## 5. Land Use & Growth Management

Santa Fe began as a 5-mile by 5-mile land grant from the King of Spain more than 400 years ago, though archaeological evidence shows pit-house settlements of native people pre-dating the Spanish settlement. The city was able to grow within its 25-square mile royal grant boundaries for 350 years until the city's first annexation in 1959 and subsequent development of the Bellamah neighborhood.

Santa Fe's population grew at a steady pace from the 1960s through the 1990s, adding an average of 5,000-8,000 new residents per decade and, in the process, changing from a small town into a city. Beginning in the 1970s, areas outside the city grew faster than the city itself, though by 2010 that trend had ended. Population and housing growth in the Santa Fe area has slowed to less than 1% annually, since the Great Recession began in 2007.

The city's existing land use is summarized in the pie chart. Though there is considerable vacant acreage within the city limits, much of it is owned by the city in the Northwest Quadrant and would require substantial investment on the city's part in order to develop the land. Other growth areas such as Tierra Contenta and Las Soleras have enough land for city growth for the next 10-20 years, based on current slower rates of annual growth of less than 1%.

#### Growth and Water

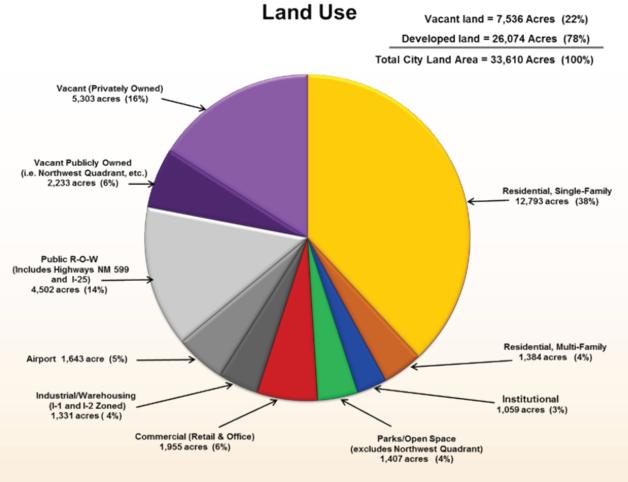
Growth and water will continue to be important issues in Santa Fe. The maps in this chapter show how the urban area may grow. However, any discussion of growth must consider limitations that the area's water supply may create for the future of Santa Fe. The city's water system currently serves approximately 80,000 residents and its supply can vary between 10,000 and 13,500 acre feet per year, depending on how much water is captured in the mountains by city reservoirs located in the Sangre de Cristo foothills.

The city is a leader in water conservation and actually reduced overall water demand from an all-time high of 12,700 acre feet in 1995 to 9,400 acre feet by 2015 through a comprehensive series of water conservation measures and the efforts of citizens. Now, new residential and some

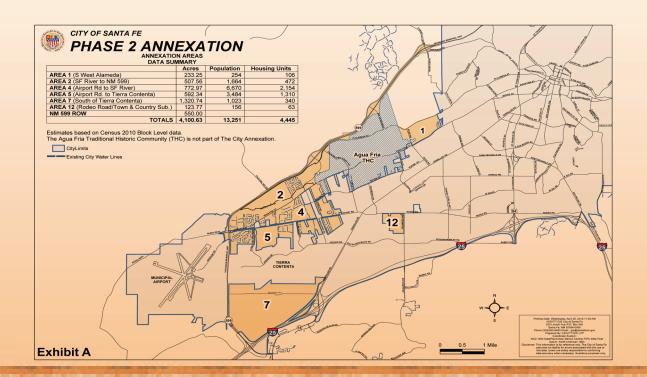


Photo Credit: Maria Clokey, City of Santa Fe Multi Media

commercial developments within the City of Santa Fe are required to obtain and transfer water rights into the city water system in order to obtain construction permits. The water rights must be equal to the amount of water the development will need at its completion, or "buildout."



City of Santa Fe



### **Growth Projections**

The growth of the city represents only a part of the growth picture in Santa Fe. Metropolitan Santa Fe includes several communities outside the urban area, but within ten miles of downtown. Another 33,000 residents live outside the Urban Area in communities like Eldorado, La Cienega, Las Campanas, Tesuque, and Rancho Viejo.

Growth of the Santa Fe Metro area, whether in the city or the county, will be dependent on the available water supply of both the city and county water systems. Both local governments discourage the addition of more domestic wells in new subdivisions.

## SANTA FE URBAN AREA GROWTH PROJECTIONS



#### Annexation

Annexation to the highways (I-25 & NM599) creates clearly definable areas for the city and the county to administer. Clear boundaries make government service delivery easier, more cost-effective, allow residents to know more easily whether they reside in the city or county and make it clear which government has authority over land development and transportation issues. The Agua Fria Traditional Historic Community will remain under county jurisdiction.

The map to the left shows the areas annexed in 2014

## **Growth Management**

The City of Santa Fe has implemented the following major growth management techniques since 2000:

Annexation/Clear Boundaries – The city has nearly completed an ambitious three-phase annexation program that has set the city corporate limits at the highways to the south and west (I-25 and NM 599, respectively). These new city limits clearly define areas of jurisdictional responsibilities between the city and county, while allowing for growth of the city within a well-defined geographic boundary.

**Water Offset Program** – The city's continuing efforts in water conservation have become nationally-recognized. The city uses a dual-track approach:

- Water Conservation at home, work and school through progressively-scaled rate pricing, rebates on replacement of older more water-wasteful household fixtures, and community advertising and education.
- Transfer of Water Rights New residential and commercial development must offset the anticipated water to be used through conservation, or transfer enough water rights to serve the entire development at build-out.

This has proven to be an effective and comprehensive approach to growth management. During the past 20 years, the city's overall annual water consumption decreased nearly 25%, while the population increased 15%.

#### The following growth management strategies should be added to the city's current program:

- **Urban Design** Well-designed development uses less land by creating smaller residential lots and using more multi-family housing, thereby making more efficient use of land and city utilities. Good urban design also aids growth management by requiring commercial development to build closer to front property lines, creating more walkable, pedestrian-friendly environments and, in the process, using less land for excessive off-street parking requirements. One of the biggest contributors to sprawl and poor land management can be found in the amount of land devoted to massive parking lots that are rarely, if ever, full. The city should review and amend its parking requirements in the Land Development Code (Chapter 14). Traditional suburban road design can also absorb much more land than is needed to create a truly effective, efficient street system. At this point in Santa Fe's development history, very few, if any, new roadways require more than 50-60 feet of Right-of-Way.
- Land Use / Streets / Public Parks & Plazas Linkage A fundamental aspect of effective growth management is fully integrating the following: (see the Urban Design chapter)
  - Smaller neighborhood-scale blocks; commercial buildings near the street.
  - Frequently intersecting street network,
  - Centrally located public parks & plazas

These three aspects of city life, when fully integrated, create the most desirable parts of the city and also create the healthiest sections of a city, fiscally. Examples of this integration are often best reflected in older neighborhoods.

**Re-Use** / **Re-Development along Major Streets** –The City should encourage and provide incentives for the re-purposing/re-use of older strip commercial development along major arterials like Cerrillos Road and St. Michael's Drive. Eliminating administrative costs and barriers to this type of re-development helps counterbalance the constant push toward more commercial development on the edges of the city.

**Impact Fees** – The city first began charging limited impact fees as early as 1993, and developed a full impact fee program collecting fees for roads, parks/trails, police and fire in 2004. These fees help fund road, park, trail, police and fire capital projects required by the new growth. Between 2004 and 2014, \$14.0 million was collected for numerous capital projects. The city waives impact fees for new affordable housing.

### Santa Fe's Aging Population

Nearly one-quarter of Santa Fe's population will be age 65 or older by 2020 and this senior population will continue to increase regardless of the rate of the city's overall population growth. Santa Fe's median age may reach 50 by 2020, considerably older than the city has been during past decades. An aging population has implications for land use and urban design considerations, such as:

#### **Streets**

- Sidewalk Maintenance Ensuring that sidewalks are in good repair is essential.
- to encouraging seniors to stay active by walking outdoors, in and around their neighborhood; Especially important on north and east sides of town.
- Crosswalks Ensure that crosswalk striping is well-maintained where a predominance of seniors reside and visit;
- Traffic Signal/Crosswalk Timing Additional seconds put onto crosswalk signals and traffic signal cycle length can be critical to allowing seniors the necessary time to safely cross a street;

#### **Public Transportation**

• Santa Fe Trails & City Senior Services – Increased planning and coordination between Santa Fe Trails and the senior services division's scheduled and "Call-on-Demand" van service will be important to serve a growing and older senior population in the future.

#### **Homes and Permits**

- Affordable Housing Regardless of age, affordable housing is fundamental to every individual's sense of security and well-being. Santa Fe's affordable housing program may become increasingly important to the city's senior population.
- House—to—Duplex (Age—in—Place with Extended Family) The city should reduce as many regulatory barriers and fees as possible to allow seniors, their families or their friends to add a guesthouse or divide a home into two units in order to house family members under the same roof or on the same property.

### Centers & Corridors

The Centers & Corridors Map shows the primary types of land use in Santa Fe and provides clearly established areas to be conserved and largely protected (Areas to Conserve) and those areas where most new development and redevelopment efforts should be directed (Areas of Focus).

**Areas to Conserve** - These areas represent established parts of the city that should remain much as they are today, unless there is widespread agreement for change.

Natural Area – Parks, open space, the Santa Fe River and other recreational areas are all natural areas that we should protect, even enhance, in the future. These natural areas become more important as the city grows larger.

NeighborhoodArea—Neighborhoods represent the city's "private realm" and residents often rely on neighborhood stability and constancy for their own personal sense of well-being. The city's many neighborhoods vary by location and physical character, but provide the foundation of the city.



Photo credit: The Architect's Newspaper Blog, 2012 creative commons

**Historic Downtown** – Santa Fe's historic downtown may continue to have some incremental physical change, but the downtown area is not a focus for large-scale new development or re-development. The maintaining of the downtown's historic built character is of great importance to the community. Landmarks such as St. Francis Cathedral (Basilica), The Palace of The Governors and the Plaza, itself, are constants that residents and visitors rely on as defining and re-assuring.

**Historic District** – Santa Fe's historic residential districts have great cultural and historical value. The city has been a national leader in local historic preservation and these efforts will continue to be a vital part of the city's identity for future generations. Any physical changes to the structures and streetscapes in these designated historic districts are reviewed and strictly regulated by the city's Historic Design Review Board.

**School Site** – School sites are often located at the heart of neighborhoods and any changes to these sites should be in keeping with the surrounding neighborhood. School sites may evolve over time and, as some sites may no longer be needed as schools, could become excellent locations as future neighborhood centers. But, these sites should always reflect the desires and scale of the neighborhoods that surround them.

**Areas of Focus** - The following areas represent vacant and/or developable parts of the city that should receive most of the city's growth over the coming decades.

**Planned Community** – These areas will be the focus of future growth for Santa Fe and already have an approved master plan, development plan, and may be under construction. They should be built with greater overall densities, connect to the city's water and wastewater system and should include a full mix of uses.

**Urban Reserve** — These areas are largely vacant tracts of land in single ownership, or with few owners, but have no overall master plan approved by the city. These areas provide a "reserve" of land for potential future growth, but due to the available land in existing developments, such as Tierra Contenta and Las Soleras, are not needed to absorb the city's population growth for at least the next 10-15 years.

#### Potential Residential Development

Community	Acres	<b>Future Housing (units)</b>	Population Added
Tierra Contenta	500	2,500	4,000
Las Soleras	500	1,500	3,000
Northwest Quadrant	160	750	1,500
River/NM 599	200	1,000	2,000
South of Tierra Contenta	440	1,250	3,500
TOTALS	1,800	7,000	14,000

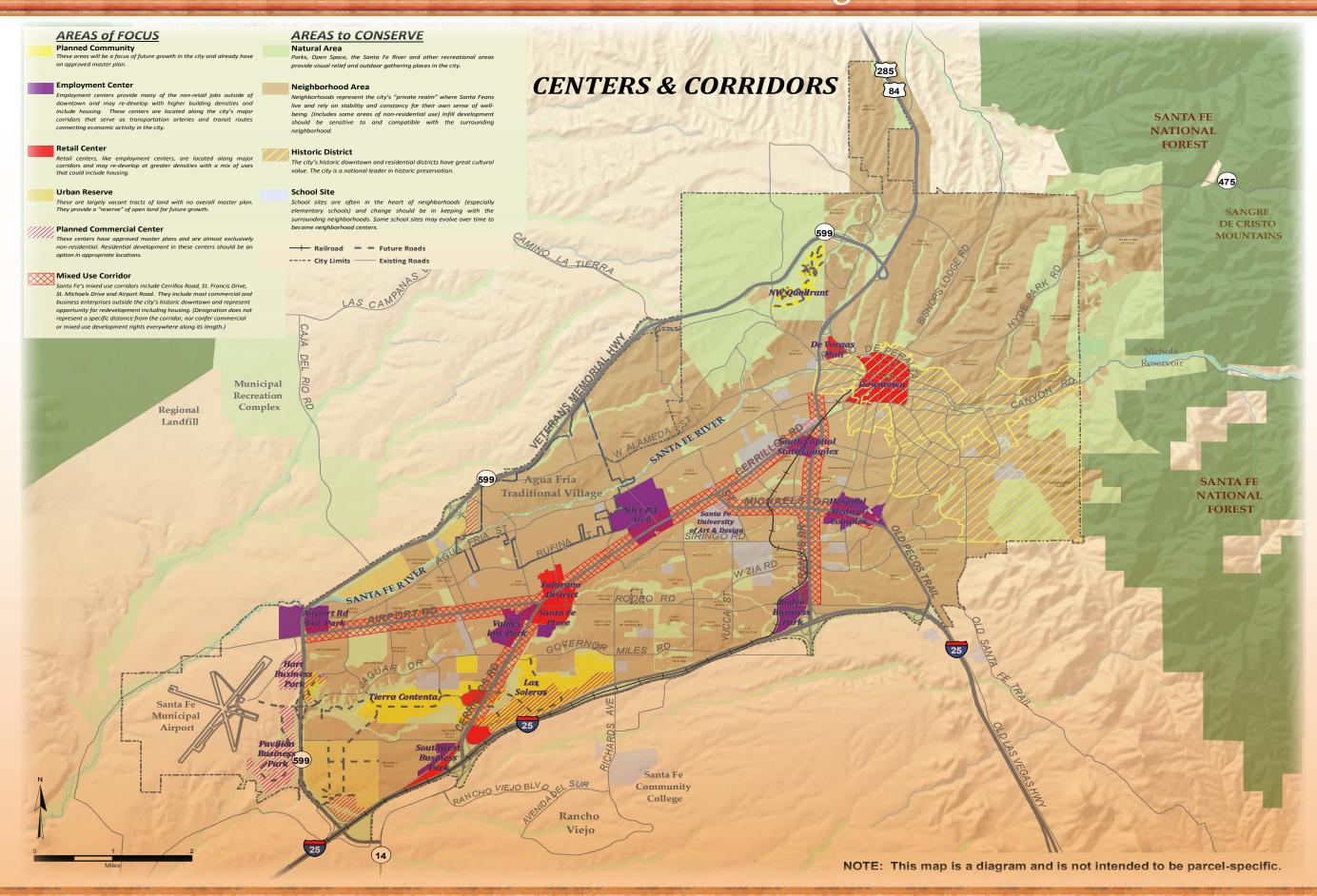
**Employment Center** – Employment centers already provide many of the non-retail jobs outside of Santa Fe's Historic downtown and should be encouraged to develop/re-develop with higher building density and even add some housing in the future. As the map shows, the employment centers (like the Retail Centers) are located along major corridors that carry large volumes of traffic and serve as the network for the city's transit (bus) system.

**Retail Center** – Like Employment Centers, these areas are located along major corridors and should be encouraged to re-develop at greater densities. These centers should consider housing in any re-development plans to promote this plan's theme of Mixed Uses.

**Planned Commercial Center** – These areas are approved for future development but are almost exclusively non-residential. Allowing residential development should be an option for the future to place residences closer to commercial activities. But any residential uses in these areas should be located away from highways and the airport.

**Mixed Use Corridor** – Santa Fe's main traffic arterials include Cerrillos Road, St. Francis Drive, St. Michael's Drive and Airport Road. They include most commercial and business enterprises outside the city's historic downtown. Development and redevelopment along these corridors should be encouraged to provide greater density of commercial uses and more housing, as they allow immediate access onto these major arterials which are also primary bus routes. The city should pursue the following approaches:

- 1. Re–Use blighted or failing buildings and businesses;
- 2. Retrofit streetscapes and underused parking lots; and
- 3. Re–Green paved or covered natural drainages with trees & wetlands.



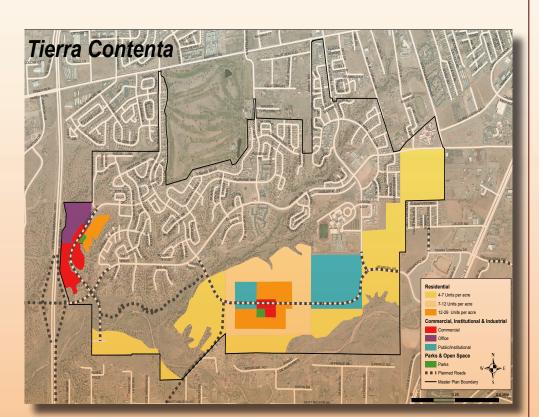
#### **Planned Communities**

The city contains three Master Planned communities that will absorb most of Santa Fe's growth through 2030.

#### Tierra Contenta

The Tierra Contenta master plan was begun in 1995 with construction of the first homes. After 20 years, nearly 2,500 homes and apartment units have been built. The master plan is approximately 50% complete based on an approval for as many as 5,200 housing units. Housing Affordability has been emphasized in Tierra Contenta as a city-initiated development and approximately 50% of all housing built to-date has met city affordability criteria. The western portion of Phase 2 and all of Phase 3 of the master plan await construction. This includes a total of approximately 400 acres of developable land and 100 acres of open space/park. The Arroyo de los Chamisos extends through parts of the southern portion of the master plan area (Phase 3).

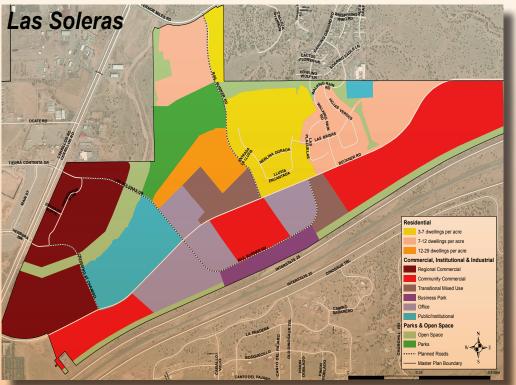
Tierra Contenta's final phases include a commercial center near the Jaguar Drive/NM 599 highway interchange, development of a Community Park (SWAN) and a larger area (Phase 3) of residential development to the south/southwest of Capital High School.



#### Las Soleras

Approved in 2008 as part of an annexation plan, Las Soleras began slowly due to the recession and the resulting drop in demand for new residential and commercial development. The master plan covers 500 acres with most of the land along I-25 slated for commercial and some mixed uses. The internal portions of the master plan are reserved for residential uses, which could be developed with 1,000-1,500 housing units.

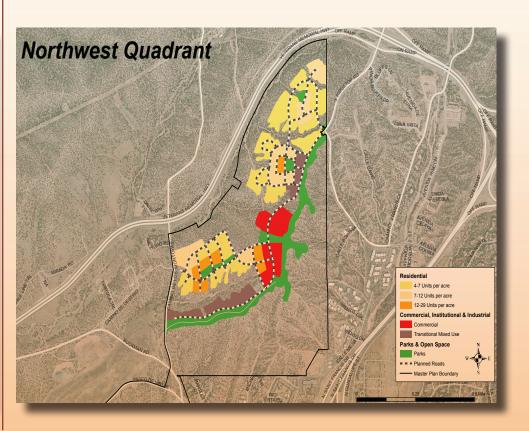
Beckner Road, the main road in the master plan, which connects Cerrillos Road and Richards Avenue, should be developed with a highly urbanized streetscape, bringing commercial buildings up close to the street while using shared-parking either between buildings, or behind buildings. Beckner, and all other streets should be tree-lined with sidewalks separated from the curb, or wider sidewalks up against the curb with tree wells used for street trees. Bike lanes should be striped on both sides of the street.



#### Northwest Quadrant

Created in 2010, this master plan covers just 160 acres of some 2,000 acres the city owns in the northwest corner of the city. The master plan calls for 750 housing units to the southeast of Highway NM 599. The plan shows a commercial center and small neighborhood scale parks with multi-family housing next to the parks. Most of the units would be lower density single-family style units. There would be a strong component of affordable housing within the master plan. Because the master plan sits on city-owned land, the city would need to initiate the land transfers and a development entity similar to what the city created in Tierra Contenta with the Tierra Contenta Corporation.

Because Tierra Contenta is still developing and due to the private land interest and private investment in Las Soleras, the Northwest Quadrant does not appear to be a necessary part of the overall development picture in Santa Fe for many years.



### South of Tierra Contenta (Urban Reserve)

The vacant land south of Tierra Contenta and the Mutt Nelson Road residential area, is comprised of approximately 440 acres, mostly in single ownership. The southern portion is zoned for commercial use, while the northern portion above an escarpment is zoned for residential use. Like the state-owned lands between Highway NM 599 and the Santa Fe River, this area may be developed in the future but currently is not under construction. Future residential development in this area could include 1,000-1,250 housing units with ample land for open space and parks much of which could act to buffer this area from existing residents in the Mutt Nelson and Remuda Ridge neighborhoods.

## Santa Fe Place Mall (Retail Center - Redevelopment Scenario)

Santa Fe Place (formerly known as Villa Linda Mall) opened in 1985 providing covered retail shopping for Santa Fe's rapidly growing south side. As the retail shopping industry changes and continues to move away from the indoor mall pattern, the 75+ acres occupied by the mall (most of which is surface parking) could transition to a more complete "village" concept with a reduced footprint of commercial businesses at the center surrounded by residential uses, including for-sale patio homes and multi-family rental units.

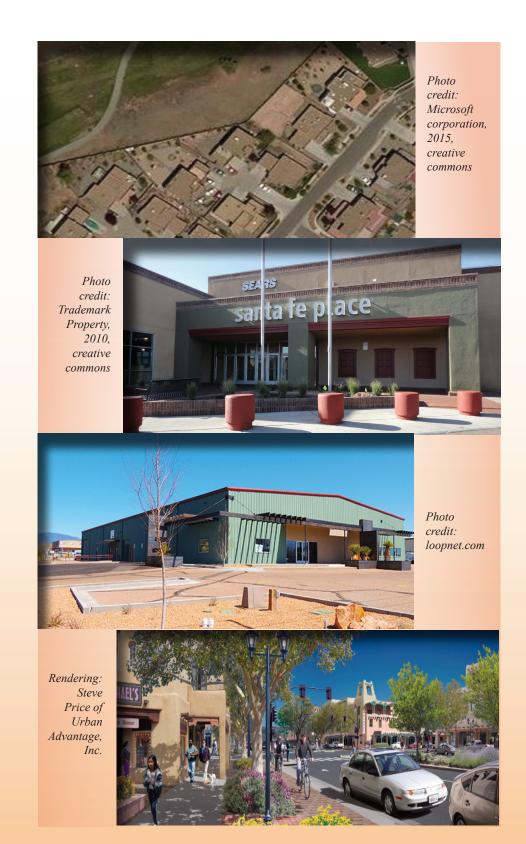
### Siler Road (Employment Center -Redevelopment Scenario)

An area of approximately 240 acres (similar in size to the downtown area), the Siler District is characterized by a mixture of older industrial/warehouse use that lacks curb and gutter on some streets and contains outdoor junk yards and outside storage on open ground. Siler Road bisects this district between Cerrillos Road and Agua Fria. The city owns significant acreage within the district that currently contains the city yards, fueling station, as well as some administrative offices.

The Siler Road area, between Cerrillos and Agua Fria, should be allowed and encouraged through re-zoning or an overlay district to redevelop with the possibility of a range of mixed uses that might include housing, offices, wholesale/retail and a variety of artist/artisan/craftsman live-work spaces.

### St. Michael's Drive (Mixed Use Corridor)

St. Michael's Drive commercial corridor connects Cerrillos Road and St. Francis Drive. This corridor is a prime location for a road diet, bicycle and enhanced pedestrian facilities. The adjoining businesses should be allowed and encouraged to redevelop existing aging buildings and underused parking lots for shops, work spaces and multi-family housing with new buildings opening onto the street. With the Santa Fe University of Art & Design at the west end and the Hospital/medical complex located east of St. Francis, this corridor is poised to play a pivotal role in Santa Fe's future.



## Housing & Affordability

The City of Santa Fe contains virtually every housing type from apartments to condominiums to single family detached homes – all built on a wide-range of lot sizes. Housing prices are higher in Santa Fe than prices nationally and have been for decades. The median housing price in Santa Fe is consistently higher than the U.S. median price.

Adding to the complexity of Santa Fe's housing market is the fact that the city is home to residents representing economic extremes – those at the very high end of the housing market and those at the very low end of the market. There has been enough activity at the higher end of the housing market in recent decades to create significant upward pressure in housing values across all price categories. This created an ongoing need for the city to be very active in the provision of affordable housing.



Photo credit: Richard Macpherson

### Santa Fe's Neighborhoods

Affordable housing has been an important issue in Santa Fe for decades. As early as 1976 the city received policy recommendations to improve housing affordability. The most recent report to guide the city is the City of Santa Fe Housing Needs Assessment (updated in 2013) which is an in depth review of the housing market and housing needs for the city, from the homeless to the homeowner. The Housing Needs Assessment steers the goals for all affordable housing programming, planning and regulation in Santa Fe.

The city has been proactive in supporting the efforts of its local nonprofit housing partners through the following programs:



- emergency shelter beds and homeless outreach services;
- supported rental units for people with special needs, mental illness, youth, victims of domestic violence and others in danger of becoming homeless;
- rental assistance vouchers for low-income renters, including people with special needs;
- homebuyer counseling and training to low and moderate-income residents;
- no-interest, no-payment due down payment assistance loans for qualified homebuyers;
- home repair loans to low- and moderateincome homeowners (includes emergency repairs) and loans for energy efficiency improvements to improve long-term housing affordability.

#### Tierra Contenta

In the early 1990s the city purchased a bankrupt development in the southwestern quadrant of Santa Fe. The city's vision was to create a master planned community in which at least 40% of the homes would be priced affordably. A HUD planning grant of approximately \$1.2 million provided the seed money for the initial phase of planning and infrastructure development. The resulting Tierra Contenta Master Plan promotes principles of walkability, traditional streetscapes, clustered housing, mixed-use districts, and access to an extensive open space and trails network.

The Tierra Contenta Corporation (TCC) was established by the city as a nonprofit development entity. As TCC sells parcels of land to developers, proceeds from the sale are used to build the "spine" infrastructure for the next phase of development and to pay back the city for the initial purchase cost. This development model is designed so that the city of Santa Fe does not incur any long-term operating costs, other than maintaining public facilities and rights-of-way.

To date, approximately 2,500 homes have been built in Tierra Contenta, housing about 7,000 people and approaching 10% of Santa Fe's current population. Forty-six percent (46%) of these homes were rented or sold to Santa Fe residents earning no more than 80% of the Area Median Income (AMI), well exceeding the original affordability goals.

### Inclusionary Zoning

This plan promotes greater residential densities and a mix of uses for the provision of new housing in newly developing areas on the edges of the city and in re-development efforts along the city's major corridors. Moderating increases in housing prices, better use of land, and efficient use of existing utilities (water and sewer lines) are some of the major reasons why this plan calls for higher housing densities and a mix of uses within close proximity, including residences located within the same buildings where retail or office uses are allowed. Another priority to both preserve affordability and support infill development is to continue home repair programs that also offer opportunities for energy efficiency improvements.



Photo credit: The Housing Trust 2014, Creative Commons

The aging of the city's population, the need to increase economic diversity by attracting younger workers, and varied sizes and mixes of families, both native and immigrant, calls for a diverse housing market with a wide range of:

- house sizes (especially smaller homes or homes that can be adapted to emerging needs like accommodating a caregiver or a home-based business)
- lot sizes (especially smaller lots or lots with more flexible use standards such as setbacks and height restrictions)
- owner-occupied and rental units, including guesthouses, mother-in-law units and other means for achieving incremental infill
- live-work units (combining residences, offices and retail spaces)

### Transportation & Mobility

Santa Fe's transportation system is multi-modal – a system that includes city streets and sidewalks, state and federal highways, the Santa Trails Bus System, the Rail Runner Commuter Train and an expanding interconnected system of on-road bike lanes and paved urban, multi-use trails. The city should support a transportation network that encourages a balanced, complete system of mobility that provides alternatives to the automobile. This is achieved, in part, by adopting land use policies that reduce the need for



Photo credit: Santa Fe Rail-Trail Conservancy Creative Commons

automobile travel by providing greater residential and commercial densities in newly developing areas as well as a greater mix of uses in redeveloping areas.

Transportation planning for the urban area is carried out by the city, county, state, tribal and federal agencies that come together to form the Santa Fe Metropolitan Planning Organization (MPO). The Santa Fe MPO produces a long-range Metropolitan Transportation Plan (MTP) which is updated every five years and allows federal transportation funds to be used for transportation improvements. The MTP also incorporates separate master plans for improving public transit, bicycle and pedestrian infrastructure and activity.

#### Road Network

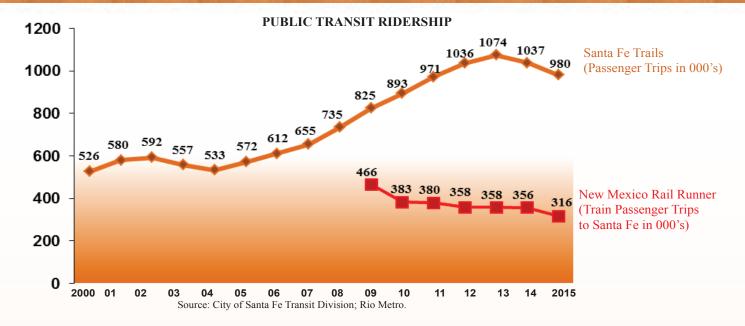
Santa Fe's road network has changed dramatically since the 1999 General Plan. Veterans Memorial Highway (NM 599) was completed in 2000 and serves as a bypass around Santa Fe and generally acts as the western boundary of the city. Two new interchanges have been added: one at County Road 62 (2012) and another at Jaguar Road (2015). The construction of Rufina Street, the extensions of Governor Miles, South Meadows, the Siler Road river crossing

and major improvements to Cerrillos Road and Airport Road have all occurred since the 1999 General plan. Major urban area transportation improvements for the future include:

**Cerrillos Road** – Re-construction of Cerrillos, ultimately to St. Francis Drive.

**Future Roads** – New roads (developer built) in Las Soleras; Tierra Contenta.

**Highway Interchanges** – New highway interchanges may be built along NM 599 (NW Quadrant, CR 70 and at Airport Road) and along I-25 (Richards Avenue). However, NMDOT has no plans for additional interchanges in the Santa Fe Area.



#### **Transit**

The Santa Fe Trails bus system began in January 1993 and grew quickly in ridership, providing one million passenger trips for the first time in 2012. The Cerrillos Road routes together account for approximately 50% of all system ridership. The city operates a fleet of 37 buses, of which approximately 22 are in service during peak hours.

Santa Fe Trails was one of the first all Compressed Natural Gas (CNG) bus systems in the United States and continues to operate today as a completely CNG- powered system.



Photo credit: City of Santa Fe Transit

The city's transit division operates federally-funded programs such as Job Access Reverse Commute (JARC) program that provides work trips by passenger van to jobs or workforce training based on income qualifications.

#### Commuter Rail

Initiated in December 2008, the state of New Mexico began commuter rail service between Santa Fe and the Albuquerque Metro Area. The New Mexico Rail Runner Express operates between Belen and Santa Fe and carries over 1.0 million passengers system-wide, annually, while about a third of those ride to and from Santa Fe.



#### Transit Master Plan

The Santa Fe Metropolitan Public Transit Master Plan recommendations for the future of the transit system include:

- Improved Coordination between Santa Fe's multiple transit agencies; Santa Fe Trails, North Central Regional Transit District, NMDOT Park & Ride Service and the New Mexico Rail Runner Express commuter train that connects Santa Fe and the Albuquerque Metro area. The plan also encourages greater coordination with the city's senior services division and its paratransit service to provide the most efficient transit service to the city's growing senior population.
- Hybrid Bus Rapid Transit (BRT) An express bus route along Cerrillos Road with fewer stops and on-board signal actuation to provide enhanced service along the city's main transit route.
- Sheridan Street Transit Center (Downtown) Build an enhanced bus transfer facility along Sheridan Street.
- Santa Fe Depot Pull-in/Turnaround Construct an off-street, pull-in/turnaround location for buses meeting rail runner trains.
- Accessibility the plan identifies bus routes, especially along Agua Fria, South Cerrillos Road and Rodeo Road that lack essential facilities (i.e. sidewalks and bus stop shelters) for existing and potential bus riders.
- Route Improvements the plan recommends improvements for more efficient service on the Agua Fria/Airport routes and the South Cerrillos Routes.
- Later Week-Night/Expanded Weekend Service.

## Pedestrian System

The Santa Fe Metropolitan Pedestrian Master Plan identifies specific city-wide pedestrian infrastructure needs and safety issues in "Areas of Critical Concern" which include stretches of the major corridors and include the following locations:

#### Areas of Critical Concern

- A. St. Francis Drive/Guadalupe Street Intersection
- B. St. Francis Drive/Historic Guadalupe Neighborhood
- C. Upper Cerrillos Road Corridor
- D. South Capitol Area
- E. Mid-Cerrillos Road Corridor
- F. St. Michaels Drive Corridor
- G. South St. Francis Drive Corridor
- H. Lower Cerrillos Road CorridorI. Lower Agua Fria Street Corridor
- J. Airport Road Corridor

#### Bikeways/Urban Trails

Santa Fe's bikeway system is a combination of on-road facilities, including designated bike lanes, striped shoulders, and lanes shared with motor vehicle traffic; and off-road facilities, including paved multi-use trails and formal or informal soft-surface paths. In some cases, facilities are designated and linked through "Bike Route" or other guidance signage. The Santa Fe Bikeways and Trails Map details existing on-road and off-road facilities throughout the Santa Fe area.

On-road bike lanes are an important part of encouraging alternative forms of transportation. The city has added a number of roads to its list of streets that have striped bike lanes, or bikeways. Cerrillos, Zia, Galisteo, Rodeo, Airport, Old Santa Fe Trail, Camino Cabra and Governor Miles are some of the roadways that have had striped bikeways added through resurfacing during the past fifteen years.

Santa Fe contains 26 miles of paved, off-road trails, providing a transportation alternative to the auto. The city's urban trail system has as its "spine" the intersection of a major east-west trail along the Arroyo de los Chamisos and a major north-south trail along the rail line. These trails intersect north of Zia Road and at Siringo Road, just east of Santa Fe High School. The city's four primary urban trails are (see map):

- Arroyo de los Chamisos Trail Extends from east of St. Francis Drive toward Santa Fe Place Mall, wraps around the mall and proceeds underneath Cerrillos Road before heading along the southern extent of Tierra Contenta.
- Rail Trail This trail extends along the rail line from the Santa Fe Depot south to Interstate 25, with the county portion continuing all the way to Eldorado.
- Santa Fe River Trail The city and county are working together to create an 8-mile Santa Fe River Trail from the eastside of downtown all the way to where the river crosses under highway NM 599 near the southwest part of town.
- Acequia Trail This trail extends south from the Rail Trail just north of Cerrillos Road. It provides access for several neighborhoods as it follows the path of the Acequia Madre or "Mother Ditch" that provided irrigation for early settlers.



Photo credit: Credit: City of Santa Fe Transit



Photo credit: Credit: City of Santa Fe Transit

School Zone Needs – There are many school zones that have a need for improved pedestrian facilities to encourage more children to walk or bike to school. The Plan highlights a few examples:

- 1. Sweeney Elementary/Airport Road Corridor area,
- 2. El Camino Real Academy Lower Agua Fria Street/ South Meadows Drive area
- 3. Ramirez Thomas Elementary Rufina Street area

In addition, the city has installed Americans with Disability Act (ADA) ramps at many intersections especially in the older historic parts of town. As an on-going program, these sidewalk and intersection improvements are generally capital improvement project (CIP) funded, or can be partially state and federal grant funded.



Photo credit: The Architect's Newspaper Blog, 2012 Creative Commons

### Bicycle Master Plan

The Santa Fe Metropolitan Bicycle Master Plan (MPO, 2012), sets out principles of strong, healthy bicycling communities as well as a plan for creating a complete system. The Expanded Bikeway Vision 2032 envisions a complete system of multi-use trails and on-street bike routes.

Benefits of bicycling, cited by the plan, are many and include:

- Local Transportation Option Bicycles can provide a daily transportation option
- Reduce Emissions Bike trips that replace car trips reduce emissions
- Health/Fitness Bicycles provide excellent exercise for better health and fitness
- Economy Bike commuting can help reduce transportation costs a major household expense
- Business/Tourism Santa Fe's environment, especially its downtown and historic districts, provides an excellent environment to help promote bicycling and bicycle-related businesses.

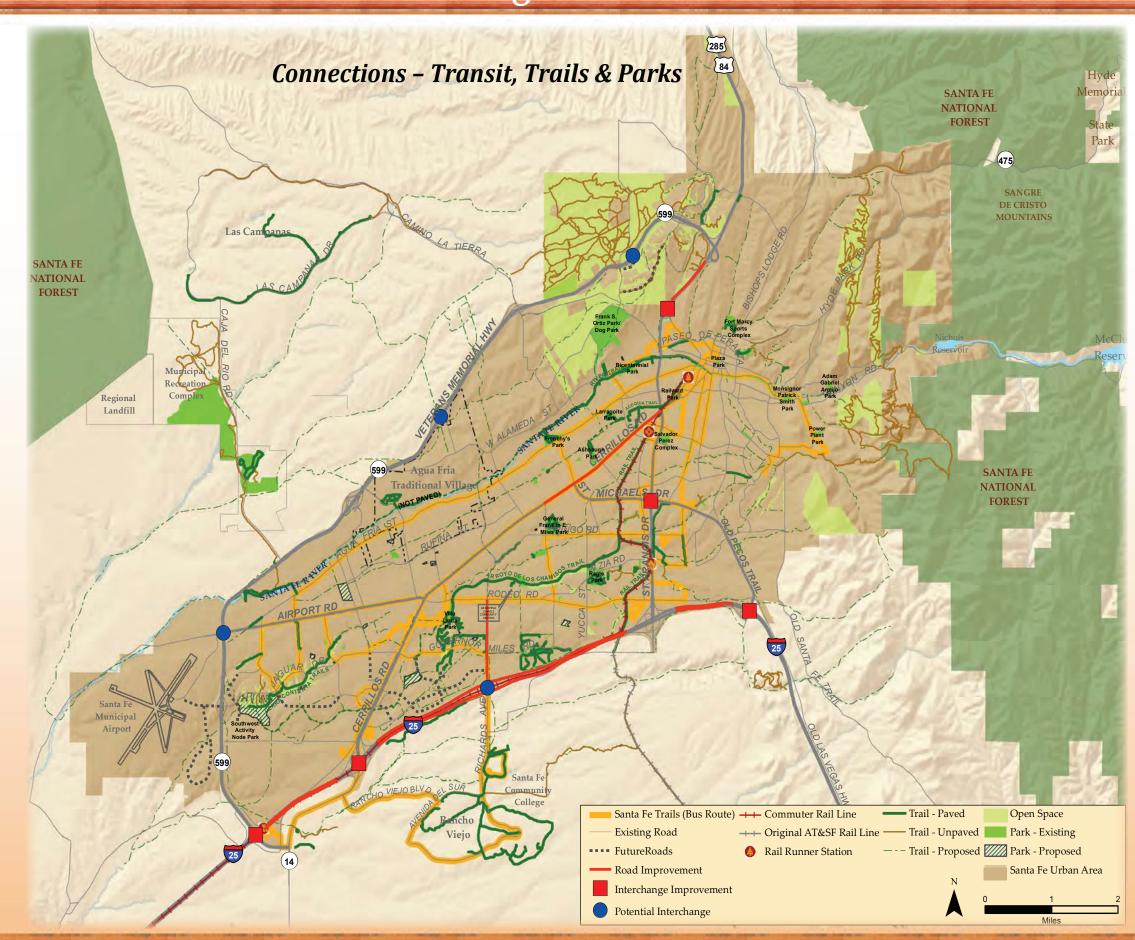
Strategies to achieve a bicycle-friendly community include:

- 1. Require bicycle accommodations in all roadway design,
- 2. Focus on system connectivity through targeted improvements,
- 3. Provide bicycle signage and on-line tools for way-finding,
- 4. Develop safe routes to schools.

#### Airport & Aviation

The Santa Fe Municipal Airport is a "primary service" airport that includes general aviation as well as limited commercial airline service to major hubs such as Denver, Dallas and Los Angeles. Expansion of airport infrastructure and facilities will occur only as increased demand of the airport warrants. As a result, there are no current plans to expand the terminal or lengthen any of the runways.

The airport will have a new entrance from Highway NM 599 and the Jaguar Drive interchange.



### Sustainability & Energy

Santa Fe adopted the Sustainable Santa Fe Plan in October 2008. The plan attempts to balance the economic vitality of the community with social justice and environmental health. The Sustainable Santa Fe Plan seeks both to reduce greenhouse gas emissions (GHG) and to find ways to increase the capacity of the community to adapt to climate change.

## Adapting to Climate Change

Predictions for Santa Fe indicate that the area will become hotter and drier with greater and more severe droughts than in the past, translating into wild fires and subsequent run-off contamination of surface water. This would affect water sources, the local ecology and the ability to produce food through both farming and ranching.

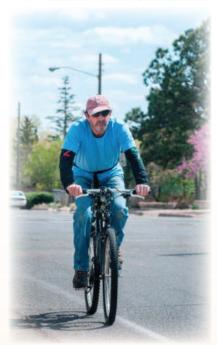


Photo Credit: Edie Moore, Albuquerque Journal

- Water Resources Protecting and conserving the city's water supply and the watershed will be important in adapting to a warmer, drier climate.
- Local Ecology The local ecology will be fundamentally changed as a result of climate change affecting soil, water, plants and animals.
- Local Food Production Local agriculture is already under pressure from water rights transfers to growing urban development. The Santa Fe City /County Advisory Council on Food Policy has recommended a policy to promote greater food security for Santa Fe.



Photo Credit: Gaia Gardens Mission Santa Fe Reporter 2012

### **Recent Projects**

Photovoltaic panels at the convention center in downtown Santa Fe and a composting facility at the wastewater treatment plant off Airport Road are the latest public-private partnership projects for renewable energy. Solar panels are offsetting power use at another part of the wastewater treatment plant, at the city's transit yard on Siler Road and at the joint city-county Buckman Direct Diversion water project.

#### Reducing Emissions

The majority of greenhouse gas emissions come from building construction and operation. The second largest contribution is from transportation of people and goods. The city's land use and growth management strategies to reduce emissions include:

- Green Building Code Santa Fe adopted a residential green building code for new single-family residences. Homes must be sited, designed, constructed to enhance the well-being of their inhabitants and to reduce the negative impacts on the environment.
- Alternative Transportation The city emphasizes alternative modes of transportation including an extensive urban trail network for pedestrians and bicyclists as well as the operation of a bus system that was the first in the nation with an entire fleet powered by Compressed Natural Gas engines (CNG).
- Development Code Land use patterns and land management strategies including using stormwater and a resource and encouraging increased density and mixed use development support reduced GHG activities within the community.

### Renewable Energy - City Facilities

Because municipalities cannot take advantage of federal or state tax credits, it is difficult to finance large-scale renewable energy projects up-front. For this reason the City of Santa Fe has pursued and will continue to pursue cost-effective alternatives to install renewable energy systems to its facilities.

The city has contracted to have photovoltaics (solar panels) put up at eight different city facilities. Greenhouse gas emissions would be reduced by an impressive 4,001 tons per year. In addition, the city expects savings of over \$11,500 per year in electric bills over the 20- year term of the contracts.

City plans to reduce greenhouse gas emissions focus first on energy efficiency retrofits for a number of reasons including: many of the planned projects have a 2 to 5 year payback, many city buildings have outdated energy technologies that result in uncomfortable environments for customers and employees and energy efficient buildings require smaller less expensive renewable energy systems.

### Wind and Solar Energy

Alternative energy sources, particularly wind and solar energy, have been studied, are being developed and can be an important role in New Mexico's energy future. PNM has begun using wind-based electricity production for use in the state. PNM currently generates approximately 8% (Source: PNM) of its total electricity from a wind farm near Tucumcari. The use of renewable energy sources promotes greater regional and national self reliance as well as greater energy stability and a cleaner environment for future generations.

Wind turbines are a good example of the growing competitiveness of renewable energy technologies. The cost of electricity produced by modern wind turbines has declined by over 50% in the past twenty years. Other renewable sources of electricity include solar-thermal electric-power plants and photovoltaic cells.

Solar energy may have the greatest potential for meeting current and future energy demands. Passive solar heating and cooling systems are not uncommon in New Mexico, especially in private homes. These systems are simple in concept and use few moving parts and require little or no maintenance.



Photo Credit: City of Santa Fe Transit

