



Remodeling

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The Economics of Deconstruction

The environmental benefits of deconstruction are obvious, but what about the economics?

by [Nina Patel](#)

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When preparing a house for a project, the remodeling industry standard is to rip out old fixtures, fittings, and materials, toss them in a Dumpster, and haul the containers to the nearest landfill. A better environmental alternative is deconstruction — removing items from the building that can be salvaged or donated. However, the process takes longer and costs more than demolition, so remodelers who are considering using it need to weigh demolition costs against deconstruction costs, including any offsets from tax credits.

Contractor or In-House Crews

Remodelers can use a specialty deconstruction subcontractor for a full-scale process or use a home-grown approach of removing and selling materials themselves. Subcontractors are more viable for larger jobs because they have employees trained in deconstruction techniques and have sources for almost all materials.

Michael Shuster of Wildwood Joinery & Design, in Longmont, Colo., prefers using a subcontractor on large projects. “If we’re doing a pop-top and tearing out the roof structure or tearing down a wing or two of house for a whole-house remodel, then we bring in a demo sub. It’s like hiring a drywall sub — if we are hanging three sheets, we do it. But if we have 500 sheets to hang, I would not even consider having our crew do it,” he says. “The [demo subs] have trucks with dump beds and trained crews. I hate to pay \$20 to \$30 per hour for a carpenter to do days of work that a \$12-per-hour laborer could be doing.”

<http://www.remodeling.hw.net/green...>



Credit: Talmadge Construction

Jeff Talmadge of Talmadge Construction, in Aptos, Calif., likes having a fixed cost for this portion of the budget. “For contractors, labor is often the item we have the most trouble estimating,” he says.

Shuster discusses deconstruction with clients during the sales or bidding process. “Clients are impressed by our care and thoughtfulness,” he says. “People who have lived in their homes for a long time have an attachment. Even if they now want to upgrade it, they do not want to see it destroyed. It seems more professional to take things out surgically versus smashing them with a sledgehammer.”

Brian McVay, general manager of the handyman and home-performance divisions at Neil Kelly Co., in Portland, Ore., says that deconstruction requires a change of mindset. “At our company, there is a growing awareness of where materials are going and where they are being recycled. We are able to answer questions from our more environmentally aware clients. It’s important to think of how we can maximize our profits and minimize our energy use,” he says.

Paul Hughes, president of DeConstruction Services, in Fairfax, Va., suggests that remodelers survey landfill prices in their areas to get an idea of the escalating costs. “That is why many remodelers call us,” he says.

Appraising Materials

DeConstruction Services has 14 people on two crews that remove materials and deliver a broom-swept foundation to the remodeler. Hughes says that he tries to get involved at the beginning of the remodeling process, ideally at the bidding stage, along with the other subs. Either he or his staff visit the house to estimate the cost of deconstruction. He says that there is no rule of thumb or average square footage cost because he has to evaluate the logistics of the site and estimate the number and placement of containers. “To save workers energy and time, you want to move products to the front of the house where they will be picked up,” he says. Most houses have five to six different streams of materials, including wood, masonry, metal, and asphalt shingles.



Credit: Talmadge Construction

The value of the company is that it has relationships with recycling firms, which need to pick up materials on short notice. “Our crews can fill a 30-yard container with drywall in less than a day. We need it pulled the next morning, otherwise we’re backing up. Roll-off companies that need 48-hour notice — that does not cut it,” Hughes says.

In the Washington, D.C., Virginia, and Maryland area, the companies charge about \$250 to \$550 to pick up and deliver containers to recycling plants, but are willing to work with DeConstruction Services because it provides a steady stream of materials. To analyze costs, remodelers should compare the cost of a standard demolition, including landfill fees, with the cost of the deconstruction, including tax credits for the homeowner for any donated products. (See “Economics of Deconstruction,” below.)

For large jobs, Hughes recommends appraisers that provide homeowners with an estimate of the donation value. “The owners can apply their own tax bracket to that to see if it makes sense,” he says. For smaller jobs, his crew does an inventory of the products and prices the donation value at 50% the cost of the item at

The Home Depot. DeConstruction Services has a 14-page matrix with prices that it periodically updates.

Shuster says that on smaller jobs, his crew separates material and takes it to recycling centers. He says that this costs 5% to 10% more for the separation and hauling time, but that he saves on the per-pound cost of taking Dumpsters to a landfill, which usually averages \$300 each. Big projects require two to three Dumpsters for a total of \$900. "It offsets the time to pull windows out carefully or segregate non-painted wood," he says. This is especially worthwhile for heavy loads such as concrete.

Shuster begins remodeling jobs by checking for interesting or architectural salvage items. "People pay a premium for antique-type items. We work with a salvage company to come to the project before we start to remove those items, and clients get paid for them," he says. He then looks at good wood, or materials that can be reused, to donate to Habitat for Humanity Re-Stores or equivalent local nonprofits such as Bud's Warehouse, in Denver, which works with at-risk youth and the homeless to provide job training. Proceeds from sales go to its program.

Shuster has the added support of Boulder County and the city of Boulder, which require a deconstruction plan as part of a construction permit. So, although most customers are supportive of saving materials from landfills, if they are not, Shuster can cite local ordinances.

Starting Point

If remodelers do not have deconstruction contractors in their area, they can start small. "To keep our margins on projects healthful, we have to minimize the time and fuel we put on things," McVay says. "It's often best to reach up and grab low-lying fruit."

Remodelers can start by asking homeowners if they want to use salvageable items elsewhere in the house. For kitchen remodels, Talmadge offers to hang the original cabinets in the garage or basement. He is also creative with old wood, once cutting a piece of mahogany into a surfboard-shaped countertop for his pool house. "Look for an opportunity in old stuff — what can you do with it?," he says. He owns some rental properties, and often uses materials in those houses.



Credit: Deconstruction Services

Talmadge's house and office are located on 5 acres, so he has space to store reusable materials until there is a large enough load for a nonprofit center to pick up. He keeps the materials from each job separated to track the donation for individual homeowners, and advises clients that it may take up to a year for them to receive a donation receipt.

receive a donation receipt.

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Shuster says that an old-fashioned "Free Building Materials" sign on materials in the homeowner's front yard also works well. Sometimes, he doesn't even need a sign. "We leave it on the sidewalk and it's gone in the morning," he says.

Remodelers can also list items on The Freecycle Network, a listserv that people sign up for to receive notifications about free items, or Craigslist, an online classified service. Shuster asks clients to deal directly with listing, pricing, and selling the items "so our crews don't have to stop work and deal with someone looking at the stuff," he says. "Usually the owner sets it up so everyone comes on one day. Any leftover materials, we charge them for hauling away."

Hughes has also sold items on site, giving the proceeds to the homeowner. "If someone approaches us directly, we will call the homeowner, tell them a good price, and the person hauls it away," he says. "That way, the owner makes cash now versus waiting to donate and file taxes."

Hughes says that nonprofit reuse centers are the best place to start, citing the 125 Habitat for Humanity ReStores throughout the country, as well as other local nonprofits. If there is no ReStore in the area, remodelers should approach Habitat for Humanity about starting one.

Economics of Deconstruction

Weighing costs with tax credits for donations

When Brian McVay of Neil Kelly Co. was a deconstruction manager, he kept photos and written inventory that homeowners would use for documenting their credit.

Paul Hughes, of Deconstruction Services, says remodelers should make sure clients understand that the tax credit won't apply until the next tax season. "If you remodeled in February, you would not file taxes for a full year, so you carry that front-end cost for the year," he says.

Jesse White, owner of an architectural salvage firm, says that tax credits are available for donations to 501c3 charities. "At my store, we have a nonprofit partner," he says. "We receive materials on their behalf. We notify them of the donated materials, and they write a letter to the donor. Values are assessed by the owner." In some circumstances, his company sends a letter listing the retail prices of the items, which could be used as a basis for value. "When we sell the items, we send a commission check to the nonprofit. We do not keep track of which item was sold from which particular donor, so we can't give an exact price of what items sold for," he explains. There are nonprofit stores that accept materials and resell them. These organizations typically give a charitable-contribution receipt and usually let the donor assess the value of the materials.

Standard demolition and landfill fees: \$10,000

Deconstruction costs: Cost of appraisal: \$4,000; cost to deconstruct: \$25,000

Difference between demolition and deconstruction cost: \$19,000

Appraised value of materials donated to nonprofit: \$117,000.

The homeowners were willing to pay the extra \$19,000 because they could take the \$117,000 deduction over a five-year period.

Resources

[Building Materials Re-Use Association directory](#)

[Construction Waste Management Database](#)

A listing of companies that pick up and have drop-off for a variety of construction waste.

[Craigslist](#)

[Deconstruction Institute](#)

Educational Web site created by the state of Florida, now run on pro-bono basis by Jesse White of Sarasota Architectural Salvage. Includes benefit calculator.

[DeConstruction Services, Fairfax, Va.](#)

[Environmental Protection Agency resource conservation](#)

[The Freecycle Network](#)

[Habitat for Humanity Re-Store directory](#)

[Institute for Local Self-Reliance's Waste to Wealth information:](#)

National Association of Home Builders: [The Deconstruction Series](#)

[A Guide to Deconstruction](#)

[ReDO ReUse Development Organization](#)

[The ReUse People \(California and Colorado\)](#)

Listing of locations, deconstruction services, and Velvet Crowbar newsletter

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