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This Old House

SPECIAL ANNIVERSARY ISSUE

This Old House 40 YEARS

Best of the Best

Your favorite projects, people, moments, and memories from TOH TV

Tom Silva takes a well-deserved break

2000

PLUS:

Tommy's tool belt

Norm's tartans

Richard's cutaways

Kevin's photo album

Roger's top tips

SNEAK PEEK:

Our 2019 Idea House

How Safe Is Your Home's Wiring?

Your home and family may be vulnerable to easily preventable dangers. Read on for ways to protect them.

An Ounce of Prevention

More than half of the 28,000 electrical home fires[1] and nearly 70% of the 400 electrocutions that occur in the U.S.[2] every year could have been prevented with two inexpensive, DIY-friendly safety devices. And while these devices may look similar, the ground-fault and arc-fault dangers they prevent—and functions they perform—are vastly different. Here's why you need the protection of both.

The Ground-Fault/Arc-Fault Difference

Ground-faults occur when electricity escapes bare, damaged, wet, or poorly insulated wires and takes a shortcut to the ground. If your body provides the path to that ground, you could be electrocuted. Arc-faults happen when electricity crosses a gap between damaged wiring such as loose, corroded, overloaded connections in walls, appliances, and cords. The resulting high-intensity heat can ignite surrounding materials, including framing and insulation. GFCI (Ground-Fault Circuit Interrupter) and AFCI (Arc-Fault Circuit Interrupter) outlets detect these faults and instantly break the connection, reducing the risk of electrical shock and fire.

Keeping Up with Codes

The National Electrical Code® (NEC®) has long mandated that GFCI outlets be installed in kitchens, bathrooms, garages, outdoors, and other damp locations. More recent code changes require AFCIs in living spaces such as bedrooms and living rooms. In 2014, the NEC introduced additional AFCI requirements for kitchens and laundry rooms; so if you are remodeling or building new, you'll need to have both in place. If you need to upgrade, Leviton's SmartlockPro® Dual Function AFCI/GFCI outlet offers shock and fire protection in one device and can be used to satisfy NEC requirements for modifications/extensions, replacement receptacles, and, in certain instances, new construction.

Why Choose an AFCI/GFCI Outlet?

The AFCI/GFCI dual function outlet is a cost-effective option that works with any type of wiring and can be reset by simply pressing a button on the face of the device.

[1] National Fire Protection Association; Electrical Safety Foundation International (ESFi)

[2] Electrical Safety Foundation International (ESFi)

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What Goes Where?

Now that you know the difference between the devices, here's where they should be installed in your home.

Living areas such as bedrooms, hallways, and family rooms to help **protect your home from electrical fires.**

Near water sources, such as bathrooms, basements, garages, and near pools and spas to help **protect you from electrocution.**

Kitchens and laundry rooms or as a replacement option for any ungrounded outlets to help **protect from electrical fire *and* electrocution.**

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SPECIAL ANNIVERSARY ISSUE

This Old House 40 YEARS

The Tao of TOH

The Fab Five in 2003, when host Kevin O'Connor was the new kid. The cast reflect on their shared journey, starting on PAGE 46

PHOTO: KELLER + KELLER

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In 1979, we went with chocolate brown—now is your chance to pick a palette and get creative with the Dorchester House

Early access on tablet!

Now you can download the latest issue of TOH on your tablet before the print issue is available. Go to **thisoldhouse.com/tablet**

PHOTOS: (TOP) ANTHONY TIEULI; (BOTTOM) KEVIN O'CONNOR

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Look who's 40!

Forty years is a long time for anything to last—a marriage, a restaurant, a business. It is almost unheard-of for a television show. And there's a good chance that no one expected that to happen for a little show called *This Old House* that sprang to life in Boston on the local PBS station, WGBH, in 1979.

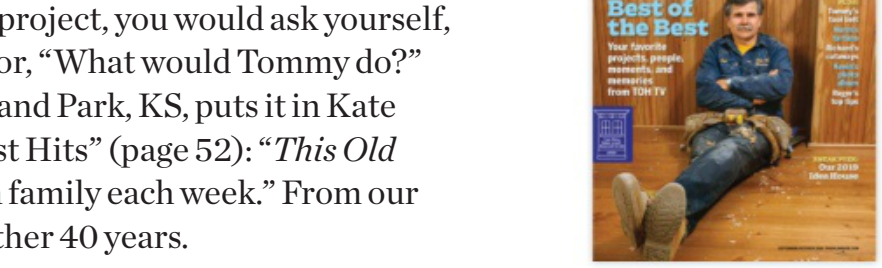
In 14 weeks, a crew of talented tradesmen rehabbed a rambling wreck in Dorchester, MA—and viewers gobbled it up. The show went national on PBS the following year, and ever since, there's been no looking back.

This year, *This Old House* is celebrating its 40th anniversary, and the magazine that you are holding is a celebration of that milestone. The show is the foundation for everything that came later—the magazine, *Ask This Old House,* the website, the Insider club. So we're suspending business as usual in this issue to acknowledge the phenomenon that *This Old House* became.

Like many of you, I discovered *This Old House* early, as a young woman living in kind of a wreck of my own in the northern Detroit suburbs in the '80s. Every week, my husband and I would tune in on Saturday morning to follow the crew's progress on the current project, gleaning inspiration and knowledge that could be applied to our own house. (You'll notice I said "could be," and not "was.")

But many of you did take that knowledge into your own hands. You watched the show with your parents, and then later, with your children. *This Old House* taught you not to be afraid of tiling a bath, building a deck, or demolishing a wall. And as you tackled each new project, you would ask yourself, "How would Norm do this?" or, "What would Tommy do?"

As Pam Stockham of Roeland Park, KS, puts it in Kate Wood's story "*TOH*'s Greatest Hits" (page 52): "*This Old House* is like meeting up with family each week." From our family to yours, here's to another 40 years.



SUSAN WYLAND,
EDITOR-IN-CHIEF
susan@thisoldhouse.com

BELOW: Trawling through decades of images for cover inspiration, we couldn't pick just one! So for this special issue, we've created five different covers, mailed out at random. You can purchase a special collector's set of all five of these 40th-anniversary magazines by going to **thisoldhouse.com/collect** and ordering yours for $25. Supplies are limited, so please place your order now.

PORTRAIT PHOTO: ERIC OGDEN; HAIR AND MAKEUP: CINDY ADAMS/HALLEY RESOURCES. COVER PHOTOS: (CLOCKWISE FROM TOP LEFT) DAVID CARMACK; KELLER + KELLER (4)

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As featured in This Old House Idea House New Canaan, CT 2019 **See the exciting reveal in the November/December issue of TOH!**

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40 something

INSIDE | PLAID TIDINGS | HOSTING SECRETS | RICHARD'S CUTAWAYS | MORE

This old tool belt

Tom Silva has been joined at the hip with McGuire-Nicholas full-grain leather tool belts for more than 40 years; this is the third one *TOH*'s general contractor has owned. Tom says his fondness for this model comes down to two features: its easy-to-adjust, quick-release buckle and its five relatively small pockets. "They're just the right size for the things I need, and can't be overloaded with extra stuff." Here's what they typically hold.

PHOTOGRAPH BY ANTHONY TIEULI

The tartans of Norm

The TOH master carpenter became a reluctant plaid ambassador when show creator Russ Morash made it Norm's on-air signature. Below, some of his classics

Leslie Dress Modern

Norm sports the bold colors that make this the updated version of a traditional tartan as he fixes a window's sash lock in 2012.

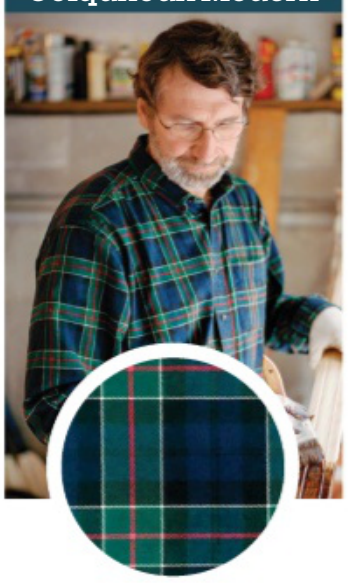
Black Stewart

Back in 2001, this black-field variation on Royal Stewart—it's tied to the Scottish and English monarchy—was among Norm's go-tos.

Brodie

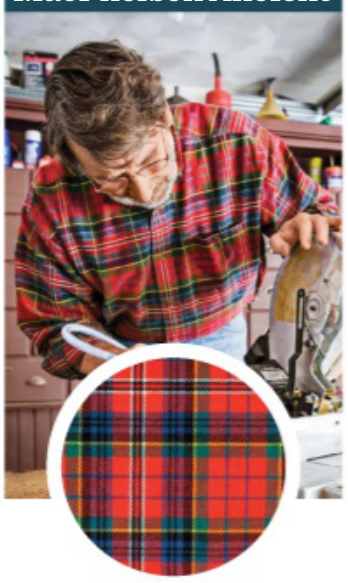
Norm uses a level to check a post for plumb in this 2007 shot. Like the others here, this classic tartan dates to the early 19th century.

Colquhoun Modern



In 2005, Norm applies wood stain wearing a tartan whose name only looks tricky (pronounced ca-*hoon*). The clan goes back to the 1300s.

MacPherson Ancient



Sure, flannel is work wear, but the notably neat Norm keeps his tidy; in this 2008 photo he vacuums sawdust while clad in a cheery red plaid.

PHOTOS: (NORM, LEFT TO RIGHT) ANTHONY TIEULI; KOLIN SMITH; RUSSELL KAYE; CARL TREMBLAY (2); (MIDDLE LEFT) RICK OLIVIER; (BOTTOM LEFT) KELLER + KELLER

TOP: Tom Silva conceals the jacked-up wheels. ABOVE: Russ Morash, Tom, and Steve Thomas fess up to Sara Ferguson.

Mischief-makers

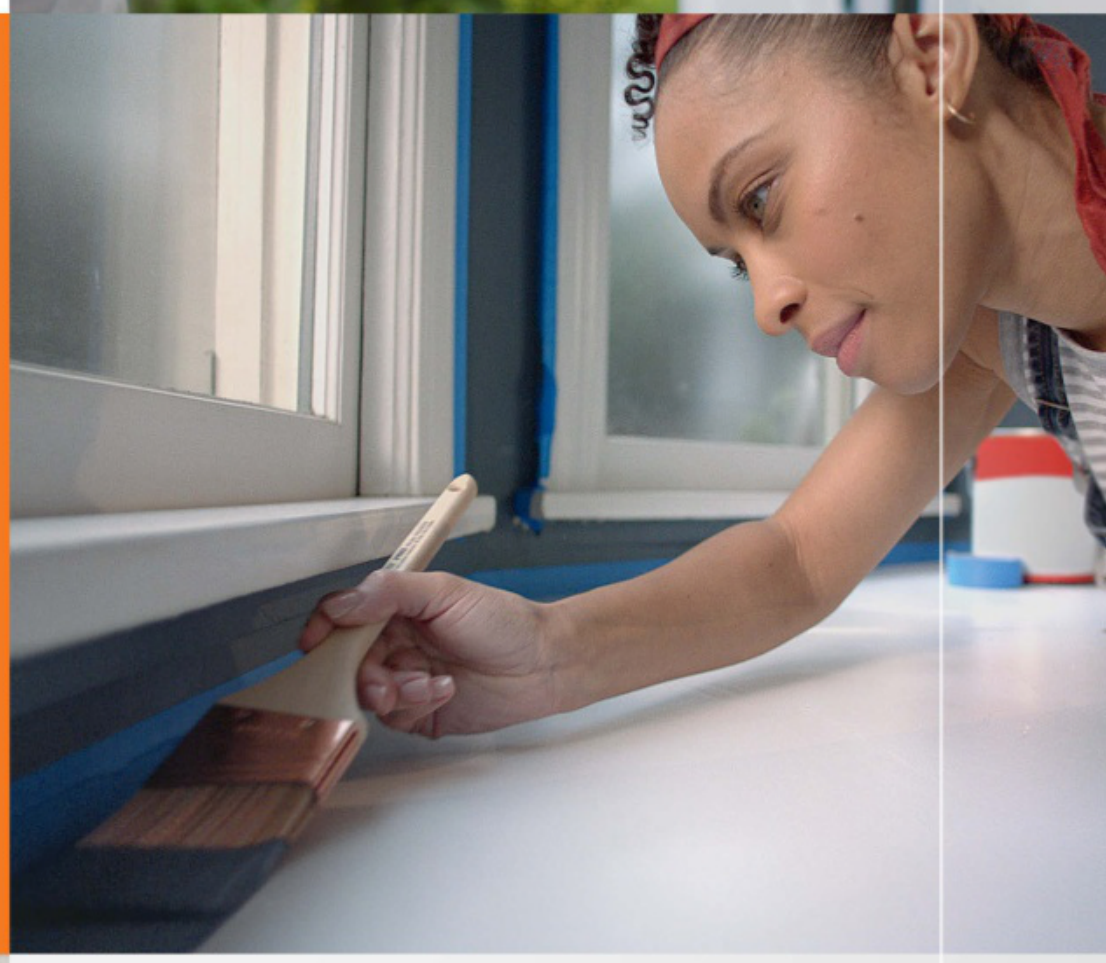
Tom and Charlie Silva aren't just house-building wizards. They're equally inventive when it comes to their sideline: pranking the TOH production assistants. Here, a few of their "all in good fun" job site setups

Spinning her wheels Filming ground to a halt as then production coordinator Sara Ferguson's car was blocking the sand-and-gravel driveway at Billerica. Try as she might, she couldn't budge it, so host Steve Thomas offered to help. Sara hopped out, he got in and hit the gas… that's when she noticed her wheels were just spinning. The crew had dug a hole, jacked up the car frame just above grade, and set it on blocks, shoveling sand around the tires. As the guys yelled "Gotcha!" Sara flushed scarlet and shared in a good laugh.

Something fishy At the Concord Barn, Tom and Charlie Silva decided to prank the coffee-making PA. They rigged a 5-gallon water jug with 6 inches of water and bought "the ugliest fish of the right size" at a pet store. They dropped in the fish, taped the spout shut, and set the bottle in the dispenser. "The fish played its role perfectly and settled in at the bottom," Tom says. When the PA went to fill her coffeepot and the water wouldn't flow, "she shook the bottle and the fish jumped and flapped—you could hear her shriek from two blocks away."

Scaffolding "accident" falls flat At the Wayland House, Charlie dressed up a dummy in Silva Brothers work clothes and hauled it to the top of a three-story-high scaffold. Then, as the new production assistant was walking by, Charlie yelled as if he had fallen and hurled the dummy off the scaffold—and it landed with a thud at her feet. Everyone else was in on the joke and called out in concern, but she was so focused on what she was doing, she didn't even look up. "No screaming or anything," says Charlie. "It was really disappointing."

CELEBRATING 40 YEARS OF HOME IMPROVEMENT



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Hosts with the most

Bob, Steve, and Kevin share stories and memories from their years on This Old House BY KATE WOOD

Bob Vila, Steve Thomas, and Kevin O'Connor recently came together for the first time to talk about their experiences as hosts of *This Old House.*

Bob Vila

(Seasons 1–10)

This Old House's first on-air host actually started out as its first homeowner. In the never-aired pilot for what eventually became *This Old House,* Bob and his wife showed a *Boston Globe* reporter around the circa-1840 Newton, MA, house the couple had restored.

One year later, Bob got a call that a totally revamped version of that pilot had been green-lighted. "I was restoring brownstones, and thought it would be good publicity for my company," he says. "Plus, I thought it would be fun." The show's first season, with the Dorchester House, debuted on Boston's PBS station, WGBH, in February 1979.

A degree in journalism, as well as his experience as a contractor, came in handy for the hosting gig. "I wasn't intimidated by a camera; I'd been trained as a journalist," Bob says. "But before *This Old House,* nobody had really been interviewing people like electricians and plumbers."

Houses people could relate to, like Season 7's low-slung Tampa House, built in the 1950s, stand out as favorites from his time on the show. "Renovating a house that was a little run-down, but wasn't a disaster, let viewers see the possibilities in buying a 30-year-old ranch."

Steve Thomas

(Seasons 11–24)

A casual mention of his own remodel—a Georgian Colonial in Salem, MA—led to Steve Thomas auditioning to be *TOH*'s second host. He was just back from shooting a documentary in Micronesia about his first passion, sailing, and his publicist asked what he was up to.

"My screen test was to explain the Concord Barn"—work began in 1989—without a script. It went well, but there was a catch: He had to agree to shave his beard, because the producers felt he looked too much like Norm!

"I was terrified," Steve says of his first few times talking to the camera. So he focused on what he loved about building "and asking questions and being curious. The role of the host isn't to be an expert; it's to bring the experts' knowledge to the audience."

Acton and Manchester-by-the-Sea were in terrible shape, he recalls, leaving some wondering if they were worth saving. "But a community is a conversation among buildings as well as people," Steve says. "If you destroy the built environment because it's inconvenient to save it, you destroy that connection. At the end of the day, *This Old House* is about preserving that conversation and maintaining communities."

Kevin O'Connor

(Season 25–present)

A letter to TOH magazine—written by his wife, Kathleen—started Kevin O'Connor on the path to hosting the show he grew up watching. "We'd bought this fixer-upper, an enormous 1893 Queen Anne, and quickly realized there was way too much to do," Kevin says. "But it was a no-brainer that if you ran into problems, you'd turn to *This Old House.*"

When producers contacted the couple, "all I heard was 'Tom Silva' and I said yes," Kevin says. He and Kathleen had no idea that one of the segments they filmed would be part of a new show called *Ask This Old House* (episode 22) or that the producers would be back in touch.

"I was a banker, and while we were filming, everyone was asking me about loans and interest rates." So when *TOH* called again, he assumed it was for financial advice, not a job offer. "Next thing you know, I was on a job site [2003's Concord Cottage], asking all the questions. They were the masters, I was the student, and we just got to it."

But the Carlisle House, which *TOH* bought to renovate, is Kevin's favorite to date. "It was this monster of a project where Tom Silva could do whatever he wanted." And when the *TOH*-owned house was finished, since there were no homeowners anxious to move in, "We got to hang out. Some of my fondest memories are from there. For a couple of months, it was our house."

PHOTO: ANTHONY TIEULI

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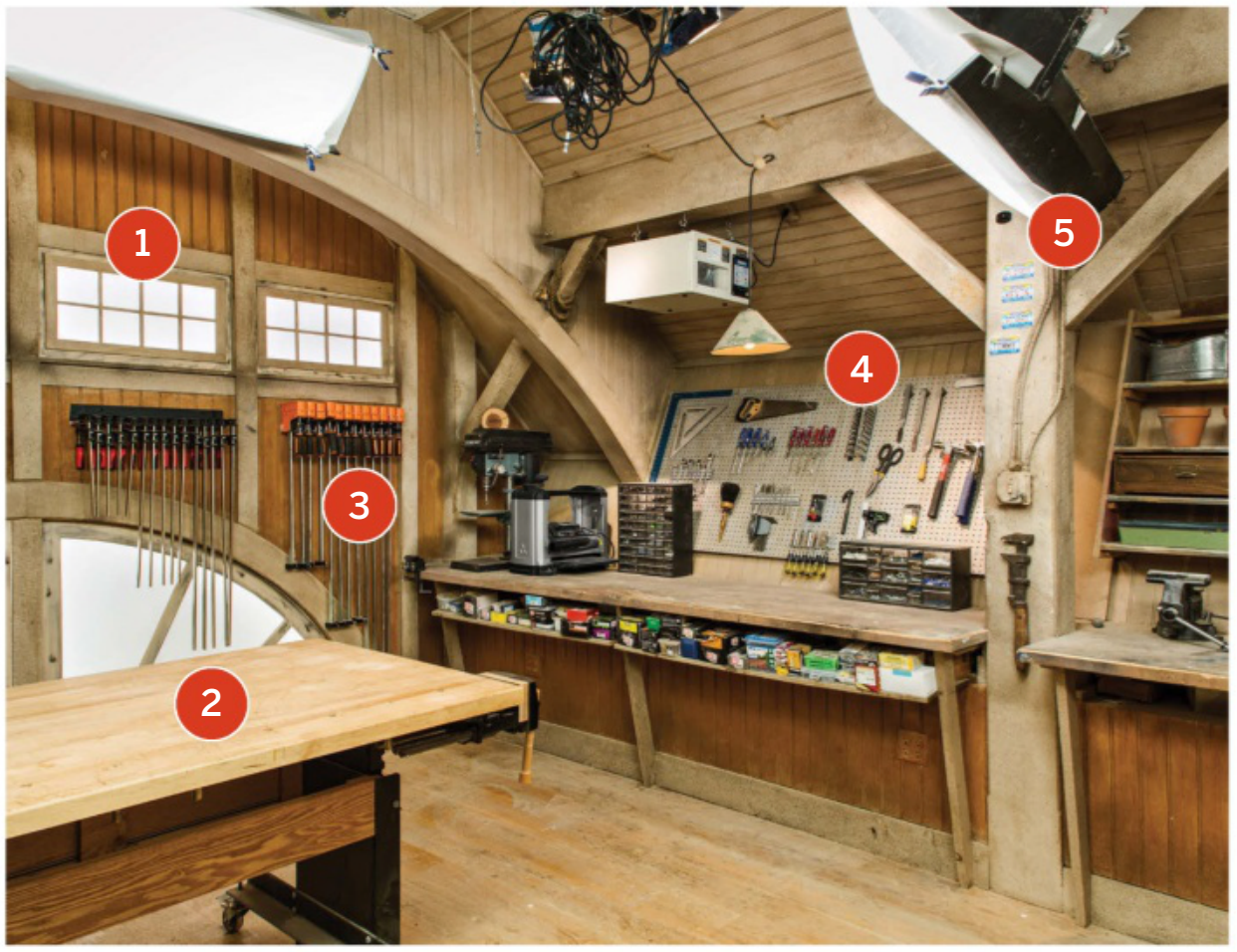
Workshop wonders

A behind-the-scenes look at the Ask This Old House studio's four trade-focused corners, each with a homey mix of tools, materials, and mementos **BY KATE WOOD • PHOTOGRAPHS BY ANTHONY TIEULI**

Carpentry>

1 > Though they replicate the real windows they replaced, these LED-backlit panes only date to 2016. Not having to rely on the sun is a big help when projects take longer than expected.

2 > It appears to be a standard workbench, but this surface is enviably versatile: The height's adjustable, it's got built-in vises and holes for bench dogs, and, of course, it's easy to roll to wherever it's needed.



3 > As Norm Abram likes to say, you can never have too many clamps! This cascading display is twice as extensive as what you see here.

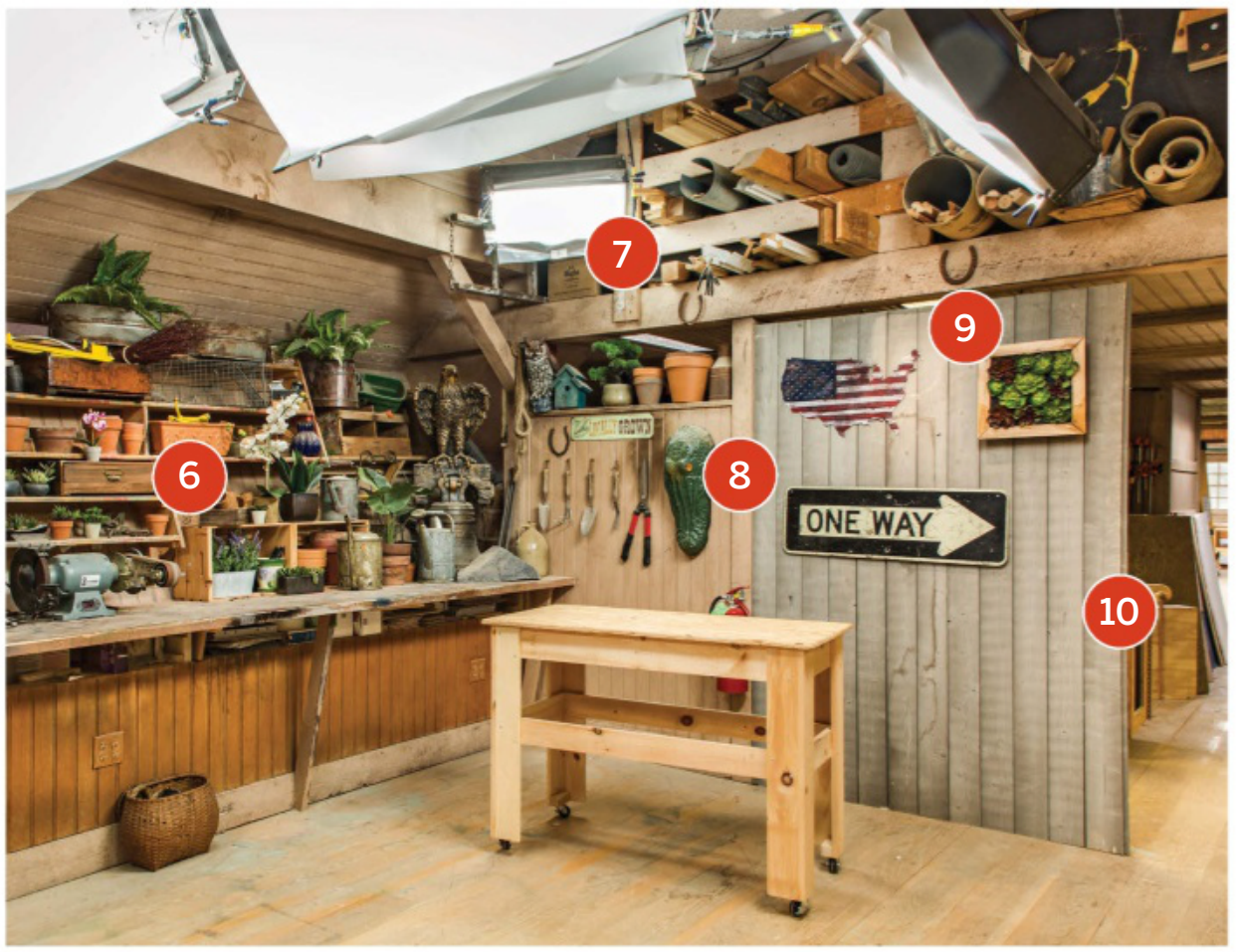
4 > This pegboard-o'-tools is meant to be set dressing—tools for each project are laid out elsewhere—but the guys often grab (and use) these.

5 > Mini license plates playfully recall a Las Vegas house call in Season 5 where Roger Cook put in a privacy screen: Kevin, Tommy, Richard, and Playboy—Roger's self-appointed tag.

Landscaping>

6 > Though the plants on this ersatz potting shelf add color—and the varieties were chosen because they can thrive in low light—they're fakes.

7 > What looks like loft storage for extra materials is actually a cleverly concealed door. The boards and pipes are only about a foot long, and the whole shebang swings out to allow access to the studio's HVAC unit.



8 > The gator head, and the owl on the shelf above, go back to Season 1. They were in a Tom Silva segment on humane pest control.

9 > The succulent art replicates a Season 14 project by landscape designer Jenn Nawada. It's also fake—even easy-care succulents need some natural light.

10 > More faux: the sliding barn door, which was added in Season 15. Originally, the low-ceilinged area behind it (less than ideal for 6-foot-plus Roger) was the landscaping zone.

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Plumbing>

11 > What's that nestled inside the coil of copper wiring? A smart thermostat, just like the one Richard Trethewey installed in a Massachusetts home during a Season 11 house call.

12 > Though the huge TV lights do the heavy lifting during filming, vintage-style (and in some spots, pretty dusty!) pendants hung as task lights amp up the old-school workshop feel.

13 > This storage is shallower than it looks, so these pipes —a mix that includes PVC, galvanized, and copper—are less than 2 feet long. Still, they come in handy!

14 > That yellowed paper almost hidden on the wall is a calendar from 2002 —the year *Ask This Old House* debuted on the air—and it has never been updated.

15 > Similar to the carpentry corner, this section has tools and materials aplenty. The plumbing carousel holds necessities like fittings and flux.

Electrical>

16 > There might not be any parking in the *AskTOH* workshop, but there is an electric vehicle charger from a segment in Season 13.

17 > Collected bits and pieces of Americana—like the ROUTE 66 sign and miniature Statue of Liberty seen here—are reminders of *Ask This Old House*'s cross-country adventures.

DIG INTO THE DETAILS
Check out views of even more of the AskTOH workshop at **thisoldhouse.com/ask-loft**

18 > This whole-house energy monitor first showed up during Season 15; home technology expert Ross Trethewey gave an update on how it's working in Season 16.

19 > Though beers are occasionally brought out of the mini fridge, it's usually full of bottled water.

20 > The studio's up a flight of stairs, so anything heavy has to be carried. Once oversize items like Richard's ever-growing collection of water heaters make it onto the floor, they're there to stay!

"The *Ask* workshop is our clubhouse, our family room, our garage. Sure, we film a lot of TV there, but it's also a home base where we can let our hair down and be ourselves." —KEVIN O'CONNOR, *THIS OLD HOUSE* HOST

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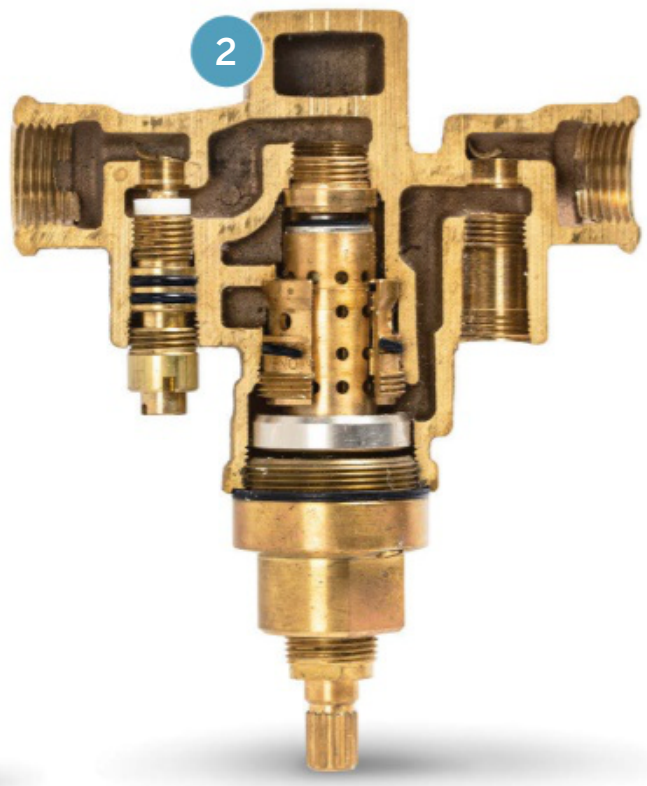
It's what's inside that counts

For decades now, Richard Trethewey has been cleaving plumbing parts in two in order to reveal their inner workings

BY JILL CONNORS

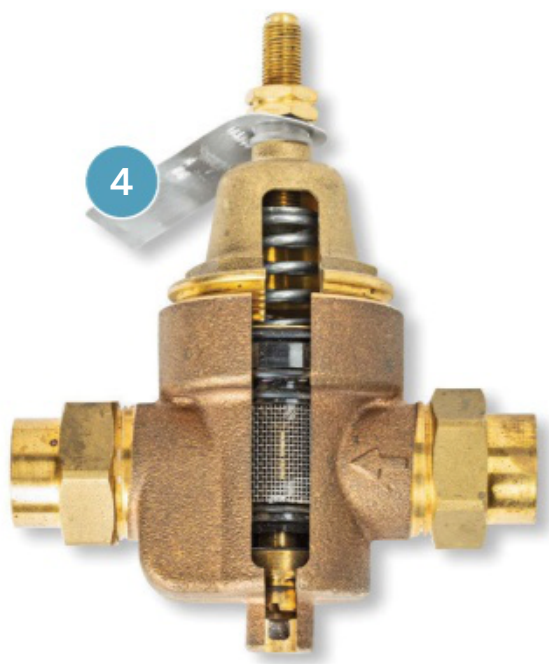
If plumbing is a mystery to you, you're not alone. "Many people have no idea how water gets to their building, how wastewater leaves, or how their house is heated or cooled," says *This Old House* plumbing and heating expert Richard Trethewey. "So my role in the past forty years has been to demystify that technical world. And it is almost impossible without a cutaway. I am the great bisector."

Wielding band saws, rotary tools, hacksaws, and more, Richard has cut up at least 60 items—from garbage disposers and water heaters to dozens of valves and pipes. Here, he explains some of his favorite teaching tools.



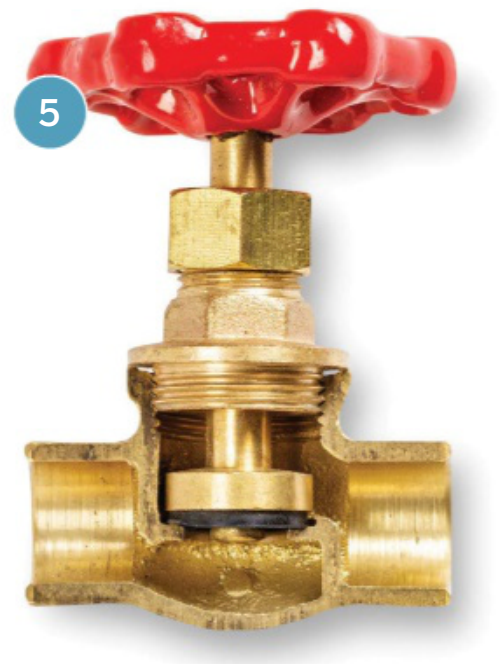
1 > Garbage Disposer

"This was my very first cutaway for *Ask This Old House,* so it is my first love. It made me realize how valuable a cutaway is in showing how things work—we could show the blades, the motor, and all the way down to the reset button on the bottom. It's been great for explaining how to repair a garbage disposer."



2 > Thermostatic Shower Valve

"There is perhaps no one thing more amazing in residential plumbing than the pressure-balanced valve for safety and comfort, because it takes hot and cold water and constantly delivers the right temperature."



3 > Siphon Jet Toilet

"Billions of toilets function flawlessly every day based on a simple principle, the siphon jet. The design has a short leg and a long leg; water is pushed through a small hole at the base of the bowl to start a siphon—the combined effect is to flush everything away. This cutaway has been on *The Tonight Show,* and on *AskTOH* at least ten times."

PHOTOS: ANTHONY TIEULI

4 > Pressure-Reducing Valve

"This device goes on the water main coming into a building in areas where the municipal water is supplied at a pressure that is too high, anything over 75 psi. Its spring-loaded core acts like a shock absorber, sending water at just the right amount of pressure—we look for 45 to 50 psi—into the house."

5 > Standard Stop-and-Waste Valve

"The most common plumbing valves all stop and regulate the flow of water, but their design has evolved over the years. The standard stop-and-waste valve, which is still used for branch lines in houses, relies on a rubber washer that will wear out eventually. A better option is the gate valve, which has a guillotine bronze wedge driven down into a gate to close off water; it has long been used on water mains. But it has its limitations, too; over time electrolysis can rot the threads into a closed position."

6 > Gas-Fired Tank-Type Water Heater

"No cutaway has given us more mileage than Old Rusty Water Heater. It's the only way you can see the important components inside—the dip tube, the anode rod, and the steel tank construction—and get a sense of why every water heater has a limited life span due to corrosion."

7 > Ball Valve

"The invention of the ball valve was revolutionary. It has a stainless-steel ball inserted next to a special material that will never wear out. It is clearly the valve of choice. Many plumbers now use ball valves everywhere for their long service life."

8 > Temperature and Pressure Relief Valve

"This is absolutely one of the most important safety devices in a house, designed to relieve pressure if a water heater ever gets to an unsafe pressure. We don't want water heaters ever going airborne again."

9 > Water-Hammer Arrester

"So many plumbing complaints begin with, 'It makes a noise like this…' and that's generally because too much water is moving through a pipe and then stopping suddenly. That's where the 'water hammer' reference comes in. An arrester is basically a chamber that sits inside the plumbing system with a neoprene gasket inside and air pressure on one side and water on the other. Oncoming water hits the equivalent of a trampoline—the gasket, which acts like a shock absorber, then lets water pass through."

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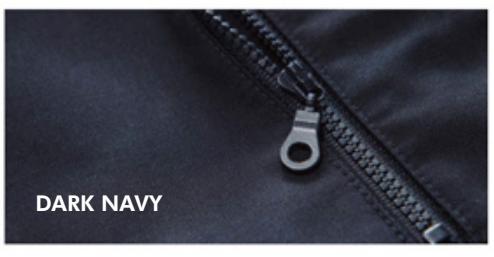

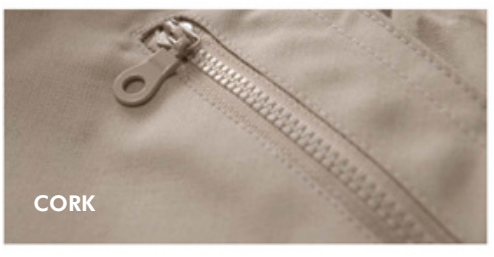

"I love the zippered pockets to keep my items secure. I really like the feel of the cotton. It is so comfortable."
David, Michigan

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Time after time

Forty years feels like half a lifetime ago—and it is. A look back at some of the kitchens and baths TOH has built confirms how times (and tastes) have changed...or have they? BY DEBORAH BALDWIN

IF THE KITCHEN were a menu item, we'd call it comfort food, as familiar as mac 'n' cheese. Might have something to do with memories of hanging out after school as Mom made dinner, and trying to score some milk and cookies. Today, even as kitchens get bigger and fancier, they remain the No. 1 destination for the whole family, pets included. Where else can you find cold drinks, lively conversation, and maybe even your keys and cell phone?

Over time, kitchen design has blurred the line between cooking and living areas, borrowing finishes and furnishings from entertaining spaces in the house. Meanwhile, the bath—that other most-frequented destination—has undergone similar upgrading, with a steady march from utilitarian to spa-like.

Curious about more signs of the times, past and present? Read on.

▲ **NOW** | JAMESTOWN NET-ZERO (2018)

▲ **THEN** | DORCHESTER (1979)

PHOTOS: (TOP) ANTHONY TIEULI; (BOTTOM) ROTHENBORG PACIFIC FOR WGBH

The Wood Kitchen

>> Durable oak has long been a go-to for warming up a cook space. By 1979, when *TOH* rebuilt the Depression-era kitchen in the Dorchester House, LEFT, cabinets made from the grainy, dark-stained wood were as popular as laminate counters and white appliances. In a zingy color now known as retro orange, that laminate—an easy-care, cost-conscious choice—became a focal point echoed on the walls.

Fast-forward to 2018 and Jamestown, ABOVE. Who knew a wood kitchen could feel so light and airy? Chalk it up to cabinetry and floors in quartersawn white oak given a pale whitewash. Then add layers of white finishes and reflective surfaces: crisp quartz countertops, classic subway tile, an oversize apron sink, painted upper cabinets that disappear against the wall, high-end enameled appliances, and a glossy planked ceiling. Simple black light fixtures, windows, and cabinet pulls help pin this kitchen gently down to earth.

▲ **NOW** | **CHARLESTOWN** (2014)

▲ **THEN** | **NEW ORLEANS** (1991)

The Colorful Kitchen

>> Time was, adding color to the kitchen—this one, ABOVE, belongs to *TOH*'s 1890s "shotgun double" house in pre-Katrina New Orleans—meant painting the walls a pretty pale hue. The lavender used here, combined with pickled-oak cabinets, black appliances, and granite-look gray laminate countertops, was pretty avant-garde for 1991.

But compare it with 2014's Charlestown kitchen, TOP, and it's easy to see the move toward richer colors and materials, including hand-painted and glazed deep-blue cabinetry, marble countertops, and warm brass finishes. Bumped out and opened up, the 2014 kitchen was of the moment while also nodding to the 1850 rowhouse's past, with flat-panel cabinet doors, globe pendant lights, and a sculptural high-arc faucet. As for the flooring, meet the latest durable exotic-wood import, Brazilian cumaru, which is cozied up with traditional Oriental rugs for a living room feel.

Timeless trio

Highlighted here: three decades-old kitchens that look just as current today

SANTA FE (1989) This space reflects its traditional adobe home. Built by Norm Abram with local craftsmen, the pale pine cabinets flatter traditional plaster walls and beams. The marble and stainless steel are still up-to-date.

BILLERICA (1999) What makes this Victorian-inspired kitchen's time-tested look a success: Shaker-style fir cabinets, open shelving, an island wrapped in beadboard and accented with legs, stone counters, and pro-style appliances.

ACTON (1994) This classic farmhouse kitchen, with its warm cherry cabinetry, wide-plank salvaged-pine floors, honed-granite counters, and stainless-steel appliances, still looks ready for prime time, 25 years after it was built.

PHOTOS: (CLOCKWISE FROM TOP RIGHT) COURTESY OF WGBH; KELLER + KELLER FOR WGBH; RICHARD HOWARD FOR WGBH; COURTESY OF WGBH; ANTHONY TIEULI

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▲ **NOW** | **NORTH SHORE FARMHOUSE** (2016)

▲ **THEN** | **WOBURN** (1982)

The White Kitchen

>> In 1982, when *TOH* tackled the kitchen in the 1950s Woburn House, LEFT, one concern was its small size. The budget wasn't big either, and the reno relied on off-white laminate cabinets and white appliances. Blue tile, used for both the backsplash and wood-trimmed counters, was a budget-friendly way to make the white scheme snap. Way ahead of today's desire to recycle, the crew saved the brown fridge, using a technique similar to automotive painting to give it a fresh look that allows it to blend in.

The 2016 North Shore kitchen, ABOVE, showcases snowy cabinets made less predictable with a blue island for contrast. In the mix and here to stay: black stone counters along the perimeter, marble on the island, white subway-tile walls, black window sashes, and light-channeling open shelves in place of upper cabinetry. More luxe touches include random-width hickory floorboards, statement lighting, and a supersize range hood—reflecting not only changing tastes but bigger kitchen budgets (and spaces) and higher aspirations.

PHOTOS: (TOP) ANTHONY TIEULI; (BOTTOM) BILL SCHWAB FOR WGBH

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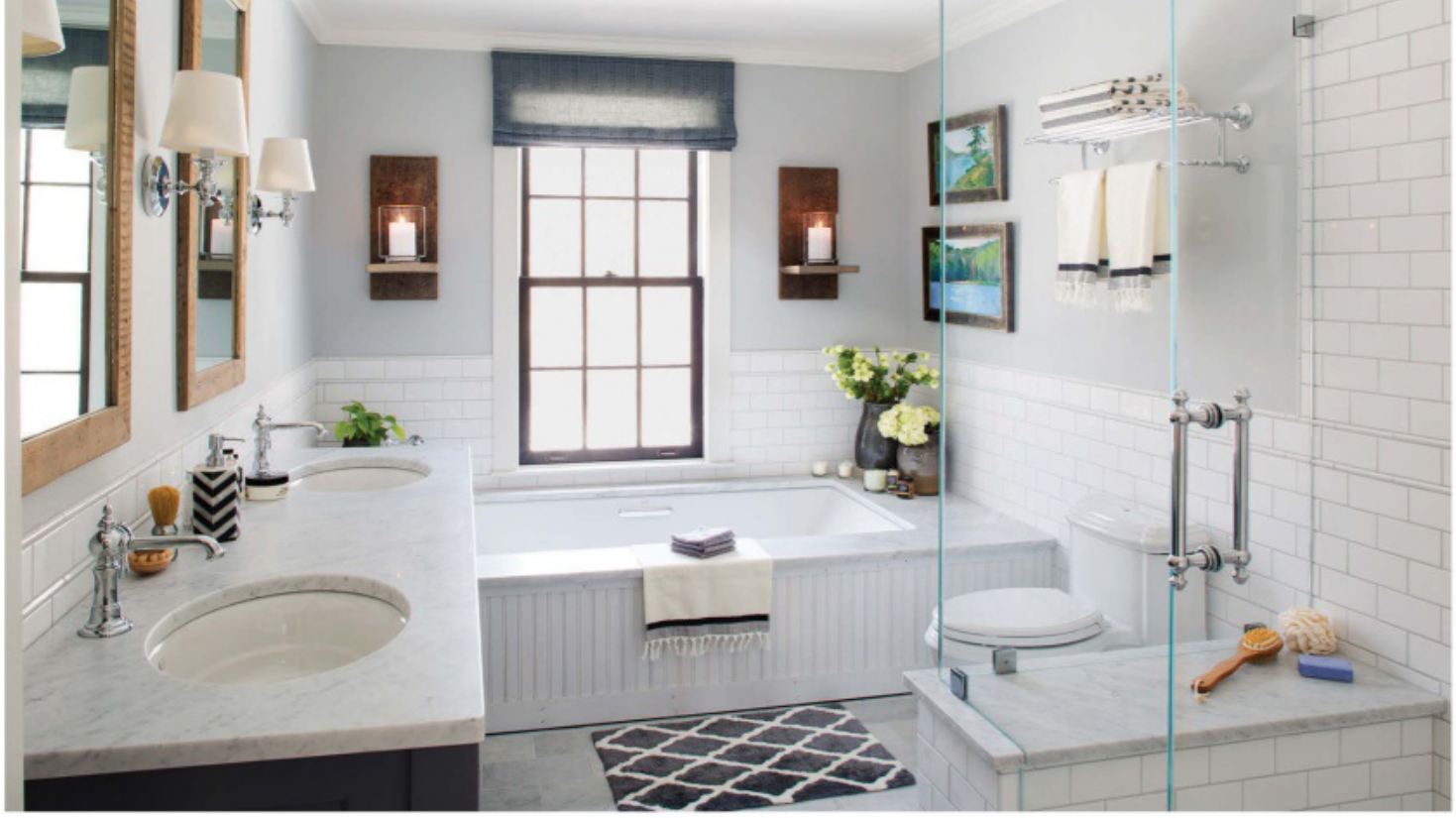


▲ **NOW** | **NORTH SHORE FARMHOUSE** (2016)

▲ **THEN** | **HONOLULU** (1994)

The Master Bath

>> Remember those columns? Back in 1994, in the renovated Honolulu bath, LEFT, a pair set off a shower-and-jetted-tub combo with a simple tile surround on one side and a taupe vanity with a lone drop-in sink on the other. Additional high-end touches included a separate toilet room, gold-finish faucets, and a medicine cabinet with a heated mirror.

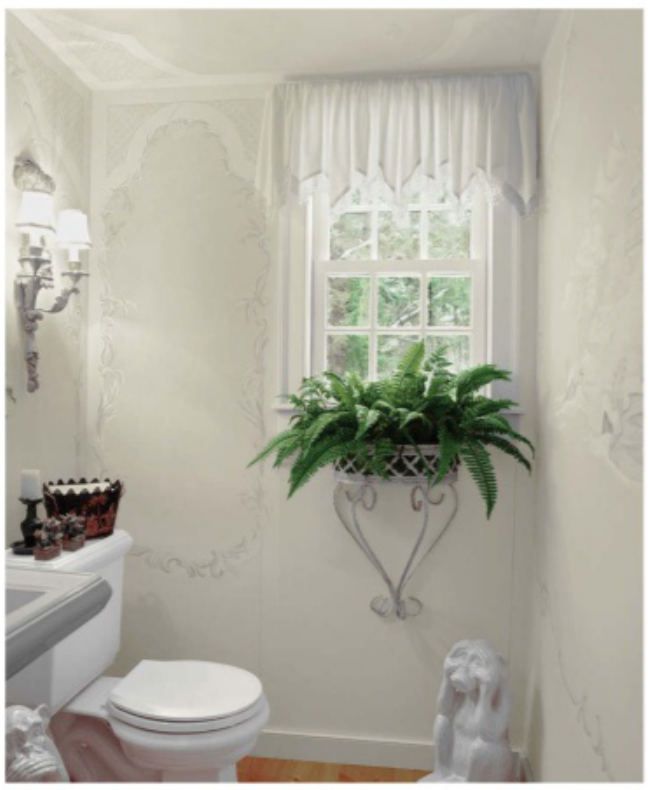
Reflecting today's strong preference for stand-alone showers, 2016's North Shore bath, ABOVE, features a built-in tub with a beadboard front and marble deck, along with a frameless-glass-enclosed shower and a double-sink vanity to ease the morning rush. The mix of subway tile, Carrara marble, and marble-look porcelain floor tile, plus period-style fittings and modern wood elements, establishes it as an updated classic.

The Powder Room

>> Homeowners continue to be advised that this small space is a place to go big with design. The powder room in 1997's Milton project, FAR RIGHT, went for a distinctive look with delicate scrollwork on the walls hand-applied with a special decoupage technique.

The 2015 Belmont powder room, RIGHT, goes bolder with a large-scale lotus-theme wallpaper that has a vintage feel; it's also hand-printed with wall paint in a color that's repeated in the living room. A sleek brass mirror and sconces update the existing marble console sink and period-style fittings. This room wouldn't have been typical when the house was built in 1907, but somehow it feels exactly right.

▲ **NOW** | **BELMONT VICTORIAN** (2015)



▲ **THEN** | **MILTON** (1997)

PHOTOS: (CLOCKWISE FROM TOP) ANTHONY TIEULI; COURTESY OF WGBH; ANTHONY TIEULI; COURTESY OF WGBH

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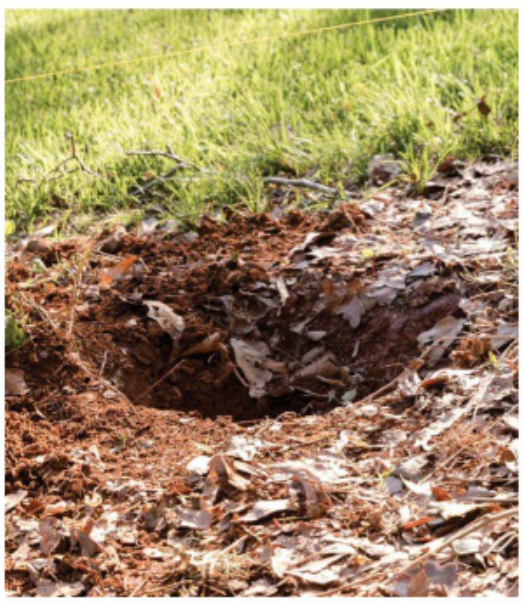

1 | Dig your hole; it should be one-third the depth of the post length and three times the diameter of the post width.

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PRO TIP

Before you begin:

Check with your municipality to ensure your plan complies with local code requirements.

Call 811 before you start digging to avoid hitting underground utility lines.

Check the weather. The mix, post, and soil temperatures should be between 40° and 90°F, with no rain in the forecast for 24 hours.

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ask This Old House

Q I have a number of saw blades that are covered with pitch. How do I remove this sticky buildup?

—DAVID PRESCOTT, KREBS, OK

A Pitch is actually tree sap that gums up saw blades as they cut through resinous woods, like pine and fir. In the old days before chainsaws, when loggers used two-man crosscut saws, they'd dissolve the pitch that slowed them down by wiping the blade with a rag soaked in turpentine. That still works for me! For safety's sake, use turpentine outdoors or in a well-ventilated area, protect your skin with gloves, and keep the rag away from fire; turpentine fumes are flammable.

—TOM SILVA
TOH GENERAL CONTRACTOR

PHOTOGRAPH BY BILL WHITE

53 tips, tricks, and answers to your home-improvement questions

Our team of veteran experts

TOM SILVA
General Contractor

NORM ABRAM
Master Carpenter

RICHARD TRETHEWEY
Plumbing and Heating Expert

ROGER COOK
Landscape Contractor

KEVIN O'CONNOR
Host

PHOTOS: (5 PORTRAITS) CARL TREMBLAY; (RIGHT) ANTHONY TIEULI

Norm Abram tightens the screws holding a bin pull to a drawer front.

When the entire front of our kitchen drawer came off—both the solid-wood front and the front of the drawer box—I discovered that the box had been made of particleboard and fastened with staples (sigh). Can the front be reattached? —CANDI MILLER, LIMA, OH

ASKTOH CELEBRATES 17 YEARS OF SERVICE

Based on this magazine's popular Q&A column Ask Norm, *AskTOH* the TV show made its debut in 2002 under the guidance of Russ Morash, the creator of *This Old House.* Instead of a season-long deep dive into a single renovation, each *AskTOH* episode features multiple small-scale projects covered from start to finish. The concise, engaging format has allowed the show to travel to all 50 states, and recently earned the series an Emmy Award.

In honor of the show's 17th anniversary, the questions selected for this issue reflect the most popular *AskTOH* topics—kitchens, doors and windows, and plumbing.

Do you have your own home-renovation question? Send it to **thisoldhouse.com/askTOH**

NORM ABRAM REPLIES: Staples aren't the best fasteners for any drawer that gets tugged open several times a day, particularly one made of particleboard covered with some kind of laminate. (I assume you didn't know what the drawer-box material was because it was covered with a laminate like melamine.) There may also have been some adhesive holding the corners of the box together, but that glue apparently lost its grip, leaving you to make the fix.

Fortunately, it's not hard to do. You'll need a drill/driver, a countersink bit, four bar clamps,

DIY SMARTS

Richard Trethewey shows homeowner Haven Nichols the flexible 4-foot appliance connector that conveys gas from a rigid iron pipe to his dryer. These connectors don't need to be grounded.

Q Gas dryer install

We have a gas furnace and want to run another gas line up to our laundry room so we can use a gas dryer. Is this something we can do ourselves? —ALISON SCHMALZIGAN, ARVADA, CO

RICHARD TRETHEWEY REPLIES: In a word, no. Most municipalities require this sort of work to be done by a licensed plumber. And even if your town has no explicit rules against DIY installations, the risk of an explosion or fire is too great to even think about doing this work yourself.

Having said that, you do have a few installation options to consider. For instance, there's more than one way to pipe gas through a home. The traditional method—the one I prefer in most cases—uses lengths of rigid, black iron pipe. (Actually, it's made of mild steel with a black iron-oxide coating.) These inexpensive pipes are threaded on both ends; they connect to threaded fittings sealed with pipe dope.

Another option is corrugated stainless-steel (CSST) gas pipe. Because it's flexible, no intermediate fittings are needed: One end connects to the gas line, the other connects to the appliance. CSST is more expensive than black pipe, but the labor it saves in certain long-run or retrofit situations may outweigh the extra cost. Note: CSST's thin walls are vulnerable to electrical arcing during a lightning strike, so building codes require this pipe to be connected—"bonded"—to the house ground.

The venting of gas dryers is also strictly regulated. They have to be vented to the outside through a 4-inch duct no more than 35 feet long (less if there are bends), and the exhaust vent can't be any closer than 3 feet from a window. The safest duct is smooth-wall, 26-gauge galvanized steel. Flexible duct can be used only if it's UL-listed—look for the UL 2158A marking—and no more than 8 feet long.

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four 1¾-inch flathead screws, a screwdriver, and a small tube of polyurethane construction adhesive, such as PL Premium (loctiteproducts.com).

To start, pull the exposed staples and scrape the old glue residue off the drawer box and the back of the drawer front. Slide the box partway out, hold it in place with clamps, and run a bead of the adhesive over the exposed particleboard at the ends of the box's sides. Bed the box front into the adhesive, then clamp it to the box. Use the clamps holding the box open as anchor points for this second pair.

While you're waiting for the adhesive to cure, take the countersink bit and drill two pilot holes through each side of the drawer and into each end of the particleboard drawer-box front. Make sure the countersink is deep enough to recess the screwheads—you don't want them to hit the cabinet stiles when opening or closing the drawer—then drive a screw into each hole. Cover the heads and fill the recesses with a fast-setting, polyester wood filler, such as Minwax High-Performance Wood Filler (minwax.com).

After the adhesive cures and the clamps are removed, you'll never have to worry about that drawer front coming off again.

Q Fix for short doors

A mold problem last year prompted us to remove all of our carpeting and put in hardwood floors. Now there's a big 1⅜-inch gap at the bottom of the interior wood doors. How do you close up these gaps and still have the door look okay?

—JIMMY JONES, GARNER, NC

PHOTO: COLLEEN McQUAID

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TOM SILVA REPLIES: When it's shut, a door should clear the floor by about ¼ inch, or ½ inch if the door swings over an area rug. So, yes, the gaps under your doors should be much smaller.

My favorite way to close up gaps on painted doors is to screw a filler strip to the door's bottom edge, and then paint it to match. If your doors aren't painted, you might want to consider doing so—it's next to impossible to make this repair blend in on a clear-finished door. But if painting is out of the question, then you may have to take out the existing doors and put new ones in their place.

To make the repair, begin by measuring the gap beneath the door on its latch side when the door is closed, and when it's open.

What is it?

A Toilet flapper

B Stud finder

C Inspection magnifier

D Blueprint paperweight

FOR THE ANSWER, SEE PAGE 38

If there's a difference between those measurements, it means that the floor is pitched and the filler has to be cut to the shorter measurement.

When selecting stock for the filler, I look for a stable, straight-grained wood, like kiln-dried poplar. It should be about ⅛ inch thicker than the door, about 6 inches wider, and, as noted earlier, the same dimension as the shorter gap measurement. The extra thickness allows me to sand the filler flush with the door on both sides, without removing any wood from the door. The extra length allows me to cut the filler exactly flush with the door sides. And using a filler

PHOTO: DENISE SFRAGA

that's the same size as the gap allows me to trim ¼ inch (or ½ inch) off the bottom of the door and get a clean surface for a good glue bond.

Take a door off its hinges, set it up on sawhorses, and trim the bottom with a track saw or a circular saw and saw guide. For the best results with a circular saw, use a sharp, new blade and apply painter's tape over the cutline to prevent splintering.

Center the filler on the bottom of the door, clamp it in place, and use a countersink bit to drill three evenly spaced pilot holes through the filler's bottom edge and partway into the door. Make the countersinks deep enough for the screwheads to be slightly recessed. Next, using the holes in the door bottom as guides, drill three pilot holes as deep as the thickness of the filler. Apply a bead of wood glue to the filler, stick it to the door, and hold it in place with three flathead wood screws. If any glue squeezes out, wipe it up with a damp rag.

While the glue dries, plane the filler until the plane's blade begins to scratch the paint on the door faces. Switch to a random-orbit sander with 60-grit paper to make the filler flush and remove the door paint, then sand with 80-grit and 120-grit papers. (If the doors are old and test positive for lead paint, take the appropriate precautions when cutting and sanding.)

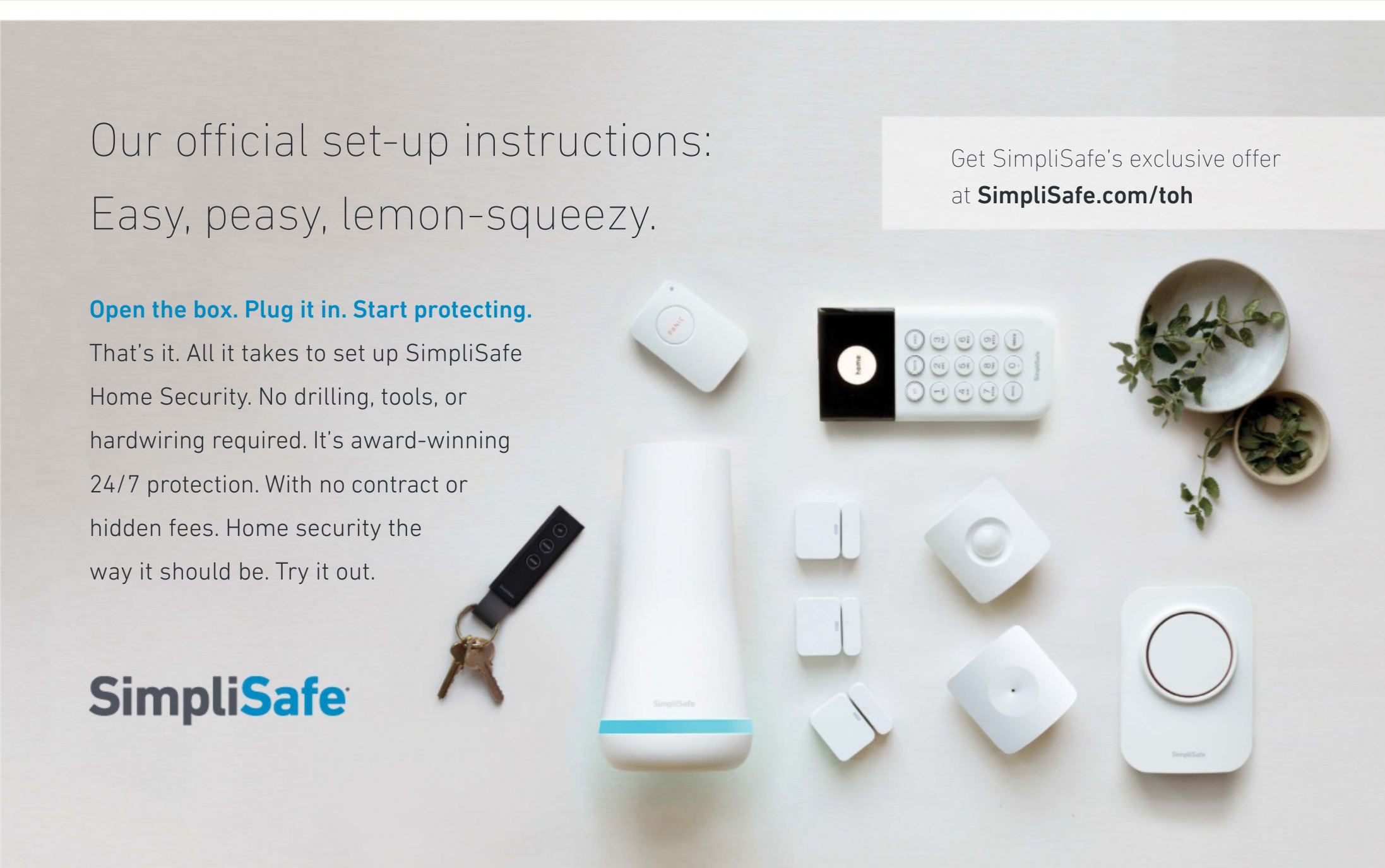
Trim the filler's overhanging ends flush with the door sides, and fill any voids in the filler's end grain with a paste made of wood glue and sawdust.

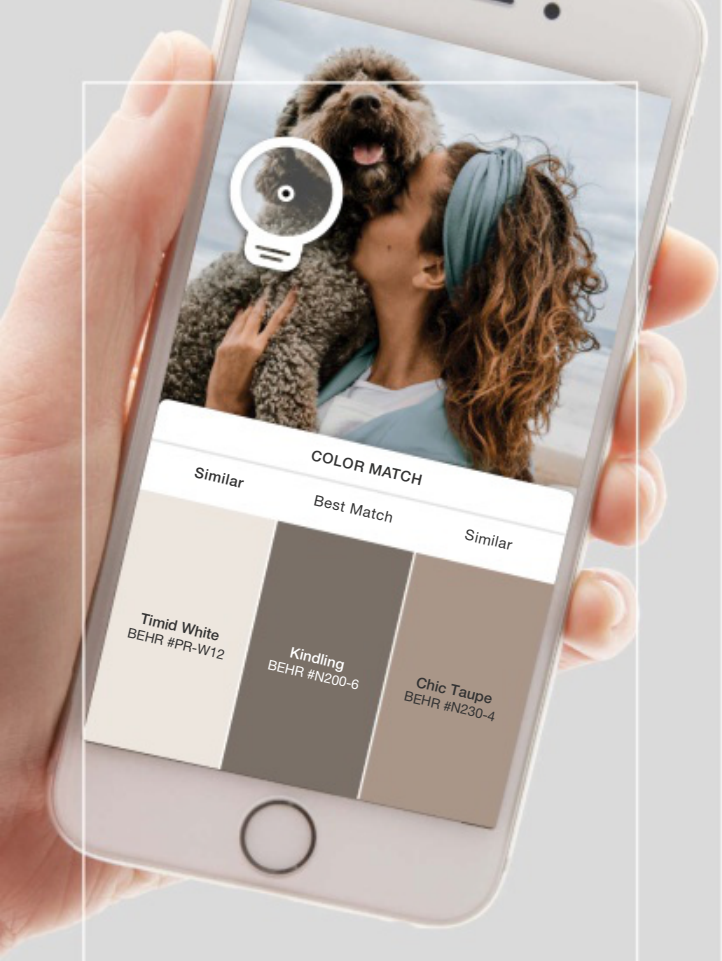
DOOR FIXES
Watch Tom Silva close up big gaps at **thisoldhouse.com/salvaged-door**

The door will be ready to paint after this one last step: Line up a rafter square with the inside edge of a door stile. Run a utility knife alongside the square to make a straight, shallow cut in the filler. Do the same thing front and back on both door stiles. These cosmetic cuts create the illusion that the stiles run from top to bottom, the way the door was originally built.

Q Hot water in attic

The tank-type electric water heater in my attic turns off during summer months, forcing me to climb into that very hot space and press the heater's reset button. The heater resumes working, then shuts down again in a week or so. I've had new thermostats and





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elements installed, but I'm still going into the attic nearly every week during the summer. Would it help to cover the heater with an insulation jacket?

—MICKEY HOLLOWAY, ELLAVILLE, GA

RICHARD TRETHEWEY REPLIES: When a water heater sits in an attic that may exceed 150 degrees on sunny summer days, it's going to absorb that heat, whether it's wrapped in an extra layer of insulation or not. And as soon as the water in the tank reaches 180 degrees F, the heater's overheat safety switch—a.k.a. high-limit switch—is going to trip. That's the reason you're taking so many trips to the attic.

As its name implies, the switch is there for your safety, so it can't be adjusted or removed. Let's look at other options.

Could you move the heater out of the attic and into a conditioned space in the house, such as a closet or an attached garage? That's probably the least costly solution. But if the heater has to stay in the attic, then consider turning the attic into conditioned space. That would require applying insulation to the underside of your roof deck and running supply and return ducts from your HVAC system into the attic.

In your climate zone, the minimum insulation requirement in this location is R-35, but packing on more wouldn't hurt. An insulated attic will not only keep your water heater comfy, it will also reduce the amount of heat absorbed by the ductwork in your attic and thereby lower the cooling load of your entire house. Insulating an attic isn't cheap, but your local utility may offer programs to help offset the cost of energy-saving projects like this.

One more thing: Like all tank-type heaters, yours will leak one of these days. And if it's still in the attic at that time, you'll have water pouring down through the ceiling. To prevent that nightmare scenario, place a water-heater drain pan under the heater and hook it up to a house drain. Then add a dedicated shutoff valve, such as a FloodMaster (reliancedetection.com), to the tank's cold-water supply. It's hardwired to a moisture sensor that sits in the pan. In the event of a leak, the sensor detects the water, sounds an alarm, and signals the valve to shut off the heater's water supply. That one device can save you thousands in repair bills.

Ask THIS OLD HOUSE

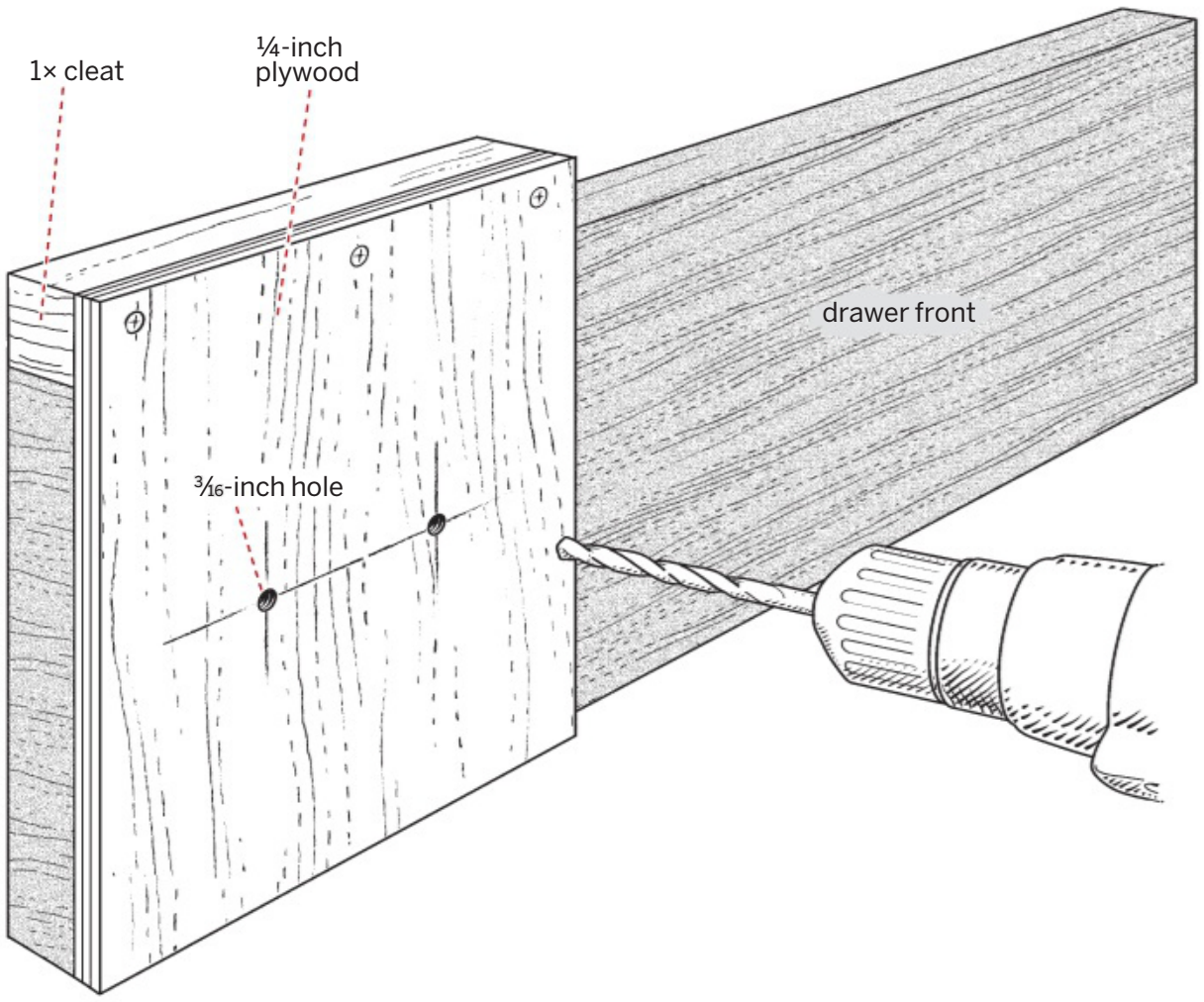
Go to: thisoldhouse.com/askTOH
Or write to: Ask This Old House
This Old House magazine
262 Harbor Drive, Stamford, CT 06902

Include a complete address and daytime phone number. Published questions will be edited for clarity and length and may be used in other media. We regret that, because of the volume of mail received, we're unable to reply to unpublished questions.

Norm's tricks of the trade

Q Our new kitchen cabinets look great, but the drawer fronts don't have any holes for the pulls. How do I go about drilling them myself? —KEITH EMRICH, EVANSVILLE, IN

A Sounds like you could use a jig to help you drill all those holes quickly and precisely. To make this one, I simply screwed a piece of ¼-inch scrap plywood to a cleat cut from 1× stock. Then I drilled two 3⁄16-inch holes—the size of most hardware screws—into the plywood exactly where I want the pulls to be located. To use this jig, made for drawers with two pulls, I hook it onto the top edge of the drawer front, align it flush with the front's sides, and drill through the jig's holes. If I were installing a single pull or knob, I'd make the jig wider so it would sit at the center on the drawer when lined up with one of the front's side edges. ⌂

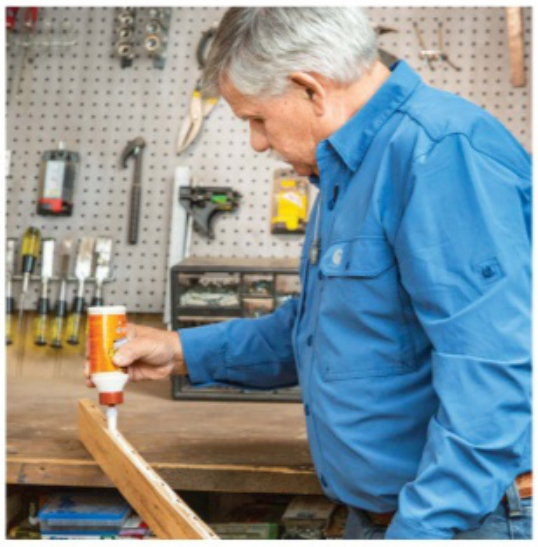


PHOTOS: WENDELL T. WEBBER; (OPPOSITE PAGE) ROBERT HARDIN. ILLUSTRATION: HARRY BATES

ask This Old House

Build Your Own Vintage-Style Record Player Stand

We polled TOH Facebook fans to choose a project for Tommy and Kevin to build this season, and this classic record player stand was a definite hit.



Tune in to *Ask This Old House* this November and Tommy will show you how it's done. Or take a spin at building it yourself with our step-by-step instructions, coming soon in the November/December issue of *This Old House* magazine.

PHOTOS: ANTHONY TIEULI

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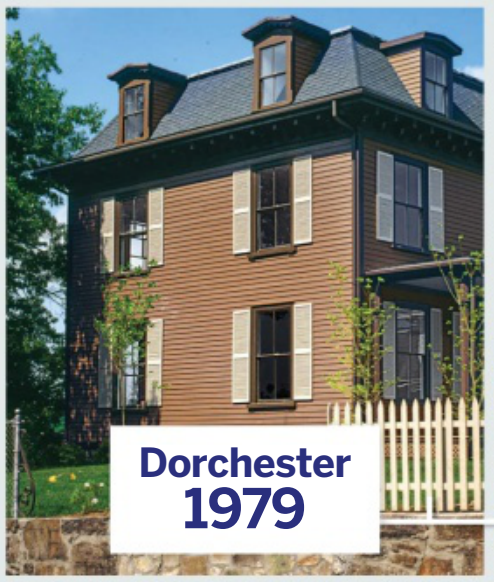

PHOTOS: (FROM LEFT) BILL SCHWOB/WGBH; ANTHONY TIEULI (2)

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TUNE IN ON PBS New season coming in October 2019. Check local listings for premiere dates and times.

Main Street event

Our 2019 Idea House steps back in time with the total overhaul of a circa-1840 Greek Revival that's a well-loved fixture in a historical Connecticut downtown

BY DEBRA JUDGE SILBER • PHOTOGRAPHS BY DAVID YELLEN

RENDERING: CAH ARCHITECTURE AND DESIGN, LLC

TOP: The oldest surviving section of the c. 1840 house—on the left—holds the main entry. Missing six-over-six windows, transoms, and fanlights, as well as portions of the exterior trim, will be restored and reused on what is an all-new structure.

BOTTOM: A rendering shows how the rebuilt house will retain its signature Greek Revival elements. The redesigned home will feature modern building materials and a family-friendly interior, while preserving the exterior's traditional look and feel.

CONNECTING WITH THE PAST takes on a whole new meaning when it involves marrying brittle 179-year-old beams with the code-compliant framing of a new structure. Just ask Gordon Jacobsen, the project manager overseeing the construction of *This Old House*'s 2019 Idea House.

"This is the hardest part," he says, pointing out the hand-hewn beams now sandwiched between crisp new 2×6s. When the work is complete, those beams—along with a number of surviving windows and trim sections—will be all that remains of the Greek Revival that has been a fixture on Main Street in downtown New Canaan, CT, since at least 1840. The house taking its place will retain its familiar architectural style while incorporating updated materials, technology, and design elements that will carry it into the next century.

It took developer Arnold Karp nearly five years to purchase the derelict house, which stood vacant for eight years and was in foreclosure. The roof leaked, and raccoons had taken up residence inside. With the

INSET: *TOH* host Kevin O'Connor visits with developer Arnold Karp at the job site. "This is right in our wheelhouse," Kevin says of the work to rebuild one of the downtown area's iconic historical homes.

TOP: For a durable, long-lasting roof, crews install a water and ice membrane and architectural asphalt shingles over sheathing panels with a moisture-resistant barrier built in. The roof's crown is framed out in three sections for a 12-by-12-foot skylight.

sale confirmed, Karp faced a second challenge: convincing historic district officials to green-light demolition of much of the rambling structure whose additions dated from the 1960s onward—while preserving whatever might be worth saving. They agreed, with the stipulation that he retain the front and left side of the original portion of the house (on the left), and replicate the height of the roof ridge.

The New Canaan project is the first *This Old House* Idea House tied to a home with a historical past—a fitting undertaking to mark the show's 40th season. "This is right in our wheelhouse," says *TOH* host Kevin O'Connor, noting the challenges a community faces in preserving a beloved vintage home. "Everyone wants it to survive, but how do you do it?"

Owing to its dilapidated condition and years of add-ons, the Greek Revival house will survive mostly in spirit. "Unfortunately, it had been cut apart and pasted together so many times there were hardly any real pieces left," says project architect Christopher A. Hull. He and Robin Carroll, Karp's director of design and residential construction, worked together to reimagine the house as a 21st-century family home without losing its 19th-century personality.

To do this, the team will restore 11 existing double-hung windows and some interior trim, along with the facade's frieze, transom windows, corner pilasters, and

LEFT: Perched over the central stairwell, carpenter Jefferson Cardenas works on framing for the skylight, which will channel natural light onto the stairway below and down to the basement level.

SHEATHING: **ZIP System**
SIDING AND TRIM: **LP SmartSide**
ROOFING UNDERLAYMENT AND SHINGLES: **GAF**
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PHOTOS: (TOP AND INSET) COURTESY OF KARP ASSOCIATES

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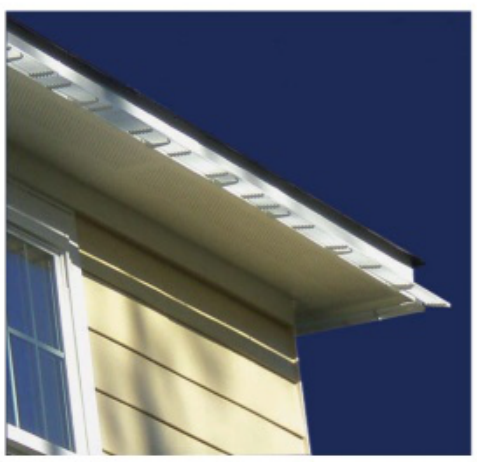

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pair of fanlights—only one of which dates to the 19th century. Beams that are no longer sound will be given a decorative second life inside. "We'll reuse original beams," says Carroll. "But they will serve as architectural details rather than structure."

Past the rebuilt facade, the new home's personality will quickly shine through—with a 12-by-12-foot skylight above the main stairwell. "It's going to be a showstopper," says Carroll of the column of light that will reach the basement level, where a hulking beehive oven awaits restoration as a decorative focal point. Its structurally deficient chimney and the fireplaces that fed into it have been removed, and a stack of closets has been added that could serve as a shaft for an elevator should a future homeowner require one.

An open kitchen, sitting area, and family room make up the heart of the reimagined home, while a mudroom, game room, and home office increase the function of the first floor, says Carroll, who will collaborate with interior designer Michelle Hogue to coordinate finishes. Alongside the kitchen is a hardworking butler's pantry with a second sink and dishwasher, coffee station, under-counter refrigerator, and other party-staging essentials.

On the second floor, the master suite will include dual walk-in closets, a spacious bath, and a private deck. Three additional bedrooms feature vaulted ceilings, walk-in closets, and en suite baths. The wide hallway, brightened by six skylights, is fitted out with desks for doing homework. Additional living space—including a bedroom, sitting room, and full bath—will occupy the third floor. Not to be forgotten, the large walk-out basement offers plenty of untapped space for a workshop, in-law apartment, or gym.

That lower-level space will be finished to the specifications of the eventual buyer of the house. Till then, Jacobsen and his crew are hard at work to meet the challenge of rebuilding it in six months, start to finish. Keeping on schedule, he says, requires thinking three to four weeks ahead, anticipating what's next. But in fact he's already thinking beyond those weeks and months, to the home that will be a new fixture on Main Street. "When this project is done it will fit right into the neighborhood," he says. "It will be great." ⌂

LEFT: Boris Pribelsky, owner of BP Quality Roofing, cuts copper that will be used to flash the central skylight. The copper will age naturally and develop a deep patina that suits the home's traditional exterior.

BOTTOM: Crew members shoulder a platform on their way to work on the roof.

SIDING AND TRIM: **LP SmartSide**
WINDOWS: **Sierra Pacific**
FOUNDATION WALLS: **Superior Walls**

PHOTO: (BOTTOM) CYNTHIA BROWN

This Old House Idea House New Canaan, CT 2019

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TOP LEFT: Crew member Marcello DaSilva measures for a course of wood-composite clapboards that have been treated to resist moisture, insects, and rot.

TOP RIGHT: Roofing membrane goes down over the sheathing in preparation for laying more courses of architectural asphalt shingles.

BOTTOM LEFT: Crew member Gil Violette holds one of the salvaged original windows that awaits reglazing. Behind him is a stack of transom windows that will also be restored and reinstalled.

BOTTOM RIGHT: Mason Jesús Vega builds a retaining wall along the south side of the house. The sloping site made construction a challenge but also created opportunities to access the outdoors at several levels.

SHEATHING: **ZIP System**
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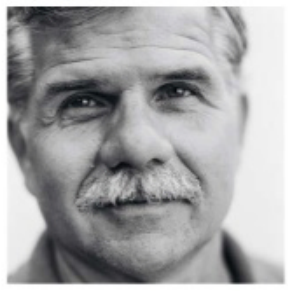
The Tao of TOH

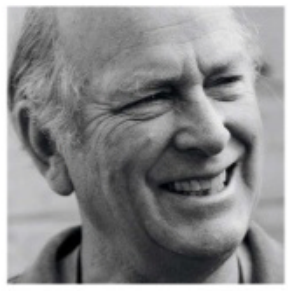
Lessons in life, and building, from 40 years of home renovations

BY BRUCE IRVING | PHOTOGRAPHS BY PETER ROSS

“We’re like an old rock band. We each get to solo, but we really play as an ensemble.”

—RICHARD TRETHEWEY





This Old House’s first broadcast, of the crew’s renovations on the Dorchester House, aired locally in February 1979—the same year, fittingly, that the band Men at Work formed. That band is no more, but the guys play on.

We sat down with TOH master carpenter Norm Abram, general contractor Tom Silva, plumbing and heating expert Richard Trethewey, landscape contractor Roger Cook, host Kevin O’Connor, and show creator Russ Morash—those familiar faces shown here—to share memories, find out what they’ve learned over the years, and get an idea of what keeps the hits coming.

"You have to be willing to let yourself make mistakes, then move on. My father used to say, 'You can make mistakes—just don't make the same one twice.'" —NORM

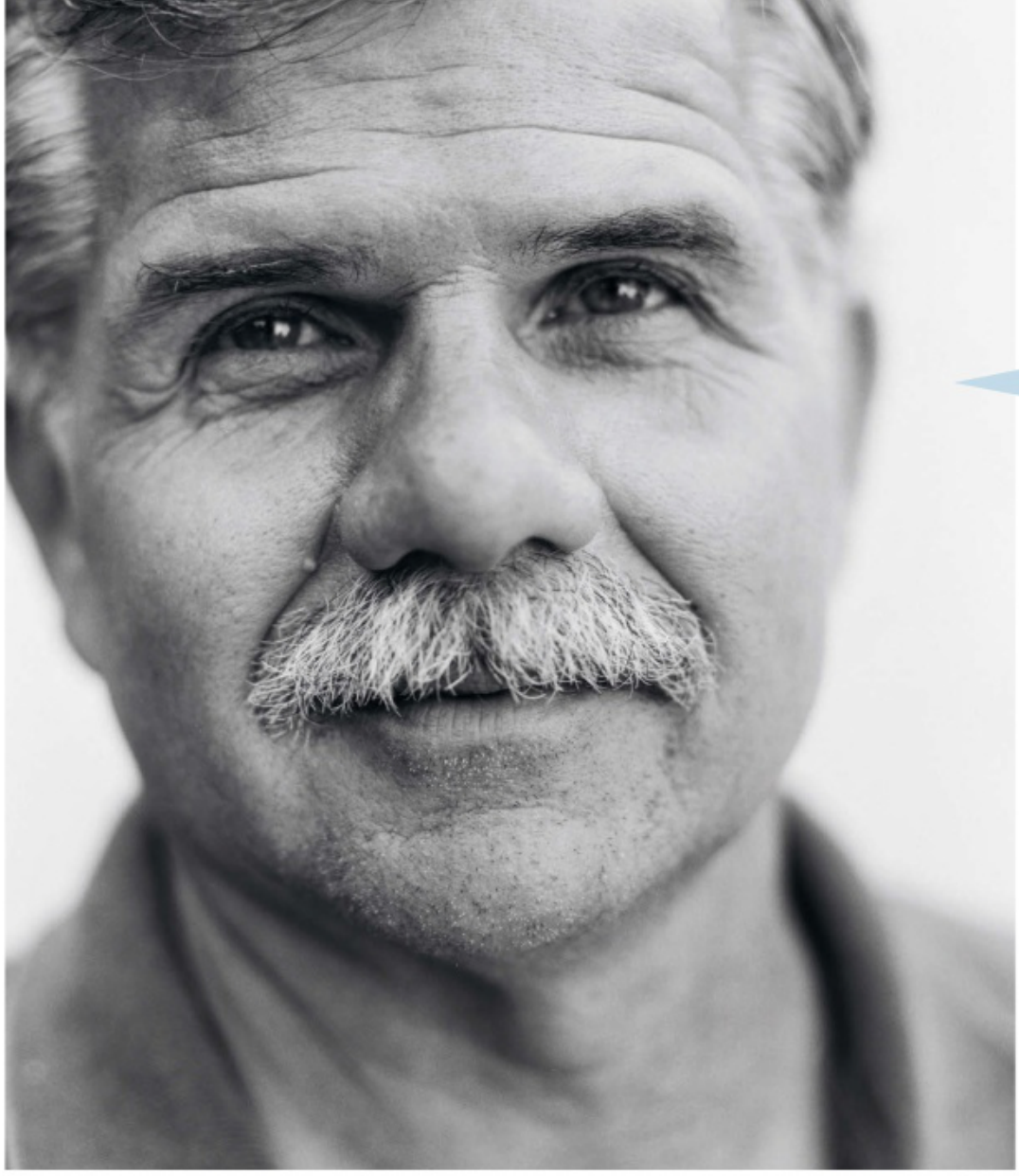
"There's a real fascination in watching a craftsperson execute a task and solve a problem," says Russ, and that, in essence, is the show's magic. Early in his television career, Russ, whose father was a house builder, would occasionally cross paths with a plumber or electrician arriving to fix something at his home as he was leaving for work. "I'd come back, and there'd be a bill on the table, but I really didn't know what the person had done while I was away." That got him thinking: Maybe there was a show in there somewhere, one that would document and demystify the home-renovation process. He convinced his employer, WGBH, to purchase a run-down Victorian-era house in a rough part of Boston, gathered up a crew, and started filming. The camera was heavy and cumbersome, attached by cables to a production truck. The format was unclear, except for the idea of seeing problems solved by people who knew what they were doing. The series was broadcast locally at first, but soon went national. As of this year, *This Old House* and its 17-year-old companion show, *Ask This Old House*, have won 19 Emmy Awards and been nominated 96 times.

"Working with your hands is deeply satisfying." Norm was 29 years old and doing some carpentry at Russ's house when Russ asked him to come work on the Dorchester project. "I remember thinking, *I don't even know what you do or how TV gets made,*" but he went anyway. "So there I was, up on a wood pump jack, no rails, with sagging planks," Norm says, shaking his head. Safety and sophistication have increased since that first project, but his take on the appeal of the show squares with Russ's, and it's something he wants the current generation to understand: "To think through a problem and then use your hands to achieve the solution…you can stand back at the end of the day and say, 'Wow, I did that.' It's a message that's gotten lost in recent years, and I'm glad the show still broadcasts it strongly."

"Because of all this, I've met a NASA astronaut at Cape Canaveral, shipped out on a nuclear submarine, stood on the top of the north tower of the Golden Gate Bridge, flown in a Blue Angel fighter jet, and appeared on the David Letterman show. Pretty unbelievable." —NORM

"Tailor your investment to your longevity in the house," Tom says. If you're going to move in five years, get some nice appliances, paint, and maybe refinish the floors. But if you're sticking around, Tom advises homeowners to spend money on "the stuff you don't see"—robust framing, proper flashing, extra insulation, high-efficiency systems. "Otherwise you're going to end up having to deal with gaps in trim, doors that don't close properly, rot, drafts, and high utility bills."

In fact, his devotion to quality is what landed Tom on the show. He had told Russ, whom he knew from growing up in the same Boston suburb, about a top-notch custom cabinetry company out of Maine, whose product he was installing on one of his jobs. The year was 1986, and "I'd been telling Russ for years, 'No way, I'm never getting in front of one of your cameras.' The next thing I know, they're coming to do a scene about this kitchen, and I'm setting the room up for Norm to come in and shoot. Then Russ walks in and pins a microphone on me." Thirty-three years later, the microphone is still part of his world. "Which is fine with me," says Tom, "because if I hadn't been a contractor, I'd have been a teacher, which is what I get to be on the show."



"Whatever your budget, whatever the project, plan for surprises." —TOM

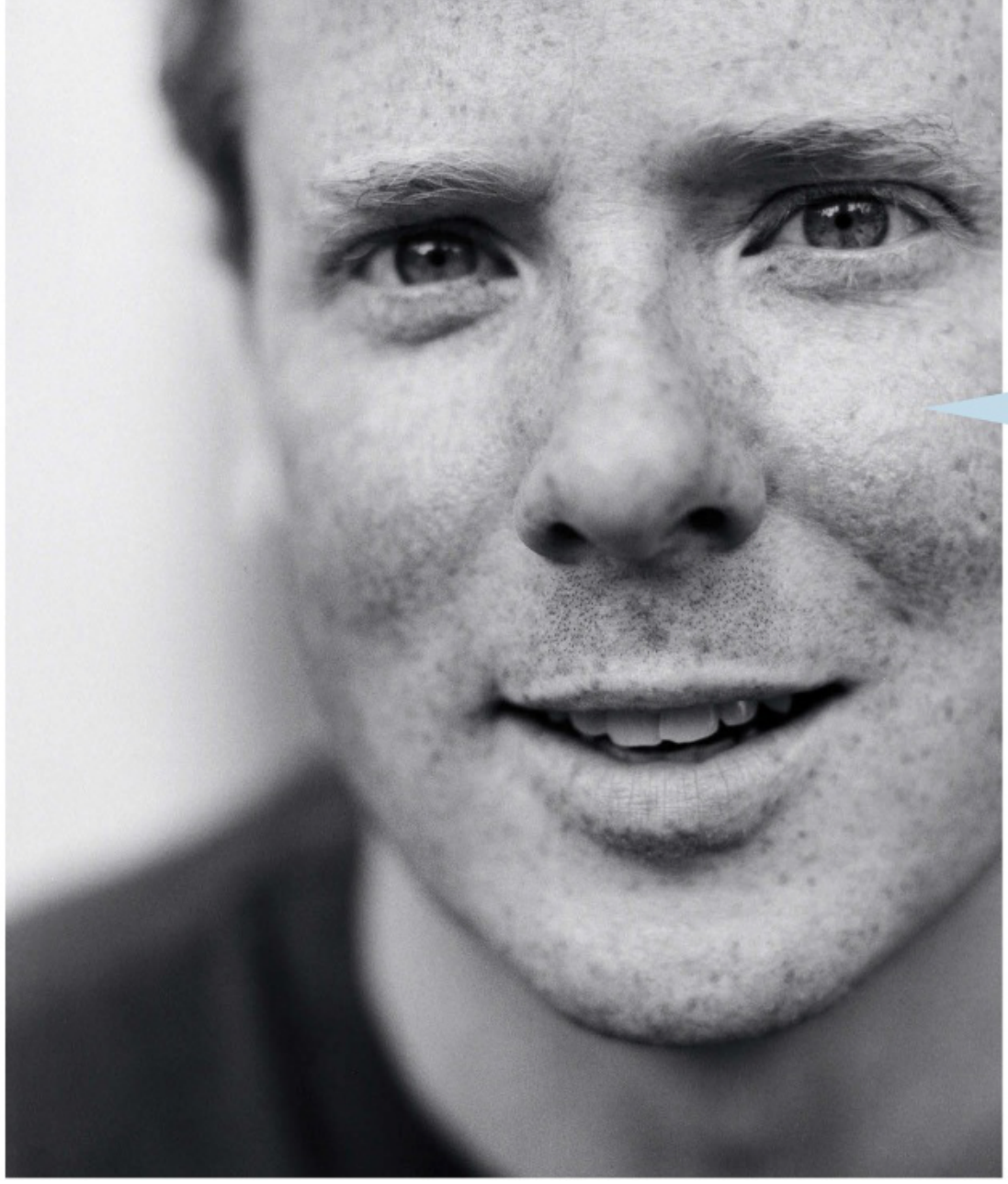
"Do the spadework," says Roger. "And I mean it literally." Long before he shows off one of his gorgeous finished landscapes, Roger's been showing viewers the hard work necessary to allow those plants to thrive over time. "We've always relied on hand tools to prepare the soil, but the rise of the Bobcat has let us do more good work more quickly," he says. The principle of proper prep is everywhere on the show, from the tasks behind Roger's fertile flower beds and never-heaving patios, to the time-consuming steps pro painters take to achieve a gloriously smooth surface, to the secrets of a tight miter joint, to the virtues of gluing and screwing—often summarized by one of the guys' favorite phrases, "That's not going anywhere."

It's all about the tools. Everyone points to the evolution of tool technology over the past decades, though one constant is, as Russ puts it, "You can't get professional results without professional tools." And unlike in the early days, such things are now available to consumers. Russ's favorite is the wet saw, which allows him to tile with confidence. Richard cites the rise of nonsoldered pipe connections as a big step forward: "Press-connect and push-to-connect fittings like SharkBite, along with PEX piping, have made plumbing much, much faster and more accessible to the nonpro." Kevin marvels at the improvement in battery life and power. "There's a lithium-ion-powered version of just about everything, from circular saws to hammer drills," he says, "with the expectation of quiet, efficient, clean operation." Dust collection, another technology that's come far, is now a standard feature on most cutting and sanding tools.

Materials have advanced as well. Tom and Norm both appreciate the structural strength that engineered beams and new fastening systems have brought to building, and the rise of synthetics has meant longer life for exterior trim and decks.

Richard is proud of how the show itself has played a role in bringing new technology into the

"In our heart of hearts, we're all teachers. And the classroom is very big." —RICHARD



"Don't touch the electrical service panel or the heating equipment. Leave that to the professionals." —KEVIN

mainstream. "Spray-foam insulation, cementitious siding, stress-skin paneling, radiant floor heat, high-velocity flexible-duct air-conditioning, insulated concrete forms, laminated prefinished flooring—we were the first to show them, and that accelerated their adoption."

"There's still a place for wood," Norm says. Over time, he's observed a downside to synthetic trim. Since it doesn't rot or absorb water so that paint pops off, it doesn't show what's happening behind it. "There can be water infiltration problems that it hides," he says. For his own home, he likes Alaska yellow cedar for trim, painted on all six sides. Tom adds, "Even with all the new materials, never ignore the old best practices," like proper flashing, adequate drainage, and allowing the building to breathe. "Like I always tell people," he says, "water kills houses."

Another thing that Tom has observed over the years: "Be careful not to bring too many people into the mix. Take the professional advice of your designer and your contractor, plan out the project as carefully as you can, but beware of listening to your friends, relatives, and neighbors." He's found that they sometimes bring their own agendas to a project, and often late in the process, leading homeowners to ask what Roger calls the most expensive question on a job: "Can we change that?"

"The Lincoln Memorial in Washington, D.C., was my favorite side trip. The National Park Service person told us that we couldn't film or speak inside the monument, but the woman in charge of the restoration of Lincoln's statue walked up and said, 'I control the scaffolding, and you guys can come up,' which is how I found myself eyeball-to-eyeball with Abe." —KEVIN

"The best way often isn't the easy way," Tom says. That applies to "the stuff you don't see," like insulation, air sealing, and high-efficiency HVAC equipment, as well as things you see every day. Referring back to the Manchester-by-the-Sea project, an extensive restoration of a Shingle-style beauty, he recalls how the most important view in the house—from the kitchen, across the dining room, and out to the harbor—was going to be compromised if the house's original ceiling height was retained. He spoke to the owners and got their blessing for the crew to stiffen each existing ceiling joist with a thin strip of steel and a new, narrower joist of engineered wood—a flitch beam. They then shaved down the original by a crucial couple of inches, raising the ceiling and "making a huge difference in how the room felt and how the outside came in." It took about three extra days of work and has paid off on a daily basis ever since.

Similarly, he made sure the ancient Acton Colonial, circa 1710, looked right after it was re-sided. How? By tapering all the clapboards so that the eye sees them as parallel, rather than skewed by the underlying out-of-square building. More recently, when he saw how a newel post in the entry of the Belmont Queen Anne was being extended to the ceiling to support a beam—a look that was not historical, and would have blocked critical sight lines—he devised a way to transfer the load elsewhere, allowing for a classic newel and a clear look into the house.

The fun never stops. Ever since Silva Brothers Construction showed up on a *This Old House* job site, a tradition of pranking the television production assistant has been solemnly observed (for more, see page 12). However, it's not been a one-way street. Asked about their favorite TV filming take of all time, everyone on the show agrees that it went down one late afternoon in the fall of 1991, in the kitchen of the Wayland House. Tom was enlarging and reframing

a window opening to accept a new replacement unit. His assignment was to explain to Norm and host Steve Thomas that "good building practice tells us that when we remove structure, we have to put it back." The scene started with Tom's brother Dickie cutting a short piece off the end of a 2×4; then the guys would walk in and start talking as the camera followed them to the window opening. "Good building practice tells us that when we remove structure, we have to put it back"—Tom simply could not get that line out. Over and over the scene was broken, and a retake started. After a while, the pile of cutoffs on the floor beneath the saw grew; sometimes the scene would break as soon as it began, as Dick couldn't keep a straight face. "I knew I was in trouble," Tom says, "when Russ went and got a chair." By the time it was a wrap, the sun was setting and the scrap pile held 17 pieces.

The next generation needs support and encouragement. All the guys worry about the struggle to get young folks to join the construction workforce, but all see signs of hope. Kevin has met a few who have virtually the same story: "Against all the odds and advice, these kids said, 'Nope, I'm going to do this. I can't suppress the urge.' They're in it because they just have to be."

Watching real pros at work on television, some can see themselves, and *This Old House*'s GenerationNEXT apprenticeship initiative makes that vision even more compelling. Richard recently met a couple of young plumbers-in-training at a trade show. "They're enrolled at a vocational school, and I asked them how that happened. They both said, 'You guys.' That felt really good." Norm points to a K–8 charter public school begun by one of his favorite organizations, Old Sturbridge Village, with a mission to provide hands-on education. Working in and around the historic village, students learn through direct experiences in animal care, gardening, and wood and metal craft. "Money can help," Norm says, "but it's really about exposure at an early age."

"Preparation is key to success. If you take the time to prepare the site, you'll get good results. That means when you put in a patio, excavate all the topsoil so the patio doesn't move on you. When you create a plant bed, dig down and work the soil, then add lots of compost. It's hard work, but it pays off down the road."
—ROGER

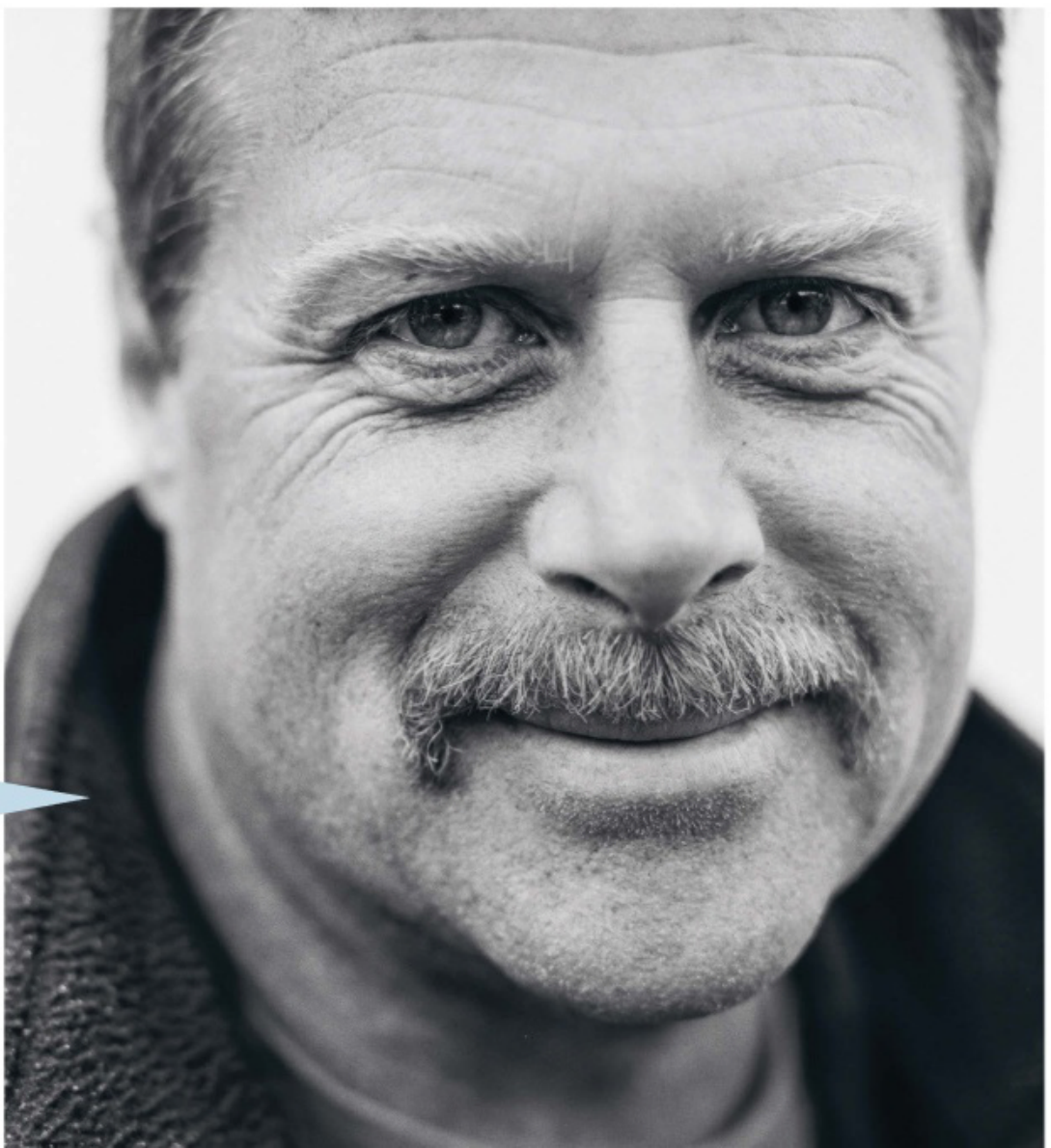
"We are family." For those working on or around the show, there's a strong sense of connection. Maybe it's the early call times in all kinds of weather, or the shared adventures on the road, around the country and overseas, or the bonds formed with homeowners, craftspeople, manufacturers, and fans over all these years. Or maybe it's the wrap parties, which are legendary and whose details must be left for another time. In any case, Kevin says, "Once you've broken bread with *This Old House,* you belong."

Richard and Norm recently paid a visit to the Sante Fe project of 1990, where homeowners Joe Anna Arnett and Jim Asher opened the door and greeted them "as if we'd never left," says Richard. "And when we dropped by Johnnie's Cash Store next door, where we'd bought homemade tamales for every crew lunch, the tamale guy looked up and said, 'Hey, welcome back!' "

Even though Norm says that "fame is no big deal," it's that kind of authentic appreciation from fans everywhere that keeps the whole band playing. Richard puts it this way: "You get so much more out of life when you're part of a 'we.' "

Bruce Irving is a home-renovation consultant and real estate agent in Cambridge, MA. He was producer of This Old House *from 1988 to 2006.*

"My strongest memory is when we raised the flag on the Manchester House the day after 9/11." —ROGER



TOH's Greatest Hits

We asked, and boy, did you answer! From our TOH Insiders to our website users and Facebook followers, loyal This Old House fans eagerly weighed in with what they've loved most from the past 40 years. As Kathy Warner of Marietta, GA, told us: "It may be called This Old House, but it never gets old." **BY KATE WOOD**

Your Top 10 This Old House Projects

Using your feedback, we created a poll on thisoldhouse.com to find out which house you liked best—and once the votes were tallied, one that wasn't on the original list earned its place as a write-in candidate! (Sorry, Lexington Bed-and-Breakfast, you got bumped.) **Here, the results:**

#10 Lexington Ranch

SEASON 14 • 1992

Rounding out your top 10 is this 1958 ranch reinvention, which earned kudos for both the "wow" factor and its friendly owners.

"I loved the Lexington Ranch. I grew up in a ranch-style home, so I could relate to it. I also think it's one of the show's most amazing transformations, from such a humble, typical American home into something truly spectacular." —NATHAN STRUM, VALENCIA, CA

"My favorite house is still the Lexington Ranch, Season 14. That's because of the incredible design in transforming the ranch; it's a house that I could imagine living in. Also, I liked the homeowners very much on that project." —MICHAEL, VIA INSIDER

#9 Manchester

SEASON 23 • 2001

The extensive restoration of this 1883 house wasn't part of the original Top 10 list. But so many of you voted for Manchester-by-the-Sea as a write-in candidate that in the end, it nabbed the No. 9 slot!

"It was a shame that all the very fine details of that home were taken off in earlier remodels, but Norm, Tommy, and the rest of the crew brought that house back to its late-nineteenth-century glory days." —PAUL, VIA INSIDER

"Manchester is my favorite. Gorgeous home by the sea. Just loved it!" —KAREN FLANNERY, NANTUCKET, MA

#8 Cambridge 2012

SEASON 34 • 2012

Though this 1887 Queen Anne's exterior is spectacular, prior renovations had stripped the interior of any semblance of its original era. *TOH*'s Scandinavian-inspired interior makeover helped it earn spot No. 8.

"We were so inspired by this season that we remodeled an entire house in a Scandinavian-modern theme. It turned out amazing; we owe you!" —MICHAEL DELANEY, FORT THOMAS, KY

"I liked how they maintained the exterior's historic character while transforming the interior into a very modern space. Plus, incorporating Swedish design that honored the family's heritage really made this home their own." —TODD, VIA THISOLDHOUSE.COM

#7 Dorchester

SEASON 1 • 1979

The house that started it all, a run-down home from 1860 with a mansard roof and plenty of potential, took seventh. More than anything, it's beloved for being the foundation of *This Old House*.

"The Dorchester House has to be number one, because it was your first project, and it got me hooked on* This Old House *right away. Inspiration to do my own projects abounded. Thanks to everyone on the show, past and present, for giving me the motivation to Do It Myself." —AL MIRABELLA, DOVER, PA

"I chose Dorchester because it's where it all started. Without Season 1 you wouldn't have Season 40. It was the first of its kind." —DARRYL LOZINSKI, KITCHENER, ON

PHOTOS: (CLOCKWISE FROM TOP LEFT) COURTESY OF WGBH; PASCAL BLANCON; BILL SCHWOB/WGBH; ANTHONY TIEULI

#6 Newton

SEASON 2 • 1981

The condo conversion of this rambling 1886 Shingle-style house (a.k.a. the Bigelow House, for its original owner) nabbed sixth place.

"Both Dorchester and Bigelow were great, because we got to watch* This Old House *being invented. But I chose Bigelow because the scope was so ambitious, with this beautiful historical home going from ruins to restoration." —MARGARET, VIA THISOLDHOUSE.COM

"I loved the idea of repurposing the old Bigelow place. It's a way of keeping history alive." —TAMMY MINN, RIVERSIDE, CA

"I chose the Newton/Bigelow project for a few reasons. It was the first season of* This Old House *that I viewed, and I'm a fan of H. H. Richardson's architecture. And I enjoyed the restoration and repurposing of such a historic home, especially one that was as large and challenging as it was to begin with." —DAVID, VIA INSIDER

#5 Billerica

SEASON 21 • 1999

No. 5 was a sentimental favorite—you were touched as the *This Old House* family came together to build a new home for Dick and Sandy Silva after a catastrophic fire.

"If I had to pick one it would be Dick Silva's home rebuild after the fire in 1999. It really became personal as everybody pitched in. It was a* TOH *family disaster, and we viewers really felt for the family."

—BOB HAYNES, MOODY, AL

"I loved the Billerica House. Not only is it a fine house, but it was special since they were building it for Tommy's brother, who'd just been through a fire. You could tell they were all trying extra-hard to give their coworker and relative a great new home." —CHRIS, VIA INSIDER

"I loved watching you do something wonderful for Dickie. It was sad, but with a happy ending." —GARY ADAM SR., WINSTON-SALEM, NC

#4 Detroit

SEASON 38 • 2017

The 1939 brick home was a charmer, but for many fans, this season wasn't just about the house. You valued the homeowners' hard work, the community that came together to help, and the rejuvenation of a great American city.

"My favorite project was Detroit, because people just started showing up and helping."

—ZACHARY KEAGLE, MONTICELLO, IL

"I really appreciated the time y'all spent in a city with such great housing stock, featuring programs that help get people into the homes, and the graciousness of all the cast and crew!"

—CARL, VIA INSIDER

"I loved how with this project, you helped to bring to light the changes taking place in an almost-forgotten city." —DANIEL, VIA THISOLDHOUSE.COM

PHOTOS: (CLOCKWISE FROM TOP RIGHT) COURTESY OF WGBH; NATHAN KIRKMAN; COURTESY OF WGBH; (OPPOSITE PAGE, CLOCKWISE FROM TOP LEFT) ALYSSA THOMPSON; KELLER + KELLER (3)

3

#3 Cambridge 2005

SEASON 27 • 2005

This 1950 mid-century modern—or "George's house"—was the dark horse, surprising us with its vote tally. But the challenges the house posed, and the techniques and technologies used to remedy them, landed it a top-three slot.

"The unique design and techniques that the team used, and the amazing homeowner, made that season really fun. Plus, I enjoyed seeing a challenge for Roger." —TYLER TOMASEK, LINCOLN, NE

"Expanding the radiant heat to the garage, driveway, and walkway was amazing!"
—CHRIS DOUGHMAN, MERRIMACK, NH

"Wonderful interpretation of modern, with great details, amazing layout, and inventive ways to implement the updates." —MICHAEL, VIA INSIDER

#2 Carlisle

SEASON 26 • 2004

For the show's 25th anniversary, *This Old House* spent an entire season renovating an 1849 farmstead. If your votes are any indication, you loved every minute of it.

"It was a huge project with so many talented people involved, plus it had all different types of renovation, from the newly built master suite to remodeling the barn for a dramatic, livable space that turned out to be fantastic." —JON MONTGOMERY, WEST UNION, WV

"Honestly, I've found myself rewatching Carlisle from start to finish twice a year since it aired."
—JAMES HAUN, KNOXVILLE, TN

"Seeing the barn interior made into living quarters, rebuilding the breezeway, the stone quartz flooring—watching the Carlisle project gave me so many ideas." —PATRICIA, VIA INSIDER

2

#1 Concord Barn

SEASON 11 • 1989

Rebuilt from its rubble-stone foundation up—and featuring an awe-inspiring barn raising (right)—the rebirth of an 1835 barn as a 20th-century timber-frame house took the top spot by a landslide.

"The Concord Barn brought together some fascinating new and old building technologies and mixed them with solid craftsmanship, along with a very likable family in the Wickwires. I became a devoted* This Old House *fan in the process."
—JOHN, VIA THISOLDHOUSE.COM

"The barn raising! Watching Tedd Benson and the crew put that barn together was amazing. That project stood out above them all." —TIMOTHY, VIA INSIDER

"Loved the mix of the ancient art of timber framing with the modern building methods. It was Steve's first project, and you could see the beginnings of his chemistry with Norm, Richard, Tommy, and Roger. Tedd Benson and his team added the passion of their craft, along with the wonderful Wickwire family." —JOHN SAGELY, FORT SMITH, AR

"Quite simply, Tedd Benson's timber-frame design and construction, combined with* TOH*'s master craftsmanship, translates to this house being around for centuries!" —CHRIS, VIA INSIDER

Family ties

For many fans, This Old House feels like home. We're honored that our family is part of yours.

"I grew up watching *This Old House* and have passed the love on to my husband and our sons. They were very excited to dress as some of the guys last Halloween. August (above left) was Roger Cook, Heinrich (right) was Tom Silva, and their little brother Sebastian was an apprentice."
—ALI VANDERLINDE, VIA E-MAIL

"When I was 8, I asked my dad how he'd learned to fix so many things, and he sat me down to watch *This Old House* with him. Now I'm 27, and I've learned so much from watching that I can take on repairs around the house."
—PAUL GONZALES, SAN ANTONIO

"Growing up, our children couldn't wait for their one special TV show with 'Bob Biwa.'" —LINDA-MARC HILDEBRANT, VIA FACEBOOK

"While most kids watched cartoons on the weekend, I woke up looking forward to *This Old House.* Now at 38, I still watch every weekend. And since becoming a homeowner, it's inspired me to tackle projects."
—ADAM SCHAFFER, ALLEN PARK, MI

"*This Old House* is like meeting up with family each week. Sometimes new members visit, and I love that you're encouraging young people. As a grandmother, I always enjoy meeting the 'kids.'" —PAM STOCKHAM, ROELAND PARK, KS

PHOTOS: (LEFT, TOP AND BOTTOM) RICHARD HOWARD/WGBH; (RIGHT) COURTESY OF VANDERLINDE FAMILY; (OPPOSITE PAGE, TOP RIGHT) KINDRA CLINEFF; (BOTTOM) JOHN TOMLIN

18+

WHAT IS AVAXHOME?

AVAXHOME-

the biggest Internet portal, providing you various content: brand new books, trending movies, fresh magazines, hot games, recent software, latest music releases.

Unlimited satisfaction one low price
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Protect your downloadings from Big brother
Safer, than torrent-trackers

18 years of seamless operation and our users' satisfaction

All languages
Brand new content
One site

AVXLIVE.ICU

AvaxHome - Your End Place

We have everything for all of your needs. Just open https://avxlive.icu

LOL moments

Back in 1979 there wasn't an acronym for it: You just laughed out loud. Renovating homes is serious business, but the guys have never taken themselves too seriously.

WACKY WARDROBE

"Funniest moment? Bob Vila's hat in the first season."
—CHRISTOPHER, VIA INSIDER

SECRET LOCATION

"In 2000, Norm took the Charlestown House's owner to the New Yankee Workshop—but first, Norm blindfolded him so he wouldn't know where the shop was." —TIMOTHY, VIA THISOLDHOUSE.COM

THE NEW GUY

"Funniest moment for me was Kevin's first day on the job. Roger greeted Kevin—and scolded him for being late."
—TONY, VIA INSIDER

"My favorite was Kevin's first day. He was so nervous!" —SANDI HAZEN PEEL, DAVENPORT, IA

"I thought Kevin was too young at first, but look at him now!"
—MARYANN MOLAEI, KALAMA, WA

Everybody's favorites

More than a few of you compared choosing a favorite from the TOH gang to being asked to pick among your children, but you weren't shy about sharing your appreciation for the entire This Old House team.

"**Norm Abram** is the best example of what teaching should be. He's a consummate professional, with incredible patience and the willingness to share his vast knowledge. It's so evident he truly loves what he does, and it's a love that is infectious." —WILLIAM, VIA INSIDER

"All my friends worship **Tom Silva**. We talk about our current projects and bounce ideas off of each other, but our favorite saying is WWTD: 'What Would Tom Do?' Plus, we love it when he gives Kevin a hard time."
—ANDREW BRETTRAGER, MANHATTAN, IL

"**Richard Trethewey** is my hero. He's inspired me to tackle many plumbing jobs. When I replaced the old pipes in my basement, many looked at me like I was crazy when I suggested PEX instead of copper. I just said, 'They use it on *This Old House*!'" —JASON KRAMER, CINCINNATI

"**Roger Cook** is the closer for *TOH*. He's often doing most of his work once every other trade has trampled the job site, and everyone's probably feeling the crunch to get the job finished. But Roger always pulls it together and puts the icing on the cake." —ABIGAIL HUGHES, VIA E-MAIL

WATCH AND LEARN

You might not be working on a whole-house reno, but that doesn't mean you haven't learned a thing or two (or 20!) from This Old House.

"*This Old House* gave me the vision to see that I could do home improvements myself, and started me on my DIY journey. I've been able to do a number of major remodels myself thanks to *TOH*. Bob, Norm, Rich, and the rest of the cast showed me everything from reglazing old sashes to building a screen porch to how to take down a wall."
—DUANE McDONALD, VIA E-MAIL

"When I needed a new roof I used synthetic slate like they used on the Billerica House (and I put it on myself with the help of a friend). I would probably never have known of that product had it not been for *TOH*. I love that I've learned so much over the years, and became a home-improvement junkie, thanks to *This Old House*."
—SHERRY HOLTMEYER, COTTAGE GROVE, MN

"About ten years ago, when my wife and I remodeled our home, everything I'd learned by watching came in so handy. I have no formal training, nor did I have a role model in these areas when I was growing up; it's all due to the shows. Every project I've watched on *This Old House* has given me at least one important lesson, and usually more than three."
—JERRY, VIA INSIDER

"*This Old House* has given me confidence to tackle projects but it's also educated me to have meaningful conversations with men and women in the trades, and given me an appreciation for their livelihood. Technology can't replace the knowledge and guidance of a trustworthy and experienced tradesperson."
—VIYAN UDAWATTA, COLUMBUS, OH

40 Years of Firsts

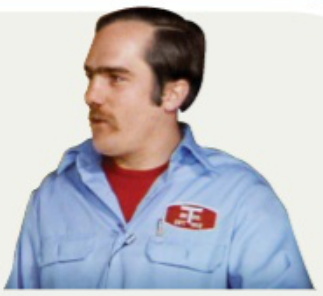
From that initial renovation of a derelict house in a struggling urban area, This Old House has stood apart as the original home-improvement TV show—and continues to be the genre's most groundbreaking

BY DEBORAH BALDWIN

1979

BIRTH OF A NOTION

After surviving more than one reno himself, TV producer Russ Morash persuades Boston's WGBH to underwrite a show demystifying the process. Meet carpenter Norm Abram, host Bob Vila, and plumber Ron Trethewey! "I thought I'd be in the background of a couple scenes carrying around ladders," Norm recalls. The real star: a run-down 1860 house in Dorchester, MA, that cost $17,000 to buy and $30,000 to renovate.



1980

After the series sets a new ratings record for the local public TV station, *TOH* airs nationally. The plumber's wrench is passed to Richard Trethewey by his dad, who decides he doesn't enjoy sweating pipes in the limelight.

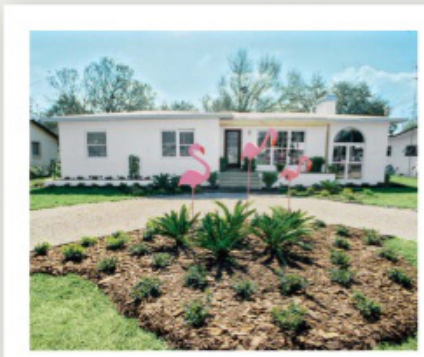
1981

THE CREW DEMONSTRATES ITS CHOPS WITH ITS LARGEST-EVER RENO, CONVERTING A LONG-NEGLECTED MANSION AND ITS OUTBUILDINGS INTO 10,000 SQUARE FEET OF COVETED CONDOS IN NEWTON, MA.

1982

HOME ALONE NO MORE

Ignoring common wisdom, the TV cast begins working directly with homeowners on the Arlington project. Miraculously, everyone survives to tell the story.



1983

TOH builds a solar-powered house from the ground up—no biggie—billing the Brookline project as so efficient it could heat itself. Thrifty Yankees, watching TV in their down coats, are glued to their sets.

1983

THIS OLD HOUSE LANDS ITS FIRST EMMY AWARD!

1986

The crew makes its first foray outside Massachusetts, traveling south to spiff up a concrete-block-and-stucco tract house in Tampa, FL, and giving it a much-deserved Florida room.

1986

Tom Silva officially comes on board as *This Old House* general contractor.

PHOTOS: (1979) MICHAEL LUTCH/WGBH; (1983) COURTESY OF WGBH; (1986, TAMPA) MIKE MINARDI/WGBH; (1986, TOM SILVA) COURTESY OF WGBH; (1989) RICHARD HOWARD/WGBH; (1992, 1994, 1996) COURTESY OF WGBH; (2002) KELLER + KELLER; (® EMMY STATUETTE) ©ATAS/NATAS

19 and Counting

That's the combined total of Daytime Emmy Awards *This Old House* and *Ask This Old House* have taken home so far.

1983
TOH, Outstanding Talk/Service Series

1986
TOH, Outstanding Achievement in Technical Direction/Electronic Camerawork/Video Control

1992

The guys expand their reach, crossing the pond to tackle their first fixer-upper outside the U.S.: the top-floor flat of an 1857 building in London.

1994

TV viewers are gripped by *TOH*'s oldest house, circa 1710, in Acton, MA. On the agenda: Get the dishwasher out of the dining room!

1995

THIS OLD HOUSE MAGAZINE LAUNCHES. DIYERS EAGERLY AWAIT IDEAS FOR STORING BACK ISSUES.

1996

For the first time, a *TOH* project—the 1887 Nantucket House—goes from being a home renovation to something closer to a complete rebuild. A number of viewers say they can relate.

1998

GREAT ADAPTATION

Looking for fresh challenges, the crew tackles its first true adaptive reuse project, turning a 1906 Arts and Crafts church in San Francisco into a young couple's home. It may be *TOH*'s only house with a belfry.

1991

WHAT ABOUT BOB?

ABC-TV airs *Home Improvement,* a sitcom that "coincidentally" features a character not unlike Bob Vila. Later he tells a reporter that he got a call from the show before it launched: "There was some concern in the legal department that I was being ripped off."

1989

The show welcomes a new host, Steve Thomas, and raises its first barn, in Concord, MA.

1988

ROGER THAT!

Landscape contractor Roger Cook joins the full-time cast, prompting a nationwide run on hydrangeas.

2002

In an effort to bring the *TOH* crew's expertise to a wider circle of homeowners, *Ask This Old House* is born, and declares its intention to cross the country in search of great questions.

1986
TOH, Outstanding Directing in a Talk/ Service Show

1987
TOH, Outstanding Achievement in Technical Direction/Electronic Camerawork/Video Control

1988
TOH, Outstanding Directing in a Talk/ Service Show

1990
TOH, Outstanding Directing in a Talk/ Service Show

1992
TOH, Outstanding Achievement in Technical Direction/Electronic Camera/Video Control

2005

With houses many of us grew up in—the cast included—now considered "old," *TOH* has its first "mod experience," turning a leaky, undistinguished mid-century find in Cambridge, MA, into a showpiece nearly doubled in size.

2006

CAPITAL IDEA

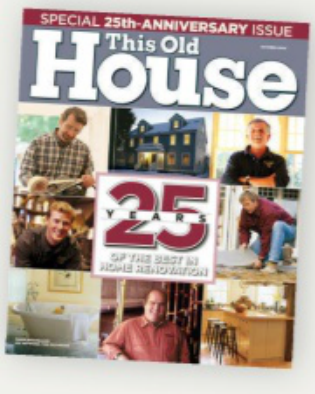
TOH teams up with a nonprofit to renovate a run-down, fire-damaged 1879 rowhouse in a tough part of Washington, D.C. The result is an affordable family home 10 blocks from the White House in a neighborhood on the rise.

2007

THE SHOW GOES TO AUSTIN, TEXAS, FOR ITS FIRST GREEN REMODEL, WHICH FOCUSES ON RECYCLING, SOLAR POWER, AND RAINWATER COLLECTION.

2008

In the aftermath of Hurricane Katrina, the crew goes to Louisiana for its first post-hurricane rebuild, a shotgun house in New Orleans.



2004

TURNING 25

TOH celebrates its 25th anniversary by—what else?—buying, renovating, and selling a run-down 1849 Greek Revival house and its barn in Carlisle, MA. The project's signature is the dramatic "living hall," with its rustic exposed posts and beams.

2003

HELLO, KEVIN!

New host Kevin O'Connor, a former banker, trades in wing tips for Red Wings. Up to his neck in renovating a rambling Queen Anne, he was "discovered" when *AskTOH,* which is just in development, makes a house call.

2003

Catching the wave of interest in small-scale living, the *TOH* team turns a 1,000-square-foot barn built in 1894 into a two-story in-law cottage in Concord, MA.

2008

PRE-FABULOUS

TOH undertakes a timber-frame prefab in Weston, MA, most of it built in a New Hampshire factory. It's like an updated barn raising—with more attention to details.

1992
TOH, Outstanding Directing in a Talk/ Service Show

1994
TOH, Outstanding Service Show

1994
TOH, Outstanding Directing in a Service Show

1995
TOH, Outstanding Directing in a Service Show

1996
TOH, Outstanding Directing in a Service Show

1997
TOH, Outstanding Directing in a Service Show

2017

Ask This Old House makes a milestone trip to its 50th state, Hawaii.

2019

The *TOH* team officially expands with some familiar names: (from left) Nathan Gilbert, Mauro Henrique, Ross Trethewey, Jenn Nawada, Jeff Sweenor, Charlie Silva, and Mark McCullough.

2017
TOH MOTORS TO DETROIT AND HELPS SAVE A 1939 HOUSE BOUGHT AT AUCTION.

2018

NET-ZERO

TOH takes on the renovation of a drafty, nearly century-old cottage in Jamestown, RI. High-efficiency systems and a solar array aim to meet all the household's energy needs.

2019
ASKTOH WINS ITS FIRST EMMY AFTER 10 PREVIOUS NOMINATIONS AND A GAZILLION MILES ON THE ROAD. YOU COULD SAY IT'S ON A ROLL OF ITS OWN.

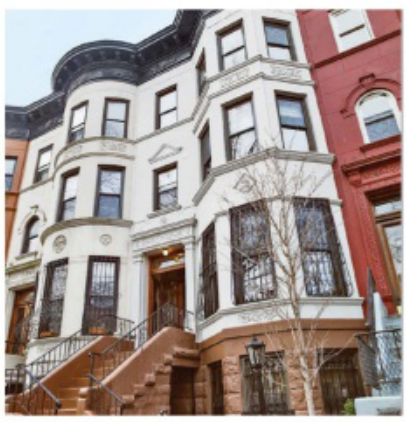
2016

NEXT UP

To encourage young people to pursue a career in the trades, *TOH* launches its GenerationNEXT initiative and welcomes on-air apprentices.

2015

TOH partners with Homes for Our Troops and a local builder to construct a house adapted to the needs of a wounded veteran.



2009

Brooklyn cheers when *TOH* comes to town to fix up a century-old brownstone. Rumors begin that a men's-haberdashery-with-espresso-bar will soon open down the street, specializing in plaid shirts.

2013

SHORING UP THE SHORE

In New Jersey for the first time, the show takes on three post–Superstorm Sandy rebuilds. The focus is as much on the financial and bureaucratic headaches facing homeowners as on preparing their houses to weather future flooding.

2015
TOH BUILDS ITS FIRST IDEA HOUSE, IN CHICKAMAUGA, GEORGIA. WHO WOULDN'T WANT TO LIVE IN A PLACE CALLED CLOUDLAND STATION?

1998
TOH, Outstanding Service Show Host

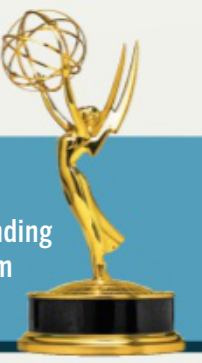
1999
TOH, Outstanding Directing in a Service Show

2002
TOH, Outstanding Directing in a Service Show

2009
TOH, Outstanding Lifestyle Program

2016
TOH, Outstanding Lifestyle Program

2019
AskTOH, Outstanding Lifestyle Program



PHOTOS: (2003, CONCORD) JOSHUA McHUGH; (2003, KEVIN O'CONNOR) KELLER + KELLER; (2006) ERIC JOHNSON; (2008, NEW ORLEANS) JULIAN WASS; (2008, PREFAB) ANTHONY TIEULI; (2009) WENDELL T. WEBBER; (2013) LAURA MOSS; (2017) COLLEEN McQUAID; (2018) ANTHONY TIEULI; (2019, LEFT TO RIGHT) CARL TREMBLAY; ANTHONY TIEULI (6); (® EMMY STATUETTE) ©ATAS/NATAS

Camera Ready

1

Between takes, Kevin O'Connor captures the action from the other side of the lens. Here, he gives us some backstory

BY LAURA D. TESTINO
PHOTOGRAPHS BY KEVIN O'CONNOR

Like many a new father, our *TOH* host greeted the birth of his first child by rushing out to buy a camera: "You have a new baby, and it's like, 'Oh my gosh, I gotta take pictures of this kid!' " That was 14 years ago—and only Kevin's second year on *This Old House.* Eventually, as he developed a habit of carrying his camera around, he thought to take it to the job site. "I quickly realized that I was in some pretty remarkable situations, whether it was behind the scenes with the guys, seeing the renovation process up close, or documenting our travels," he says now. "So I just started snapping away."

This was before Facebook and iPhones and Instagram, and Kevin wasn't thinking about other people seeing his shots. But the more photographs he took, the more he enjoyed doing it, and the better he got at it. He's drawn to capturing the cast and crew working at their craft amid the hubbub of the job site, and quieter moments that speak to the process, too, like wood curling off a block plane. Now his photos appear regularly in *TOH* magazine, on the *TOH* website, and on his social media. Since he's one of the few on set for full days when the show is filming, he's realized he has become the "unofficial chronicler" of *This Old House.* "Now I feel a responsibility to grab as many of these unique moments as I can."

1. "That's apprentice Kevin Barker in the foreground, on the roof at Jamestown. He's a Marine, and he's got some experience; you can see it in how he carries himself."

2. Photographer Anthony Tieuli captured Kevin between clicks with his trusty Canon Mark IV at the Brookline House.

3. "This is cool because they're framed like they're on their own canvas: Expert master patiently shares lessons with new apprentice. The fact that the apprentice [Bailey Beers] is a young woman with a tattoo on her arm and the master is the old guy with some gray in his moustache says it all."

2

PHOTO: (BOTTOM) ANTHONY TIEULI

4. "Here's Kevin Barker on the Jamestown roof again, where they're popping in a dormer. It's kind of an easy shot, the heroic pose. All the lines, including my sight line, are pointing up to the sky. It feels aspirational."

5. "This is at our new build, up in Essex, and I'm taking advantage of one of those unique opportunities. I'm in the lift with the TV camera guy as he's getting this shot, looking down as the cupola is being lifted into place."

6. "I love this kind of 'heavenly light.' And it's Norm, who can build anything, just tapping together two pieces of wood using a simple $20 hammer, nothing fancy."

7. "This is one of those close-ups I like to take. It's Tommy in Weston, using a basic carpenter's tool, a simple little block plane. How could you go wrong when you see a pair of well-worn hands working like this and the wood curling?"

8. "Tommy's in Brookline sharing one of his gems for simplifying the process of installing a door. But it's also metaphorical: Here's a guy you can trust, who's just rock solid in everything he does, and who's always on the level."

9. "This is how I like to do portraits. During a quick break in filming in Charleston, I asked Richard to turn around and smile. With the old wood, and the finished balustrade, and different layers of the house exposed, there was just so much texture."

10. "Apprentice Austin Wilson's tool belt is still clean and fresh here at Newton. Norm was giving a lesson about framing an interior wall and checking to see if a board is straight, and now Austin's setting about doing it."

THERE'S MORE!
See a larger collection of Kevin's behind-the-scenes and on-the-job-site photography at **thisoldhouse.com/kevins-albums**

Game Changers

Cordless tools, wireless-control systems, engineered beams, fiber-cement siding—we look at some of the innovative tools, building materials, and technologies that have revolutionized remodeling over the last four decades **BY THOMAS BAKER**

"They don't build them like they used to." At *This Old House,* the reply to that curmudgeonly complaint is "That's right. We build them better!" And that's due in no small part to the inquisitive, adaptable contractors at the heart of this venerable TV show. When they find a product or material that performs better, lasts longer, and still looks good, or when they find a tool that enables them to work faster with less effort and without compromising quality, they're quick to make it their new standard going forward.

On the following pages, we revisit some of the most notable advances in building technology since *TOH* launched 40 years ago. At that time, many of these changes would have been impossible to imagine, just as we can't imagine what new developments might arise in the coming decades. But the trend lines are clear: Fewer tools will have cords, more things will be controlled by our phones, and we'll be using energy and water more wisely. And the good contractors of the future, the ones who strive to improve their craft and their clients' lives, will be honestly giving the same answer to future curmudgeons: "You're right. We're building *better* than they used to!"

RIGHT: Tom Silva's favorite drill/driver, a Festool CXS, is powered by a 10.8-volt lithium-ion battery, has a variable-speed motor, and weighs just a bit less than 2 pounds.

Tools

The first cordless tools had brief run times, minimal power, and long recharge times. But lighter, smaller, and more powerful lithium-ion tool batteries, coupled with highly efficient brushless motors, made it possible to cut the cord on almost any electrical tool, including table saws and compressors. Now these batteries are even replacing the gas engines on chainsaws and lawn mowers.

> **"The nice thing about battery-powered tools: no cords to get tangled, hung up, cut, or unplugged." —TOM SILVA**

Chainsaws Tree-topplers with lithium-ion batteries, like those made by Ego, are lighter and quieter than gas-powered models, but cut just as fast. **Power+ chainsaw with 18-inch bar;** *egopowerplus.com*

Table saws Hard to believe the workhorse of so many job sites no longer has to be tethered to a cord. This 18-volt version rips through 600 feet of OSB on a single charge. **M18 table saw;** *milwaukeetool.com*

Self-leveling levels These portable devices, which shoot fan-shaped beams horizontally and vertically, come in handy when installing cabinets, laying tile, and framing. The bright green laser lines on DeWalt's level can be seen at 100 feet. **12v Max Cross Line Laser;** *dewalt.com*

PHOTO: (LEFT) ANTHONY TIEULI

LEFT: Richard Trethewey explains how the copper heat exchanger in a tankless water heater transfers the heat from a gas flame to the water flowing through the tubing.

Energy Efficiency

The oil-price shocks of the 1970s spurred the fight to control our profligate energy use. Nearly 50 years later, we have 98-percent-efficient boilers, furnaces, and tankless water heaters; Energy Star programs that push for more-efficient appliances, fixtures, and heating-and-cooling equipment; certification programs for window performance; and many new energy-saving products. And with the advent of affordable solar panels, houses can produce as much power as they consume.

"In just 20 years, there's been a quantum leap in the amount of heat we get out of every dollar we spend."
—RICHARD TRETHEWEY

Heat pumps In most conditions, this type of heating-and-cooling equipment captures and concentrates about 3kw of thermal energy for every 1kw of power it consumes. However, many heat pumps suffer a steep decline in heating capacity when outside temperatures drop below freezing. Mitsubishi's inverter-driven, cold-climate heat pumps are an exception to that rule; they maintain 100 percent capacity down to 23 degrees F. **H2i Heat Pump;** *mitsubishicomfort.com*

Thermal imagers These handheld devices convert infrared radiation into colors on a screen, allowing you to see otherwise hidden problems such as uninsulated stud bays, wet wood, soggy insulation, leaky windows and ducts, overheating switches and outlets, even termite infestations. **FLIR One Gen 3;** *flir.com*

LEDs Solid-state bulbs, including those from Cree, produce the same amount of light as old-style, 60-watt incandescents, while using just ⅙ the energy. That makes LEDs the easiest, most cost-effective way to minimize utility costs. **Cree 60-watt replacement bulb;** *creebulb.com*

Condensing technology When excess heat is extracted from the exhaust of fuel-burning furnaces, boilers, and tankless water heaters like Rinnai's, efficiencies that once topped out at 85 percent are able to reach 98 percent. **Sensei Series;** *rinnai.us*

Smart Tech

Since the introduction of the iPhone in 2007, the move to wirelessly connect phone apps to the systems and appliances in a home has steadily accelerated. Now, through this Internet of Things, homeowners have the means to monitor and control nearly every aspect of a home's operation through their smartphones and laptops.

Smart thermostats You don't have to program anything; they monitor your comings and goings, and then set the temperature accordingly to maximize both indoor comfort and energy efficiency. **Nest Learning Thermostat;** *nest.com*

Electricity watchdogs Energy-use monitors like the Sense inform your smartphone about how much power individual systems and appliances are using, which helps you spot problems. **Sense;** *sense.com*

Doorbell cams Smartphone-enabled cameras like those from Ring keep an eye on who's coming to your door, day or night, and let you listen and talk to visitors, even when you're not home. And if you want to get a closer look, rewind the video feed. **Ring Video Doorbell Pro;** *shop.ring.com*

"No one could ever imagine this level of control with a phone you carry in your pocket."
—RICHARD TRETHEWEY

Durable Exteriors

The key to a low-maintenance, long-lasting exterior is to use building materials that can withstand the elements, and to install them in a way that always allows moisture a means of escape. Some products sit unseen beneath siding or soil. The more visible, man-made trim and siding offer unmatched durability without compromising aesthetics.

Drainage planes The airspace established by the dimples on Dorken's below-grade foundation membrane halts the migration of water from soil into concrete. **Delta-MS;** *dorken.com*

No-leak flashing Rubbery membranes—both stick-in-place sheets like Ice & Water Shield and brush-on liquids—form a barrier that keeps water off roof sheathing and the framing around windows and doors. **Ice & Water Shield;** *gcpat.com*

Fiber-cement siding Pioneered by James Hardie, this mix of wood pulp, sand, and cement resembles wood siding but doesn't have wood's high cost, tendency to decay, or need for frequent repainting. **HardiePlank lap siding;** *jameshardie.com*

Rain screens When installed over wall sheathing, a mesh like Slicker HP creates a naturally ventilated air gap that allows wood siding—both lap and shingles—to dry out after it gets wet. **Slicker HP;** *benjaminobdyke.com*

Rot-free wood Decking that can withstand the elements doesn't have to be soaked in toxic metals, made of plastic, or grown in a rain forest. Thermory's thermally modified white ash—from U.S. and European forests—is cooked until it's unpalatable to insects and rot fungi, a process that also makes the boards more stable than untreated ones. **Benchmark White Ash Decking;** *thermoryusa.com*

Forever trim Cellular PVC, brought to the U.S. market by AZEK, looks and cuts like painted pine, but doesn't decay, warp, or get chewed up by insects. And it's not just for trim; the material is also fashioned into handrails, moldings, fences, and pergolas. **AZEK;** *azekexteriors.com*

> **"I have cellular PVC trim and fiber-cement siding on my Victorian-era house, and most people can't tell it isn't wood."**
> **—TOM SILVA**

ABOVE: The yellow-mesh rain screen under the cedar shingles at the 2018 Jamestown Net-Zero House provides an easy way for water to escape.

BELOW, FAR LEFT: The 2017 Newton GenerationNEXT House is covered with lap siding and shingles made of low-maintenance fiber cement.

LEFT: At the 2017 *TOH* Idea House, the exterior trim around the doors and windows, and over the beams and columns, may look like painted wood, but it's actually rot-proof cellular PVC.

PHOTOS: (TOP) CARL TREMBLAY; (BOTTOM LEFT) ANTHONY TIEULI; (BOTTOM RIGHT) NAT REA; (OPPOSITE PAGE, TOP LEFT) MIKE LAST

Better Building

Whether they use pegs and tenons or nails and screws, builders have always needed a dependable way to hold their houses together. These days, due to great strides in chemical technology, glues and adhesives play a big role in the process, by magnifying screw strength and enabling the manufacture of man-made lumber. Also, thanks to improved metallurgy and thread design, we now have structural screws so strong and quick to install, they've largely supplanted lag bolts.

Poly upgrade In Tom's world, strong polyurethane construction adhesives, like those made by Loctite, have generally replaced inexpensive, smelly, and short-lived synthetic-rubber adhesives. Because polys bond tightly with most materials, and aren't bothered by water, they're great for exterior applications. **PL Premium;** *loctiteproducts.com*

Man-made lumber In certain critical home-building applications, everyday sawn lumber may not have what it takes. That's when engineered joists, studs, and beams come to the rescue. These glued-together structural members are reliably stiff, perfectly straight, and free of defects along their entire length. **Boise Cascade Engineered Wood Products;** *bc.com*

ABOVE: When building a rustic headboard, Tom used construction adhesive in conjunction with nails. Together they make a much stronger bond than nails alone.

Flexible epoxies With the invention of epoxies that move with wood, and of penetrating primers that ensure strong bonds with wood substrates, it's now possible to make effective, long-lasting repairs to rotted windows, columns, and beams. **Flex-Tech HV and Prime-A-Trate;** *advancedrepair.com*

Sophisticated sealants Exterior sealants are meant to keep out water and block airflow, grip both sides of a gap, remain flexible through years of hot, cold, and wet weather, and accept a coat of paint. The new hybrid sealants made by Gorilla and others use polymers modified with silyls—silicone derivatives—and can actually do all those things, performing far better than the old, shrink-prone latex formulations. **Paintable Silicone Sealant;** *gorillatough.com*

Faster fasteners To hang a deck ledger or sister a joist, Tom used to bore pilot holes, then laboriously crank in fat lag screws. Now, with the help of an impact driver, he can send home slim but strong structural screws, like GRK's RSSs, that need no pilot holes. **RSS Rugged Structural Screws;** *grkfasteners.com*

"Engineered lumber lets me safely span big spaces without the need for steel plates. That means the connections can be wood-to-wood, which is much simpler than drilling into steel, and which holds up better in the long run."
—TOM SILVA

Fresher Interiors

Tighter homes save energy and money, but can also lead to the buildup of airborne chemicals, carbon dioxide, and the humidity that causes mold growth. These days, increased concerns about indoor air quality have made us more vigilant about the kinds of products used to clean, decorate, and furnish our homes, and more reliant on mechanical systems to ventilate, dehumidify, and filter the air.

Outside air, less energy loss

Way better than opening a window, energy-recovery ventilators (ERVs) and heat-recovery ventilators (HRVs) expel stale indoor air as they temper the incoming flow of fresh outdoor air. That tempering action reduces both the cooling and heating loads. While most ERVs are meant for climates with long, humid summers, Panasonic makes one that operates in both hot and cold climates. **Intelli-Balance 100 Cold-Climate ERV;** *panasonic.com*

Safe paint

To keep a lid on volatile organic compounds (VOCs) and toxins such as alkylphenol ethoxylates, look for coatings like Natura that are certified to meet Green Seal 11 standards. **Natura;** *benjaminmoore.com*

Low-VOC carpeting and rugs

Products designated as Green Label Plus, like this residential carpeting, contain fibers and adhesives certified as low in VOCs. **Bellera Collection;** *shawfloors.com*

"I've been using paints with no VOCs for two years and, honestly, I haven't noticed any difference in quality compared with paints that do have VOCs."
—MAURO HENRIQUE

LEFT: *TOH* painter Mauro Henrique says his customers are pleased to find that zero-VOC paints have no lingering paint smell.

RIGHT: Richard discusses what's involved in the design and testing of high-performance, low-flow toilets.

Water World

Clean, fresh water is a precious—and increasingly scarce—resource, and we've made great strides in reducing how much water it takes to flush a toilet, take a shower, or wash our hands. Plumbing systems have also improved, due to plastic pipes that limit the opportunity for leaks, and smart shutoff valves that prevent catastrophic floods.

Impressive PEX

Unlike rigid pipes, tubing made of flexible cross-linked polyethylene (PEX) minimizes joints, doesn't split open when it freezes, and makes radiant in-floor heating with hot water a realistic option. **AquaPEX;** *uponor-usa.com*

Water-savers

Before 1994, a single flush could consume up to 3.5 gallons of water. Now the legal limit is 1.6 gallons, but there are many toilets that use much less, including Niagara's dual-flush, 05/.95-gallon model. **Original Stealth Dual Flush;** *niagaracorp.com*

"Even though our population has grown, water consumption is dropping, thanks to the new fixtures that meet federal water-use regulations."
—RICHARD TRETHEWEY

PHOTOS: (TOP RIGHT) COLLEEN McQUAID; (BOTTOM) ANTHONY TIEULI; (OPPOSITE PAGE, TOP) ANTHONY TIEULI

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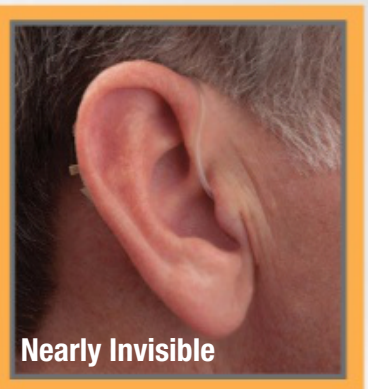

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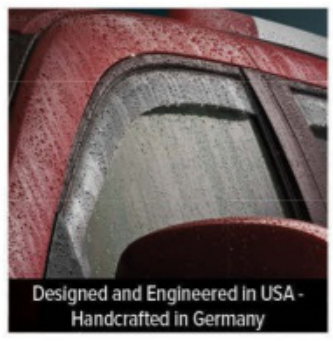

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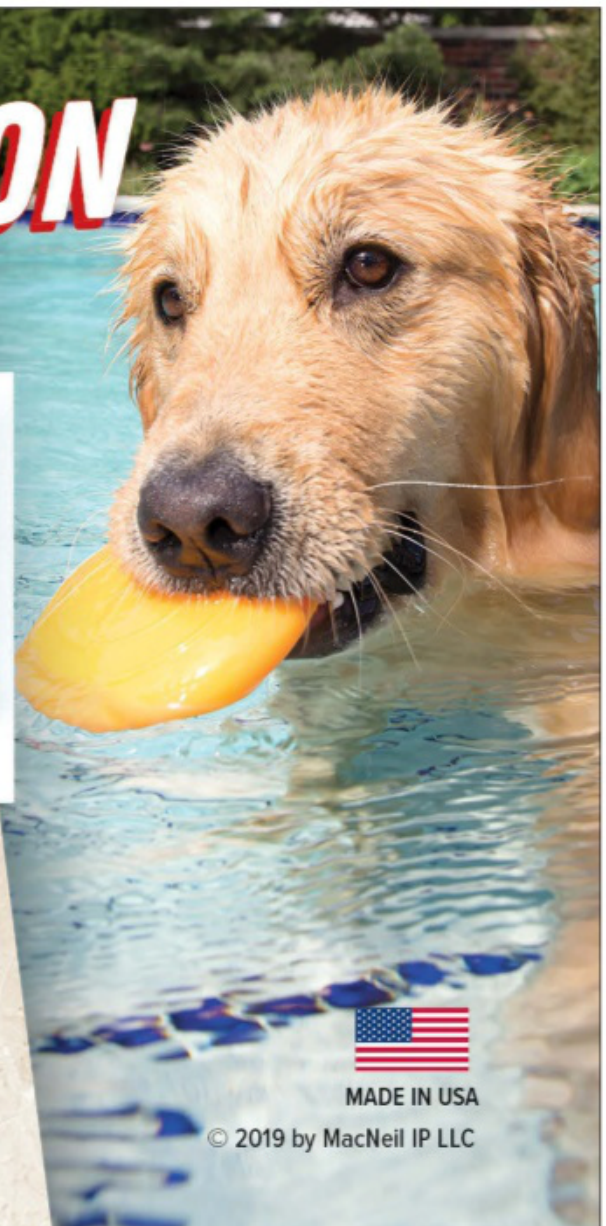

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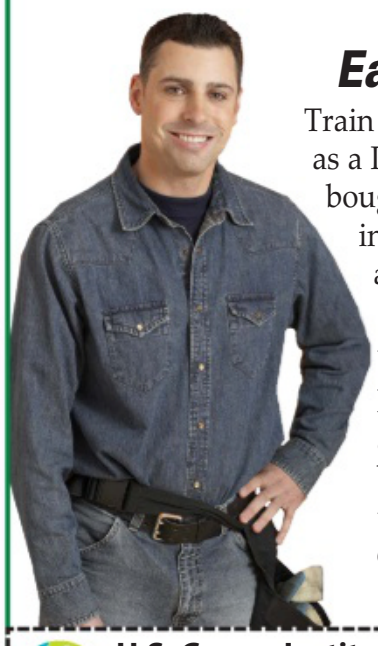

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Method of payment:
❑ Check payable to Littleton Coin Co.
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❑ AMEX ❑ DISC

QTY	DESCRIPTION	PRICE	TOTAL
1	103-Coin Quarter Set *(limit 1 set)*	$29.95	$29.95
	Statehood Display Folders	$3.50	
	National Park Display Folders	$3.50	
	*Sales Tax		
	***FREE** Shipping!*	**TOTAL $**	

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12" DUAL-BEVEL SLIDING COMPOUND MITER SAW
Customer Rating
ITEM 56775/56597
69684/61776
61970/61969 shown
BLADE SOLD SEPARATELY
3-1/2" VERTICAL CROWN MOLDING CAPACITY
2-5/8" TALL SLIDING FENCES
LASER GUIDE LIGHT
$144.99 ~~$199.99~~
SAVE $73 COMPARE TO PROFESSIONAL WOODWORKER $218.71 MODEL: 8637
Not available in AZ, OH, OK, and VA.
39571976
LIMIT 1 - Coupon valid through 12/9/19*

BETTER — ADMIRAL
SUPER COUPON
12" DUAL-BEVEL SLIDING COMPOUND MITER SAW WITH LED AND LASER GUIDE
Customer Rating
ITEM 64686
FREE BLADE INCLUDED $19.99 VALUE
6-1/2" VERTICAL CROWN MOLDING CAPACITY
4-1/2" TALL SLIDING FENCES
LASER GUIDE LIGHT & LED WORK LIGHT
$179 ~~$199.99~~
SAVE $90 COMPARE TO RYOBI $269 MODEL: TSS120L
39586982
LIMIT 1 - Coupon valid through 12/9/19*

SUPER COUPON
OVER 5,000 5 STAR REVIEWS
FREE WITH ANY PURCHASE
SUPER BRIGHT LED /SMD WORK LIGHT/FLASHLIGHT
- Super-Strong, Ultra-Lightweight Composite Plastic
- Magnetic Base & 360° Swivel Hook for Hands-Free Operation
- 3 - AAA Batteries (included)
- 144 Lumens

ALL IN A SINGLE SUPER POWERFUL LIGHT
COMPARE TO PERFORMANCE TOOL $13.52 MODEL: W2264
ITEM 63878
63991/64005/69567
60566/63601/67227 shown
39525785
Cannot be used with other discounts or prior purchases. Original coupon must be presented. Valid through 12/9/19 while supplies last. Limit 1 FREE GIFT per customer per day.

SUPER COUPON
20% OFF ANY SINGLE ITEM*
39517004
Limit 1 coupon per customer per day. Save 20% on any 1 item purchased. *Cannot be used with other discount, coupon or any of the following items or brands: Inside Track Club membership, Extended Service Plan, gift card, open box item, 3 day Parking Lot Sale item, compressors, floor jacks, safes, storage cabinets, chests or carts, welders, Admiral, Ames, Bauer, Central Machinery, Cobra, CoverPro, Daytona, Diamondback, Earthquake, Fischer, Hercules, Icon, JupiMac, Lynx, Pauline, Predator, Tailgator, Viking, Vulcan, Zurich. Not valid on prior purchases. Non-transferable. Original coupon must be presented. Valid through 12/9/19.

WOODWORKING

Bauer — SUPER COUPON
15 AMP, 12-1/2" PORTABLE THICKNESS PLANER
Customer Rating
$269.99 ~~$329.99~~
ITEM 63445 SAVE $179
COMPARE TO DEWALT $449 MODEL: DW734
39600053
LIMIT 1 - Coupon valid through 12/9/19*

BANKS — SUPER COUPON
18 GAUGE BRAD AIR NAILER
Customer Rating
$24.99 ~~$29.99~~
ITEM 64140 SAVE 71%
COMPARE TO DEWALT $89 MODEL: DWFP12233
39622680
LIMIT 3 - Coupon valid through 12/9/19*

Bauer — SUPER COUPON
6.5 AMP HEAVY DUTY TOOL-FREE VARIABLE SPEED ORBITAL JIG SAW WITH LASER
$49.99 ~~$59.99~~
Customer Rating
ITEM 64290 SAVE $68
COMPARE TO MAKITA $119 MODEL: JV0600K
39670579
LIMIT 3 - Coupon valid through 12/9/19*

PITTSBURGH — SUPER COUPON
Customer Rating
12" RATCHETING BAR CLAMP/SPREADER
LIFETIME WARRANTY
ITEM 46807/69222/69221
63017/62123 shown
$2.99 ~~$4.29~~
COMPARE TO IRWIN $19.98 MODEL: 1964718 SAVE 85%
40033782
LIMIT 5 - Coupon valid through 12/9/19*

GARAGE

NEW U.S. GENERAL — SUPER COUPON
44" x 22" DOUBLE BANK EXTRA DEEP CABINETS
Customer Rating
HOLDS 20% MORE
SAVE $2,285
YOUR CHOICE OF COLOR $449.99 ~~$499.99~~
COMPARE TO SNAP-ON $2,735 MODEL: KRA413FPRO
Item 64446, 64443, 64133, 64954, 64955, 64956
39600925
LIMIT 1 - Coupon valid through 12/9/19*

WINDSOR DESIGN — SUPER COUPON
60" HARDWOOD WORKBENCH WITH 4 DRAWERS
$119.99 ~~$149.99~~
Tools sold separately.
Customer Rating
SAVE $279 COMPARE TO GRIZZLY $399.95 MODEL: H7723
ITEM 93454/69054/63395/62603 shown
40034953
LIMIT 1 - Coupon valid through 12/9/19*

BRAUN — SUPER COUPON
5000 LUMENS LED HANGING SHOP LIGHT
Customer Rating
SAVE 57%
$29.99 ~~$29.99~~
46-3/8"
$19.99
COMPARE TO INOLED $47 MODEL: SNT288-12
ITEM 64410
39846793
LIMIT 3 - Coupon valid through 12/9/19*

OUTDOOR

PORTLAND — SUPER COUPON
7 AMP ELECTRIC POLE SAW 9.5" BAR
6 ft. to 8 ft. 10"
ITEM 68862
63190/62896 shown
Customer Rating
$59.99 ~~$79.99~~
COMPARE TO WORX $99.98 MODEL: WG309 SAVE $39
39618000
LIMIT 2 - Coupon valid through 12/9/19*

PORTLAND — SUPER COUPON
1750 PSI ELECTRIC PRESSURE WASHER
- 1.3 GPM
- Adjustable spray nozzle

Customer Rating
$79.99 ~~$99.99~~
SAVE $94
COMPARE TO BRIGGS & STRATTON $174.44 MODEL: 20600
ITEM 63255/63254 shown
39642596
LIMIT 2 - Coupon valid through 12/9/19*

luminar OUTDOOR — SUPER COUPON
24 FT., 18 BULB, 12 SOCKET OUTDOOR STRING LIGHTS
Customer Rating
YOUR CHOICE OF COLOR $19.99
BLACK
ITEM 64486
63483 shown
SAVE 50% ~~$27.99~~
WHITE
ITEM 64739
NEW
COMPARE TO PORTFOLIO $39.98 MODEL: SLC12BK
39686577
LIMIT 3 - Coupon valid through 12/9/19*

SUPER COUPON
7 FT. 4" x 9 FT. 6" ALL PURPOSE/WEATHER RESISTANT TARP
Customer Rating
$2.99
COMPARE TO BLUE HAWK $8.78 MODEL: BGEX10-Y SAVE 65% ~~$4.99~~
ITEM 69249/69115/69137/69129/69121/877 shown
39852104
LIMIT 5 - Coupon valid through 12/9/19*

HOME IMPROVEMENT

AVANTI — SUPER COUPON
HVLP HAND HELD PAINT SPRAYER
Customer Rating
NEW
$69.99 ~~$89.99~~
COMPARE TO WAGNER $99.98 MODEL: CONTROL STAINER 350
SAVE $29
ITEM 64934
39621730
LIMIT 2 - Coupon valid through 12/9/19*

Bauer — SUPER COUPON
20 VOLT LITHIUM CORDLESS 1/2" COMPACT DRILL/DRIVER KIT
- 450 in. lbs. of torque
- 1.5 amp hour battery
- Weighs 3.4 lbs.

ITEM 64754/63531 shown
Customer Rating
SAVE $39
$59.99 ~~$69.99~~
COMPARE TO RYOBI $99 MODEL: P811
39667071
LIMIT 2 - Coupon valid through 12/9/19*

DIAMONDBACK — SUPER COUPON
7" HEAVY DUTY WET TILE SAW WITH SLIDING TABLE
Customer Rating
NEW
$219.99 ~~$259.99~~
COMPARE TO MK DIAMOND $434.29 MODEL: 159943
Stand sold separately.
SAVE $214
ITEM 64683
39845709
LIMIT 1 - Coupon valid through 12/9/19*

FRANKLIN — SUPER COUPON
17 FT. TYPE IA MULTI-TASK LADDER
- Versatile - 24 configurations
- Safe + Secure + Stable
- Super strong - holds 300 lbs.
- Weighs 34 lbs.

Customer Rating
$109.99 ~~$139.99~~
COMPARE TO LITTLE GIANT $298.99 MODEL: XE M17
SAVE $189
ITEM 63418/63419
67646/62514/63417 shown
39852448
LIMIT 1 - Coupon valid through 12/9/19*

*Original coupon only. No use on prior purchases after 30 days from original purchase or without original receipt. Valid through 12/9/19.

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color This Old House

In 1979, we went with chocolate brown for the Dorchester House, our very first renovation. What color(s) would you choose now? ILLUSTRATION BY DOUG ADAMS

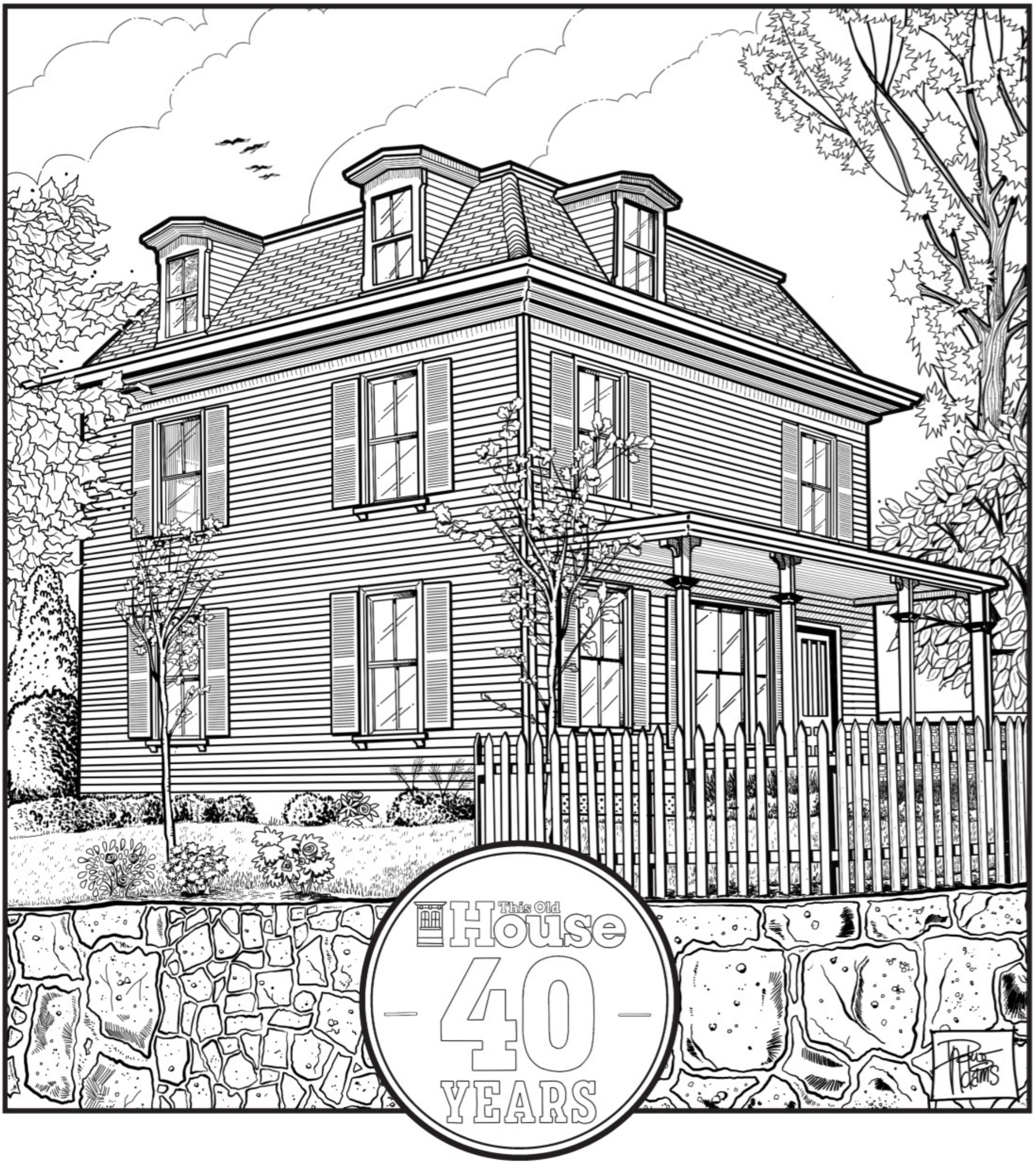

ILLUSTRATION BASED ON A PHOTO BY BILL SCHWOB/WGBH

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