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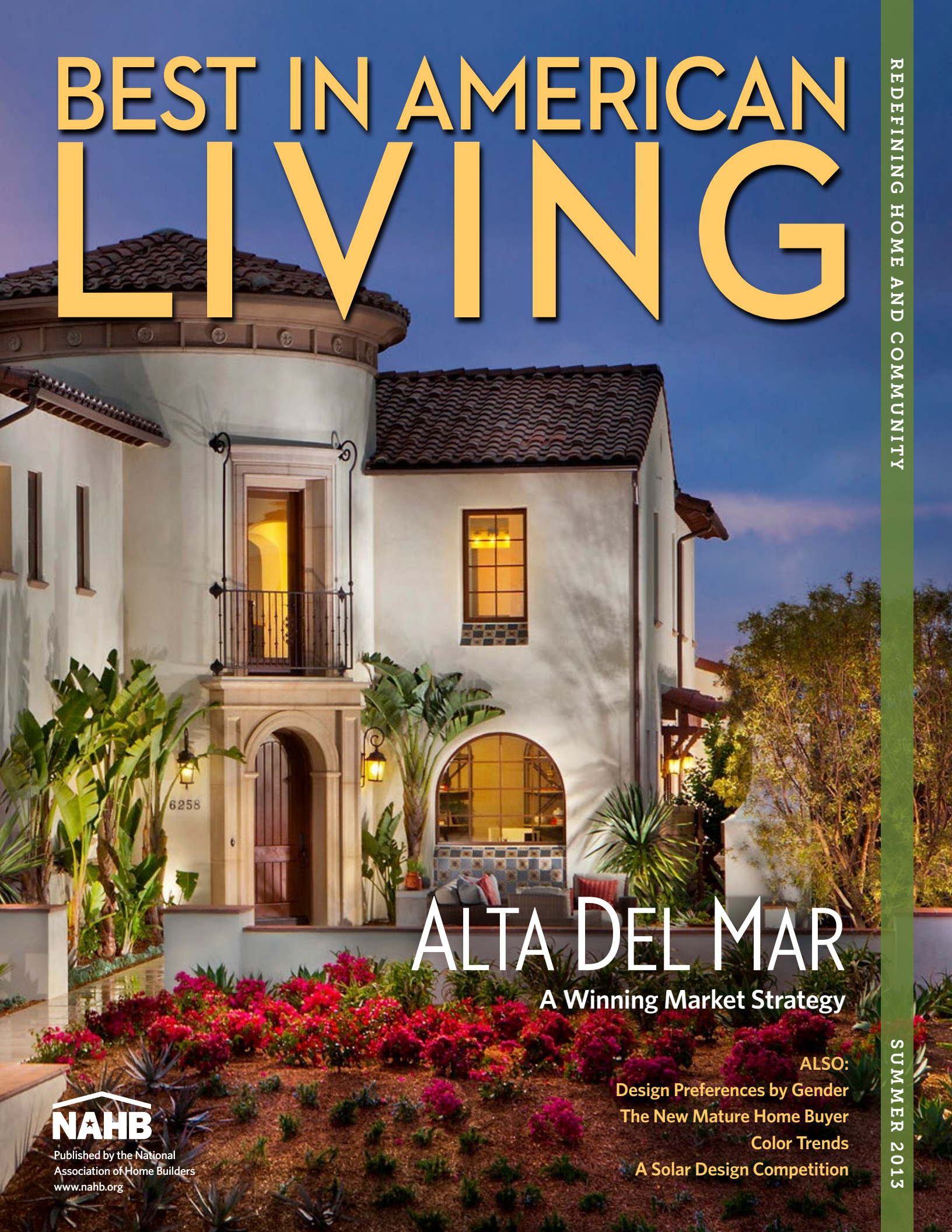

REDEFINING HOME AND COMMUNITY

Alta Del Mar

A Winning Market Strategy

ALSO:

Design Preferences by Gender

The New Mature Home Buyer

Color Trends

A Solar Design Competition

SUMMER 2013

NAHB

Published by the National Association of Home Builders

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BEST IN AMERICAN LIVING

NAHB

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ON THE COVER: Homes in Alta Del Mar, San Diego, blend contemporary design with intimate indoors and outdoors spaces. Cover photo: Eric Figge Productions, Inc.

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SUMMER 2013

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THE HE SAID

FOR DECADES, movies and television sitcoms have been based on the premise that men and women see the world differently. One of the best-selling books on the topic, "Men are from Mars, Women are from Venus," was written over two decades ago, but it helped to launch a debate that has not slowed down since then.

Four veterans of the housing industry put some of the pre-conceived notions about gender buyer preferences to the test in a program at the 2013 International Builders Show (IBS). The speakers concentrated on the distinctly different, male-female priorities in the selection of a home. Joining me (an architect) on the "He Said, She Said" panel was my panel co-creator Anne Postle (also an architect), builder Tony Crasi and interior designer Doris Pearlman.

We started discussions by sharing a survey of housing consultants, clients, sales representatives and marketing experts. Although we make no claims that this survey was scientific, it did shed some light on current thinking. In the survey we asked respondents their ages and genders, and then asked them to rank their top 10 priorities for a new home from the following 14 choices, with no other qualifiers, descriptors or information provided:

- Function, function, function
- Family interaction space
- Outdoor living space
- Curb appeal
- Garage/workshop
- Home technology/AV/controls
- Entertaining space
- Wonderful master suite
- Bonus spaces (loft, basement, craft room, fitness room, flex room, etc.)
- Green-ness
- Great kitchen
- Place to work (home office, pocket office, study, command center, etc.)
- Space for guests
- Kids' space

The IBS panel presented the blended results of the survey and provided a hand-out that further broke down the results by age group. To quote BUILDER magazine, which reported on the presentation in the magazine's social media outlets, "When it comes to what's important in a home...the battle of the sexes isn't much of a fight." This was proven in the discussions of the four panelists, which were stunned by unexpected agreements given the age-old "Men are from

MEN'S TOP 10

1. Great kitchen
2. Function, function, function
3. Wonderful master suite
4. Entertaining space
5. Family interaction space
6. Outdoor living space
7. Garage/workshop
8. Place to work
9. Curb appeal
10. Technology

JERRY GLOSS, AIA, CAASH

SHE SAID
OF HOME BUYING

WOMEN'S TOP 10

- Great kitchen
- Function, function, function
- Wonderful master suite
- Family interaction space
- Entertaining space
- Outdoor living space
- Place to work
- Curb appeal
- Space for guests
- Garage/workshop

Mars, Women are from Venus" banter. For example, look at the similarities between the Women's Top 10 and the Men's Top 10.

What the Results Show

While these lists are similar, there are still some outcomes worth further examination, such as the factors that are considered in making a particular choice. For example, variant factors are most likely considered by each gender for each selection. Curb appeal for a man may mean an implied sense of value of a home; but for a woman, it may be a wider-based sense of community. This informal survey did not contain controls to deduce specifics. However, the panel was willing to speculate, based on experience working with custom clients, community projects and navigating through decades of design parameters and data, why the lists are so similar.

First, the panel felt there has been a blurring of gender-based activities. Men cook much more than in the past, and women have invaded the garage for kids' activities and gardening. The center of family life has shifted from the family room to the kitchen.

Second, the last five years of economic turmoil have shaken the nation's collective value-based roots. In homes, that means returning to the understanding that kitchens, baths and master bedrooms enhance and help maintain a home's value. Perhaps as the economy rebounds further, differences in priorities may become more distinct.

Age is also a factor in the overall picture. For instance, the survey pointed out slightly differing priorities among age segments. For those below the age of 30, curb appeal slips in importance, perhaps an indicator of an entry-level budget. For the buyer over 50, a place to work increases in importance—an ironic but understandable occurrence in light of the difficult economy and the need to work past retirement age.

The conclusions reached by this informal survey are certainly subject to challenge. But the results point out the importance of understanding who we build and design for, and to whom we market. The panelists were unanimous in suggesting that to better understand the client or market niche, builders and designers conduct their own polls and refine them to their particular regions (Generation Y, boomers, singles, etc.).

Jerry Gloss, AIA, *is a Principal with KGA Studio Architects, St. Louisville, Colo. He can be reached at jgloss@kgarch.com.*

Honed Vitality

Nature and harmony are the goal of the browns, tans and soft blues of this bathroom.

Opposites Attract Attention in 2013

PUTTING SHERWIN-WILLIAMS 2013 COLORMIX FORECAST under the microscope reveals that today's color mood has dueling influences. From exploring the dichotomies of simple versus complex, mystery versus certainty and light versus dark, designers will find a source of creativity from this year's color palettes.

Sherwin-Williams' color experts selected 40 vivid hues grouped into four palettes that they feel will shape 2013 based on the drivers that will have the most significant impact this year. For inspiration, these experts looked beyond the fashion runways and evaluated current economic conditions, pop culture, popular travel destinations and the arts, among other diverse pressures and tastes.

"We know people gravitate toward personal preferences, but they are being shaped by the divergent energies pulsing all around us," said Jackie Jordan, Director of Color Marketing, Sherwin-Williams. "Keeping these influences in mind, the 2013 color forecast embraces these conflicts and shows how colors are about a process of combination and creating unexpected harmony."

Colors featured in the 2013 forecast work well when incorporated into existing palettes, staying true to the goal of harmony. The colors can be used to accent walls or furniture pieces. Designers can also use the featured palettes as inspiration for new designs.

The four color palettes are: Midnight Mystery, Honed Vitality, Vintage Moxie and High-Voltage.

Honed Vitality

The Honed Vitality palette reflects the interplay of time and nature, taking inspiration from the layered hues of mineral deposits, sea-buffeted stones and the weathered shutters of a rustic farmhouse. The colors are chalky grays and blues, and earthy cider-colored browns. Finishes are matte with an organic, textured feel.

"The colors of Honed Vitality create a softened beauty that is restful, comforting and embraces furnishings with natural textures for décor you can feel with your eyes," Jordan said. "This isn't a 'back-to-basics' palette. It folds in the energy of the Earth."

Midnight Mystery

Midnight Mystery

The colors of Midnight Mystery are moody; the vibe is masculine and the aesthetic is both Victorian and futuristic. Earthy Plum Brown, absinthian Bottle Green, the metal gray of Outerspace and Rustic Red evoking the houndstooth cloak of Sherlock Holmes—these are the intriguing shades of the Midnight Mystery palette.

"This palette is a declaration of independence—a statement of luxury and purpose that pairs warmly with textured fabrics and collections of curiosities," Jordan said.

High-Voltage

The electricity of Vegas neon inspires this palette, which plugs into a digital stream of electric limes, phosphorescent yellows and feverish reds. This palette is consumerism as self-expression, giving the bold and the not-so-bold equal permission to be nonconformists. The High-Voltage palette leaves nothing to the imagination, in stark contrast to the colors of Midnight Mystery.

"Big color is being embraced as central to self-expression," Jordan said. "But all those bold hues need a palette cleanser, bringing black, white, gray and clear acrylics into the picture to offset the electric feel of the brighter neon shades."

The green of this accent area against the black and white furniture show why this palette is called High-Voltage.

High-Voltage

The boldness of the walls in this kitchen and dining area contrast with the palette-cleansing softer shades of the rug, as well as the black of countertops and appliances.

Vintage Moxie

Representing midcentury demure with a new, modern edge, Vintage Moxie is a pretty palette in which the retro glamour of pearls, florals and classic feminine silhouettes is tempered by funky accents and attitude.

"Glamour has become much more free-spirited. We see people embracing their individuality with a standard of beauty that's unique to them," said Jordan. "It's [this palette] softness emboldened; golds infused with semi-precious citrine, violets that are bit more vivid, an almost black that you might not expect, all set off by gauzy white."

Design professionals can find further inspiration with color selection tools from Sherwin-Williams. Order a 2013 colormix color card at www.swcolorsamples.com or visit sherwin-williams.com/color for a series of interactive tools you can access from your mobile or tablet device.

More information is available at www.sherwin-williams.com/architects-specifiers-designers/inspiration/color-forecast/2013-color-forecast/.

Vintage Moxie

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SHERWIN WILLIAMS

Alta Del Mar

SITE-RESPONSIVE DESIGN CAPTIVATES LUXURY HOME BUYERS

Knowledge of the San Diego market, smart architecture that enhances a one-of-a-kind site and floor plans that provide seamless indoor/outdoor living propel strong sales.

Photography by Eric Figge Productions, Inc.

THE STORY OF PARDEE HOMES' NEWEST community in San Diego is one that the building industry has been awaiting since the housing crash created a new world of residential building: With each new release of home sites, the million-dollar-plus residences are selling out immediately.

Is this because San Diego has made a quick recovery? The answer is mostly no. Although the recovery may have helped, the reason Pardee's Alta Del Mar community has experienced tremendous sales success is not because of major market changes—it's because the community has the ingredients that have forever contributed to best-selling communities:

- Strong knowledge of the local market on the part of the planner
- An exceptional site
- Architecture that responds to that exceptional site and offers buyers homes that embody the latest trends in design

The Site

A singular setting atop a plateau in the Del Mar Mesa is home to Alta Del Mar's 107 estate and custom home sites. The topography of the area creates lush beauty in all directions, including the coastal canyons. Each lot has spectacular views, but homeowners have privacy within their outdoor living environments.

Architecture for the estate home collection draws inspiration from San Diego's 1915 Pan Pacific Exposition, a watershed event to celebrate the city as a port of call after the opening of the Panama Canal. The exposition began a golden age of residential architecture in Southern California in the early 20th century. Timeless architectural styles—Spanish, French and Monterey—come to life at Alta Del Mar through form, detail, color and materials. Stucco, wrought iron, tile and rich wood create architectural expressions that blend seamlessly with the Mediterranean-like environment.

Floor plans range in size from about 4,151 square feet to 6,235 square feet and offer both one- and two-story living. Hans Anderle, Bassenian|Lagoni Associate Vice President and Senior Designer, says that each plan in the estate home collection blends contemporary ideas and features for relaxed indoor/outdoor living with spaces designed to be both intimate and grand depending on the occasion.

"Everyone has a traditional and even nostalgic notion of 'home,'" explains Anderle. "Our job as residential architects is to create environments that preserve the traditional while recreating it for the way we live today."

PROJECT TEAM

ARCHITECT:	Bassenian | Lagoni
BUILDER:	Pardee Homes
INTERIOR DESIGNER:	PDI/Pacific Dimensions
LANDSCAPE ARCHITECT:	SJA Inc.
LAND PLANNING:	Project Design Consultants

The Alta Del Mar home designs also reflect some of the innovations in design that judges in the prestigious Best in American Living Awards design competition noted during the last few rounds of judging. These trends reflect what today's home buyers want. For Alta Del Mar, that includes:

- **High-quality detailing**: Authentic detailing brings an architectural style to life. In the single-story French Country-inspired elevation, for example, concrete flat-tile hip roofs with clay barrel tile accents at the hip joints are layered with a stone tower rising above the main roofline and an inner courtyard. Pre-cast concrete surrounds doors and windows that have accent elements such as finished wood shutters and pot shelves, with an entry way that is accented by a wrought-iron gate.

- **Spa-like master baths:** Marble and quartz combine with glass and wood to create soothing yet efficient spaces that meet the dual needs for retreat and for a well-organized area that can accommodate two busy professionals. For example, in the Spanish-inspired home, natural light combines with a nature-based color palette while a corner cabinet and vanity configuration increases storage options.

- **Kitchens as living spaces**: Oversized islands define the kitchens in Alta Del Mar. Kitchens also orient to the outdoor living environment and to the great room, creating an informal gathering area for family and entertaining.

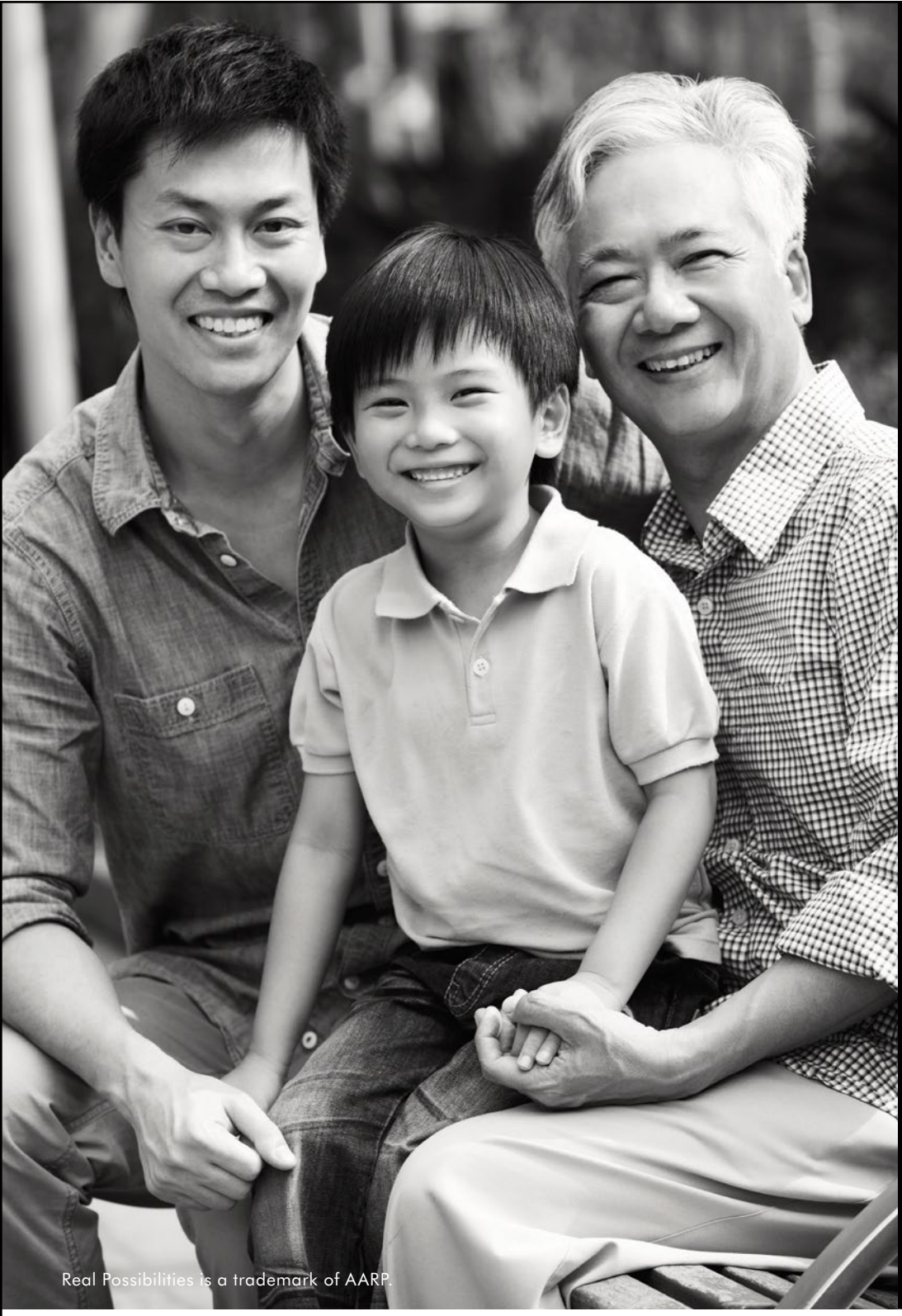
SPA-LIKE MASTER BATH

- **Rooms with different specialties**: Game rooms, libraries, wine rooms, sun rooms, outdoor kitchens, home offices, drop zones, sleeping porches and laundry spaces with room to clean both the clothes and the dog offer flexibility and personalization to buyers.
- **Ceilings as design:** The homes feature unique treatments of this often overlooked plane: a honey-combed wood panelized ceiling in the dining room, a coffered ceiling in the master bedroom, a painted orange ceiling in a white-walled game room and a sloping ceiling in the sun room add dimension and visual interest.
- **Multigenerational living:** The Monterey style offers a unique floor plan—a front-facing guest room with an expanded private living space. Similarly, the Spanish and French estates include guest suites away from the main living areas that offer private access to outdoor living environments.

This rich assortment of living spaces and luxury details creates a one-of-a-kind community.

"The site is a secluded promontory, with great natural beauty, exquisite views and natural enclave character," said Bob Clauser, Pardee Homes Senior Vice President of Marketing and Architecture. "We wanted every particular of Alta Del Mar to complement this inherently magnificent location, and we were confident that if we met this goal, buyers would respond immediately—as they have."

Heather McCune *is Director of Marketing at Bassenian|Lagoni in Newport Beach, Calif. She can be reached at hmccune@bassenianlagoni.com.*



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GLYNN ROUNTREE

The Costs of Restoring Chesapeake Bay

IN 2010, the Environmental Protection Agency (EPA) finalized a new regulatory rule to cure the environmental ills of Chesapeake Bay. While the effects of the rule may help to clean up the bay, the rule comes with an enormous price tag, and many of the requirements are focused on construction activities, including determining conditions under which new construction activities will be allowed within the Chesapeake Bay watershed. Property owners in the watershed will be hit directly with some of the costs, and they will assume personal liability for some of the necessary pollution reduction measures.

The Situation

The Chesapeake Bay Total Maximum Daily Load Rule (TMDL) was finalized in 2010. It covers the Chesapeake Bay watershed, which includes parts of Delaware, Maryland, New York, Pennsylvania, Virginia, West Virginia and Washington, D.C., an area with 17 million residents. With the rule finalized, EPA is poised to mandate essential actions. Information is now coming out on how the states plan to meet the rule, and affected citizens are just beginning to recognize the costs and sacrifices involved.

Maryland and Virginia have estimated their costs will reach $15 billion each during implementation, which began in 2010 and runs through 2025. This price tag comes during a period in which states are struggling to provide services their citizens expect on trimmed budgets.

Each state affected by the rule has developed a Watershed Implementation Plan (WIP) that demonstrates how it will meet requirements. The WIPs are very different from state to state, reflecting unique geography, soils, culture and other environmental, governmental and social conditions within each state.

While the price tag for restoring the bay is immense, some states are looking to lower costs through state water quality trading programs.

The EPA's website describes water quality trading as:

> "... an innovative approach to achieve water quality goals more efficiently. Trading is based on the fact that sources in a watershed can face very different costs to control the same pollutant. Trading programs allow facilities facing higher pollution control costs to meet their regulatory obligations by purchasing environmentally equivalent (or superior) pollution reductions from another source at lower cost, thus achieving the same water quality improvement at lower overall cost."

Home Builders Among the Most Affected

Home builders will probably be affected more than any other industry by the TMDLs since they hold the bulk of stormwater permits issued by the states. Within the next few years, builders will need to purchase "offset credits," to offset new pollution sources from a new home. These sources include the pollutants in rainwater running off the impervious surfaces of the new home (the roof, driveway, walkways, etc.) and the septic system if the new home has an on-site system. This will add new costs and uncertainties to the home-building process. Each of the states in the watershed is working on a regulatory proposal to make the offset credits available. EPA has not revealed a deadline for when these state programs are to become effective.

Maryland has proposed an offset program, though it rescinded the proposal due to concerns about complexity and cost. Still,

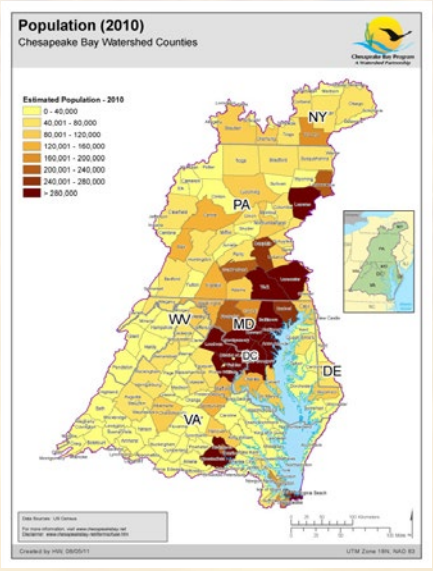
SHUTTERSTOCK/ DAVID KAY

the state promises to finalize a new proposal by the end of this year. Once it becomes effective, a home builder must purchase credits that will offset pollution from a new home before obtaining a stormwater permit or building the new home. While the home builder will make the initial purchase of these credits, the home owner will take over the credit purchases, which will take place periodically as long as the home exists. Once a home sells, the new home owner must take over credit purchases. Currently, there are no valid estimates of the cost of an offset program.

New Fees and Requirements for Property Owners

As a result of the Chesapeake Bay requirements, the 17 million people living in the watershed will face new fees, taxes and stormwater requirements, many directed at home owners and property owners. For example, a stormwater fee on property owners (often referred to as the "rain tax") will soon be in effect in the areas where it's not already in effect. This fee covers some of the costs of meeting the new requirements. The fee will need to be raised periodically because pollution reductions are expected to become more expensive to achieve over time.

The new requirements for home owners will take some time for implementation, and some of them promise to be contentious. For example, many new home owners or their home-owner associations will have the



responsibility of maintaining the low impact development stormwater devices that now come with their new homes. Maryland and possibly other states will require new homes to have on-site septic systems that will be more expensive and complex than the systems used for older homes. The new systems will be hooked up to a professional "maintenance provider," who will remotely monitor the functioning of the septic system and go to the home owner's property to fix any hiccups that occur with the system.

On top of offsetting pollution from existing homes through the rain tax and other new fees, the state offset programs for new growth will require offsets for pollution generated by impervious surfaces created by any additions to existing homes. This will probably not be well received by families that must pay the new fee to make space for aging family members.

Because of all these developments, the next few years promise to be interesting for those affected by the new requirements and fees, as well as for the regulators that have to carry them out.

Implications for Other Areas

The Chesapeake Bay rule is the largest and most complex TMDL ever developed. Its complexity is partly attributable to the size of the watershed covered and partly due to the fact that it is a more complicated estuarine system than a freshwater stream or lake. Nevertheless, many of the regulatory processes developed for this rule will be transferable to nutrient and sediment TMDLs that exist elsewhere in the U.S.

All of the Chesapeake Bay states are holding public meetings this summer to explain their WIPs, which will create an opportunity to better understand how the rule affects residents of the Chesapeake Bay watershed.

Glynn Rountree *is a Program Manager for Environmental Policy at NAHB. He can be reached at grountree@nahb.org.*

ENDNOTE

[1] These programs are described in Section 10.1.2 and in Appendix S of the final Chesapeake Bay TMDL.

Chesapeake Bay Resources

Chesapeake Bay Program website:
www.chesapeakebay.net/

Chesapeake Bay TMDL website:
www.epa.gov/chesapeakebaytmdl/

BEAUTY, EFFICIENCY & FUNCTIONALITY

KEVIN MORROW

GOING GREEN

Competition Challenges Teams to Design Solar-Powered Homes that Balance All Three

EVERY BUILDING INDUSTRY PROFESSIONAL knows that a key to success is to find the sweet spot between cost, performance, market appeal and occupant experience. The U.S. Department of Energy (DOE) hopes to help students today find that success with an eye toward sustainability through its Solar Decathlon competition. This year's contest, which is October 3-13 in Orange County Great Park, Irvine, Calif., expects over 350,000 visitors, who will come to see how university teams have envisioned using solar power with other technologies and good design to create homes that blend affordability, consumer appeal and design excellence with optimal energy production and maximum efficiency.

U.S. DEPARTMENT OF ENERGY
SOLAR DECATHLON

The Contest

This award-winning competition challenges intercollegiate teams to design, build and operate solar-powered houses. The biennial event provides students the opportunity to showcase high-performance homes in a "living laboratory" venue. Twenty teams put what they have learned about efficiency and renewable technologies in the classroom into building a real house that may find practical use in the near future.

But the purpose of the competition goes beyond trying to win top honors.

"The students aren't the only ones who learn," Solar Decathlon Director Richard King said. "One of the best things about the event is how it exposes builders, architects, remodelers and the general public to practices, designs and technologies they may be seeing for the first time."

After touring the 2011 event (in Washington, D.C.), for example, Don Ferrier of Ferrier Custom Homes in Fort Worth, Texas said he found, "innovative designs and impressive green technologies. We plan to visit again in California because I know I'll come away with ideas."

The decathlon includes 10 competitions upon which the teams and homes are evaluated over the event's nine days. Besides energy production/consumption, cost-efficiency, aesthetics and comfort, the judges are looking at whether the homes produce sufficient energy for household appliances to cook, clean and entertain.

This year's participants will have a high bar to meet set by the last event's winner, the University of Maryland team. Dubbed

The University of Maryland's entry, which placed first overall in the U.S. Department of Energy Solar Decathlon 2011 in Washington, D.C.

STEFANO PALTERA/U.S. DEPARTMENT OF ENERGY SOLAR DECATHLON

WaterShed, the team's project earned 951 out of a possible 1,000 points (which is the highest score in the event's history). The project's name pays homage to the Chesapeake Bay ecosystem and watershed, which includes most of the state of Maryland, five surrounding states and the District of Columbia.

"We put water management innovation and design at the forefront because we recognized the inextricable link between water stewardship and energy conservation on scales as small as a single building and as large as cities and regions," the Maryland team's lead faculty advisor, Amy Gardner, AIA, said.

The design of the Maryland project models how the built environment can help preserve watersheds by managing stormwater on site, filtering pollutants from greywater and minimizing water use. The form of the WaterShed house highlights the path of a water drop: its split butterfly roofline captures storm runoff from each module of the building, directing and collecting the water into an axis at the core of the house. Water used within the house intersects this axis through a consolidated mechanical core. The Maryland team envisioned a design for a working couple using the house as both home and office. It maintains an eye for affordability by investing in energy- and water-efficient technologies to provide sufficient savings to offset upfront costs.

WaterShed Features

- Modular-constructed wetland helps filter and recycle greywater from the shower, clothes washer and dishwasher.
- Green roof slows rainwater runoff to the landscape while improving the house's energy efficiency.
- Garden, edible wall system and composting station illustrate the potential for improved health, energy and cost savings with a complete carbon cycle program.
- Liquid desiccant waterfall serves as a design feature and provides humidity control.
- Engineering system harnesses excess energy generated by the solar thermal array.
- Home automation system monitors and adjusts temperature, humidity, lighting and other parameters

See the 2011 winner in action:

WaterShed photo gallery: www.solardecathlon.gov/past/2011/gallery_maryland.html

WaterShed video: www.youtube.com/watch?v=VDwoTAp4z34&feature=player_embedded

The SCIA/CIT project

See the SCIA/CIT project renderings:

www.solardecathlon.gov/team_sci_arc_caltech.html#nogo

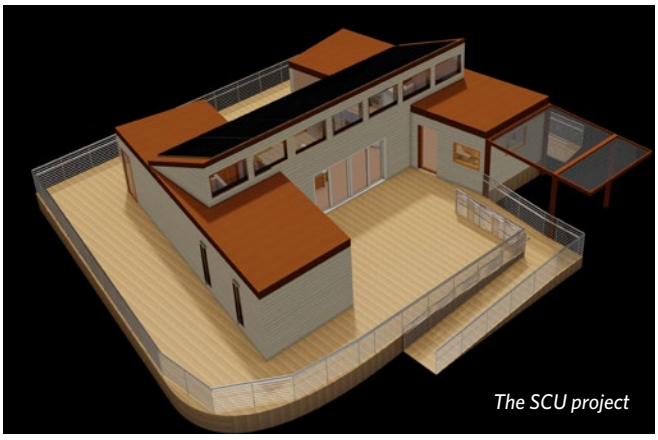
www.flickr.com/photos/solar_decathlon/8343388262/in/photostream

See the SCIA/CIT project video:

www.youtube.com/watch?v=2gE9jTXHMbE&feature=player_embedded

The 2013 Event

This year, the Solar Decathlon moves away from its traditional location on the National Mall in Washington, D.C. to sun-drenched Irvine, Calif. But location is not the only change in the 2013 event—the competitors have also changed. Only five of the 20 teams from two years ago are returning, and many joint teams have been formed. One example is collaboration of the Southern California Institute of Architecture and the California Institute of Technology (SCIA/CIT), whose local knowledge of the area may provide some advantage with the 2013 event's new location. According to that team's project summary, its ambitious goal is to "advance architecture toward its future state by producing a housing prototype that is clean, safe and sustainable. By pushing engineering forward and architecture into new, unfamiliar territory, the team expects to produce a prototype that not only resolves the needs of energy conservation but also delivers a new future for architecture."



The SCU project

In another collaboration from California, Santa Clara University (SCU) and the University of San Francisco have partnered in the Rhythm House project.

Santa Clara says the concept for the house is driven by the three "Es" of efficiency, elegance and economy. The architectural design assistance provided by the University of San Francisco emphasizes bamboo architectural applications in keeping with the belief that sustainable living can be affordable.

By using highly efficient materials and technologies, the team plans to balance the cutting-edge with the deceptively simple to create a new frontier in sustainable living.

See SCU project rendering:

www.flickr.com/photos/solar_decathlon/8343723976/in/photostream

See the SCU project video:

www.youtube.com/watch?v=IwMGUs2jtrM&feature=player_embedded

Not to be outshone by their west coast colleagues, teams from other parts of the country and the world are also gearing up for this year's competition and joining forces. One such team from Tidewater, Va. includes members from Hampton University and Old Dominion University (TVA). Their concept goes beyond environmental and performance considerations and "takes a step toward universal design…to create a house that allows its occupants to lead an independent lifestyle with innovative technology….creat[ing] a harmonious design that will enable a response to the environment as well as occupant needs."

See the TVA project renderings:

www.solardecathlon.gov/team_tidewater_virginia.html

www.flickr.com/photos/solar_decathlon/8342319563/in/photostream

See the TVA project video:

www.youtube.com/watch?v=t5XWkj280GM&feature=player_embedded

Awards to Builders

New to the event this year is a program highlighting some of the nation's top, energy-efficient home builders. DOE will present the Housing Innovation Awards during the Solar Decathlon to the leading DOE Challenge Home Builders and Home Performance with Energy Star contractors. Visitors to the decathlon site will be able to meet builder award nominees, who will have the opportunity to display their products and promote their services. (More information about the DOE Housing Innovation Awards can be found at www.buildings.energy.gov/challenge.)

Visitors are also welcome to tour the Solar Decathlon 2013 houses to gather ideas for use in their own homes and to learn how energy-saving features can help them also save money. Builders, architects, designers, manufacturers and subcontractors will visit to see high-performance projects that have graduated from drawing board concepts to amazingly beautiful homes.

Kevin Morrow *is Director of Energy & Green Building, NAHB. He can be reached at kmorrow@nahb.org.*

The TVA project

50+ HOUSING Gets a Facelift

The apartments at the NoHo Senior Arts Colony were specifically designed for those involved or interested in the arts.

CLAIRE WORSHTIL

The NoHo Senior Arts Colony offers a unique way for seniors to retire, with a community that allows them to discover, or rediscover, their passion for art.

PHOTOS COURTESY NOHO SENIOR ARTS COLONY

The next generation of seniors will reinvent retirement communities

ALMOST 40 MILLION AMERICANS will approach the age of 65 over the next decade. These "Leading-Edge Boomers," a term coined by John K. McIlwain in *Housing in America: The Boomers Turn 65*, are not like any previous group to reach this age, and the housing industry has to be prepared to respond to an older generation with very different tastes and priorities than previous generations.

The Leading-Edge Boomers

The new generation of mature Americans (who do *not* want to be referred to as "seniors") is expected to live and work longer and have better health and more energy. At the same time, many of these Leading-Edge Boomers have greater debt and less retirement savings.

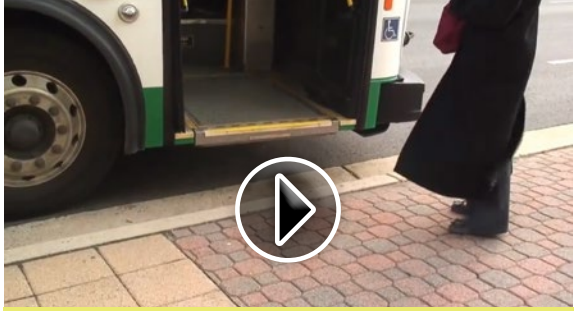
Also, a senior citizen is no longer a single market segment, but several generations spanning 30 years. The housing choices of the greatest generation (1901-1925) and the silent generation (1925 through WW II) do not appeal to their independent-minded children. Fewer of the Leading-Edge Boomers will make the migration south to warmer climates, and the age-restricted communities that were popular before the current housing crash do not have the appeal they once did.

An AARP study reports that more than three-fourths of those older than 45 say they want to stay in their homes even when they need assistance.[1] This does not mean they want to live their entire retirement in the same home, just that they do not want to be institutionalized. Even though the population of seniors is growing, the housing market targeted to them will shrink unless builders can develop acceptable alternatives to aging in place. Just as there is not a single generation, there is not a single housing trend, but multiple trends that will bring new opportunities and challenges to the housing industry.

Naturally Occurring Retirement Communities

Because of the recession, many boomers currently may be stuck in homes whose values have fallen, or they may be unable to find move-up buyers. When residents stay in their homes past retirement age, it creates naturally occurring retirement communities in areas originally designed for young families with children and cars. At some point in the future, these residents will have significant healthcare needs and require an array of personal services.

With so many people aging in place, a boom will occur in the home remodeling business to make homes more accessible. This may also contribute to the much-needed redevelopment of the older suburbs as residents require upgraded infrastructure, community amenities and access to goods and services.



"Creating Neighborhoods Around Transit" showcases the importance of creating accessible communities for our aging population in order to facilitate independence and mobility. This six-minute video features conversations with residents, local officials, and experts in Arlington, Va., where they are working to build a community that is walkable, accessible and sustainable for all generations.

More and more non-profit companies are being formed to help seniors stay in their homes. These formations are called Virtual Villages. Virtual Villages provide members basic services such as rides to the doctor, home healthcare, dog walking and home maintenance. Members pay a fee, which is sometimes high, to obtain these services, which they share with neighbors.

Beacon Hill Village in Boston is an example. Beacon Hill offers concierge-level services that allow older adults to lead safe, healthy and productive lives in their own homes. They charge over $600 per person or about $1,000 for a household per year, which includes help paying bills, pet sitting services, assistance with errands, in-home computer classes and much more.

Empty-Nester Phenomenon

Some Leading-Edge Boomers who have the means are selling suburban homes and moving to condos and townhomes in urban areas. What's more, urban living itself is no longer confined to the central city—many urban areas outside of the central area have the amenities, entertainment options and modes of transportation formally associated with central cities. Leading-Edge Boomers are looking for these areas for their retirement communities. The residents that move also will require Virtual Village-type services, but they have the added benefit of living in mixed-use, multigenerational settings with access to urban amenities and public transportation.

The courtyard at the NoHo Senior Arts Colony offers residents a quiet gathering place to socialize and enjoy the beautiful Los Angeles weather.

College Towns

Seniors are also looking at college towns as good places to retire. In fact, the number of university-based retirement communities has doubled in the last decade. College towns attract retirees because of access to free classes, good hospitals, speakers, entertainment, sports, affordable cost of living, and closeness to children and grandchildren, who may gravitate towards college towns and population centers for job possibilities.

An example is University Commons, an independent living community located outside the University of Michigan's Ann Arbor campus. This condominium community is composed of 92 apartments, townhomes and villas. It is about a block from a University of Michigan commuter lot, with university and city bus services available at the entrance to the Commons community.

The designer of the community included details that go along with the university feel to promote an active lifestyle. The community has a recital hall; library; seminar, exercise and craft rooms; and a wood-working shop. The community also draws from university faculty and staff as well as residents themselves for a pool of speakers.

Cohousing and Group Living

The newer generation of retirees also relies on a collaborative housing model in which residents actively participate in the design and operation of their own communities. Currently, the U.S. has more than 110 cohousing communities, both for seniors and intergenerational living. Cohousing communities typically cluster homes around a central community building called the common house, which is much larger than a traditional community building. People choose cohousing lifestyles because they are looking for a custom neighborhood in addition to a custom home, and they enjoy the "built-in" pool of friends who share community responsibilities and form connections.

Wolf Creek Lodge, in Grass Valley, Calif., is an example. The community is rural in feel, yet is close to two shopping centers and to a bus service that takes residents to other communities, including the downtown. Downtown Grass Valley, which was a booming mining town during the Gold Rush Era, is now a historic center for arts, culture and recreation.

In addition, common meals, one of the most popular social activities in cohousing groups, are offered five days a week in the Wolf Creek community.

Affinity Communities

Leading-Edge Boomers have defined themselves more than previous generations by their lifestyle interests. For this reason, affinity retirement communities are a growing trend. An example is Taube Koret Campus for Jewish Life, in Palo Alto, Calif., a 193-unit, multigenerational, mixed-use community anchored by the Jewish Community Center that fully integrates seniors into its daily activities. The site plan is divided into a series of eight outdoor rooms, each with its own unique use such as a play area for children or

PHOTOS COURTESY NOHO SENIOR ARTS COLONY

The onsite theater at the NoHo Senior Arts Colony is run by a professional theater group, the Road Theatre Company. The theater will offer residents a chance to enjoy professional performances without leaving the apartment community.

recreational areas. Individual units include the option of floor plans that boast universal design and accommodate segregated living space for live-in home care providers.

Another example is NoHo Senior Arts Colony, in North Hollywood, Calif., which is the first community to pair professional theater with an active adult community. This senior apartment community caters to artists and has a professional on-site theater as well as visual arts studios, film editing studios and free educational art classes.

Living in Layered Communities

Two other trends from Leading-Edge Boomers are that they want to live in multigenerational situations, and they want to blend continuing care with an active life.

This convergence of continuing care retirement communities and active adult communities is a direct result of Leading-Edge Boomers molding the market to meet the demands of longer lives and better health.

Leading-Edge Boomers want to feel as if they are living on their own even when they need the help of an institution. At the same time, today's older generation does not want to be singled out—people want to live alongside younger generations.

Hummingbird Point in suburban Cleveland is an example. The community was remodeled from a 236-unit rental building to a wellness-oriented senior living community. Developer Forest City added services to the building for senior living, but did not limit the services to older residents.

In addition to the $6 million remodel that renovated apartments and added an 18,000-square-foot amenity center, the company brought in a home health care agency to provide residents with free access to wellness programs and an onsite nurse, as well as two exam rooms for physicians and therapists to use.

All of these housing options will need to incorporate stylish universal design and green building options to stay competitive in this growing market. Also, though urban life has become more popular, these housing options will not be confined to urban areas—in fact, current surveys from AARP indicate that 60 to 80 percent of Leading-Edge Boomers want to retire to non-urban areas.

One certainty is that people will continue to live longer. Cultural anthropologist Mary Catherine Bateson calls the 30-plus years of life that have been added to this generation (over the last century) "Adulthood II." Leading-Edge Boomers will redefine these additional years of life by inventing new careers, new patterns and new influences on the marketplace, including the shape of homes and neighborhoods.

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ENDNOTES

[1] Home and Community Preferences of the 45+ Population, November 2010, Gfk Custom Research North America for AARP. See http://assets.aarp.org/rgcenter/general/home-community-services-10.pdf

JOHN BARROWS

MOISTURE

Building a Better Envelope

WHAT DO A WELL-INSULATED HOME AND MOISTURE CONTROL HAVE TO DO WITH EACH OTHER? It turns out, a lot, actually. For years, improving the performance of the building envelope meant adding insulation to protect occupants against outside temperatures. In some cases this led to a drop in performance because of what happens with moisture. It turns out that just adding insulation without consideration to moisture movement can result in more condensation forming within a cavity.

Current building science, however, provides holistic and cost-effective methods to improve the performance of wall and roof assemblies, taking into consideration all aspects, including thermal issues, air movement and moisture control. Two such methods are the use of Structural Insulated Panels (SIPs) and Insulated Concrete Forms (ICFs).

What Moisture Does

To understand the role moisture plays, we need to consider the detrimental effects it can have in both forms—bulk (liquid form) and vapor. Bulk moisture can lead to rot, decay, mildew and mold, which can be harmful not just to the building itself, but also to occupants. Vapor, on the other hand, is present everywhere, but becomes a critical issue when the vapor turns to bulk (i.e., when condensation occurs). Understanding what happens as moisture travels through a wall or roof assembly, and the influence of different temperatures and material characteristics, is the challenge designers and builders today face.

As vapor, moisture moves from areas of higher humidity (more concentrated moisture) to areas of lower humidity and from areas of higher temperature to areas of lower temperature. Practices put into place to keep moist air warm in the winter (when vapor drives to the exterior) may not perform well in regions that experience warm and moist summers (when vapor moves to the interior). The classic model is to install polyethylene sheeting on the warm side of the insulation. This works well in the winter to keep the vapor in a warm area, thereby avoiding condensation, but in the summer, it can lead to mildew and mold trapped in the cavity.

To understand how to design and construct a better assembly requires understanding the concept of a vapor profile, which is how the vapor acts as it moves across the assembly. Constructing a vapor profile means knowing (1) what is happening from the thermal standpoint, and (2) what influence the materials in the assembly have on the moisture. Problems can result when temperatures are low enough and condensation occurs on a low-permeability material installed within the wall or ceiling assembly. (The website of the Building Science Corporation has a very good discussion on vapor and how to deal with it in different climate zones and with different assemblies—www.buildingscience.com/resources/vapor_barrier_code_changes.)

The goal is to keep vapor from condensing, and there are two best practices to keep in mind: (1) keep the condensing surface as warm as possible (i.e., warm the material with lowest permeability), and (2) allow the assembly to "dry out" by diffusing moisture in both directions from the lowest permeability material.

Building Science Put into Practice

Today, most structures are built with cavities that are filled with insulation. Some products also add air-sealing and moisture control features. As the products and processes become more complicated—with higher levels of insulation and tighter assemblies—the sensitivity to potential moisture problems increases, and material and installation costs can climb. For the designer and builder trying to contain costs, this presents a dilemma—how to get the best performance without substantially adding cost.

Cost-effective solutions include addressing the hygrothermal characteristics (characteristics that pertain to both humidity and temperature) systematically. In other words, the best solutions are the most effective processes that, when bundled together, yield the highest level of performance not only thermally, but also for moisture control.

One common solution is filling the cavity with foam insulation or a hybrid of foam and blanket insulation. From the building science standpoint, this solution requires a careful balance between the vapor-impermeable foam insulation and the more permeable insulation to prevent the vapor from condensing. How to accomplish this depends on the climate zone of the project and is prescriptively addressed in the 2009 version of the International Energy Conservation Code. The balance does come with added costs from the multiple products, processes and construction trades involved in making it happen.

CONTROL

Insulation and walls become one with SIPs.

PHOTO COURTESY INSULSPAN

The walls are precut for plumbing and electrical before they are put into place.

Because building science illustrates that best practice is keeping the condensing surface as warm as possible, it is not a big jump to see that rigid exterior insulation can provide a practical solution to address the issues. The benefit of rigid exterior insulation is that, in one process—insulated sheathing—the assembly has better thermal properties (by eliminating thermal bridging at the studs), better air control (through taped joints), and perhaps most importantly, greater moisture control (since the condensing surface is kept warm). Also, unless the project is in a high-wind area, the application will be a one-step process.

Furthermore, the quality control on this process is simplified since the installation of the sheathing is easily inspected. However, the balance between the ratio of impermeable exterior insulation and the permeable cavity insulation needs to be evaluated—too little rigid insulation in very cold climates can result in more condensation potential.

One question that arises from all this is if a better building practice is to add more rigid insulation to the exterior of a cavity, why not put all the insulation on the exterior of the wall? Or, perhaps an even better question is why not build using a system that uses the structural components and insulation in one step? SIPs and ICFs were developed in part with this concept in mind—to provide a systemic solution that incorporates all the energy practices needed into one structural component.

Such holistic systems can be very cost effective when compared to measures that would be needed to get the separate systems to perform to similar standards. SIPs and ICFs can also shorten construction time. Success using these advanced systems requires planning, however. For example, wall thickness because of additional insulation on the exterior of the frame will have an impact on window frames, siding and trim applications. Also, SIP and ICF construction can pose challenges to other components such as electrical installations.

However, forethought and planning can overcome obstacles with these systems, yielding a building envelope designed and constructed to perform for the long-term future of the building, which means lower costs over the life cycle of that building.

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SIPs can be used both for outside walls and roofing.

PHOTO COURTESY INSULSPAN

It's all in the details

STEVEN M. LANE, AIA

Columns

EVER SINCE THE GREEK INTRODUCTION OF THE THREE ANCIENT ORDERS OF ARCHITECTURE—Doric, Ionic and Corinthian—and their notable corresponding column styles, architects have found hundreds of ways to use these features as basic structural and visual elements. The column is a design tool that has endured through the ages because of its versatility. Columns not only provide support, but with embellishment they also are a simple way to add character and define the architectural style of a building.

In today's residential market, columns are designed and illustrated most prolifically on front porches and rear verandas to support structures that give us shelter from the elements. A column can be as simple as a wood post with decorative wraps to fit the architectural style or a steel column with no additional detailing for a clean, contemporary expression. Regardless of the material used, good column design relies on the right proportions. Listed here are a few tips for successful column design.

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DO

Give wood columns extra width, dimension and character by adding trim to the top, bottom and sides.

When designing a column with a base, it is important that the width of the column compliment the size of the base and vice versa.

These wood columns are far too skinny to be paired with a large stone base.

These are nicely proportioned columns. The large stone base visually supports the upper portion of the column and portico.

The height and width of a classical column needs to be designed with regard to the architectural element it will support.

While these columns are well-detailed, they do not work aesthetically.

Introduce a second floor balcony to add visual support and detail work in harmony with two-story columns.

The spacing and design of the column needs to match and support the architecture.

These columns are too tall and narrow to feasibly support the weight of the large portico

These are beautifully proportioned and spaced columns with simple detailing. Note that the column cap is the same width as the beam it supports.

Avoid meaningless column supports. Just because it does the job, does not mean it is appropriate to the design.

There appears to be no rhyme or reason to the spacing of these columns, and they are too small. Furniture spindles are not appropriate to hold up a covered porch.

DON'T