Pros of Advanced Framing

Advanced framing is a collection of methods used to reduce construction waste and the amount of lumber required for framing a house, while increasing energy efficiency and simplifying the framing layout. These methods will save you money on the cost of both materials and labor.

Common advanced framing methods:

- 24" on center framing using 2x6 studs
  - Allows more room for insulation.
  - Means fewer studs, thus a need for fewer materials.
  - Makes framing more compatible with standard 2-ft and 4-ft modules, thus better optimization for common lumber and sheet sizes.
- Stacked roof rafters, wall studs, and floor joists
  - All vertical loads are transferred directly downward.
  - Eliminates the need for two top plates, thus minimizing lumber needs.
  - Fewer obstructions when running mechanical, electrical, and plumbing lines.
- Single top plates, single-studs around windows and elimination of window cripples
  - Reduction in both lumber cost and waste.
  - Placement of windows and doors so they land on a stud, which minimizes odd-size, hard to work with cavities formed by excess studs.
  - Eliminating unnecessary cripples saves on lumber waste.
- Framed-in and insulated headers above windows and doors
  - Greater insulation due to lack of "thermal bridges," or conduction of heat through framing.
  - Only place headers where they're needed. Non-load bearing walls do not typically require a header above doors and windows.
- Use of prefabricated trusses and wall units
  - Saves both time and material waste from having to build units on-site.
- Two-stud, open-corner framing
  - Leaves more room for insulation and fewer thermal bridges for cold to pass through.
  - Less compression of insulation resulting in higher performance.
  - Reduced lumber needs by using only two studs per corner.
- Use of 1-inch foam exterior sheathing in place of plywood.
  - When used with two-stud, open corners, cold spots are completely eliminated.

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How advanced framing methods can save you money:

The chart below shows a cost/benefit comparison of materials for a 40-ft exterior wall of an average home:

Materials Comparison for a 40-ft. Wall	
Standard Wall Framing	*Advanced Wall Framing*
35 studs, 10 cripples	21 studs, 2 cripples
28 insulation pieces	20 insulation pieces
Amount of wall that can be insulated: 68%	Amount of wall that can be insulated: 75%
R-value: 13	R-value: 24
Rough cost of framing & sheathing for house: $4,000	Rough cost of framing & sheathing for house: $2,000
Annual heating & cooling costs: $1,000	Annual heating & cooling costs: $710

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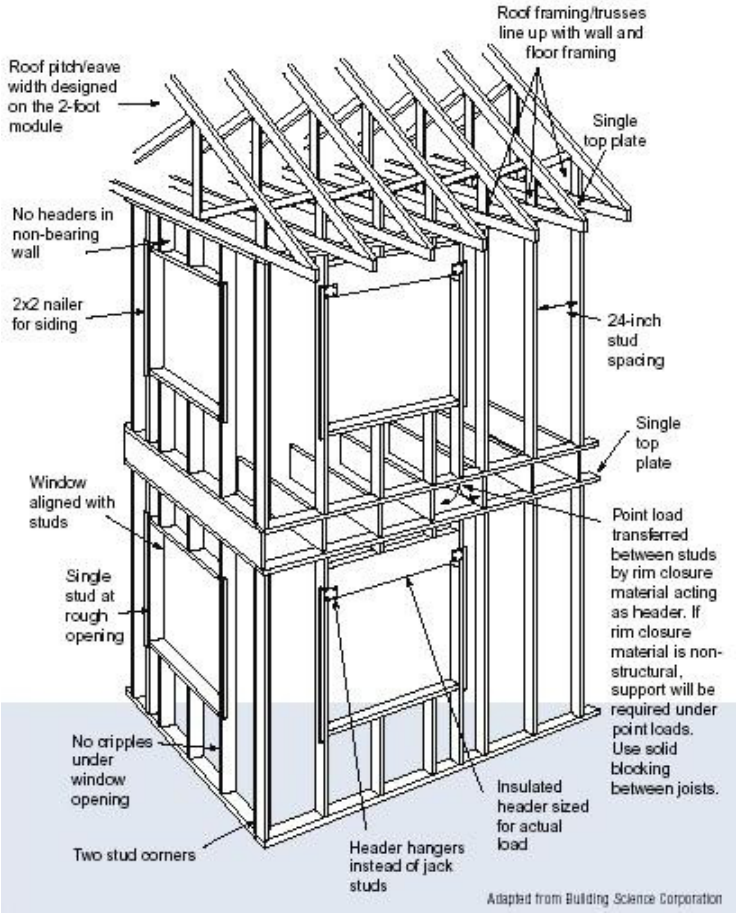
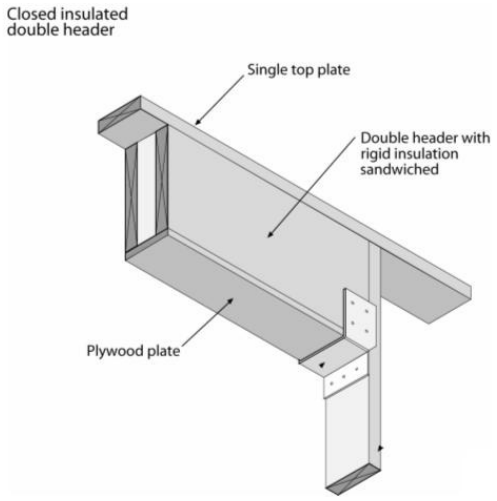
- By reducing the amount of lumber used in your construction you will be instantly saving money in the areas of materials, labor, heating and cooling.
- Your home will be better insulated, providing greater comfort.
- Being thrifty with lumber will reduce construction waste and save on natural resources.





Things to consider:

- Remember, it is critical that you pre-plan advanced construction methods with your architect and contractor. As some contactors are unfamiliar with these methods, it is important that all parties are involved in the material guidance and takeoff processes.

Did you know?

According to the US Department of Energy's Office of Building Technology, advanced framing technologies can save $500 in material costs per 1200-ft² of a house, reduce labor costs by up to 5%, and reduce annual heating and cooling costs by 5%.

www.ecoact.org

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