



# Making Sustainable Communities Happen

In the Valley of the Sun



## ARE YOU FRUSTRATED THAT

- We have long commutes between our jobs and homes
- Our children may need to take a bus to school simply because it is too hazardous to cross busy city streets
- We have few shops and services near our homes without jumping into the car and battling traffic
- We have fewer and fewer choices of where we want to live at a price we can afford
- We want to preserve our natural landscape and precious resources, yet still have thriving economies and growth

With the rapid growth in greater Phoenix and our need to protect the health of our environment and the people who live here, many people are searching for ways to develop sustainable places. *Making Sustainable Communities Happen in the Valley of the Sun* is a resource booklet that accompanies the PowerPoint presentation of the same name. This booklet provides more resources and examples of the strategies described in the presentation.



## MAKING SUSTAINABLE COMMUNITES HAPPEN IS FOR

- Community organizations and residents concerned about making their communities healthy, safe, sustainable, and affordable to all citizens
- Public officials who want to expand their knowledge about sustainable community design
- Business leaders active in community development who are looking for strategies to make sustainable communities
- Citizens who simply want to learn more about sustainable community design and development and how it can:
  - lower public costs
  - promote healthy living
  - provide affordability for more people
  - preserve land and natural resources
  - replace “drive time” with “family time”

Lisa Dwyer, Andrea Garfinkel-Castro, and Samantha Samples. Architects at the Stardust Center—Ernesto Fonseca, Daniel Glenn, and Nic Smith—also contributed their talents. Nan Ellin, director of the Urban & Metropolitan Studies program at ASU’s College of Public Programs, was instrumental in pulling together the presentation and speaker’s handbook, training speakers, and getting the word out. Mookesh Patel, chair of the Visual Communication Design department at ASU, and research assistant Seungeun Kim provided not only compelling graphic design but also invaluable advice on enhancing and structuring the PowerPoint and brochure. Jon Denker photographed most of the sites seen in the presentation and brochure, sometimes in the most trying of circumstances. And a number of dedicated people volunteered as speakers to engage groups, officials, and organizations throughout the Valley in thinking about ways to grow sustainable communities in their own neighborhoods.

### Acknowledgements

The PowerPoint presentation and booklet for *Making Sustainable Communities Happen* represent the efforts of many people who contributed their time, energy, and resources. They constitute the *Growing Sustainable Communities in the Valley of the Sun* coalition of committed individuals and organizations across the Valley that continues to grow as more and more people become familiar with these efforts.

Teresa Brice, executive director of LISC Phoenix, planted the seed and championed this effort throughout its development and launch. Recognizing that this effort needed to be a collaborative one, involving different sectors throughout the Valley, she assembled an advisory panel of 27 members who contributed valuable feedback at every step of its development. Members of this advisory panel and funding sponsors are listed at the end of this booklet.

Sherry Ahrentzen, associate director of research of the ASU Stardust Center for Affordable Homes and the Family, compiled a team of dedicated, resourceful research assistants including

Sources of information and photographs used in this brochure are available at the ASU Stardust Center website: [http://stardust.asu.edu/research\\_resources/detail.php?id=31](http://stardust.asu.edu/research_resources/detail.php?id=31)



## What is a Sustainable Community?

Sustainable communities are places where people want to live and work, now and in the future. They meet the diverse needs of existing and future residents, are sensitive to their environment, and contribute to a high quality of life. They are places that are attractive, safe, and healthy for the environment as well as for the people who live there. A sustainable community has a set of qualities that makes it a place, not simply an anonymous cluster of homes, roads, and strip malls. Having a broad range of housing choices and affordability is essential to a sustainable community but so is the substance between the homes and what it offers to the people who live, work, and play there.

As we rapidly grow in the Valley of the Sun, we need to make sure we create places in which we can all thrive. It is essential that we build and maintain healthy places so that we can have healthy communities.

This is about our future. About the big picture in how we choose to grow. This is about our home. Every decision we make is an opportunity to make it better.

## Why Now? Why Here?

### We Are a Desert City

In the Navajo language, Phoenix is called Hoozdo or “the place is hot.” There is no denying we live in the Sonoran desert. Our natural resources are unique and precious. They are the reason many of us choose to live here and what makes Phoenix such a distinctive place. But they are fragile, and we need to make sure we use the water, air, and energy in ways that are renewable and lasting for future generations.

### We Are a Young Place

In terms of our communities and built landscape, we are a young city. The vast majority of roads, buildings, and neighborhoods were constructed after World War II—when the car dominated the landscape, when money for highways was plentiful, when gasoline prices and land prices were low, and when air conditioning became available. We do not have a deep history of building more sustainably, more compact, like older cities. We are learning now how to do this—and we can’t look to the immediate past for lessons.

### We Are Growing

This continues to be a place where many people move to. And it is also a place where people make homes and have families. As we grow, we are becoming more diverse in terms of age, income, culture, occupation, and living situation. As geographer Patricia Gober states in her book *Metropolitan Phoenix*, “Phoenix...is an ever-changing, ever-growing fusion of newcomers and old timers, all with an eye toward the future.”



## A Diverse Population.....

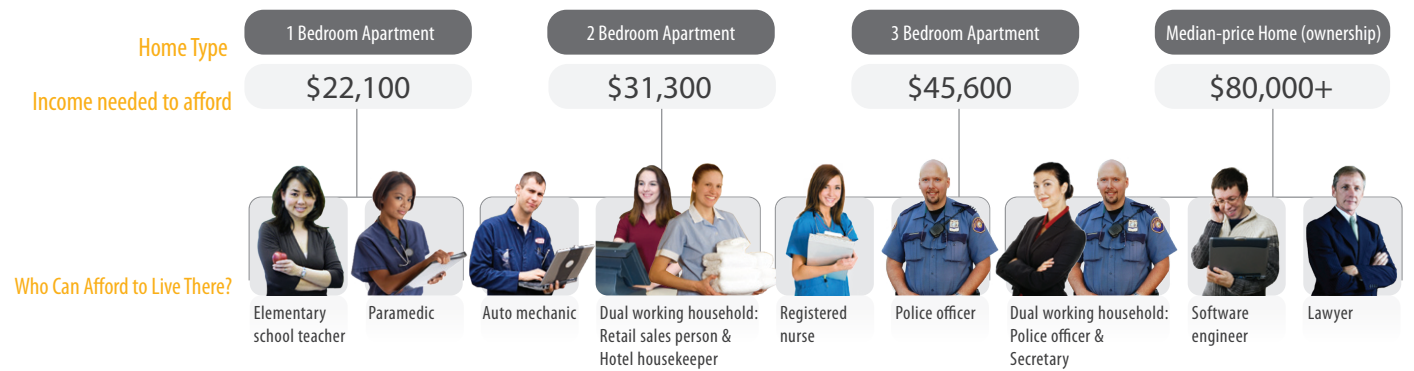
Sustainable communities are for people. Before making decisions about the buildings, roads, and homes in these communities, we first need to get a better idea of who lives in the Valley and who future residents will be. In 2006, nearly 3.8 million persons lived in Maricopa County. It is not only a large but also a diverse population. For example:

- Although Maricopa County is home to many retirement communities, the median age of residents is younger than the U.S. average. In fact, metropolitan Phoenix ranks fifth youngest among the 25 largest metropolitan areas in the United States.
- The percentage of Arizonans 65 years and older is projected to grow from 11% of the total resident population in 2004 to 22% in 2030, according to the U.S. Census Bureau. The percentage of persons 18 years of age and younger is projected to grow to 24% in the same time period.

- Arizona's growth isn't simply because people are moving here. It's also because many are being born here. Arizona has the third highest birth rate in the country, topped only by Utah and Texas.
- Today, 60% of Valley residents are non-Hispanic White, 30% Hispanic, 4% non-Hispanic Black or African American, 3% Asian, and 2% Native American or Alaska Native.
- In Maricopa County, one out of four homes (27% to be exact) is occupied by a single person. This is consistent with national norms: 25% of homes are occupied by one person; 58% of homes by either one or two persons. Today, only 33% of homes in Maricopa County include families with children under 18.
- Income disparity of households in Arizona is the highest in the country. The average income of the top five percent of families is \$223,081, that of the bottom 20% of families is \$15,719. This gap has been increasing since the early 1980s.

With the rising land, construction, and housing costs that the Valley has experienced in the last several years, more and more households are finding it difficult to live in a home that fits their pocketbook, lifestyle, family conditions, and in a safe, healthy neighborhood close to schools and employment. **The continuum below** shows the type of homes in the Valley that people in different occupations (adjusted to median full-time income) can afford to live in without paying more than 30% of their income for housing.

### What Homes are Affordable?



Sources: Arizona Department of Economic Security (2006), Arizona Department of Housing (2006), National Low Income Housing Coalition (2006)

When soaring gas prices are added to the household budget, many residents of greater Phoenix have to make a tradeoff between paying a greater portion of their income for housing or enduring long commutes with high transportation and gasoline costs.

## .....Needs Diverse Housing Choices



### A Variety of Housing Types

This diversity of households and people reflects a wide range of housing needs and desires. It is a mistake to assume that their housing preferences and living conditions are all the same. Providing a spectrum of available housing opportunities and housing types allows people to choose those residential conditions that best meet their needs, dreams, and living conditions.

**Single Detached Houses** are the most common type of housing in metropolitan Phoenix. In Phoenix, lot sizes range from an expansive 150 feet to a compact 40 feet in width, but the standard lot width is 65 feet.

**Town Homes or Row Houses** are single homes, attached and arranged in rows, two or three stories tall, and each with exterior ground floor access. Patio homes are usually one or one-and-a-half stories tall, with connecting walls between units.

**Manufactured Homes** are single detached houses, preconstructed in a factory, then transported to and assembled on a lot where they are placed temporarily or permanently.

**Duplexes, Triplexes, and Fourplexes** are buildings consisting of two, three, or four dwelling units. They are often designed to look like a single-family house.

**Apartments and Multi-Unit Developments** come in a wide range of sizes and shapes—two or three stories, up to 30 and 34 stories in height in some of the recent high-rise developments in the Valley. Many apartments and multi-unit developments have shared outdoor space and amenities.

**Cohousing** is a residential development composed of 20–40 private homes, supplemented by common facilities on the site, usually in a separate structure called the “common house.” Common facilities vary but usually include a large kitchen and dining room where residents take turns cooking and sharing meals with the community.

**Mixed-Use Developments** comprise buildings with residential units and either commercial or retail space or both. Some have started to include public facilities such as libraries, museums, or healthcare facilities.

**Accessory Dwelling Units** are small self-contained residential units located on the same property as a single detached home. They have their own entrance, living, kitchen, and bathroom space.

**Live/Work or Enterprise Housing** are homes where the resident both lives and has a business space in the home.

### Rental and Homeownership Arrangements

In addition to a range of housing types, there are a variety of ways in which residents pay for their homes.

**Rental or Lease:** This entails an agreement between a landlord and a tenant that gives the tenant the right to use and occupy rental property for a period of time. In Maricopa County, 32% of the homes are rented or leased to residents.

**Shared Equity Homeownership:** This represents a middle ground between renting and ownership. It ensures homes remain affordable on a long-term basis by restricting the appreciation a single homeowner can retain. There are three types: community land trust, limited-equity cooperative, and deed restricted housing with covenants lasting 30 years or more.

**Condominium:** In this arrangement, the residential units are owned by individuals, and the common parts of the property, such as the grounds and building structure, are owned jointly by the unit owners.

**Conventional Homeownership:** This is the most common form of homeownership, where the owner has the right to control, use, and transfer property at will, and the owner owns the home and the land it is built on. In Maricopa County, 68% of the homes are conventional homeownership.



## In the Valley of the Sun

- **Mixed land uses** are increasingly desirable places to live. When designed well, homes can successfully coexist with shops, parks, and civic amenities such as libraries. Mixed use can be in a single development—as in Roosevelt Square in Phoenix—or it can be within an entire community, as in Chandler’s historic district.
- **A range of housing types** coupled with a range of housing prices provide choices for the diverse households we have today in our communities. Single detached homes can be affordable housing by creative development of clustered housing and use of smaller lot sizes for homes. Multi-story, higher density housing can be designed to incorporate amenities and public spaces that many households are looking for.
- **Thriving economies** are those with a mix of both local businesses and national ones, those catering to local residents, and those that attract consumers from nearby communities. When residents shop at locally owned businesses, money is recirculated and creates up to 75% more tax revenue to the community and state. Independent businesses are distinctive enterprises that contribute to the character of a community.
- **Environmentally responsive design** minimizes resource consumption; maximizes resource reuse and energy efficiency; creates a healthy, nontoxic environment for people; and provides a well-designed balance of nature and development. Such design addresses not only how to build but also where to build. Developing areas in or near employment centers, public transportation, and existing public infrastructure saves money and also protects the natural environment.
- **Having a variety of transportation choices** reduces traffic congestion, protects the environment, and encourages physical activity. We drive a lot, instead of walking or biking, in part because of the way neighborhoods are designed. Most Americans are willing to walk just over one-third of

a mile. People will walk twice as far when they can walk in appealing areas. Shorter blocks, sidewalks, trees, and street lights can increase the number of people walking.

- **Compact development** preserves the character of the land by minimizing the construction footprint. Lot sizes are typically smaller. Homes may be clustered together or stacked in multi-story developments. Residential streets are narrower. Well-designed compact development integrates pedestrian and bicycle networks and includes parks or open space networks within the development.
- **Making places safe** is important because law enforcement is often the biggest item in a city’s budget. Communities should be designed to be self-policing by creating places that have neighborhood surveillance, community watch groups and police working together, few places hidden from view, and places where residents and business owners feel a sense of pride and ownership and where neighbors watch out for each other.
- **Promoting healthy living** means having our built environment offer the kinds of places and amenities that encourage people to be more active in their daily lives. This means having safer and attractive sidewalks and crosswalks, dedicated bicycle lanes, community gardens where people can grow their own vegetables, soccer fields where children can safely play, and hiking trails and nature preserves where residents can enjoy the unique qualities of the Sonoran desert they live in.
- **Community engagement** needs to happen at the beginning of any project. Residents, business owners, public officials, and developers all must be involved in discussions and decisions about how their communities will grow. This community involvement can occur in public forums but also in social community gatherings such as ice cream socials and neighborhood block parties.



Using information and calculations that the Sierra Club has compiled, this Healthy Density Calculator displays the costs and benefits of having neighborhoods developed at various residential densities

## Density Calculations

To give you a better idea of what these density figures mean, we identify examples of particular residential developments in the Valley (dwelling units, or DU, per acre)

	3 DU/acre Phoenix Average	5 DU/acre South Ranch	14 DU/acre Roosevelt Commons	20 DU/acre San Marcos Village	31.5 DU/acre Roosevelt Square	56.4 DU/acre Optima Camelview Village
<b>Water Use</b> Gal per household /day	1032	682	348	293	247	211
<b>Local Shopping</b> Service and retail employees /acre	1.6	2.6	6.9	9.8	15.3	27.3
<b>Transit Service</b> Avg buses /hour	0	5	29	46	76	143
<b>Gasoline</b> Avg gal per household /year	1178	1044	704	585	447	304
<b>Pollution</b> Lbs of nitrogen oxide per household /year	155	138	93	77	59	40

For more information about this calculator, see [http://stardust.asu.edu/research\\_resources/detail.php?id=31](http://stardust.asu.edu/research_resources/detail.php?id=31)

## Compact Development Can Be Compelling

It reduces public costs, enhances transportation choices, promotes healthy lifestyles, and preserves land and natural resources.

**Public infrastructure** includes roads, water, sewer, trash removal, electric lines, police and fire protection, and other public amenities. The expense of constructing and maintaining these depends, in part, on the location and proximity of homes in a development. Research from the Brookings Institute estimates that switching from conventional subdivision site planning to more compact residential patterns would result in public savings of nearly \$10,000 per home. When infrastructure costs are reduced, **housing** becomes more affordable.

Compactness also makes **transit service** more feasible as more people can live within an easy walk of bus or light rail stops. Research shows that people drive less if they live in more compact communities with ample transportation choices and walkable neighborhoods and destinations.

Compact communities consume less land, leaving more **open space** for preserving view sheds and other natural features. They also can be designed to incorporate more public places—playgrounds, parks, hiking/biking trails—within easy walking distance of homes.

Compact developments reduce **water usage**, which is especially important in the desert. Since outdoor water use accounts for 60 to 70% of home water use, the size of our lots and how we landscape and manage water on them has a lot to do with water conservation.

Streets not only use a lot of land but can add excessive amounts of impervious surfaces. Such surfaces are associated with high levels of **pollutants** from storm water runoff, resulting in water quality degradation. Wide streets and vast parking lots also contribute to the **heat island effect**. Cities around the United States are now reevaluating their street design standards, some finding that a 22-foot wide street can effectively serve neighborhoods of low traffic volumes.



# Learn More About How to Make Sustainable Communities Happen



## For more resources about how you or your organization can

- Learn more about compact development
- Support local economies
- Protect the environment
- Waste minimally
- Drive, bike, and ride safely
- Engage in sustainable leadership
- Make places safe
- Keep up to date on best practices
- Learn about employer efforts
- Create beautiful places
- Read more about housing affordability solutions
- ..... and more

See [http://stardust.asu.edu/research\\_resources/detail.php?id=31](http://stardust.asu.edu/research_resources/detail.php?id=31)

## Advisory Panel for Growing Sustainable Communities in the Valley of the Sun

Roc Arnett, East Valley Partnership  
 Sandy Bahr, Sierra Club-Grand Canyon Chapter  
 George Bosworth, Urban Land Institute (ULI) Arizona  
 Dean Brennan, City of Phoenix Department of Planning  
 Diane Brossart, Valley Forward Association  
 Charlotte Christian, Colliers International  
 Diana Yazzie Devine, Native American Connections  
 Trinity Donovan, Valley of the Sun United Way  
 Betty Drake, Scottsdale City Council  
 Shana Ellis, Tempe City Council  
 Elizabeth Fantetti, Valley Forward Association  
 Grady Gammage Jr., Gammage and Burnham  
 Steve Gervais, Pinnacle West/APS/SunCor  
 Tiffany Halperin, Norris Design

Jim Holway, ASU Global Institute of Sustainability  
 Dan Klocke, Downtown Phoenix Partnership/DPCDC  
 Kimber Lanning, Local First, Arizona!  
 Kathryn Lansink, Norris Design  
 Jack W. Lunsford, WESTMARC  
 Kevin Murphy, Labor's Community Service Agency  
 Jane Pearson, St. Luke's Health Initiatives  
 Patrick C. Rehse, Architectural Resource Team, Inc.  
 Debra Stark, City of Phoenix Department of Planning  
 Amy St. Peter, Maricopa Association of Governments  
 Ken Strobeck, Arizona League of Cities and Towns  
 Cyd West, Maricopa Partnership for Arts and Culture  
 Sandy Zwick, City of Phoenix/METRO



## These sponsors helped make this presentation and brochure happen

- Arizona State University
- Central Arizona Architecture Foundation
- Comerica Bank
- Local Initiatives Support Corporation
- Maricopa Partnership for Arts and Culture
- State Farm Insurance
- St. Luke's Health Initiatives
- Urban Land Institute
- U.S. Bank



Making Sustainable Communities Happen PowerPoint presentation and brochure developed by Arizona State University Stardust Center for Affordable Homes and the Family, College of Public Programs, and Department of Visual Communication Design