



# Reuse Tips for Builders, Remodelers & Do-it-Yourselfers



## Building Materials Reuse in Remodeling & New Construction

Many used or surplus building materials can easily be incorporated into renovation and new construction projects. These items may be purchased at low cost and may add a distinctive, often historic, character to structures. In addition, contractors can set themselves apart from the competition by practicing reuse and recycling at the job site—a valuable distinction in today's market.

### Advanced Planning is Key

Planning for reusing structural elements, exterior windows and doors, and other items begins in the design phase so they are included in the building plans. If working with an architect or interior designer, they may not be familiar with using salvaged items. It will be important to convince and challenge them to use them.

Start early to find salvaged items that meet your needs and plans.

When searching for specific items:

- Have a list of the design elements you want the salvaged items to include.
- Be sure to have specific measurements for needed items, including countertops, cabinetry space, ceiling heights, wall and floor lengths, etc. Also, be sure to bring a measuring tape with you when you shop.
- Items originally intended for one thing can be repurposed. One example: Single pane windows aren't energy efficient enough to be used as exterior windows, but may be hung inside a loft or other open living area to define room space.
- If a desirable item is found after the plans are drawn and it doesn't quite fit the available space, perhaps it would be worth changing the design or plans to fit the specific item.

Storage space for the reused components will need to be planned as well. Chances are the search for desired items will take some time, so protecting the "found treasures" from the elements will be important.

### Examples of Reusable Building Materials

- *Architectural details (columns, mantels, molding, bannisters)*
- *Brick & block*
- *Electrical equipment*
- *Flooring*
- *Heating ducts*
- *Insulation*
- *Interior doors & windows*
- *Landscaping materials*
- *Light fixtures*
- *Marble*
- *Plumbing fixtures*
- *Shelving*
- *Siding*
- *Steel beams & studs*
- *Structural lumber*
- *Tile*
- *Trim*
- *Wrought iron gates & grates*

## Finding the Items You Want

Used and surplus building materials are readily available from multiple sources, including:

- Building reuse outlets
- Classified ads
- Demolition sales.

If you are shopping at reuse outlets, it is important to look over each piece you are interested in to make sure that the condition of the items meet your needs. If you are shopping online, ask for pictures and a detailed description of the item's condition. If the owner or client you are working with only wants to use new materials, surplus building materials (e.g. unused wood, drywall, fixtures, etc.), can also be easily found. And keep in mind that previously used building materials may be of a better quality than new ones.

## Know What Salvaged Materials Should Not Be Used

The reuse of some salvaged materials may not be appropriate. Some building materials may pose safety hazards and others may be energy or water inefficient. Consider the age and condition of all materials prior to reusing them. Also, check with local building code officials and local requirements relating to building with salvaged materials. See [NERC's Hazardous Building Materials Found in Homes & Other Buildings \(http://www.nerc.org/documents/hazardous\\_building\\_materials.pdf\)](http://www.nerc.org/documents/hazardous_building_materials.pdf) for information on basic environmental concerns.

*Lumber* - It is important that **salvaged lumber** that will be used for structural applications be professionally re-graded to meet local building codes. If there is concern about the structural integrity of salvaged lumber, use it for nonstructural applications, such as flooring, interior non-bearing walls, trim, paneling, siding, cabinets, or furniture.

*Doors* - Consider the intended application and insulating qualities of **salvaged doors**. Also, doors to be used in applications that require a fire rating will need inspecting.

*Windows* - **Single-paned windows** and many aluminum-framed double-paned windows are not energy efficient. If single-paned windows are in good condition, the use of storm windows can help to limit heat loss. Alternatively, use salvaged windows that are not energy efficient as part of interior décor, or in sheds, outbuildings, and greenhouses.

*Plumbing Fixtures* - **Older plumbing fixtures** (such as faucets) often contain lead solder and leaded brass. Lead solder was regularly used to join copper pipes until it was banned in 1980. Lead from these fixtures may leach into drinking water. Do not reuse plumbing or plumbing fixtures if it's suspected that the fixtures were in place prior to 1980.

*Toilets and Showerheads* - It is recommended that **toilets** manufactured prior to 1994 not be used due to their high water consumption. Prior to 1980, 5 gallons per flush was typical; newer, low-flow models use 1.6 gallons-per-flush. Older **shower heads** are also inefficient. Newer shower heads with 2 - 2.5 gallons per minute are recommended.

*Appliances and Equipment* - **Old appliances, water heaters, furnaces, and boilers** must meet current safety standards and should be inspected for energy conservation specifications.<sup>1</sup> Older

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<sup>1</sup> See [Energy Star \(http://www.energystar.gov/\)](http://www.energystar.gov/) for more information.

model refrigerators and air conditioners are likely to contain ozone-depleting CFCs and old appliances may contain asbestos and other hazardous materials. These appliances must be disposed of properly. Contact local solid waste offices for detailed information.