Bringing the Power of Design to Affordable Housing: The History and Evolution of the Affordable Housing Design Advisor

Deane Evans

New Jersey Institute of Technology Center for Building Knowledge

Abstract

The Affordable Housing Design Advisor (Design Advisor) is an online capacity-building tool designed to help developers, sponsors, and users of affordable housing understand what constitutes good-quality design, why it is worth striving for, and how to achieve it in their own projects. The Design Advisor was created by the U.S. Department of Housing and Urban Development and launched in 2001. This article describes the history and evolution of the Design Advisor through the intervening years, ending with the upgrading and relaunch of the tool in 2013.

Introduction

Decent, affordable housing is critical to the social and economic well-being of the United States. The need for such housing continues to far outstrip demand, and those projects that do get built suffer from severe cost constraints. Good-quality design—too often considered an expensive amenity, rather than a cost-effective necessity—is usually one of the first components cut from a project in the name of cost containment. The result is a country dotted with projects that meet minimal shelter requirements but fall far short of the well-planned, well-designed, and well-landscaped environments usually associated with good-quality housing.

Good design, however, can be the critical difference between an affordable development that succeeds—one that satisfies its residents and neighbors, enhances the community where it is built, and continues as a stable part of that community for decades—and one that does not. In fact, good design may be the most viable strategy currently available to improve the quality, asset value, and acceptance of affordable housing. The funds available for housing development are not likely to

rise, land acquisition and construction costs are not likely to fall, and regulations restricting affordable housing development are not likely to become less burdensome. In the face of these constraints, better design may be the one option left for cost-effectively improving the overall quantity and quality of affordable housing in the United States.

Aware of the potential for better design to significantly improve affordable housing in the United States, the U.S. Department of Housing and Urban Development (HUD) determined in late 1999 that the affordable housing community had a clear need for straightforward, easy-to-use guidance on how to achieve cost-effective design excellence. To address this need, HUD initiated a project to create a new tool that would help improve affordable housing design literacy in the United States. The result was the Affordable Housing Design Advisor (hereafter, the Design Advisor).

The remainder of this article recounts the history of the Design Advisor, its evolution since its launch, its current status, and where it—and the role of good design in community development—may be headed in the future.

The Affordable Housing Design Advisor

The Design Advisor is a web-based tool designed to help developers, sponsors, and users of affordable housing understand what constitutes good-quality design, why it is worth striving for, and how to achieve it in their own projects. Based on real-world experience and case studies of successful developments from all over the country, the Design Advisor, when originally launched, included the following key sections.

- 20 Steps to Design Quality is a systematic, detailed procedure for making sure that excellent design is built into every step of the development process.
- The Project Book is a design-focused workbook that provides a simple, effective way to manage the development process to achieve the highest possible levels of design quality.
- The Design Considerations Checklist is a practical guide to understanding and ensuring
 that a series of key issues—those with the greatest potential to affect design quality—are
 considered from the earliest phases of the development process and that no opportunities for
 achieving design excellence are overlooked.
- The Gallery is a collection of outstanding, well-designed affordable housing developments from all over the country, with photos and detailed information on each project.

HUD developed the Design Advisor in cooperation with the following organizations.

- American Institute of Architects (AIA).
- Enterprise Community Partners (Enterprise).
- Federal Home Loan Bank (FHLB) of Boston.
- Local Initiatives Support Corporation (LISC).

- National Congress for Community Economic Development (NCCED).
- Neighborhood Reinvestment Corporation (NRC).

These organizations served as the formal advisory group for the tool and provided valuable input throughout the course of its development and deployment.

The Design Advisor is administered and maintained by the Center for Building Knowledge at the New Jersey Institute of Technology in Newark, New Jersey. It can be accessed at http://www. designadvisor.org. Exhibit 1 shows the original look of the Design Advisor.

Exhibit 1

The Original Affordable Housing Design Advisor Homepage



Bringing the power of Design to affordable housing.

Launch, Promotion, and Expansion (2001 and 2002)

The Design Advisor launched in early 2001. HUD and the other members of the advisory group promoted it through announcements in newsletters and on the websites of the advisory group and via a broad series of presentations, workshops, and training events designed to inform community development organizations and personnel about the Design Advisor and how it could be used in their own affordable housing developments.

These promotional activities were national in scope, ranging from regularly scheduled training events by LISC, NRC, Enterprise, and the AIA to 1- or 2-day workshops for state and local organizations like the Vermont Housing & Conservation Board and the Community Development Commission of the County of Los Angeles. Based on audience responses and the degree of interest in the Design Advisor expressed at all the promotional events, the Design Advisor was well received. Many workshop participants reported that the issue of design was often confusing, if not intimidating, to them. They therefore welcomed a new tool that could help them better understand what good design is and guide them on how to manage the development process to ensure a better designed outcome.

During this early period, the Design Advisor was also expanded to include a new module titled "Demystifying Density." Created with support from the Fannie Mae Foundation, the module was developed to address what was then—and is still today—a hot button topic in community development by explaining the value of higher density housing and, in the process, helping to correct some of the myths that often underlie NIMBY (not-in-my-backyard) responses to affordable housing developments.

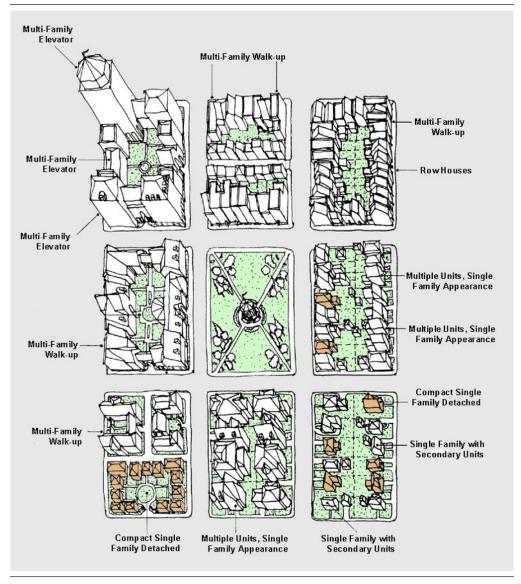
The new module consists of nine short lectures presented by Tom Jones, a nationally recognized expert in housing density and its effects on community development. The first three lectures—an "Introduction to Density"— provide the definition, history, and benefits of density. The next six present a series of "Strategies for Creating Higher Density Housing," organized by housing type (exhibit 2).

- 1. Compact Single Family Detatched.
- 2. Single Family with Secondary Units.
- 3. Multiple Units, Single Family Appearance.
- 4. Row Houses.
- 5. Multi-Family Walk-up.
- 6. Multi-Family Elevator.

One key objective of the lecture series, as the name implies, is to demystify what density looks and feels like. Another objective is to illustrate how relatively high levels of density can—through good design and by paying attention to the characteristics of different housing typologies—be accommodated in what appear to be low-density developments.

Exhibit 2

The Demystifying Density Module



The density lectures are in the form of streaming online video presentations. They are accompanied by a comprehensive set of Microsoft PowerPoint slides that users can download to create their own presentations. Together, the lectures and the slides are intended to serve as a powerful advocacy tool that any stakeholder in the community development process can use to argue persuasively for the value and benefits of higher density affordable housing.

Evaluation (2003)

After the Design Advisor had been deployed for roughly 2 years, HUD funded an evaluation of its progress and current status. The study, Bringing the Power of Design to Affordable Housing: An Evaluation of the Affordable Housing Design Advisor, presented the results of a series of discussions and focus groups with key target audiences for the Design Advisor (NJIT, 2003). More than 300 community developers participated in these discussions. Additional audiences included 235 architects, 94 government officials, 71 financial personnel, and 46 others, including students and for-profit developers.

The results of the discussions and focus groups were organized into two sets of findings and recommendations: one focused on the general topic of design in affordable housing, and the second focused on specific recommendations for improving and updating the Design Advisor.

In general, the study found the Design Advisor to be a valuable tool, but also a complex one in which specific parts might be equally useful as the whole. In addition, it found that the Design Advisor was not achieving sufficient market penetration to move the meter on design. As the study noted, "The target audience for the tool appears to be very receptive to the message, but not enough of them are hearing it" (NJIT, 2003: 5).

The study provided a series of recommendations—including the estimated level of effort and resources necessary for accomplishing them—based on the following general findings.

- High priority/moderate resources required.
 - Significantly expand the number and type of case studies.
 - Expand the number of housing types discussed, especially single family, rural, special needs, and manufactured.
- High priority/moderate-to-substantial resources required.
 - Develop information on, and tools for, controlling construction costs.
 - Create guidance on the structure and value of design fees and costs.
 - Provide guidance on appropriate construction materials and methods.
 - Provide guidance on incorporating sustainable and green design into affordable housing.
 - Develop strategies for influencing the pull side of community development.
 - Create substantially more minilectures.
- High priority/substantial resources required.
 - Present much more information on the rehabilitation of existing housing.

The evaluation process also revealed some unexpected findings concerning how the target audiences—specifically, community development stakeholders—perceive the meaning, cost, and value of design. The concerns these groups expressed were so consistent and pervasive that they were assembled as a separate discussion within the report as a whole.

Good Design: Essential Component or Expendable Amenity?

Many participants in the study appeared to misunderstand and even mistrust the concept of design quality, equating it primarily with aesthetics, an attribute viewed as desirable—but not essential—to affordable housing. Because aesthetics could be considered an amenity or frill, by extension, so could good design. This somewhat negative bias seemed to be pervasive among the study participants and emerged as a potentially significant barrier to creating better designed affordable housing.

The study concluded that research was needed to better characterize—

- How affordable housing developers understand "design."
- What, if any, negative associations come with the term.
- How to overcome these negative associations, perhaps via arguments drawn from market-rate development and other sources.

The Cost and Value of Design: Perception Versus Reality

Coupled with the general misunderstanding and mistrust of design described previously was a general assumption that good design costs more and that this extra cost is not worth it. Both these assumptions constitute critical barriers to adopting better design practices in affordable housing.

The study concluded that research is needed to provide definitive answers to three key questions that emerged repeatedly during the course of the study.

- 1. Does better design, net of amenity costs like high-grade finishes and appliances, add to construction costs?
- 2. Does better design cost more in terms of architectural fees?
- 3. If better design does cost more, what added value results from this extra investment?

Definitive answers to these questions will go a long way toward clarifying the true costs of good design in affordable housing and, hopefully, toward debunking current assumptions that good design is always too expensive to afford.

The findings and recommendations from the study, submitted to HUD at the end of 2003, represented a snapshot in time of the Design Advisor's progress and trajectory since its launch in 2001. They also represented a roadmap for future activity. During the period that the evaluation report was being prepared, training events and other promotional efforts for the Design Advisor continued, primarily in cooperation with the original members of the advisory group.

The Campaign for Excellence in Affordable Housing Design (2004 and 2005)

One key finding of the HUD evaluation study was that, in spite of recent successes in spreading the word about the Design Advisor, systemic barriers appeared to block the widespread adoption and use of the principles embedded in the tool. For example, although study participants were enthusiastic about the Design Advisor and saw ways that it could immediately help in their community development activities, they were concerned and, in many ways, confused about the more general subject of design and its value and effect in affordable housing.

Parallel to this finding, it also became clear that, although the Design Advisor may be an extremely useful tool for organizations that want to improve the design quality of their developments, it is not, by itself, able to transform the market concerning the value of good design in community development. If community developers misunderstand and mistrust the basic concept of good design, they will be unlikely to use the Design Advisor, no matter how valuable a tool it might be.

The Campaign for Excellence in Affordable Housing Design (hereafter, the Campaign) was developed with support from the Fannie Mae Foundation—as a means to address and begin to overcome these key barriers to achieving higher quality affordable housing. It was also developed to help the providers of affordable housing (1) understand the meaning and value of good design in affordable housing and (2) see how a commitment to good design could help them in their work (exhibit 3).

Exhibit 3

Design Updates, Centerpiece of the Campaign for Excellence in Affordable Housing Design



The centerpiece of the Campaign was a series of 18 short articles, called Design Updates, that discuss the value of design in affordable housing. The Design Updates—written in an accessible and concise manner—explain why design is an important consideration in any affordable housing development, and they lead the reader to additional resources that can help them implement better design in their developments.

The Design Updates were included in a special new section of the Design Advisor. In addition, short paragraphs announcing and describing each new Design Update were provided to the advisory group organizations to be distributed each month via their respective e-newsletters. Readers were provided links from the paragraphs directly to the articles on the Design Advisor. From there, they could find links to additional resources, many of which were found on the Design Advisor itself. In this way, the Campaign was designed to promote not only the concept of good design but also the Design Advisor as a key resource that could help community developers achieve better design in their projects.

The 18 Design Updates were—

- 1. First Impressions: Great Front Doors and the Difference Design Makes.
- 2. Designing Porches and Balconies That Work for You and Your Neighbors.
- 3. Stepping Up to a Great Home: The Value of Well-Designed Stairs.
- 4. The Heart of the Matter: Designing a Great Interior.
- 5. Q: When Do Ordinary Outdoor Spaces Become Great Outdoor Places? A: When They Are Designed Like Outdoor Rooms.
- 6. Benches and Beyond: Designing Great Outdoor Seating.
- 7. Where a Building Meets the Sky: The Value of Well-Designed Roofs.
- 8. Making Walls Work for You: Shaping Your Development by Design.
- 9. Windows Inside and Out: The Difference Design Can Make.
- 10. Success Is in the Details: How the Smallest Design Decisions Support Your Whole Development.
- 11. Landscaping: Creating Great Outdoor Places by Design.
- 12. Getting To, Through, and Around: Delightful Paths and Walkways by Design.
- 13. Really Good Fences Make Really Good Neighbors: The Difference Is Design.
- 14. How Big Should a Building Be? How Big Should It Look? Controlling Size and Scale by Design.
- 15. Can a Building Have Rhythm? Absolutely, and Good Design Provides the Beat.
- 16. Catching Your Eye: The Importance of Visual Complexity in Housing Design.
- 17. Reducing the Impact of Parking: The Role of Good Design.
- 18. Optimizing Driver/Pedestrian Interaction by Design.

The Design Updates were distributed to—

- 6,000 members of the AIA Housing Committee.
- 400 NCCED constituent organizations.
- 1,400 organizations in the NRC Neighborworks network.
- 14,650 recipients of the LISC monthly e-newsletter.
- 2,500 recipients of the monthly Enterprise (formerly Enterprise Foundation) e-newsletter.
- 7 FLHB of Boston Community Investment Officers (who provide information to the 470 participating banks of the FHLB system).

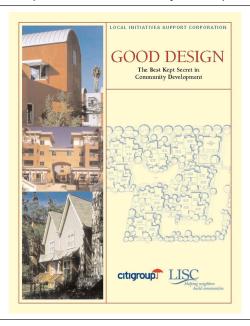
During the course of its implementation, the Campaign was successful in increasing both awareness of the Design Advisor and appreciation for the value of design.

Good Design: The Best Kept Secret in Community Development (2004 and 2005)

During this period—and parallel to the Campaign—a white paper was developed with support from LISC titled, *Good Design: The Best Kept Secret in Community Development* (Evans and Beck, 2005). The paper was specifically developed to address the concerns about—and the mistrust of—the design process voiced in the HUD study (exhibit 4).

Exhibit 4

Good Design: The Best Kept Secret in Community Development



The paper, which contains multiple short case studies of well-designed affordable housing developments, is organized into four core sections. The first section—What Good Design Is—emphasizes four key points about design: it is (1) essential and not an amenity or frill that can get cut from a development to reduce costs, (2) much more than aesthetics, (3) a process much more than a product and (4) perhaps the most enjoyable and fun aspect of the affordable housing development process.

The second section—What Good Design Does—sets forth the four core criteria for a well-designed development that are described in much more detail in the Design Advisor. Like the Design Advisor, the white paper posits that the goal of a good design process is to create developments that (1) meet the needs of the occupants, (2) understand and respond to the building's physical context, (3) enhance their neighborhoods, and (4) are built to last.

At first glance, these four criteria may seem to have little to do with how many people would define design excellence. They contain no mention of aesthetics or what a development looks like nor convey concern with the wow factor that might normally be associated with design quality. Rather, these criteria focus on a set of outcomes that provide direct and tangible benefits to the occupants of an affordable housing development—and the community where it is located. As noted in the paper and on the Design Advisor, design quality means—

- 1. **Meeting occupants' needs.** Well-designed developments understand the needs of their occupants and how these needs affect physical design. One size definitely does not fit all. Families with children may need larger homes with more bedrooms, larger kitchens, and more storage. Elderly people living alone, on the other hand, may need less space but will require more of that space to be designed with accessibility issues in mind.
- 2. Understanding context. Although the context in which an affordable housing development is brought to life includes socioeconomic, legal, and regulatory issues, the physical context is most important from a design perspective. How wide are the sidewalks? Are they completely paved or do they have a grassy strip? What do the roofs of neighboring houses look like: pitched or flat, gabled or hipped? What are the primary exterior materials? What are the main colors? Do most of the surrounding houses have porches, patios, or decks? How is open space handled? Such questions can help define the physical context in which a new development will be located and can help the design team create housing that responds positively to this context.
- 3. **Enhancing neighborhoods.** All affordable housing developments, no matter how small, have a responsibility beyond simply meeting the needs of their occupants. They also have a public responsibility to add to and enhance the neighborhoods in which they are built. Good design is critical to this process and to moving developments beyond the goal of simply providing shelter to the goal of building communities.
- 4. **Building to last.** Good design can help ensure that a development stands the test of time. By designing in materials, systems, and finishes that are durable, easy to maintain, and energy efficient, a development team can ensure that its projects are cost effective and built to last, needing minimal repair and upkeep over time.

All four of these outcomes are tied to the physical aspects of a development and can be achieved only through intelligent, sensitive design. If they are achieved, the result will be a development that works—one that is fully occupied, increases in value, has residents who are proud of where they live, and has neighbors who are pleased as well. Any development that meets these goals constitutes a lasting community asset that is, by definition, well designed.

The white paper concludes with two short sections—What Good Design Costs and Who's Responsible for Good Design. The paper was distributed widely by LISC and through the Design Advisor site as part of the Campaign. It is still available on the Design Advisor website.

Going Green (2005 Through 2008)

Beginning in late 2005, the Design Advisor began to add new content related to green affordable housing. For 3 years, Design Advisor staff worked closely with representatives of the AIA Housing Committee and the AIA Center for Communities by Design to create a comprehensive new section of the Design Advisor Gallery focused on green, sustainable design. The AIA, as a partner in Enterprise's Green Communities Initiative, assembled and juried a selection of high-quality affordable housing projects that also focus on sustainable design principles to help demonstrate how green design in affordable housing can be achieved. Design Advisor staff assisted the AIA in administering the "Show You're Green" program and in formatting and posting the selected projects on the Design Advisor site.

The result was the Green Housing Projects Gallery, which includes 34 detailed case studies of affordable housing developments that are both well-designed and green, organized according to the 10 criteria used by the juries to assess the projects: (1) community context, (2) site design, (3) building design, (4) water conservation and management, (5) energy efficiency, (6) less material use, (7) recycling, (8) indoor environmental quality, (9) quality assurance, and (10) other.

The creation and posting of these new case studies during the course of 3 years constituted a major addition to the breadth of content available through the Design Advisor and was a testament to an innovative and effective collaboration with the AIA.

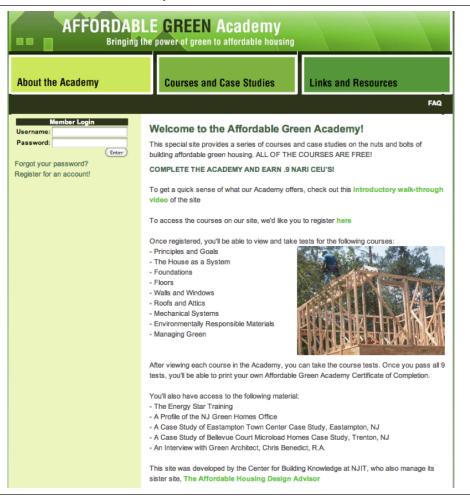
Parallel to the Show You're Green case study effort, the Design Advisor also received funding from a private foundation to create an innovative new educational tool focused on green affordable housing. The Affordable Green Academy (hereafter, the Academy) was developed based on a survey—posted on the Design Advisor—that asked community development stakeholders about their current construction practices and about the types of green guidance they would find most useful. Based on the results of the survey, a decision was made to focus very explicitly on the practical specifics of how to actually detail and construct affordable green housing.

The resulting Academy contains online courses taught by recognized building science experts. The courses—and their accompanying online tests—are designed for community development organizations as training or certification programs for their staffs and contractors. The courses contain 10 sections: (1) introduction, (2) principles and goals, (3) the house as a system, (4) foundations, (5) floors, (6) walls and windows, (7) roofs and attics, (8) mechanical systems, (9) environmental materials, and (10) managing green.

The Academy also includes a series of narrated, online case studies that illustrate how to put the lessons learned from the courses into practice in real affordable housing developments (exhibit 5).

Exhibit 5

The Affordable Green Academy



Reverse-Engineering the Design Advisor As a Funding Review Tool (2008 and 2009)

Beginning early in the deployment process for the Design Advisor, attempts were made to have funding agencies use the tool in their proposal review processes. Some early success occurred when the Community Development Commission (CDC) of the County of Los Angeles adapted the Design Advisor's 20 Steps to Design Quality as a guide to awarding discretionary design points for developments seeking funding. Using the Design Advisor in this way helped make the design review process more systematic and credible, and the CDC used the tool for several years starting in 2002.

In 2008, a new opportunity arose to revisit this use of the Design Advisor when the Pennsylvania Housing Finance Agency (PHFA) initiated a special Excellence in Design Initiative (hereafter, the Initiative) layered on top of its existing Homeownership Choice funding programs. PHFA decided to use the Design Advisor as the basis for the Initiative and as the underpinning for a required design study, prepared by the development teams, that would demonstrate how the proposed project meets user needs, understands and responds to its context, enhances its neighborhood, and is built to last. The goal of the Initiative was to establish a standard for preliminary design that would incentivize development teams to integrate the meaning, value, and process of good-quality design in developing affordable housing.

Working with the Philadelphia-based Community Design Collaborative, Design Advisor staff successfully reverse-engineered the Design Advisor to provide guidance both to the developers submitting proposals and the PHFA team reviewing them. The result was a successful initiative that fostered a new and more widely shared awareness of the value of design and, in some cases, resulted in improved overall design quality. This new focus on design unfortunately was not maintained after the pilot phase of the Initiative was complete. Awareness of the issue remained, but a structured approach to incentivizing good design, based on the results of the Initiative, was not institutionalized across all PHFA programs.

Maintenance and Promotion (2010 Through 2012)

The years 2010 through 2012 were relatively quiet for the Design Advisor. The tool was maintained and stakeholders still accessed it, but promotion was minimal and no new content was added.

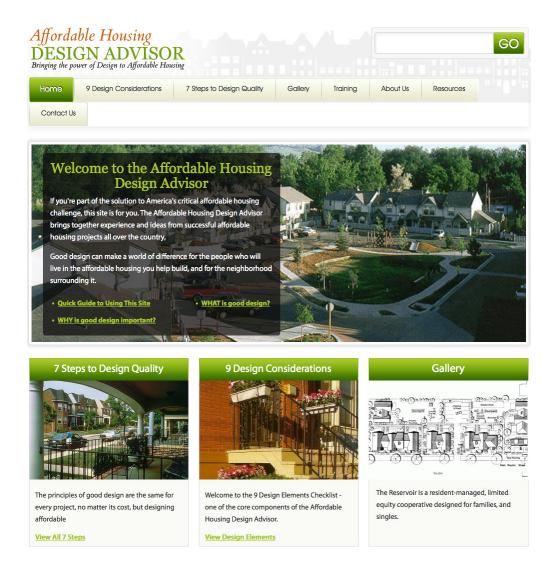
Makeover and Relaunch (2013)

In 2013, the Design Advisor underwent a substantial makeover. The emphasis shifted from being a structured (and often very linear) tool for stakeholders to use to being a rich set of curated resources that stakeholders could access. Many of the older references were eliminated; the step-by-step guidance that was the centerpiece of the original Design Advisor was downplayed; and core resources—specifically the Design Considerations section, the Gallery, and the training resources—were given more prominence.

The updated version of the tool launched in early 2014 with the same web address as the original: http://www.designadvisor.org (exhibit 6).

Exhibit 6

The Redesigned Affordable Housing Design Advisor Homepage



Next Steps (2014 and Beyond)

With its recent update and relaunch, the Design Advisor is poised to reengage the affordable housing community on the issue of design quality. In addition to seeking partners and resources to more broadly deploy the existing tool and increase its use, the site's managers will pursue a series of new initiatives with the potential to expand the scope and utility of the tool.

The Design Advisor As a Funding Review Tool

Since its launch, the Design Advisor has stepped into the design review process twice. Both times, the results were positive but short lived. A new initiative to focus greater attention on design in the funding of affordable housing—by using the Design Advisor to underpin a more systematic approach to the design review process—could be a very powerful way to encourage funding agencies to move beyond the common "money, land, and pro forma" approach to development and to demand better design.

Renovation and Rehabilitation

The Design Advisor primarily focuses on new construction and therefore does not address the wide range of community development activities involved in renovating and rehabilitating existing housing. As the Design Advisor moves forward, it will seek partners and resources to create a companion tool focused on improving the design of this substantial segment of the affordable housing marketplace.

Materials and Methods Information Exchange

During the process of developing the Design Advisor, affordable housing stakeholders often noted their need for practical information on which systems, products, and materials work well in affordable housing developments—and which do not. Community development organizations working in the field have a wealth of knowledge and experience in this area, but they have no way to share it with others and, at the same time, have their own questions answered. One goal of the Design Advisor from its inception was to become firmly enough established in the affordable housing community across the country so that it could provide a platform for robust, peer-to-peer exchanges about such issues.

That goal has not happened yet, but it is still a goal that the managers of the Design Advisor intend to pursue vigorously in the future, taking maximum advantage of the social media explosion that has happened since the Design Advisor launched more than a decade ago.

Author

Deane Evans is an architect who currently directs the Center for Building Knowledge at the New Jersey Institute of Technology. In 1998, he served as the Founding Director of the U.S. Department of Housing and Urban Development's Partnership for Advancing Technology in Housing (PATH) program within the Office of Policy Development and Research.

References

Evans, Deane, and Jody Beck. 2005. *Good Design: The Best Kept Secret in Community Development.* New York: Local Initiatives Support Corporation.

New Jersey Institute of Technology, Center for Architecture and Building Science Research (NJIT). 2003. *Bringing the Power of Design to Affordable Housing: An Evaluation of the Affordable Housing Design Advisor*. Washington, DC: U.S. Department of Housing and Urban Development, Office of Policy Development and Research.