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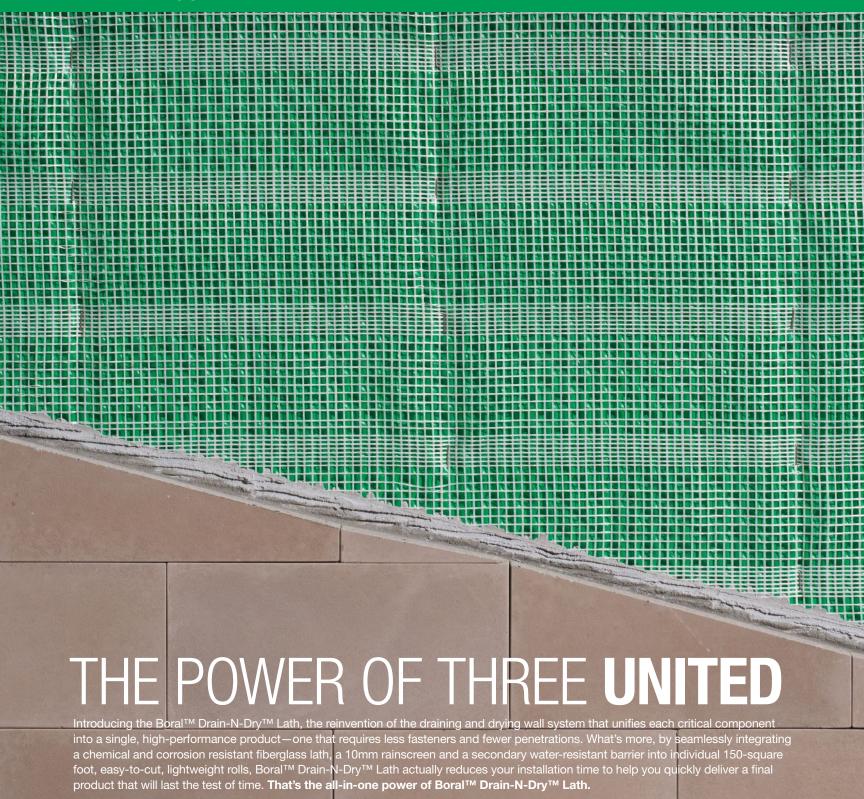
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Giving Back

ince the launch of Professional Builder's Daily Feed newsletter on June 4, 2014, I have scanned thousands upon thousands of news stories about or related to home building in some way. (And yes, it's me who chooses the stories, so feel free to direct any and all comments my way-my email address is at the bottom of this page.) The news biz being what it is, many of the articles I read are not what you might call feel-good stories. Lately, we've been inundated with all of the reasons why the industry hasn't fully recovered from the recession: lack of land and labor; the proliferation of impact, regulatory, and other fees that raise the prices of homes; the rising costs of materials; the growing number of Americans who are unable to afford to buy a home; and so on. The business of home building is hard work and not for the faint of heart. It's not surprising that recently released demographic data from the NAHB show that the number of single-family builder members stands at only a little more than 50 percent of the roughly 45,000 members counted in 2008.

Which is why, when I'm scrolling through the news and I come upon a different kind of home building story, such as the one, for example, about the most recent Habitat for Humanity Home Builders Blitz, it makes my day. The Blitz is an annual event; a partnership between Habitat and builders all over the country to build houses for deserving families over the course of a fiveto-10-day period. Builders (and starting in 2015, remodelers and various trades) volunteer their time and labor and donate as much of the materials for the homes as they can. Suppliers such as Ply Gem, Panasonic, and others also helped with materials, products, and funds for this year's builds. During the second week of June, the volunteers built, renovated, or repaired nearly 250 homes in 71 communities in 31 states.

Another story that hit the same note was about HomeAid America's Homes for Our Veterans Initiative, which focuses on shelter development for charities working with homeless vets and community outreach activities to support those charities. Projects for veterans completed to date have resulted in shelters with 350 new beds, serving more than 4,700 vets, as well as 11 renovated apartments and another six that will be finished this year. These are in addition to the more than 440 housing projects nationwide that HomeAid has provided for the homeless through the generosity of home builders, their trades, and suppliers.

Those of us who work in and around the industry know of the countless charitable and community service endeavors of builders. Every home builder I've come in contact with, big or small, gives back to its community in some way. Why do they do it? How do they find the time when their businesses seem to require more hours than there are in a day just to survive?

I put these questions to Tom Gipson, the Raleigh, N.C., custom builder who set the Home Builders Blitz in motion back in 2002. He said that

home builders are naturally highly involved in the well-being of their communities and that giving back is essential for the entire commu-

nity to experience positive growth. Charities such as Habitat for Humanity and HomeAid simply allow builders to use their talents and connections to make more substantial contributions. Tom added, "One of my builder friends, when asked why he participated in the Blitz, answered that we made it so easy. How else could he, in a week's time, with the help of his subs and suppliers, make a contribution of approximately \$50,000?"

I'm not sure it was really easy for that builder or for the large numbers of participants who spent their off-hours building homes and raising money, but many, many thanks to all who did, and for making life a bit better for their many beneficiaries.

Denise Dersin, Editorial Director ddersin@sgcmail.com



Builders are naturally highly involved in the well-being of their communities.



Professional

VOL. 81 NO. 7



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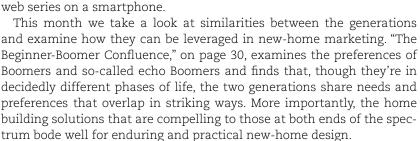
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Do You Hear an Echo?

he "generation gap" is an idea that gained popularity in the 1960s, though it could be argued that awareness of it arose about the time that the concept of adolescence was created, at the beginning of the 20th century. Much is made of the divide between Boomers and their Gen-Y offspring, yet most of the differences cited involve technology and popular culture—rather than politics and social mores, as they did a half-century ago. Your kids text; you're more apt to make a phone call. You might still go to the movies; your grandkids stream their favorite web series on a smartphone.



We hear a lot about an oncoming gray wave, but this past spring, it was noted that the 75.4 million echo Boomers, or Millennials, now account for more than 25 percent of the U.S. population, surpassing some 74.9 million Boomers. That Millennial generation will continue to surge for the next two decades, spiking to 81.1 million by 2036. As you'll read, marketing new homes to Boomers and echo Boomers involves new models as well as embracing some ideas from the last century that are being reinvented.

In your quest to create new and appealing places to live, you likely hear lots about community and sense of place. Much attention is paid to landscaping, walking trails, and curb appeal. They're all important. But in "Designing From the Inside Out," on page

36, senior editor Susan Bady talks to builders and designers who chose an inward focus for recent, successful projects. That type of emphasis results in a stronger connection to other components within a project.

Focusing inward doesn't mean turning your back on what's outward, but it does mean creating a cohesive enclave. At a moment when 'A' locations are pricey, land is scarce, and building on infill lots often means making the best of less-than-ideal surroundings, the inside-out approach has applications for a wide range of projects. It's not a one-size-fits all proposition though, and you'll hear from builders and developers about the contexts in which it makes the most sense

Amy Albert, Editor-in-Chief aalbert@sqcmail.com @ProBuilderMag



The groups that bookend the market

want many of the same things in a home

By Michael Chamernik and David Malone, Associate Editors

MARKET DATA

FEWER MIDDLE-INCOME HOUSEHOLDS

The share of middle-income adults significantly shrank from 2000 to 2014. The Pew Research Center examined 229 of the 381 U.S. metro areas and found that in 203 of them the number of adults living in middle-income households fell over the last 14 years.

The metro areas for Atlanta (56.0 to 50.5), Baltimore (57.5 to 51.3), Boston (55.9 to 48.6), Chicago (56.3 to 51.1),

2000 2014 55% 51%

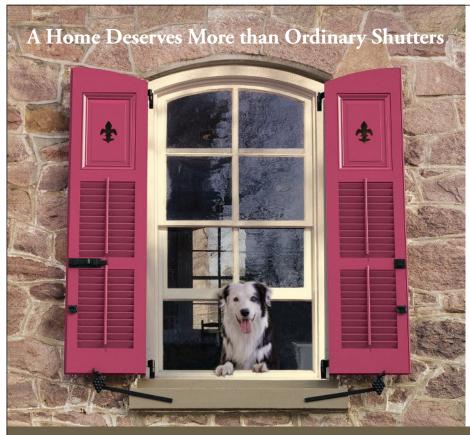
Milwaukee (58.9 to 52.6), Minneapolis (61.0 to 54.6), Philadelphia (56.1 to 50.6), and San Francisco-Oakland (52.7 to 47.7) all saw their share of middle-income adults decrease by at least 5 percentage points from 2000 to 2014. Dallas, Denver, Houston, Indianapolis, Los Angeles, Memphis, Miami, New York, Pittsburgh, San Diego, and St. Louis also saw declines in the middle class.

The conclusion tracks with a Pew study released late last year, which found that the number of adults in middle-income households in the U.S. decreased from 55 percent in 2000 to 51 percent in 2014.

With a smaller middle class, percentages increased for both upper- and lower-class adults. The upper-income tier rose in 172 areas, and the lower bracket increased in 160 areas. Some 108 metros saw rises in both categories.

In the study, a middle-class household was defined as a household income two-thirds to double the national median, adjusted for household size. This worked out to be a range of between \$42,000 and \$125,000 for a household of three. The median income was between \$70,000 and \$75,000 in 138 of 229 areas.

Incomes in each metro area are adjusted for the cost of living relative to the national average. The 229 metro areas, selected because of publicly available Census Bureau data sets in both





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2000 and 2014, represent 76 percent of the U.S. population in 2014.

Pew identified the areas that gained and lost the most economic status since 2000. Midland, Texas, for instance, went from an 18.5 upper-class share to a 36.8 share from 2000 to 2014 due to a population surge from the oil and gas industry. Midland's middle-class rate shrank from 53.3 to 42.6 percent in the same timeframe. Meanwhile, industrial cities such as Goldsboro, N.C., suffered. Goldsboro's lower-income share went from 27.2 to 40.9 from 2000 to 2014; its middle-income rate declined from 59.6 to 47.8.

The areas with the greatest share of middle-income adults are located in the Midwest. In Wausau, Wis., 67.2 percent of adults were considered middle class in 2014. Janesville-Beloit.

Wis. (65.2), Sheboygan, Wis. (63.2), Kankakee, Ill. (62.1), Elkhart-Goshen, Ind. (61.4), Eau Claire, Wis. (61.2), and Youngstown-Warren-Boardman, Ohio-Pa. (60.2) were among the metros with a middle-income share greater than 60 percent. —MC

LABOR

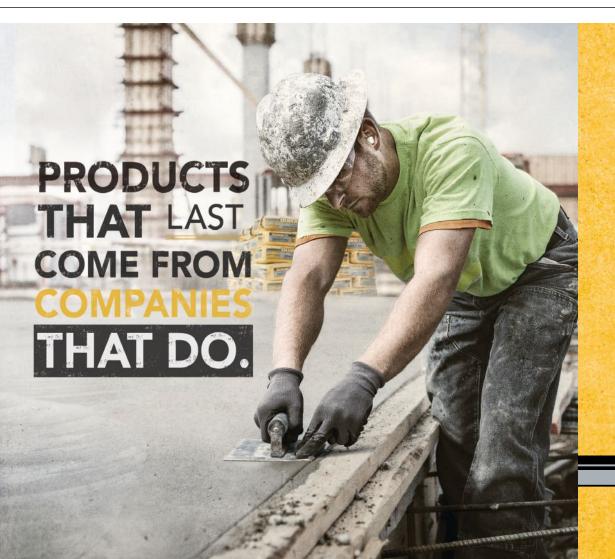
ROOFER SHORTAGE

In a 2015 NAHB survey, 40 percent of surveyed builders indicated they had a roofer shortage—34 percent reported "some" shortage, while 6 percent reported a "serious" shortage. And subcontractors looked even harder hit: 36 percent of subcontractors reported



some shortage and 8 percent said they had a serious shortage.

The National Roofing Contractors Association is looking to fill those gaps. It launched the online NRCA Career Center, nrca.net/careers, a roofing industry-specific resource that will allow all industry sectors—including roofing contractors, distributors, manufacturers, consultants, and designers—to find skilled candidates.



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MARKET UPDATE

The NRCA Career Center website offers access to two job databases, the NRCA Job Bank and the Hard Hat Hub. The NRCA Job Bank lists available industry jobs and lets candidates upload résumés that employers can review. The Hard Hat Hub is a construction industry database where candidates can create a personal profile and search for open jobs.

The site also has resources including safety webinars, training programs, specific state-by-state wage information from the Bureau of Labor Statistics, and contact information for joining a variety of apprenticeship programs.

"For many years, there has been a great need for workers in the roofing industry," William Good, NRCA's CEO, said in a statement. "The NRCA Career Center will help make workers more aware of the many opportunities that

exist in our industry and how rewarding a career in roofing can be." —MC

MATERIALS

CONCRETE-CANCER CURE

It's known as concrete cancer: Alkaline properties in cement paste react with silica properties that can occur in recycled concrete additives, such as glass, and cause the concrete to weaken, expand, and crack. If concrete that uses recycled glass is unable to retain its expected properties, the concrete becomes almost useless. The issue becomes how to use recycled glass in concrete without weakening the material.

Researchers from the University of



British Columbia may have found the answer. Associate Professor of Engineering Shahria Alam and co-researcher Anant Parghi calmed the reaction that leads to concrete cancer. By adding a water-based synthetic rubber polymer, fly ash, and silica powder to the concrete mix, the negative chemical reactions that act as the catalyst for concrete cancer are neutralized.

Replacing some of the cement with



polymer, fly ash, and glass powder resulted in two key outcomes: concrete that's 60 percent stronger than what was previously believed possible; and, because recycled glass was used, a reduction of up to 25 percent of the materials that would otherwise need to be mined for cement production.

The researchers' concrete still needs long-term testing to assess stability. Yet a viable cure is in sight that allows the use of recycled materials in concrete production. —DM

ENERGY EFFICIENCY

NEW BATTERY CHARGER EFFICIENCY STANDARDS

Every year more than 500 million electrical chargers are sold in the U.S. and there are already an estimated 2 billion charging devices in use across the nation, the Natural Resources Defense Council reports. Now, new standards from the Department of Energy, scheduled to go into effect in May 2018, will address the efficiency of the battery chargers for portable products. This includes the power supply unit that plugs into an outlet, the battery that is being charged, and the charge-control circuitry that's integrated into the product.

By increasing efficiency by about 10 percent on average, it's anticipated that the new standards will save 500 million kilowatt-hours annually—enough electricity to power the households in a city with a population of 100,000.

The DOE's new standards are modeled on existing standards in California, while improving on those standards for some product types, such as electric toothbrushes and golf carts.

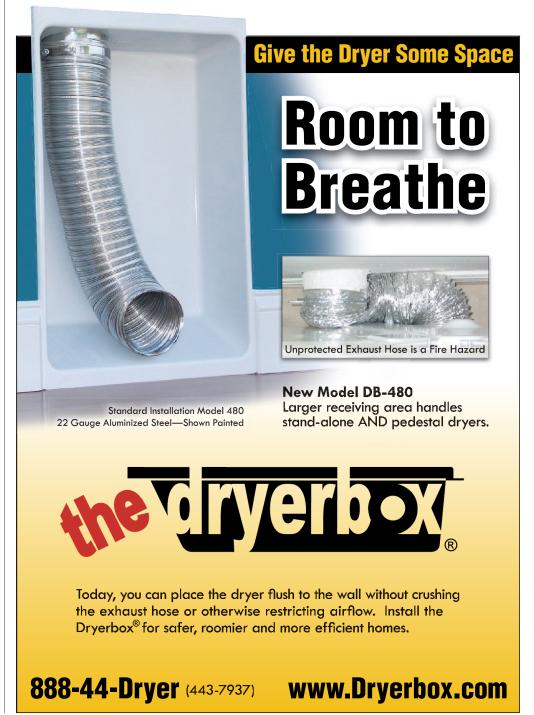
The DOE estimates up to 95 percent of all products sold in the U.S. already comply with California requirements. When state and the new federal standards are combined, the amount of electricity saved annually will equal



the output of six 500-megawatt coal-fired power plants.

The need to be within a few feet of an outlet has been

greatly reduced thanks to products that can be used anywhere. While the number of chargers and portable electronic devices may increase, the electricity consumed by those devices doesn't need to parallel that growth. —DM



Circle 758

BUILDERS REPORTING LOT SHORTAGES AT ALL-TIME HIGH

f finding skilled labor isn't your top concern, then chances are pretty good that finding lots to build on is your biggest challenge. Since 1997—almost 20 years—the NAHB/Wells Fargo Housing Market Index has periodically tracked builder sentiment regarding lot availability. In that time, the percentage of builders reporting shortages has never been as high as it is now: In the May survey, 64 percent of respondents reported a "low" or "very low" lot supply—a 2 percent increase from the previous record set in May 2015.

Even back in 2005—when the market was strong and roughly twice as many new homes were being built nationwide—the share of builders reporting shortages was at 53 percent.

The percentage varies somewhat based on the region of the country, builder size, and the type of lot. Although the categories are seldom precisely defined, builders often think in terms of A, B, and C lots, based on the desirability of their location. As you might expect, the shortage tends to be most acute for A lots. In the May 2016 survey, 69 percent of the builders said A lots were in short supply, compared with 60 percent for B lots and 47 percent for C lots.

Nowhere is the scarcity of land more apparent than in the West, where 39 percent of builders said lot supply was "very low" (compared with 23 percent in the South and 18 percent in both the Midwest and the Northeast). But when specifically referring to premium "Class A" lots, builders from coast to coast reported widespread shortages.

"Here in Northeast Ohio, the supply of 'A' lots has really dwindled," said Bill Sanderson, vice president of construction and land for Knez Homes, a Cleveland-area custom home building company. "A few spots are available for redevelopment, but that process takes time, and there still isn't a ton of [land]."

Sanderson, who also serves as president of the Ohio Home Builders Association, says that many builders have little choice but to look farther and farther out into the suburbs, where the prices need to be highly competitive to entice enough buyers. "In those secondary locations, increased entitlement time and more regulations, including environmental and other issues, mean that lots are not coming online as quickly as planned," he explained.

Lot shortages were also reported somewhat more often by larger home builders. Overall, 70 percent of builders with more than 100 starts reported a low or very-low supply of lots, compared with 65 percent for builders with six to 99 starts, and 62 percent of builders with fewer than six starts. **PB**

ABOUT NAHB: THE NATIONAL ASSOCIATION OF HOME BUILDERS IS A WASHINGTON, D.C.-BASED TRADE ASSOCIATION REPRESENTING MORE THAN 140,000 MEMBERS INVOLVED IN HOME BUILDING, REMODELING, MULTIFAMILY CONSTRUCTION, PROPERTY MANAGEMENT, SUBCONTRACTING, DESIGN, HOUSING FINANCE, BUILDING PRODUCT MANUFACTURING, AND OTHER ASPECTS OF RESIDENTIAL AND LIGHT COMMERCIAL CONSTRUCTION. FOR MORE, VISIT NAHB.ORG.

HOUSING MARKET SNAPSHOT **BUILDER CONFIDENCE STEADY** 2010 2015 2016 NEW-HOME SALES INCREASED 1.200 1.000 800 619,000 600 200 2010 HOUSING STARTS ROSE 1,500 1,250 1,000 REMODELING SPENDING DROPPED 160 000 \$142.2 billion 2010 2012 2013 2015 According to the NAHB/Wells Fargo Housing Index,

According to the NAHB/Wells Fargo Housing Index, builder confidence was unchanged in May at 58. April new-home sales jumped 16.6 percent from March to an annual rate of 619,000, and housing starts also increased, 6.6 percent during the same period to an annual rate of 1.17 million. Remodeling spending in April fell 3.2 percent to \$142.2 billion.







THE STATE OF CREDIT & CAPITAL

HOME BUILDERS REPORT ON THE STATUS OF CREDIT AVAILABILITY, ALTERNATIVE

FINANCING, AND CUMBERSOME PAPERWORK

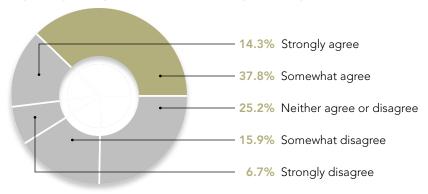
By Mike Beirne, Senior Editor

hile the majority of builders reported in *Professional Builder*'s 2016 Finance survey that access to financing has improved over the past year, many, judging from their written answers, would like to have a time machine to skip the arduously long period for processing loans.

Fewer builders indicated that they were shut out of a project due to the inability to secure financing compared with the previous two years, when more than a third of respondents said they lost projects due to tight credit. But there were plenty of respondents-including members of Builder Partnerships—who grumbled about lending activity not keeping up with their ability to start projects. Other complaints included long delays in closing loan applications, the inability to close homes with lenders on time, and cumbersome regulations and paperwork. The NAHB first-quarter AD&C financing survey found that while credit conditions for that period were better compared with the fourth quarter, looking at the longer-term trend suggested that the easing of credit that began in 2012 peaked in the fourth quarter of 2014, and has been diminishing since then. For more results, see the charts that follow.

METHODOLOGY & RESPONDENT INFORMATION THIS SURVEY WAS DISTRIBUTED BETWEEN MAY 5 AND JUNE 5, 2016, TO A RANDOM SAMPLE OF PROFESSIONAL BUILDER'S PRINT AND DIGITAL READ-ERS AND TO MEMBERS OF BUILDER PARTNERSHIPS. NO INCENTIVE WAS OFFERED. BY CLOSING DATE, A TOTAL OF 119 ELIGIBLE READ-ERS RETURNED COMPLETED SURVEYS, RESPONDENT BREAKDOWN BY DISCIPLINE: 32.8 PERCENT PRODUCTION BUILDER FOR MOVE-UP/MOVE-DOWN BUYERS: 29.4 PERCENT CUSTOM HOME BUILDER: 15.1 PERCENT DIVERSIFIED BUILDER/REMODELER; 10.1 PERCENT PRODUCTION BUILDER FOR FIRST-TIME BUYERS: 3.4 PERCENT LUX-URY PRODUCTION BUILDER; 2.5 PERCENT ARCHITECT/DESIGNER ENGAGED IN HOME BUILDING: 1.7 PERCENT MULTIFAMILY: 0.8 PERCENT MANUFACTURED, MODULAR, LOG HOME, OR SYSTEMS BUILDER: AND 4.2 PERCENT OTHER, APPROXIMATELY 36.1 PERCENT OF RESPONDENTS SOLD ONE TO FIVE HOMES IN 2015, AND 16 PER-CENT SOLD MORE THAN 100 HOMES.

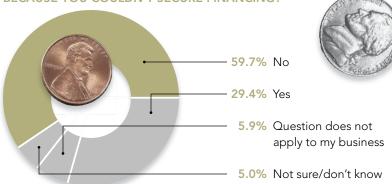
PLEASE INDICATE THE EXTENT TO WHICH YOU AGREE OR
DISAGREE WITH THIS STATEMENT: BANKS IN MY MARKET(S) IS/
ARE MORE OPEN TO PROVIDING FINANCING TO MY COMPANY/
HOME BUILDERS THAN THEY WERE THIS TIME LAST YEAR



BASE: 119; PROFESSIONAL BUILDER 2016 FINANCE SURVEY

Builder sentiment that banks are looser with the purse strings is stronger this year compared with 41.5 percent of respondents last year who either strongly or somewhat agreed that banks were more open to financing during the past 12 months.

HAS YOUR COMPANY HAD TO PASS ON A POTENTIALLY LUCRATIVE PROJECT (VERTICAL CONSTRUCTION, LAND PURCHASE, OR DEVELOPMENT) IN THE PAST 12 MONTHS BECAUSE YOU COULDN'T SECURE FINANCING?



BASE: 119; PROFESSIONAL BUILDER 2016 FINANCE SURVEY

Between banks being more willing to lend and the availability of alternative capital sources, the majority of builders say they have not been shut out of a project due to lack of financing.

[EXCLUSIVE RESEARCH]

WHICH OF THESE ISSUES, IF ANY, HAS YOUR COMPANY EXPERIENCED WITH YOUR LENDER/BANK IN THE PAST 12 MONTHS?

Bank is willing to lend but documentation for appraisals, inspections, and other administrative requirements is onerous and time-consuming

Other bankers have contacted my company about the possibility of doing business with us

My current banker(s) is/are more open to financing vertical construction projects and offering better terms than a year ago

My current banker(s) is/are more open to financing land acquisition/development and offering better terms than a year ago

Home appraisal(s) came in lower than the purchase price

Bank will fund vertical construction but not land acquisition/development

My primary bank was acquired by another bank or was taken over by the FDIC

Lines of credit stopped

Loans called even though payments are current

2.5%

Other



BASE: 118; PROFESSIONAL BUILDER 2016 FINANCE SURVEY

Bankers are more aggressive in courting lending business and slightly more builders reported that their bank is funding land buys than not. However, red tape and long processing times continue to be the top complaint.

PLEASE SELECT THE TOP THREE FINANCIAL CHALLENGES YOUR COMPANY HAS FACED IN THE PAST 12 MONTHS

Land values are too high

53.4%

Home appraisals undervalue my product

Finding a bank that will do development lending

Buyers unable to secure a loan

Securing quicker availability of capital by securing alternate financing

Rising bank fees

Banks taken over by the FDIC

0.9%

Others

BASE: 118: PROFESSIONAL BUILDER 2016 FINANCE SURVEY

Expensive land and lowball appraisals once again were the top two challenges, while finding a bank willing to lend to develop land surpassed homebuyers' inability to get a loan, which was last year's No. 3 financial challenge.





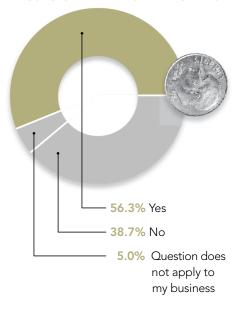
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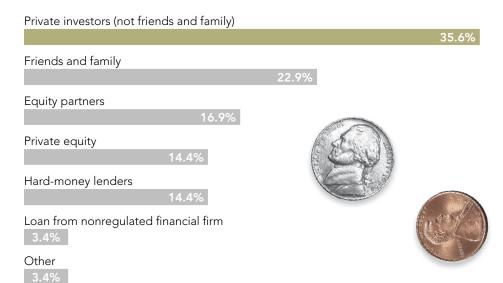
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HAVE YOU USED ALTERNATIVE FINANCING METHODS TO FUND PROJECTS IN THE PAST 12 MONTHS?



WHAT TYPES OF ALTERNATIVE FINANCING (ALTERNATIVES TO BANKS) HAVE YOU BEEN ABLE TO SECURE?

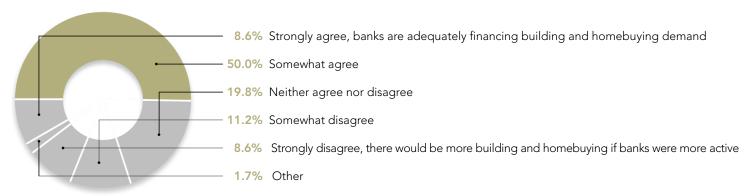


BASE: 119; PROFESSIONAL BUILDER 2016 FINANCE SURVEY

BASE: 67; PROFESSIONAL BUILDER 2016 FINANCE SURVEY

The majority of builders said they used financing sources other than a bank, up from 45.2 percent in last year's survey. Private investors and friends and family were the most popular alternatives.

HOW STRONGLY DO YOU AGREE OR DISAGREE WITH THE FOLLOWING STATEMENT: THE LENDING ACTIVITY BY BANKS IN MY MARKET(S) IS/ARE REFLECTIVE OF THE DEMAND FOR NEW HOMES



BASE: 116; PROFESSIONAL BUILDER 2016 FINANCE SURVEY

The notion that bank financing activity was in line with the demand for new housing was strongest in the South Atlantic region (Delaware, Florida, Georgia, Maryland, North and South Carolina, Virginia, Washington, D.C., and West Virginia). But builders in that same region and in the East North Central (Illinois, Indiana, Michigan, Ohio, and Wisconsin) and West South Central (Arkansas, Kentucky, Mississippi, and Tennessee) regions polled higher for the sentiment that bankers are not keeping up with the lending needed to build projects.

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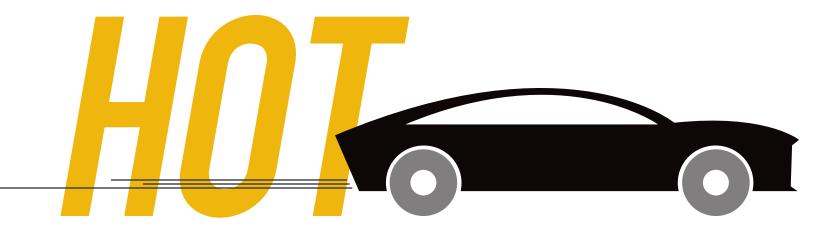
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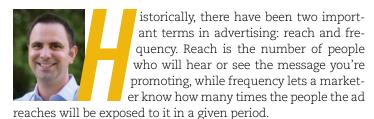
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IF YOU'RE NOT USING ALL POSSIBLE RESOURCES TO PURSUE

By Kevin Oakley, Contributing Editor



Now I'm going to suggest that you forget about one of these terms altogether. In today's competitive online landscape, can you guess which one is less important?

The answer is frequency. You used to have to pay extra to reach a whole bunch of people—many of whom didn't care about your message—in order to also reach those who did care. Not anymore. Now you can be more targeted, make sure those who are showing interest are reached with even higher frequency, and pocket the savings.

In my first job back in 2003 working for a private builder with \$2 billion in revenue, I was to do pretty much one thing every week: design a full-page, full-color ad to go in the real estate section of a daily newspaper. Ad space cost between \$10,000 and \$15,000 each week, and being in the real estate section made it seem like it was targeted at the builder's ideal audience. The newspaper's reach in 2003 was incredible—the majority of the area's population read a newspaper at least once per week. As an advertiser, I had to pay for that high level of reach, even though only about 2 percent of my metro area was in the market for a home at any given time.

Paying to reach people who have no interest in your product is wasteful. But in 2003, you had little choice. In today's digital world, however, continuing to do so can have a catastrophic effect on the efforts of your sales and marketing teams. Reaching large mass numbers is out; focusing on your target audience—as many times from as many different angles as possible—is in.

BE PERSISTENT. BE PRECISE

Identifying those who are most likely to purchase a new home has evolved light-years from the days of placing ads in the newspaper real estate section. We can now target ads tied to online behavior—what web searches new-home seekers are doing, the other websites they're visiting (Zillow? Trulia? Redfin?), and even from whom they're receiving email. Often you'll need to pay extra for this kind of laser-focused targeting, but there are some things you can do that cost almost nothing. Here are the foundational pieces to put in place now to become a professional stalker without breaking the bank.

1. Google AdWords Remarketing

By displaying your ad on other websites a user visits after being on your site, or within other web searches the user performs after leaving your site, your company can stay top of mind with those site visitors. (It's called "remarketing" because you're reintroducing your brand or product to a prospect who has already been on your site.) Setting up remarketing in Google AdWords is completely free; you only pay for actual results. That's why we always encourage you to set this up and manage it yourself, if possible, instead of paying others to do so. There are several options to consider:

• Display ad remarketing: Most of us have had the experience of shopping online for an item and then seeing banner ads related to that item later on other sites, and it works exactly the same way for home builders. The beauty of this approach is that you only pay for ads when they're clicked on, and display ads for remarketing have a very low click-through rate. That means it's common to receive more than 100,000 ad impressions for only a couple hundred dollars per month.

EVERYONE WHO HAS SHOWN INTEREST IN YOUR PRODUCT, YOU NEED TO START—TODAY

• Search remarketing: You can also choose to show unique text ads based on the Google searches that users who have visited your website perform. This allows you to create messages, unique bid amounts, and more based on the knowledge that these users have already been to your site. Setting up remarketing list search ads can increase clickthrough rates to 10 percent or more for little cost. Do a Google search for "RLSA" for full details.

2. Facebook Remarketing

In today's hyper-social world, Facebook remarketing is a must-do. It allows you to target—directly within Facebook—those who have visited your website and have a Facebook account. A potential customer visits your site on their laptop at 10 a.m., and when they hop on Facebook using their iPhone at lunch-time, there you are in the middle of their news feed.

What makes this type of remarketing effective is that it crosses over from one device to another because it's connected to the site visitor's Facebook account. Again, Facebook retargeting doesn't cost anything extra and it's quick to set up—it can take as little as 10 minutes. It's also usually about 30 percent to 50 percent less expensive than the cost of regular Facebook ads.

TELL YOUR UNIQUE STORY. BUT STOP SHOUTING

Advertising in all its forms is about gaining your audience's attention, and remarketing is no different. But because those who see your remarketing ads have already been on your website, you have a unique opportunity. The biggest mistake I see builders make is that they don't create fresh messaging specifically for the purpose of remarketing. Instead, they keep hammering the same message, "We build homes for \$XXX!" or "We build homes near you!"

Better would be to create ads based on the testimonials of happy homeowners or to promote awards you recently won for high customer satisfaction or a unique home design. Remarketing, especially on Facebook, provides the ability to tell your unique story without having to focus only on features, price point, and location. And an effective remarketing campaign has the effect of building trust in your company's brand.

MIX IT IIP AT FVFRY STFP

Once a visitor to your website signs up or submits information, you have the ability to note that in your remarketing efforts and show that visitor an entirely different set of messages, or turn off remarketing to them altogether. You can do the same for individual community pages on your site to allow for remarketing at the community level instead of at the corporate level. To push your creative thinking even further, imagine how powerful a 15-day "thank you" remarketing campaign on Facebook could be to those who completed an online survey post-closing.

A KEY PIECE OF THE PUZZLE

Remarketing should be a foundational element of your marketing strategy. Even in larger regions, the strategies discussed here will likely cost less than \$350 per month. They'll maximize the return on all the other online campaigns that drive traffic to your site by encouraging previous visitors to revisit your site. And once they come back, you have another shot at converting them from a browser to a buyer.

Kevin Oakley is managing partner at Do You Convert, a company exclusively focused on online sales and marketing for home builders and developers. Write him at kevin@doyouconvert.com.



By Al Trellis

hat? and Where? are the questions at the heart of making an inventory program work. For me, the secret is simple. Start with where a spec home makes sense for your business, within the larger context of optimizing that inventory slot in your global inventory program. Once you've selected a neighborhood and defined the mission of that particular home, decide

on a price point that should move relatively quickly in that location. Remember, a home that turns once and makes \$50,000 contributes fewer dollars than one that turns twice and contributes \$40,000 each time. Additionally, the second case also reduces carry costs such as taxes and interest on another lot. The following can act as a checklist of not only how to create inventory, but how to manage it, as well.

ACCEPTABLE COMFORT LEVEL FOR THE BUILDER

It makes no sense to add significant stress to an already stressful profession. The most important single factor in determining the size of your inventory program is deciding how many unsold houses you can accept without constant worry. And, while the first of our core beliefs states, "There is a place for inventory in every builder's business plan," it's completely possible for a builder to acknowledge this fact and still be unwilling (or emotionally unable) to maintain an inventory position.

AVAILABLE CREDIT AND CAPITAL

For many builders, available capital and access to credit are the limiting factors in designing a viable inventory program. If you don't have these things, obviously it's a constraint—but even if you do, the real risk here is the lost opportunity cost if you utilize these resources for inventory and miss out on alternative uses that might have provided even greater profits.

CURRENT INVENTORY LEVELS IN THE MARKET

It is possible to compete against other inventory, but it's far better, and usually more profitable, to create inventory where competition, at least at the micro level, is minimal. If you must

compete, look carefully for any flaws in the competition so that your house will be superior in some obvious way (for example, three-car garage, more bedrooms, better kitchen, etc.).

QUALITY OF YOUR ABILITIES TO PROPERLY MANAGE INVENTORY

There is no better way to increase risk than to institute a poorly managed inventory program. The fundamental truth here is guite simple: Do not build inventory homes if you lack the commitment, resources, skills, and mindset necessary to:

- Properly select plans, options, and specifications;
- Properly study the competitive market and price your product accordingly;
- Understand that building inventory is about more than just increasing profits; and
- Accept that, as a rule, inventory often sells for a lower margin than pre-sold units do.

Operating an inventory program correctly is a learned skill. Don't attempt to do it unless you're prepared to spend the time needed to master those skills.

DEALING WITH DIFFICULT INVENTORY

When inventory doesn't move in a reasonable time, this is typically the result of one of the following:

- **1. Something is wrong with the lot.** When building inventory, the actual lot selection process requires careful planning and a detailed analysis at both the micro and macro levels. With a few exceptions, the best course is to build inventory on mid-quality lots. Your worst lots will be a negative factor that many buyers will not accept, regardless of price. Your best lots will move without inventory and are typically at the core of your built-to-order sales. But, beyond this basic truism, there are many other factors to consider:
 - Visibility: Inventory that can be seen does more for you than inventory that cannot.
 - Neighbors: Building adjacent to a more expensive home, or one with a premium elevation, helps establish the value of the proposed inventory.
 - Ease of construction: Building on lots with one side

INVENTORY

A checklist for ensuring that quick-delivery homes contribute to the success of your business

open is usually easier and less disruptive than building between existing homes. One key benefit of inventory is that, right or wrong, you get to make the decisions, and decisions that make your life simpler can't hurt. This is the same reason we preselect all of our choices from standard palettes rather than making each inventory home seem like a semi-custom build.

- Lot-specific opportunities: Many times, a given plan will work best on a lot with specific characteristics. Once you've selected the targeted house plan, it's to your advantage to put it on a lot that enhances its specific physical characteristics, such as shape, dimensions, room orientation, and outdoor living opportunities. Some lots are simply difficult; others are less difficult with the right house plan and/or the right structural options.
- 2. Something is wrong with the plan. Not all plans are good plans, and not all plans make for good inventory. When selecting a plan for an inventory home, try to anticipate the prototypical buyer and select a design that offers features and amenities that align with that buyer's needs and wants. Buyers move for many reasons, but some of those related to house design—which you should analyze—are as follows:
 - Room count (particularly bedrooms): In general, avoid two-bedroom plans and consider four bedrooms, especially if the home doesn't include a designated study.
 - More/better bathrooms: Consider dual-sink master baths and three- to 3½-bath plans for family-oriented homes.
 - Adequate storage: One of the prime motivators for moving is more storage space. Don't skimp on master closets, and consider the power of oversize or three-car garages.
 - Bigger/better kitchens: The keys here are islands and eating bars. Additionally, many surveys of buyers list granite countertops as a sought-after feature, which can lend a feeling of luxury to a less expensive home.
- **3. Something is wrong with the price.** Buyers have choices, and it's our job to create inventory that's superior to the

competition. This means that before you build *any* inventory, you need to study the available competition and make a detailed comparison between it and your product. If your product doesn't compare well, you have several choices: You can improve the features and benefits to justify the price; you can improve (reduce) the price to justify inferior features and benefits; or you can go back to the drawing board for a different lot or a different plan as discussed above. But what you *can*'t do is build a noncompetitive product and hope for the best. A successful, well-managed inventory program starts with good market intelligence and uses that information to make savvy product and pricing decisions.

4. The home is unfinished and lacks emotional appeal. In other words, you are asking a potential buyer to "imagine" the finished product. Unfortunately, most customers lack this ability. If the home is the same plan as a finished model or finished spec, this problem is significantly mitigated. This is why I generally recommend that you totally finish any inventory that doesn't have a completed similar version available for buyers to see.

Creating and managing a superior inventory program requires a real investment of time and resources. But for those prepared to do what needs to be done, building inventory should be both profitable and fun. So remember:

- Inventory is about turns—make sure your pre-construction cycle is minimal.
- Build only as many inventory homes as makes you comfortable.
- Never underestimate the importance of knowing the market and the competition.
- When building more than one inventory home in a community, mix up the plans and prices—your job is to create urgency in the mind of the buyer. **PB**

Al Trellis is president of Home Builders Network, HBNnet.com, in Mount Airy, Md. Write him at admin@hbnnet.com.



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RESPONSIVE, RESPONSIBLE, AND RESILIENT

The grand winner of the 2016 Race to Zero Student Design Competition is an affordable, sustainable house with emergency preparedness in mind

By Sam Rashkin, Chief Architect, Building Technologies Office, U.S. Department of Energy

he U.S. Department of Energy's Race to Zero Student Design Competition is an annual event created to address a critical gap in the residential construction industry: having enough capable professionals who are trained to integrate building science solutions. A goal of the competition since it began two years ago is making building science education possible for the college students who will be designing, engineering, and building our nation's future homes.

It's been rewarding to watch these students work together in multidisciplinary teams to solve real-world challenges for delivering high-performance homes that are cost-effective and meet design constraints of the mainstream housing industry. Each year, the students exceed expectations, bringing energy, creativity, and practicality to their designs.

This year, 31 teams from 25 colleges and universities submitted entries in the categories of suburban single-family; urban single-family; attached; and small multifamily housing. Students partnered with a variety of local builders, architects, home energy professionals, and nonprofit organizations to grapple with the same problems our nation's builders face daily: affordability, disaster resilience, and marketability. Faculty from the competing schools provided guidance and support. The final juried portion of the competition was held at the National Renewable Energy Laboratory,



in Golden, Colo., with teams presenting their design solutions to industry and government leaders. I left this year's competition encouraged by these impassioned students, who are well aware that the knowledge and experience they've gained will change their lives as they move forward in their careers.

The year's top prize went to the Prairie View A&M University Green Future Team, in the Urban Single-Family Housing Contest. Here are highlights of the winning entry.

THOUGHTFUL AND PRACTICAL INFILL

Recognizing that not all average buyers can afford zero energy, the team studied census data in order to choose an affordability target and decided on a zero energy-ready home without a

solar electric system. The simple design includes readily available high-performance products that are cost-effective and enhance disaster resilience.

The students selected Independence Heights as the project location. This historic neighborhood was the first incorporated black municipality in Texas and was subsequently incorporated into the City of Houston. In 2008, the area sustained significant damage from Hurricane Ike.

The Green Future Team designed an infill, zero energy-ready home submission to provide an affordable, high-performance, small-footprint home for low-income families. Independence Heights has a 40 percent vacancy rate, so the team's infill strategy involves clustering new single-family homes on

BUILDING SCIENCE

adjacent vacant lots into pocket communities with shared open space. The narrow lots can accommodate one to two single-family homes, depending on the square footage. A home with three bedrooms and two baths provides a good option for a growing family that desires to move back into the neighborhood to be closer to older family members who are still in the community.





The project had challenging constraints. To be affordable, the home had to be small, yet comfortable and modern for occupants. The design was further limited by the narrow and deep lots typical to Independence Heights, where the neighborhood, subject to Houston's 100-year floodplain, has experienced severe flooding over the past several years. In response, the first floor was raised 4 feet above the ground. The design was contextual and responsive to community feedback by using a shotgun plan typical of the South (thus the project name Double Barrel). The project uses advanced framing

techniques, a ductless mini-split system for air conditioning, and dedicated whole-house dehumidification.

MEETING ENERGY GOALS

The project meets mandatory Energy Star and DOE Zero Energy Ready Home requirements, as well as Passive House standards. The building enclosure is designed to reduce radiation heat gain using radiant barriers on the roof and wall assemblies. The roof's radiant barrier consists of a standing seam metal roof over a 3/4-inch ventilation cavity. The wall consists of foil-faced insulation facing a 34-inch ventilation cavity, and the rainscreen wall assembly further reduces heat gain by allowing heat and humidity to convect out of the wall prior to entering the wall assembly. Increased insulation reduces thermal flow through the building enclosure. Advanced framing and continuous rigid insulation sheath-

> ing work together to reduce thermal bridging. Finally, a continuous air control layer reduces the significant heat gains due to air infiltration.

> Fresh air is provided via an energy recovery ventilation (ERV) system, which recovers both sensible and latent heat between the intake and exhaust airflow to minimize energy use and

improve comfort. Even with an ERV, continuous ventilation is a challenge in hot, humid climates due to the amount of energy required to dehumidify the fresh-air intake. Because of this, a dedicated whole-house dehumidification system complements the ERV system. The home is designed with a vaulted ceiling in the living space, utilizing the stack effect to collect rising hot air and then exhaust it. **PB**

For the complete list of winners and their submissions, visit the program website, http://energy.gov/eere/buildings/us-department-energy-race-zero-student-design-competition.

DESIGN GOALS

- o Meet and redefine affordability standards in the Independence Heights area of Houston
- o Incorporate community scale, context, and gardens in the plan
- o Comply with Passive House Institute United States requirements
- o Comply with DOE Zero Energy Ready Home requirements
- o Comply with EPA Indoor airPLUS requirements
- o Comply with Energy Star Certified Home requirements
- o Provide resilience to locally prevalent flooding risk

PROJECT DATA

- o Location: Houston
- o Climate zone: 2A
- o Area: 1,567 square feet
- o Layout: 3 bedrooms, 2 baths 2 story
- o HERS Index: without photovoltaics 36, with PV 9
- o \$72 monthly utility bill, without a PV system

TECHNICAL SPECIFICATIONS

- o Wall insulation = R-30 (Passive House upgrade is R-33)
- o Foundation insulation = R-30 (Passive House upgrade is R-48)
- o Roof insulation = R-47 (Passive House upgrade is R-55)
- o Window pertormance = U-factor 0.15, SHGC 0.25
- o HVAC specifications = SEER 23 (cooling), HSPF 10.5 (heating)



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THE BEGINNER-BOOMER

Two of the largest, most significant buyer groups are in different stages of life, yet are often drawn to similar features in a home.

Here's a look at those intersecting tastes—
and how to maximize them

By Amy Albert, Editor-in-Chief

ast year, a well-known business blog called the divide between Millennials and Boomers the biggest longterm story on the U.S. economy. There's no doubt that differences exist between these generations that go beyond texting instead of picking up the phone. While Millennials are revving up their adult lives, many Baby Boomers are dialing theirs down, or at least pondering it. While many Millennials struggle to get a down payment together if they can do it at all, Boomers often have equity. But despite these real and salient contrasts, builders, designers, and developers are finding that the two generations, which currently bookend the housing market, share a surprising number of common needs and desires. "The youngers are having a hard time starting out, while many of the olders are realizing that bigger isn't better," says Langley, Wash.-based architect Ross Chapin, who is well-known for designing pocket neighborhoods—small enclaves that foster community while figuring in privacy, inspired by early 20th-century bungalow courts.

A FOCUS ON LIFE STAGES, NOT LABELS

The cohorts known as Millennials (born between 1982 and 2000) and Baby Boomers (born between 1946 and 1964) each span an 18-year age range. The problem is, two decades of life potentially encompass several stages: Making categorical assumptions based on demographic labels risks gross generalization (not to mention annoyance from those being categorized). "As soon as a Millennial has kids, the needs are different—they're thinking about a house, a backyard, and a swingset," points out Mike Woodley, principal of Woodley Architectural





Group, with offices in both the Denver metro area and Orange County, Calif. "They may not be Gen X, but the needs are similar, and that's where the commonalities are." Woodley advises thinking in terms of life stages rather than age groups.

SMALLER + LOWER MAINTENANCE

Miller & Smith builds throughout metropolitan Washington, D.C. Both buyer groups there seek homes that are low-maintenance, though the reasons for doing so can be different, says president Doug Smith. While the empty nesters that Miller & Smith sells to seek to liberate themselves from home maintenance tasks such as cleaning the gutters and mowing the lawn, younger buyers in D.C. (arguably one of the most hard-driving, career-centric metros in the U.S.) also crave low-maintenance homes as a relief from working long hours at demanding jobs. "When they get home, it's time to unplug and kick back," Smith says.

On the other side of the country, in Washington state, Linda Pruitt, owner of The Cottage Company, in Seattle, sees a similar trend: "Boomer couples and singles seeking a high-quality, smaller home on a small lot with less upkeep." Pruitt adds that close-in locations with amenities that residents

can walk to and a context of community are also crucial.

When done properly, low maintenance can dovetail with curb appeal, Smith insists. At Upper West, the new town home section of the One Loudoun community, exteriors include black brick, bold colors, and industrial materials on modern four-level town houses that leverage density and include multiple outdoor spaces in the form of balconies, terraces, and small yards. While curb appeal is crucial, so is pride in the neighborhood. "Buyers don't just buy home design and floor plan layouts," Smith says. "They demand special attention—community design, landscaping, and amenities."

SINGLE-STORY LIVING

The simplicity of one-story living appeals to those just starting out, as well as to those scaling down. But what about a desire to age at home and stay in the community—a preference shared by some 87 percent of Americans?

"We solve it with an elevator," says Woodley, a feature that's becoming increasingly affordable, he points out. Doug Smith agrees. Though stairs don't faze Millennials, some Boomers may have concerns about them. The Penthouses at Lucent,

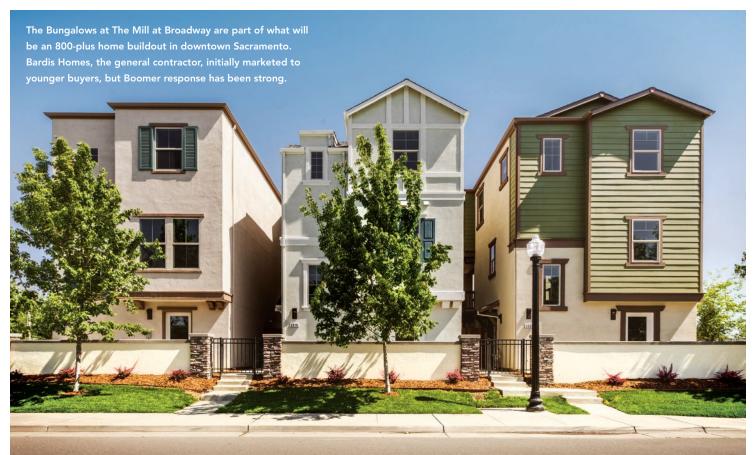


PHOTO: COURTESY VISION LAUNCHERS; RENDERING: UNION STUDIO ARCHITECTURE AND COMMUNITY DESIGN



in San Diego, offers three levels of loft-like flats and two-story penthouses with rooftop space and optional elevators. When Woodley created these designs for Shea Homes, he was under the impression that he was designing for Boomers. Yet there was as much interest from buyers just starting out.

Smith would love it if every buyer opted for the elevator at purchase time, but making installation possible at a later date eases that purchase decision for buyers not yet ready to think about the day when stairs will pose a challenge. (Smith refers to including an elevator as "futurizing" the home.)

Most builders make elevators optional, but Woodley says that Millennia, a new project underway in San Diego, will include them as standard. Though it happened because the price was right—the builder simply informed Woodley that elevators would be standard in the design—the architect wonders if this might not be the future. "They're not so crazy-expensive anymore," he says.

AN URBAN FEEL, A SENSE OF PLACE

Rachel and Katherine Bardis, co-principals of Bardis Homes, are the general contractors on a take-down of a former lumber mill and manufacturing facility in downtown Sacramento. The Mill at Broadway's total buildout will consist of more than 800 detached bungalows, attached town homes, and six-plexes. The Mill will feature an urban garden, marketplaces housed in repurposed industrial buildings, and a decommissioned rail line turned bike and pedestrian path that will trace the Sacramento

Riverfront from The Mill to a public park to the Capitol Mall to the Kings arena.

The co-principals (who are first cousins), were surprised at first by the interest shown by move-down buyers in both bungalows and town homes. Initial marketing skewed toward younger buyers until both friends and the sales team reported wider interest in The Mill's amenities and its proximity to arts, culture, food, and entertainment. "The homes aren't laid out for an older couple," says Rachel, who adds that they were originally designed for what's now called The Missing Middle, housing within reach because of its moderate size and price.

In late 2016, The Mill will offer The Penthomes: 5½-story stacked flats that are accessible by elevator and are drawing strong interest from move-down buyers. "'Getting rid of the stairs is what we've been waiting for,' is a common reaction among move-down buyers," says Katherine, who points out that the six-plexes offer city living without the stairs.

As in many parts of the country, Sacramento's last home building boom saw a proliferation of McMansions in surrounding towns, accompanied by the debt and burden that can be part and parcel of a large house. But for many Boomers, "The kids have gone and that's no longer interesting," Rachel observes. A move downtown means being near theaters, galleries, restaurants. "They want to be a part of that," she says.

Buyers at each end of the spectrum want walkability, the ability to stroll to restaurants, shops, and entertainment. Yet city living isn't for everyone. Smith's answer to this is what he



calls Safe Urban. "It's a town-center lifestyle with an urban feel, but in suburbia," he says of One Loudoun.

Right in the urban core is Morton Street Mews in Park View, a gentrifying section of Northwest Washington, D.C. It's made up of 24 row houses and flats, including three two-level town homes contained in a historical church building. "Couples, young singles, and empty nesters—that's pretty much our buyer from the word 'go,'" says Sean Ruppert, principal of OPaL, who reports that bookender buyer groups are drawn to the generously sized town homes and condos located close to shops and restaurants. Empty nesters, he says, "want to move into the city and enjoy it without living in an 800-square-foot condo," and young buyers who are about to start families appreciate a space that they won't soon outgrow. A lottery was held for the two flats that fell within affordability pricing for D.C.'s notoriously costly market.

COMMUNITY + WALKABILITY

At Emerson Green, a master planned community on a decommissioned Army base northwest of Boston, developer Dan Gainsboro, principal of Now Communities, reports that buyers are evenly split between Millennial-aged families with young kids and Boomers who are downsizing. The first phase of the project includes 17 modestly priced single-family homes—six duplexes and 11 single-family—close to two train stations on the commuter line to Boston, as well as to downtown Ayer, Mass. (The community sits on land carved out of the towns of Ayer, Shirley, and Harvard.) When complete, Emerson Green will have a total of 124 homes, one-third of which will be rental apartments in two connected 20-unit structures that look like big New England houses. Features that appeal to both sets of buyers include a cohesive community, walkability, energy efficiency,

and not-so-big homes that are easy to maintain, Gainsboro says. "Both move-up and move-down are a part of the plan," he says. Ten percent of Emerson Green's homes will be designated as affordable housing; another 15 percent will be moderately priced.

Although Emerson Green is still more auto-centric than Gainsboro would like, he's sure that more amenities will be created nearby in time, and he wonders if Emerson Green could be a future model for housing across the state. But finding interesting locations—those with infrastructure that offers the community and walkability that both age groups crave—is no small feat. "It's the single hardest thing, finding developable land in a close-in, infill location that our buyers would find desirable," Pruitt says. In her area, buyers want homes "in the context of community, not in an anonymous cul-de-sac."

Though women, in particular, Pruitt says, are more likely to want other neighbors "who provide community in a scary and anonymous world," she is starting to see single men opt for the cottage-style homes her company offers. (According to the 2012 census, 72 percent of men age 65 and over live with a spouse, while 45 percent of women do.)

THE RETURN OF THE ADU?

On the northern edge of Seattle, Pruitt is in the entitlement stages of a cluster of 1,500-square-foot homes targeted to multigen households, each with an accessory dwelling unit (ADU). She lists the myriad possibilities that the arrangement offers. "It might be Boomer parents helping their Millennial kids get started; the Boomer parents take the ADU while the kids start a family and have the grandparents around to watch the kids. It could be a professional couple who use the ADU as a rental or Airbnb, or a graphic designer or therapist who sees clients at home."

Not all jurisdictions sanction ADUs, but this may be loosening up, Woodley says. "The new communities get it; they want it," he adds. Years ago, Woodley built a casita in the front of his own Denver-area house, not fully knowing at the time how it might be used. "Life can take twists and turns; a relative who's ill, a good friend who gets divorced, a kid who wants to return home," Woodley says. "You can make a strong argument that controlled placement of ADUs could be a better alternative than some apartments," says Larry Garnett, owner of Larry Garnett Designs and a contributing editor to *Professional Builder*.

What's clear is that old ideas offer new answers. Once-traditional setups that have fallen out of favor—higher density, walkability, accessory dwellings, bungalow courts, and shared amenities—offer relevant solutions and appeal to groups that bookend the buyer spectrum. Old ideas made new again may hold a key to delivering practical and desirable homes to two burgeoning buyer groups that share more in common than we might have imagined. **PB**



Washington, D.C., developer OPaL attracts bookenders by leveraging the urban, transit-friendly location of Morton Street Mews.



Fifth Street Commons, an affordable multigenerational community in Langley, Wash., balances privacy with shared amenities such as a big garden.

BOOKENDERS AND BEYOND

Though young buyers struggle for homeownership, affordability pressures exist for older buyers, too. Many in both cohorts are downsizing and opting out of suburban locations—particularly younger buyers, who scale down by necessity, and also for lack of interest in impressing others with "grand foyers and big houses," says architect Ross Chapin.

In response to the urgent need for attainable housing, Chapin looked to his own community of Langley, Wash., on Whidbey Island, 30 miles north of Seattle. "People want to be here because it's such a cool place, but you have to have all kinds of money," he says. Chapin, his wife, and another couple offered all cash for a down-at-the-heels apartment complex, reaching out to the community to supplement funds. The multifamily building was transformed into Fifth Street Commons, an affordable, multigenerational community of 16 one- and two-bedroom units, all with full kitchens and a condo-ownership structure. The two couples served as general contractors, with John Jacobs Construction as construction supervisor.

Residents range from age 3 to 73, says Chapin, who observes that the setup has been especially beneficial for single working moms, whose kids have a built-in network of "aunties and uncles." Fifth Street Commons includes a common house with a shared living room, kitchen, dining area, laundry room, workshop, and guest room, plus a community garden, with future plans for a larger garden with adjacent neighbors. "How many shovels, weed whackers, rakes, and lawnmowers do you really need?" Chapin asks.

To steer the balance toward younger buyers, word of mouth was the only means of publicity used. (Chapin suspects that otherwise the units would have been snapped up by older buyers seeking second homes.) The apartments, which sold for between \$109,000 and \$139,000, were never shown on MLS, nor was there marketing or advertising.

"It's the most walkable you can be," says Chapin, noting that the project is a five-minute stroll from cafes, a theater, schools, and the marina; the grocery store and post office are even closer. "It's working, so now the question is, is this repeatable?," he asks. "Where are the surplus properties that may not be in the best neighborhoods but could be reconfigured?"—AA

ESIGNING FRO

FOCUSING A PROJECT INWARD CAN HELP RESIDENTS MAKE IMPORTANT CONNECTIONS WITH ONE ANOTHER AND THEIR ENVIRONS

By Susan Bady, Senior Editor

t was while doing fieldwork for Meyers Research that Adam McAbee noticed that inward-focused communities are a trend. McAbee, a vice president in Meyers Research's San Diego office, visited a community of four single-level detached homes facing onto a courtyard. "I thought it was so creative that [the builder] was able to take a duplex lot in a market where demand for higher-priced product was weaker than for lower-priced product and translate that into four very livable units," he says. "The courtyard created a nice environment."

McAbee soon discovered other infill projects that had this inward focus, sometimes compensating for a lack of vibrant surroundings by putting the emphasis on interior amenities. "With some communities, even though you're close to employment, shopping, and so on, the surrounding areas may be a little run down and need a shot in the arm," says Meyers' managing principal Tim Sullivan, who is based in Irvine, Calif. "The way that we improve neighborhoods is from the inside out."

The trend is not limited to California. "We're seeing it across the country, and we think it's a sea change in attitude," Sullivan says. "It really translates from the individual consumer to the home to the community and back."

While there are benefits to focusing inward, architects and planners must be careful not to create an air of exclusivity, says Doug Van Lerberghe, principal of Kephart Community: Planning: Architecture, in Denver. "The biggest challenge often is overcoming the objections of municipalities and jurisdictions that are usually looking for plans and designs that connect and engage with the larger community," Van Lerberghe says. To overcome this challenge, Kephart creates a welcoming entry to the community and links it at controlled points to the surrounding area so that it doesn't alienate people from the outside.

One example is Kent Place Residences, an apartment community designed for those who are renters by choice. Kent Place has 23,000 square feet of amenity space located in the center of the project rather than on a busy corner. "To draw people into

the center of the community, we designed a vibrant piazza with lush landscaping, fountains, and Tivoli lighting," VanLerberghe says. "The piazza creates a tranquil transition between public and private space while giving the community a signature statement and a unique sense of arrival."

Some infill communities focus inward to draw attention away from commercial areas and railroads. "It's a buffering of the new community from existing adjacent properties that may be considered unfriendly," says Sherman Jones of Robert Hidey Architects, in Irvine, Calif. "It gives residents a sense of place and enhances privacy and security, and it promotes interaction among neighbors."

One pitfall of focusing inward is the lack of what Jones refers to as 360-degree architecture. "Often these communities 'turn their backs' on neighboring sites, leaving elevations that are typically less detailed," he says. "Additional design emphasis needs to be placed on these elevations."

WHEN SURROUNDINGS AREN'T PRETTY

As Mark Larson, partner at Rehkamp Larson Architects, in Minneapolis, says, "Some infill sites are absolutely spectacular in every possible direction, but most aren't." A lot with an alley, an ugly house, or a close neighbor on one or more sides requires the architect to orient living space inward. Larson relishes such projects because "they can actually produce cool houses. When you can't control the outside, you can still control the inside"

Rehkamp Larson typically designs custom single-family detached homes on infill lots. "We normally start a project by looking at the constraints: the setbacks, the lot coverage, the height limitations, and any neighborhood requirements about exterior materials," Larson says. "But in a funny way, the more constraints you have, the more it makes for an interesting house. So you go beyond the basic zoning requirements and look at things like primary and secondary views, solar orientation, and the direction of prevailing breezes."





A CLIENT'S DESIRE FOR A JOSEPH EICHLER-LIKE DESIGN PROMPTED ARCHITECT MARK LARSON TO CREATE A HOUSE WITH AN INTERIOR COURTYARD. LARSON POPPED UP THE CENTER OF THE ONE-STORY HOME AND ADDED CLERESTORY WINDOWS TO FLOOD THE SPACE WITH DAYLIGHT.

One home was built on a lot with wetlands to the rear and a close neighbor on one side. The client was a fan of Joseph Eichler's modern houses, which were popular in California in the 1950s and '60s. That gave Larson the idea to create an interior courtyard in the middle of the house, which was only one story. "We popped up the middle to give it a taller ceiling and put clerestory windows around the perimeter," he says. "That way you get this pool of light in the middle of the floor plan, not just at the edges."

TIGHTLY PACKED HOUSES FOCUS ON OUTDOOR SPACE

The June Street Collection, in West Hollywood, built by Canfield Development and designed by KTGY Architecture + Planning, consists of 10 single-family detached homes ranging from 1,887 to 2,255 square feet. The homes are organized around landscaped paseos that lead to the residents' front doors. Private auto courts are enhanced with decorative

paving and complementary drought-tolerant landscaping. All of the homes have ample outdoor space and rooftop decks, plus lower-level decks. Canfield built the homes under the city's Small Lot Ordinance, which permits a more compact footprint and maximizes the lot. The June Street homes are separated by a mere 8 inches of air space. Brian Gelt, vice president of development for Canfield, says the neighbors weren't happy about the original proposal for 3½-story townhomes on the site. "So we worked with them to redesign the project," he says. Only one driveway with five units on each side was created, which decreased density and makes the courtyard the focal point, he adds.

All patios face inward. The design team, which also included landscape architect SQLA, in Brea, Calif., and Studio Bricolage, in Santa Monica, Calif., designed a Spanish-contemporary courtyard theme with Old World cobblestone pebbles set in a round pattern in the center. They then added a pair of rectangular grountains on either side of the court entrance and a driveway $\frac{8}{4}$ gate with a modern, horizontal wood skin. Five of the 10 homes were sold in two weeks, priced from \$1.4 million to \$1.6 million.

CONNECTING PRIVATE SPACE TO THE PUBLIC DOMAIN

For Sherman Jones, Orchard Park, a community in San Jose, Calif., is a perfect illustration of inward-focused design. "Orchard Park has a pedestrian-friendly site plan with strong landscape integration, open space and landscape pockets, and architecture that visually connects private and public spaces with elements such as porches, decks, and courts," Jones says.

The architects looked at the adjacent neighborhood for clues about the project's orientation. A natural arroyo to the southwest has mature flora and fauna as well as public walking and riding trails. Accordingly, the property was configured with a large open space and 1-acre public park abutting the arroyo. The community's 2-acre riparian path is an extension of the existing trail.

The New Home Co., of Walnut Creek, Calif., is building 239 homes at Orchard Park, including Townhomes, Flats, and Courts. The Townhomes are more like detached homes, says Jones, while the Flats and Courts are stacked. The

Townhomes are best suited to young families, due to direct access to each unit and their connection to activity at the ground level, says Jones. The Courts cater to first-time buyers and young professionals with high-tech jobs. The Flats were conceived more for first-time buyers as they are the most affordable, he says.

The buildings are organized to maximize privacy with primary views, porches, and balconies oriented to landscaped shared courts that filter in a linear pattern to a private clubhouse and the large open space and public park. Townhomes range from 1,622 to 2,123 square feet and are priced from the mid-\$800,000s to the high \$900,000s. Flats are 1,661 to 2,147 square feet and priced in the high \$800,000s. The Courts, which are sold out, range from 1,690 to 2,243 square feet and priced from the \$800,000s to \$1.1 million. Since the community opened in 2014, 220 units have been sold.

HAVEN FOR HORSE LOVERS

Oaks Equestrian Center, in San Juan Capistrano, Calif., is regarded as one of the best equestrian facilities in Southern California thanks to the dedication of its owner, Joan Irvine Smith. Several years ago, Irvine Smith sold the 20-acre property to Del Mar, Calif.,

THE ATTACHED HOMES AT ORCHARD PARK ARE ORIENTED TO PUBLIC OPEN SPACE THAT ABUTS A NATURAL ARROYO WITH WALKING AND RIDING TRAILS. PRIMARY VIEWS, PORCHES, AND BALCONIES FACE LANDSCAPED, SHARED COURTYARDS.



[DESIGN]

builder/developer Bill Davidson, who in turn created something magical. The Oaks Farms realizes Davidson's vision of integrating the equestrian facility with single-family detached homes. He succeeded where previous builders had failed, obtaining entitlements to build 32 homes ranging from 3,400 to 4,200 square feet. Davidson took great care with the property, which has oak trees that are hundreds of years old. "We pushed parking to the rear of the site and moved the best of the equestrian buildings to open space," he says. "We also saved trees and added new barns. The trees are positioned as if they were on a golf course, and one bridle path runs right behind the houses."

R. Douglas Mansfield Architect, in San Clemente, Calif., created elevations that are a mix of farmhouse and Spanish architecture and incorporate elements of old San Juan Capistrano. The white stucco walls, dark wood trim, and rooflines of the old houses were integrated into a fresh, clean style. Nine

homes have been sold to date, ranging from \$1.7 million to \$2.2 million. The buyers are mostly families, and 90 percent of them own horses. However, architect John McKee points out that one doesn't have to be a horse owner to appreciate the community's unique ambience. "It's like purchasing a home on a golf course," he says. "Even though you don't play golf, you love the view."

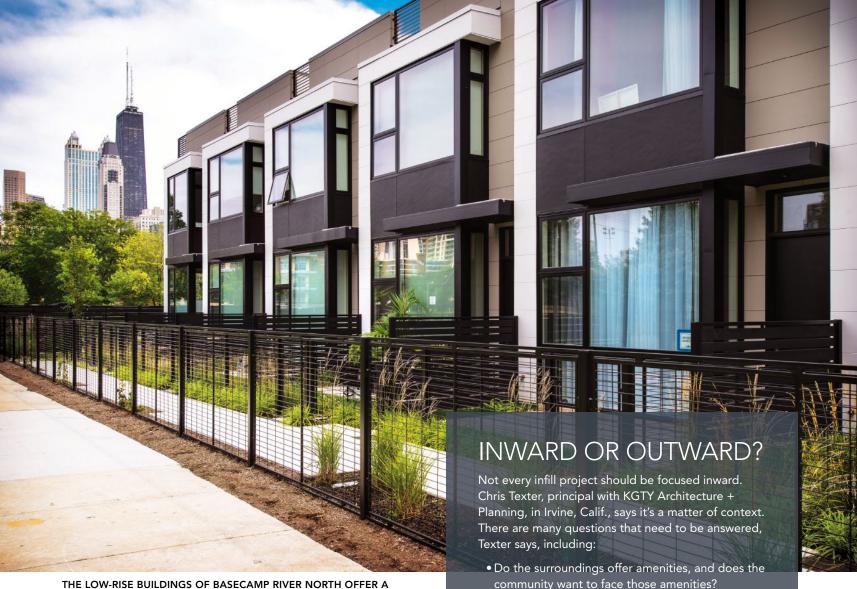
CREATIVE SOLUTION FOR AN EMERGING NEIGHBORHOOD

Chicago's Basecamp River North is located on land that decades ago was occupied by public housing. It's close to downtown Chicago and popular neighborhoods such as Lincoln Park and the Gold Coast. Basecamp was intended to give residents a better quality of life in an urban environment, and it does so through a mix of two- and three-story row houses

BASECAMP RESIDENTS ENJOY SKYLINE VIEWS OF DOWNTOWN CHICAGO FROM THEIR ROOF DECKS.







THE LOW-RISE BUILDINGS OF BASECAMP RIVER NORTH OFFER A STRIKING CONTRAST TO NEARBY HIGH-RISE BUILDINGS, INCLUDING CHICAGO'S FAMED JOHN HANCOCK TOWER.

with two-car garages. The low-rise project contrasts with the density of nearby high-rise buildings, says Zev Salomon of Ranquist Development Group, in Chicago.

Architect George Pappageorge, co-principal of Pappageorge Haymes Partners, in Chicago, says the project is inward-focused in some ways and outward-focused in others. "The townhouse elevations are articulated with nice materials and they're attractive elevations by themselves; they face the street with front doors and façades," he says.

The unit types are based on an earlier project by Pappageorge Haymes that consisted of 65-foot-deep town houses (much bigger than the norm for a Chicago neighborhood). "We made the footprint much deeper," Pappageorge says, "so we could have the garage and the kitchen/living/dining area on-grade, which meant the indoor/outdoor space was contiguous."

Basecamp sold out before construction started. The market-rate units were priced from \$550,000 to \$900,000. **PB**

- Is the existing neighborhood compatible with the new development in use and scale?
- Do the streets provide the right scale for the development?

Texter emphasizes that an inward focus doesn't necessarily mean turning your back on the surroundings—especially if the development is adjacent to a busy street or freeway. When creating inward-looking developments, the focus should be on making an enclave. For example:

- Does the vehicle and pedestrian circulation have a hierarchy?
- Is there a community gathering space and private or public outdoor space?

The idea is to create a village of scale to promote a healthy lifestyle. But the concept of focusing inward can be extended to individual lots and homes as well. "It's clear that the market is embracing and looking for privatized outdoor space," Texter says. "The traditional backyard with a neighbor on each side and in the back is being accomplished through the use of courtyards, covered loggias, and landscape elements." —SB







n a mild winter afternoon in California's Central Valley, I walked a ranch house with an

architect, engineer, and several builder personnel. The house had some cool features: The kitchen opened up via an entire wall of sliders to a patio with an optional outdoor kitchen, making homeowners feel like they live outdoors, and an inner courtyard admitted light into rooms in a surprising way. The entire house had a delightful feel to it and customers loved it. That's the good news.

The bad news: The house was selling, but the margins were terrible. After seeing the beautiful model, we drove farther back into the project to the same unit at the frame stage. As we moved through the house, the engineer-not the one who worked on the ranch house in question—kicked into high gear, offering his take on the engineering. "Every window and door opening has extra jacks and kings that contribute nothing to the strength of this house," he said. "Why are you paying for these?" The builder had no answer. "See those double lam beams over that opening?" the engineer asked. "No need whatsoever. Those could be done with dimensional lumber at less than half the cost."

The engineer went on to point out oversize headers built with both top and bottom plates, many of them completely unnecessary. He stopped at every excess cripple, wasted corner stud, extra framing member at the intersections of closets and walls, and window sill doubled for no good reason. Then he started in on all the excess tie-downs, bolts, and bracing beyond code.

This continued until the builder's staff succumbed to overload and went from informed to bewildered. A couple of days later, the engineer delivered his report. By eliminating unneeded framing, engineered wood, trusses, bracing, and

recovering just a fraction of the labor saved, the builder could recover a minimum of \$2,500—a good start toward solving the margin problem, and the builder didn't have to campaign and cajole for a single reduction in bid price from suppliers or trades. So why didn't the builder's regular engineer catch all this?

TEXAS TRAYS

In Texas we walked a house with that rare architect who boasts a slew of design awards yet puts a lot of thought into the cost, from elevations to floor plans to how to build them. He'd actually done a stint as head of purchasing with a production home builder. Among many other issues (read: opportunities), this large single-story ranch was festooned with ceiling trays, including the living room, dining room, kitchen, master bedroom, and one additional bedroom. Five in all, all standard, each built with double 2x12 framing members.

The architect made several observations: The builder could use a single 2x12 for the trays, and the trays could be built more efficiently with 2x4 material or even 2x2, with scrap OSB to box them out. Each method would save money and work just as well. Then he queried, "Have you ever asked your truss company to build the trays right into the trusses? That can save both material and a ton of labor." No one on the builder's team had considered that. Finally, the architect suggested, since they were already using 9-foot ceilings throughout, why not make the trays an extra-cost option?

The story ends with the builder going the integrated truss/tray route and making all but the master bedroom tray optional. The builder netted out more than \$900 per house for starters, found additional profit on tray options, and made its framers happy. The old "beatdown" approach was unnecessary. Why did they have to bring in an architect from 800 miles away to suggest this?

MOST BUILDERS ARE RELUCTANT TO PAY FOR EFFICIENT DESIGN AND ENGINEERING BECAUSE THEY DON'T UNDERSTAND TOTAL COST AND TOTAL VALUE. IF THEY KNEW THE NUMBERS, THERE WOULD BE NO HESITATION.

FEAR & LOATHING IN MEMPHIS

A few years ago, Memphis, Tenn., and surrounding cities adopted seismic standards and codes every bit as demanding as those in San Francisco, due to the New Madrid fault zone. The entire community of builders, architects, engineers, trades, and suppliers was on edge implementing the new requirements. When we walked those first houses supposedly built to the new code with a highly experienced West Coast-based engineer, what we found was every home built far beyond code requirements, at a cost of \$1,500 to \$3,000 extra for each in excess timber, sheer panel, engineered wood products, hold-downs, tie-downs, straps, and bolts. So just fix it, right? This engineer wasn't licensed in Tennessee, so he thoroughly marked up the plans and schedules, with full details and load calculations. Yet the builder's local engineer wanted nothing to do with the revised specs, even though they fulfilled code requirements. The builder had the same experience with several other engineering firms in the market. Finally, he was able to find one young guy to do the redesigns, who saw the opportunity to learn and thus grow his business.

WHO'S YOUR BOSS?

Out East, a builder contracted with a panel plant and was quite happy with the results. They saw reductions in cycle time, site waste, and—although it took a while for their framers to learn the process and time savings—they eventually dropped their labor price. During our site walk, I noticed a remarkable excess of timber throughout the entire structure. I fully understand that

panels must be built to both travel well and assemble efficiently. I spent one entire year of my career on a project that required visits to more than 25 panel plants and modular house manufacturers. The first house we entered revealed excess framing, headers, and connectors—all the usual suspects. At the next house—a large two-story—three representatives from the panel plant arrived to accompany us. My gentle prodding about the glut of timber was only met with claims that the excess was for transportation needs; something I knew to be false. I didn't think they were lying, they just needed to give me something on the fly and hoped I'd buy it.

Then we saw the back wall of the house, which ran from a large family room through an open dining area on into the kitchen—36 feet in total. The structure used to accomplish this left me staring in disbelief. Along the entire length ran tripled-up lam beams with about 30 fat TJIs supporting the second floor, attached with joist hangers, and there were several 3-0/5-0 windows and one 48-inch sliding door. Huge support posts at 12 feet and 24 feet created a 12foot opening, filled in by panels, plus the windows and slider. For the life of me, I couldn't fathom the thinking behind the design. Then someone explained: "The customer wanted an 18-inch bump-out on the back wall"

The panel plant was owned by a large lumber dealer, and together they worked up the specs and design for the panels plus the necessary engineered wood, connectors, etc. The rep talked a good game about how efficient the panels were, when all I could see was blatant waste. I asked the panel rep if his company had an engineer and he replied,

"Absolutely! We have two! They're involved in the design of everything." Yet there were at least two or three far more efficient, cost-effective ways to design this option that I could see, so I asked about who the engineers work for. The rep looked confused, so I added, "Who pays them for their work?" He tried to explain that the engineers work for the panel plant, just like he does, and it is owned by the lumber company, and ... he was confused again. I feigned surprise and explained that from what I could see, I assumed the engineers work for Georgia-Pacific, Weyerhaeuser, Simpson Strong-Tie, and a few other big suppliers. The rep laughed, but soon realized no one else was amused.

I explained that although the panel company builds nice, sturdy panels, it hadn't understood who the customer is for this job. The customer is not the component manufacturer, lumber supplier, or lumber dealer; the customer is the builder—who had no desire to buy and bury excess timber and metal behind the walls. Part of the panel company's job should have been to make damn sure the builder didn't waste money, but I suggested that that had been forgotten. It was a tense moment, but over the next few months, everyone woke upincluding the builder. Changes were made, adding several thousand dollars of margin for the builder.

EDMONTON EXCESS

Walking homes in Edmonton, Alberta, in February isn't what many would consider a good time, but finding big savings helps to ease the chill. On this day I noticed grade beams and thickened footers that appeared way beyond the

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I HAD AN ARCHITECT IN NASHVILLE ACTUALLY LOOK ME IN THE EYE AND STATE THAT HE HADN'T VISITED A FIELD SITE IN 24 YEARS SINCE GRADUATING. IT WAS ONE OF THE FEW TIMES I'VE BEEN LEFT TOTALLY SPEECHLESS.

call of the code. We measured about 10 of them, and that was all the evidence we needed. Turns out the house architect had developed a habit of simply dotting in the interior footers and grade beams with the universal, "as required." Then forming crews built them as they found expedient, and the concrete company reaped the benefits. Once this spec deficiency was remedied and the architect began calculating the correct sizes, the builder realized an additional average savings of \$375 per house.

If you think—or perhaps just hope—these incidents are simply cherry-picking four or five out of a few hundred product tours, you're wrong. My TrueNorth colleagues and I find similar examples in the homes of every builder we visit—more than 200 over the past 19 years across the U.S. and in four other countries. No exceptions. Thus we know, not anecdotally but by the facts, that the problems with architects and engineers are not the exception, they're the rule.

Here are the cold, hard facts. The vast majority of architects are not trained in the intricacies of efficient construction. Engineers are trained, but most show little or no concern. We can be a bit more forgiving of the architects, although not so much so their universities. If I ran a school of architecture, each student. each summer, would be required to work in the field in construction. Same for engineers learning about the process of how things are built and the costs, both obvious and hidden. That would benefit them far more than a summer internship at a design firm. And any architect should be highly motivated as soon as he or she actually begins designing, to get up to speed on cost factors. Yet I had an outside architect in Nashville actually

look me in the eye and say he hadn't visited a field site in the 24 years since graduating. That was one of the few times I've been totally speechless.

I find it harder to give a break to engineers, who just know better. They know when they're over-specifying; they know when they have designed at two or three or five times the code requirements. They know that it costs their builder—who writes the checks—a fortune. I propose this as the job definition for a residential structural engineer, "Meet every building code—including the customer code—at the lowest cost to the builder." Yes, the customer code is important. If you build a second-floor master bedroom to code, yet each time the homeowner crosses it it bounces, you just lost the game.

DIRTY SHOES

Some years ago at an NAHB presentation, I was doing my rant about these issues, and during the Q&A a woman asked how you go about finding architects and engineers who "get it" when it comes to cost and value. "Simple," I proclaimed, "just go from office to office seeking one pair of dirty shoes."

Not long after I wrote a column citing my frustration with architects, a high-level official from the American Institute of Architects sent a letter to my editor-in-chief complaining that I was being unfair to architects and demanding that I cease and desist from further criticism. That made my day because it was proof that I'd touched a nerve well in need of tweaking. I challenged him to submit an article refuting my points, which the editor assured would be published. I also challenged him to point-counterpoint debates at

any venue of his choosing. He never replied. But I did hear from quite a few architects and engineers thanking me for laying the problem on the table.

I am a huge fan of architecture, and that only adds to my frustration. It's true that some of the greatest designs ever produced would likely never have happened had the designer been constrained by cost. The reality, however, is that 99 percent of us will never live in a home designed by a famous architect. And although I agree that architects should be artists first, we can't build beautiful residences without understanding cost and value, with the full support of every structural engineer, at a price homebuyers can afford.

This is an industrywide problem, and builders' reluctance to pay for great design that actually increases building efficiency and reduces cost is a huge contributing factor. Purchasing will work mercilessly to bid and rebid, desperately seeking a \$500 price reduction. Yet senior management will balk at spending the money to design a house that will generate a multiple of that \$500 in margin, net of the fees. I couldn't claim this if I hadn't seen it repeatedly done by the small percentage of architects and engineers who truly get it. They amaze me and have taught me so much, but they make me impatient with the status quo in their professions. I'm tired of the waste we find in every house. Are you? Isn't it time we all lost patience with the current state of affairs? PB

Scott Sedam is president of TrueNorth Development, a consulting and training firm that works with builders to improve product, process, and profits. You can reach Scott at scott@truen.com or 248.446.1275.

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WAYS TO MINIMIZE WAYS TO MINIMIZE TO MINIM

IMPROVEMENT TO HELP PREVENT
WARRANTY HASSLES AND GIVE YOU
AN EDGE OVER COMPETITORS

By Tony Callahan

arranty problems can affect margins, sales, employee morale, and a builder's reputation. However, minimizing warranty expenses can help differentiate your company from the competition. The areas of focus should be design, systems, construction documentation, material selection, proper installation, superintendents and subs, homeowner orientation, warranty defect tracking, and continuous improvement.

TO MINIMIZE WARRANTY EXPENSES, BEGIN WITH DESIGN. Poor design can increase your warranty expenses from the very start. Good design considers constructability and warrantability as much as it does aesthetics. To get it right, involve construction, key trades, and manufacturers' technical support representatives.

Architectural designs are getting more complex, with simple gable roofs being replaced by combination systems that include hips, valleys, crossed gables, and dormers. While these are all attractive, changes in pitch, plane, and orientation can result in construction defects such as water intrusion if combinations aren't properly thought through. Give ample consideration to the flow path of precipitation from the roof and avoid any design in which water will directly flow to a wall. Make sure that roof overhangs are adequate and that gutter and downspout drainage paths are clear and direct water away from the foundation.

Elevations that integrate a variety of materials—brick, stone, lap siding, and shake shingles—can also create warranty issues. And the trend toward incorporating more natural light in home design has increased the number of windows, doors, and skylights, adding more details to already complicated architectural designs. Each opening presents an opportunity for water intrusion. Proper flashing and a shingle approach to the drainage plane is paramount.

EXPENSES

LOOK FOR WHOLE-HOUSE ENGINEERED SOLUTIONS. Understanding how the house will perform as a whole, integrated unit with its occupants in it is key. This includes structural assemblies-foundation, wall, roof, and floor-and mechanical, plumbing, and electrical systems. Whenever possible, involve third-party experts in the engineering and inspection phases. For example, rather than having your HVAC contractor size the equipment and duct system, consider using a mechanical engineering firm that specializes in HVAC design, inspection, and testing. Make sure the firm has the proper accreditation; specifically, membership in the American Society of Mechanical Engineers, and in the American Society of Heating, Refrigeration and Air Conditioning Engineers, and is certified by the Air Conditioning Contractors of America. Involvement in organizations like these brings credibility and demonstrates a commitment to the industry and the profession.

REVIEW CONSTRUCTION DOCUMENTS FOR CLARITY. Documents must be clearly written and easy to follow. You can have the best design and a great engineered solution, but if trades can't follow the construction documents, it's all for naught. The best way to develop readable construction documents with the appropriate level of detail is to involve the people who will be using them to build the house. Renderings and illustrations are better than the written word. Drawings should have separate detail pages for critical areas. For example, flashing details need to be large enough to easily read and should have their own page in your drawing set. They should clearly illustrate which materials are applied first to ensure an effective drainage plane.

PROTECT YOURSELF IN SUBCONTRACTOR, SUPPLY, AND SALES CONTRACTS. One way to make sure that trades are properly installing products is to contractually obligate them to do so. A solidly written subcontractor, supply, and sales contract

transfers risk to the source of the possible problem. If there's an issue with the way a manufacturer's product was installed, it should be the installer's burden to fix it—all of it. Don't hold one trade responsible for another trade's work. For example, if a repair requires removing trim and drywall, the trade that caused it should pay to have it repaired, painted, and cleaned.

Have a clear warranty coverage book that details what's covered and what's not. Be specific. For example, if there is a crack in the driveway, specify how wide the crack is and what the crack offset must be before it's covered. State the methods in which the crack can be repaired; otherwise you leave yourself open to a homeowner who believes you should replace the entire driveway for a surface crack, with no separation or offset. Reference the warranty book in your sales contract and provide homeowners with a copy early in the contracting process so they know what is covered—and what isn't—before the contract is finalized.

Include specs in the construction document package. Clearly note if you expect that a specific manufacturer's product will be used. Include the manufacturer name, product SKU number, and a description. Note if alternative material is allowed, but rather than just saying "comparable" product, be specific. Make sure your scope of work includes your expectations. For example: Material should be installed per the manufacturer's installation instructions. Failure to do so will void the manufacturer's warranty.

USE BETTER MATERIALS TO CREATE A BETTER HOME. Cost is always an issue when it comes to the quality of materials used in new-home construction. As far as warranty expenses are concerned, don't confuse the price of materials with the cost of using them. For example, a pine exterior door jamb may have a lower purchase price, but if you're in a region that gets a lot of rain, that pine door jamb will wick and rot at the threshold. Better to pay slightly more up front and use a rot-free jamb than pay the cost of replacing a rotten one later. Do

FOCUS ON DESIGN, SYSTEMS, DOCUMENTATION, MATERIALS, INSTALLATION, SUPERINTENDENTS AND SUBS, HOMEOWNER ORIENTATION, DEFECT TRACKING, AND CONTINUOUS IMPROVEMENT.

your homework on the materials used in your projects—don't just blindly relegate responsibility to your trades. Also, don't confuse brand with quality. While it's true that some brand names have built their reputation on quality materials, this isn't always the case.

AVOID THE MOST COMMON WARRANTY EXPENSE: BAD INSTALLATION. Poorly installed insulation can cause an HVAC system to work harder than it should, creating inefficiencies and resulting in excessive energy consumption. Incorrectly installed shower tile can trigger moisture and mold problems. Improper grading can cause foundation issues. Out-of-place dampers, vents, and ducts can create an uncomfortable home for occupants. Drain pipes with inadequate slope can result in plumbing back-ups and clogged drains. Hardwood that isn't allowed to acclimate before installation can gap and bow. The list goes on.

In the new normal of subcontractors subcontracting the labor to install your products, there is less focus on training the person who is doing the installation. If you can avoid using subcontractors who subcontract the work, I encourage you to consider it. For training to be effective, you need to work with subs that have actual employees installing the products—subs with low employee turnover. Then invest in those employees. Make sure they receive proper ongoing training. Manufacturers are a great resource for product installation training. After all, it's in their best interests (and yours) to make sure that their products are correctly installed. As you increase the skill level of the person who actually installs the product, your warranty expenses will go down.

USE CONSTRUCTION SUPERINTENDENTS AS A LAST LINE OF DEFENSE AGAINST CONCEALED DEFECTS. Supers have to walk every house every day. If they don't catch incorrectly installed or defective products before they're concealed by drywall, concrete, roofing shingles, etc., it will likely be an expensive warranty issue. Make sure that you provide training for your superintendents. They need to be knowledgeable about proper installation of products in your homes.

USE CHECKLISTS TO SET STANDARDS AND ENSURE CONSISTENCY. Don't expect your superintendents to remember everything. Work with them and with your trades to develop checklists at critical construction phases (at the least: framing, mechanical, and final). Checklists will help ensure that specific items are reviewed on every home and that homes are constructed to your standards. If you're not using checklists to make sure that you're getting the products and proper installation methods you are paying for, consider implementing them soon.

PROVIDE HOMEOWNER ORIENTATION TO ENSURE PROPER HOME MAINTENANCE. Give homeowners an orientation manual that addresses everything homeowners need to know and do to maintain their new home. You can also use this as an opportunity to set expectations about what is/is not covered in your warranty program.

TRACK DEFECTS TO HELP ELIMINATE ROOT CAUSES. Have a system to track warranty defects at a granular level. Identify warranty issues by the: installing trade, brand of materials, installation date, construction superintendent name, house plan number, and elevation. Review the defect database looking for root causes, then rapidly implement solutions and identify exposure to future warranty problems by tracking homes involving affected trades and material brands.

OFFER GOOD WORKMANSHIP TO START THE HOMEOWNER EXPERIENCE ON A POSITIVE FOOTING. Fit and finish are important. Sloppy cabinet finishes, poor tile fitting, and lack of attention to trim, carpet, and paint can doom you from the start. Your customer satisfaction scores suffer, the homeowner will scrutinize everything else about the home, and you've begun the relationship on a sour note. PB

Tony Callahan is president of Callahan Consulting Group, callahanconsultinggroup.com. For questions and comments regarding minimizing warranty expenses, email tonyc@callahancq.com.

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POOL HOUSES & CABANAS

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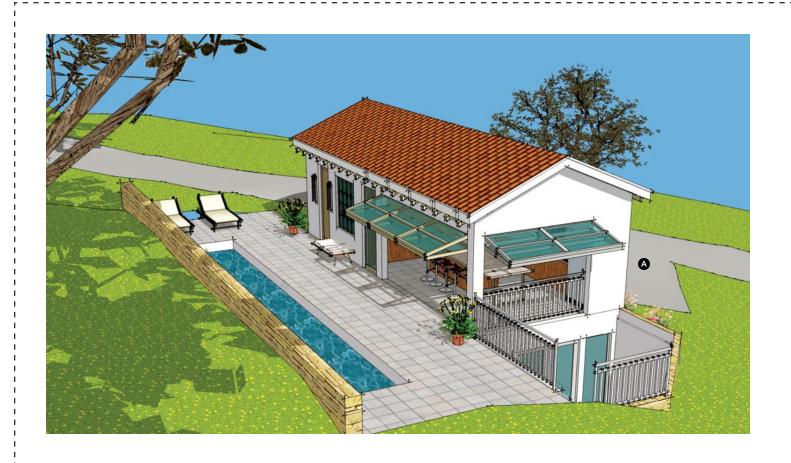
DECEMBER Kitchens

A range of solutions can accentuate outdoor living

By Larry W. Garnett, FAIBD, House Review Lead Designer

utdoor living spaces endure as a priority for many clients when planning a home. Because pools remain one of the most common outdoor areas, pool houses and cabanas become a natural focal point. Just as the kitchen is the dominant feature inside the home, an outdoor kitchen becomes an important part of the backyard. With the introduction of weather-resistant furniture, outdoor living rooms now rival interior spaces with tile or polished concrete floors, fireplaces, and

even flat-screen televisions. The following ideas from our House Review team range from basic entertainment pavilions to structures that can easily double as stand-alone guest quarters. Each provides outdoor spaces with the functionality and comfort of an indoor living area.



HILLSIDE POOL HOUSE

his pool house is both an escape and a guest house. Downhill from the main house, it provides a retreat from the daily grind and a private place for guests to come and go without interrupting the household. Strict development limitations imposed by the jurisdiction required that half the floor area be below grade. The upper floor is a party pavilion with supporting bath and laundry facilities. Two sides of the pavilion open to the southwest with large awning doors. These lead to the pool deck and outdoor kitchen. The deck expands when the pool cover rises from the bottom and meshes with and matches the paving. The lower-level houses a bedroom suite that opens out to a sunken courtyard and open air stairway leading back up to the pool area.

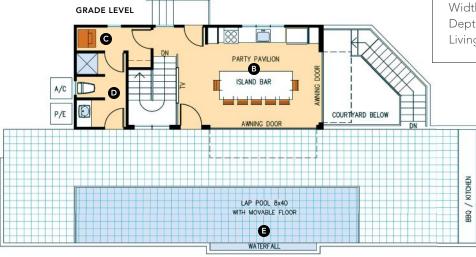
ARCHITECT

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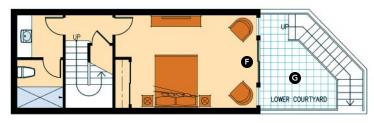
PLAN SIZE

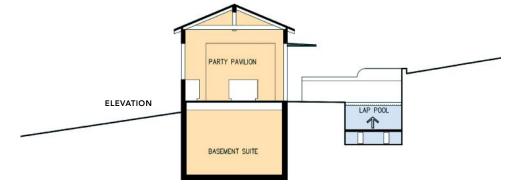
Width: 35 feet

Depth: 14 feet, 4 inches Living area: 1,000 sf



BASEMENT





- A Parking area shielded from the main house by the pool house
- Party pavilion with a full kitchen and central island focusing on a large-screen TV above the stair rail. Two sides open up with awning doors facing the sun and pool patio
- Laundry area for both pool and guest house use
- Bath opens directly to the pool deck and also connects with the house
- Lap pool as retaining wall waterfall. Pool floor rises up with the press of a button to form a cover and expand the surface of the patio
- **6** Bedroom suite opens out to the lower courtyard
- Sunken courtyard with stairway leads up to the pool deck

[HOUSE REVIEW]

THE RETREAT

DESIGNER

Gary Iltis Residential Design Concepts garyrcdesign@gmail.com 713.598.0964

PLAN SIZE

Width: 30 feet Depth: 20 feet Living area: 545 sf



djacent to the swimming pool and designed for informal outdoor gatherings, this pavilion offers a compact space for grilling, dining, and conversation. The combination of stone and brick along with tile flooring and granite countertops provides for low maintenance. The 12-foot vaulted ceiling adds to the feeling of spaciousness.

- A Pavilion exterior uses a combination of stone and brick for the fireplace and column bases
- B Kitchen area offers a sink, grilling area, refrigerator, keg tap, and granite countertop
- © Sitting area features a stone fireplace with a flatscreen television above it. The TV is placed in a cabinet for protection from the elements. The ceiling is vaulted from 9 feet to 12 feet in height
- **D** Dining area



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FALLS COURTYARD HOME

ARCHITECT

The Evans Group Donald Evans, AIA devans@theevansgroup.com theevansgroup.com 407.650.8770

PLAN SIZE

Width: 40 feet Depth: 94 feet

Living area: 2,046 sf (optional

109 sf pool cabana)



his is the ultimate indooroutdoor home, wrapping around a private and lushly landscaped pool courtyard, with 560 square feet of covered outdoor space. It lives larger than its square footage and boasts an open floor plan with lots of natural light throughout. The outdoor living environment is fully screened and provides space for a pool and fountain as well as a



garden, outdoor dining room, outdoor seating areas, complete outdoor kitchen, and an area for sunbathing. The flex option, which enables creating a pool house from the garage storage, adds even more flexibility and space to this floor plan. The plan proves that a courtyard home with a separate pool house and cabana needn't be large and can be right-sized for today's market and buyers.

- A True courtyard home with fully screened-in outdoor living
- B Pool with fountain feature, garden, seating, and dining
- Outdoor cool kitchen with a seating bar, grill, refrigerator, wine refrigerator, and sink
- Garage storage space flexes to become a pool house, with sliding glass doors opening to the pool area







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THE HUNTINGTON POOL HOUSE/CABANA

ARCHITECT

GMD Design Group Scott Gardner, AIA scott@gmddesigngroup.com 919.320.3022 Donnie McGrath donnie@gmddesigngroup.com gmddesigngroup.com 770.375.7351

PLAN SIZE

Width: 45 feet Depth: 18 feet Living area: 749 sf





his multifunction cabana is designed to provide indoor-outdoor living. The cabana interior has a small sleeping area for a guest and a large open area for relaxing and entertaining. There is a covered porch, and an outdoor fireplace and arbor complete the outdoor living experience.

- A Pool
- **B** Pool deck
- Arbor with seating area
- Outdoor fireplace
- **■** Covered porch
- **6** Open living and eating area
- **G** Bath with direct access to the exterior and interior
- Guest suite



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CONFERENCE SPEAKERS:

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POOL HOUSE

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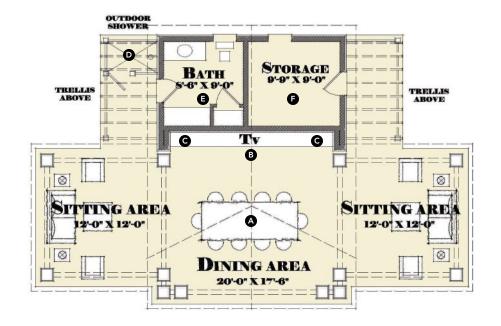
Todd Hallett, AIA, CAPS TK Design & Associates thallett@tkhomedesign.com tkhomedesign.com 248.446.1960

PLAN SIZE

Width: 44 feet, 4 inches

Depth: 28 feet Covered area: 561 sf

Bath: 78 sf Storage: 90 sf



he entertainment industry has poked fun at the luxury of owning a pool cabana ("Oh, cabana boy ..."). It's amusing, yet with as many pool houses as our firm has completed, we've never encountered that particular client profile or attitude. Most pool houses are used by families to entertain while keeping an eye on the little ones as they splash and carry on. A well-designed pool house should be as functional as it is great-looking. Its job is to provide both shelter from the sun as well as the amenities required to make the outdoor space as enjoyable as possible.

- A Large covered area protects the family from UV rays while allowing high visibility. The space is designed for a large farm table bookended by two flanking seating areas
- 1 On the back wall, a large TV is great for watching sports and providing a little background noise
- © Built-in cabinetry offers plenty of storage and a framework for outdoor kitchen appliances
- An outdoor shower is a nice way to clean off the chlorine (or salt) without soaking an interior space
- Bath is large enough for a changing area and is designed for privacy
- Storage area is large enough to hold pool toys and unsightly pool equipment



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PREMIUM PERFORMANCE WINDOWS

Certified by the Passive House Institute for use in extremely cold climates, Zola Arctic, a new offering from **Zola Windows**, is a premium performance window that can be used in buildings across a broad spectrum of temperatures and climates. A timber-aluminum frame, PU-foam insulation, thermal glazing, and a superspace triple seal with butyl as a secondary seal combine to create a window with an R-value of 15 (a typical Energy Star window has an R-value of between 2.5 and 3.7). Zola Arctic has a visible light transmittance of 64 percent that allows for maximum daylight, uses German concealed hinges—available in marine grade stainless steel for coastal conditions—and has a powder-coated aluminum exterior for durability and longevity. The Fixed Windows can fit openings as large as 8 feet wide and 10 feet high, while the Tilt & Turn Windows can fit expanses as large as 5 feet wide and 9 feet high. **For more info circle 900**

INSULATING WINDOW FILM

Heat lost or gained through windows accounts for over 30 percent of all the heating and cooling energy used in homes and buildings in the U.S. The 3M Thinsulate Window Film Climate Control Series aims to rectify that. Thinsulate provides the same benefits of 3M Sun Control Window Film by rejecting heat and blocking UV rays, but it also works to protect against heat loss during cold weather. The film, applied directly to existing windows, is faster and less expensive to install than replacing windows and is almost as effective as an extra pane of glass, the company says. Despite being almost completely invisible, up to 99 percent of UV rays are blocked, which helps to protect artwork, furniture, hardwood floors, and window treatments. For more info circle 901



ALUMINUM DOUBLE PANE

The A4 aluminum double-pane window from **Glo European Windows** provides double-pane glass with a thermally broken aluminum frame for cost-effective durability and

clean architectural lines. The Glo A4 series double-pane window has an R-value between 4 and 3.4 and a solar heat gain coefficient between 0.28 and 0.60. Glo's double-pane windows manage to outperform most triple-pane windows while offering a lower price point. The windows come with four handle options and 14 standard color options with a powder coat finish, while also offering more than 300 custom color options. Additionally, the A4 series comes in tilt turn, French, and fixed window styles.

For more info circle 903



Kolbe's new double-hung locking hardware is designed to fit historical renovation projects. The spoon sash lock can be paired with Kolbe's Ultra Series XL Sterling double-hung window, as the lock coordinates with the window's Antique Brass finish. It can also be installed on Kolbe's Heritage and Ultra Series Sterling double-hung windows. A dual-positioning lever allows the sash to be unlocked and tilted in for cleaning.

For more info circle 902



WOOD WINDOWS

Clean lines, square interior detailing, and a sleek profile give Jeld-Wen's EpicVue wood windows a contemporary feel. A thick, aluminum-extruded sash supports the pane, allowing for more glass exposure. The windows can be direct set at 90 degrees in the corners of a home to provide a panoramic view of the surroundings. A water-based wood treatment called AuraLast prevents the wood from rotting and protects against water saturation and termites. EpicVue is available in eight wood species and five stains, with custom color-matching options. For more info circle 904



COASTAL WINDOWS

The Premium Coastal line from **Weather Shield Windows & Doors** is specifically designed to hold up in coastal climates while adding to the aesthetics of high-end beachfront homes. The windows come with enhanced coatings to endure harsh coastal climates. Premium Coastal windows include push-out and traditional casement, awning, double-hung, picture, and direct-set styles. The double-hung style is available in sizes up to 8 feet tall, and operating casements are available in sizes up to 7 feet. All Premium Coastal windows come with a TriCore frame that's composed of a vinyl sub-frame, aluminum clad exteriors, and wood interiors that provide for a weathertight fit and excellent thermal performance, the company says. TriCore frames use moisture-resistant materials for the frame components that are most susceptible to weathering. The entire product line is available in a range of exterior clad colors, seven choices of interior wood species, and eight interior finish options. **For more info circle 905**





MOTORIZED DRAPERY ROD

The first and only trackless motorized drapery rod is now available from **QMotion**. Forgoing wires and motor boxes, the QMotion rod uses a patent-pending, battery-operated motor that is hidden inside the rod to reduce noise. When the batteries need to be changed, it's not necessary to remove the drapery panels—another industry first for the QMotion rod. Touch Wand Activation, a manual override feature,

close the draperies through movementsensing technology. The drapery rods come in six finishes and six finial options. Additionally, the hardware can be paired with an individual's own choice of fabric to create a custom

allows users to tap the wand to open or

choice of fabric to create a custom design. For more info circle 907



LARGE CASEMENTS AND AWNINGS

Contemporary architecture and design often calls for large, energy-efficient windows with uninterrupted expanses of glass. To meet this need, **Marvin Windows and Doors** has added larger sizes to its Contemporary Casements and Awnings, Ultimate Casements and Awnings, and Ultimate Replacement Casements and Awnings. The new sizes are available on clad-wood windows featuring Marvin's extruded aluminum cladding with 70 percent Kynar finish. The Contemporary Casement, Ultimate Casement, and Ultimate Replacement Casement are now available in the maximum sizes of 36 by 102 inches, 40 by 96½ inches, and 44 by 91½ inches. Meanwhile the Awning windows' maximum sizes are 64 by 81½ inches and 96 by 48½ inches for all three styles with an additional size of 72 by 72 inches for the Ultimate Awning. **For more info circle 906**



PRIVACY WINDOWS

The new Home Designer Collection of decorative glass windows from **Hy-Lite** offers four unique privacy windows inspired by the company's Designer Advisory Council. The windows help solve the issue of privacy while allowing natural light into a room. The four new window styles are Metro, Mission, Prairie, and Baroque. With its clean lines and three-dimensional design, Metro is inspired by modern architecture. Mission is a Craftsman-style design constructed with silk-screened tempered privacy glass. Prairie (shown) is a versatile transitional design that can be used in traditional or contemporary homes, and Baroque's design is inspired by classic and modern tile, providing a unique way to blend texture into a room. The windows come in a variety of sizes and are available nationwide. **For more info circle 908**



TWO-TONE VINYL WINDOWS

A growing design trend across the U.S. is the use of two-tone windows. A dark window exterior can accent a variety of building styles, while a lighter more neutral interior color helps to maintain design flexibility in a living room or bedroom. But the two-tone color trend poses a challenge because dark colors absorb more solar heat, which can lead to warping in vinyl window frames. To combat this, **Ply Gem**'s new 1500 Vinyl Collection uses beige, clay, dark bronze, or black color co-extruded capstock over white profiles (the color is within the product, not painted on) to reflect sunlight and limit fading (Brickmould Craftsman Dark Bronze, shown). The line is fully customizable and allows builders to pay only for the upgrade options they want without getting ones they don't need. The 1500 Collection is Ply Gem's first window line available with its Sound Transmission Control glass technology to dampen sound and reduce outside noise pollution. **For more info circle 909**

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LADDER ACCESSORIES

Two accessories from 360 Products will help painters when working with extension ladders. The Side Kick paint can holder can be fastened to either side of any aluminum extension ladder, which ensures that a onegallon paint can is safely secured at arm's length. The Can Holster snaps onto the open can, where it prevents paint from drying in the rim and around the bucket's edge. It has a brush well that can hold a 3-inch wet brush. The Side Kick and Can Holster are locked into place by a safety pin, and a pivoting selfleveling mechanism prevents spills no matter the ladder angle. For more info circle 911



ODOR-KILLING PRIMER

The new Zinsser Odor Killing Primer from Rust-Oleum eliminates existing odors on painted or unpainted surfaces. The water-based primer seals off the unpleasant smells left by pets, food, cigarette and cigar smoke, and fire and smoke damage. It applies white but dries clear with a lowsheen finish. Dry to the touch in about 25 minutes, it can be top-coated after 45 minutes using any clear finish or paint. The primer can be applied to a variety of surfaces, including glass, cabinets, subfloors, walls, ceilings, drywall, cured plaster, ceramic tile, and metal. For more info circle 913







With 3,600 psi, the RX-Pro airless spray gun is as powerful as it is comfortable for builders to use. The spray gun, from Titan, has ergonomic features that let users paint longer. The trigger requires 30 percent less force than other similar guns, and the FingerPrint Grip has three interchangeable grip sizes to fit any hand. The RX-Pro also has a one-touch trigger lock, a free-flow swivel for easier maneuvering, a built-in filter removal wrench, and bucket and ladder hooks. For more info circle 912



SnapDry

PPG Paints has updated its Break-Through line of coatings. The new low-VOC (<50 grams per liter) version of the water-borne acrylic paint has a slightly higher viscosity for easier handling; better sag resistance for a more even finish; improved flow and leveling for a smoother finish with fewer brush marks; a drying time of 17 to 20 minutes to touch; and a longer "open time"—the period when paint is still wet enough for painters to fix brush marks and drips. Available in both satin and gloss sheens, the paint can be applied on floors, trim, cabinetry, railings, shelving, and other metal, wood, concrete, and laminate surfaces.

For more info circle 914



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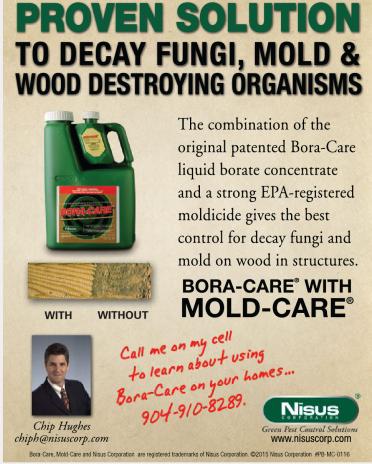








Circle 776





Jennifer Barkan on turning website visitors into warm leads and home sales



Jennifer Barkan Online Sales Consultant Rose & Womble Realty Co. Suffolk, Va.

ennifer Barkan was an operations manager for a real estate company representing home builders when she attended a 2012 conference about cultivating online prospects. What she heard there provided the impetus for what would be a turning point for the firm's new-homes division and her career.

Barkan convinced her managers that the company needed an online sales consultant and spent almost a year training with consultant Mike Lyon before developing the program and implementing a customer relationship management system. During the first two years of the online sales program, the number of builder clients grew from two to 10 companies and the online division's share of sales increased from 6 percent to 13 percent. Barkan also increased Facebook engagement by featuring shelter dogs available for adoption in her house tour videos.

What was the opportunity you recognized that led you to pursue becoming an online sales consultant?

Mike Lyon was giving a presentation about having a commitment to online sales and having an online sales consultant. It was like a light bulb went off for me. I thought, "We don't know how to quantify what happens after the person gets to our website." So, sitting there, I'm thinking ... What are we doing? There's a huge opportunity here, yet we have no idea where these people are going once they get to our site.

The leads at the time were just going directly to our salespeople. And, while we love our salespeople, cultivating and marketing leads isn't their highest and best use. I just raised my hand and said, "I think this is a huge opportunity for our company, and I'd like to spearhead it." Our managers were like. Let's do it!

We started the project just for our new-homes division. We have a separate page on our company website for new homes, and I started as the online sales consultant for new homes.

How should a lead be handled within the first 30 days?

A I learned from Mike Lyon that you have to be as quick as possible with your response. What we know about our on-site agents is that they're at their best with the person who is in front of them. They aren't going to stop their sales process to go to the phone or respond to an email. That's where I come in. I'm like their virtual assistant. I try to be available seven days a week, all hours of the day. I do turn my phone off at 11 p.m. It freaks people out a bit if I answer the phone at midnight. They're like, "Oh my gosh, I thought I was just going to leave a message." We have over 40 new-home communities that we're marketing, so there's no way I'm going to have the answers to every single thing someone calls to ask. But it's about being a friendly voice on the other side of that computer or phone. And yes, I respond, I'm real, and I will get back to you with an answer.

So I try to answer the phone as quickly as possible; that's first. Second is to really find out the person's wants, needs, and desires. I try to control the conversation so that I'm asking the questions and trying to get information about what they want rather than them asking me the questions. I try to steer the conversation so that I'm finding out about their family, where they live now, what they like and don't like about their current home ... so I can determine which of our available homes would best fit their needs. Taking that person from just looking online to being a real, viable prospect for our sales team is my goal. By the time the prospect reaches our sales team, that potential buyer has likely had a couple of conversations with me, and I'm able to provide my salespeople with lots of good information about the prospect so that when they get to the home site, the salespeople are ready.

What needs to be on a builder's website to make the online sales consultant's job easier and more effective?

A Having a consistent, clear call to action on the website is really important. Also, if the builder's site agent's email and phone number are on there [along with mine], I don't always know what happens to the prospect. Part of my job as OSC is to report on the activity of the website.

For the complete interview with Jennifer Barkan, see probuilder.com/barkan



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