

# WALH

WESTERN ALBUQUERQUE LAND HOLDINGS, LLC



## SANTOLINA

A NEW COMMUNITY FOR  
A NEW ECONOMY  
NOVEMBER 2013

*There is nothing like a  
dream to create the future.*

Victor Hugo

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## SANTOLINA

*A new community for a new economy*

Santolina is a 13,700 acre master planned community, located west of Albuquerque in Bernalillo County. The community will feature a mix of neighborhoods, commercial and retail centers, business parks, medical facilities, manufacturing, schools, parks, trails, government services and an industrial and business park. Although it is considerable in size, Santolina is designed on a neighborhood pedestrian scale to encourage multiple modes of transportation (walking, biking, running, bus and automobile).

Santolina will serve as a major job center for the region. At full build out, the community will be home to businesses that employ approximately 75,000+ people.

Santolina is designed as a 40-50 year phased development. Considerable thought went into the master plan to create the framework to support the residents, businesses, schools, services and industry of the new economy. The variety and interplay of land uses provides residents the ability to live, work, shop, dine, learn and play.



### Purpose

The purpose of this report is to provide a vision of how various elements of sustainability have been integrated into the Santolina Planned Community Master Plan. Sustainability looks at and balances the needs of the present community with that of future generations. Santolina brings together economic, environmental and social aspects as they overlap to ensure long term sustainability.

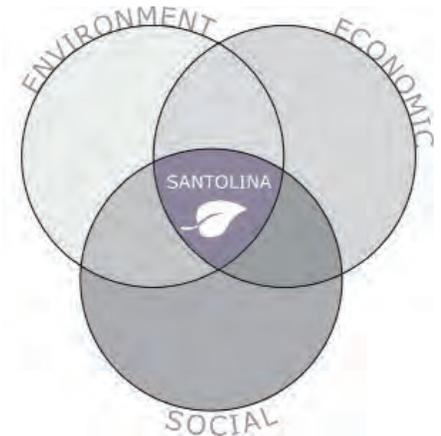
### Economic

Economic sustainability improves human well-being and social equity, while significantly reducing negative impacts to the environment. In order to achieve this, Santolina focuses on:

- Fiscal Responsibility
- Job Creation
- Efficient Delivery of Services (transportation, energy, infrastructure, etc.)

### Environment

Environment refers to both the natural and built environment. The natural environment is comprised of systems that will be preserved, i.e. escarpments, arroyos, vegetation that will be enhanced through thoughtful implementation of the built environment, e.g. water conservation through xeriscaping, reuse and storage. Santolina provides the necessary framework to preserve and enhance the environment over time.



### Social

Social sustainability includes housing, recreation, transportation options, jobs and services, education (all levels) and cultural diversity. Social aspects provide for residents' housing and service needs, as well as the opportunity for community participation and interaction throughout residents' daily lives. Such interaction will occur in public spaces such as schools, businesses, community gardens, parks and recreation and governance, to name a few.

To that end, Santolina will be a holistic, self-sufficient community with a distinct sense of place for residents to live, work, learn, play and thrive.

# Sustainable Design



*Balance*

*Conservation*



*Stewardship*



## PRINCIPLES

During the design of Santolina, the following objectives were identified, shaping the vision for the community. Santolina will be a community where:

- Opportunities for jobs and education are plentiful and locally accessible
- Desirable housing responds to current demographic and market preferences
- Open space and quality of life are preserved and enhanced
- A true “live, work, learn and play” community is created

To achieve these objectives, the following principles of sustainable design were utilized.

- **Systems Thinking Approach** studies the relationship of systems that form a community, focusing specifically on the interplay between natural and built environments.
- **Living Process** continuously re-evaluates assumptions and values, adapting to demographic and environmental change.

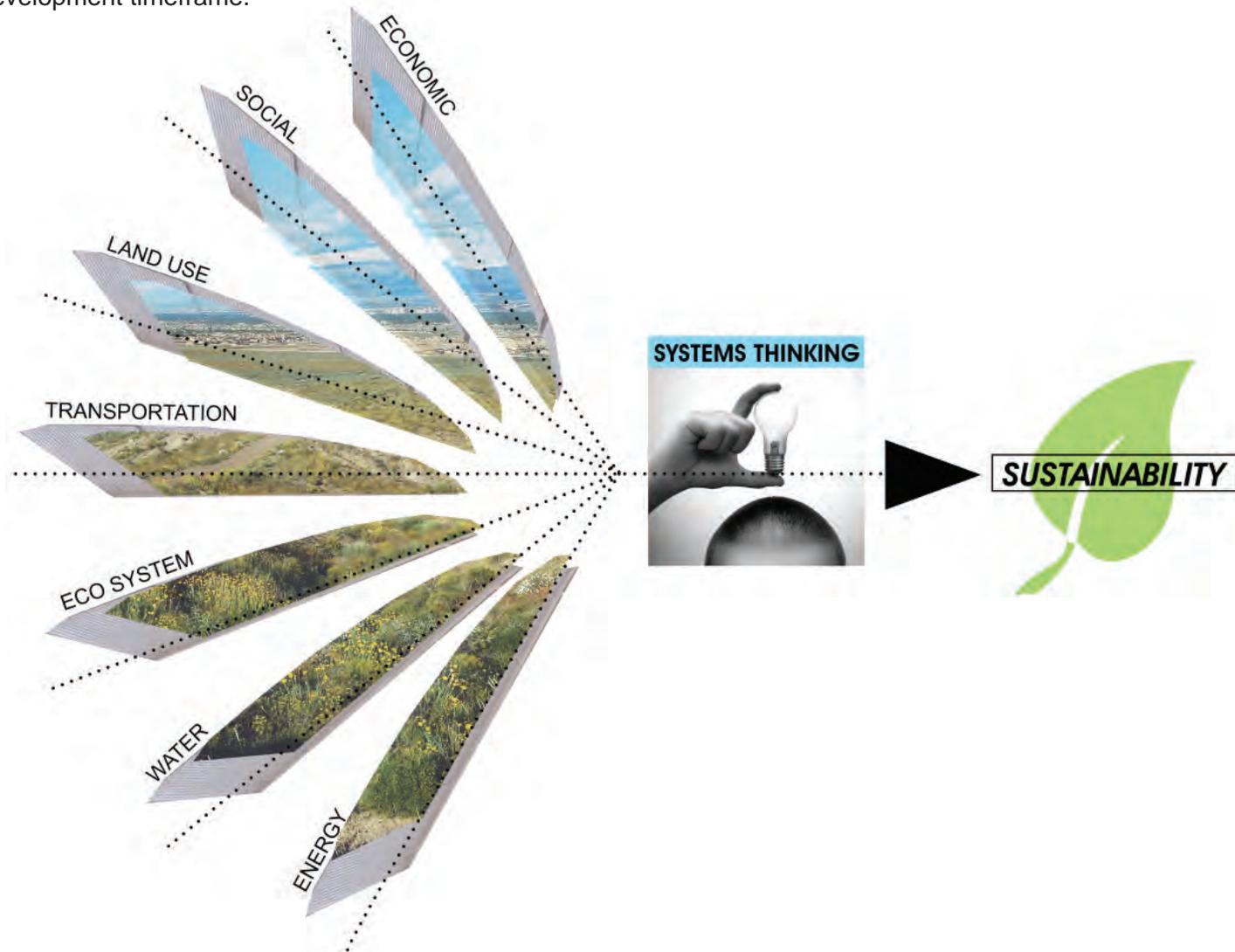


- **Design with Nature and Culture** creates a community that is responsive to economic, environmental and cultural conditions in order to ensure both short and long term solutions.
- **Hierarchy of Preservation** maximizes and mimics the benefits of ecosystems by preserving existing environmental features, conserving resources and regenerating lost/damaged ecosystems.
- **Environmental Stewardship** fosters an understanding that responsible management of healthy ecosystems improves the quality of life for present and future generations.
- **Energy Conservation** evaluates energy use within the community, renewable energy opportunities and reduction, recycling and reuse of resources over time.

## Systems

The development team employed a Systems Thinking approach to study the economic, social, land use, transportation, ecosystem, water and energy systems of the community. For each, data was gathered, studies were conducted and results verified to understand and guide the design process. It was also essential to evaluate the interplay between these systems, their impact on the community design and the goal to efficiently accommodate the 40-50 year development timeframe.

From this analysis, the development team was able to determine an appropriate means to balance physical, market, economic and community considerations to ensure a community design in harmony with the natural and built environments.



## Ecosystem

Santolina is defined by a large mesa framed by two escarpments. The mesa offers panoramic views of the:

- Sandia and Manzano Mountains
- City of Albuquerque
- Bernalillo County's South Valley



The property is characterized by the gently sloping terrain of the mesa while more intense topography is found in the escarpments. The property features:

- dunes and vegetated swales
- an extensive network of arroyos that convey storm water across the site into natural depressions or drain offsite
- a variety of grasses, wildflowers, cacti and brush providing groundcover
- a few species of native animals, reptiles and invertebrates

During the course of preparing the Master Plan, a number of studies were conducted, finding that no endangered species or archeologically significant properties exist within Santolina.

## Transportation

Santolina has nearly six miles of exposure along I-40 as well as ready access to:

- Central Avenue
- Dennis Chavez Boulevard
- Atrisco Vista Boulevard
- 118<sup>th</sup> Street

Santolina's transportation plan promotes connections to and from the existing county roadway system.

Santolina's mixed use, multi-modal development approach is envisioned to minimize traffic impacts to the existing and future transportation network. In many cases, traffic conditions within the adjacent roadway network will be improved. Based on research conducted by the Department of Housing and Urban Development\*, a 20% reduction in vehicle miles traveled may occur as residents of western Albuquerque commute to the commercial centers within Santolina. Additionally, it is expected that the development of Santolina will not overly burden existing roadways, as many residents will stay within the community to work, shop, dine, learn and play.



MIXED USE  
VEHICLE MILES  
TRAVELED  
**20%**  
REDUCTION  
Mixed Use vs.  
Single Use  
Land Use



*Multi-modal connectivity*

The roadway system has been designed and modeled as a multi-modal system with adequate space for trails, bicycle and transit through on-street, roadside and off-road trails/bikeways.

\* Department of Housing and Urban Development, Sustainable Communities E-News, *Arizona Study Suggests Dense, Mixed-use Development Patterns Reduce Vehicle Miles Traveled and Congestion*

### Water Conservation

Water is an extremely valuable resource, and in this region, is the primary factor in the consideration of sustainable growth and development. Historically, Albuquerque and Bernalillo County have relied almost solely on the underground aquifer as the source of potable and non-potable water for the area.

In order to grow sustainably, the local governments have instituted a number of water conservation measures and the San Juan – Chama water project. Over the past 17 years, the ABCWUA has made significant advances in water conservation, reducing its monthly water use by millions of gallons in the past two years alone. Per capita, per day consumption has been reduced from approximately 251 gallons in 1995 to 148 gallons in 2012 and is projected to go down to 135 gallons by 2024.



Aquacraft, Inc. *Analysis of Water Use in New Single Family Homes*

Santolina anticipates being an active participant in these water conservation measures. Special attention will be given to:

- water efficient fixtures and appliances
- water storage, reuse and harvesting
- xeriscape principles

### Water and Wastewater

Santolina is undeveloped and as such, no water, wastewater/sanitary sewer or stormwater management systems are planned. This provides an opportunity to plan and implement these systems in coordination with the appropriate agencies.

Santolina will receive water and sewer service from Albuquerque Bernalillo County Water Utility Authority (ABCWUA). The Santolina Water and Wastewater Master Plans are consistent with the ABCWUA criteria and operational methodology for the general water and wastewater systems. The Santolina Water Master Plan Technical Report and the Santolina Wastewater Master Plan reports are available for review. The reports outline the data that has been studied and details how to serve the Santolina Master Plan Area.

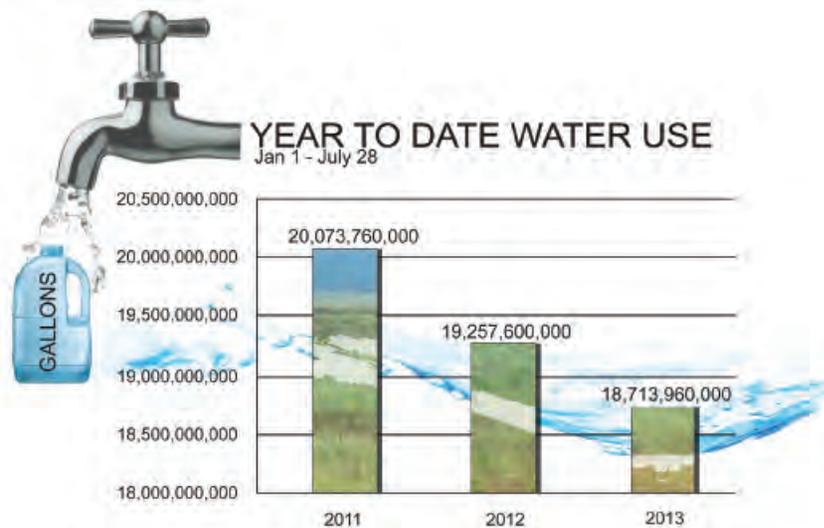
### Stormwater

In addition to water and wastewater services, Santolina will embrace creative and innovative stormwater management practices. Santolina features an extensive network of drainage corridors that convey stormwater across the site into closed basins or drain offsite. Stormwater land will serve two purposes, drainage and recreation.

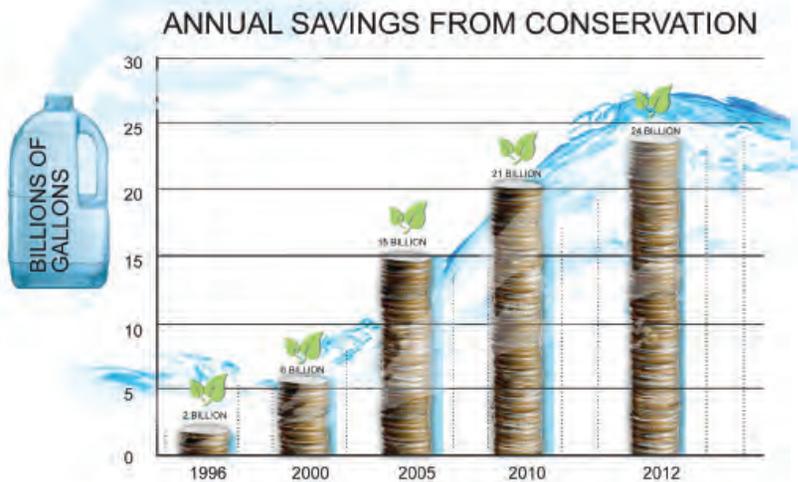


Strategies for stormwater management within Santolina include:

- Sustainable infrastructure approaches for the control, conveyance, storage and discharge of stormwater
- Improve water quality by the use of stormwater retention and detention facilities
- Shallow groundwater recharge and landscape irrigation by implementing water harvesting and water reuse techniques



Greater Albuquerque Metropolitan Area reduction in water usage due to water conservation programs  
 Source: Albuquerque Bernalillo County Water Utility Authority



Annual savings for the Greater Albuquerque Metropolitan Area from water conservation programs  
 Source: Albuquerque Bernalillo County Water Utility Authority

- Naturalized surface drainage systems intertwined with the community trails and open space system
- Prime recreational opportunities including sports fields in dry detention areas and hike/bike trails around wet retention facilities

### Energy

Energy costs play a significant role in the home buying process. According to the US Department of Energy’s Building Technologies Program\*, adoption of the 2012 International Energy Conservation Code (IECC) will lower New Mexico residents’ energy costs an average 24.7%. Additionally, New Mexico households will save an average of \$288 per year on energy costs with the 2012 IECC.



U.S. Department of Energy, Residential Building Energy Codes, International Energy Conservation Code 2012 and Beyond

As part of Santolina’s sustainability program and in keeping with builder trends toward more energy efficient building practices and products, all construction within Santolina will be encourage to adhere to the standards of the ENERGY STAR certified new home or the NAHB’s Home Innovation ICC 700 National Green Building Standard (NGBS) certification programs.

ENERGY STAR certified homes are designed and built to include energy efficient features, materials and equipment that deliver better performance. Home designs consider local conditions, utilize climate specific energy saving techniques and appropriate energy-efficient features to provide energy savings up to 30% compared to standard new homes.

Single and multi-family homes built to the ICC 700 NGBS are designed and built to bring a minimum 15% increase in energy efficiency. Each new home is certified to meet established criteria in energy efficiency, water and resource conservation and indoor air quality.

Residents will realize the cost savings of certified energy efficient homes while enjoying the quality, durability and comfort of well designed and built homes.

Santolina's large industrial and energy park on the far west side of the community provides opportunities for alternative energy production. Potential uses for this area include solar panel fields, wind power generating complex as well as other alternative fuel powered facilities.

\* US Department of Energy *New Mexico Energy and Cost Savings for New Single- and Multifamily Homes: 2012 IECC as Compared to the 2009 IECC*

### Land Use

In order to realize the vision for Santolina, six (6) land use categories are located within the community to provide for a wide range of uses and activities as follows:

- Villages (including village centers) to accommodate housing, education, public services, commercial services and recreational uses within convenient reach



- An Urban Center for mixed use development including co-location of regional public and private facilities such as a community center, APS schools, a post-secondary school campus, a regional park, fire/sheriff facilities, commercial and high-density residential development
- A Town Center with freeway access to attract large-scale regional commercial service businesses and hotels
- Two Business Parks with freeway access to attract employment centers such as research, technology, healthcare, business as well as post-secondary educational campuses or job training educational facilities
- A large-scale Industrial & Business Park suitable for manufacturing, distribution and warehousing operations, energy production facilities and other industrial uses
- Open Space to protect and highlight the natural beauty of the community and provide recreational areas for residents



### Economic

Santolina proposes 37,930 dwelling units. Job creation will begin immediately with the first residential, commercial and/or office construction. This construction will result in a substantial, net-positive, economic and fiscal benefit to the County and region. Hundreds of current Albuquerque and Bernalillo County residents will be employed, putting money into the local economy. Additionally, the local economy will enjoy a boost from the purchase of significant amounts of building materials needed to construct it all.



Santolina is designed to include manufacturing, office, education, medical and service facilities to accommodate approximately **75,000 jobs**, a jobs-housing balance of approximately **2.0 jobs per household**. The addition of the targeted 75,000 jobs will increase the County's overall current jobs-housing ratio **from 0.99 to 1.23**, a **24.65% increase**. The economic impact to Bernalillo County as a result of the anticipated jobs and output generated by Santolina is substantial.

Based on the fiscal study that accompanies the Level A Master Plan, Santolina provides the following economic benefits:

- **\$22.4 million** - the annual recurring fiscal surplus to Bernalillo County's general fund as a result of the development of Santolina
- **\$20 million** - annual non-General Fund revenues contributed by Santolina
- Santolina will generate **annual recurring revenues** projected to equal approximately **1.78 times the General Fund** costs associated with Santolina
- **\$47.7 million** in General Fund and **\$40.9 million** in non-General Fund revenues – one time construction gross receipt tax revenues flowing to the County over the build-out of Santolina
- **\$10.9 billion** - the annual recurring direct and indirect economic impacts to the County
- **\$18.1 billion** in one-time construction wage output

Santolina will import dollars into the county as residents and employees from surrounding communities spend at the shops, restaurants, gas stations, et al, either on their way to/from work/school or as a regional commercial destination.



A unique component of Santolina is the 2,000 acre Industrial and Business Park, designed specifically for heavy industrial, manufacturing, technology and energy facilities. The site provides easy access to I-40 and potential rail service. Albuquerque's developed metropolitan area has no sites that are appropriate for large-scale industrial users such as these.



### Social

A vital component to the design of Santolina is the social infrastructure envisioned for the community, serving as both a destination for residents of Santolina and surrounding communities, again contributing to the economic benefit of the community.

Santolina's social opportunities are envisioned to provide a wealth of entertainment, recreation and educational venues. These venues contribute to the overall quality lifestyle, bringing people together, close to home and reinforcing the unique sense of community.





*Community Spaces*



*Public Spaces*



*Galleries*

*Parks*



*Outdoor Classrooms*



*Cafes Shopping*



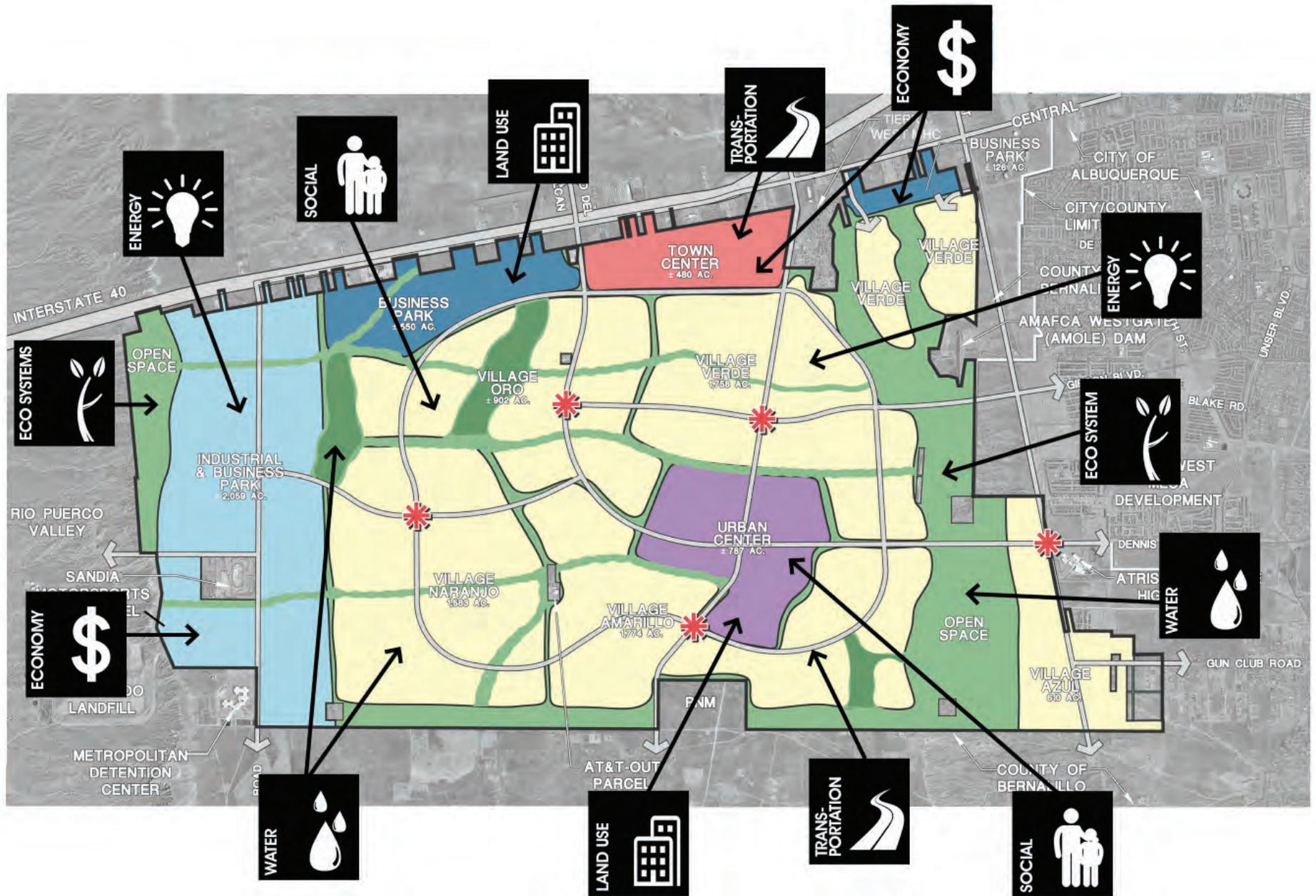
## THE RESULT

Santolina incorporates the following design principles:

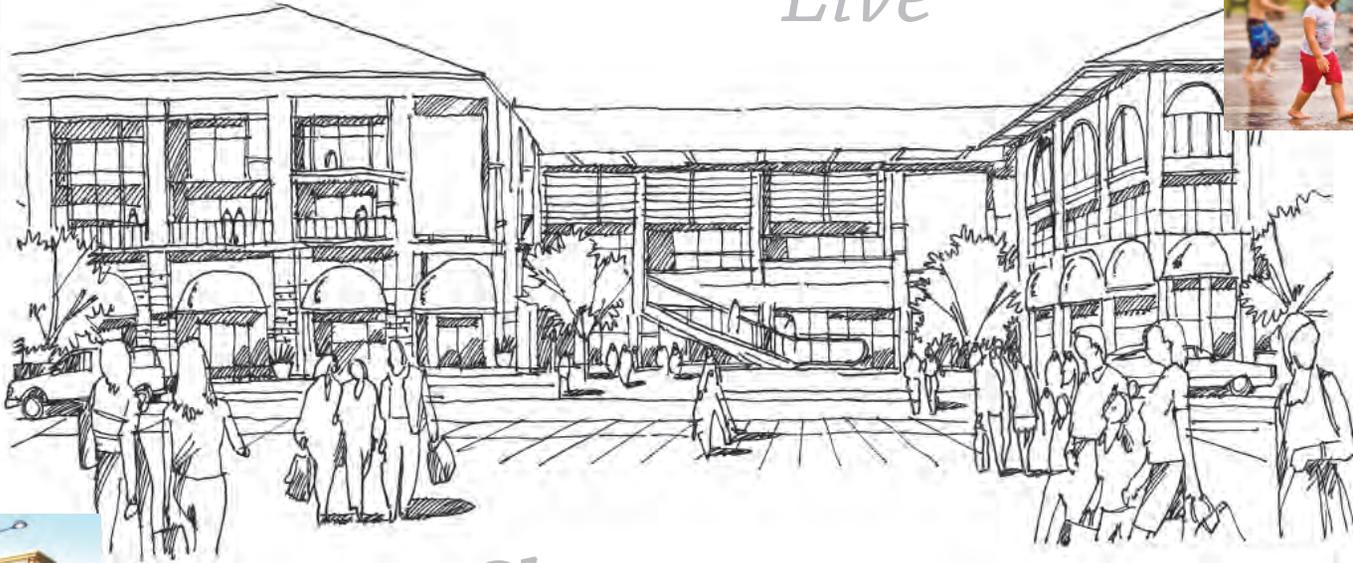
- A mix of residential villages and sub-areas defined by neighborhoods and village centers linked by an extensive open space and trails network.
- Employment areas of various scales to accommodate large industrial and energy production facilities, professional business parks, regional retail centers and neighborhood scale retail and work options.
- Integration of life-long learning opportunities provided by educational and training facilities and job incubation.
- Integration of open space to provide a network of connected parks, trails, and natural open spaces for water harvesting and storage, community recreation, cultural and geographic landmark preservation, and wildlife habitat.



- A mix of land uses that may evolve with changes in home buyer and employer market trends during the development of Santolina.
- A transportation system that promotes connections to and from the existing county roadway system and provides opportunities for alternative modes of transportation such as transit, walking and biking.
- A framework for future public facilities, i.e. sheriff/fire, schools and parks to serve the community.
- A framework for the provision of utilities and drainage infrastructure to meet the needs of the community.
- A framework for creating the necessary skilled workforce needed in today's high tech world through public and post-secondary schools, training and educational institutions, colleges and universities.



Santolina Land Use Plan



*Shop*

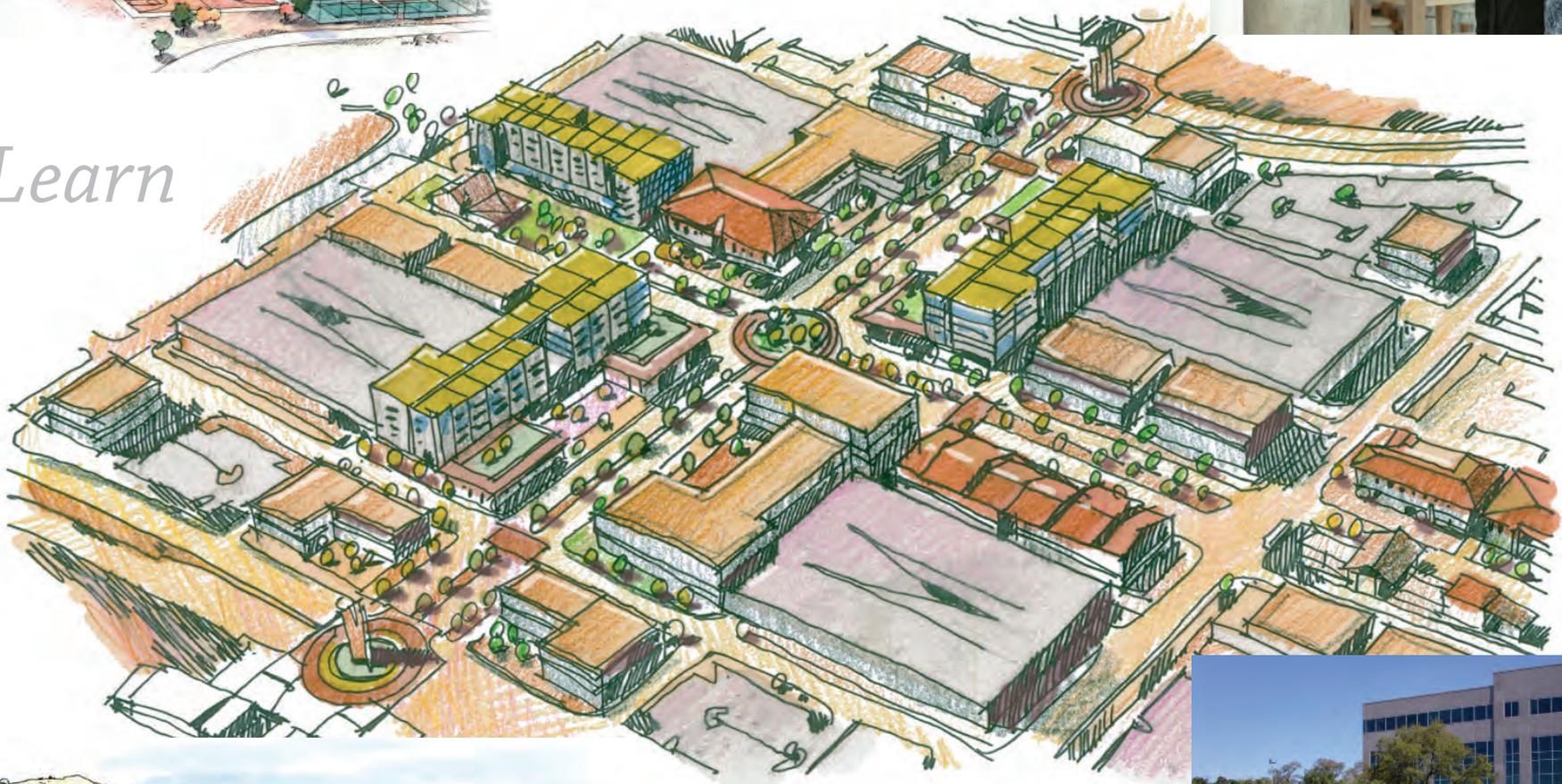




*Design*



*Learn*



*Innovate*

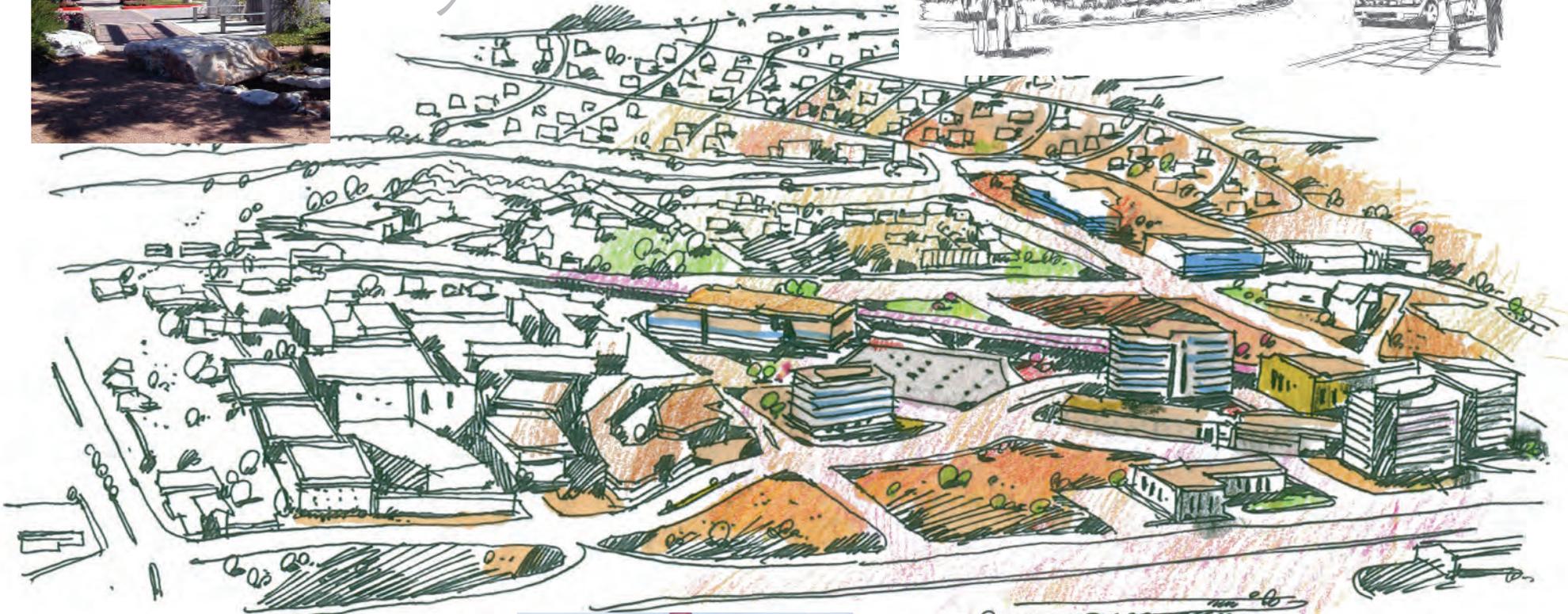




*Dine*



*Play*



*Grow*

*Learn*

## Live, Work, Play, Learn, Thrive

The vision for Santolina encompasses an ambitious program of housing, amenities, commerce and manufacturing that will benefit the region for generations. Santolina will contribute to the success of the region as it attracts new businesses, provides education opportunities, employs residents of all skill levels, supports new technology and encourages local investment and innovation. Santolina is truly a new community for a new economy.



*Live*



*Thrive*



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