

/// SMART BUILDING STARTS HERE ///

THE MAGAZINE
OF THE NATIONAL ASSOCIATION
OF HOME BUILDERS

Builder

— TURN UNDESIRABLE
LAND INTO PROFITS /// P.54

— PREDICTING THE
FUTURE THROUGH
LAND SUPPLY /// P.26

— GET READY FOR THE
BUILDERS' SHOW /// P.63



Winning the Land Game

Four proven strategies to
compete with the nationals

SEE PAGE 46

THE ALL-NEW
RAM PROMASTER
RUN THE TOWN



**ON THE
JOB**

BUSINESS LINK
The fast lane for small business.

1) Comparison based on standard condition. 2) Based on Class 2 single rear wheel, axle cargo vans when properly equipped. 3) Based on 1500/1500 series (large commercial van segment). When properly equipped. See dealer for details. Ram is a registered trademark of Chrysler Group LLC.

**WALKS TALL,
CARRIES
BIG STICKS**

**TALLEST STANDARD
INTERIOR
65 INCHES***

**BEST-IN-CLASS
PAYLOAD
4,430 LB***

**BEST-IN-CLASS
CARGO
CAPACITY***

BLUEPRINT™



RAMTRUCKS.COM/COMMERCIAL

2014 CALL IT A BEST-IN-CLASS RECOVERY



534 THOUSAND
HOUSING
STARTS
2012



1.2 MILLION
HOUSING
STARTS 2016

EXPERTS SAY BUSINESS IS LOOKING UP FOR RESIDENTIAL BUILDERS... WAY UP.

After all you've been through, you know better than to take that to the bank. But all signs point to "Single family housing starts should more than double over the next five years."*

Yes, the best is yet to come.

But save the champagne. All you know is that you've never worked so hard to keep the business humming from behind the wheel. Your truck is more than a second office, it's THE office. Text, voice, data, video, you-name-it... customers, suppliers and the team expect you to be available by all means necessary.

With so much at stake, why settle for anything less than a mobile command central that keeps you free to do what you do best?



Isn't it time for a 383-HP Wi-Fi hotspot that rules its class with towing muscle? Watch how more and more home builders work on the go like never before at RAM-RESIDENTIALBUILDER.COM. It's two minutes and four seconds that no growing best-in-class home builder should miss.

RAM 3500

- Best in Class 30,000 lbs Towing¹
- Best in Class 850 ft/lbs Torque¹
- Proven 6.7L Cummins Turbo Diesel Engine
- 5 Year/100,000 Mile Limited Powertrain Warranty²
- Smart Diesel Exhaust Brake
- Available Cargo-View Camera
- Available Integrated Fifth-Wheel/Gooseneck Prep Package



RAM-RESIDENTIALBUILDER.COM

*Source: Metrostudy, October 2013
Ram is a registered trademark of Chrysler Group LLC. Cummins is a registered trademark of Cummins, Inc.



¹ When properly equipped. ² See dealer for a copy of the powertrain limited warranty.



We're committed to building beautiful, high quality homes that will fit any lifestyle. Ply Gem allows us the ease of coordinating with one manufacturer- which helps us create the custom-looking home exteriors that our buyers demand.

Darrell Daigre



The
**Designed
Exterior**
by Ply Gem

Designed Exterior Builder

Darrell Daigre, CEO, Savvy Homes
Raleigh, North Carolina



SIDING + ACCENTS



WINDOWS

Visit Ply Gem
IBS BOOTH
C3820

Ply Gem
makes it easy.



STONE VENEER



FENCE + RAIL



TRIM + MOULDINGS



Ply GEM
BUILDING PRODUCTS. BUILDING SUCCESS.

70
YEARS
1943-2013

PLY GEM WINDOWS • MASTIC HOME EXTERIORS • VARIFORM • NAPCO • CELLWOOD • PLY GEM STONE • KROY • PLY GEM TRIM/MOULDINGS plygem.com

We are pioneers of safety.
Separately, we are a host of brands
that have secured the world for centuries.
Together, we are a new company
focused on the future;
halting dangers before they threaten
and keeping the vulnerable from harm.
We are many.
We are one.

We are
Allegion.



ALLEGION™

PIONEERING SAFETY™

Learn more about all of our brands at allegion.com. © 2013 Allegion

Contents

10 Crowdsourcing

16 In the News

91 Ad Index

Foundations

21 Project of the Month: Infill housing fit for any suburban lot

24 Field Report: Builder news you can use

26 Dashboard: Vacant new-home supply metric can predict the market two years out

28 Details: A garage pulls double duty as public outdoor space

30 Tactics: Charter Homes finds marketing success with its print magazine

32 Success Story: Texas' Inland Homes builds where others won't

Products

35 Editor's Pick

36 Top Shelf

38 Category Review: Automating the home

Sound Off

42 Crowe's Economy: A look at economic conditions from the NAHB's chief economist

Build Smart

79 Construction Detail: Air-sealing an eyebrow roof

80 How-To: Crown molding done right

82 Redline: Flex space can work in the front and back

86 Callbacks: Mass, damping, and air sealing are the keys to soundproofing

NAHB

89 National Beat: News from the NAHB and the Home Innovation Research Labs

Plan View

93 Luxury home buyers want floor plans that are unique

Next

96 Ancient structures help produce a more durable concrete



New Purpose Assured Group turned a brownfield into an outdoor-centric community. [Page 54](#)

Features

46 Gaining Ground

Smaller builders find success by forming relationships with land owners, finding capital partners, and building on lots overlooked by big builders or on infill.

54 New Life for an Old Site

How one builder turned a challenging brownfield site into a vibrant mixed-use village.

63 2014 IBS Pre-Show Planner

Check in on The New American Home and get a sneak peek at products from the industry's big trade show and educational conference.

On the Cover Construction at Brambleton in Loudoun County, Va. Photo: Chris Usher

Volume 36, number 12. Builder (ISSN 0744-1193; USPS 370-600) is published 12 times per year: monthly in Jan., Feb., March, April, May, June, July, Aug., Sept., Oct., Nov., and Dec. by Hanley Wood, LLC, One Thomas Circle, N.W., Suite 600, Washington, D.C. 20005, for the National Association of Home Builders and printed in the USA. Copyright 2013 by Hanley Wood. Opinions expressed are those of the authors or persons quoted and not necessarily those of the NAHB. Reproduction in whole or in part prohibited without written authorization. Single-copy price: \$8.00 (except House Plans issues, which are \$12.95). Periodicals postage paid at Washington, D.C., and at additional mailing offices. Postmaster: Send address changes to Builder, P.O. Box 3494, Northbrook, IL 60065-9831. Member: Business Publications Audit, American Business Media.



SoftPlan 2014: available now

"I don't know how a builder survives without SoftPlan."

Jim Irvine, Builder - The Conifer Group, Portland Oregon, Past President NAHB

- easy to learn & use
- 3D renderings
- materials lists
- framing layouts
- automatic elevations
- site plans
- animations
- powerful roof design
- remodeler's setup
- kitchen & bath design
- deck design
- round-trip AutoCAD® files
- links to QuickBooks®
- REScheck™ energy calcs
- 3D panorama views on PC, iPad and iPhone



Try SoftPlan for yourself: visit www.softplan.com or call 1-800-248-0164 for your free trial

THE MAGAZINE OF THE NATIONAL ASSOCIATION OF HOME BUILDERS

Daniel Morrison, EDITORIAL DIRECTOR
Jean Dimeo, EDITOR-IN-CHIEF
Gillian Berenson, CHIEF DESIGN DIRECTOR
Jennifer Lash, MANAGING EDITOR
Amy Albert, SENIOR EDITOR
Jennifer Goodman, SENIOR EDITOR
Shelley D. Hutchins, SENIOR EDITOR
Brian Wilson, DEPUTY ART DIRECTOR
Sandra Malm, ASSISTANT EDITOR
Spencer Markey, SENIOR WEB PRODUCER
Andrew Knight, SCRUM MASTER, RADAR DESK
Charlotte O'Malley, CONTENT PRODUCER, RADAR DESK
David Crowe, **Ted Cushman**, CONTRIBUTORS

Cathy Underwood, SENIOR DIRECTOR, PRINT PRODUCTION
Margaret Coulter, LEAD PRODUCTION MANAGER
Lauren Searson, AD TRAFFIC MANAGER
Betty Kerwin, PREPRESS COORDINATOR

Christina Lustan, GROUP DIRECTOR/AUDIENCE MARKETING & CIRCULATION
Jeff Stockman, AUDIENCE MARKETING MANAGER

Megan McCloud, SENIOR DIRECTOR/CREATIVE SERVICES
Mike Bendickson, VICE PRESIDENT/CONFERENCES & EVENTS

HANLEY WOOD MEDIA

Bob Benz, PRESIDENT/CONTENT
Sarah Welcome, SENIOR VICE PRESIDENT/AUDIENCE OPERATIONS
Ron Kraft, VICE PRESIDENT/FINANCIAL PLANNING & ANALYSIS

PUBLISHED BY HANLEY WOOD, LLC

Peter Goldstone, CHIEF EXECUTIVE OFFICER
Frank Anton, VICE CHAIRMAN
Matthew Flynn, CHIEF FINANCIAL OFFICER
Dave Colford, CHIEF CUSTOMER OFFICER
Andrew Reid, PRESIDENT/DIGITAL
Rick McConnell, PRESIDENT/EXHIBITIONS
Christopher Veator, PRESIDENT/METROSTUDY
Paul Tourbaf, EXECUTIVE VICE PRESIDENT/CORPORATE SALES
Warren Nesbitt, EXECUTIVE VICE PRESIDENT/EXECUTIVE PROGRAMS
Tom Rousseau, EXECUTIVE VICE PRESIDENT/STRATEGIC MARKETING SERVICES
Jennifer Pearce, SENIOR VICE PRESIDENT/STRATEGIC MARKETING SERVICES & CONSUMER MEDIA
Shawn Edwards, VICE PRESIDENT/FINANCE
Michael Bender, VICE PRESIDENT/GENERAL COUNSEL
Sheila Harris, VICE PRESIDENT/MARKETING

EDITORIAL AND ADVERTISING OFFICES

One Thomas Circle NW, Suite 600, Washington, DC 20005
 Phone: 202-452-0800; Fax: 202-785-1974

SUBSCRIPTION INQUIRIES AND BACK ISSUE ORDERS

888-269-8410 or email: builder@omeda.com
 NAHB members please call 800-368-5242 x8546

CIRCULATION CUSTOMER SERVICE

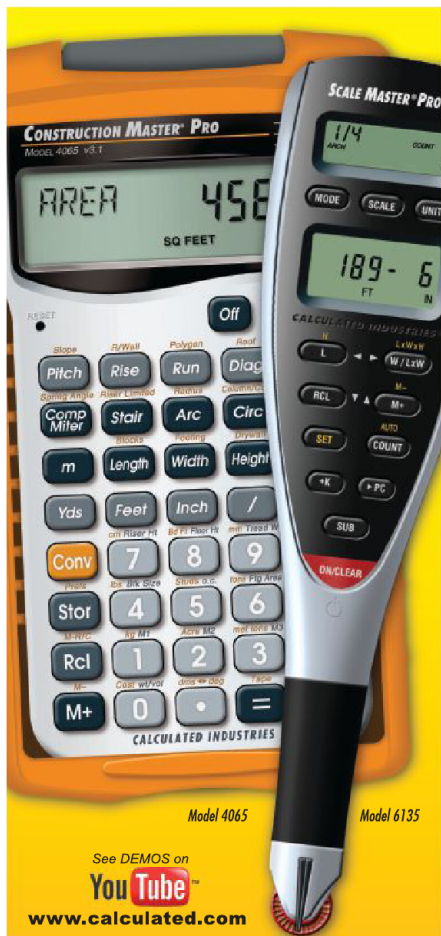
www.omeda.com/customerservice/bldr

PRIVACY OF MAILING LIST Sometimes we share our subscriber mailing list with reputable companies we think you'll find interesting. However, if you do not wish to be included, please call us at 888-269-8410.

Canada Post Registration #40612608/G.S.T. number: R-120931738. **CANADIAN RETURN ADDRESS** Pitney Bowes Inc., P.O. Box 25542, London, ON N6C 6B2

POSTMASTER Send address changes to Builder, P.O. Box 3494, Northbrook, IL 60065-9831

BUILDER occasionally will write about companies in which its parent organization, Hanley Wood, LLC, has an investment interest. When it does, the magazine will fully disclose that relationship.



Save time, reduce costly errors, win more bids.

CONSTRUCTION MASTER® PRO

- Complete Rafter and Framing solutions
- Complete Stair layouts
- Built-in Right-Angle functions

SCALE MASTER® PRO XE

- Fast, accurate takeoffs from blueprints, plans and maps
- 91 built-in U.S. and metric scales, 10 custom scales
- Converts between scales and dimensions



For a dealer near you call
1-800-854-8075

THE SMART CHOICE FOR YOUR BUILDING IS LG



LG
Life's Good

NEW MULTI V™ IV VRF SYSTEMS
offer exceptional advantages:

- Design flexibility
- Simultaneous heating and cooling
- Superior efficiency
- Low Total Cost of Ownership

LG air conditioning products
are the smart choice you can
feel good about today
and far into the future.

With LG, it's all possible.



Find out what LG has for your clients at lg-vrf.com

©2013 LG Electronics U.S.A., Inc., Englewood Cliffs, NJ. All rights reserved. LG Life's Good is a registered trademark of LG Corporation.

NOTICE OF SETTLEMENT

FOR QUALIFYING OWNERS OF PROPERTY ON WHICH CERTAIN FIBER CEMENT SIDING MANUFACTURED BY CERTAINTEED CORPORATION IS INSTALLED

What Is The Litigation About? In this lawsuit, *In re: CertainTeed Fiber Cement Siding Litigation*, MDL Docket No. 2270, filed in the United States District Court for the Eastern District of Pennsylvania, the Representative Plaintiffs (representatives of owners of buildings on which CertainTeed Fiber Cement Siding was installed prior to September 30, 2013) alleged that the CertainTeed Fiber Cement Siding is subject to shrinkage, warping, bowing, cracking and otherwise does not perform in accordance with the reasonable expectations of users. CertainTeed denies these allegations. In 2013, CertainTeed and the Representative Plaintiffs reached a proposed class action settlement to resolve this dispute, subject to the Court's approval. Further information about this lawsuit and related settlement is available in the Standard Long Form Notice, Settlement Agreement, and other documents located on the Settlement Website at www.CertainTeedFiberCementSettlement.com.

What Siding Is The Subject Of This Lawsuit? The Siding that is the subject of this lawsuit (called Siding throughout this Notice) consists of CertainTeed Weatherboards™ Fiber Cement Siding, Lap Siding, Vertical Siding, Shapes, Soffit, Porch Ceiling, and 7/16" Trim installed on or before September 30, 2013. Siding installed after September 30, 2013 is not part of this Settlement. To find out if your Siding is CertainTeed Fiber Cement Siding and for more information about whether you are eligible to file a claim, access the "Claim Eligibility" tab on the website shown on this Notice, or call the Claims Administrator at (855) 332-3413.

Who Is Involved? To receive a remedy under this settlement, you must be a Settlement Class Member. You are a Settlement Class Member if:

as of September 30, 2013, you owned a home, residence, building or other structure located in the United States, on which the Siding was installed on or before September 30, 2013.

As a Settlement Class Member, you qualify for a remedy under this settlement only if you have an Eligible Claim. This means that your Siding has Qualifying Damage as defined in the Settlement Agreement AND the claim is not deemed ineligible for any other reason as set forth in the Agreement. You may also file a claim if you purchased a building on which the Siding was installed on or before September 30, 2013, the warranty states it is transferable, and the seller did not retain the right to make a claim. (If you owned such a building but sold it and retained the claim, you must file any claim within 180 days after the Effective Date of this Settlement Agreement or the settlement on the sale of the building).

What Are The Settlement Terms? In summary, CertainTeed will pay \$103.9 million to settle the Class Action. Settlement Class Members with Eligible Claims will receive a cash payment for the costs associated with replacement siding. The amount paid for an Eligible Claim will be determined based on a number of factors, including (1) the extent of the Qualifying Damage; (2) the proportion of the wall with Qualifying Damage; (3) the size of the wall; and (4) the length of time the Siding has been installed.

The attorneys will petition the Court for attorneys' fees plus reasonable expenses and costs. The amount of these fees and costs will be paid from the Settlement Fund, as will the cost of the notice to the class and claims administration.

If I Am A Member Of The Class, What Are My Legal Rights?

EXCLUDE YOURSELF. If you exclude yourself (or "opt out"), you are not eligible for any remedy under the Agreement. To opt out you must send a complete and timely Opt-Out Form to Class Counsel. For instructions on excluding yourself from the settlement, see the Long Form Notice. The deadline for excluding yourself is January 9, 2014.

OBJECT. If you do not wish to exclude yourself from the settlement but you think some aspect of the proposed settlement is unfair, you can write to the Court about why you do not like the settlement. To do so, you must send a statement of your objection to the Court, Class Counsel, and CertainTeed. For instructions on objecting to the settlement, see the Long Form Notice. The deadline for objecting to the Settlement is January 9, 2014.

APPEAR AT A HEARING. If you do not exclude yourself, you can ask to speak to the Court about the fairness of the settlement. The Court will hold a Final Approval Hearing to decide if the proposed settlement is fair, reasonable and adequate on February 19, 2014. The Hearing will be held at 10:00 a.m., in Courtroom 4A, United States District Court for the Eastern District of Pennsylvania, Byrne Federal Courthouse, 601 Market Street, Philadelphia, PA 19106. You may, but need not, enter an appearance at the hearing through your own counsel, at your own expense. For instructions on appearing at the Final Approval Hearing, see the Long Form Notice.

SEND IN A CLAIM FORM. If you are a Settlement Class Member and your Siding appears to be damaged, send in a Claim Form. You will not receive a remedy if you do not submit a Claim Form.

DO NOTHING. If you do nothing, you will be bound by the terms of the settlement and give up your right to sue CertainTeed on these claims, even if you have objected to the Settlement, and even if you have other claims, lawsuits, or proceedings pending against CertainTeed involving alleged damage to the Siding during the class period. You will receive no payment if you fail to file a Claim Form by the due date, six years following the Effective Date of the Agreement (or sooner if you have sold the building).

How Do You Receive A Remedy Under This Settlement? To receive a remedy you must timely submit a Claim Form. All claims must be submitted within six years following the settlement's Effective Date (or sooner if you have sold the building).

For More Information On Your Rights Under The Proposed Settlement, Including Access To The Settlement Agreement, Long Form Notices, And Claim Forms, visit www.CertainTeedFiberCementSettlement.com call (855) 332-3413 or write to CertainTeed FiberCement, Claims Administrator, P.O. Box 2007, Chanhassen MN 55317.

PLEASE DO NOT CALL THE COURT.

WWW.CERTAINTEEDFIBERCEMENTSETTLEMENT.COM

(855) 332-3413

Builder | hanleywood

THE MAGAZINE OF THE NATIONAL ASSOCIATION
OF HOME BUILDERS

SUBSCRIPTION INQUIRIES AND BACK ISSUE ORDERS

Call 888-269-8410 or EMAIL: builder@omeda.com
NAHB members please call 800-368-5242 x8546

FOR LIST RENTALS

203-778-8700

TO ORDER REPRINTS

Wright's Media, Nick Iademarco
877-652-5295 ext. 102 or niademarco@wrightsmedia.com

ADVERTISING SALES OFFICES

Jeffrey Calore, EXECUTIVE VICE PRESIDENT/RESIDENTIAL
CONSTRUCTION GROUP

PHONE: 202-380-3766 FAX: 202-785-1974

EMAIL: jcalore@hanleywood.com

Norma Figueroa, ACCOUNT COORDINATOR, TEAM LEAD

PHONE: 773-824-2412 FAX: 773-824-2540

EMAIL: nfigueroa@hanleywood.com

East

Paul Pettersen

112 Kingsbury Rd., Garden City, NY 11530

PHONE: 516-536-9154 FAX: 202-785-1974

EMAIL: ppettersen@hanleywood.com

Midwest

Susanna Lione

6191 N. Highway 161, Suite 500, Irving, TX 75038

PHONE: 972-536-6459 FAX: 972-536-6301

EMAIL: slione@hanleywood.com

Southeast

Patrick Zazzara

One Thomas Circle NW, Suite 600, Washington, DC 20005

PHONE: 202-736-3483 FAX: 202-785-1974

EMAIL: pzazzara@hanleywood.com

West

Carol Weinman

395 Del Monte Center, Suite 317, Monterey, CA 93945

PHONE: 831-373-6125 FAX: 831-373-6069

EMAIL: cweinman@hanleywood.com

Canada

D. John Magner, York Media Services

500 Queens Quay W., Suite 101W,

Toronto, Ontario, Canada M5V 3K8

PHONE: 416-598-0101, ext.220 FAX: 416-598-9191

EMAIL: jmagner@hanleywood.com

United Kingdom and Europe

Stuart Smith

PHONE: +44 (0)20 8464 5577 FAX: +44 (0)20 8464 5588

EMAIL: stuart.smith@globalmediasales.co.uk

China and Hong Kong

Adonis Mak

PHONE: +852 2838 6298

EMAIL: adonism@actintl.com.hk

Online

Edwin Kraft, DIGITAL MEDIA

5908 Northern Court, Elkridge, MD 21075

PHONE: 443-445-3488 FAX: 202-785-1974

EMAIL: ekraft@hanleywood.com

Washington, D.C.

Phil Hernandez, EXECUTIVE DIRECTOR/ACCOUNT
MANAGEMENT

EMAIL: phernandez@hanleywood.com

Brian Sherry, ACCOUNT MANAGER (WEST)

EMAIL: bsherry@hanleywood.com

Ken Wilson, ACCOUNT MANAGER (NORTH)

EMAIL: kwilson@hanleywood.com

Inside Sales Account Executives

One Thomas Circle NW, Suite 600, Washington, DC 20005

PHONE: 202-452-0800 FAX: 202-785-1974

LIGHT. STRONG. SLEEK. NEW.

TREX REVEAL[®]

ALUMINUM RAILING.
FROM THE WORLD'S #1 DECK BRAND.

MINIMALIST STYLE AND MAXIMUM STRENGTH
MAKE IT PERFECT FOR BOTH RESIDENTIAL
AND COMMERCIAL PROJECTS.

WHAT'S IN IT FOR YOU?
PLENTY.



WHERE ENGINEERING MEETS ARTISTRY

THE COLLECTION STEEL FRAMING DECKING RAILING LIGHTING TRIM TREX.COM

Crowdsource

in *How do you avoid having your prospects ask, “What’s your price per square foot?”* We get asked this question so often in the housing industry. I’m wondering if any of you are having success in your marketing efforts to get prospects to see the value of your services and not be so focused on price.

— *Rich Storlie CMP, MCSP, CSP, CNE*
New Home Sales Coach

The loaded question. And the one we all hate. I tell people that “cost per square foot” is smoke and mirrors. Something as simple as kitchen appliances can change that number greatly. Instead we focus on “cost to construct” in our discussions. That’s a number that everyone can wrap their heads around and that can be revised based on the client’s personal choices, lot development, complexity of the home, etc. But, until the building industry as a whole just refuses to answer that question, we’re probably stuck with going through this explanation every time we meet with a client.

— *Bonnie Pickartz*
President, Goshen Timber Frames

We sell one component, energy-efficient walls, so we talk about price per square foot of finished wall. We save about \$1 per year per square foot of wall in heating and cooling energy costs. People understand that the material cost of the block is paid for in about five to six years, and that the walls pay for themselves in energy savings.

— *Marty Walters*
Director of sales, NRG Insulated Concrete Block

Why would you want to avoid that question? That is a dream question for someone to ask you. If they are not interested in the price,

then they are not interested in making a purchase. Simply ask them what price they are comfortable with and let them qualify themselves. If you build in that price range, sell them a home. Or maybe the particular community you are in is more or less expensive than they desire, and you can send them to the proper community. Sure, the salesperson has to do some work to build value in the price of the home site and level of finish, but that is what they are paid to do.

— *Jon Ball*
Digital marketing consultant,
Builders Digital Experience

Talking about “cost to construct” does seem to change the direction of the conversation. Budget comes out of the closet and into the room. We talk about hard and soft costs and what we can do to keep costs in line with their budget during the design phase. Site development and outdoor space are discussed and how they impact the build cost. A 2,000-square-foot house built on the side of a mountain with huge decks is different than a 2,000-square-foot home in a suburban development, but people often don’t understand the difference. “Per square foot” alludes to living space and people are sometimes left with the impression that it includes everything needed (site work, etc).

— *Bonnie Pickartz*
President, Goshen Timber Frames

READERS CHOICE



Trane ComfortLink II

“It is a great item for customers to see when they walk in our homes. It looks fancy but also provides a great cost saving and energy saving function,” says Sarah Virgin, director of marketing and advertising at Virginia’s Royal Dominion Homes. The programmable thermostat features a 7-inch interactive color display and remote access from any Web-enabled device. www.trane.com

STAT OF THE DAY

\$337k

April 2013 saw the highest peak in new-home prices since 2009

Source: NAHB

Design is in the details. We couldn't agree more.



 **MOEN**
Buy it for looks. Buy it for life.®

View our full collection of modern designs at moen.com/modern

©2013 Moen Incorporated. All Rights Reserved.



RF32FMQDBSR



ME21F707MJT



NE58F9710WS



DW80F800UWS

Satisfy your appetite for stylish design.

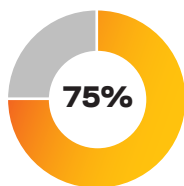
Create a kitchen showcase worthy of your finest culinary delights. The stand-out design and performance of the newest Samsung kitchen suite of appliances will please the eyes as much as the palette.

SAMSUNG

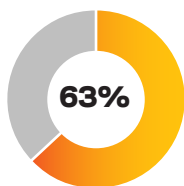
Crowdsource

HAUNTED HOUSING REPORT

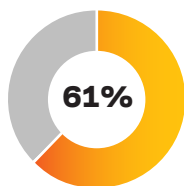
More than half of home buyers are open to buying a house that is haunted, according to Realtor.com's 2013 Haunted Housing Report, and 12 percent would pay full market value or more for a haunted house. Also, 35 percent of the nearly 1,400 people who took the survey say they have lived in a haunted home. Of those respondents who would consider purchasing a home that's reportedly haunted, the following occurrences would change their minds:



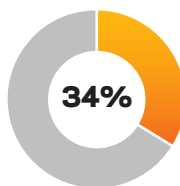
Levitating
objects



Ghost
sightings



Flickering lights/
appliances



Warm or cold
spots

Online response to the article "Keeping Water Out of Stucco"

Thanks for the great article. With the mold issue up front in recent years, this correct installation method can save homeowners and builders a huge amount of grief and money. We've been repairing a home with water intrusions from "many" sources. Although it may be rare, window frames can leak. We caulked all the corners of a top brand aluminum clad casement window. The factory seal, probably butyl, had failed. We removed the windows and caulked where the nailing fin—in this case a thin plastic with an even thinner "plastic hinge" (foldable fins)—joined the frame. These joints had split wide open.

A sill pan with a vertical lip at the interior side of the framed opening, turned up at a position flush with the inside of window frame, installed on the wood plate at the bottom of the window frame before setting the window can be a good idea also. Of course this should counter flash all other paper and window wraps that are installed from the bottom up. We have water tested and fixed all the

leaks except for one problem wall. We may do a tear off and start from scratch there, too.

Has anybody used drainage mats behind the cladding and over the building paper in residential applications?

— Bob Di Janni

bobdijannicustomhomes.com

BUILDER responds:

Drainage mats are a great idea, Bob. A lot of builders in the northeast use them behind cedar shingles to allow the shingles to dry evenly and thus curl or cup less. Most building science experts agree that drainage is a good idea behind all wall cladding systems—stucco, brick, wood, fiber cement, vinyl. Drainage mats one way to do it. Furring strips behind wood or FC works, too. Vinyl is inherently ventilated. With stucco, it is often recommended to use two layers of felt paper, so that the first can act as a bond break and the second as a drainage plane. Of course, an exit for the water is critical in any drainage system.

— Daniel Morrison

Editorial director, BUILDER

Do you have comments, suggestions, or news for BUILDER?

Follow us and let us know via social media: [in](#) [f](#) [t](#)

© 2013 Samsung Electronics America, Inc. All rights reserved.



Samsung RF32FMQDBSR shown

Introducing the next generation Refrigerator.

Unique four-door design, with room for 32 bags of groceries¹, and the most fresh food capacity in its class.²

A Convertible Zone that can change from refrigerator to freezer and back, so you're never out of space.

Our exclusive Triple Cooling system maintains up to 4x higher humidity levels, keeping food fresher longer.³

Custom stainless steel resists fingerprints to keep your kitchen beautiful.

1. One bag of groceries is equivalent to 1 cubic foot; actual capacity is 31.7 cu. ft.

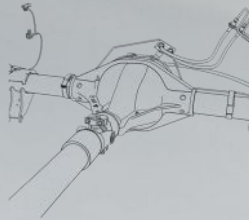
2. Fresh food capacity compared to current Samsung products.

3. Humidity levels compared to Samsung mono-cooling refrigerators.

SAMSUNG

WHAT.

MAX TRAILERING PACKAGE MAXIMIZES PULL. The all-new Chevy Silverado is strong. With the available Max Trailering Package, it's even stronger. A heavy-duty axle, automatic locking rear differential and upgraded rear springs increase your towing capacity and your options for work and play. And since hauling work equipment and twenty-foot boats present different challenges, you can customize the level of trailer brake sensitivity by simply pressing a button. The Trailer Brake Controller button, to be specific.



THE AVAILABLE
MAX TRAILERING PACKAGE:
BEST-IN-CLASS TOWING.*

TECHNOLOGY THAT KEEPS TRAILERS IN LINE.

Another button you'll find useful is the Tow/Haul mode. Press it and the transmission will stay in gear longer, optimizing power when you need to accelerate. No buttons are required for the Trailer Sway Control feature, though. This technology applies both the vehicle and trailer brakes

(when properly equipped), to help get you back in line, when needed.

WIN THE BATTLE AGAINST GRAVITY.

But that's not the only automatic feature you'll appreciate (especially if you've got a large camper behind you). Hill Start Assist detects inclines of 5% or more and holds the brakes for up to 1.5 seconds or until the accelerator is pressed, helping to prevent rollback

and keeping you focused on what's ahead. For the other side of the hill, Auto Grade Braking helps you maintain speed when you want to slow down.

Inch by inch, from hood to hitch, everything about the all-new Chevy Silverado is designed to work harder for you. See for yourself at chevy.com/silverado and learn how over 13 million miles of testing made us stronger.

ALL-NEW CHEVY SILVERADO

*Silverado Double or Crew Cab 2WD with available 6.2L EcoTec3 V8 engine and Max Trailering Package. Class is half-ton full-size pickups.
©2013 General Motors. All rights reserved. Chevrolet emblem® Chevy™ Silverado®

WHY.

The more you have behind you, the more you have ahead of you.



FIND **NEW** ROADS™



In the News



Land Acquisitions: Relationships Pay Off

Land acquisition, done well, is hard. It works best when—amid the clamor of competitors, asymmetries, over-payments, and sugar-rushes of cash—both a seller and a buyer accomplish a goal. Toll Brothers' recent acquisition of Shapell Industries made winners of both buyer and seller.

Relationships may have played a part. Bloomberg/ BusinessWeek reports that Vera Guerin, daughter of Nathan Shapell, emerged as a billionaire after Toll agreed to buy her family's business.

When all is said and done, distressed land deals are becoming fewer and farther between, and in the rush to get a lot pipeline populated for 2014 and 2015, many costly mistakes are going to happen. Land acquisition experts with relationships to boot are going to be one of home building's hottest human talent commodity's over the next couple of years. — *John McManus*

Sobering Facts about Women in Construction

In 2012, women held 14.3 percent of executive officer positions at Fortune 500 companies and 8.1 percent of executive officer top earner positions, according to

Fortune/Catalyst. In both 2011 and 2012, one-fifth of companies had 25 percent or more women executive officers.

Among America's publicly traded home builders, not so much.

Of the 19 public home building companies, 79 named executive officers got mention in Securities and Exchange Commission proxy statements and S1s, showing an average compensation package totaled \$2.54 million in 2012. One woman, Taylor Morrison Homes president and CEO Sheryl Palmer, had the top position of the 19 companies, so that's just over 5 percent.

Nevertheless, only 5 percent of the 19 enterprises' named executive officers were women, and women executive compensation packages averaged \$1.44 million, just 56 percent of the average executive compensation. — *John McManus*

Remodeling Activity Kicks Into High Gear

Remodeling and replacement projects continue to come in stronger than originally expected based on the latest release of the Residential Remodeling Index (RRI) by Metrostudy, a Hanley Wood company. The seasonally adjusted third quarter national composite of the RRI registered a score of 93.3—a 2 percent improvement over the revised second quarter result of 91.3.

The increase quarter-to-quarter was the seventh consecutive improvement after the industry experienced declines in 2011 and bottomed out after peaking in 2007. Remodeling and replacement began to increase in 2012, but 2013 is turning out to be the strongest year for remodeling and replacement activity since 2007 because of strong housing market fundamentals driving demand. Metrostudy is forecasting the market to continue to improve over the next several years and is now calling for a full recovery nationally within the next two years.

"Remodeling and replacement activity has kicked into high gear as a result of robust existing home sales, strong home price appreciation, and rebounding consumer

confidence," says Jonathan Smoke, chief economist at Hanley Wood, BUILDER's parent company. "An additional boost to activity is a declining share of professional investors purchasing homes to rent. Owner-occupiers invest more in home improvements than investors trying to secure a renter."

Metrostudy produces the RRI to provide the industry visibility into local market remodeling activity, forecasted future activity, and potential demand. According to the company's first quarter report, there are 364 out of 366 Metropolitan Statistical Areas with forecasted growth in project activity for 2013, and markets average growth of 9 percent in projects over 2012.

Metrostudy ranks the best markets for remodeling based on market health, level of activity, extent of recovery, and potential demand. The current top 10 best markets for remodeling are Buffalo, Houston, San Antonio, Dallas, Austin, Pittsburgh, Des Moines, Denver, Oklahoma City, and Indianapolis. — *Metrostudy*

Redfin Launches Builder Listing Service

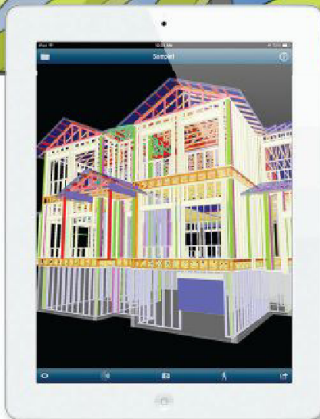
Redfin, a technology-powered real estate brokerage, is launching Redfin Builder Services to help residential developers and builders sell new homes and condos faster.

Redfin leverages its network of agents, access to multiple listing service (MLS) sales data, and proprietary database of home-buyer preferences to provide clients custom market research to inform product, pricing, and marketing decisions. Based on these insights, Redfin brings together local real estate experts with marketing, social media, and communications specialists to create an integrated sales and marketing program. Each project will get featured placement on Redfin's website and mobile app, which will expose the properties to millions of home buyers each month, the firm says.

Redfin's first Builder Services client is the Solo Lofts in Seattle, to be built by Vancouver-based InHaus Development. Pre-sales begin in January 2014. — *Jean Dimeo*

Courtesy/Toll Brothers

© 2013 MiTek. All Rights Reserved.



IF IT WORKS IN SAPPHIRE™, IT WORKS ON SITE.

With SAPHIRE™ Software, trusses and structural framing can be defined correctly in true 3D – to 1/16th of an inch – before your home is sold. Eliminate wasted jobsite labor and materials. Lock in your bottom line. Download the free SAPHIRE™ Viewer and visualize a better way to build.



Download for PC at BuildabilityNow.com/jobsite

MiTek
A BERKSHIRE HATHAWAY COMPANY
Better Technology.
Better Building.™

TOUR 6,700 SQ. FT. OF MONEY- MAKING IDEAS

Be one of the first to experience **The 2014 New American Home**, a moving triumph of light, space, sustainability, and universal design for how families live today and how they will live in the future. As a product innovation showcase, it's without equal. It's a 6,700 square foot living laboratory, a visionary portal to what your customers will be talking about throughout 2014 and beyond. And TNAH 2014 is also the final masterwork of renowned production architect Barry Berkus, assuring its lasting place in home building history.

➡ Check out the home in person during IBS, KBIS, and IWCE, Feb. 4–6, 2014 in Las Vegas. Visit tnah.com for more information.

Tickets available for IBS/KBIS/IWCE registrants at TNAH booth at the Las Vegas Convention Center. Get there early as tickets will go fast. *Complimentary shuttle bus.*



PROJECT PARTNERS



TITLE SPONSOR



FOUNDING SPONSORS



SUPPORTING SPONSORS

American Gas Association | Boise Cascade | Carrier | Dal-Tile | DuPont Surfacing | Environmental Stoneworks | Sherwin-Williams Company | TruStile Doors

ALLIANCE SPONSORS

Baldwin Hardware | Bayer/Bayseal | Broan-NuTone | Watts Water Technologies

PARTICIPATING SPONSORS

Clopay Building Products | DuPont Tyvek | IAPMO R&T | Liftmaster | Milbank | Mohawk | Ortal USA | Phantom Screens | Progress Lighting | Simpson Strong-Tie
Thomas & Betts | USG | VELUX



www.TOOLSOFTHEBRAVE.com

DeWALT®

GUARANTEED TOUGH.®

Look for this label on specially marked DeWALT packaging, for tools and accessories built in the United States, using global materials. Built Guaranteed Tough, by DeWALT.

© 2013 DeWALT. The following are trademarks for one or more DeWALT power tools and accessories. The yellow and black color scheme, the "D" shaped air intake grille, the array pyramids on the handgrip, the kit box configuration, and the array of lozenge-shaped humps on the surface of the tool.



Foundations

Field Report	Page 24
Dashboard	26
Details	28
Tactics	30
Success Story	32

PROJECT OF THE MONTH

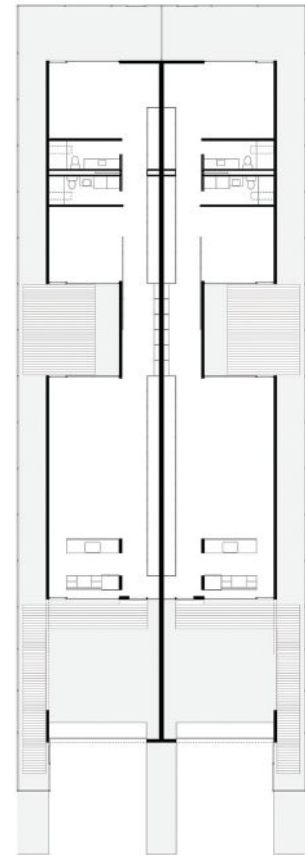
Courting the Suburbs

Ancient courtyard housing ideas applied to suburban lot layouts maximize land use for density, affordability, and privacy

"I'm interested in housing not houses," declares Edward M. Baum. The well-respected architect and professor backs up his statement with a growing cache of infill housing that is designed to fit suburban lots anywhere in the country. When Baum was looking for a place to live while teaching in Dallas, he found very few options that gave (see page 22)

Craig Kuhner

Foundations



him a good location for a decent price. What he did find were two adjacent lots in a close suburb. Baum purchased the lots and designed four one-story, single-family houses for his site that also can be duplicated in a variety of places.

The architect created a housing model to fit typical lots and work within existing codes that can be built using only components found at major home supply retailers. Using a duplex designation yields more flexible codes and allows for higher density without sacrificing single family amenities like ample outdoor space. It also drastically cuts costs because two houses share a single foundation and roofing system. In addition, Baum's use of a courtyard plan offsets lack of daylight from the party wall.

The lots Baum purchased measure 50 feet wide by 150 feet deep and run from street to alley. Most people wouldn't envision a courtyard house fitting such a linear site, but Baum feels the technique creates an infill prototype

that can be built anywhere. "The idea of a courtyard house is so old both for privacy and security reasons," he explains. "By making the outdoor space internal, it becomes the safest part of the house and you don't have to depend on the surroundings for views."

A central courtyard flanked by window walls, which are the only custom products, floods interior spaces with natural light. Open living/dining spaces sit to one side of the courtyard with a secondary bedroom/home office on the other. The same window wall system caps each end of a gallery-like plan, so the kitchen and master bedroom also enjoy copious sunlight. A continuous circulation spine runs along the party wall carrying daylight into every room. Built-in storage fills that entire shared wall further enhancing sound abatement.

Standard setbacks actually benefit the courtyard layout. The front setback of 20 feet provides enough space for a shallow driveway and a two-car garage that doubles as an enter-

Project Throckmorton Housing, Dallas

Architect Edward M. Baum, FAIA, Architect, Dallas

Builder/ Developer Diane Cheatham, CCM Group and Urban Edge Developers, Dallas

Project Size 1,660 square feet per unit

Site Size 0.34 acre

Resources: Garage Doors: Clopay Building Products; Exterior Siding: Jimmy's Cypress

tainment court. (Read more about this detail on page 28.) A 10-foot-deep backyard setback yields a secluded outdoor space adjacent to the master suite. Five feet along each side makes room for crushed rock walkways and French drains that catch runoff from the metal roof and direct water toward vines planted along 8-foot-tall chain link fences enclosing each property. "These side easements also connect outdoor spaces," Baum adds, "so no one has to drag plants or a lawnmower through the house." — SHELLEY D. HUTCHINS

Visit go.hw.net/bol1213-courting-the-suburbs for additional photos.

Craig Kuhner

The New Sprinter

Engineered to exceed expectations.



Starting At:

\$37,710*

2500 Crew Van 144", Low Roof, 4-Cylinder

Since inventing the van over 110 years ago, Mercedes-Benz has a history of recognizing specific business needs and engineering innovations that make working easier, safer and more efficient. With a 2-stage turbo diesel engine, industry-first safety features, class-leading payload capacity and the flexibility to carry up to five people on board, the new Sprinter once again exceeds expectations—and sets the standard for commercial vehicles to follow. Learn more at www.mbsprinterusa.com.

© 2013 Mercedes-Benz USA, LLC

*Excludes all options, taxes, title, registration, transportation charge and dealer prep fee.
Options shown. Not all options available in the U.S.



Mercedes-Benz
Vans. Born to run.

FIELD REPORT

From Workout to Worship and a Texas Theme Park

Economic news from across the country. BY JENNIFER LASH

News You Can Use BUILDER scans news across the nation each month for interesting, informative, and useful items, choosing a handful of the most significant for this Field Report.

Church Aims to Nab Area Gym Rats

Six months ago, a Land Park office building in Sacramento was about 80 percent vacant. But by acting more like a retail property, the *Sacramento Business Journal* reports that the space is filling up. Fitness System occupies 17,000 square feet, and Streamline Church plans to move in, realizing the gym could help attract potential parishioners. Pending city approval for a change of use permit, the church will occupy 7,600 square feet of the building, which is 80 percent leased.

New Facility for Federal in Wis.

Federal Manufacturing, the largest supplier of dairy filling equipment in the U.S., soon will occupy a 78,000-square-foot building in Pewaukee, Wis. The company was acquired by Cincinnati-based Pro Mach in 2012. The new multimillion-dollar facility—to be completed by summer 2014—will provide state-of-the-art manufacturing technology and room for growth, says the *Cincinnati Business Courier*. Federal expects its head count to increase by 10 percent in the next 18 months.

Sephora Expands Into Baltimore

Sephora, a cosmetics giant that operates more than 300 stores in the U.S. and 1,300 worldwide, is moving into a 656,000-square-foot warehouse in the Perryman area near Baltimore. The lease has been signed and the new warehouse is expected to be completed by June, according to the *Baltimore Business Journal*. This deal will almost double the company's current space and create 200 jobs for the area.

Theme Park Brings Jobs to Texas

Texas history and culture will be in the spotlight at the new Grand Texas Theme Park, which is set to open in 2015, reports CultureMap. The 630-acre entertainment district will include not only an amusement park, but 450,000 square feet for retail and dining, hotels, and a 6,000-seat stadium. Up to 1,600 construction workers may be needed during the building process, and officials say the theme park will generate 2,000 new jobs for the area.

Plant Inspection in Atlanta Cuts Costs

A \$5 million, 16,000-square-foot plant inspection facility recently opened at the Hartsfield-Jackson International Airport in Atlanta. Its main purpose is to inspect live plants from other countries for pests and disease, reports the *Atlanta Journal-Constitution*. The facility should cut costs, speed up shipping time, and reduce the risk of plants deteriorating on their journey. This is the second-largest USDA plant inspection station in the U.S.; Miami is No. 1.

"We are proud to be moving forward with Federal's growth plan and making a significant investment in the greater Milwaukee metropolitan area." — *Mark Anderson, CEO, Pro Mach*

SUCCESS IS IN OUR DNA

*Selling more homes more profitably comes naturally with us.
That's just the New Home Star advantage.*



Sophisticated Intelligence

Combining extensive research and systematic assessments, we give your sales team the foundation they need to truly excel by making them experts on their community and its strategic positioning.



Cutting Edge Technology

Exclusively offered by New Home Star, our sales training, reporting and support portal, New Home Connect, leverages gamification and connection to keep your team engaged and laser-focused on performing at the highest levels.

For more information visit:

www.newhomestar.com



Best in Class Training

The New Home Star training program, delivered to trainees through engaging eLearning modules, extensive study materials, and one-on-one coaching sessions with new home sales experts, ensures your sales team will be prepared to deliver explosive results.



Always-On Support

Whether you're a sales agent in the field or a builder in need of answers, our professionals stand at the ready to support and guide you through every step of the sales and marketing process.



HR Efficiency

Recruiting, managing and retaining a high performing new home sales team is difficult. We eliminate the headaches with our proven processes. Using optimized compensation plans, compelling career paths, and stellar development programs, we attract and grow the right people to take your organization to the next level.

Experience the New Home Star Advantage

New Home Star is the nation's leading new home sales and marketing consulting and outsourcing firms, working with top builders to sell more homes more profitably. Come find us at booth **C1966** at the **2014 NAHB International Builders' Show** to learn more about how an approach built by experience and driven by technology can take your firm to the next level.

newhomestar
Leading Sales Performance.

Foundations



DASHBOARD

Best Market Indicator

Vacant new-home supply metric can predict the market two years out

The recent slowdown in per-project absorption highlights the need to once again start monitoring leading indicators. We all know that the housing industry is highly cyclical, prone to booms and busts. We learned in the previous cycle that there are indicators that can predict turns in the market two years ahead.

The best indicator is finished vacant months of supply, a metric that monitors the accumulation of inventory of newly completed homes. The months of supply of new-home inventory is calculated as the number of empty new homes divided by the pace at which people are moving into them.

Our experience in the previous cycle showed that when this metric went above 3.0 months of supply, concessions and outright price reductions were coming. Two years after we started to see certain submarkets spike, projects began to fail, just as Metrostudy predicted. It was this indicator that allowed me to warn my builder and developer clients to “watch what you’re pay-

ing for land” because a downturn clearly was on its way.

There are no signs indicating that we are in that situation again, but anyone who is buying land to use two to three years in the future should continue to watch this metric going forward.

All builders are trying to open more stores, all trying to target move-ups. Any one of their pro formas looks reasonable by itself, but at some point, there are pro formas that overlap, claiming the same absorption. This trend of overlapping must be watched.

Builders are bidding against each other for land, and driving lot prices back to peak levels in many submarkets. Mortgage rates will go up at some point in the future, and that will impact absorption and pricing. These two trends are at odds with one another when it comes to future profitability, and a leading indicator like this will become valuable at some point in the future.

It is important to monitor long-term risks when it comes to land purchases.

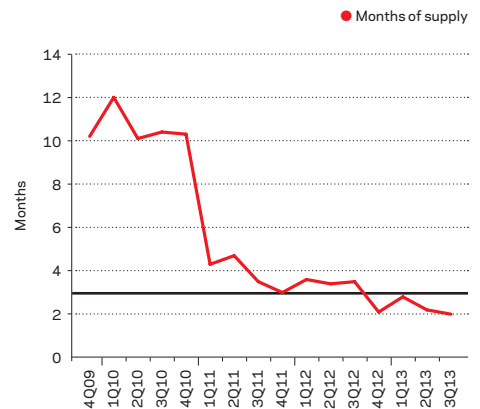
— BRAD HUNTER

STATS

CANARY IN THE COAL MINE: EMPTY NEW HOMES

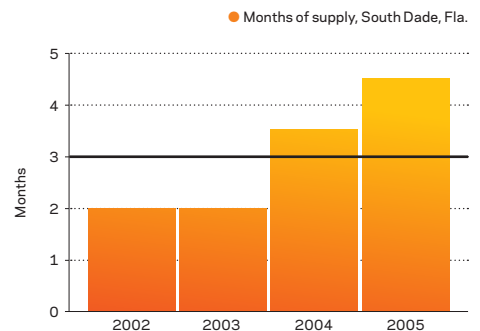
Finished Vacant Months of Supply

As one example, the oversupply of inventory in South Dade, Fla., reached astronomical levels (10 months and higher) by 2010, but today the reading is back in the normal range. If it ever again gets back to three months or higher, watch for a new round of price discounting.



Indicator Predicted the Decline in Home Prices as Early as 2004

The months of supply of homes that were being completed but not occupied exposed the fact that more than half of the sales were to speculators—that was illusory demand. This crucial leading indicator may serve us well once again in the next cycle.



For more analysis, visit www.metrostudy.com or email bhunter@metrostudy.com.

Feel Me!!

Architectural Fiberglass Doors From JELD-WEN

Fiberglass doors that look and feel like real wood!

Experience the new Architectural Fiberglass line from JELD-WEN at the International Builders' Show in Las Vegas, February 4-6, 2014. Booth #C6131 and the Cutting Edge Country Home in IBS Show Village.

Find out more at jeld-wen.com

© 2013 JELD-WEN, inc.



Foundations

DETAILS

Garage Party

In true suburban style, this garage is designed to do double duty as public outdoor space

A 20-foot setback becomes an amenity in the deft hands of Edward M. Baum. For a small infill development near Dallas, the architect fit a two-car driveway and matching carport within the footprint of the required setback. The strategy allows for a private interior courtyard (see more on page 21), but also in true suburban style, the garage is designed to do double duty as an outdoor space.

Saving money was big for Baum, who lived in one of the duplexes and sold the rest. He made a profit, but even more important, he provided high-quality houses at a reasonable cost. For the garage cum party space, a parasol roof floats above reclaimed cypress walls—a common material in the south.

“We used doubled-up 2x12s to support the standard commercial insulated metal roof,” Baum explains. “The connective incline beams are just 2x6s with plywood and electrical conduit that we flattened by hand as the braces.”

With the garage door open, the home’s façade is transformed into a bright entry court ideal for entertaining or socializing with neighbors. The walkway winds around to the side of the garage, which has a protective soffit but no wall, and then leads to a transparent entry.

Simple crushed rock ground cover offered big savings; plus it’s a permeable surface that hides spills or drips. The use of mostly outdoor materials along with leaving the space partially open provides occupants with a sense of the outdoors—even if it rains and the door remains closed. “But when the garage door is open,” Baum notes, “you can see the street from almost every room in the house.” — SHELLEY D. HUTCHINS

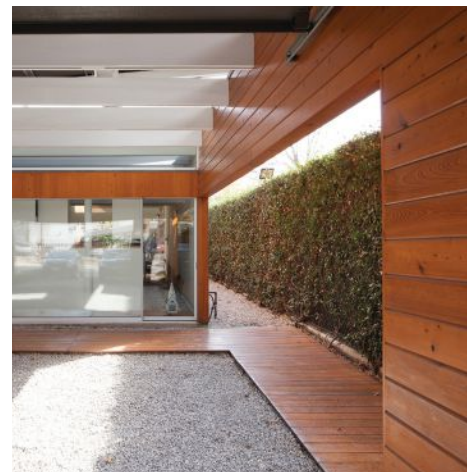


Project Throckmorton Housing, Dallas

Architect Edward M. Baum FAIA, Architect, Dallas

Builder/Developer Diane Cheatham, CCM Group and Urban Edge Developers, Dallas

Resources: Garage Doors: Clopay Building Products; Exterior Siding: Jimmy’s Cypress



Craig Kuhner

Heating
120k BTU

DHW
199k BTU



Finally, a combi-boiler strong enough to support heating and DHW for the whole house



Introducing Navien NCB Combi-boiler

- Compact design, 17"W x 28"H x 9"D
- NCB-240 features dual inputs of 120k BTU/h for heating and 199k BTU/h for DHW
- Turn down ratio of 6:1 for heating and 11:1 for DHW
- NCB-240 offers 4.5 GPM@77° temperature rise for DHW — highest in industry
- Dual stainless steel heat exchangers with 10 year warranty
- ½" gas capability and 2" PVC venting
- Up to 93.6 AFUE
- NG to LP field gas convertibility
- 3.5" minimum W.C. NG
- Energy Star approved



Navien NCB is the first high efficiency tankless condensing combination boiler with the capacity to supply both heat and domestic hot water for larger homes — enough hydronic heat for a whole house, plus hot water to run two showers and a dishwasher at the same time.

Save installation time and reduce call backs, as your customers save energy and enjoy all the hot water they need, whenever they want it.

Discover why the new Navien NCB is the new leader in tankless condensing combi-boiler systems at WholeHouseCombi.com.



Complies with the 2014 National Lead Free Act.

KD Navien®
The Leader in Condensing Tankless Technology

W E M A K E I T E A S Y T O G O T A N K L E S S



Fit for Print Charter Homes shows off its classic communities in a print magazine.

TACTICS

Paper Beats Virtual

Charter Homes and Neighborhoods proves that print isn't dead with a magazine that showcases its high-quality communities

Home buyers aren't the only people that Charter Homes and Neighborhoods needs to impress.

The Central Pennsylvania builder also has to make a good impression with bankers who can lend Charter capital to develop neighborhoods, owners of family farms that it might want to acquire for development, and local town officials who might have to approve the builder's next neighborhood development plan.

"We think of ourselves as in a very competitive business," explains Charter's president, Robert Bowman. "At the end of the day, people have to choose us."

And that's why a little over a year ago, Charter started publishing *Blueprints*, a magazine that shows how attractive its homes and neighborhoods are, and explains the company's philosophy.

Beyond Traditional Advertising While most builders are satisfied promoting their products on their websites, in the newspaper, or an occasional radio or television advertisement, Charter executives felt that sending a high-quality magazine to "talk to the people of influence" would set the company apart from the crowd. Bowman calls it a "channel" to tell the public about the company.

"We believe that our product is best seen, rather than talked about," Bowman says.

The thought was that at a time when so many people get their information on the Internet, receiving a magazine via traditional mail that shows Charter's high-quality work, its executives, and its philosophy through beautiful photography and a few well-chosen words would make it stand out even more.

The builder can't quantify how valuable the first two issues have been, but he has

some anecdotal evidence that the magazine is not ending up in the trash can.

"I can tell you that I have been to many meetings [with bankers] where they pull it out of a file" to show during the visit, he says. "Landowners have files like that, too. It does a good job of telling the company story."

Rather than dealing with the details of every house plan the company offers, the magazine showcases large photographs of Charter's neighborhoods and home interiors. To make the publication memorable, the front and back covers are a panorama of a neighborhood. The goal is to sell community and quality rather than individual homes.

Bankers Are Readers, Too While its quality message is important to communicate to consumers, Bowman says it's also necessary to promote to banks that the builder works with as well as potential land sellers. The ability to see the quality of the communities Charter has built makes sellers—particularly those who have strong ties to the land they are selling—more likely to sell to Charter rather than its competition. "We don't think everybody wants to work with us," says Bowman. "But those who are drawn to [our] character do." — TERESA BURNEY

Courtesy Charter Homes and Neighborhoods

Ford BPN Dealers think about your vehicles **AS MUCH AS YOU DO.**



Ford Business Preferred Network (BPN) Dealers understand the importance of keeping your vehicle on the road. When you count on a BPN Dealer, you can expect dedicated commercial vehicle expertise, with comprehensive vehicle inventories, an expert team of Ford-certified personnel, extended service hours and priority service for commercial customers. And now, when these trained professionals work on your commercial vehicle, the parts used in the service are included in the Ford Service Part Warranty with no commercial restrictions. All the more reason to trust the nearly 600 BPN Dealers across the country. To learn more about BPN sales, service and financing, go to ford.com/BPN.



**COMMERCIAL
TRUCK**



See your dealer for limited-warranty details.



Overlooked Success Texas' Inland Homes has prospered by building on leftover lots.

SUCCESS STORY

Adopting Orphan Lots

Inland Homes builds where other builders won't in San Antonio

When IH Texas, a licensed Inland Homes builder entered the San Antonio, Texas, market two years ago, executives quickly noticed that the north side of town was where all the homes were selling. So, naturally, the builder started looking for lots there.

But for the local operator, Bill Hoover, who had little knowledge of the market and zero connections in the local land development community, buying land in the best locations was difficult and expensive.

"You have to do what you say you're going to do and be honest with people—and still you are not going to get the lots in the best communities," he says, primarily because lot sellers honor the relationships they have with builders they already work with.

Hoover started with leftover lots in good neighborhoods on the north side of town. Then, about a year later, he began reading about the burgeoning oil fracking industry in Texas and noticed some companies were opening major facilities in South San Antonio.

Inland executives counted the jobs south of town—some 3,000 within 6 miles of a 60-lot defunct subdivision called Lakeview Ranch that they had spotted earlier. "That's when we decided to try building where local builders weren't," Hoover says.

"We'll put our toe in the water down there," he recalls thinking, even though people told him there was no demand for the type of housing IH Texas was offering. "It was a calculated risk."

The start-up company bought 30 of the 60 available lots. "Within six months of open-

ing the model, we sold all of them to move-up buyers, quite a few who were directly involved in the oil fracking that we had identified as our target market," Hoover says.

"The other 30 [lots] went to another builder," he says, regretfully. "Everybody looks in their rearview mirror, but I wish we had bought all 60."

Inland purchased more lots across the street from the original 30 in Lakeview, but lot prices had climbed 35 percent to 40 percent.

Still, success wasn't guaranteed. Hoover and his team worked hard to educate potential buyers about the subdivision. "San Antonio residents have the erroneous perception that the Lakeview subdivision is a long way from town," Hoover says. "It's beautiful down there. You are on rural half-acre lots in south Texas, but it's 15 minutes from the Alamo [in downtown]. It's amazing."

To counter the perception that the neighborhood is too remote, Inland gives potential buyers the facts:

- 15 minutes from downtown
- 12 minutes from the medical center at Fort Sam Houston
- 15 minutes from the Toyota plant
- 12 minutes from Loop 410
- 10 minutes from the offices of Baker Hughes and Halliburton

Success With a Model Home With homes selling so fast, plus the cost of model homes, Inland devised a money-saving strategy to show potential buyers its homes without building and maintaining model homes. Instead, the company constructs a couple of speculative homes that serve as quasi-models. At Lakeview, it built three specs, but they sold so quickly that Hoover found himself with nothing to show buyers.

When potential home buyers are interested and qualify to buy, Inland makes arrangements to show the prospects existing houses. Hoover asks former customers to show off their places once or twice a month, with notice, and gives them a \$50 gift certificate in return.

The practice sparked an unexpected benefit. The homeowners become de-facto Inland sales agents, offering testimonials about their construction experience.

"They tell people what a great team we are and how happy they are," Hoover says. "I couldn't replicate that any other way for 50 bucks." — TERESA BURNEY

Project Lakeview Ranch
Location San Antonio

Date opened for sale
January 2013

Product size 2,000 to 2,700 square feet

Price range \$205,900 to \$240,000s

Total units at build-out
30

Sales to date 30



NEW **SMART**
CONSTRUCTION

8X MORE
COVERAGE



*Based on average of 28 linear feet per 4'x8' subfloor

LEARN MORE AT WWW.SMARTBOND.COM

YOU
JUST
NEED

SmartBond™ ADHESIVE

Lay 12 sheets of
standard subfloor
with just one can of
DAP® SmartBond™
Subfloor Adhesive.*

Faster and easier to
apply. Polyurethane
strong. Now how's that
for working smarter?

r sheet.

DAPADHESIVE.COM/BM



**YOU DON'T
NEED ALL THIS
ADHESIVE**





SMARTBOND™

CONSTRUCTION ADHESIVES

NEW



GO FURTHER

8X more coverage — 1 can of DAP® SMARTBOND™ equals the coverage of 8 cartridge adhesives*

GO FASTER

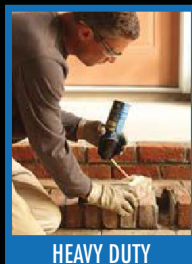
25% faster to apply — Easy aerosol dispensing with less gunning

GO STRONGER

Polyurethane strong — Dynamic adhesive gel forms a permanent bond

See
SMARTBOND™
on the job.

Get the free mobile app
at <http://gettag.mobi>



HEAVY DUTY



SUBFLOOR



LANDSCAPE

NAHB
RESEARCH
CENTER
TESTED
COVERAGE
www.nahbrc.com/tested

Check out the **SMARTBOND** project calculator at www.SMARTBONDADHESIVE.com/bm

*Subfloor 8X comparison based on 20 oz. can versus 8-28 oz. cartridges. Heavy Duty and Landscape 8X comparison based on 12 oz. can versus 8-10 oz. cartridges. Subfloor adhesive comparison based on recommended 3/8" cartridge adhesive bead versus DAP® SMARTBOND™ recommended 1/2" adhesive bead. Heavy Duty & Landscape Adhesive based on recommended 1/4" cartridge adhesive bead size versus DAP® SMARTBOND™ recommended 1/2" bead adhesive.

©2013 DAP Products Inc.

An **RPM** Company

AVAILABLE AT



National Association of Home Builders

BUILD A
BETTER YOU

JACKPOT

Turn Green Into Gold

Take an NAHB Green Course at IBS

Whether it's a high-performance home, an energy efficient project or just building a home to the latest environmental codes, the green home building market continues to grow.

Take advantage of this opportunity to build your green expertise by taking one of our green courses being offered at the **2014 NAHB International Builders' Show®** in Las Vegas, January 31 – February 3.

To see complete course offerings and to register, visit BuildersShow.com/preshow



NAHB Education

Sponsored by



Join the Conversation.





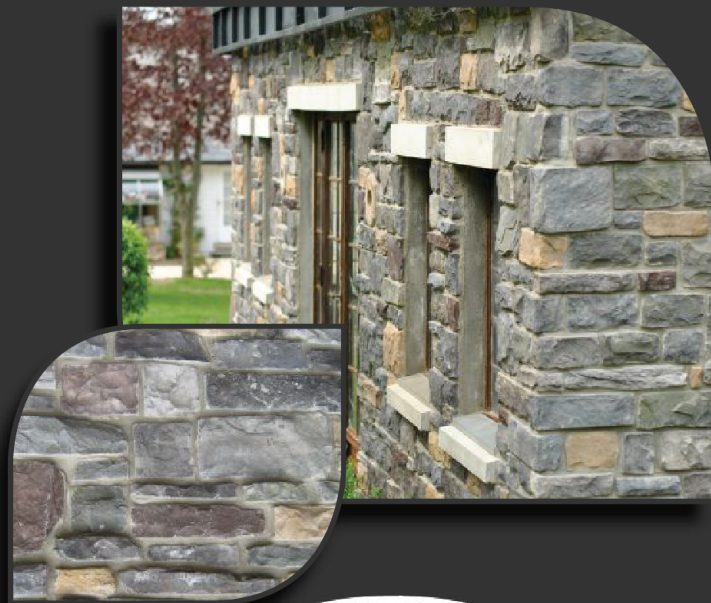
Elegance in Stone

Finding elegance in stone has a lot to do with fine details.

The culmination of stone faces staring back at you often reflects class and a choice of style. We take a step away from the factory-made, and we take leaps and bounds with the significance of choice, variety, and quality. Our large palette of stone colors and styles can be tailored to your needs and made with artistic diligence as it is always made exceptionally distinct by our established process.

Quality Stone Veneer, Inc. is wise on the details.

Personality echoed by stone is made easier with the customization of product details that only Quality Stone Veneer, Inc. can offer. There are fine lines of believability and a natural aesthetic that is unmatched in value with our *hand-crafted* stone veneer. Choosing our stone ensures diversity based off of the natural look and feel of stone. As a turnkey operation for both commercial and residential, we can be with you through the entire process as one source accountability for your stone needs, and help you turn any idea into a wonderful façade for any home or business at competitive costs. Our difference in excellence is typically unspoken—our stone veneer speaks for itself. Collaborate with us on your next stone project and you'll find our quality is not just in the name.



est. 1976

www.QualityStoneVeneer.com | 800.795.3229

Products

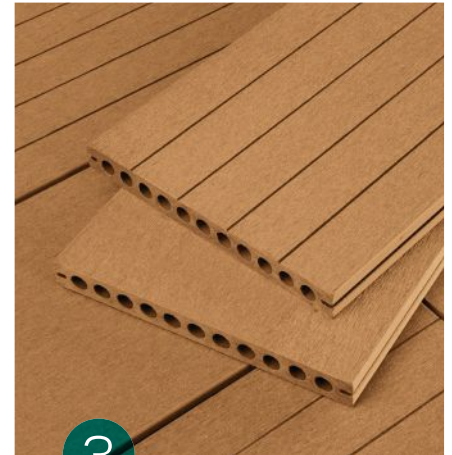
Top Shelf **Page 36**
Category Review **38**

GE Artistry Series

Designed to bring style and affordability to kitchen staples, this line of appliances aims to attract millennials and first-time buyers. Metallic touch points set against glossy white or black finishes create a cool, contemporary look with retro details like an analog oven clock. The four-appliance suite is available for less than \$2,500, including an Energy Star-rated dishwasher and refrigerator.

www.geappliances.com





TOP SHELF

Editor's Picks

This month's roundup of eight new products you should know about

EDITED BY SANDRA MALM

1. Simpson Strong-Wall

This prefabricated wood shearwall offers design flexibility and lateral-force resistance for a range of applications. In areas susceptible to seismic activity or high winds, the SB wood shearwall provides structural support comparable to that of narrow steel shearwalls, says the company. The product is available in widths of 12 inches, 18 inches, and 24 inches, varying heights up to 20 feet, and can be trimmed in the field. www.strongtie.com

2. Rinnai Water Heater

This hybrid water heater combines the on-demand heating technology of a Rinnai tankless water heater with a 40-gallon storage tank. According to the company, the combined technologies offer consumers more than twice the capacity of a typical 50-gallon tank. The 91,500 Btu unit has the same hot- and cold-water connections as a traditional storage tank and requires a ½-inch gas line. www.rinnai.us

3. BamDeck 3G

This ¾-inch-thick composite decking is made from 60 percent reclaimed bamboo fibers and 40 percent recycled HDPE plastics. Cylindrical chambers running through the material reduce its weight by 20 percent and increase tensile strength by 35 percent compared with the company's solid decking. The planks come in 5 ½-inch and 8 ¼-inch widths and are meant for use with hidden fasteners. www.calibamboo.com

4. Florsprufe Vapor Barrier

Florsprufe polyolefin vapor barrier glues itself to the underside of a concrete slab, minimizing the risk of water vapor from the ground reaching the floor finishes, claims the firm. A 1-mil protective coating keeps it from feeling sticky during construction; once the concrete is in place, pressure breaks down the coating and activates the adhesive. It comes in 4-foot-by-115-foot rolls. www.graceconstruction.com



5



6



8



7

5. Carrier ERV

This Comfort Series energy recovery ventilator helps maintain a home's energy efficiency by transferring heat from outgoing air to fresh, incoming air. The unit features a compact footprint and a two-duct connection that streamlines the installation process, says the company. The ventilator can be integrated with existing home systems and helps manage indoor humidity.

www.carrier.com

6. Unique Lift

This storage system maximizes garage space by using a ½ horsepower 110-volt electric motor to lift clutter from the floor. Controlled by a key switch and spring-loaded button, the 32-square-foot storage basket is rated for up to 400 pounds. When lowered, the basket sits on the floor. The company says typical assembly places the basket above the garage door; additional options are available.

www.unique1lift.com

7. Barclay Lea Basin

This above-counter bathroom basin measures 18 ½ inches by 14 ½ inches at the top and gradually tapers down toward a 13 ⅝-inch-by-9 ¼-inch base to create a contemporary trapezoidal shape. The wider edge in the back comes drilled for either a single handle faucet or an 8-inch widespread faucet. The sink's white, nonporous fire clay surface is highly durable, says the firm.

www.barclayproducts.com

8. National Gypsum

National Gypsum says its PermaBase Plus backerboard weighs 25 percent less than its standard cement board. The lighter weight material benefits the installer in a variety of applications—from bathrooms to outdoor kitchens. The product received the highest ASTM rating for mold and mildew resistance, according to the manufacturer. PermaBase Plus features a tapered, reinforced-edge design.

www.permabaseplus.info

CATEGORY REVIEW

Automating the Home

Wireless solutions bring smart home technology within reach

BY SANDRA MALM

Until recently, home automation lived at the market's extremes, reserved for hobbyists and six-figure projects. Now, thanks to improvements in wireless technology and the success of smartphones, options are available for most every home.

More than half of adult Americans own a smartphone, rising to 90 percent for those earning more than \$75,000 per year, according to the Pew Research Center. This familiarity with technology is driving expectations of connectivity in new homes.

Accelerating the trend are cost-effective products that use wireless mesh network technology. "A buyer walks into a house like you walk into a Starbucks and expects to be connected," says Dan Bridleman, senior vice president of sustainability, technology, and strategic sourcing at KB Home, which includes a ZigBee platform in each of its homes.

What Wi-Fi did to the way we consume media at home, mesh networks like ZigBee and Z-Wave are doing to how we control the home. You can't stream a movie over them, but you can connect many devices to the Internet using far less power, extending battery life by years. The resulting technology offers myriad benefits over wired systems.

Crestron

This open architecture platform can do it all: personalized control and automation of media, HVAC, lighting, and security systems. The company offers remotes and touch pads as well as an app for use with smartphones and tablets. A referral program recommends local dealers and integrators who have experience installing custom systems of similar scope. Cost: 5 percent to 10 percent of total home price. www.crestron.com



Give the Dryer Some Space

the dryerbox®

Room to Breathe

Today, you can place the dryer flush to the wall without crushing the exhaust hose or otherwise restricting airflow. Install the Dryerbox® for safer, roomier and more efficient homes.

New Standard Installation Model 480
22 Gauge Aluminized Steel—Shown Painted

In-O-Vate
Technologies Inc



Actual Transition Hose without a Dryerbox



888-443-7937
www.Dryerbox.com

Chief Architect®



Rendered with Chief Architect®

Download a Free
Trial Version



Software for Design

Home Design & Remodeling
3D Renderings & Virtual Tours
CAD & Construction Drawings
Wall Sections & Elevations
Terrain & Site Planning
Kitchen & Bath Design

Chief Architect®
chiefarchitect.com/FreeTrial

Wireless brings down the cost. Incorporating wireless decreases the cost of home automation systems and also enables the move away from islands of technology like a home theater or a single communicating thermostat.

“We’re moving toward wireless platforms that integrate the whole house,” says Delia Hansen, residential marketing manager at Crestron, a manufacturer of high-end home automation technology that uses a modified ZigBee network. “Your house is one thing. Now your automation will be one thing.”

Matt McGovern, marketing leader at Nexia Home Intelligence, notes that before, “you had to predict what home buyers might want. Now, you include a few devices to get them started, and people can build from there.”

Nexia allows users to control products from an app on any Web-enabled device via Nexia Bridge, a component that installs like a router.

Lennar, headquartered in Miami, is an example of how a system like Nexia can benefit home building companies. The firm has installed Nexia Home Intelligence since 2011 as a standard feature in its Everything’s Included homes. The company touts the control capabilities of its system: door locks, lighting, cameras, and thermostats. The system comes with a one-year subscription to Nexia’s cloud-based platform.

New systems offer easy control. In addition to giving homeowners more control, wireless systems talk back. KB Home now features

Schneider Electric’s Wiser home management system, which allows homeowners to track energy use from their smartphone or tablet. By making energy use highly visible (the Web-based portal displays both dollars and kilowatts), the company says homeowners are more likely to control and reduce energy costs.

The technology side of home automation often is overly complex, but the user interface on your smartphone doesn’t have to be.

“Ultimately, it’s not about selling gadgets, but selling solutions,” says Brett Price, CEO of Clare Controls. “Aim for an integrated homogenous experience.” Clare Controls’ icon-based app is designed for middle-age women. The result is an intuitive interface that controls the entire system.

Smart home technology is undoubtedly a



Clare Controls

Packaged options in the ClareHome line ensure a responsible profit for builders, the firm says, and include support during installation and maintenance after closing. The cloud-based system can be controlled from any Apple device and doesn’t require a monthly subscription. Cost: \$1,000 to \$7,500 for a 3,500-square-foot house. www.clarecontrols.com

Wiser Home Management

The Wiser system provides access to real-time home energy output, allowing homeowners to adjust the system according to what they want to pay for utilities each month. The standard Wiser system is the base of a ZigBee-enabled platform that can be enhanced to include control of door locks, lighting, thermostats, and security system components. www.wiserenergy.com

Nexia Home Intelligence

This Internet-based wireless system doesn’t require an integrator to install it. Nexia Bridge supports up to 230 components, and many of the products—such as locks, thermostats, and lighting outlets—can be installed through your existing supply chain. Cost: about \$60 for the Bridge; \$50 to \$200 for components; \$10 per month for subscription. www.nexiahome.com

Structured Wiring

Not ready to offer home automation? Future-proof the house by running structured cable to every room in the house from a centralized hub. Consult an integrator to determine what mix of Cat5e and Cat6 cables will best suit each room’s function and design. At \$0.15 per foot, this adds the most value for the buyer and prepares them for anything that may come down the line.

strong selling point for new homes. “Buyers love it,” says Stan Pugsley, purchasing manager at Brighton Homes, “It is like candy for the husbands.” However, he sees the roughly 25 percent of Brighton Home’s buyers who include smart home technology opting for what has been the wired-in legacy of home automation: audio systems. As Pugsley says, “They just want to get their iPod docked.”

Bridleman at KB Home agrees that an immediate benefit is important for the buyer, but so is setting a baseline to make room for a smart house.

The company’s recent “Get Smart” collaboration with Whirlpool, for example, was possible because a secure wireless protocol was in place in via the Wiser system. The builder now offers Whirlpool’s 6th Sense Live appliances, which can be monitored and operated from computers and mobile devices.

“We didn’t embark on this just for energy management,” Bridleman says. “When you think about whole house automation you have to think bigger, smarter. You have to think about the future.”

Wireless systems hedge against obsolescence with automated software updates. Nexia is an example of a BYOD (bring your own device) platform that lets homeowners add components down the line, theoretically for years to come.

“We can push updates out without the end user having to do anything,” McGovern says. “We future-proof it.”

Take time to do it right. The downsides of a wireless system are similar to what you may have experienced with Wi-Fi. Limited range of the hub or router, obstruction from cement or stone walls, and power outages can all block reception. Some LinkedIn members also warn against relying on wireless locks and sensors for security concerns. For these reasons, upgrading to a hybrid system that includes both wired and wireless segments can offer more value, albeit higher integration costs.

Clare Controls has built ease of integration into its value proposition. “About half of what we do with builders has to do with

technology, the other half is marketing sanity and structure,” Price says. “My job is to eliminate surprise for the builder.” If you hire a local integrator, choose one who has experience with projects that are similar in size, scope, and budget to your own.

Home automation is not an undertaking to take lightly. Bridleman told BUILDER, “It takes a lot of due diligence to do it right. You’ll train your supply chain, sales people, subcontractors ... make sure the entire value chain is ready for this.”



TruChoice. Treated.

The new TruChoice Treated line of exterior siding and edge-glued boards delivers quality, durability and resistance against whatever nature can throw its way. And best of all, it’s real wood as nature intended.

- Made from high-quality Radiata pine grown in Arauco’s sustainably-managed plantation forests
- Resistance against moisture, termites and fungal decay
- 30-year Limited Warranty



ARAUCO
Atlanta, GA
Phone: 770-350-1620
sales@arauco-usa.com
www.arauco-usa.com
www.truchoicemoulding.com



Crowe's Economy

Slow to Recover

Single-family construction is not expected to return to normal levels until 2016



David Crowe
CHIEF ECONOMIST
NAHB
WASHINGTON, D.C.
dcrowe@nahb.com

The Great Recession was a depression for housing. Construction activity collapsed more than any time since the beginning of World War II. The total number of homes started in 2009 was the lowest in three generations.

The recovery has varied by location, but it is here. In 2014, housing starts should pass the 1 million mark on the way to a sustainable level of 1.7 million housing starts per year.

From a local standpoint, the progress toward a more normal level of construction is greatly dependent on how far the market sank before turning around. Recovery speed depends on local economic conditions, employment growth, distressed home sales, strength of the home builders, and many other idiosyncratic elements of a local market.

Monitoring the Market In 2011, the NAHB began tracking individual market curing with the NAHB/First American Improving Markets Index (IMI). The index monitored metropolitan areas that showed six-month improvement in three critical indicators of economic and housing health: single-family permits, home price appreciation, and employment.

Beginning in September 2011, 12 markets satisfied the definition of improving, and the index ultimately rose to 291 out of a potential 361 markets—or more than 80 percent of all markets. National figures now demonstrate the same point; housing starts are up almost double their low point, home prices are up 15 percent from their bottom, and the economy has added back 7 million jobs. Tracking the beginning of a market recovery now moves to tracking progress toward complete recovery.

In October, the NAHB introduced the NAHB/First American Leading Markets Index (LMI) to replace the IMI and begin a monthly monitor of proximity to a normal market. The same three elementary indicators are used, but instead of measuring from the bottom, the LMI measures the most recent levels compared with levels under more normal market

conditions. The single LMI for every market is the average of the three component indexes.

Path to Normalcy? The U.S. LMI is 0.85, meaning general market conditions as measured by housing construction, home prices, and employment are within 15 percent of a normal economic growth path. Within the composite index, the three measures show significant difference in their path back to normal. Home prices are 18 percent above the last normal period from 2000 to 2003; total employment is back to 94 percent of normal, last seen in 2007.

But single-family construction remains at 43 percent of the expected normal levels recorded in 2000 to 2003. While the overall path to normalcy is within sight, it remains the slowest housing component to recover. The NAHB expects employment to be back to normal levels next year, but single-family construction will not do the same until 2016.

Individual local markets have exceeded their last normal levels. Fifty-two metropolitan areas have an LMI at or above 1, primarily because of strong energy sector economies. Almost half of the 52 recovered markets have seen housing production return to and exceed the last normal period. Single-family progress is behind one or both of the other two indicators in all but a few of the 361 markets tracked.

Proximity to a normal market is greatly dependent on the local economic base and the depth of collapse. Markets in the Midwest region experienced large declines because the fundamental economic base eroded and is returning slowly, dependent on new employment sources. Markets that experienced wild ups and downs in home prices and production also are recovering but remain further from normal because the bottoms were so deep.

Within the slowest 100 markets to recover, 83 percent are in 11 states—California, Arizona, Nevada, Florida, Minnesota, Wisconsin, Michigan, Illinois, Indiana, Ohio, and Georgia. Even the slowest is more than halfway back, but their extraordinary falls put these markets as the last to return to normal.

View the LMI and its components—updated monthly—online at www.nahb.org/LMI.

Recovery speed depends on strength of home builders, local economic conditions, employment growth, distressed home sales, and other elements.

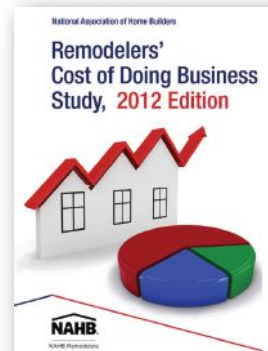
Market Research Essentials

Remodelers' Cost of Doing Business Study, 2012 Edition

NAHB Remodelers

Find out how your remodeling business measures up to the competition. This study provides key financial benchmarks which remodelers can use to compare their business with similar remodeling firms and with the industry as a whole. Use the data to pinpoint areas for improvement, increase efficiencies, and make informed decisions about profit and budget goals in the future.

From BuilderBooks, 2013, 55 pp/e-Book
Retail \$89.99 Member \$59.99



What Home Buyers Really Want

NAHB Economic Group & Housing Policy Group

This study provides insight into buyers' preferences for home type and size, room layout and design, kitchen and baths, windows and doors, accessibility and outdoor features, electronics and technology in the home, energy efficiency, choosing a community, and trade-offs buyers are willing to make. Results are available by age, income, race, and Census division, among other demographic characteristics.

From BuilderBooks, 2013, 224 pp/e-Book
Retail \$149.99 Member \$49.99



Now you can browse and purchase full-text, online and offline access to several other popular BuilderBooks publications including the *National Green Building Standard™* and the *Jobsite Safety Handbook*. They are fully searchable and can be stored on your PC, iPad, or can be viewed and read online. Prices as low as \$6.99.



*National Cash Back Incentives: Take new-vehicle delivery from dealer stock by 1/2/14. Restrictions apply. See dealer for qualifications, complete details and possible program extension. Offer correct at time of printing; program rules subject to change. **2013 E-Series Cargo Vans, Wagons, Cutaways and Stripped Chassis: Not available on factory-installed options. Units receiving any form of CPA (56A), GPC, Long-Term Rental (56K) or other concessions are ineligible. †Up to \$5,000 in total savings options for eligible 2013 E-Series Cargo Vans, Wagons, Cutaways and Stripped Chassis. Eligible vehicles receive up to \$2,500 in Cash Back plus up to \$2,500 in Upfit Cash Allowance. Vehicles not eligible for Maintenance Package coverage. For upfit offers on listed vehicles: Take new-vehicle delivery by 1/2/14. Restrictions apply. See dealership for details.

BUILD YOUR VAN.

Build your savings.

During Commercial Van Season, when you pick your perfect van, you'll start putting together some serious savings off MSRP. Like up to **\$5,000** on 2013 E-Series Cargo Vans, Wagons, Cutaways and Stripped Chassis. From the Crew Van Package to the Ambulance Prep Package to the Shuttle Bus Prep Package, there's no limit to the way you can upfit a Ford E-Series. Hurry in today, because Commercial Van Season ends 1/2/14. For more details, visit ford.com/CVS.

\$2,500 | **\$2,500 Upfit** |
CASH + **CASH** = **UP TO \$5,000**
BACK* | **Allowance**** | **IN SAVINGS†**



COMMERCIAL
TRUCK



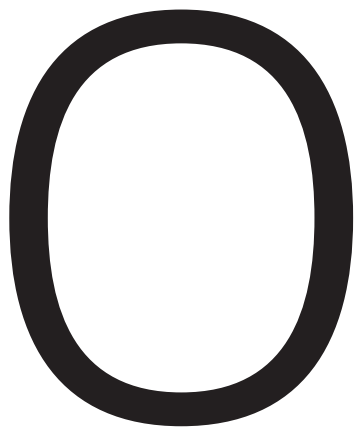


Gaining Ground

Small to mid-size firms find success by building on lots overlooked by big builders or infill, forming relationships with land owners, and finding capital partners

By Teresa Burney and John Caulfield





ver 40 years and through four incarnations of home building companies in Chicago, the Benach family learned a skill that allows them to compete against big, better-capitalized builders.

The clan can build and sell homes on close-in suburban and urban infill projects where other national and regional Chicago builders can't or won't.

Infill is the business model for the family's fourth company—Lexington Homes—that Ron Benach and his son, Jeff, along with CEO Wayne Moretti and CFO Max Pizak, started in October 2006. It's the same name of the original company the Benachs started in 1973 and sold to Westinghouse Electric in 1989.

"If the nationals want those big subdivisions in the suburbs, they can have them," says Jeff Benach, who points out that, while land might be cheaper in the suburbs, home prices remain stagnant.

Lexington Homes, which closed 30 houses in 2012, is finding land that the big pro-

duction builders don't want: urban infill lots. And the new Lexington is willing to fit any type of project on those lots. "We'll do single-family, multifamily, midrise, even rental if the opportunities present themselves," Benach says.

Now that the home building market is emerging from catatonia, builders are scouring the country for land to meet the new housing demand, and they are having trouble finding good lots in the right place at the right price. This is particularly true for small to mid-size builders.

Because development of new lots all but stopped during the downturn, the pickings of finished lots where most people want to live—"A" and "B" lots—are scarce. And, chances are good if you construct houses in a major market, publicly held builders already have tied up the best lots.

While the total number of finished lots available is nowhere near as low as it was just before the recession ended, the numbers are deceptive because roughly 25 percent of them are in what Metrostudy, BUILDER's research company, describes as "D" and "F" locations—places so undesirable that nobody wants to live there.

So what can a smaller builder with less-than-plentiful capital do?

LIVE ON THE LEFTOVER LOTS

Jim Bagley, president of City Homes in Orlando, Fla., has access to lots through private equity. His advice to builders who don't: "If you have no capital, you have to go to the fringe markets, C markets, where your margins are lower, your velocity is lower, but you can live on it."

That's one strategy William H. Hoover, president of Texas-based Inland Homes, a franchisee of Inland Homebuilding Group in Tampa, Fla., was forced into when he started his franchise in San Antonio three years ago.

He knew he couldn't compete against established builders for spots in the best communities, so he had to find good communities that they had overlooked.

"We have been forced to find the lots that others don't want," Hoover says. He feels that being new to the area was an advantage because he saw opportunities with a

fresh eye that local builders with preconceived ideas disregarded.

Case in point was an older community forgotten by local builders. It is near good schools and a mile and a half from Costco and Target. Because it was out of favor with local builders, Hoover got lots at good prices and terms. (He declined to provide the prices he paid or the terms.) Still, it took five or six months to convince a bank to finance the deal. But the payoff came quickly when Inland started selling in June 2011, and sold 24 houses in 18 months at good profits.

Hoover's other strategy was to find lots in good locations with problems other builders didn't want to deal with. He found a prime community on the north side of town with some gnarly leftover lots.

"The big boys will go through a community and they will pick the easy lots and then when the lots get more challenging they tend to leave them and go on the next community because they have a next community to go to," Hoover says.

In this community, the leftover lots needed a lot of rock excavation to make them suitable for construction. But they were cheap enough and, thanks to a good deal with a local excavation contractor, Inland made a profit despite the high costs of lot preparation. There was another side benefit as well.

"We are kind of a savior for developers with troublesome leftover lots," Hoover says. "You have got some ugly lots, let us come and finish out your community."

Hoover started doing business in San Antonio three years ago, so while he has successfully found leftover lots and expects to continue finding lots that way, he does

"If the nationals want those big subdivisions in the suburbs, they can have them."

— Jeff Benach, Lexington Homes



Land Banks Clear Path for Neighborhood Renewal

But builders and developers have been slow to embrace

What do Pennsylvania, New York, Missouri, Georgia, and Nebraska have in common? All passed legislation in the past two years that authorized the formation of land banks to reclaim real estate whose market value in its present blighted or tax-delinquent condition is all but worthless.

For adventurous builders and developers—especially those whose business models include infill aspirations—land banks hold out the promise of inexpensive, albeit risky, redevelopment options. And if this phenomenon expands, as some experts predict it will, land banks could become more important to metros trying to resuscitate neighborhoods and attract more residents and businesses.

One hundred to 150 authorized land banks are in operation across the United States. Typically, the banks are set up to serve counties or metros like Chicago, whose Cook County Land Bank Authority is scheduled to open this fall. And if all things fall into place as planned, Philadelphia could have its first land bank by mid 2014.

Philadelphia has more than 40,000 residential and commercial properties that haven't paid taxes in years or are vacant or abandoned. Various public agencies own about one-quarter of these properties. The game plan over time, says Rick Sauer, executive director of the Philadelphia Association of Community Development

Corporations, is to move a sizable portion of the land and buildings into the land bank and repurpose as many properties as local real estate conditions will allow to get them back on the tax rolls.

Land banks “are a new tool based on a new reality,” says Frank Alexander, professor at Emory University School of Law in Atlanta, and co-founder and general counsel for the Center for Community Progress.

Historically, these properties have been located in dilapidated neighborhoods within a city’s urban core. But, says Alexander, the last housing recession spread this plague to the suburbs, where he’s seen whole subdivisions succumb to foreclosure.

Land banks have become a solution for cash-strapped cities that want to rehabilitate rundown neighborhoods, but don’t have the money or manpower to chase down owners of abandoned properties or to tear down buildings.

Land banks have the legal authority to take ownership of properties within days or weeks, settle (often by voiding) title and lien obstacles, demolish what can’t be salvaged, and assemble and resell land and buildings through commercial brokers.

A few years ago lenders and underwriters—including Fannie Mae, Wells Fargo, and Bank of America—paid Cuyahoga County Land Bank in Ohio \$3,500 to \$7,500 per house to buy and tear down the worst foreclosed houses in Cleveland.

This kind of quick fix has led some critics to brand land banking as eminent domain in sheep’s clothing, and unreasonable competition for private developers. Proponents reject that argument and note that land banks aren’t forcing anyone out of their homes, as eminent domain might.

Depending on the city, a sizable portion of what land banks take over inevitably will be demolished and greened over. Of the 9,000-plus

“If you have no capital, you have to go to the C markets, where your margins are lower, your velocity is lower, but you can live on it.”

— **Jim Bagley, City Homes**



Brian Carlson Photography

not know how fruitful this strategy will be over time.

Henry Walker Homes, which builds nearly every type of dwelling from condominiums to custom in Utah and Colorado, makes a point of picking up land that the large public builders don't know about or aren't interested in to stay out of the "food fight" with builders over tracts.

CEO Colin Wright says the company finds lots in municipalities that have infill land to develop and are maybe anti-large builders. It also develops brownfield projects and jumps on property that banks are holding notes on.

"We pride ourselves on being really opportunistic," Wright says.

INFILL PROJECTS PROVIDE NICHE

Next year, California Home Builders (CHB) will celebrate its 20th anniversary. Over those two decades, this Canoga Park, Calif.-based builder/developer has survived in the land of giant builders by its willingness to shift gears ahead of changing markets.

The company, says its owner and CEO Shawn Evenhaim, started out building custom homes. But within two years, CHB was into production home building with a focus on infill projects, which have been the foundation of its business model ever since.

Last year, CHB closed 130 multifamily units and 60 single-family homes. It recently completed two multifamily projects of 81 and 41 units, respectively, that it sold to investors who are renting them.

Evenhaim says his game plan calls for selling larger multifamily projects to investors, and selling single-family homes and smaller multifamily projects to home buyers.

He projects about 60 single-family closings this year, rising to 100 single-family and 200 multifamily closings in 2014.

Nationally, infill represented approximately 21 percent of new-home construction in metropolitan regions from 2000 to 2009, according to the EPA. What makes an area more attractive for infill development? The EPA confirmed what many builders already know: that infill typically happens in areas where home prices are high.

Mass transportation also makes a difference. Metropolitan areas with more transit ridership and miles of rail transit also tend to have higher rates of infill, compared with those cities and suburbs without a big investment in mass transit.

BUILD STRONG RELATIONSHIPS WITH LANDOWNERS

A few months ago Rob Bowman, president of Charter Homes and Neighborhoods in Lancaster, Pa., was in a heated contest to buy an attractive piece of land. So he took the owners for a tour of Charter's self-developed, award-winning neighborhoods. They also visited Charter's Walden Crossings Community, a successful residential town center attached to its greater Walden master plan.

The owner, impressed by Charter's artful communities, ended up giving Charter the land contract.

"He said, 'My father passed away and I believe he would think I'm making the right decision. Could we name one street after my dad?'" Bowman recalls. "It's that kind of emotional satisfaction, that connection, the ability to give landowners that kind of stake in the property" that convinces them to sell their property to Charter over other buyers.

Pat Neal, president of Neal Communities, has been a home builder in the Southwest Florida area since 1968. Arguably, he knows every large farmer or rancher from Tampa to the Everglades. It's likely that he's sat down at their kitchen tables passing on this message: "When you get ready to sell, give me a call."

He knows where to track down every one

of them when necessary.

"There's one who, if I want to talk to him, I go to St. Peter and Paul the Apostles church on Saturday afternoon," he says.

There are land tracts in Florida that Neal has been tracking for 25 years. He courted one land owner for 10 years before finally getting the deal.

Neal, who jokes that he scrupulously maintains his reputation "because I am likely to run into them at Publix" supermarket, has earned the trust of many local landowners in a large swath of the Sunshine State. At the same time, many large publicly held builders working in the same areas eroded the trust of landowners when they abandoned Southwest Florida when the recession hit.

"They have earned a reputation for being harder to deal with because they are short-term in their orientation; the private builder has to live in the community," Neal says.

Because of what Neal calls his "asymmetrical" knowledge of land assets, the motivation of land sellers, and the planning and zoning movers and shakers in local governments, he has procured plenty of land to fuel this company's geometric climb in home sales. Neal Communities bought 19 parcels in 2013; 2,826 home lots. Neal's strategy is so effective that he has gathered enough lots for his own home building needs with leftover land that he plans to sell to public builders.

"I would have bought another seven, eight, or nine [parcels of undeveloped land] if I had been willing to pay as much as the national builders," he says.

Bill Handler, president of GHO Homes in Vero Beach, Fla., has found success by using similar strategies.

“My game plans have really been to be very decisive and move quickly,” he says. Like Neal, Handler is visible in the community and easily reachable. “I think the advertising and local PR we do get me calls as well,” he says.

To gather the intel, Handler taps into a network of local contacts, including landowners. He keeps in touch with engineers, real estate agents, subcontractors, former sources of land, friends of friends, and former customers.

“All of those have made calls and introductions, or got me in direct contact with landowners wanting to sell,” he says. “I have also tried to be the first call from local banks” with land to sell.

As a result, Handler currently has a two-year land supply—not a bad achievement considering he’s in Florida and his sales have been climbing.

FIND A CAPITAL PARTNER TO SHARE THE COSTS

Of course, even the best land deal requires cash to buy, more money to develop it into lots, and even more funds to market and sell houses on it. While it’s rare for privately financed home builders—particularly small ones—to acquire cash in the quantities that public companies have, there are some partnering options.

“You better have a land capital partner because that is how the publics will win otherwise,” notes Wright of Henry Walker Homes. “They have more access to capital.”

Easier said than done, true, but not impossible.

“The capital is an ever-changing, ongoing battle,” says Wright, whose company initially was funded by costly private equity capital. “We used third-party land banks to bank land. We gave profits away to those land banks, but it helped us as we didn’t have to raise capital to develop.”

That partnership helped Henry Walker Homes build houses and make profits that made its balance sheet more desirable to banks as time went on.

“We look better as a company now,” Wright says. Plus, he adds, banks are more willing to loan money today to build homes, if not buy the land to put them on.

There also are less traditional ways for a cash-strapped builder to acquire land. St. Petersburg, Fla.-based Black Orchid Equity, for instance, recently bought 1,500 vacant home lots and 1,000 acres of other land across the southeast from Rialto Capital, Lennar’s subsidiary formed during the recession to work out distressed land assets.

Black Orchid’s managing director, Blake Whitney Thompson, is striking partnerships with home builders at favorable terms to build homes on the land. In some cases, Thompson is turning the lot titles over to the builders with the agreement that they would pay Black Orchid for the land after the home is built and sold. That direct builder ownership makes banks more comfortable with lending cash to build the house.

Deferring the payment for the lot means the builder doesn’t need to take money out of pocket to buy the land. “We are looking for builders [to partner with] that are aggressive, creditworthy, and looking for long-term relationships,” Thompson says.

Essentially, to successfully find and buy land in the currently overheated market, builders without the deep pockets to compete head-to-head with public home builders must find land they don’t want or don’t know about, cultivate relationships with land sellers, and find financial partners to help pay for it.

Consider Lexington Homes’ example by buying land where large public big builders are not. In September, Lexington Homes

opened three subdivisions, two of which are in Palatine, Ill.: Lexington Hills, with 41 units; and Lexington Oaks, with 15 units.

That same month, the company also opened the second phase of single-family homes and third phase of rowhouses at its Lexington Square community. Located in the south end of Chicago’s diverse Bridgeport neighborhood, Lexington Square is a mere eight blocks from U.S. Cellular Field—home to the Chicago White Sox—and will offer 20 single-family houses ranging from 3,000 to 3,600 square feet and starting at \$472,500, and 21 two-story rowhouses ranging from 2,216 to 2,507 square feet and starting at \$369,000.

This year, Lexington expects to double its closings to 60 homes, and co-principal Jeff Benach says that velocity would be much higher if his company had more land. “We need to start buying land more aggressively,” he points out. At the moment, however, Lexington is narrowing its focus on purchasing smaller parcels—no more than 100 lots.

Benach says that he and his 81-year-old father have no desire to build Lexington Homes into a behemoth. “We want a nice, manageable company that’s building 200 to 300 homes a year in four to seven subdivisions,” he says.

Lexington is in good shape financially, he says, with bank relationships that allow it capitalize projects “before a shovel goes into the ground. That’s unusual for most builders these days.” **B**

"We used third-party land banks to bank land. We gave profits away to those land banks, but it helped us as we didn't have to raise capital to develop."

— **Colin Wright,**
Henry Walker Homes



Michael Schoenfeld

properties that Flint, Mich.-based Genesee County Land Bank has in its inventory, it will tear down 1,700 to 1,800 homes, which is only about two-fifths of the demos that could be done, says executive director Doug Weiland.

Over the years, Genesee has paid for demolitions and what little rehabbing it has done partly with funds from the Neighborhood Stabilization Program.

Other land banks are funded in various ways. The office of New York's Attorney General recently allocated \$20 million in grants for seven land banks in the state. Chicago is funding two land banks initially with \$6 million from a larger settlement that Illinois won against big banks for foreclosure and mortgage fraud.

Meanwhile, Lucas County Land Bank—with an annual budget of around \$1.6 million—is like many programs in Ohio and other states that fund themselves through penalties imposed on property-tax scofflaws.

The business model of many land banks is to eventually operate on proceeds from sales and tax receipts once properties are repaired or cleared and then reused.

One of the more active land bank customers has been Habitat for Humanity. Emory University's Alexander points out that over the past 15 years, the Atlanta Land Bank Authority has been transferring ownership of properties in South Atlanta to the local Habitat chapter for as little as \$1 per lot.

Since 2006, Habitat's Dallas chapter has acquired 150 lots from the Dallas Urban Land Bank, at an approximate cost of \$615,000.

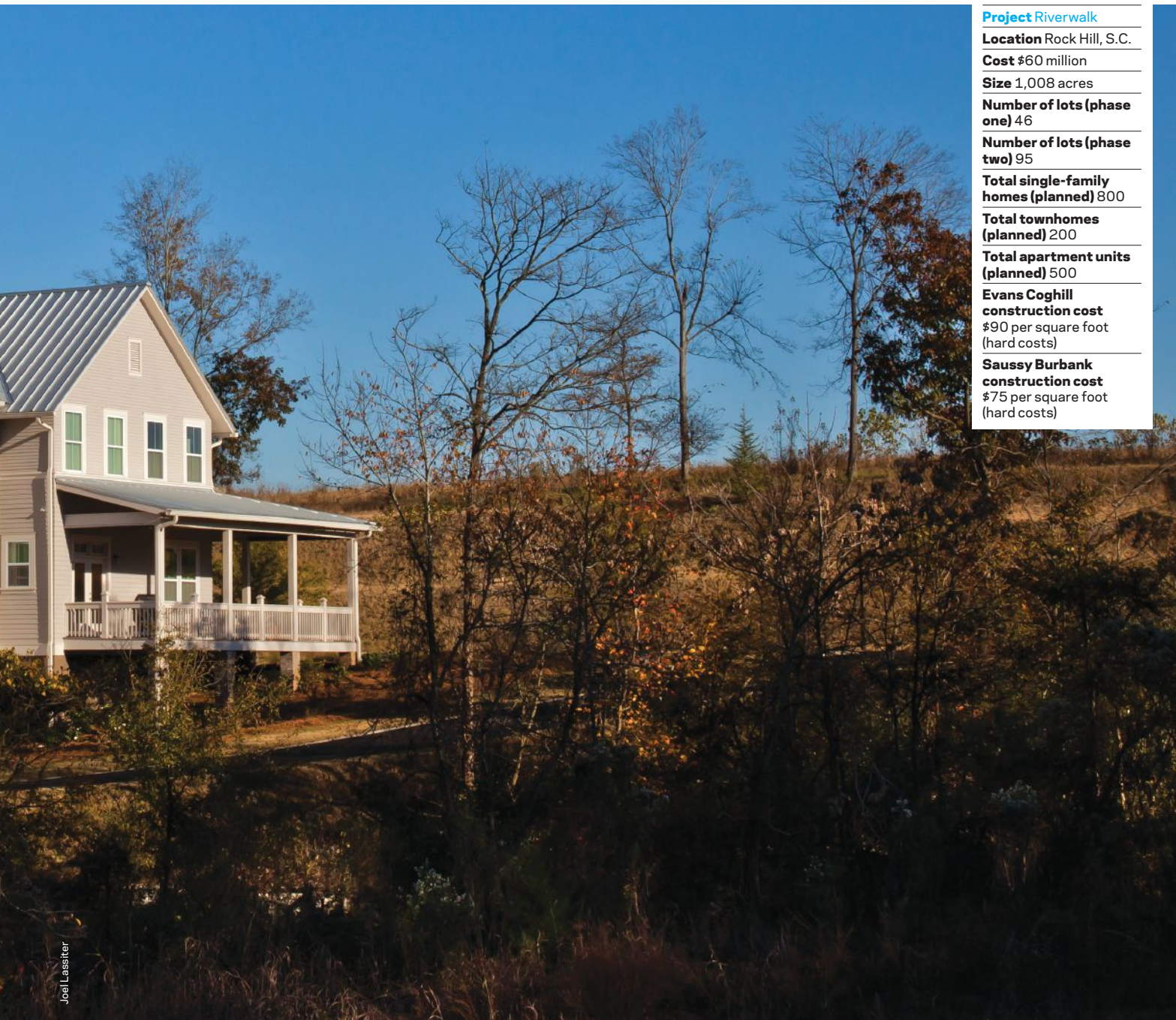
"The benefit is that the land bank clears up the titles before transferring the land to us," says Kristen Schulz, Dallas Habitat's director of public policy and government funding. — J.C.



How the Assured Group transformed a challenging brownfield into a vibrant mixed-use village centered around outdoor sports

By Jennifer Goodman

NEW LIFE FOR



Joel Laastier

Project Riverwalk

Location Rock Hill, S.C.

Cost \$60 million

Size 1,008 acres

Number of lots (phase one) 46

Number of lots (phase two) 95

Total single-family homes (planned) 800

Total townhomes (planned) 200

Total apartment units (planned) 500

Evans Coghill construction cost \$90 per square foot (hard costs)

Saussy Burbank construction cost \$75 per square foot (hard costs)

AN OLD SITE

M

ost developers wouldn't have touched the 1,000-acre site on the Catawba River with a 10-foot pole.

Located in northern South Carolina, the property was home to a recently vacated textile factory that left behind environmental degradation and a community struggling with unemployment from its shutdown. Hazards included 20-foot-deep lagoons filled with industrial waste, an arsenic-tainted coal storage yard, and groundwater contaminated by flammable chemicals including acetone and benzene.

But for the Assured Group of Companies, those issues weren't deal breakers. The Cincinnati-based developer, which specializes in brownfield remediation and redevelopment, has made a name for itself repurposing property that other companies don't want.

On the former Celanese Corp. of America site, company officials envisioned a mixed-use community of single- and multifamily housing, shops, restaurants, offices, and commercial space. The company spent \$40 million in a two-year cleanup effort that included demolition of the 2.5 million-square-foot factory and remediation of the soil and groundwater.

Once the site was ready, Assured Group executives searched for home builders that would emphasize the company's vision for a

traditional neighborhood development aesthetic. They were impressed by two local production companies, Saussy Burbank and Evans Coghill. Before committing to the plan—called Riverwalk—the two builders considered how the land's unusual history would impact buyers.

"The Celanese plant had been there for a long, long time," says Saussy Burbank president Bob Zweier. "Some people kind of looked at it like, 'Is it safe to build there?'"

Nevertheless, both builders were undeterred. They signed on to the project, determined to turn what could be a liability into an asset, says Evans Coghill chief marketing officer Alan Banks. Now that the project's first residential phases are complete, the builders are prepared for questions from potential buyers. Banks says salespeople are upfront with customers about the site's past and explain the property's industrial history rather than shy away from it. "We knew buyers could be turned off if we didn't approach this issue properly," he says. "We talk to them about how this is a good reuse of the land and we explain the remediation process. We brag about it."

Even so, salespeople keep a letter from the project's engineering firm on hand to reassure wary buyers. "We show them the third-party testing that says this is a clean site, although most people just want to know that there is a process for remediation and that it was followed," Banks says. Dave Williams, development director of the Assured Group, is also available to answer questions by phone.

"It doesn't come up with every buyer; many buyers aren't even aware of what was there," adds Zweier, who notes that questions—mostly from local residents—have died down now that the project is underway.

PARTNERSHIPS WITH LOCAL GOVERNMENTS PAY OFF

For all of its risks, the site presents a number of impressive rewards. Its location is

ideal, bordering 3 miles of riverfront property and adjacent to Rock Hill, S.C., a growing city 25 miles south of Charlotte known for its active outdoor amenities and sports tourism venues.

The project also has another thing going for it: From the beginning, city and county officials were on board with the plan, which they saw as a way to catalyze the local economy and create jobs. As the remediation got underway, the city provided the Assured Group with tax increment financing and incorporated the property into the City of Rock Hill to facilitate bond funds to install streets and utilities.

This strong public/private alliance led to a game-changing partnership with the city's Parks, Recreation & Tourism office, regionally known for developing top-level sports facilities. On 250 acres donated by the Assured Group, the city created a world-class recreation venue that is drawing visitors and new residents alike.

The crown jewel is the newly opened Giordana Velodrome, which hosts national and international competitive cycling events on its 250-meter track. Other recreational offerings include 2.5 miles of paved riverfront trails, a kayak and canoe launch, mountain biking trails, and a 10-acre open green space. A BMX Supercross track is under construction. To date the city has invested \$15 million, Williams says.

"Through this partnership we were able to offer amenities that a private developer couldn't support on its own," he points out. "It's all part of the active outdoor lifestyle brand we've created with the project."

Thanks to the partnership, most of the amenities were already constructed by the city or well underway before the home builders signed on to the plan—a reassuring sign during the height of the recession.

"The partnership is one of the reasons why we're involved," Banks explains. "The project

Preparing the Site At Riverwalk, environmental concerns centered around chemicals used in the former textile plant, which produced a synthetic fiber called cellulose acetate. Even though the site received a clean bill of health from the state of South Carolina, its past life could have scared off buyers concerned about potential health issues. Nevertheless, the project's home builders have embraced the site's past life instead of trying to hide it. "That way, we can control the way the information is presented to customers," says Evans Coghill's Alan Banks.



Courtesy The Assured Group



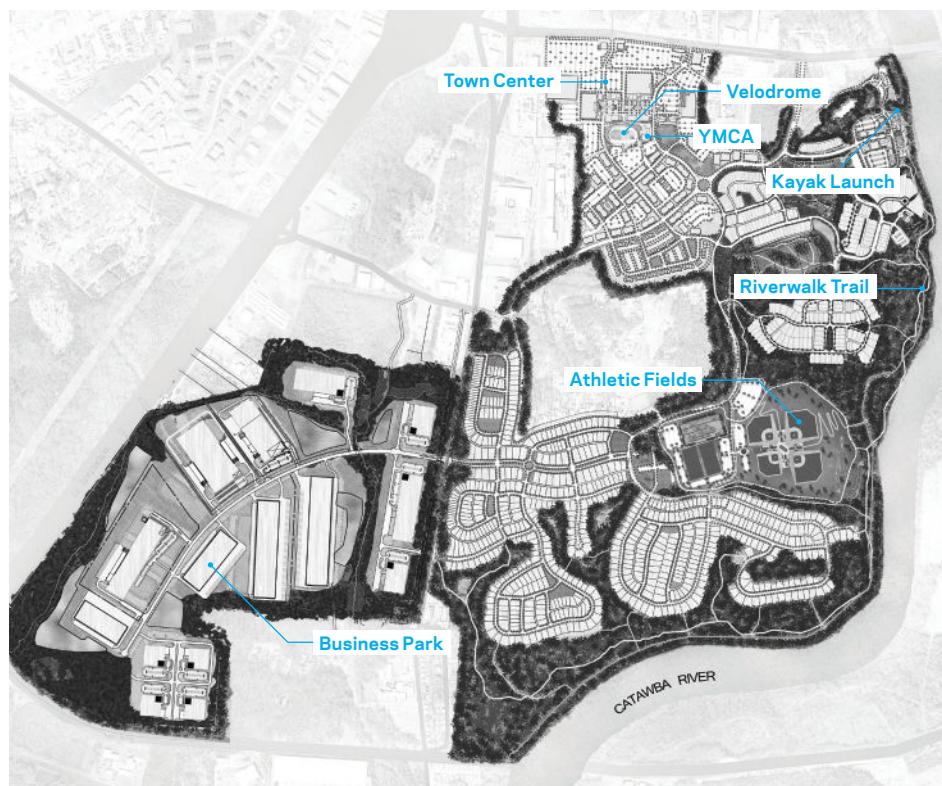
Joel Lassiter

Cycling Mecca The 250-meter Giordana Velodrome is the hub of the Riverwalk community, with its banked walls located in the middle of shops, residences, and restaurants.





Top left: Courtesy/Evans Coghill; top right: Joel Lassiter; middle left and right: Zan Maddox for Saussy Burbank; bottom left and right: Joel Lassiter



Site Plan The Riverwalk vision for 2014 and beyond includes a YMCA and athletic fields, a town center, professional offices, industrial space, a boat launch, and residential neighborhoods, all connected by pedestrian- and cycle-friendly streetscapes and trails. Saussy Burbank and Evans Coghill executives were drawn to the unconventional site plan. "It wasn't the usual, 'Here's the swim club and here's the events center,'" says Saussy Burbank president Bob Zweier.

came along as the economy was falling apart, but they were able to continue moving dirt and keep things moving."

WATERFRONT AND RECREATION LURE PROSPECTIVE BUYERS

The riverfront location and recreational opportunities bring in visitors from all over the region, and many of them want to know more about making Riverwalk their home. Walk-in traffic to the Saussy Burbank model home is more than five times greater than that at any of its other communities, thanks to its proximity to the cycling center and walking trail—used by more than 10,000 people a month. "It's not all qualified traffic, but it's still really good exposure for us," Zweier says.

Another differentiator is that the homes are certified to Environments for Living, a green building program offered by Masco Home Services, which guarantees lower-

than-average heating and cooling bills. The homes also are built with strict covenants to uphold a distinctive outdoor-focused design. The guidelines address basics such as massing, porch depth, material selection, doors, windows, and color selection, says Williams.

The Saussy Burbank products are geared toward move-up buyers at multiple price points, with two-unit attached townhouses and cottages starting in the low \$200s to single-family homes from the high \$200s to high \$300s. Sizes range from 1,662 square feet to 3,156 square feet.

Evans Coghill offers six models at Riverwalk, all developed since 2007, when the recession changed the size and shape of the firm's floor plans. Casual dining spaces have taken the place of formal dining rooms and many buyers go for spa showers in the master bathroom instead of garden bathtubs, Banks says. About half choose first-floor master bed-

rooms. Prices range from \$235,000 to \$385,000 with square footages from 1,800 to 2,650.

All but eight of the 46 homes have been sold in phase one, which was completed in December 2011. Phase two encompasses 95 lots, with six under construction and one pre-sale, says Williams. The two builders began work in November on more townhomes that will bring a lower price point and low-maintenance living to the neighborhood. Crews from the competing-but-friendly companies worked side by side on this phase.

"It's not a joint venture—each of us is doing our own thing and selling our own product," Banks says. "It's just that we both have to complement each other because we're all on the same street." **B**

Q For additional project photos, visit go.hw.net/bol1213-riverwalk

Tight Squeeze Riverwalk's narrow lots proved to be a construction challenge for the project's builders and their subcontractors, who worked together to determine how best to deliver and stack framing materials at the sites, some as small as 35 feet wide. "We had to be very disciplined about how we handled our framing materials and when they would be delivered," says Alan Banks, noting that his trade partners appreciated the extra planning. "They thanked us for asking them what would make it easier for them."

Eaton & Cooper united

Innovative solutions
for modern lifestyles

- **Surge protection** – Offers internally and externally mounted solutions, to protect all of your sensitive electronics and appliances from the damaging effects of surges.
- **Wiring devices** – Offers a broad portfolio of innovative electrical connectivity and control solutions, needed to keep power accessible, reliable and safe.
- **Lighting** – Delivers a range of innovative and reliable indoor and outdoor lighting and control solutions, specifically designed to maximize performance, energy efficiency and cost savings.

SURGE PROTECTION



WIRING DEVICES



LIGHTING



Powering Business Worldwide

Visit us at the 2014 IBS booth #C5016

www.eaton.com/surgetrap

www.cooperwiringdevices.com

www.cooperlighting.com

2014 PRE-SHOW PLANNER

The New American Home /// IBS Product Preview
Feb. 4-6, Las Vegas



SHOW STOPPER

The 2014 New American Home is chock-full of multigenerational, sustainable, and inspirational design ideas

By Jennifer Goodman



TOUR DATES AND TIMES The 2014 New American Home will be open for free guided tours during the International Builders' Show, Feb. 4-6, in Las Vegas. The home is located in Henderson, Nev., about 13 miles from the Las Vegas Convention Center, where the show is being held.

Complimentary shuttle bus tickets will be distributed from The New American Home booth located in the central concourse of the Las Vegas Convention Center from 7:30 a.m. to 3:30 p.m., Feb. 4-6. If you are a registered attendee of IBS, the Kitchen & Bath Industry Show, or the International Window

The 2014 New American Home, co-sponsored by the NAHB and BUILDER, is destined to be a one-of-a-kind crowd-pleaser for International Builders' Show (IBS) attendees in February.

Rising out of the foothills of the exclusive Sky Terrace housing development in Henderson, Nev., the 6,700-square-foot showstopper will serve as a construction technology laboratory when it opens for tours during IBS. Although it's a huge custom project undertaken with an insanely compressed construction schedule, the tour will offer lessons for builders of all types and sizes from across the country.

As builders and guests walk through the lavishly appointed home, they can imagine

how it will make life easier for the home's occupants, envisioned as a busy, extended family made up of children, parents, and grandparents. Architect Jeffrey Berkus' design provides grand spaces for entertaining, areas for homework and schooling, quiet spots for meditation, and multiple outdoor living spaces.

In preparation for the tour, some of the home's must-see features include:

The indoor/outdoor experience The home's open layout fuses the indoors with the outdoors and provides the owners with many spaces to live and work outdoors. These include an outside office space that doubles as a meditation center and a rooftop terrace.

Design for multigenerational living The home will comfortably accommodate a three-generation family, with the option of locating the master suite either upstairs or downstairs. A carriage suite with separate access will connect to the house through an elevator. (One side of the elevator opens to the carriage suite; the other opens to the main home.)

Distance learning opportunities In a nod to the growing trend of online learning platforms and home schooling, the house will accommodate distance learning. A double island in the kitchen offers space to cook on one side and an informal area on the other so that kids can work on schoolwork while still interacting with the family and being a part of the home's social sphere.



Courtesy Jeffrey Berkus Architects

Coverings Expo, head to The New American Home booth on the morning of the day you want to take the tour. Tickets for specific shuttle bus departure times on that day will be handed out on a first-come, first-served basis. They will go quickly, so organizers strongly encourage visiting the

ticket booth early for the best chance of getting tickets for the time most convenient for you. Buses will leave every 30 minutes from the curb in front of Exhibit Hall C2 beginning at 8:30 a.m., with the last bus departing at 3:30 p.m. each show day.



Public and private spaces The house is designed to be both dynamic and soothing, with high ceilings in public spaces, and lower ceilings to create a more intimate feel in the family areas, Berkus says. There's also a long gallery that can be used either as a transition space or as a large entertaining space. Prime views are afforded from the dining room, first-floor master suite, and rooftop terrace.

Dramatic floor plan Attendees will be awed by custom touches such as a water wall, a poolside meditation room, and a second-story circulation bridge connecting the core spaces. "This house is based around the idea of flow," says Berkus, who took over the project's design when his father, Barry Berkus, passed away in November 2012. "You're going to see a lot of 'memory points' in the house, as dad would call it—where you walk through and turn a corner and say, 'Wow.'"

The home is being constructed by Henderson-based Element Building Co. to the highest level of the National Green Building Standard with state-of-the-art technology including a solar water heater, photovoltaic panels, closed-cell spray-foam insulation, and a weather-sensitive irrigation system that automatically adjusts usage relative to the immediate climate. The house also features tankless water heaters, hydronic air handlers, intelligent fireplaces, and sustainable building materials.

To keep occupants comfortable during Nevada's blazing afternoons and cool nights, the project team is relying on the most effective type of air sealant on the market: spray polyurethane foam, which can provide an R-value per inch up to 6.5. With foamed-in-place insulation, the material fills wall and ceiling cavities completely.

Builder Josh Anderson and his crew are under a rock-solid deadline because the

house soon will be toured by thousands of conference attendees as part of the show, happening Feb. 4 to 6 in Las Vegas. They are surviving each day by anticipating changes and staying flexible, says Anderson. For example, the design changed drastically from the early phase, and then work was delayed by one of the rainiest summers on record that waterlogged the building site and ruined 350 sheets of drywall.

"It's a constant battle to make time up for a home like this with all the moving parts," Anderson says. "We've always got a Plan B."

For up-to-date coverage of The New American Home's construction and design—including slideshows, floor plans, and interviews with the project team—visit www.builderonline.com/new-american-home.

Courtesy Jeffrey Berkus Architects

Solutions are here.



We value the *art* in partnership. Finding real partnerships in the home building industry is vital. Tapco is readily available to take your call, demonstrate our latest products and offer robust information – from education and market statistics to design ideas – on our Resource Corner website. From professional courses to specific answers from our Architectural Services group, we invite you to take advantage of our comprehensive solutions.

Start seeing the art in partnership at www.TapcoGroupRC.com.



Roofing ♦ Siding ♦ Shutters ♦ Siding Components ♦ Tool Systems
Egress Systems ♦ Trim ♦ Decking

www.TapcoSolutions.com



We're a solutions partner – see our Field Solutions and learn how Tapco products can help you.



Products

1. Sea Gull Lighting The Lazlo collection features multifaceted clear or mercury glass framed within an octagonal base, expanding the company's contemporary lighting options. This indoor lantern is open ended at the top and bottom to allow for more illumination. www.seagulllighting.com. Booth No. C6908

2. Perennial Wood Perennial Wood expanded its modified wood decking and porch flooring options to include post wraps. The product uses TruLast Technology, which alters the wood's cellular structure by using heat, pressure,

and an organic compound to make a straighter, harder, more water-resistant board. www.eastman.com. Booth No. C1053

3. Dekton by Cosentino This ultra-compact surface delivers exceptional strength and performance, as well as UV resistance for color stability outdoors. Architectural applications include flooring, cladding, staircases, exterior façades, kitchen countertops, and bathrooms. www.dekton.com. Booth No. N2939

4. Tyvek ThermoWrap R5.0 DuPont attached a 1.5-inch

blanket of polyester and polyolefin fibers to its patented Tyvek material to create this insulated building wrap. The continuous exterior insulation boosts the R-value of the wall system and reduces thermal bridging. The product installs similarly to housewrap. www.thermawrapR5.tyvek.com. Booth No. C5034

5. DAP SmartBond DAP says its new foaming gel construction adhesive provides eight times more coverage in each cartridge and faster application than competing products. Three lines of the polyurethane gel

are optimized for subfloor, heavy duty, and landscape applications. The pressurized cans dispense a collapsing foam without pumping. www.dap.com. Booth No. S2210

6. Ply Gem Windows The 1500 Vinyl Collection allows builders to customize windows from a selection of design and performance options. Both traditional and contemporary frame designs are available. The line now features three new exterior color options—bronze, clay, and beige. www.1500vinylcollection.com. Booth No. C3820

NO TIME FOR BULL?



Mohawk understands time is money. We partner with you to give you solid solutions, not flimsy excuses. Mohawk is the only full service flooring resource offering an enormous product selection and extensive expertise to help you grow your business on your schedule.

Stand on Mohawk. Cut the bull and get down to business.

For more information, visit mohawkflooring.com/builder or call toll-free 877-275-6642.

CARPET | WOOD | LAMINATE | TILE | RESILIENT



“Of the 82 Ritz-Craft homes I’ve built over the last three years, this home was for my toughest customer... my wife.”

Dick Burke
Owner of DB Homes

Visit the Ritz-Craft booth **S1050** at IBS and find out how Ritz-Craft modular building systems and marketing programs can complement your building business.

Building success- It's all about the company you keep.



Mifflinburg, PA • Jonesville, MI • Hamlet, NC • 800-326-9836 • Ritz-Craft.com



Visit us at the IBS Show
in Las Vegas, NV
February 4-6, Booth S1015

Quality of life begins with fresh air

Flex100h and ECO-Touch
HRV and Wall Control

They deliver an unbeatable combination of improved air quality, energy efficiency and reliable performance year after year. That's simply better™.



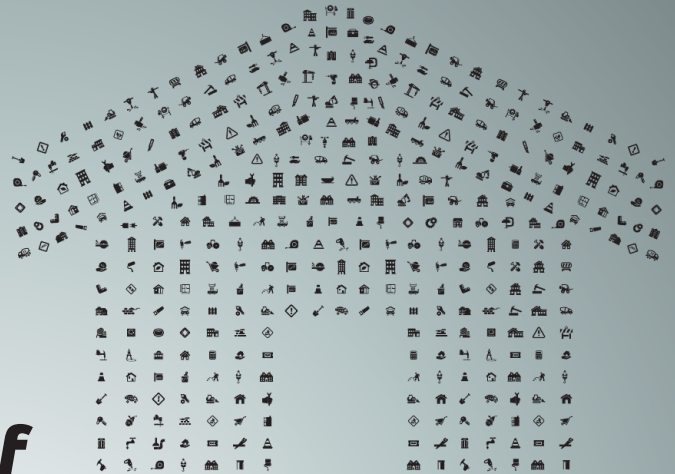
www.fantech.net



 fantech

IBS 2014

MORE *of* **EVERYTHING**



REGISTER
By February 1
for BEST
pricing!

MORE TO SEE. MORE TO LEARN. MORE TO BUILD.
2014 NAHB International Builders' Show®

Here's your sneak peak to the building
industry's biggest event!

FEBRUARY 4-6 // LAS VEGAS // BUILDERSSHOW.COM



IBS 2014: MORE TO SEE

Extraordinary Reasons to Attend:

- » 1 Badge = 2 Shows! This year your IBS expo pass gets you even more when IBS and the Kitchen & Bath Industry Show (KBIS) co-locate for the first annual **Design & Construction Week™!**
- » Explore the exhibits of IBS and KBIS as well as the exhibits of a third show, the International Window Coverings Expo.
- » See over 1,500 exhibitors in more than 600,000 square feet of exhibits.
- » Network with some of the 70,000 attendees that are expected to attend **Design & Construction Week.**
- » Access more than 100 education sessions taught by 275 renowned building industry experts (including 80 new speakers) from around the country. From High Performance & Energy Efficient Building to Sales, Marketing & Customer Focus – there's something for everyone!

3 Full Days of Exhibits!

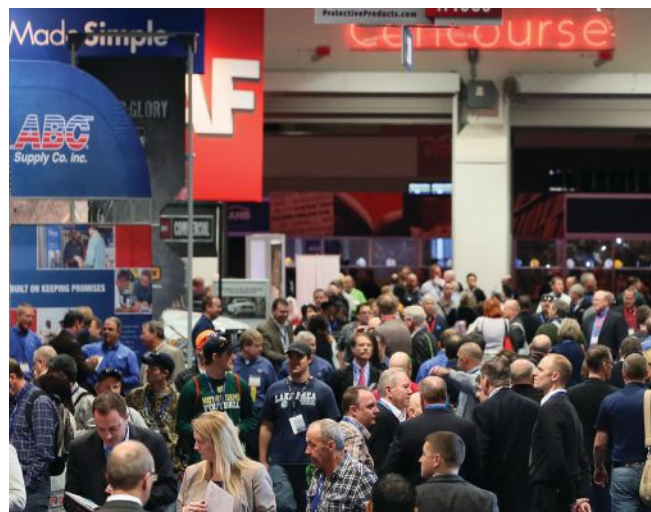


EXHIBIT HALL HOURS

Tuesday, February 4 - Thursday, February 6
9:00 AM - 5:00 PM

Register NOW for Best Pricing! There's an Option for Everyone!

Fees & Deadlines

	NAHB Member		Non-Member	
	REGULAR 12/21/13 - 2/1/14	ONSITE 2/2/14	REGULAR 12/21/13 - 2/1/14	ONSITE 2/2/14
Full Registration	\$375	\$475	\$525	\$625
Member First-Time Attendee	\$125	\$125	N/A	N/A
Expo Pass	\$75	\$125	\$150	\$200
1-Day Education with Expo Pass	\$125	\$175	\$175	\$250

FEBRUARY 4-6, 2014 // LAS VEGAS // BUILDERSSHOW.COM REGISTER NOW!

MORE TO LEARN

NOW MORE THAN EVER: IBS EDUCATION

We've made several exciting enhancements to the 2014 IBS education program. Attendees can expect a variety of new session formats, technology upgrades, interactive architectural and design plan reviews and more hands-on demonstrations both on and off the show floor.

- » **Building Knowledge Sessions Revamped.** With more than 100 education sessions spanning ten different tracks, the 2014 program features new formats and over 80 new speakers to provide fresh content, informative concepts and plenty of material that attendees can implement immediately.
- » **Spotlight Sessions.** Show-stopping sessions highlighting leading industry experts and emerging trends including the latest in design, color and kitchen enhancements.
- » **The Tech Hub.** A unique and interactive technological experience immersing attendees in advance technology using "plug-in" features to cover tech-heavy topics such as social media, online business management tools and mobile marketing.
- » **Expansion of Exhibitor Floor Forums.** These interactive forums will be hosted right on the show floor by exhibiting companies and will offer NAHB-approved education that qualify as continuing education (CE) credits for all those who hold NAHB professional designations.
- » **More Information-Packed Master Sessions.** The number of Master sessions offered has increased from 3 to 5 and have been restructured from full-day programs to half days. Attendees can still expect these sessions to focus on advanced-level training and dig deeper into specific industry topics.
- » **Lumber & Building Material Sessions.** For the first time in recent history, IBS is offering content specific for building material distributors and suppliers. Sessions will cover hot topics such as supplier services and OSHA crane regulations.

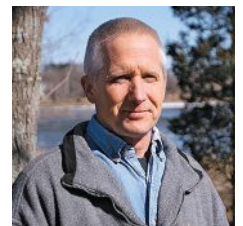
HIGH PERFORMANCE BUILDING ZONE DEMONSTRATION STAGE

The new High Performance Building Zone demonstration stage will feature top building science experts leading a series of live, interactive construction demos showcasing the latest methods, tips and tricks used in high performance building technique. Nationally-acclaimed instructor Gord Cooke will discuss the practical, real-world side of *why* building science and high performance building are important, while award-winning energy efficient builder and instructor Rick Arnold demonstrates the *how-to*.

Throughout the week, you will receive a "whole-house" look at energy efficient building. Each day will have its own unique theme and examine a specific aspect of high performance building. There will be three live demonstrations offered daily as well as a recap session that gives an overview of all the concepts introduced that day. By the end of the show, you will have seen first-hand the best practices for improving efficiency in all areas of the home from basements to roofs and everything in between.



Gord Cooke



Rick Arnold

IBS 2014: MORE TO DO

OPENING CEREMONIES

Tuesday, February 4 // 8:00 AM
Las Vegas Convention Center

The three day show kicks off with the Opening Ceremonies headlined by General Stan McChrystal. Hearing General McChrystal speak is something you won't want to miss – few can speak about leadership, teamwork and international affairs with as much insight. Known for his candor and innovative leadership and called “one of America's greatest warriors,” this four-star general and former commander of USA and international forces in Afghanistan was also a former leader of Joint Special Operations Command, which oversees the military's most sensitive forces.

The Opening Ceremonies will close with a distinct and unforgettable acrobatic performance by Cirque Fantastic. The elegant acrobatic troupe has created awe inspiring spectacles for over 1,000 events in 30 different countries.

Doors open at 7:00 am. Limited general seating is available on a first-come, first-served basis.



Gen. Stan McChrystal

THE IBS CENTRALS

BuildersShow.com/centrals

IBS Centrals host an array of activities devoted to niche industry topics and are chock full of networking opportunities and hands-on workshops. All IBS registrants are invited to visit these spaces where you can explore questions, issues, strategies and trends unique to home building industry niches.

Meet with industry experts during workshops and roundtables to discuss best practices, challenges and solutions. Bring design plans and sit down with specialists and gain new perspectives. Participate in product tours on the show floor and see the best and most innovative products for each niche market.

Whether you're a seasoned professional looking to expand into a different sector or just starting out in the industry, you'll make countless connections and learn something new in:

- » 50+ Lifestyle Central
- » Custom Building Central
- » Design Studio
- » Multifamily Central
- » Remodelers Central
- » Sales Central

Events in the IBS Centrals are open to all IBS registrants!

More IBS Special Events @ BuildersShow.com/events

YOUNG PROFESSIONALS AFTER HOURS PARTY



Wednesday, February 5

8:30 - 10:30 PM

House of Blues (Mandalay Bay Hotel & Casino)

If you are under 40, your Wednesday night of the Show should include this first-time event! Young professionals will pack the House of Blues at Mandalay Bay to enjoy a live band, open bar and light hors d'oeuvres. It will be a great place to meet and network with people as passionate as you are about the building industry.

How to Participate:

Tickets are \$35 per person and get you access to an open bar and hors d'oeuvres during the event.* Tickets are limited and you must be registered for the show to attend. Get yours now by adding this event to your Show registration.

* Must be 21 or over with a government issued picture ID to attend.



BuildersShow.com/live

Located right on the Show floor, IBS Live! will feature panel discussions along with education presentations, entertainment and many networking opportunities. There's something new going on each day during the show – make sure you stop by to see what's happening!

EDUCATION

On the Show Floor

Exhibitor Floor Forums

Forums will be held 11:15 AM - 12:45 PM each day on the Show floor.

Back by popular demand – Exhibitor Floor Forums! 15 exhibiting companies will be offering NAHB approved education sessions in their booths. These interactive Forums will be 20-60 minutes in length, are free to attend, and no pre-registration is required. They will also qualify as continuing education (CE) for all those who hold NAHB professional designations. A full schedule of Floor Forums along with the list of the participating companies can be found in the Official Show Guide and at BuildersShow.com/floorforum.

IBS SPIKE CONCERT

Thursday, February 4

5:00 - 7:30 PM

South Hall – S4



Join us for a private concert featuring rock'n'roll superstar and living legend Pat Benatar. The four-time Grammy winner will take the stage with her husband Neil Giraldo who is responsible for the signature Benatar sound. This live performance will exhibit why after more than three decades in rock'n'roll, Neil's innovative song writing and explosive steel-bending guitar playing along with Pat's bold sound and trail-blazing stage presence, produced distinctive hits that still remain as unforgettable now as they were at the dawn of MTV, when Pat emerged, fearless, fighting and forging a path for other female rock stars around the world.

How to Participate:

Tickets are \$35 per person and you must be registered for the Show to attend.

Tickets are limited to this exclusive event, so purchase yours now by adding this event to your Show registration.

Connect at BuildersShow.com/social



THE NEW AMERICAN HOME 2014



**THE NEW 2014
AMERICAN HOME**

NAHB
NAHB Leading
Suppliers Council

Builder

The 31st edition of the NAHB show home is a stunning 6,706 SF desert contemporary design built for a multi-generational family. The home was designed and positioned to take full advantage of the spectacular views of the Las Vegas strip. Cutting-edge energy

efficiency, innovative elevation design and transitional interior designs create a seamless integration between indoors and outdoors to display the future of home building. The latest green and sustainable building materials, products and construction methods are featured in the home.

Expected Certifications / to be verified:

- » National Green Building Standard - Emerald
- » HERS Index - 17
- » US DOE Energy Star certified
- » US DOE Builders Challenge qualified / Build America Program
- » US EPA Indoor airPLUS Qualified
- » Southern Nevada Green Building Partnership
- » Water Smart Home program (SNWA/ SNHBA)
- » Progress Energy Home Advantage Program

How to Tour the Home

Complimentary shuttle bus tickets will be distributed daily from The New American Home booth located in the Central Concourse of the Las Vegas Convention Center (LVCC). If you are a registered attendee of the International Builders' Show, the Kitchen & Bath Industry Show or the International Window Coverings Expo, just head to The New American Home booth!

Tickets are available on a first-come, first-served basis. For the best chance of getting tickets, visit the ticket booth early on the day you want to take the tour.



Home Innovation
RESEARCH LABS™

Already Registered for IBS? Make the Most of the Show!

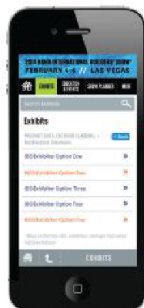
Join the
CONVERSATION

Connect at BuildersShow.com/social



IBS 2014 MOBILE

Receive real-time IBS alerts, plan your Show experience and view the exhibit floor plan... all on your smartphone!



Plan YOUR VISIT



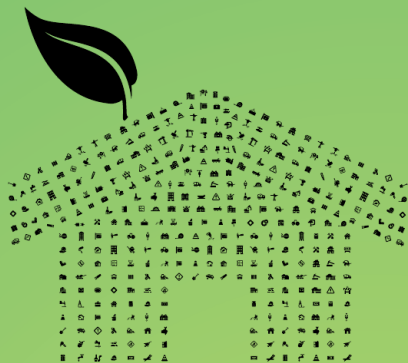
Don't wait until Show time to figure out which exhibitors, education sessions and special events you want to attend. Be sure to visit BuildersShow.com and let "IBS Show Planner" help you plan ahead!

At BuildersShow.com/showplanner you can:

- » Preview new products and services and highlight the booths you want to visit
- » Check out education sessions and add them to your planner
- » Scan the list of special events and add favorites to your calendar

FEBRUARY 4-6, 2014 // LAS VEGAS // BUILDERSSHOW.COM REGISTER NOW!

THINK



GREEN

at IBS 2014

The future of high performance and energy efficient building is happening now! Be at the top of the building industry and keep ahead of the trends – learn new cost-effective and innovative construction techniques along with new marketing strategies at the **NAHB International Builders' Show® (IBS)**.

ACCESS GREEN-FOCUSED EDUCATION SESSIONS, INCLUDING:

- » 12 Simple Steps to Building Net-Zero Energy Homes
- » Marketing High Performance Green Homes: Myths, Lessons & the Future
- » Great Places & Green Spaces: Curb Appeal Through Sustainable Community Design
- » Building Energy Efficient Homes Without Breaking the Bank
- » Geothermal Heating & Cooling: A Proven Renewable Energy Technology

HIGH PERFORMANCE BUILDING ZONE

See four live demonstrations daily featuring top building science experts leading a series of interactive construction demos showcasing the latest methods, tips and tricks used in high performance building technique. Each day will have its own unique theme and examine a specific aspect of high performance building.

2014 NAHBGREEN AWARDS & NETWORKING NIGHT OUT

Wednesday, February 5 // 7:00 – 9:00 PM
House of Blues, Mandalay Bay Hotel & Casino

Make plans for a night of *Vegas* proportions as we celebrate this year's achievements in green building. The House of Blues is famous for great music, strong drinks and delicious food! You'll enjoy all of these as we toast the winners of the awards for Advocates of the Year, Site Development and Green Projects of the Year in single-family, multifamily and remodeling.

Space is limited and this event will sell out!

How to Participate: Tickets are \$50 and includes dinner and open bar*.

**Must be 21 or over with a government issued picture ID to attend*

Register NOW at BuildersShow.com

2014 NAHB International Builders' Show®

FEBRUARY 4-6 // LAS VEGAS // BUILDERSSHOW.COM/GREEN



WANT A **COMPETITIVE ADVANTAGE?** YOU NEED **INSIGHT!**



Insight is an iPad-friendly, location-aware service that makes it easy to immediately analyze nearly any subdivision or parcel you're viewing in the field.

- County-by-county summary of new, resale or foreclosure activity
- Tailor results over time, price range or transaction type
- Tap to see the market's top players... who is selling... who has inventory

Insight is just one of the many new online services from the new Metrostudy-Hanley Wood team. You should see all the ways we've changed the game with new decision-support services, reports and analytics.

Request an in-person demo today at metrostudy.com/contact.php

↑ Housing Starts Here.

Build Smart

How-To	Page 80
Redline	82
Callbacks	86

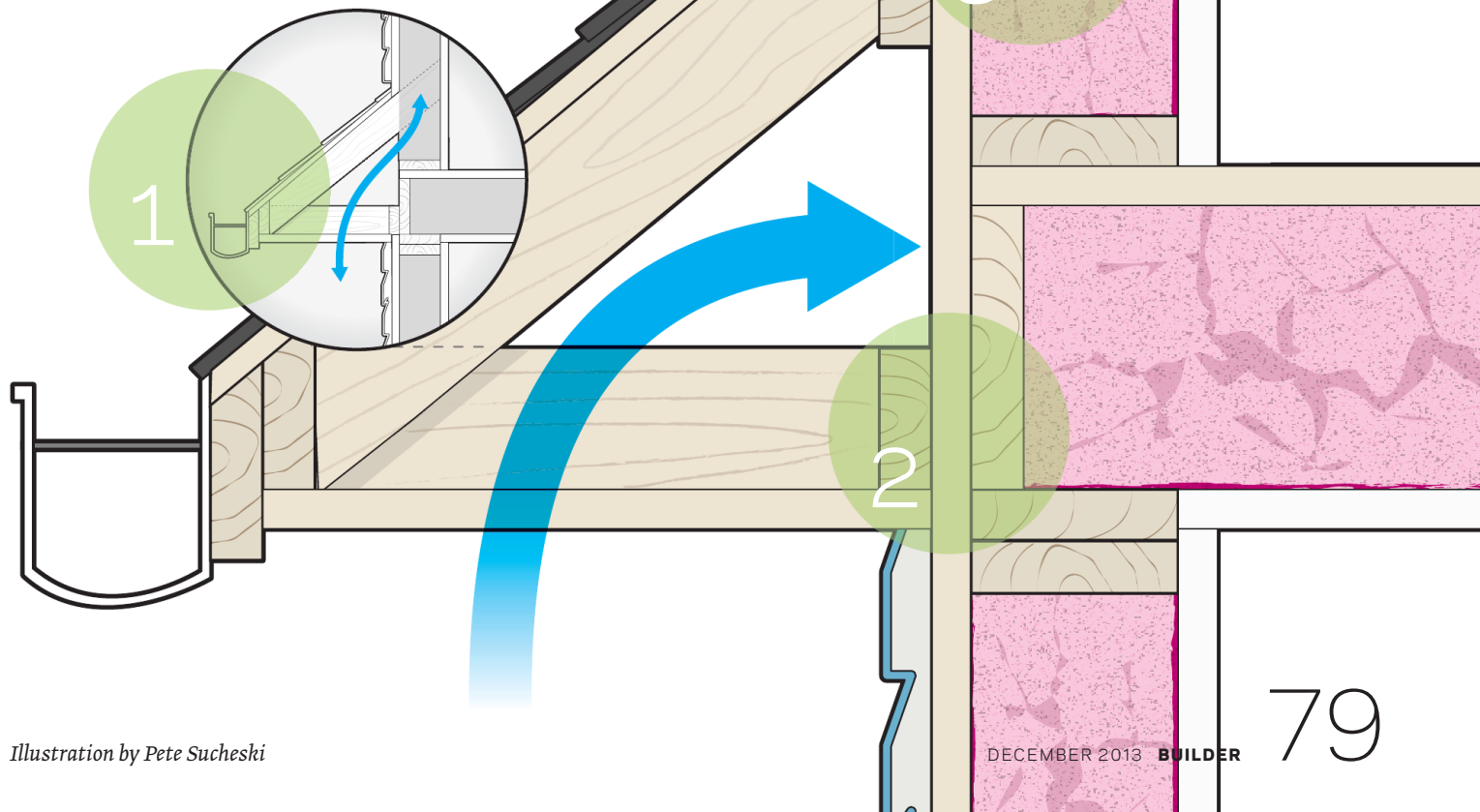
Air-Sealing an Eyebrow Roof

Small decorative roofs attached to house walls can be the source of pesky air leaks, but keeping the wall sheathing continuous maintains an air-tight shell.

1. Hidden Holes Open framing allows air leakage, creating drafts, risking moisture problems, and reducing the effective R-value of fiberglass insulation in the wall.

2. Continuous Shell To create a good air barrier, don't attach small rafters to the sides of studs. Instead, fully sheathe the wall before you frame the eyebrow.

3. High Performance When fiber insulation is fully supported and protected on all sides, it will perform at its full rated R-value, without cold spots and hot spots.



HOW-TO

If You're Good at Crown, You're King

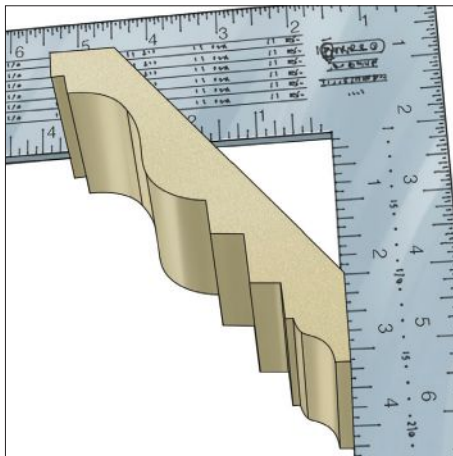
The key to visually pleasing crown molding starts with the layout

Crown molding is the test of the journeyman finish carpenter. If you're good at putting up crown, you're worth money. Master craftsman Gary Katz supplied these tips in a September 2002 article in Hanley Wood's *Journal of Light Construction* ("Installing Crown Molding").

The key to visually pleasing crown is a straight line across the molding's bottom edge, where it sits against the wall. To start, determine how far down the wall the molding will extend by measuring the crown against a framing square. Save the horizontal leg number (the ceiling dimension) for setting your chop saw, and transfer the vertical leg number (the wall dimension) to the walls using a gauge block.

Snap lines along the wall to keep the molding straight—crooked crown shows up where it passes above window and door casings. While you're snapping lines, measure and note the wall lengths (this saves you a few trips up the ladder).

To cut molding in position on the chop saw, think of the saw table as the ceiling: set a stop fence along the table at the position matching the horizontal leg you measured with the square, and use that stop to hold the molding "in position" (upside down and backward). — TED CUSHMAN



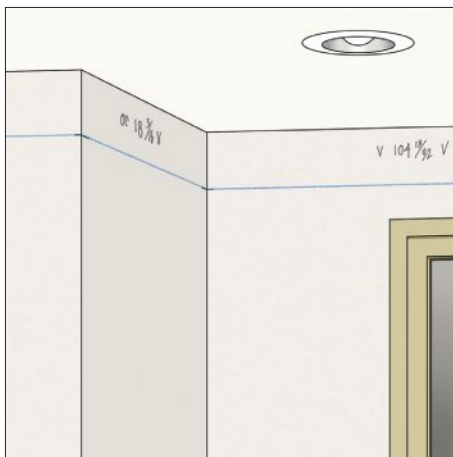
1. Measure Molding

Crown molding sits at an angle, touching both the wall and the ceiling. Hold a scrap of molding with the edges flat against a framing square, and note the horizontal and vertical measurements from the corner to the crown's edge. Transfer the vertical measurement to the wall, and use the horizontal (ceiling) measurement to set a stop on your chop saw table.



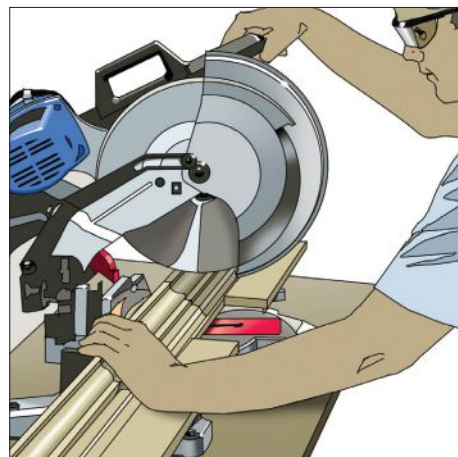
2. Mark Walls

A uniform distance down the wall is the critical layout factor for crown molding. You want that dimension to be consistent across the wall, and throughout the house wherever the same size of molding is applied. If it's a big job with multiple carpenters hanging crown, give every crew member an identical gauge block to ensure uniform layouts in every room.



3. Snap Lines

Straight, crisp lines across the bottom of the crown are the craftsman's touch that you won't notice if it's right, but that will leap out at the eye if it's wrong—especially where the crown molding passes close above a door or window head casing. Given irregularities in the drywall or framing, the ceiling-to-wall angle may vary. Let any variation show up on the ceiling, not on the wall.



4. Upside Down and Backward

The foolproof way to get crown molding corners right is to cut the material in position on the chop saw. Visualize the chop saw's table as the ceiling, and its back fence as the wall. Screw a stop to the chop saw bench extension wings to hold the crown in position for every cut. For inside corners, the long point of the miter always is on the fence (representing the wall). For outside corners, the short point sits on the fence.



For more construction technology articles, go to www.jlconline.com.

Download free samples of the new
SP documents at aia.org/builder



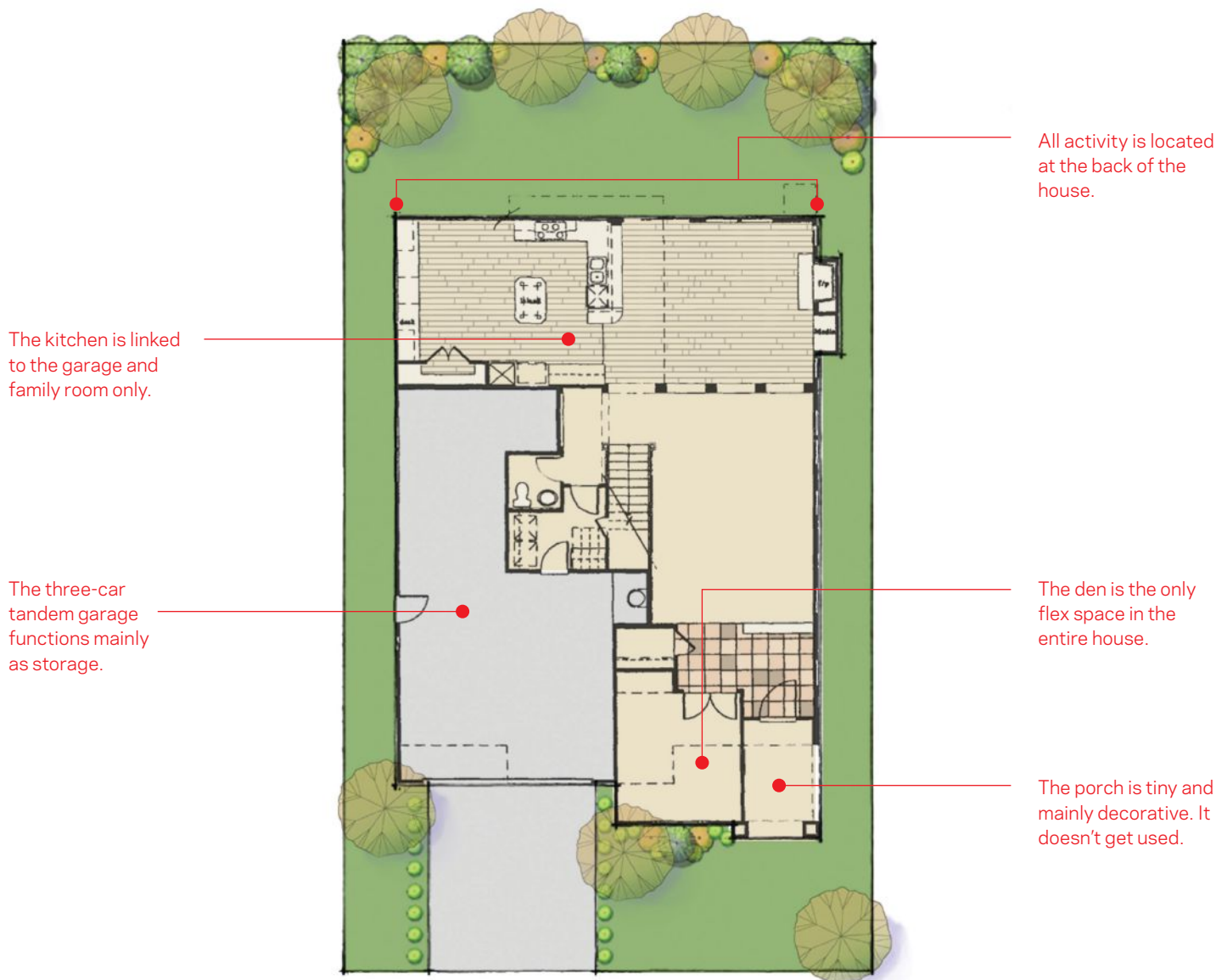
Doing business doesn't come with a warning sign.

Help minimize the risk of building with AIA Contract Documents. Get the same contract protection used by many of America's largest construction companies. AIA Contract Documents are the Industry Standard because they're strengthened by more than a century's worth of legal precedent. Courts throughout the country have recognized their legitimacy, making AIA Contract Documents one of the most effective ways to manage risk and protect interests throughout every phase of construction.

Widely accepted by all stakeholders because of their fair and balanced approach, AIA Contract Documents cover a complete range of project types through a comprehensive suite of over 160 contract documents including the new Sustainable Projects (SP) versions of the Construction Manager as Adviser (CMA) and Construction Manager as Constructor (CMc) documents.

Get free samples of the new SP documents at aia.org/builder

AIA Contract Documents®
THE INDUSTRY STANDARD.



Limited Uses The first floor of this two-story plan functions perfectly well, but the only flex space is the front den. The plan offers limited functionality at a time when households come in all shapes and sizes.

REDLINE

Flex Appeal

For production houses with custom appeal, bring on the flex space—front and back

Demographics offer clues, but the reality is, households come in all sizes and preferences. The challenge for builders is crafting a house with a plan that delivers, where buyers can imagine living life.

In the past, we'd program a house—say, four bedrooms, three and a half baths, a den, and a loft. The only flex space left was a den or tandem garage, and the sole spot for the kitchen was near the garage. It's a restrictive strategy that plays to the back of the house.

Flex space isn't a new idea. But providing more is—and it's catching on. The (see page 84)

National Association of Home Builders

SAVE

Put your membership
to work now.

Money-saving discounts that benefit your
business, your employees, and your family

nahb.org/MA



SOLVERAS PAYMENT SOLUTIONS IS NOW TRANSFIRST



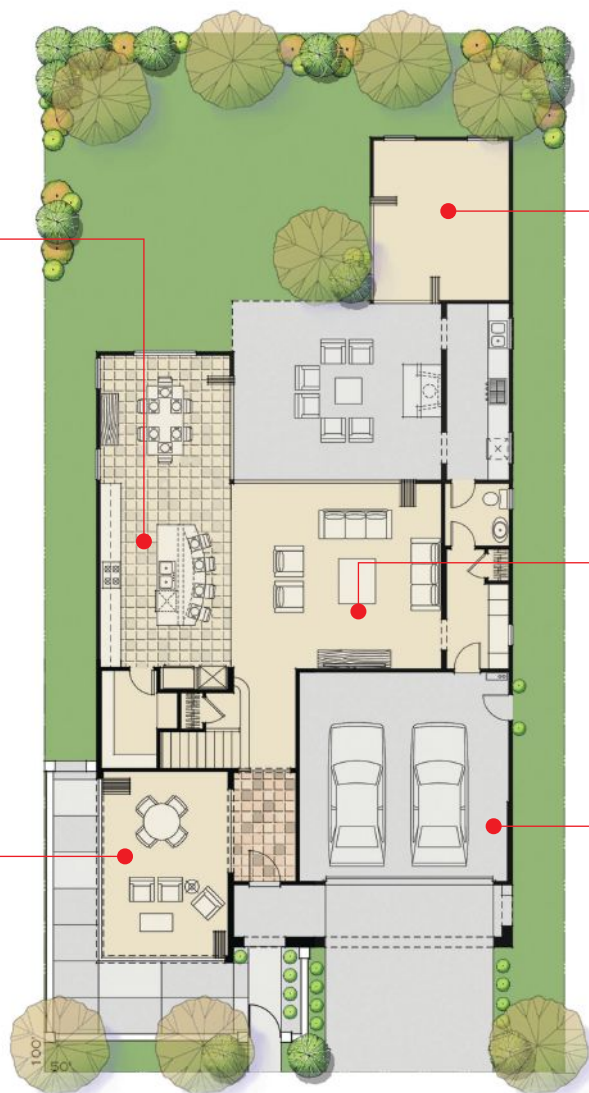
The kitchen becomes more centralized as the hub, oriented to both the front and the back. Sawtoothing the back creates a deeper, more usable backyard.

The family play room can be open or enclosed; it can play to the street—or not. This room also can work as a formal dining and wine room, a craft room, an in-home classroom, an outdoor super-porch, man cave, or guest suite.

Here, the idea space is adjacent to an outdoor kitchen. It's a plug-and-play area: it can function as a guesthouse, wine room, media room, or greenhouse.

The great room is connected to the outdoor spaces and all other first-floor areas. Exterior and interior great rooms are the same size.

When the garage gets moved to the side of the entry, it allows more flexibility in the plan. It can become a bike shed, a surfboard shack, or a woodshop.



Nick Lehnert is an executive director at KTG Architecture + Planning and heads up the firm's idea lab. nlehnert@ktgy.com

strategy is this: Allowing maximum flexibility helps homes sell. Here, the basic plan is a big box with a couple of appendages coming off it. The hub of the house is centered around a super kitchen, super island, and super pantry. There's a great room as well as a media area room that can serve as family hangout or private study. From there, the front and the rear "idea" spaces of the home can be personalized to best fit the lifestyle of the buyers.

We've long set idea space at the back of the house. Now we also put it in the front and design the front flex area to be indoor-outdoor. The porch becomes a place to check email, keep an eye on the kids while they're

Idea Generator In the second plan, idea spaces are positioned at the front and back of the house. What those rooms become is up to the builder and the buyer.

skateboarding, or meet the neighbors' new dog. With sliding glass doors, the front can be enclosed when you want privacy and open when you want company.

Or, flip it so the workshop is at the front of the house with the media room at the rear. The dining room at the front could become a space for cocooning. There's no set way of looking at a plan like this, and that's the way to deliver a flexible product that sells. **B**

Builder

Don't Miss a Headline Get BUILDER on Your iPad®

BUILDER has a customized application specifically designed for iPad users

- Instant access to the latest news and top stories updated in real-time from builderonline.com
- Featured editorial from BUILDER magazine, the most trusted source for home building industry news, data, analysis and insight
- Information and resource library focused on design, green and product topic areas
- BUILDER TV content
- Product videos and slideshows

Plus, the application is built for maximum iPad compatibility, allowing users to quickly scroll through the colorful mosaic of items and expand/manipulate video and image files with ease.

Download this FREE app today at
builderonline.com/app



iPad® is a registered trademark of Apple Inc.

Sponsored by: **MARVIN**
Windows and Doors
Built around you.®

hanleywood

CALLBACKS

Cure for Noisy Neighbors (and Kids)

Mass, damping, and air sealing are the keys to soundproofing

In multifamily housing, soundproofing between units is a critical quality concern. Even in single-family homes, sound transmission between rooms can be a problem. Whether it's foot traffic upstairs, conversation passing through a wall, or snoring in a bedroom, sound can be an unwelcome companion in the house.

But there are solutions—and in fact, soundproofing methods are getting better. The highly effective traditional method was showcased in the October 1999 issue of our sister publication, *Journal of Light Construction* ("By Design: Details for Damping Household Noise" by Jerry Germer). Success starts with air sealing: like heat energy, sound travels through air, so if you want a room to be soundproof, you need to make it airtight. The next step is to add mass—insulation within the wall cavities, and an extra layer of drywall to absorb and dissipate the kinetic energy of sound waves.

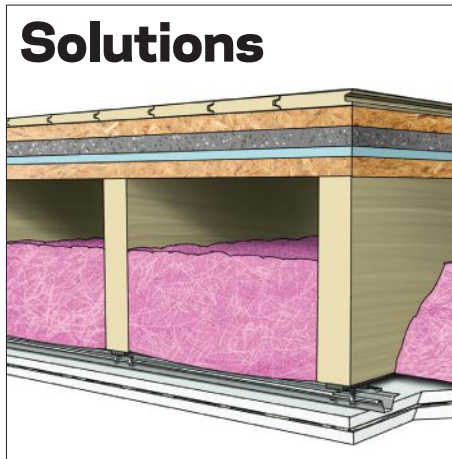
But for the best performance, the additional sound-damping mass should be decoupled from the source of the sound. Even a single layer of drywall dampens sound better when applied using resilient J channel, instead of being screwed directly to the studs. And there are special resilient adhesives you can use to isolate a second layer of gypsum board from the layer beneath it (such as Green Glue from Saint-Gobain Performance Plastics). This application allows for an easy sound-damping upgrade without demo or new framing. — TED CUSHMAN

 For more construction technology articles, go to www.builderonline.com/construction.



Bad Vibrations

Light framing on partitions and floors allows walls or ceilings to transmit sound from room to room. Gaps and holes big enough to allow airflow also let sound flow freely—meaning that even ordinary conversation and daily activities can be readily heard in adjacent spaces.



Add Mass

Sound is a kinetic wave that carries physical force. To muffle it, add mass to the building components to soak up the energy. Fiberglass stuffed in the wall and more and heavier drywall will soak up unwanted sound (but only if you also plug air leaks that "communicate" between spaces).

Dampen the Motion

Extra mass does its job best when it's decoupled from the sound's source with a material that absorbs energy. The traditional solution is a J channel screwed to the framing (with drywall screwed only to the channel). An even more effective modern option is a sound-damping adhesive such as Green Glue.



Stay Informed, On Your Schedule

Learning 

NAHB E-Learning: We Offer More So You Have More To Offer

Online Courses

Take them at your own pace, on your own time!
Interact with classmates through virtual forums.

- Certified New Home Sales Professional (CSP) **NEW!**
- Customer Service
- Basics of Building
- Effective Marketing on a Shoestring Budget

Webinars

Check out NAHB's Webinar Wednesdays for weekly, info-packed sessions on Business Improvement, Design and Technology, Economics and Research, Policy and Finance and Sales and Marketing. Can't participate live? Purchase the on-demand version.

Learning Resources Network (LERN)

Courses from the Learning Resources Network, Inc., develop personal and professional skills that go beyond the home building industry.



Sponsored by



Get complete details at
nahb.org/elearning

Join the Conversation.



National Association of Home Builders

BUILD A
BETTER YOU

Get a Leg Up On the Competition



Take an NAHB Course in Las Vegas

Knowledge is power, and the more you know, the more you have to offer your clients. Build your expertise by taking one of NAHB Education's **31 pre-show courses offered at the 2014 International Builders' Show® in Las Vegas, January 31 – February 3.**

Diverse topics such as **Business Operations, Green Building, Remodeling, Sales and Marketing and Presentation Training** allow you to build a broad knowledge base and stand out amongst the competition.



Sponsored by



Get complete course offerings and register at
BuildersShow.com/preshow

Join the Conversation.



NATIONAL BEAT

NAHB Briefs

Expiration Date

Many housing- and business-related tax measures enacted during the past 10 years will expire at the end of 2013. These "tax extenders," for now at least, appear unlikely to be extended before the start of 2014.

Housing rules set to expire include:

- Mortgage debt forgiveness tax relief that prevents tax liability due to workouts that involve forgiven, deferred, or canceled mortgage debt.
- The deduction for the cost of private mortgage insurance or insurance for an FHA or VA mortgage.
- The Section 25C energy-efficient tax credit for existing homes, a remodeling market incentive with a lifetime cap of \$500.

Business rules set to expire include:

- The section 45L new energy-efficient home tax credit, which allows a \$2,000 tax credit for the construction of for-sale and for-lease energy-efficient homes in buildings with fewer than three floors above grade.
- The fixed 9 percent LIHTC credit rate, which provides equity for affordable housing investment.
- Modified qualifying income rules affecting military tenant eligibility

Easy Resolution

Network and let Pat Benatar hit you with her best shot in concert at the 2014 International Builders' Show

By Rick Judson

CHAIRMAN OF THE BOARD, NAHB
WASHINGTON, D.C.



If your resolutions for the new year include improving your business, I can't think of a better way to do that than to attend the upcoming International Builders' Show (IBS).

Scheduled for Feb. 4 to 6 in Las Vegas, the 2014 IBS marks the first time that the NAHB has teamed up with the Kitchen and Bath Industry Show (KBIS) to present Design and Construction Week to the home building industry.

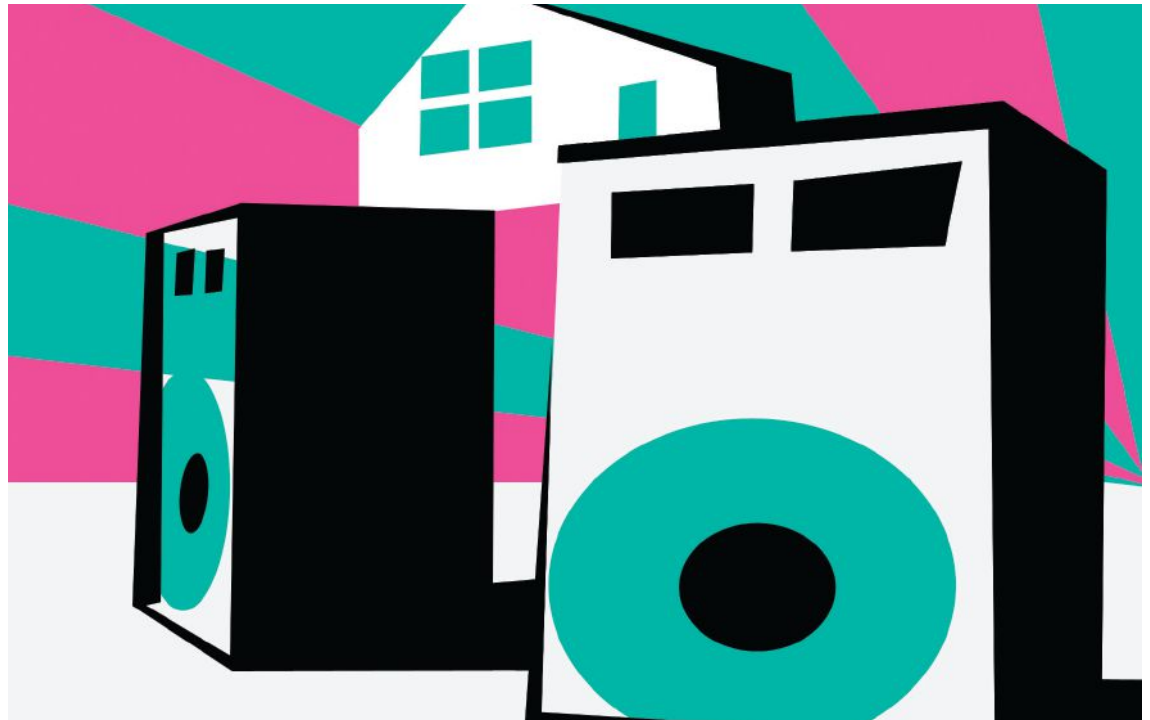
The shows will be co-located in Las Vegas, and people who register for either IBS or KBIS will have

access to the exhibition floors of both shows at no additional cost. With a total of more than 1,500 exhibitors showcasing the newest and most innovative products available, that's an unparalleled opportunity to examine the cutting-edge products and services that will wow your customers.

In addition to exhibits, the IBS also will feature a lineup of quality education programs in 12 tracks:

- 50+ Housing
- Building Material Dealer and Supplier Issues (new track)
- Business Management and Operations
- Community Design and Development
- Construction Codes and Standards
- Custom Building
- Financing Strategies, Market Forecasts, and Legal
- High-Performance and Energy-Efficient Building (newly expanded Green Building track)
- Home Design
- Multifamily

(see page 90)



- Remodeling
- Sales, Marketing, and Customer Focus

To better serve attendees, we also have made some changes to our education programming. There will be more advanced-level training with five Master Sessions for experienced builders, and leading industry experts will examine emerging trends during Spotlight sessions.

We also are introducing an interactive learning experience that encourages attendees to “plug in” and participate in sessions held in a new Tech Hub, and we have expanded opportunities for NAHB-approved show floor education that can be used to satisfy continuing education requirements for NAHB designations.

The “Centrals,” which are open to all registered IBS attendees, provide networking opportunities for people in remodeling, multifamily, sales, design, custom building, and 50+ housing.

The official IBS House Party, which will be held at the Hard Rock Cafe on the Strip, provides another chance for networking. The House Party has sold out

for the past two years, so get your tickets soon.

Now in its 31st year, The New American Home is the official show house of the IBS. Both a show home and a construction technology laboratory, it displays innovative building products and techniques that builders can use in homes nationwide. The New American Home is produced and presented by the NAHB Leading Suppliers Council and BUILDER.

The show offers inspiration to help motivate us all to work better and more efficiently. There’s also great entertainment to round out the IBS experience. At the grand opening ceremonies, Gen. Stanley McChrystal, former commander of U.S. and international forces in Afghanistan, will speak about the qualities of leadership. Cirque Fantastique will demonstrate dazzling acrobatics that have thrilled audiences around the world, and the Spike Concert will be headlined by rock ‘n’ roll legend Pat Benatar.

As you can see, there is much to do and great personal opportunity for each attendee. I’m looking forward to seeing you there!

for affordable housing.

- The section 179 small business expensing limits, which provide cash flow and administrative cost benefits for small firms.
- The section 179D deduction for some energy-efficient upgrades to multifamily and commercial properties.
- The New Markets Tax Credit for community development projects.

Housing industry stakeholders and homeowners should assume that these tax provisions will sunset at the end of 2013. If the rules are extended, it likely will occur retroactively through legislation passed in 2014; comprehensive tax reform could change all tax rules substantially.

Design Excellence

NAHB’s Building Systems Councils recently honored leading manufacturers and builders in the systems-built industry with the 2014 Jerry Rouleau Awards for Excellence in Marketing and Home Design.

The annual awards spotlight the best marketing strategies and innovative home designs for concrete, log, modular and panelized homes. In the marketing category, winning companies used Pinterest and Facebook to drive sales traffic; winners in the home design category included unique smaller log cabins and large modular home estates.

Images of the winning projects will be displayed in February at the IBS in Las Vegas. A list of winning companies and projects is online at nahb.org/2014bscawards.

Home Innovation Research Labs

Overcoming Barriers

New PEX guide provides updates to standards and designs

If you’re looking for a better water supply piping system, you might want to use cross-linked polyethylene (PEX) for your next water supply piping installation.

For those unfamiliar with PEX, it’s a high-temperature, flexible plastic (polymer) pipe. The cross-linking raises the thermal stability of the material under load. Thus, the resistance to environmental stress cracking, creep, and slow crack growth are greatly improved over polyethylene. PEX doesn’t corrode or develop pinhole leaks, is chlorine-resistant, scale-resistant, and has fewer and more reliable fittings, connections, and elbows than rigid plastic and metallic pipe.

PEX piping systems are durable and provide security for safe drinking water. In addition to domestic water supply systems, PEX can be used for floor or wall radiant heating, and snow and ice melting systems in sidewalks and driveways.

PEX tubing is lightweight and flexible, and can easily be bent around corners and obstacles and through floor systems. It also can withstand temperatures of up to 200 F. PEX tubing ranges from 3/8 inch to more than 2 inches.

Most important, PEX pipe is approved for potable hot- and cold-water plumbing systems and hot-water (hydronic) heating systems in all model plumbing and mechanical codes across the U.S. and Canada.

New Guide Provides Guidance PEX has been available in for use in residential construction in this country since 1984, and had 30-plus years of successful use in Europe prior to that. But it only recently made significant market penetration and still faces a variety of barriers to more widespread use. The Plastics Pipe Institute (PPI), Plastic Pipe and Fittings Association (PPFA), and Home Innovation Research Labs released a PEX design guide in 2008.

In light of changes in building codes and standards, as well as technology developments in the fittings used with PEX systems and new

design considerations, PPI, PPFA, and Home Innovation Labs recently released a second edition of the guide. The latest version includes updates to reflect the increased usage of PEX systems in a variety of residential applications.

In addition to industry associations and PEX manufacturers, additional third-party certification bodies, such as the ICC Evaluation Service, also contributed to the new guide, which is more comprehensive, easier to use, and provides more value to installers and inspectors.

The 2013 guide provides resources and information to design and install PEX water supply systems in residential buildings, introduces new/prospective users to the technology, and enables current users to optimize their PEX plumbing and fire sprinkler systems and minimize system costs. It includes design concepts and installation guidelines to increase the acceptance and proper usage by builders, designers, and trade contractors, and it will allow code inspectors and homeowners to become familiar with the applications, characteristics, and benefits of PEX water supply systems.

Visit www.HomeInnovation.com/PEXDesignGuide for the latest edition.

AD Index

Advertiser	PG number	URL
AIA Contract Documents	81	www.aia.org/builder
Allegion	4	www.allegion.com
Analytics Consulting	8	www.CertainTeedFiberCementSettlement.com
Arauco	41	www.truchoicemoulding.com
Builder iPad App	85	www.builderonline.com/app
Calculated Industries	6	www.calculated.com
Chevy Silverado	14-15	www.chevy.com/silverado
Chief Architect	39	www.chiefarchitect.com/FreeTrial
Daimler Vans USA, LLC	23	www.mbsprinterusa.com
DAP SmartBond	32a-d	www.SmartBondAdhesive.com/BM
DEWALT	20	www.ToolsOfTheBrave.com
Dryerbox	39	www.Dryerbox.com
Eaton	62	www.eaton.com/surgetrap
Electrolux	C4	www.ElectroluxBuilder.com
Fantech	70	www.fantech.net
Ford	31, 44-45	www.ford.com/BPN www.ford.com/CVS
JELD-WEN Windows & Doors	27	www.jeld-wen.com
JLC Live	95	www.jlclive.com
LG	7	www.lg-vrf.com
Metrostudy	78*	www.metrostudy.com/contact.php
Milgard Windows & Doors	78*	www.milgard.com
MiTek	17	www.BuildabilityNow.com/jobsite
Moen	11	www.moen.com/modern
Mohawk	69	www.mohawkflooring.com/builder
NAHB	33, 43, 77, 83, 87, 88	
Navien	29	www.WholeHouseCombi.com
New Home Star	25	www.newhomestar.com
Nissan	C3	www.nissancommercialvehicles.com
Ply Gem	2-3	www.plygem.com
Quality Stone Veneer Inc.	34	www.QualityStoneVeneer.com

*Issue mailed in regional editions.

Advertisers: To update your listing, contact Lauren Searson at 202.736.3461 or send an email to lsearson@hanleywood.com

AD Index

Advertiser	PG number	URL
RAM	C2-1	www.ramtrucks.com/commercial www.ram-residentialbuilder.com
Ritz-Craft	70	www.Ritz-Craft.com
Samsung	12, 13	
SoftPlan	6	www.softplan.com
The New American Home 2014	18-19	www.tnah.com
The Tapco Group	67	www.TapcoSolutions.com
Trex	9	www.trex.com

*Issue mailed in regional editions.

Advertisers: To update your listing, contact Lauren Searson at 202.736.3461 or send an email to lsearson@hanleywood.com

Classifieds

SPECIAL ADVERTISING SECTION

Carpet Express™
AMERICA'S FLOOR STORE

SAVE 30-50%

Shaw
Where Great Floors Begin

CARPET • HARDWOOD • VINYL • LAMINATE
RESIDENTIAL & COMMERCIAL FLOORING

800-922-5582
915 Market Street Dalton, GA 30720
CarpetExpress.com

FOR INFORMATION

on how to be a part of the next

BUILDER MAGAZINE

special advertising section,

contact Brian Sherry at

202-200-8553.



Don't miss an issue

Free subscriptions of home
building news, industry trends,
and much more!



Subscribe Now

omeda.com/bldr
888.269.8410

hanleywood

Builder

Content Licensing for Every Marketing Strategy

Marketing solutions fit for:

Outdoor | Direct Mail | Print Advertising |

Tradeshow/POP Displays | Social Media | Radio & TV

Leverage branded content from *Builder* to create a more powerful and sophisticated statement about your product, service, or company in your next marketing campaign. Contact Wright's Media to find out more about how we can customize your acknowledgements and recognitions to enhance your marketing strategies.

For information, call Wright's Media at 877.652.5295 or
visit our website at www.wrightsmedia.com

Plan View

DESIGN DETAILS

Character Building

Luxury home buyers want something unique. How about these designs?

Usually we focus on modest floor plans for this section—ones that will appeal to a broad customer base. But for those clients that have the budget for more, here are four plans with seriously special details both inside and out.

Check out the first design below: triple shed dormers bring light into multiple spaces upstairs, shingles blanket the exte-

rior, and a wide porch adds a lot of usable outdoor living space. Inside, your buyers will love the kinds of useful amenities that they're unlikely to find in existing homes: windows in the master closets, a super-functional (and super-spacious) mudroom, and plenty of space for parking.

Want more? See thousands of additional house plans in every budget category at www.BuilderHousePlans.com.

Luxury Buyers Would Trade Space for Amenities

According to a BHG survey, 94% of luxury home buyers would give up 1,000 square feet of living space for an amenity they want, such as:

1. Living in a better neighborhood	54%
2. Living in a house with "character"	51%
3. More land	44%
4. Access to dining and entertainment	39%
5. A shorter commute	38%

Source: Better Homes and Gardens Real Estate

Shingles and Shade

Plan #HWB1620001



Square Footage	4,903
Bonus Space	394 Sq. Ft.
Bedrooms	4
Bathrooms	4 ½ + ½
Dimensions	94'-0" x 117'-0"
Foundation	Crawlspace
5 sets	\$1,415
8 sets	\$1,515
Repro	N/A
CAD	\$2,760
PDF	\$2,015



Lots of Light Inside

Plan #HWB1620002



Square Footage	5,342
Bedrooms	4
Bathrooms	3 ½
Dimensions	88'-6" x 62'-0"
Foundation	Optional Finished Basement
5 sets	\$1,495
8 sets	N/A
Repro	\$2,250
CAD	\$3,295
PDF	\$1,950



Top: Bob Greenspan; Bottom: Builderwebsites.com

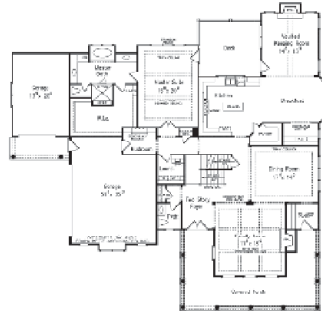
Plan View

Porch Has Traditional Appeal

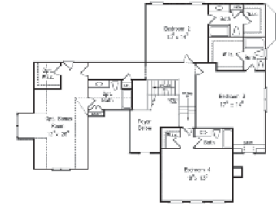
Plan #HWB1620003



Square Footage	3,956
Bonus Space	492 Sq. Ft.
Bedrooms.....	4
Bathrooms.....	4 1/2
Dimensions	79' - 0" x 76' - 9"
Foundation	Crawlspace, Unfinished Walkout Basement
5 sets	\$1,240
8 sets	\$1,350
Repro	\$1,610
CAD	\$2,755
PDF	\$1,610



Main Level



Second Level

Arresting Arched Entry

Plan #HWB1620004



Square Footage	3,217
Bedrooms.....	3
Bathrooms.....	3 1/2
Dimensions	70' - 0" x 71' - 0"
Foundation	Crawlspace
5 sets	\$950
8 sets	\$1,050
Repro	N/A
CAD	\$2,125
PDF	\$1,380



Main Level



Second Level

New and Improved Website

BuilderHousePlans.com

Affordable Solutions

28,000+ House Plans

Exclusive Plan Designs

Multifamily Layouts

Green Home Designs

Unlimited Use Collections

Buy More, Save More: Get up to 15% off with the Builder Advantage Program

Browse Plans or Order Online: www.builderhouseplans.com

By Phone: 1 800 634 4773 U.S. TOLL FREE

1 877 223 6389 CANADA TOLL FREE

1 520 544 8200 OTHER INTERNATIONAL ORDERS

HWB162

Free Ground Shipping
Free Customization
Estimates and \$100 Off
Customization Services*

*Excludes a limited number of select plans

Additional Items for Sale: Call for Prices

Materials List
Additional Sets
Mirror Reverse
Right Reading Reverse
Line Rendering
Color Rendering

YOUR SKILL YOUR PRIDE YOUR JOB...

IT'S NOT JUST A TRADESHOW

IT'S **YOUR** JLC LIVE.

JLC LIVE New England is THE most eagerly anticipated event of the year for residential construction professionals! It's the place to learn new techniques, see the hottest products, and find great deals. JLC LIVE - The go-to place to kick start your tomorrow. See you there in 2014!

REGISTRATION WILL OPEN SOON.

VISIT OUR BRAND NEW WEBSITE — **JLCLIVE.COM**

EXHIBIT HALL: MARCH 21-22, 2014

CONFERENCE: MARCH 19-22, 2014

RHODE ISLAND CONVENTION CENTER
PROVIDENCE, RHODE ISLAND USA

TOLL FREE: 866-261-7769





Still Standing The longevity of 2,000-year-old concrete structures is in their chemical binders.

Do as the Romans Do

Ancient Italian structures could hold the key to producing a more durable, environmentally friendly concrete

Anyone visiting Italy can't help but marvel at structures built 2,000 years ago that remain standing and, in some cases, are still functioning.

Researchers affiliated with the Advanced Light Source at DOE's Lawrence Berkeley National Laboratory believe there are lessons to be learned from the materials used to build those edifices that might change the way modern concrete is made.

By analyzing Roman concrete that has been submerged in seawater for millennia, researchers uncovered a mortarlike substance made from lime and volcanic ash that, upon contact with seawater, triggered a warm chemical reaction. The resulting concrete included a highly stable binder consisting of calcium, aluminum, silicate, and hydrates, known by its acronym C-A-S-H.

In October's *American Mineralogist*, researchers attribute the longevity and cohe-

"There's a whole hidden world of pozzolan."

— Marie Jackson, research geoscientist, Advanced Light Source, about a possible substitute for Portland cement

sion of Roman seawater concrete to the use of pozzolanic pyroclastic rock, the preparation of the lime, and the Romans' construction techniques. A key ingredient was crystalline Al-tobermorite, an aluminum-tinged mineral structure that gave the C-A-S-H binder's ribbons of silica tetrahedra more symmetry than poorly crystalline compounds, and made the Roman concrete super durable.

Roman Concrete Is Eco-Friendly What also separates Roman seawater concrete from modern concrete made from Portland cement is that the latter requires significantly higher temperatures: 2,642 degrees F to produce Portland cement's basic ingredients, known as clinker; versus 900 degrees F to produce lime.

This is important because while Portland cement is widely used—25 billion tons are produced globally every year—the manufacturing process accounts for 7 percent of the world's annual carbon dioxide emissions.

Partially substituting fly ash for Portland cement reduces CO₂ levels, but ash comes from coal mining, which has its own environmental issues. The supply of fly ash is only about 800 million tons annually, and the ash isn't always suited for blended cements or concrete mixtures.

Volcanic pozzolan, however, is found throughout the world, including the western U.S., says Marie Jackson, a research geoscientist who is on the team that's examining Roman seawater concrete. But Portland cement isn't going away. It has many pluses, not the least of which is that it hydrates quicker than a similar product made with volcanic pozzolan.

Paulo Monteiro, the research team's leader, says there's interest among manufacturers about blending pozzolan with Portland cement to reduce the cement content in the concrete mix. He cautions that the cost of pozzolan varies "greatly" among regions. But Jackson thinks cost should take into account "the whole state of repair. Conventional Portland cement concretes are not particularly durable materials." — JOHN CAULFIELD

Stock.com/Angelafoto



Innovation
that excites

NV[®] CARGO

BRANDON SAID GREAT THINGS ABOUT HIS NV CARGO. WE SHOULD KNOW, WE WERE HIDING IN THE BUSHES.

We used hidden cameras to find out what Brandon Bastardo really thinks about his Nissan NV Cargo. He talked about rear doors that open 243° and custom shelving designed just for locksmiths, with no drilling required. He described an interior that has room for his e-printer and a passenger seat that folds into a desk. "They put the engine outside, so there's no hump inside. So much more space." We'll make room for Brandon's opinion any day. See more real opinions from tradesmen at CandidCargo.com.

7 million door-cycle tests | 800,000 miles road-tested | Body-on-frame tough



NISSAN Commercial Vehicles

For more information, visit www.nissancommercialvehicles.com. Always wear your seat belt, and please don't drink and drive. © 2013 Nissan North America, Inc.



NV[®] Cargo High Roof | NV[®] Passenger | NV200[®] Compact Cargo



Electrolux



SUITE.



From a starter home to a luxury custom home, build the perfect Electrolux appliance suite for your customers at:

ElectroluxBuilder.com

888.735.4920 or builder@electrolux.com

VISIT US AT KBIS/IBS 2014 BOOTH #N3005

