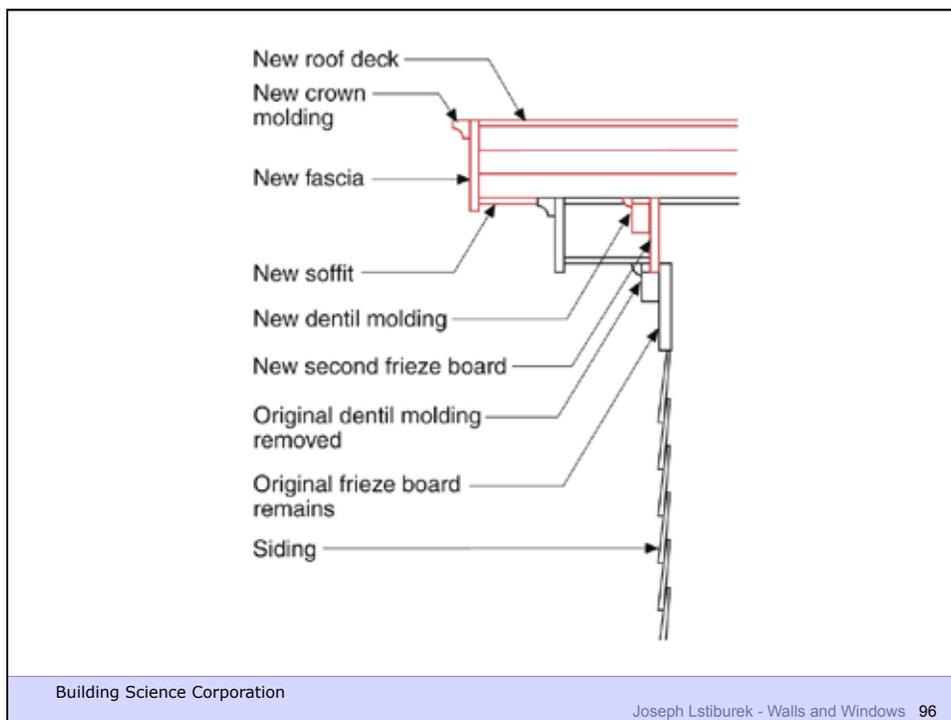
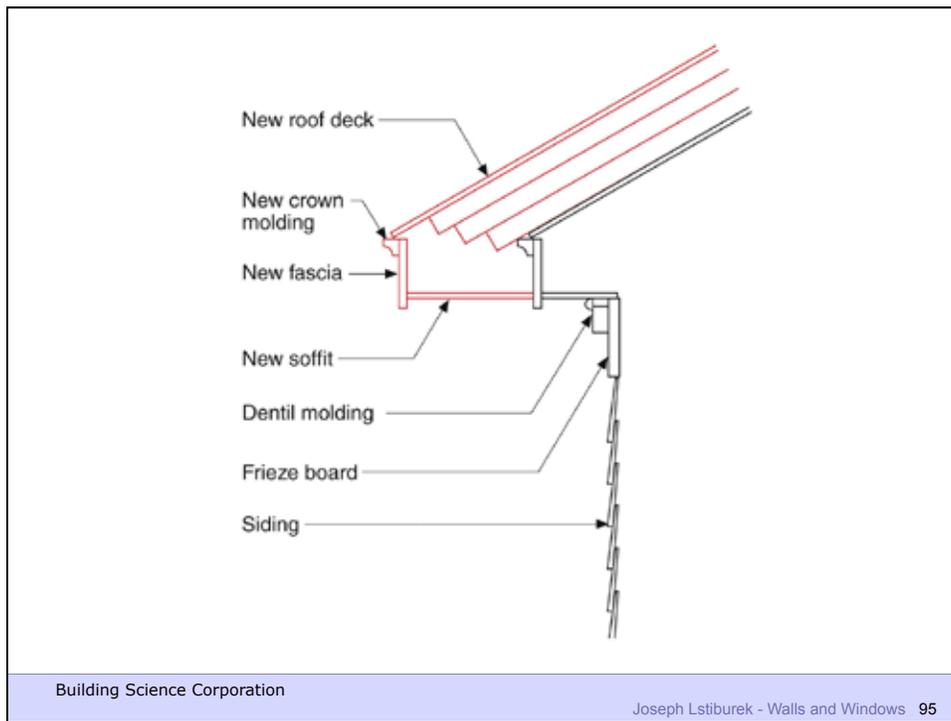
Building Science Corporation

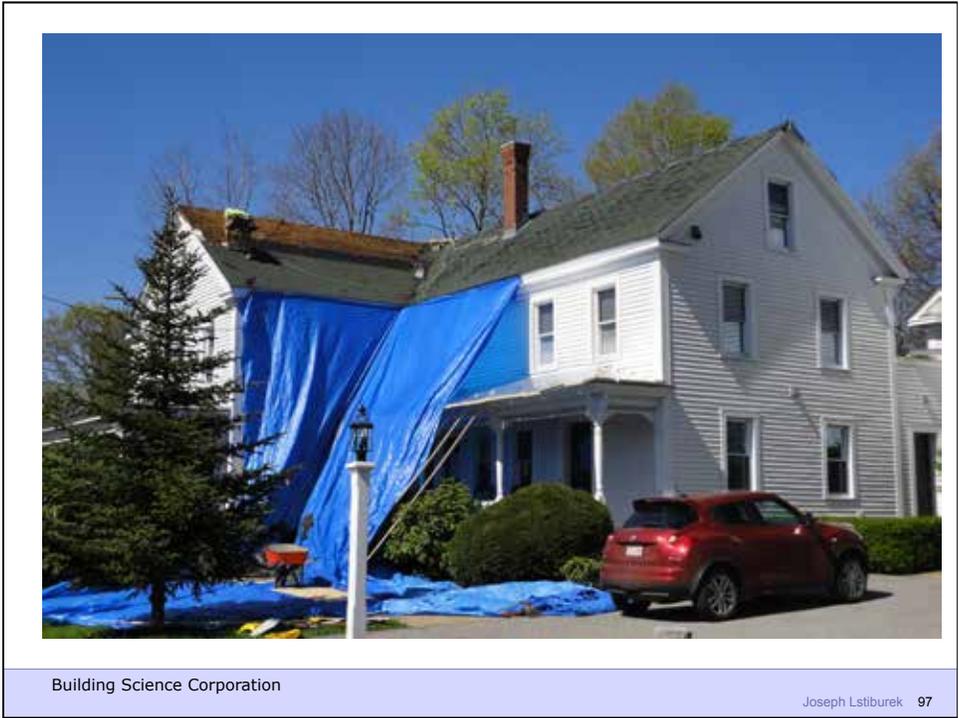
Joseph Lstiburek - Walls and Windows 93



Building Science Corporation

Joseph Lstiburek - Walls and Windows 94







Building Science Corporation



Building Science Corporation



Building Science Corporation



Building Science Corporation



Building Science Corporation



Building Science Corporation



Building Science Corporation



Building Science Corporation



Building Science Corporation



Building Science Corporation