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The LivingHomes model in Santa Monica, Calif., is the first residential project in the country to attain a Platinum rating under the LEED for Homes pilot. Photo by Tom Bonner.

LIVING HOMES

ANATOMY OF A PLATINUM-RATED GREEN RESIDENTIAL HOME-BUILDING PROJECT.

BY STEVE GLENN

Residents in the Ocean Park neighborhood of Santa Monica, Calif., gathered on a neighbor's stoop under clear blue skies and the blazing April sun to watch as a 175-ton crane laid 11 prefabricated modules into place. Those neighbors who left before the crews arrived at 7 a.m. would return from work to find the formerly empty lot transformed into a three-story modernist, green, prefab home that continues to elicit national attention and regular 'drive-bys.'

While it was certainly an impressive feat to watch the home go up in a matter of hours, the work was only just beginning for the LivingHomes team. Installation marked the beginning of an arduous journey that would culminate four months later in August 2006, when LivingHomes received the highest rating possible from the U.S. Green Building Council's (USGBC) new pilot LEED for Homes (LEED-H) rating system. The model home is the first residential project in the country to attain a Platinum rating, definitively illustrating that there is a commercial market for homes that combine high design standards with low ecological impact.

As a company, LivingHomes is committed to building some of the healthiest, most ecologically considerate production homes available. The start-

up developer of prefab homes is working with the LEED-H pilot program in order to provide its customers with third-party verification, and to increase the marketability of their product. The LEED Platinum designation helps LivingHomes customers understand what is different and important about their product vis-à-vis other production homes.

The following article outlines the anatomy of a Platinum project, highlighting the collective features and elements that garnered LivingHomes this significant environmental achievement.

LESSONS LEARNED

Each LivingHome is designed to attain at least a Silver LEED rating. The model home, however, goes that extra mile to prove that less is indeed more, incorporating a unique blend of materials and innovative environmental systems in order to earn the Platinum designation. While not every single LivingHomes project will be subject to such stringent environmental considerations, the company was committed from the outset to making the first LivingHome—which also serves as the company's founder and CEO's own residence—embody the company's root values.

EVALUATION CATEGORIES	POINTS AVAILABLE	POINTS ATTAINED
Location + Linkages (LL)	10	10
Sustainable Sites (SS)	14	14
Water Efficiency (WE)	15	15
Indoor Environmental Quality (IEQ)	14	9
Materials + Resources (MR)	22	8
Energy + Atmosphere (EA)	29	32.5*
Homeowner Awareness (HA)	1	1
Innovation + Design Process (ID)	4	1.5
TOTAL	109	91

Certified = 30-49 points / Silver = 50-69 points / Gold = 70-89 points /
Platinum = 90-109 points
 * Awarded bonus points

The most important lesson is to plan early and to assiduously review all materials during the design phase, as it is very challenging to make changes later in the project. LivingHomes was able to capture significant credits by carefully planning every aspect of the project. Under the watchful supervision of Project Architect Amy Sims, the LivingHomes team scored 91 out of 109 points.

- By locating the home in a dense urban beach community, the company was able to capture all the points in the location and linkages category.

- Similarly, by only including landscaping on the site that is native to Southern California and minimizing the demand for water usage, LivingHomes also captured all the points in the *sustainable sites* category.

- In the *water efficiency* category, LivingHomes installed a 3,500-gallon cistern to collect all the rain-water run-off for irrigation purposes. Graywater is also used to irrigate the garden. A challenge for the company was pioneering the use of graywater in a residential application in the City of Santa Monica. The model home is the first in the city to utilize graywater. For the use of such an efficient system, LivingHomes achieved the highest water efficiency grant possible from the city to offset the cost.

- By creating a more efficient heating system that uses a solar hot water collector and gas fired boiler backup rather than a conventional forced hot air system to heat the house, LivingHomes attained bonus points in the *energy + atmosphere* category.

- Since the cooling system is based on natural ventilation and the heating is a hydronic radiant one, there are no ducts in the home. This greatly reduces the risk of indoor pollution, and garnered LivingHomes a high score in the *indoor environmental quality* category.

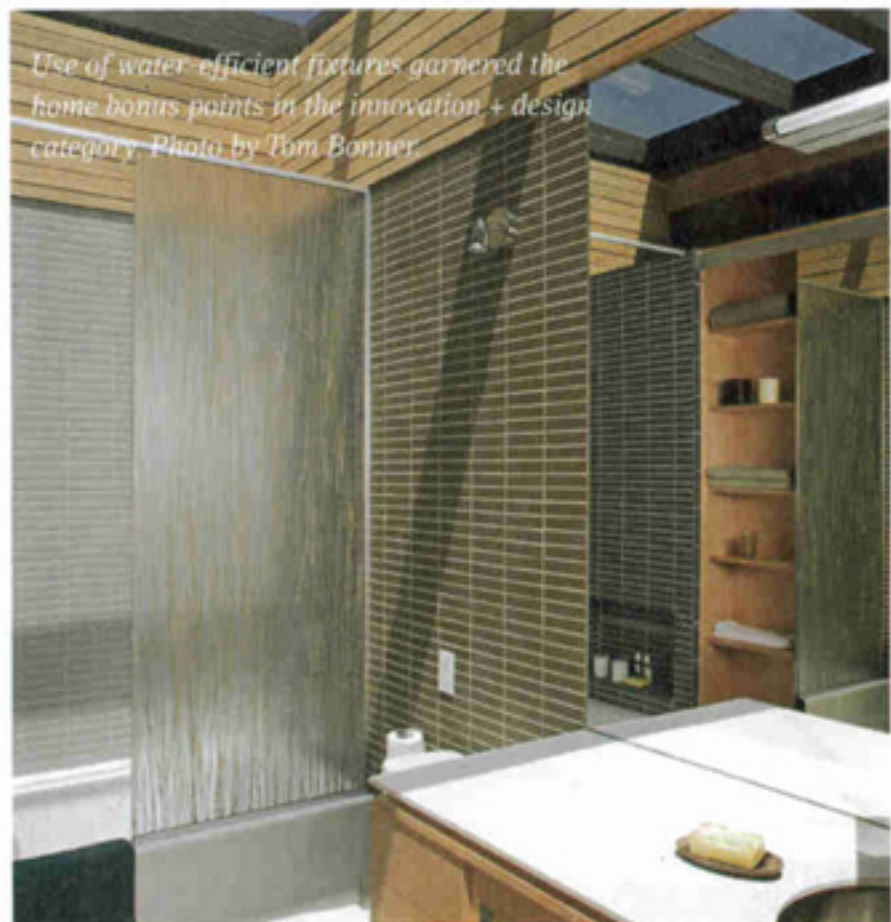
- In the *materials + resources* category, LivingHomes scored points because the home was built in a factory, greatly reducing the amount of waste involved in construction as compared to a typical "stick-built" home. Also, the amount of material used was reduced in the structural framing due to the fact that the home has a steel frame.

- LivingHomes scored highly in the *innovation + design* category. Bonus points were awarded for

LIVINGHOMES MODEL SANTA MONICA, CALIF.

GREEN SYSTEMS + DETAILS

- PHOTOVOLTAIC SYSTEM BY PERMACITY/GRIDPOINT
- SOLAR WATER HEATING AND RADIANT FLOORS BY ACME ENVIRONMENTAL AND CREATIVE CLIMATE
- NATIVE LANDSCAPE AND ROOFTOP GARDEN BY RICHARD GRIGSBY OF THE GREAT OUTDOORS
- ENERGY STAR APPLIANCES FROM BOSCH
- LED LIGHTS FROM PERMLIGHT
- GRAYWATER RECYCLING SYSTEM BY BILL WILSON ENVIRONMENTAL PLANNING
- FANS BY PANASONIC
- WHOLE HOUSE FANS BY TAMARACK
- FLEETWOOD DOORS AND WINDOWS
- 100 PERCENT POST-CONSUMER RECYCLED PAPER BASED COUNTERTOPS FROM PAPERSTONE
- RECYCLED GLASS TILES FROM OCEANSIDE GLASSTILE
- RECYCLED PORCELAIN TILES FROM COVERINGS ETC.
- GREEN FIBER 100 PERCENT RECYCLED DENIM INSULATION
- ORGANIC BEDDING AND LINEN FROM MATTEO
- WATER-EFFICIENT FIXTURES BY KOHLER
- FSC-CERTIFIED CEDAR FROM ECO-LUMBER CO-OP
- RECYCLED GLASS COUNTERTOPS BY ENVIROGLAS PRODUCTS INC.
- SPECIAL ROOFING BY CARLISLE - SYNTEC
- INTERIOR DESIGN BY HEIDI TOLL DESIGN
- AN ENERGY EFFICIENT SPA BY JACUZZI
- FURNISHINGS BY DESIGN WITHIN REACH, HERMAN MILLER, AND HENRY HALL DESIGN



Use of water-efficient fixtures garnered the home bonus points in the innovation + design category. Photo by Tom Bonner.



By marrying the highest levels of green products with good design, the LivingHome hopes to fill a void in the market for environmentally and ecologically aware consumers. Photos by Phil Beron.

exemplary performance for the use of environmentally preferable products, ranging from energy-efficient appliances by Bosch, furniture by Design Within Reach, and water-efficient fixtures by Kohler (see sidebar on page 9).

Participating in the LEED-H program has not been easy. As with any pilot program, there are “bugs.” However, from this experience, LivingHomes is confident that they will be resolved and that the program will be a great success in the long term.

LOOKING AHEAD

As awareness builds and more consumers demand good design, health benefits, quality, and ecological sustainability in the products they buy, the company is confident that a product like the LivingHome—which marries the highest levels of green and good design, not to mention value—will fill a void in the market.

With nearly a dozen articles slated to run in publications including *Dwell*, *Men’s Vogue*, *Interior Design* and other architectural magazines; thousands of customers who claim they want homes; 10 homes currently



under contract in California; and a LivingHomes community planned in Joshua Tree, the LivingHomes message is already resonating with consumers. This fall, the innovative developer will start a second production run that will include three to four customized LivingHomes, and the company is currently in development with David Hertz on a second LivingHomes product line. ■

Steve Glenn is the founder and CEO of LivingHomes, LLC (www.livinghomes.us). LivingHomes aspires to "wed profit and purpose" by developing homes that make great design, functionality and sustainable design practical and affordable. Founder and former CEO for PeopleLink, Glenn also co-founded and serves on the

board of the Sustainable Business Council, Kaia Parker Dance Fund, and the Hope Street Group. He has also worked with the William Jefferson Clinton Foundation, and recently helped organize an initiative with the American Heart Association to address childhood health and nutrition.