Village Homes: A Case Study In Community Design

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Mark Francis, FASLA is professor of landscape architecture at the University of California, Davis. Trained in landscape architecture and urban design at Berkeley and Harvard, his work has focused on the use and meaning of the built and natural landscape. Much of this research has utilized a case study approach. He developed the case study method for the Landscape Architecture Foundation and serves on their Land and Community Design Case Study Initiative National Advisory Board. **Abstract:** Village Homes is one of the most publicized built examples of sustainable community design and landscape architecture in the United States. Designed and developed by Michael and Judy Corbett in the 1970s, Village Homes consists of 242 single- and multifamily residences on sixty acres. Houses are planned as energy-conserving buildings around common open spaces with play areas and shared gardens. A sizable part of the development is devoted to community open space, including orchards, vineyards, and play areas. Most of the landscape is designed as an edible landscape and is owned and actively managed by its residents.

Seen early on by local planners and bankers as a high-risk development, Village Homes today is one of the most desirable and economically successful developments in California. It offers many design and planning lessons useful for community design and landscape architecture. While widely studied and well documented, its impact has not been fully reviewed. The purpose of this case study is to make this knowledge available to practitioners and researchers as well as to provide a critical review of the project's successes and limitations.

This case study follows a format developed for the Landscape Architecture Foundation (Francis 1999a, 2001a). This is one of three prototype case studies being developed for LAF's Land and Community Design Case Study Initiative (Francis 2001b,c; Francis 2002). It is intended as a prototype place-based case study that will aid others in developing cases of natural and built landscapes.

Davis, California may be turning into one of the most innovative towns in North America in its current search for new solutions to low-energy community design. (Thayer 1977, p. 223)

C o begins Rob Thayer's Daward-winning article on Village Homes published over twenty years ago when construction of Village Homes first began. Thayer suggested (1977), and many studies have since confirmed, that Village Homes has become one of the most innovative new neighborhoods built in the United States in the past twenty-five years. It has also made the community of Davis, as Thayer suggested, one of the leading examples of sustainable design in the United States.¹ Village Homes may in fact be one of the most innovative examples of community design since Radburn, New Jersey, was planned in 1928. Village Homes is a model community design distinct from most current new urbanist proposals. It is especially useful as an example of sustainable landscape architecture.

The Landscape Architecture Foundation selected Village Homes as the first place-based case study for its Land and Community Design Case Study Initiative for several reasons. Most importantly, there is considerable case study material already available on Village Homes. This includes detailed case studies prepared by the Local Government Commission, the National Association of Home Builders, the U.S. Department of Energy Center of Excellence in Sustainable Development, the Rocky Mountain Institute, and MIT's Department of Urban Planning. In addition, the project designers and developers have published extensive information on the goals and perceived outcomes of the project (Corbett 1981; Corbett and Corbett 1979, 1983, 2000). Several studies, including some useful postoccupancy evaluations, have been completed of Village Homes over the years by researchers, students, and governmental agencies interested in sustainable development.² Much of this information is already available but is scattered in the literature on community design, energy, and sustainable development and located in archival documents, obscure web sites, graduate theses, and local reports largely inaccessible to people interested in the project.

Past research on Village Homes may be helpful to understand its significance as a model for sustainable community development. For example, residents report having twice as many friends and three times more social contacts than residents in a nearby conventional neighborhood in Davis (Lenz 1990). Furthermore, houses use one-third less energy than other neighborhoods in Davis (Lenz 1990). When first proposed, the developers and designers had difficulty securing financing for the project (Corbett and Corbett 2000). Village Homes is now "Davis' most desirable subdivision," with homes selling at \$10-25 per square foot premium in 30 percent less market time (Coldwell Banker Residential, cited in Wilson, 1998).

Despite its success and fame, Village Homes has not been replicated as a whole. While many of its features, such as open channel drainage and passive solar house design, have become more standard practice in community design, its holistic approach has not been adopted. This raises the question of the barriers that prevent innovative community design from being more widely implemented. In the case of Village Homes, an understanding of its design and development process as well as impacts may help explain its significance and potential for landscape architecture and community design (Figure 1).

The Case Study Method

This case study utilized a method prepared for the Landscape Architecture Foundation (Francis 1999a, 2001a). The method was developed as a template to provide a uniform and comparable way to document and evaluate landscape architecture projects and issues. Three types of case studies are being developed by LAF—place-based, issuebased and hypothetical case studies for teaching. This is the first placebased case study developed by LAF, with several others to follow.³

The case study method involves the collection and analysis of different kinds of information, including baseline data, role of key project participants, financial aspects, project goals, and the design and decision making process. In addition, this case documents use, perceptions, unique constraints, project success, and limitations.

The methods used to develop this case study included archival research of key documents on Village Homes, published reviews of past research and case studies on Village Homes, internet searches, numerous visits to the community over twenty years, including behavioral observations and a short time spent living in the community, and studies of children in Village Homes (Francis 1981, 1985, 1988). In addition, awards or special recognition descriptions, interviews with the designers/developers of the community, and interviews with residents and users, nonresidents, maintenance people/ gardeners were used.

Village Homes Case Study: Summary Data⁴

Project Name:	Village Homes	
Location:	Davis, California located in Central Valley,	
	Putah/Cache Creek Bioregion, 60 miles north-	
	east of San Francisco and 15 miles west of	
	Sacramento	
Date Designed/Planned:	1973–1975	
Construction Completed	Built in phases (50 units at a time) from	
construction completed.	groundbreaking in 1975 to build out in 1982.	
Land Cost:	\$434,000 (in 1974)	
Development Costs:	\$2,329,241 (in 1974)	
Site Improvement Costs:	\$313,107 for swimming pool, bike paths, land-	
I an dam	Scaping	
Lender:	Sacramento Savings Bank	
Houses:	600–3,000 Sq. Ft. Also a nine-bedroom co-op	
	house has about a dozen residents	
House Construction Costs:	\$38 per square foot (1976 dollars)	
House Building:	60 percent built by developer and $40%$ by	
-	small contractors	
Initial Sale Price per Unit:	\$31,000-\$75,000	
Resale Price per Ûnit:	\$150,00-\$450,000 (2000)	
1	Resale \$10–25 square foot higher than other	
	sales in Davis (1995): sold in 30–50% less time	
	(Coldwell Banker)	
Return on Investment:	93% per annum for 13 investment partners	
Size:	60 acres	
Density:	4 dwelling units/acre (7 7 dwelling units/acre	
Density.	not counting common landscape); 6.023	
	not counting common landscape), 0,555	
	Vicipity density 2 5 dwelling units /eero	
	Vicinity density: 5–5 dwenning units/ acre	
	vicinity: 5,458 people per square mile	
Open Space:	25% of site in public and community open	
	space	
Land Use:	242 housing units (222 single family units, 22	
	apartments); 650 residents; Commercial Office	
	space: 4,000 sq. ft. with 15 small businesses in-	
	cluding consulting and professional firms;	
	Agricultural uses: 12,000 sq. ft.; 12 acres of	
	greenbelts and open space; 12 acres of com-	
	mon agricultural land; two village greens;	
	swimming pool: community center building:	
	restaurant, dance studio, and day care center	
Lot Size	Approximately 4 000 sq. ft	
Land in Streets and Parking	15 percent in Village Homes: 99 percent in	
Land in ources and ranking.	Vicinity	
Street Widths:	23 ft. in Village Homes; 44 ft. Vicinity	
Average Number of Cars:	1.8 in Village Homes, 2.1 in Vicinity	
Landscape Architect(s):	Michael Corbett, Town Planners, Davis, Cali-	
	fornia	
Client/Developer:	Michael and Judy Corbett	
Managed By:	Village Homeowners Association	



Figure 1. Panoramic view of Village Homes. Photograph by Tom Lamb.

Precedents and Historical Context

The design of Village Homes was largely influenced by earlier concepts and long-standing principles of community design. Mike and Judy Corbett, the project's designers and developers, give credit to earlier greenbelt communities in Britain and the United States (Howard 1965; Corbett and Corbett 2000) including planned communities such as Radburn, New Jersey and Greenbelt, Maryland. It was also inspired by critiques of failed efforts at urban development and renewal in the 1960s (Jacobs 1961). Village Homes was planned well before the current interest in smart growth and new urbanism. As a result, it serves as an original and unique form of planned community than is currently popular (Duany et. al. 2000; Calthorpe et. al. 2000) (Figure 2).

Project Developers and Planners

The developer's background in architecture, town planning, ecology, and environmental psychology helps to explain their goals in designing the project. Michael Corbett is principal in the consulting firm Town Planners and author of A Better Place to Live (Rodale 1981). He served as mayor of Davis in the late 1980s. In 1999, he was named, along with Judy Corbett, as a "Hero of the Planet" by Time magazine. Judy Corbett is the founder and for the past twenty years has served as Executive Director of the Local Government Commission, a nonprofit membership organization made up of almost one thousand mayors, city council members, county supervisors and local government staff from throughout California and the Western States. She has co-authored several books and guides for policymakers on implementing more livable land use patterns. A 1974 graduate of the Ecology Graduate Group at the University of California at Davis, Judy Corbett has served as a board member of the Congress for the New Urbanism since 1995.

Project Background and History

Mike Corbett describes their early experience developing the Village Homes project. "When I first presented the concept plan for Village Homes to the then City Planning Director for the City of Davis, she sat back in her chair and started to laugh. 'This goes against everything I learned in planning school. Change all of it and come back and then we can talk,' she responded. What is remarkable, I was able to get about 90 percent of what was on that original plan."5 Judy Corbett has stated, "we basically had to break almost every code in the city to get Village Homes approved" (Owens 1993, p. 19) (Figure 3).

And so begins the story of Village Homes in Davis, California. What started out as a visionary plan combining healthy doses of ecology and sociology eventually became an internationally recognized built example of community design. Regarded by some as a one-of-a-kind community and by others as a model for sustainable community development, Village Homes is now well known as an experiment of community planning in the ranks of Radburn, New Jersey; Reston, Virginia; Greenbelt, Maryland; Sunnyside Gardens, New York; and Milton Keynes in Britain (Howard 1965; Lang 1994; Stein 1989).

Interviewed some twenty years later, Senior Planner Doris Michael of the City of Davis commented, "I think the strengths of the design are the sense of community and the feeling of belonging to a neighborhood. I like the fact that there's a sense of recognition and that people care about who you are. People in this community know each other" (Fitch 1999, p. 15). The fact that city planners have done a complete reversal of attitude toward the project reflects both its significance in the local community and the changing culture of development today.

Genesis of Project

Village Homes began as the developers' vision in making what they call "a better place to live." Born out of social and environmental concerns of the 1960s and 1970s, Village Homes was intended as a reflection of the values of these times-environmental sensitivity and social responsibility. It began, according to developer Judy Corbett, with a small group of families meeting for a year to try to create their own community. The Corbetts later set up a booth at the first Whole Earth Festival held on the University of California Davis campus with sign-up sheets for anyone interested in joining them. More than thirty families met for about a year, but the group eventually fell apart. "People decided we couldn't get enough money," Mike Corbett recalled (Fitch 1999, p. 2).

Writing in their book on Village Homes some twenty-five years later, the Corbetts describe their early experience developing Village Homes:

> When we set out to design and build Village Homes in 1972, it seemed unlikely that we would be successful. We had no financial assets and no track record in development. We were embarking on a large-scale project that incorporated numerous untried and innovative features. The most likely out

come, and the one we expected, was that we would not succeed but would be able to publish a book about our experiences and describe how a forward-looking community could be designed. Our planning concepts and design ideas might then be useful to others. Luck was on our side. It took a great deal of tenacity and perseverance, but in the end we were able to overcome multiple obstacles and build Village Homes. (Corbett and Corbett 2000, p. xiii)

The developers describe their two interrelated goals for the community of "designing a neighbor-



Figure 2. Aerial view of Village Homes in the mid 1980s.

hood which would reduce the amount of energy required to carry out the family's daily activities, and establishing a sense of community" (Corbett and Corbett 1983, p. 1). These goals are based on a number of philosophical ideals, many combining human and natural ecology (Corbett and Corbett 2000) (see Table 1).

In the early phases of Village Homes there was a strong pioneering sense. Judy Corbett observes, "We did a lot with community work parties, building paths and foot bridges. There was a real strong 'spirit of the pioneers'; we were doing something different, for ourselves. The rest of Davis thought we were a bunch of nutty hippies. The process was very unifying socially" (Owens 1993 p. 20). She says, "We put everything into the vision and making it work" (personal communication, 2000).

Design, Development and Decision-Making Process

Design Process. The designers and developers used a participatory approach to develop the initial planning concepts for the community. They brought together a group of friends and interested families to discuss how the project should be designed. "The goals of this original group, who called themselves "the Village," were visionary:

> The discussion centered on a shared sense of dislocation, disconnection, and powerlessness and on a concern for the environment. We wondered whether it would be possible to recover some of the homier aspects of village life within the context of a modern neighborhood. We believed it should be possible to design a community so that one might live more lightly on the land." (Corbett and Corbett 2000, p. 23)

Yet the group disbanded after a year, frustrated by the lack of a site and funds to realize their dream. The Corbetts retreated to develop their own plan and find willing investors. The final plan was their own vision, a blend of Judy Corbett's background in environmental psychology and Mike Corbett's interests in architecture and ecology. The plan was one of the first to combine natural ecology and social ecology into an integrated vision of people, nature, economy, and community.

Decision-Making Process. When the Corbetts submitted their plan to city officials in the early 1970s, it met with considerable resistance and hostility. As Judy Corbett describes the process, "Everyone had a problem. The police department did not like the dead-end cul-de-sacs. The fire department did not like the narrow streets. The public works department did not like agriculture mixing with residential. And the planning department picked it apart endlessly" (Jackson 1999, p. 78).

Even the federal government found cause to question the merits of the project. "While this office is most



Figure 3. Site Plan of Village Homes. Courtesy of Mike Corbett.

Table 1. Assumptions of Sustainable Development. Source: Corbett and Corbett 2000,pp. 53–60.

- 1. Every living thing survives by numerous and subtle relationships with all living things and with the inanimate environment.
- 2. Ecosystems and parts of ecosystems composed of a wide variety of species tend to adapt better to environmental changes or human tampering than do those composed of fewer species.
- 3. Part of the ecosystem is a complex system of energy transfers that depends, ultimately, on energy input.
- 4. In the long run, every one of the humanity's physical needs must be satisfied either without the use of nonrenewable resources or through recovery and reuse of those resources.
- 5. Although humans seem to be the most adaptable of living things, we still have certain inherent physical and psychological needs that must be met by the ecosystem, the human-made physical environment, and the social environment.
- 6. Humans are for the most part genetically adapted to the environment that existed about 200 to 20,000 years ago. This adaptation involves not just the physical makeup but also the modes of perception and behavior and relates to the social environment as well as the physical environment.
- 7. The relationship between people and the environment goes both ways: humanity shapes and is shaped by its environment.
- 8. Humans can adapt to a wide range of environmental conditions, but the results of the adaptation to inhospitable conditions is temporary or chronic stress.

sympathetic with your objective concerning energy conservation and environmental concerns, we feel the proposal requires further study," said Richard D. Chamberlain, area director for the U.S. Department of Housing and Urban Development at the time, in a letter to Mike Corbett. Chamberlain questioned having apartments in the midst of singlefamily housing, providing parking bays instead of on-street parking, and the orientation of lots. He said the common areas seemed ill conceived. provisions for runoff of storm water inadequate, and the idea of having a homeowner association growing agricultural products questionable. "It could well be that the same objective can be obtained by enlarging individual lots and substantially eliminating much of the common area," he said, noting such a change would provide individual homeowners with space for garden plots (Fitch 1999, p. 2).

The Corbetts responded with the persistence of missionaries rather than the pragmatism of developers. Not taking no for an answer, "they set up traffic cones in an empty parking lot to show the fire department that emergency equipment could easily navigate the narrow streets, even past parked cars. They convinced the police department that putting sidewalks behind the houses rather than in front and eliminating throughways would make residents feel safer, and Village Homes' low crime rate has proved this point" (Jackson 1999, p. 78) (Figure 4).

While city staff fought virtually every design concept, it was the political process that rescued the project



Figure 4. Judy and Mike Corbett used large-scale maps and models to develop the plan for Village Homes. Courtesy of Judy Corbett.

and allowed it to be built. Judy Corbett says, "We essentially had to appeal all staff decisions to the City Council, and fortunately, the City Council was very liberal and supportive of what we were attempting" (Owens 1993, p. 19). After almost three years of delays and negotiations, they were allowed to begin construction of the first houses in 1975.

Financing. While the plan was anything but conventional, conventional financing was needed to build the project. Judy Corbett remembered" there was a lot of resistance to the project from local banks. We went to 30 different banks before we got a loan" (Owens 1993 p. 21). Reasons they were turned down included their lack of past experience as developers and the unusual aspects of the plan. Eventually they convinced a bank to finance the project after downplaying its unique features.

Role of Participation. While the overall plan came solely from the developers, they built in numerous opportunities for residents to participate in the design of open spaces and ongoing management of the community. One of the main ways residents have been involved is through work parties. Much of the communal landscape and buildings were constructed through this communitybuilt process. Funds were set aside by the Homeowners Association to allow residents to design and build landscape areas and buildings such as the Community Center and Pool. For example, each group of eight homeowners living around a common area received about \$600 from the Homeowners Association to landscape the common areas as they wished. This forced residents to work together and get to know each other almost immediately after moving in.

An important benefit of resident participation is creating a sense of symbolic ownership. Surveys have shown that this participation has led to a stronger sense of attachment to the neighborhood and greater satisfaction (Lenz 1990).

Design and Planning Concepts. Village Homes combines older design and planning principles with newer more innovative ideas. Many of its basic concepts, as the developers admit, are drawn directly from earlier greenbelt communities. The idea of a residential area organized around open space (as compared to the street) is a long-standing and popular planning concept. It also goes against most new urbanist thinking that maintains the street as the central focus of public space (Brill 2002; Calthorpe et al., 2000; Duany et al., 2000) (Figure 5).

The physical planning principles grow directly from the larger mission of the community. *The New Homeowners Guide*, published by the Village Homeowners Association (1995), summarizes the major planning concepts and spells out the social and environmental goals of the plan.

> A number of design features help Village Homes residents live in an energy-efficient and aesthetically pleasing community. All streets are oriented east-west and all lots are oriented north-south. The orientation helps the houses with passive solar designs and makes full use of the sun's energy. Street widths are all narrow with curving cul-de-sacs less than 25 feet wide minimizing the amount of pavement exposed to the sun in the long, hot summers. The curving lines of the roads also give them the look of vil

lage lanes, and the few cars that venture into the cul-de-sacs usually travel slowly.⁶ The common areas also contain Village Homes' innovative natural drainage system, a network of creek beds, swales, and pond areas that allow rainwater to be absorbed into the ground rather than carried away through storm drains. Besides helping to store moisture in the soil, this system provides a visually interesting backdrop for landscape design. (Village Homeowners Association 1995, p. 1)

Site Planning. The Corbetts identify six elements as the main site planning innovations of Village Homes (Corbett and Corbett 1983, pp. 27–47). They include community, energy conservation and use of solar energy, walking and bicycling, a "design closer to nature," neighborhood agriculture and natural drainage (Figure 6).

Open Space. Several types of open space are provided in Village Homes, including private gardens, common areas, agricultural lands, turf areas for sports, and landscaped areas (see Table 2). These spaces are described in the official publications of Village Homes as "household commons," "greenbelt commons," and "agricul-



Figure 5. Village Homes house solar design. Courtesy of Mike Corbett.



Figure 6. Panoramic of central open space. Photograph by Tom Lamb.

tural lands" (Village Homeowners Association 1995, p. 11). Residents hold common interest in all three types of land. Common lands are specified by the Homeowners Board to be used for three purposes—enjoyment, flowers and food, and profit, such as the almond orchard of 300 trees that generates income for the homeowners association.

These traffic-protected open areas form safe play areas for children (Francis 1998). Residents have built play areas for their children in some of these open spaces and modified them as the kids grew older. They have also experienced some problems with nonresidents using the open spaces and picking fruit (Figure 7).

Vegetation and Edible Landscape. Much of the plant material in Village Homes is either edible or native. Village Homes residents can pick fruit right outside their houses in most common areas. The edible landscape includes oranges, almonds, apricots, pears, grapes, persimmons, peaches, cherries, and plums. Community gardens located on the west side of the neighborhood provide organic produce, some of which is sold to local restaurants and markets. Annual harvest festivals bring residents together. This edible landscape has created a diverse and somewhat overgrown character to the neighborhood. Some nonresidents have commented that the overall landscape is "an eyesore" and needs a great amount of maintenance. On the other hand, residents

Table 2. Typology of Open Spaces found in Village Houses.

- Streets
- Central Green
- Vineyards
- Orchards
- Common areas
- Playgrounds
- Drainage swales
- Community Gardens
- Bicycle and pedestrian paths
- Private courtyards

get pleasure in seeing the seasonal cycles of nature expressed in the Village's vegetation and open spaces (Figure 8).

Circulation. Pedestrian and bicycle paths were laid out before the streets and given greater emphasis in the overall plan. This makes it easier to walk or bike from one part of the community to another than to drive. Greatest travel time within the neighborhood is five minutes, typically without ever crossing a road. The Community center with swimming pool, day care center, the Plumshire Inn restaurant, and a dance studio are no more than a five-minute walk from any house. No other services are provided in the community. Grocery stores and other services are a short bicycle ride away, although most residents use cars to shop in



Figure 7. Community designed, built and common area. Photograph by Tom Lamb.



Figure 8. Much of Village Homes is an agricultural landscape owned by residents. Photograph by Tom Lamb.

neighborhood centers or in downtown Davis. Large purchases generally take place in Woodland, ten miles to the north, or in Sacramento, fifteen miles east of Davis (Figure 9).

Open Channel Drainage. The drainage system creates a network of small, creek-like channels that hold rainwater and allow runoff to percolate back into the water table, the City of Davis' source of drinking water. During the dry summers they become landscaped play areas. The system accomplishes multiple goals. This creates a low-technology drainage system, saves infrastructure costs, and creates pleasant natural areas with visual and play value (Booth and Leavitt 1999; Girling and Helphand 1994). As a result, conventional storm sewers were not required, saving nearly \$200,000 in development costs (Corbett and Corbett 2000). Open channel drainage instead of catch basins and pipes underground reportedly saved enough money to pay for most landscape improvements in the development, including walkways, gardens, and other landscape amenities (Figure 10).

Open channel drainage not only recharges the water table and reduces infrastructure costs for utilities but also creates a diverse landscape well suited for naturalistic play (Hart 1978; Moore 1993). These principles have been adopted and have begun to be widely implemented (see, for example, Ferguson 1998; Richman & Associates 1997). Several Davis developments have adopted open channel drainage in the design of a number of residential and commercial projects, including the Aspen and Willowcreek developments.

Energy Use and Conservation. Natural heating and cooling is accomplished through both passive and active systems. While residents were not required to have active solar waterheating systems, the design review committee strongly encouraged them, and Mike Corbett put them on all the homes he built. Almost every resident complied. Houses are oriented north/south, accommodating the use of solar panels. The design also allows south-facing windows to be shaded in the summer by overhangs and deciduous vegetation.



Figure 9. Bikepaths in use. Photograph by Tom Lamb.

Houses incorporate passive heating and cooling, are well insulated, and incorporate thermal mass. Solar hot water systems are required and typically meet up to one hundred percent of a home's hot water needs in the summer and above fifty percent in the winter. Street trees shade roads and reduce ambient air temperatures by as much as ten degrees, a significant amount on hot summer days.

A well-publicized aspect of Village Homes is its reported lower use of energy. Lenz (1990) found onethird less household energy use than in other parts of Davis. This is a result of a combination of its passive solar house designs, south-facing site orientation, and south and west side shading. A dissertation at UC Davis in 1978 found that Village Homes residents consume fifty percent less energy than other residents in Davis (Hamrin 1978).

Water Conservation. The neighborhood is designed to conserve water through drought-tolerant landscaping and reduced use of turf areas. It employs a "hydrozoning" concept where irrigation is applied most heavily to areas of human use (Thayer and Richman 1984). For example, larger commons have lawn for soccer practice, games, and informal gatherings, while areas along paths use native or edible vegetation. This has proved to be quite effective (Corbett and Corbett 2000).

Management. An office manager hired by the Homeowners Association performs daily management. All residents are dues paying members of the Village Homeowners Association (VHA). The Homeowners Association Board and its various committees (which include both a Design **Review Board and an Agricultural** Board) is a strong body that ensures local control and participation. The Board is involved in everything from resolving disputes among neighbors to controlling use of pesticides to reviewing additions and remodeling of existing structures. Committees and regulations are numerous. For example, three pages of guidelines govern the community gardens and garden coordinators are appointed to oversee different areas.

When residents move in, they receive a *Welcome to Village Homes* brochure (Village Homeowners Association 1995). More than a welcome wagon, this document lays out the



Figure 10. Open channel drainage. Photograph by Mark Francis.

history and philosophy of the neighborhood and its unique features and rules. It provides instructions for payment of homeowners' dues, noting that a reduction in fees is available for residents who maintain their portion of the common area. The Board of Directors makes semiannual "weed walks" to ensure that residents do their jobs. The nonprofit Board also is the sole stockholder of Plumshire, Inc., a for-profit corporation set up to plan and manage nonagricultural profit-making ventures of the Association. This includes the Plumshire buildings with offices, some apartments, and a small and popular restaurant, the Plumshire Inn.

Community Economics. The Corbett's original vision was to develop, as much as possible, an economically self-sufficient community. Moneymaking ventures were envisioned through different types of agriculture, office developments, and an inn. Only some of this has been realized. Office space owned by the Homeowners Association is rented, as is the Community Center, with rates ranging from \$25 an hour for residents to \$250 a day for nonresidents. The Community Center is very popular for weddings and family reunions and is often booked. Boardsponsored events as well as free classes, parties, and meetings are exempt from fees.

Most residents are employed by the University of California or in Sacramento, the state capital. There are a few employment opportunities in the village. Those that exist are in the Plumshire office complex, at the restaurant, in the day care center, or with the Homeowners Association. Some residents have used the community gardens to grow and sell produce.

Food Production. Residents are the primary beneficiaries of the neighborhood's edible landscape. Lenz (1990) found that residents produce about twenty five percent of their household fruit and vegetable consumption. Some residents also produce their own nuts, honey, and grain. The community gardens are productive and add to the agricultural character of the neighborhood. There are almond orchards that are harvested in the early autumn. The community is invited to participate in this work party, and if they do, they have the opportunity to buy the almonds at a fifty percent discount. Remaining almonds are sold to other residents, and any excess is sold to commercial almond processors (Figure 11).

Community Organizations and Special Events. A number of special events and special interest groups are active in Village Homes. These include a "Performance Circle" of acoustical musicians, a "Secret Garden Tour," Yoga and Tai Chi classes, an Easter Egg Hunt, and a regular Potluck Brunch. Noteworthy is the



Figure 11. Much of the public and private landscape is edible. Photograph by Tom Lamb.

annual Overhill-Westernesse Backto-School Party. Residents of the Overhill-Westernesse common areas built a neighborhood play area in their commons and hold a back-toschool party to share it with the rest of the community.

Safety and Traffic Calming. The use of narrow and cul-de-sac streets in Village Homes appear to result in traffic-calming benefits. The need for slow streets to encourage child play and residential satisfaction has been well documented (Southworth and Ben-Joseph 1997). The long and narrow streets in Village Homes accomplish this but lead to other problems, such as lack of visitor parking (Figure 12).

Role of Landscape Architect(s)

Village Homes is the result of a strong vision on the part of the designers. Its success is also due to the designers' ability to implement their vision over time. In many ways, the project has been a long-term labor of love for the Corbetts. They put forth a vision and fought for it against great odds for more than a decade. They have also lived in the community since its inception, invested countless hours into the management and publicizing of the community, and invested in neighborhood businesses. Mike Corbett runs his planning firm from the community and has built and operates Plumshire Inn, a small and excellent restaurant opened in 1999.

Evaluation of Successes and Limitations

The literature on Village Homes is almost unanimous in its praise of the community. Yet much of this literature is anecdotal or based primarily on qualitative assessments. The few quantitative studies of Village Homes tend to support the community's successes. To date, no longitudinal research has been done on the project which limits understanding the project's long-term benefits.⁷

The most systematic and com-

prehensive evaluation of Village Homes was done as a postoccupancy evaluation (POE) by Thomas Lenz as part of his master's degree in social and urban geography from the Technical University of Munich (Lenz 1990). According to Lenz, his research goals were to find out how Village Homes "functioned as a neighborhood, whether the design goals as stated by the developers were met, and whether residents were satisfied with their neighborhood." The data



Figure 12. Streets were designed to be narrow and heavily shaded with no on street parking provided. Photograph by Mark Francis.

were collected between October 1988 and March 1989 and involved comparison of Village Homes to a control neighborhood in Davis.⁸ He also compared factors such as recycling behavior, car and bicycle trips, and household energy use between the two neighborhoods. His findings are particularly useful in understanding the successes and limitations of Village Homes as "a better place to live."

In general Lenz found that "residents of Village Homes are more satisfied with their houses and much more satisfied with their neighborhood than their counterparts in the

conventional neighborhood" (1990). Major complaints from Village Homes residents had to do with problems with solar equipment, quality of building materials, and lack of lighting in the common areas. Other concerns included the lack of parking, garages, and storage. Most appreciated was the unique social life of the neighborhood, including its communal open spaces, appropriateness for children, and opportunity for social contacts. Lenz found that residents of Village Homes socialized more and knew their neighbors better than residents in the traditional neighborhood (see Table 3).

Lenz's study raises the question of whether increased social contacts are a result of the physical design of the community or the unique kinds of people who choose to live there. Lenz found that Village Homes was comprised of a greater number of young families and what he called "special interest groups" such as students and senior citizens. He also found that the people who rated their social lives the highest tended to be Food Co-op members and community gardeners, while people who were not part of these groups socialized, recycled, and gardened less and rated the neighborhood lower on

Table 3. Comparison of Village Homes and Conventional Neighborhood. Source: Lenz 1990.

	Village Homes	Control Neighborhood
Demographics		
Number of households	242	54
Cars per household	1.8	2.1
Bikes per household	3.5	3.6
Family households	71.9%	93.3%
Mean household income	\$51,600	\$65,300
Mean house square footage	1500	1820
Percentage of homeowners	86.5%	93.3%
<i>Evaluation of Houses</i> (0 = completely dissatisfied; 10 = completely satisfied)		
Average of all evaluated items	7.3	6.8
Overall design evaluation by respondents	7.9	7.0
Evaluation of Neighborhoods		
Average of all evaluated items	8.2	7.7
Overall design evaluation by respondents	8.6	7.1
Evaluation of Friends and Socializing		
Number of best friends within neighborhood	4	.4
Number of friends	16	8
Number of persons known	42	17
Time spent with friends from within the neighborhood (hours per week)	3.5	.9
Time spent with friends from outside the neighborhood (hours per week)	8.7	3.7
Agriculture		
Average number of fruit and vegetables grown	10	8
Average contribution to total		
annual consumption	24%	18%
Transportation		
Average annual miles per car	11,300	13,400
Average miles per household	210	270
Average gas mileage of vehicles	$27 \mathrm{mpg}$	23.5 mpg
Gasoline consumption per car per year	422 gallons	577 gallons
Gasoline consumption per household per year	753 gallons	1171 gallons
Energy Consumption		
Total yearly energy consumption per household (kW/h)	44,900	67,700
<i>Recycling</i> (0 = do not recycle; 10 = always recycle)		
Glass	7.5	6.4
Paper	4.3	1.7
Organic Waste	3.4	2.0

most dimensions. Lenz concludes that it is a combination of the unique values of the residents and the provision of places that bring people together that make the community more social.⁹

UC Davis landscape architecture professor Patsy Owens and her students conducted a follow-up postoccupancy evaluation (POE) a few years later (Owens 1993).¹⁰ They found similar high levels of satisfaction among residents. The three highest ranked design elements were the common areas, the bicycle and pedestrian paths, and the attractiveness of the community (Owens 1993, p. 29). Close behind were auto circulation, closeness of houses, privacy, solar design, and open channel drainage (all above eighty percent satisfaction) (Owens 1993, p. 29). Lowest ranked was the satisfaction with parking, which may be due to the rise in teenagers bringing a third car into the household. When asked how much longer residents planned to live in Village Homes, half answered "forever." This mirrors the strong sense of attachment to place felt by residents.

Even studies by the City of Davis now confirm its success. "The overall impression of the neighborhood is how the homes and streets recede into the lush landscape and greenbelts: a non-manicured landscape consisting of many edible plants and dominated by common areas," explained then Community Development Director Jeff Loux and Associate Planner Robert Wolcott (Loux and Wolcott 1994).

Maintenance and Management. A key feature of Village Homes is the unique management system that involves residents in decision-making. The Corbetts' believed that a participatory management organization was needed for the community to be successful (2000). They chose a homeowners association model as it provided the greatest degree of local control and participation. Over the years they may have regretted this to some degree as the homeowner board has gone against some of their proposals. For example, it took several years of discussion before the Board agreed to develop the small

restaurant complex completed in 1999. Yet the Corbetts continue to include participation as one of their essential ingredients in making sustainable communities (Corbett and Corbett 2000).

Social/Community Factors. What is unique about Village Homes is how it works as a social place. The physical form of the neighborhood has created a cohesive and dynamic community life. For example, Lenz (1990) found that people living in Village Homes had twice as many friends and three times as many social contacts as people living in other parts of Davis.

Another good indicator of a community is how it works for children. In my interviews with Judy Corbett, she emphasized this as one of the most successful aspects of the community. "It is a great place to raise kids. It offers children a sense of freedom and security. This is one of the community's greatest successes" (personal communication, 2000).

In the early 1980s, we did a series of observations and interviews to assess children's use of open space in Village Homes (Francis 1985, 1988). We found in general that it provided an accessible and rich landscape that offered kids numerous opportunities for naturalistic play. One of the findings was somewhat surprising and counter to one of the core principles of Village Homes. The street was as heavily used and valued a part of the childhood landscape as the common areas. What is unique about Village Homes from a child's perspective is the diversity of places provided, from streets to play areas to natural areas, and the almost seamless access provided to these places (Figure 13).

Critical Reviews. Village Homes has been widely discussed and reviewed in both the professional and popular press. Publications as diverse as Landscape Architecture, The Christian Science Monitor, Time, and Newsweek have featured the community in articles on sustainable development. Village Homes is well known abroad due to numerous documentaries aired on European and Asian television. It has also received several national design awards.

Another form of peer review is published reports by its residents on the experience of living in Village Homes. Some of the case studies published on Village Homes illustrate its unique social life. For example, Paul Tarzi, a resident of Village Homes since 1979, comments "the open spaces and play areas are well used and provide casual meeting opportunities. You're just more accessible to your neighbors." His neighborhood group has had weekly potlucks for years. "It's something that people look forward to," he says. "Everyone has an orange flag they put out that day if they intend to come." Tarzi goes on to state, "A community is more than a physical location. It's a feeling of kinship. Living at Village Homes has enhanced our lives in many ways. I guess I could say I'm looking forward to growing old here" (Browning and Hamilton 1993, p. 33).

In summer 2000, a 25th anniversary party was held for Village Homes and was attended by 350 people, including some "alumni" who had moved away and come back to celebrate. There were speeches, music, and a slide show of the early days of the Village. For the first time, the community honored the Corbetts sfor their vision in founding Village Homes with a bronze plaque to be mounted on a large rock near the community center (Davis Enterprise 2000.

Criticism. Most of the publicity surrounding Village Homes has pointed to its successes as a development and praised its importance for other communities. Little of what has been written has been sharply critical. Village Homes does raise some fundamental issues surrounding the creation of community through physical design.

The National Association of Home Builders (NAB) has critiqued the unrealized aspects of the Village Homes plan. They state "not all of the original design premises and expectations of Village Homes have been realized. The Davis Department of Health rejected a plan to recycle



Figure 13. The open drainage areas provide numerous opportunities for children's play. Photograph by Mark Francis.

gray water for irrigating orchards. A cooperative store idea fell by the wayside, as did a central cooperative elementary school. And when federal tax credits for alternative power sources were terminated by the Reagan Administration in the 1980s, continued solar development on the Village Homes model experienced a major setback" (National Association of Homebuilders 2000)

The following criticisms¹¹ have been offered of Village Homes and its approach to community design:

Shared Values or Design Determinism. Is the success of Village Homes its unique community design or the kind of people who have chosen to live there? Several observers of Village Homes have raised this question. For example, landscape architect Ellen Jouret-Epstein (2000) asks in a letter to the editor to Landscape Architecture, "Is Village Homes a sharing community because of its indisputably great features? Or because it has attracted and concentrated a population with certain shared values?" Clearly some residents decide to live there due to its physical and symbolic reflections of their environmental and social values. In the early days many residents chose to settle there

due to its unique ideology and the pioneering spirit of living in a new experimental solar community. Since then, there has been a large turnover of residents and today only about 25 percent of the early residents remain, a figure that is still much higher than it is for most communities. Many people now choose to live there due to its strong property values and high quality of living. This reportedly creates some conflict between old and new residents, which sometimes need to be mediated by the Homeowners Association (Jouret-Epstein 2000, p. 11).

Conflict with New Urbanist Principles. Village Homes goes against many of the principles currently popular in new urbanist and smart growth planning (Fulton 1996; Duany et. al. 2000; Calthorpe et. al. 2000). For example, the development is open space-oriented as opposed to more formal geometries of community design (Francis 1995). Clare Cooper Marcus provides a critical review of Village Homes' transformation from an early "hippie" community to now one of the most "desirable" places to live in Davis (Cooper Marcus 2000). Comparing Village Homes to new urbanist planning, she states, "The design of this highly successful community breaks many of the rules popularized by the proponents of New Urbanism. First of all, it eschews the grid and provides access to houses via long, narrow cul-desacs-those 'lollipops' of 1950s suburbia much hated by proponents of New Urbanism. The green-shaded, narrow, dead-end streets save money on infrastructure, use less land, reduce urban runoff, keep the neighborhood cooler in summer, and create a quiet and safe public area where neighbors meet and children play" (Cooper Marcus 2000, p. 128).

Hierarchy of Open Space. Cooper Marcus goes on to critique the open space design of Village Homes and compare it to the more formal, street-oriented layouts proposed by new urbanists. She finds, based on observations, that the shared pedestrian commons or green spaces provided between houses work well for children's play, natural areas, and communal events. "This attractive environment-though accessible to outsiders riding or walking through—is definitely not a public park." She suggests that these common areas provide "a green heart" to the neighborhood. Cooper Marcus goes on to suggest that "between the designations of 'private yard' and 'public park' lies a critical category of outdoor space that might be called communal or shared" (Cooper Marcus 2000, p. 128).

What would you do differently? Some of the criticism of Village Homes comes from the developers themselves. Mike Corbett suggests that the development could be three times denser while providing the same amount of green space. Judy Corbett observes that the community may be too big with some 800 residents. She states, "We would have had a much stronger sense of community if there were about 500 of us" (Owens 1993, p. 20). The Corbetts disagree between themselves regarding the size of the central green area near the Community Center. Judy Corbett says, "I tend to think it would



Figure 14. While well designed, some open spaces in Village Homes are not heavily used. Photograph by Tom Lamb.

be better smaller, though Mike thinks it should stay that size. It's good for soccer practices and more spread-out activities, and it is used on weekends. It's just too big for the kind of intimacy that other open spaces seem to have fostered" (Owens 1993, p. 20).

Where is the front door? The site plan, which emphasizes the backyard common areas over the street, led to a dilemma in deciding where to put the front door. With the house turned away from the street, the front door was deliberately not placed on the street side. With the common area being the major focus, the front door could go here, but there were concerns about visitors being able to find it. The Corbetts were ambivalent about this and ultimately settled on putting the door on the side of the house. They admit that the front door "is often impossible to find" (personal interview, 2000).

Lack of Open Space Use. During informal observations over a period of several years, and more systematic observations done for this case study, I was struck by how underused some of the landscape of Village Homes is (Francis 1985, 1988). While use picked up in evenings and weekends, weekdays tended to find few people using the common landscape. The low use may be partially due to the harsh summers in Davis where it is not comfortable to be outdoors, especially during the day. An added factor may be the busy lives of its residents, whose lives are as highly structured and over-programmed as those of their suburban counterparts in other developments. This is also true of Village Homes' children whose lives are filled up with school, sports, music lessons, computers and TV (Figure 14).

Whose Fruit? One limitation with the design of Village Homes is the blurred boundary between public and private realms. While this is responsible for much of its distinct character, with no fences between private yards and more public common areas, it has created some problems. For example, it is unclear to whom the bountiful fruit in the common areas belongs. Is it the private residents? The collection of houses around it? The entire community? The public? Visitors and even some residents are often confused by this. Common fruit trees are especially

hard to identify, since they are generally near household common areas.

While the landscape is ambiguous about this, the Homeowners Association rules are not. They specify "only residents of Village Homes are allowed to pick produce from the common areas. You're encouraged to introduce yourself and anyone you see picking if she or he is a resident... and you should politely explain to nonresidents that Village Homes is private property." Even residents are discouraged from picking fruit in other people's common areas: "Please do not pick fruit from household commons unless you see a sign inviting you to pick, and always honor signs requesting you not to pick" (Village Homeowners Association 1995, p. 13) (Figure 15).

Vegetation and Pest Management. With plentiful and diverse vegetation comes a diversity of insects. In Village Homes this includes spiders (including black widows), slugs, and ants. Residents report having these in large quantities and some attribute it to the profusion of vegetation and the lack of chemical pest control. Some have called for more integrated pest management (IPM) education among gardeners and residents. As one Village Homes resident sums it up, "I'm all for integrating nature into my home, but this is ridiculous!!"

Security. Village Homes has proved to be a safe neighborhood comparable to other neighborhoods in Davis. Yet it is not without its critics. A Davis police officer with the



Figure 15. Who owns the fruit and vegetables has been a point of conflict in the community as seen in this "Private Orchard" Sign. Photograph by Tom Lamb. Crime Prevention Unit commented in a 1993 interview "If Village Homes were to be built today, it would not meet the current Davis Security Code, so many changes would need to be made. In general, the streets are too narrow for emergency vehicles to turn around, house numbers are not easily visible from the street, and lighting is poor throughout the site. Because the shrubbery s not kept pruned back from walls, there are too many places for prowlers to hide" (Owens 1993, p. 23).

These are several of the same criticisms that almost prevented Village Homes from being built. Even with this criticism, it is one of the safer areas in Davis. Police department records show that Village Homes crime rates are ninety percent below the rest of Davis (Corbett and Corbett 1983, p. 9).

Role as a Symbolic Community. The farm-like landscape serves as a powerful symbol for the community. Without the vineyards, orchards, and community gardens, Village Homes would appear much more like a conventional development. It demonstrates that there is a value to zoning small scale agricultural uses within existing cities, rather than the current thinking that farms must exist apart from where people live.

Aesthetics. Village Homes has its own unique look that has been characterized as "ecological aesthetics" (Thayer 1994). The landscape clearly reflects the ecological practices that guide its creation and management. While some value the "rural feeling" of the development, not all appreciate its often wild and unkempt character. The developers concede that the aesthetic of Village Homes "is not for everyone" (personal communication, 2000). The regular "weed patrols" of the Homeowners Board is evidence of the continuing struggle to find a healthy balance between wildness and order.12

Environmental Impacts. Much of the planning and site design was intended to be sustainable—to reduce energy use, conserve water, reduce automobile use, and create food systems. Clearly this has occurred with Village Homes. Most new urbanist planning has similar environmental



Figure 16. Innovations such as open channel drainage have been used in later Davis projects such as the design of this "play beach" in the Aspen development. Design by CoDesign; photograph by Mark Francis.

goals. Yet it is questionable if these types of development yield the same environmental benefits as Village Homes.

In a study at the University of Oregon funded by the National Urban and Community Forestry Advisory Council, researchers compared the effects of three types of neighborhood development on air, water, and urban forest quality (Girling et al., 2000). They did extensive modeling of a traditional suburban development, a typical gridded, new urbanist development, and an open spaceoriented development modeled largely after Village Homes. The researchers found that the traditional and new urbanist developments had very similar environmental impacts, including amount of impervious surface, runoff, and energy use. The Village Homes style development was the only one that produced significant improvements in air, water, and forest quality. This study points out the need for more comparative studies that look across cases.

Replication. The most common and troubling criticism of the project is that it has not been replicated. Even the developers acknowledge "there is nothing like it anywhere" (personal communication, 2000). Village Homes has even spawned developers among its residents who have chosen not to replicate its successes. When asked why, the response is that "it would be too risky." John Whitcombe, one of Davis' leading residential developers, is not surprised no one has built a project as revolutionary as Village Homes. He suggests that "the main reason there aren't more Village Homes is there's only one Mike Corbett" (Fitch 1999) (Figure 16).

Former City of Davis planner Doris Michael suggests that it is due to the fact that "it is too expensive" (Owens 1993, p. 17). She attributes the lack of replication to "not all people feeling comfortable living so close to others." Fears of expense and density are common fears of developers. Yet the reality of development has proved that these are more myth than fact.

Planners Loux and Wolcott (1994) have observed, "Many citizens

throughout the city look with pride to Village Homes and question why no similar model has been built in the past 20 years." The two planners suggest that the reasons for this are increases in land prices and changes in home styles and tastes. City standards in Davis and elsewhere remain a substantial barrier for a developer wanting to build a similar project.

Mike Corbett offers an assessment of why the project has not been reproduced. "The problem is not that the public does not want it. They come here and see what we have done and say, 'Why isn't everybody doing this?' But developers are so closed-minded. They continue to build thousands of places where you can't get around without a car" (Jackson 1999, p. 79).

Even replicating the project in Davis has been difficult. Judy Corbett points out, "the present City Council does not hesitate to brag to other countries about how wonderful their Village Homes is, but they do not seem to do much to enable anything like it to be built here again" (Owens 1993, p. 19). Some of the ideas, such as open channel drainage and natural landscape, have been used in later developments in Davis, but no one has attempted to replicate the community in whole. For now, it is a oneof-a-kind project.¹³

Significance and Uniqueness of Project. Why does Village Homes work? Factors commonly cited in the literature include that people like living there, they perceive the community as safe, it is seen as a good place to raise children, and that the designers and developers actually live there.¹⁴ Some point out that the houses have a higher resale value that makes them a good investment. It also encourages and fosters the participation of its residents. Also mentioned is that it exists in a town that is socially and environmentally aware and that it provides a needed alternative to suburban living. Perhaps most importantly, Village Homes has meaning for residents who have a strong attachment to it as a place (Figure 17).

Limitations and Problems. With its many successes and pioneering design and planning features, Village Homes has not been without its problems. Many of these are minor design flaws, yet several raise significant issues for designing similar sustainable communities. One limitation is that many residents living in Village Homes often have strong environmental and social values, although



Figure 17. Community participation, such as used in the design and construction of the community pool, is one reason for the success of the community. Photograph by Tom Lamb.

not everyone shares the same political views. Another problem is that inadequate storage space has created visual clutter. Judy Corbett for example has commented, "I would have no carports. Those seem to have just gotten messy, and people complain about lack of storage. Garages would work much better" (Owens 1993, p. 20). The developers and most observers agree that the same success could have been achieved with a higher density.

Despite great efforts on the part of developers to provide affordable housing opportunities, social diversity has been limited in Village Homes. As home values have escalated, so too has the number of professional residents. While rental apartments, the co-op house, and small houses create a sense of diversity, social diversity is limited in the community as it is in the larger city of Davis. As the community has matured it has also been difficult to sustain the level of involvement of the early days. For example, the Village Homeowners Association (VHA) in its newsletter (March 1999) complained about the shortage of votes to conduct Board elections.

Generalizable Features and Lessons. Most, if not all, of the design and planning principles discussed earlier are directly applicable to other projects. Especially transferable is the project's emphasis on participation, open channel drainage, the diversity of open space types, shared communal space, the childoriented landscape, and hydrozoning. Also generalizable is the mixeduse Village Center concept and placing emphasis on pedestrians and bikes first, and cars second.

There are some comparable developments to Village Homes worth noting. Perhaps the closest philosophically is The Woodlands in Texas, also designed in the early 1970s (WMRT 1974). Most similar to Village Homes is the more recent Prairie Crossing, a 667-acre development in Grayslake, Illinois, north of Chicago. Prairie Crossing puts similar emphasis on agriculture and open space, with 150 acres set aside for farmland among its 317 home sites. It also uses a natural drainage system. Other recent examples that share similarities to Village Homes are Coffee Creek in Indiana (being designed by architect William McDonough), Haymount in Virginia, and Civano in Arizona. One also cannot help comparing Village Homes to two other well-known planned communities — Sea Ranch, also in California, and Seaside in Florida.¹⁵ While these projects differ in that they are primarily second home communities, they do share Village Homes' ingenuity and design experimentation.

Future Issues and Plans. If Village Homes were being designed today, some thirty years later, how should it be different? Given its great success, one could argue that it should be designed exactly the same as there are so many things that work well about this place. Yet there have been many advances in the basic design principles pioneered in this project. For example, we know more about how to design natural drainage systems and make them larger, more visible parts of communities (Richman & Associates 1997).

When asked what she would do differently, Judy Corbett commented, "build the commercial area first rather than wait until the end" (personal communication, 2000). She observes that NIMBYism (not in my back yard) does set in, and residents become resistant to change and new ideas. Just as the city of Davis was a barrier to implementing the Corbetts' ideas, residents were reluctant to approve their plans for completion of the Village Center (Figure 18).

Conclusions/Implications

The Corbetts summarize what they consider to be the importance of their labor of love in this way. "We do not view Village Homes as an ideal. We see it as a practical step in the right direction. Just as the houses and the quality of life within Village Homes have been improved as we have gained experience, we hope that future developments will be improved to become largely selfsufficient neighborhoods. Most of the necessary techniques, equipment and knowledge are now available to do this. The challenge is to combine these many simple, practical and economical steps so they work together" (Corbett and Corbett 1983, p. 9).

The ideas and principles embodied in Village Homes can be utilized in many other situations. It already has influenced many other designers and developers. Village Homes has also inspired development of important theory and built practices of sustainable community design.

With the current interest in formal approaches to community design as evidenced by new urbanists, Village Homes provides an alternative and refreshing model of neighborhood design. Most importantly, it demonstrates an approach to sustainable community design quite different than most current models. Perhaps the most important difference is the project's heavy emphasis on open space as the organizing framework for the community. Unlike new urbanist proposals that begin with formal layouts of gridded streets and precise formulas for street design and provision of public space, Village Homes emphasizes more informal and naturalistic open space to foster community participation and sense of place. It also shows how important

the designed and natural landscape is to creating a strong community identify and resident satisfaction.

Writing in his award-winning article in 1977 that first introduced Village Homes to design professionals, Thayer suggested that it might not be appropriate to make Village Homes a model for all community design. "It may be unwise to suggest that Village Homes is a generalizable case study. A large percentage of homeowners live there as an experiment." He goes on to conclude "Village Homes will make a significant contribution to progress in community design, whether it stabilizes as a neighborhood and true product of environmental awareness or serves as a continually evolving laboratory for conservation and community in environmental design. As Buckminister Fuller might say, "Village Homes is perhaps less a noun and more a verb." It is clear that the experimental period of the project is now past and it has become a more established and even institutionalized model of community design. Village Homes today serves as a living model of sustainable community design and an ongoing laboratory for research and replication.



Figure 18. Many home gardens are designed as sustainable landscapes emphasizing native plants, water conservation, and habitat. Photograph by Tom Lamb.

Acknowledgments

I would like to thank Frederick Steiner and Susan Everett who first encouraged me to do this study and to the Landscape Architecture Foundation who commissioned this work. The preparation of this case study was funded by a JJR Research Grant, the Landscape Architecture Foundation, and the University of California Agricultural Experiment Station. I would also like to thank the designers and developers of Village Homes, Judy and Mike Corbett, whose openness, self-criticism, and enthusiasm aided preparation of this case study. I would also like to acknowledge Rob Thayer, my colleague at UC Davis and longtime Village Homes resident, for his important research and insight over the years regarding Village Homes and its significance for landscape architecture. My students at UC Davis have also been important observers of Village Homes and have greatly informed my own views of the place. Mary Bedard, Judy Corbett, Susan Everett, Randall Fleming, and Rob Thayer provided useful comments on an earlier draft of this article. I also thank Tom Lamb for his permission to reproduce his original photos commissioned by LAF for this study.

Notes

1. Innovations that have made Davis recognized as an "ecological" community have often been initiated outside the university. A few days before President Francois Mitterand's 1984 visit to Village Homes, designer and developer Mike Corbett was on his bike to visit then UC Davis Chancellor Jim Meyer to explain that the French President did not have time to visit the campus and to invite the Chancellor to come out to Village Homes to greet the French dignitaries. Residents of Village Homes, including graduate students, professionals and UCD faculty members, have made notable environmental and design contributions to the neighborhood and larger community. Residents Rob Thayer, Jim Zanetto, Bruce Maeda, Virginia Thigpen, Bob Schneider, and Marshall Hunt are notable examples.

2. My purpose is not to collect substantial new data on Village Homes but to synthesize and make available existing information in a useful and accessible case study format. A secondary goal is to show the project's significance for landscape architecture and urban design so that it can be more easily replicated in the future. An additional goal is to provide a critical review of the project so that future researchers can learn from both the project's success and its failures.

3. For more information on LAF's Land and Community Design Case Study Initiative see their web site at www.lafoundation.org. For an example of an issue-based case study see Francis 2001c.

4. This article presents selected parts of the Village Homes Case Study. For the full case see Francis 2001b. Most of this baseline data is taken from the Local Government Commission case study on Village Homes. While many sources list information on Village Homes, I have used this data as Judy Corbett is Executive Director of the LGC. This data was also checked against the Corbett's *Designing Sustainable Communities* book (2000) and in interviews with the developers.

5. Lecture by Mike Corbett on Village Homes at UC Davis in 1988. The fact that he was able to get the plan approved is a testament to his tenacity and persuasion.

6. The cul-de-sacs in Village Homes distinguish it from the new urbanist communities that encourage gridded streets and do not allow culde-sacs. A 1997 survey done by the Urban Land Institute shows that a majority of U.S. homebuyers would prefer to live on a cul-de-sac.

7. It would be useful to repeat Lenz's survey or something similar every three to five years. 8. The control neighborhood was a more conventional suburban neighborhood built about the same time as Village Homes. Houses were about 20 percent larger and lots 60 percent larger than Village Homes and lacked communal open space. Lenz's study involved 89 questionnaires returned from Village Homes residents (a 37 percent return rate) and 15 from the control neighborhood residents (28 percent return).

9. A useful study would be to examine the effect of environmental values on attachment to place. Are these values shaped by the place or do values create the sense of place? In the case of Village Homes, it is the interaction of these two that form neighborhood attitudes and a sense of belonging.

10. Unlike Lenz, Owens utilized a multimethod approach to the POE involving interviews along with observations, archival research, and recording of behavior traces. While the sample size was smaller (25 total interviews compared to Lenz's 89), Owens' report offers a more holistic and comprehensive view of the neighborhood.

11. Some of these observations are based on papers written by my students at UC Davis, including "Landscape Architecture 220-Public Space and Public Life," Winter, 2000. 12. A Canadian developer visiting Village Homes noted that "it looked like a slum" in reaction to the somewhat unkempt landscape. Most developed communities adopt a manicured approach to their landscape and reinforce this through strict regulations requiring conformity and a high level of maintenance. Village Homes took a different approach where natural aesthetic is more highly valued. But it does raise the issue of the aesthetics of ecological design. Thayer (1994) has provided a useful theory that suggests that the public values making sustainability visible. Clearly, the high satisfaction of Village Homes by its residents proves this true.

13. There may be nothing wrong with this. Just as other great planned communities like Reston and Columbia are unique, so too is Village Homes. Perhaps what is more important than total replication is that the successes of Village Homes be reproduced elsewhere. 14. Not all of these factors were true in the beginning but have since become important. 15. See A Case Study Method for Landscape Architecture (Francis 1999a), which presents Sea Ranch as a case study.

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