

Improve IAQ While You Remodel

Tommy Strong for PATH Partners -- 7/1/2007

Of the countless approaches one can take toward a successful green remodeling project, those related to indoor air quality (IAQ) are among the most prominent. Yet the issue itself is one of the least visible. The air we breathe is a hot topic, but one usually examined in terms of improving our clients' lives once the remodel is done. But we can concentrate on how to improve IAQ during the remodeling project, too.

There's no reason why clients should wait until HEPA filters are installed on the air exchanger or a timer switch is wired on the new vent fan to benefit from better IAQ. With a bit of planning and an awareness of products, indoor air quality can be improved the minute you start the job.

The reason remodelers are not bound by the Hippocratic oath is because the directive "do no harm" does not apply. Unlike doctors, doing harm is often the first thing we do. But we can think like doctors, and we should rethink demolition strategies to make remodeling more like surgery and less like tear out. Don't let the speed of the procedure become more important than the quality. Too often the priority of demolition is *getting it done — now!* But you don't do that with other phases of the job like custom woodworking and complex tile designs. Doing a quality job means actually caring how you do a job, not how fast you do a job.

Getting Started

The best part? You can improve air quality immediately with a quick, three-step process that is both cheap and easy. Before demolition begins you simply:

1. Enter the job site
2. Open a window
3. Leave it open

In many parts of the country, outside air is cleaner than what's inside the home, so go ahead and let some of the outdoors in!

Keeping IAQ at a high level throughout the project takes a little more commitment, though, and requires planning and adjustment. But hey, you're a remodeler, so you're used to it. What you may not be used to is analyzing your on-site tactics for isolation, protection and cleanliness.

Isolate

First, isolate the work area so that air quality for the entire home is not compromised when you start tearing into drywall. At a hallway or door opening, set up a barrier using heavy duty 6-mil plastic, not the thin stuff. Mount it to a 2- by 4-inch frame, and stick it in the opening using a friction fit. Tape the edges securely and install a zipper that allows for access back and forth.

Next, don't just block off the air conditioning registers but seal them shut and check to see if there are dampers that can be closed anywhere in the ductwork. If a return air box in the work area can't be disabled during construction, keep a supply of filters on hand and change them regularly.

One way to make sure your clients are satisfied when the dust has settled is to manage the settling dust. Start with minimizing traffic through the living space. When you can't access the work area through an exterior door, consider removing debris out of a window. If you have a window to replace, take it out early and install the new one later. Maybe you can turn a window into a temporary door. For a 15-week project, it

could easily be worth the expense if it will prevent a parade of trade contractors from trudging through the front door every day and across the hardwood floors.

Ventilate

Your next goal is to ventilate, so bring in the fans. Box, cyclone, oscillating or my personal favorite, the "squirrel catcher," a reclaimed blower from an old air conditioner. We mounted one in a box, screwed a handle on top, and connected 20 feet of 10-inch duct to the exhaust. It doesn't matter what you use, though, as long as you create negative air pressure.

Designate an opening to exhaust all the dirt and grime — ideally an opening that is not the entrance. Sweep large debris, and vacuum the rest. Bag old insulation batts and reuse the bags. When removing ceilings under attics, work from above and suck out loose fill — don't just kick down the drywall and get out of the way. We employ a box blower for this operation too, using a length of ductwork attached to the intake. Finding a way to bag, vacuum or minimize the dust from old insulation will minimize the effects of toxic detritus contaminating the work area and workers.

Another tip: You may want to leave the old carpet in the room until the end of the demolition. It's easier on your feet, it keeps the noise down and it will grab a lot of the dust your crews create.

Accommodate

When it's time to put Humpty Dumpty back together again think carefully about how to bring in materials and products. No matter what you are installing — and it matters a lot — do it right.

To a lot of clients, "construction chaos" means drywall dust — everywhere. You can lessen the mess by using USG Dust Control Joint Compound that has special additives to coagulate the dust. Under the heat generated by sanding, the excess "mud" solidifies into small blobs and falls to the ground rather than hanging in the air and migrating all over the place.

Wet sand whenever you can. Vacuum rather than sweep, but if you do sweep, be sure to sprinkle water around to keep dust on the ground.

Another way to alleviate indoor disruption is by doing as much work outside as possible. Cut everything you can outdoors, especially flooring and plywood. Grinding and cutting backer board, tile and granite inside the work area is completely unacceptable; do it on sawhorses in the driveway. And make sure sanders or planers have dust bags.

OK, so maybe all your effort won't elicit from your client the oohh's and aahh's that 12-foot ceilings do, and it won't take their breath away like a polished granite countertop. But fine-tuning your tactics can boost indoor air quality — and the quality of life — during the project for your production team and for your clients when the job is done.

And if you discover that this more refined approach means you're not using the sledgehammer as often, don't worry. You can always use it to prop the door open and let some fresh air in.

Author Information

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Brothers Strong Remodeling

Brothers Strong is a residential design/build firm, named 1999, 2003 and 2005 Houston Remodeler of the Year and Texas Remodeler of the Year in 2001 and 2003. A PATH Remodeler Partner since 2006, Brothers Strong demonstrates a commitment to building practices that improve the durability, efficiency, affordability, and environmental performance of their homes.

In addition to remodeling, the Strong brothers just finished building their first home through their new division, GreenHaus Builders. The home will be certified with a gold rating under the new LEED for Homes pilot program. Learn more about Brothers Strong at www.BrothersStrong.com or www.GreenHausBuilders.com.