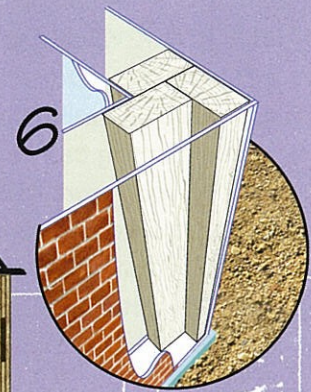
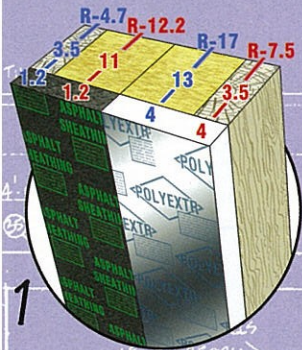


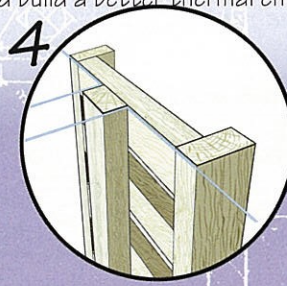
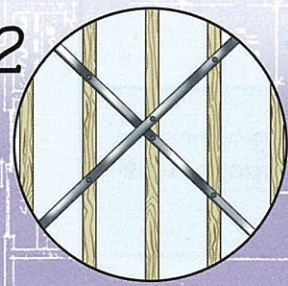
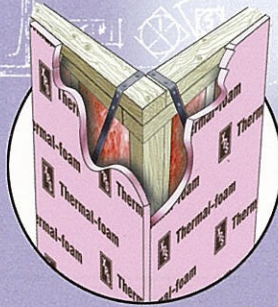
ADVANCED FRAMING FOR ENERGY EFFICIENCY



R-1.0 versus R-4.0

Framing is expensive in materials and labor. Save money and time. Reduce the number of framing members in exterior walls and make room for more insulation.

R-Value indicates resistance to heat flow. Wood has an R-Value of 1 per inch. Insulation has an R-Value of about 4 per inch. Wall area may be up to 20% wood framing members. Here are some ways to lower that amount and build a better thermal envelope.



1 Use a high R-Value sheathing (R-4 or better) to boost overall heat resistance of walls. Conventional 2x4 house framing can be efficient if you choose your products carefully. The illustration shows two approaches: R-12.2 at stud cavities and R-4.7 over framing versus R-17 at stud cavities and R-7.5 over framing.

2 Replace OSB corner bracing with metal strap bracing. It will save time, materials, and allow exterior sheathing to be continuous.

3 If OSB corner bracing is required, use 1/2" high R-Value sheathing over it. The OSB and sheathing at the corners will be equal in thickness to the 1" sheathing on the rest of the exterior.

4 Use ladder intersects where interior partition walls meet exterior walls. It will save time, materials, and create space for insulation. Traditional four stud interfaces create pockets that cannot be insulated.

5 It is time to update "old school" framing to meet the challenges of energy efficient construction. Eliminate four stud corners on your jobsite.

6 Upgrade corner framing construction to a three stud design. It will save time, materials, and create space for insulation batts. You may even move on to two stud corners using drywall clips to save even more.

Additional advanced details may also work for your projects. You may be interested in 24" O.C. stud spacing, insulated headers, aligning windows with stud spacing, or even Optimum Value Engineering.



Find more information here:
<http://www.toolbase.org/Technology-Inventory/Whole-House-Systems/advance-framing-techniques>
http://www.eere.energy.gov/consumer/your_home/designing_remodeling/index.cfm/mytopic=10090
<http://www.eere.energy.gov/buildings/info/documents/pdfs/26449.pdf>
http://www.energystar.gov/ia/new_homes/features/VEFraming1-17-01.pdf

For more information: