



City of Chandler

Santan Freeway Corridor Area Plan

28 October 1999



BRW

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BRW

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29 October 1999

Mr. Bob Pazera
General Plan Coordinator
Planning Services Department
CITY OF CHANDLER
215 East Buffalo
Chandler, AZ 85244-4008

RE: Santan Freeway Corridor Area Plan

Dear Mr. Pazera:

BRW, Inc. is pleased to submit the ***Santan Freeway Corridor Area Plan***, as adopted by the Chandler City Council on 28 October 1999. The Corridor Area Plan culminates many months of hard work by the Chandler City Council, Planning and Zoning Commission, City of Chandler Staff, residents of the community and BRW, Inc.

The ***Santan Freeway Corridor Area Plan*** contains the following elements:

- Land Use;
- Transportation and Circulation;
- Infrastructure; and
- Economic Development.

These elements are comprehensive in their easy reference and long-term flexibility.

We sincerely appreciate the support and cooperation from all the participants who helped prepare this Corridor Area Plan. We are confident that the recommendations contained herein will establish a solid foundation for continued long-range planning in regards to the Santan Freeway Corridor.

It has been our pleasure to assist the City in this endeavor, and look forward to assisting you in any future ventures.

Sincerely,
BRW, Inc.

Celeste C. Werner
Vice President

ACKNOWLEDGEMENTS

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Rob Robson, Vice Mayor
Patti Bruno
Boyd Dunn
Martin Sepulveda
Donna Wallace
Philip Westbrooks

Planning and Zoning Commission

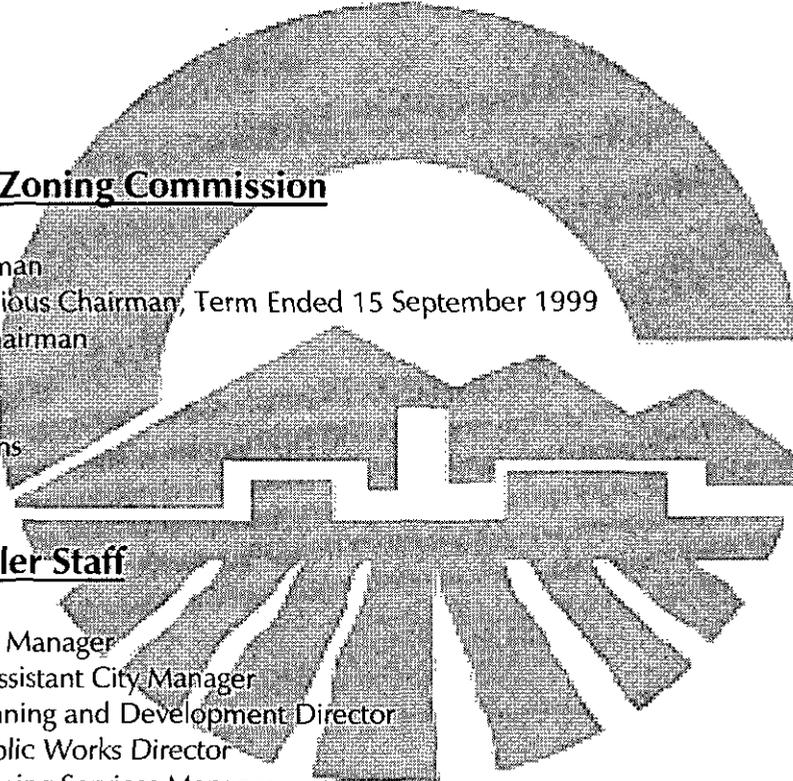
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RESOLUTION NO. 3138

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF CHANDLER, ARIZONA, ADOPTING AN AREA PLAN (PL99-053, THE SANTAN FREEWAY CORRIDOR AREA PLAN) FOR THAT AREA GENERALLY LOCATED BOTH ONE MILE EXTENDING NORTH AND SOUTH OF THE SANTAN FREEWAY CORRIDOR BETWEEN PRICE AND GILBERT ROAD LOCATED IN THE CITY OF CHANDLER.

WHEREAS, the Chandler City Council has resolved by previous resolution that it expects to implement the Chandler Land Use Element by adopting area plans prior to rezoning as provided for by law and as deemed appropriate in the opinion of the City Council; and

WHEREAS, Area plans are necessary to provide coordinated and comprehensive guidelines for future development in the City of Chandler; and

WHEREAS, The City Council directed staff to coordinate the preparation of an Area Plan along the Santan Freeway Corridor; and

WHEREAS, Public participation was maximized by notifying all property owners within the study area and conducting two major public workshops including a Planning and Zoning briefing prior to their regular public hearing; and

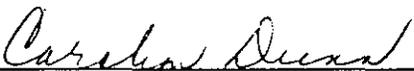
WHEREAS, all State of Arizona legal requirements for the adoption of area plans have been met;

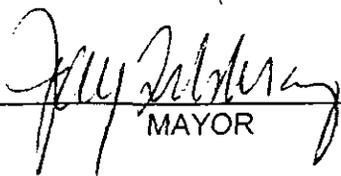
NOW, THEREFORE, BE IT RESOLVED by the City Council of the City of Chandler, Arizona, as follows:

That the request filed as PL99-053, the Santan Freeway Corridor Area Plan is hereby approved and adopted as an area plan, as recommended by the Planning and Zoning Commission.

PASSED AND ADOPTED by the City Council of the City of Chandler, Arizona, this 28TH day of October, 1999.

ATTEST:


CITY CLERK


MAYOR

CERTIFICATION

I HEREBY CERTIFY that the above and foregoing Resolution No. 3138 was duly passed and adopted by the City Council of the City of Chandler, Arizona, at a regular meeting was held on the 28th day of October, 1999, and that a quorum was present thereat.

Carelynn Duxon
CITY CLERK

APPROVED AS TO FORM:

Gerrin M. O'Neill
CITY ATTORNEY

Santan Freeway Corridor Area Plan

28 October 1999

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1.0 Introduction

The Santan Freeway Corridor Area Plan is situated within the City of Chandler south of the downtown area. The area is bounded by the Price Road/Freeway alignment to the west, Gilbert Road to the east, Germann Road to the south and a combination of Frye and Pecos Roads to the north. The Study Area was established to incorporate the areas to the north and south of the Santan Freeway alignment that will be most significantly impacted by its construction.

The Study Area will generate significant economic and transportation oriented opportunities for residents and businesses within the City of Chandler through development of high speed transportation facilities and land use intensification. These opportunities, accompanied by the surrounding facilities, including the Chandler Municipal Airport and the Union Pacific Railroad, create an environment of heightened multi-modal commerce oriented transportation opportunities.

The Santan Freeway will serve as the centerpiece of the Study Area. The final design will include a six-lane facility with interchanges every mile along the arterial roadway network. Traffic projections for the freeway are estimated to reach 123,682 vehicles per day by 2020, for both eastbound and westbound traffic. A majority of the freeway alignment through the Study Area will be constructed below grade, with overpasses only at the Arizona Avenue/Union Pacific Railroad and the Consolidated Canal. Current construction schedules estimate completion of the freeway segment between the Price Freeway and Gilbert Road by 2005.

The Santan Freeway Corridor Area Plan will provide the City of Chandler with a guide for development and redevelopment over the next twenty years. A primary goal of the Plan is to protect existing and planned residential development from the impacts created by the Santan Freeway, thereby preserving quality of life aspects of the existing area. Secondly, the Area Plan will establish patterns for employment based development that will generate revenue for the City, provide residents with local employment opportunities and create a buffer zone adjacent to the freeway.

Through adoption of the Area Plan, the City will have a resource to promote alternative land use patterns and integrate the Plan into the City's General Plan. As an individual component of the General Plan, the Santan Area Plan can identify unique goals and objectives for this area.

1.1 Planning Process

The Santan Freeway Corridor Area Plan was completed according to a work program that involved six technical tasks, designed to ensure completion of the project over a six month time period. The first phase of the project involved a comprehensive assessment of existing conditions within the Study Area and an evaluation of the land use pattern. These findings were presented in Technical Report #1, *Background Report*. The second phase of the

project focused on gathering input from the community, stakeholders and City staff through a series of public workshops and meetings. This issue identification process led to the formulation of the Visions, Goals and Objectives documented in Technical Report #2. With a defined vision for the project in place, a series of alternatives for land use within the Study Area were generated utilizing variable development criteria for each of the scenarios. A second community meeting provided a forum for the discussion of the three alternative scenarios and allowed for a more focused discussion of planning issues within the Study Area with relation to impacts created by the Santan Freeway and subsequent land use intensification within the Area. Issues were evaluated and integrated into Technical Report #3, *Alternatives Evaluation*. The final phase of the planning process involved the development of the Area Plan and the associated elements, which led to the creation of the Policies and Implementation Program, presented in Technical Report #4, *Draft Santan Freeway Corridor Area Plan/Development Policy and Implementation Program*.

The public participation phase of this project was an ongoing task that included community meetings in addition to community newsletters, policy and issue meetings with City staff, the Planning and Zoning Commission and the City Council. The schedule for the community participation schedule for the Area Plan attempted to adhere as closely as possible to the project schedule and was successful in the overall coordination of staff comment and review.

1.2 Planning Context

The City of Chandler has designated the Santan Corridor Study Area for preparation and adoption as a detailed Specific Plan Area. Area plans are incorporated into the General Plan upon the approval of the Planning and Zoning Commission and adoption by the City Council. The Santan Area Plan supports the overall goals and policies of the General Plan and is compatible with surrounding uses proposed by the Plan. The Santan Area Plan also adheres to the general strategies of the Capital Improvement Plan and existing area plans that overlap the study area.

The Santan Study Area is comprised of a conglomerate of City, County and State administered property under the broad coverage of the Chandler Municipal Planning Area. This designation allows the City of Chandler to provide input on planning issues, with ultimate authority for zoning/rezoning requests exercised by the individual jurisdictions. The City of Chandler has expressed an interest in the eventual incorporation of all county islands within the incorporated area, but will typically investigate these cases only at the request of affected property owners.

Land use decisions are typically enforced on all properties within a Plan area after adoption by the City Council.

1.3 Organization of the Area Plan

The Santan Freeway Corridor Area Plan consists of four plan elements which will guide growth in the community. The four elements are: Land Use, Transportation and Circulation, Infrastructure, and Economic Development.

The *Land Use Element* designates the general location and intensity of land uses for residential, commercial, industrial, parks, open space and public facilities in the Study Area. The *Alternatives Report*, dated June, 1999, details the process that lead to the selection of the Land Use Plan.

The *Transportation and Circulation Element* identifies the general location and function of existing and future streets and describes the need for transportation facilities (i.e. bike paths and walking paths) that will enhance the use of alternative modes of transportation such as bicycles and walking.

The *Infrastructure Element* establishes general guidance for the provision of public facilities and services including: water supply and distribution; sewage collection and treatment; public utilities; and other related infrastructure systems.

The *Economic Development Element* recommends strategies to enhance the economy of the City, expand existing businesses, and attract new economic activities.

Each element of the Santan Freeway Corridor Area Plan contains five sections as follows:

Introduction: A description of the purpose of each plan element.

Existing Setting: A brief summary of the existing conditions and issues in the Study Area. Greater detail about existing conditions can be found in the Existing Conditions Report, dated June, 1999.

Vision, Goals and Policies: A statement of the broad values, identified by the community residents and a list of the goals and policies that will guide City decisions concerning development of the Study Area. An original list of goals and polices was published in the Vision, Goals and Policies Report, dated June, 1999. Vision, goals and policies are defined below:

Vision: A statement of community values. A vision statement expresses broad community values.

Goal: A concise statement that describes a condition to be achieved. A goal is generally not quantifiable, time-dependent or suggestive of specific actions for achievement. Goals are expressed as ends, conditions, or aspirations.

Policy: A specific action that guides decision-making. A policy is clear and unambiguous, and is based on stated goals, as well as the analysis of data. Policies may describe standards, which are rules or measures that establish a level of quality or quantity that should be complied with or satisfied. Standards define the more abstract terms of goals and objectives with concrete specifications.

Plan: A description of the plan vision for physical development that ties the vision, goals, and policies to the implementation program.

Implementation Program: A table illustrating the actions necessary to implement each plan element. The Implementation Program includes:

Implementation Measure: A description of the action, program or strategy.

Purpose: The intent of accomplishing each implementation measure.

Timeframe: The target years, in two-year increments, for implementation in the first eight years of the planning horizon.

Key Participants: The appropriate public or private body, agency, group or individual responsible for the implementation measure.

Project Location/Area of Influence: The location of the proposed action.

Resources: The appropriate source of funding for carrying out the proposed action.

2.0 Land Use Element

The Land Use Element of the Santan Freeway Corridor Area Plan is presented in the following sections:

- 2.1 Introduction
- 2.2 Existing Settings
- 2.3 Land Use Plan Vision, Goals, Objectives, and Policies
- 2.4 Land Use Plan
- 2.5 Implementation Program

2.1 Introduction

The key to a successful development pattern within the Santan Freeway Corridor Study Area is contingent on the adherence to the Land Use Plan. The Plan will provide the City with an interpretive guide for development through the year 2020 and will attempt to incorporate future trends and needs of residents and stakeholders. By adhering to the Land Use Plan, the City will be provided with an opportunity to improve the urban environment and steer development towards becoming a compatible and sustainable community.

The Land Use Element is a guide to decision making for the Santan Area that achieves the following:

- Identifies the general types, locations and pattern of land use in the Santan Area;
- Establishes guidelines for various land use categories depicted on the Land Use Plan;
- Promotes compatible land use and protects incompatible land uses from becoming established adjacent to the freeway corridor; and
- Identifies courses of action and strategies that provide the means to implement the Land Use Plan.

2.2 Existing Setting

The existing Study Area is currently comprised of a mixture of low/medium density residential and agricultural land uses. Positioned at the edge of the current urban growth boundary for the City, the Santan Study Area is beginning a process of land intensification, prompted by a series of private property specific area plans that have identified central Chandler as an area of significant employment opportunity. Year 2000 population estimates for the Study Area identify approximately 15,574 residents, based on Maricopa Association of Governments (MAG) Traffic Analysis Zone data. These figures will show significant increase over the next twenty years as a result of the southward movement of the urban growth boundary.

Current land use within the Study Area is generally limited in its implementation of freeway-compatible land use types, particularly with the continuing development of low to medium density residential properties directly adjacent to the freeway alignment. These properties

will require sound attenuation with regular monitoring of local environmental conditions. Large existing tracts of agricultural land dominate the land use pattern to the east, with the large Pecos Ranch residential development and other subdivisions located on the western boundary of the Study Area. A significant number of large-lot rural residential is interspersed throughout the Study Area, while the highest housing densities are found in the north adjacent to the Arizona Avenue corridor spreading southward from the Downtown area. A number of commercial and industrial properties are located in the Study Area and are *primarily confined to arterial corridors*.

Municipal facilities within the Study Area includes elementary schools, public parks, the Chandler Water Treatment Facility, a water retention facility, wastewater lift station and multiple telecommunications sites and community churches. The arterial roadway network adheres to the one-mile grid system with established rights-of-way available for future improvements (i.e., widening). Other transportation facilities include the Union Pacific Railroad and a small portion of the Chandler Municipal Airport.

Current Zoning

The City of Chandler and Maricopa County have adopted zoning ordinances to control development within their jurisdictions pursuant to Arizona Revised Statutes (ARS-9-462.01 and 11-821). These ordinances specify permitted land uses and regulate size, height and massing of structures within each district.

Within the Santan Freeway Corridor Study Area, the dominant zoning districts are planned area development (PAD) and agricultural. Planned area development districts are typically residential, but can also include commercial, industrial or mixed-use designations.

Property Ownership

The Santan Freeway Corridor Study Area contains no federal lands, while the Arizona Department of Transportation (ADOT) is currently in the process of acquiring right-of-way for the freeway. Most of the land within the Study Area is privately owned. A small percentage of the Study Area is municipal property used for planned or existing public facilities.

2.3 Land Use Plan Vision, Goals, Objectives, & Policies

Vision Statement:

The City of Chandler seeks to capitalize on the completion of the Santan Freeway through appropriate levels of land use densities and economic development. The Plan will seek to foster the orderly and planned growth of the area and establish criteria that will promote compatible new development and facilitate the preservation of a high quality of life within the community.

Goal 1.0

Guide and control orderly growth to ensure a high quality of life and compatible new development.

Objective 1.1

Promote general land use policies for the Santan Study Area that dictate development criteria for all land use types and encourage sustainable, well-managed growth initiatives.

- Policy 1.1.1 Encourage land developers to work together with residents and City staff to develop a mutually agreeable land use plan during any General Plan Amendment or rezoning, platting or other development review processes.
- Policy 1.1.2 Discourage the development of noise sensitive institutions or businesses within the Santan Freeway noise impact area without approved provisions for noise mitigation.
- Policy 1.1.3 Develop a design review process that ensures compatible growth within the Santan Freeway Corridor Area with consideration to existing urban character.
- Policy 1.1.4 Review and update the City zoning ordinance to promote higher intensity land uses adjacent to the Santan Freeway.
- Policy 1.1.5 Promote area-wide master planning criteria for all developments.
- Policy 1.1.6 Promote compatible land use development and adequate buffering to preserve land and development value.
- Policy 1.1.7 Investigate annexation issues concerning County properties within the Santan Study Area.
- Policy 1.1.8 Revise the City's zoning ordinance to allow development of high density centers for mixed use residential and employment uses.

Objective 1.2

Promote residential land use policies for the Santan Study Area that will ensure sustainable community growth and cohesiveness through compatible adjacent development initiatives and noise mitigation requirements.

- Policy 1.2.1 Protect and preserve the physical and social environment of existing neighborhoods within the Study Area by establishing well defined residential/commercial boundaries.
- Policy 1.2.2 Future high-density residential uses may be located to buffer moderate to low density residential areas from vehicular noise and traffic impacts.

- Policy 1.2.3 Mitigate freeway generated noise levels in residential developments through implementation of setback requirements and developer sponsored sound attenuation methods.
- Policy 1.2.4 The City shall require proposed low density residential development patterns adhere to locations cited in the Santan Freeway Corridor Area Plan.
- Policy 1.2.5 The City shall discourage future development of single-family residential be located within one-half mile from the freeway alignment unless approved sound attenuation methods are implemented.

Objective 1.3

To promote development policies for light industrial and commerce-oriented land uses within designated employment areas, with a sufficient buffer from inappropriate adjacent land uses.

- Policy 1.3.1 The City should encourage the development of future professional office uses adjacent to the proposed freeway and within the interchange nodes at intersections with arterial roadways.
- Policy 1.3.2 The City shall ensure that all office development adjacent to residential development, be adequately buffered and proportionately scaled so as not to adversely impact residential uses.
- Policy 1.3.3 Future industrial uses will be located in existing industrial districts and adjacent to the proposed freeway alignment. Proposed "high-tech" and higher image industrial uses will capitalize on freeway corridor visibility and accessibility.
- Policy 1.3.4 The City shall promote a campus-like design theme for industrial and office developments within the Study Area.
- Policy 1.3.5 The City shall require buffering between commercial and industrial land uses and residential developments.

Objective 1.4

To promote the development of retail commercial land use while adhering to policies that provide for compatible community growth and sustainable economic growth.

- Policy 1.4.1 Promote active coordination of public and private interests to implement compatible commercial and recreational activity centers.
- Policy 1.4.2 The City shall promote the strategic assets of commercial areas along the Santan Freeway, specifically at the Freeway-Arterial interchanges.
- Policy 1.4.3 The City shall discourage uninterrupted stretches of strip commercial development along the frontages of major arterial streets in the Study Area

Interchange Node Specific Planning Objectives

Goal 2.0

To promote development within the interchange nodes that is congruous with the objectives of the Santan Freeway Corridor Area Plan.

Objective 2.1

To prioritize compatible development adjacent to freeway interchange locations with consideration to property access, localized congestion and noise mitigation initiatives.

- Policy 2.1.1 The City should encourage compatible employment uses to be located adjacent to the freeway corridor, with proper arterial and freeway access, transitioning to lower intensity uses and buffered from adjacent residential uses.
- Policy 2.1.2 The City should encourage regionally oriented retail and service facilities to be located adjacent to freeway corridors, with proper arterial and freeway access, transitioning to lower intensity uses and buffered from adjacent residential uses.
- Policy 2.1.3 The City should promote the consolidation of commercial strip frontage lots with limited access along arterial roadways for redevelopment (i.e., Arizona Avenue).
- Policy 2.1.4 The City shall require adequate building setbacks along arterial roadways in freeway corridor areas to reduce driver distraction, preserve sight distance and provide for potential road widening.
- Policy 2.1.5 The City can require traffic impact assessments (which includes A Trip Generation Analysis) for any proposed development within the Santan Freeway Corridor Area Plan, subject to the discretion of the Public Works Director.
- Policy 2.1.6 The intrusion of vehicular traffic generated from intensive development should mitigate opportunities for traffic to impact less intensive adjacent development (i.e., residential).
- Policy 2.1.7 The City should ensure, through the analysis of traffic impact studies that street and ramp capacities adequately serve through and locally generated traffic.

2.4 Land Use Plan

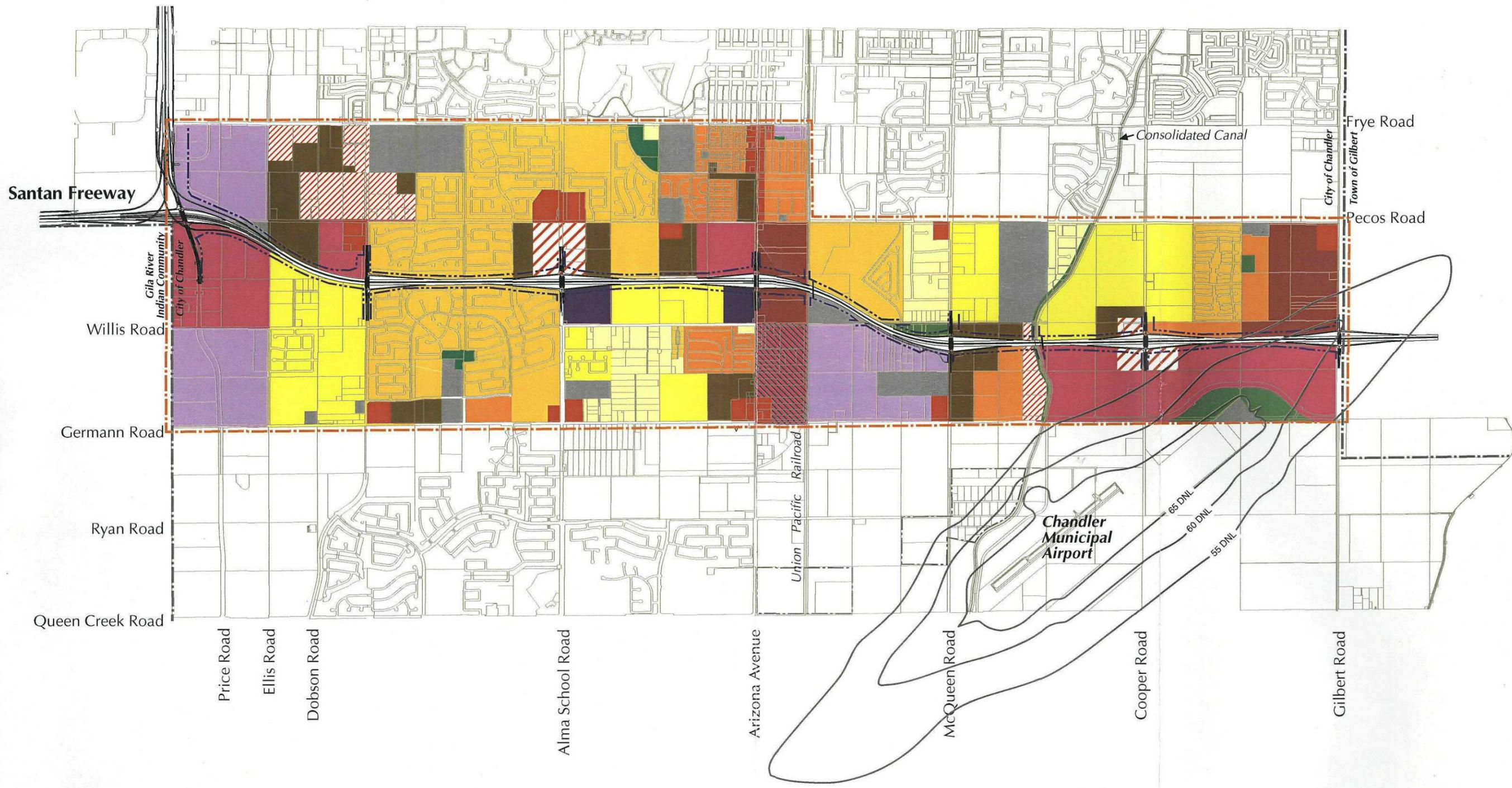
The Santan Freeway Corridor Area Plan, as illustrated on Figure 2-1, *Land Use Plan*, identifies the overall land use pattern within the Study Area. Within the Study Area, freeway interchanges were identified as strategic locations for intensified employment and retail activity. A strong community commercial and commercial/office/business park presence is evident at nearly all interchange locations throughout the Study Area.

The Price Road employment corridor has been preserved for a combination of light industrial and commercial/office/business park uses. Improved access to the corridor as a result of the Santan and Price freeway construction and the improved visibility of development adjacent to the interchange, translates into a compatible land use for the area. A majority of the Price Road corridor will be confined to the area between Ellis Street on the east and the Study Area boundary on the west. Ellis Street will serve as a buffer for the proposed low/medium density residential development proposed for the area to the east.

The Downtown Area in the northern portion of the Study Area will continue to encourage the development of commercial land uses along the Arizona Avenue corridor south to Pecos Road. Appropriate land uses in addition to existing residential include; high-density residential, commercial and office uses. This intensification will be compatible with the growth of the Chandler Downtown and focus on the Downtown as an important employment element in the City improvement vision.

The Hospital Area will continue to experience demand for high density residential and professional/medical office space as the Regional Hospital continues to expand its facilities. The combination of employment and assisted care facilities will drive the need for high density residential development adjacent to the hospital/office core.

The Airpark Area overlaps the Santan Study Area by three square miles between Arizona Avenue and Gilbert Road. Existing land use designations within this area are sensitive to freeway and airport generated noise impacts, located to the south. Appropriate land uses identified for this area include commercial/office/business park and regional commercial to the south of the freeway alignment and a combination of variable housing densities, public and commercial land uses to the north.



Santan Freeway Corridor Area Plan
City of Chandler

- | | | |
|--|---|----------------------|
| Rural Residential (0-1.5 du/acre) | Regional Commercial | Freeway Right-of-way |
| Low Density Residential (1.6-3.5 du/acre) | Special Use Commercial | Study Area Boundary |
| Low/Medium Density Residential (2.6-8 du/acre) | Commercial/Office/Business Park | Municipal Boundary |
| Medium Density Residential (8.1-12 du/acre) | Office | 2020 Noise Contour |
| High Density Residential (12+ du/acre) | Light Industrial | |
| Neighborhood Commercial | Public/Semi-public Facilities | |
| Community Commercial | Parks & Open Space | |
| | Light Rail Corridor Overlay (Potential Mixed Use) | |

Figure 2-1
Land Use Plan

Remaining portions of the Study Area include high proportions of low/medium density residential housing distributed throughout the Study Area and community commercial and neighborhood commercial nodes at arterial-arterial and arterial-interchange nodes. Small pockets of rural and low density residential, public and special use commercial are also found within the Study Area.

The Plan identifies approximately 4,025 acres of net developable housing as shown in Table 2.1, *Land Use Calculations*. This translates to a total dwelling unit count of 14,167 for the Study Area and a resultant population of 32,932 persons. Employment within the Study Area is concentrated within the Price Road Corridor and the northern portions of the Airpark Area. These areas will experience the majority of the projected 45,859 employment positions designated by land uses within the Santan Area, with others areas including the Hospital and Arizona Avenue nodes. Approximately 24,766 jobs are associated with the office and commercial/office/business park designations, totaling 54 percent of all employment within the Santan Study Area at buildout.

Approximately 516 acres have been designated within the Santan Area for variable types of commercial development, 1,224 acres for commercial/office/business park and light industrial uses and 309 acres reserved for public/semi-public uses. Approximately 82 acres have been dedicated to recreational open space located throughout the area's existing parks.

Due to the high level of development activity within the Study Area during the planning process, only a small proportion of the Study Area remains unplanned. A significant percentage of the area has been approved under conceptual zoning status in 1999. Figure 2-2, *Unplanned Land*, illustrates unplanned, vacant land within the Santan Freeway Corridor Study Area.

Land Use Definitions and Guidelines

Land use within the Study Area is defined by the following categories. Residential categories are aggregated into five independent types that are defined largely by density and structure type. Commercial uses include neighborhood, community, regional, special use and commercial/office/business park, defined by use and the floor to area ratio. Other categories include Light industrial, Public/Semi-Public and Parks/Open Space. In addition to the following definitions, Table 2.2, *City of Chandler Land Use Categories and Standards*, further defines land use types within the City of Chandler.

Santan Freeway Corridor Area Plan

Table 2.1
Land Use Calculations

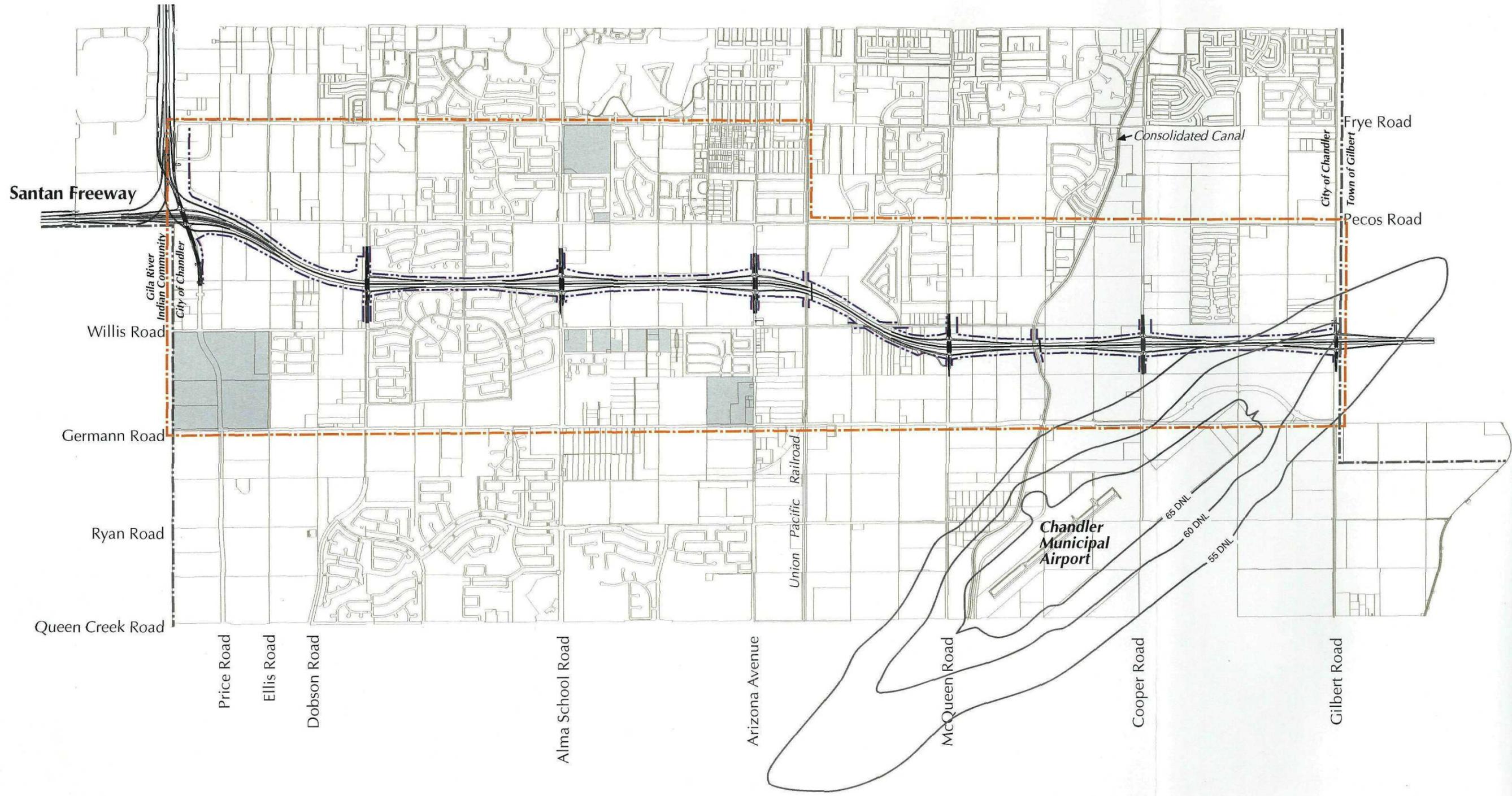
Land Use Categories	Gross Acres	Efficiency Factor	Net Development Acres	Density/Intensity	Total Dwelling Units	Population/Dwelling Unit	Resultant Population	Employment Factor (1 employee/#sq.ft)	Resultant Employment
Rural Residential	232	0.95	220	1	220	2.8	617	-	-
Low Density Residential	688	0.9	619	2.5	1,548	2.7	4,180	-	-
Low/Medium Density Residential	1,163	0.8	930	6	5,582	2.5	13,956	-	-
Medium Density Residential	342	0.8	274	10	2,736	2.2	6,019	-	-
High Density Residential	320	0.85	272	15	4,080	2.0	8,160	-	-
Neighborhood Commercial	124	0.8	99	0.23	-	-	-	400	2,485
Community Commercial	80	0.8	64	0.23	-	-	-	400	1,603
Regional Commercial	212	0.8	170	0.23	-	-	-	400	4,248
Special Use Commercial	100	0.8	80	0.23	-	-	-	400	2,004
Office	50	0.80	40	0.23	-	-	-	250	1,603
Commercial/Office/Business Park	680	0.85	578	0.23	-	-	-	250	23,163
Light Industrial	494	0.85	420	0.32	-	-	-	680	8,607
Public/Semi-Public Facilities	309	0.85	263	0.15	-	-	-	800	2,145
Parks and Open Space	82	-	-	-	-	-	-	-	-
Total	4,876		4,025		14,167		32,932		45,859

Overall Net Housing Density (du/ac) **6.1**

Source: BRW, 1999.



BRW
A DANIEL MANN GROUP COMPANY



- Legend**
- Unplanned Land
 - Freeway Right-of-way
 - Study Area Boundary
 - Municipal Boundary
 - 2020 Noise Contour

Figure 2-2
Unplanned Land

Table 2.2
City of Chandler
Land Use Categories and Standards

Land Use Category	Typical Development Standards	General Development Characteristics
Rural Residential	0 - 1.5 DU per Acre	One- to two-story single-family detached homes on large lots
Low Density Residential	1.6 - 3.5 DU per Acre	One- to two-story single-family detached homes on lots in excess of 7,000 square feet
Low-Medium Density Residential	2.6 - 8.0 DU per Acre	Housing types found in low density areas on smaller lots and areas of transitional land use
Medium Density Residential	8.1 - 12.0 DU per Acre	Includes townhomes and condominiums, typically located adjacent to high intensity land uses
High Density Residential	12.1 - 18.0 DU per Acre	Multi-family developments which include apartments and condominiums
Neighborhood Commercial	Site Size = 10 to 20 acres	Provides for the development of smaller scale commercial areas to serve adjacent neighborhoods within 1 or 2 miles
Community Commercial	Site Size = 30 to 40 acres	Large retail centers located along arterial corridors and activity nodes, serving a market radius of 2 to 4 miles
Regional Commercial	Site Size = 40 to 200 acres	Encompasses the entire range of large-scale retail and service activities and will serve the region, immediate community and tourist/traveler trade
Special Use Commercial	Site Size = N/A	Will service the retail commercial established in conjunction with the Paseo System and may be integrated with moderate to high density residential
Commercial/Office/Business Park	Site Size = 10 to 200 acres	Includes office and business complexes and promotes a campus oriented environment
Light Industrial	Site Size = 10 to 200 acres	Encompasses low intensity uses such as warehousing and light or high-tech manufacturing industries
Public/Semi-Public Facilities	Site Size = 1 to 640 acres	Properties designated for a variety of municipal and quasi-public uses to include: utilities, public services and educational institutions
Parks & Open Space	N/A	Includes all municipal park properties and open space areas

Source: BRW, Inc., 1999.

Residential Uses

Rural Residential (0-1.5 DU/AC)

Rural Residential denotes areas where low-density single family residential development is preferred based upon a desire to retain the rural character of a given location, and/or due to environmental constraints or limited infrastructure. The density ranges from 0 to 1.5 dwelling units per acre.

Low Density Residential (1.6 - 3.5 DU/AC)

Low Density Residential denotes areas where increased residential density can be accommodated, within a range of 1.6 to 3.5 dwelling units per acre. Public infrastructure is required to serve this density of residential development. In general, this category is intended to serve as a transition between rural areas and areas with more intense residential uses.

Low-Medium Density Residential (2.6 – 8.0 DU/AC)

Low-Medium Density Residential denotes areas where moderate intensities of primarily single family residential uses are appropriate, based upon existing patterns of development, available transportation and other infrastructure, and proximity to service, employment, and retail facilities. Public infrastructure is required to serve this density of residential development. A variety of housing forms may be developed, including townhouses and low profile, condominiums. Institutional uses, such as schools, convalescent facilities, or religious facilities, may be appropriate, if sited in locations that minimize impacts on adjacent residential uses. Residential density ranges from 2.6 to 8.0 dwelling units per acre.

Medium Density Residential (8.1 – 12.0 DU/AC)

Medium Density Residential denotes areas generally located within established development corridors, close to retail, transit services, and employment uses, where multi-family residential uses are appropriate. Infill housing development may also be appropriate as a means of maximizing infrastructure investments. A variety of housing types and styles are permitted in order to serve the needs of a wide range of demographic and income groups. Specialized forms of housing (e.g., elderly, affordable, group homes) may also be appropriate. The residential density ranges between 8.1 and 12.0 dwelling units per acre.

High Density Residential (12.1 – 18.0 DU/AC)

High Density Residential denotes where high density residential projects are appropriate. This includes existing urban settings or where substantial development intensity is desired. The actual developed densities will depend on project quality, available infrastructure capacity, and development impacts. The high residential

densities possible in these locations would provide substantial support to service and retail uses in the area. The density ranges from 12.1 to 18.0 dwelling units per acre depending on site suitability, project quality and demonstrated need.

Commercial Uses

Neighborhood Commercial

Neighborhood Commercial denotes where neighborhood-based commercial uses, such as clustered retail, personal services, restaurant, and entertainment uses are appropriate. These areas will typically attract patrons from a relatively small (1 mile) radius. Total building area is typically 30,000 to 140,000 square feet.

Community Commercial

Community Commercial denotes where community commercial uses such as clustered retail, personal services, restaurant, and entertainment uses are appropriate. These areas will typically attract patrons from two to four miles. Total building area is typically 140,000 to 300,000 square feet.

Regional Commercial

Regional Commercial denotes areas appropriate for regional retail and employment uses with convenient access, and where impacts on adjacent development are minimized. A wide variety of retail, service, hotel, and office employment uses are allowed. Total building area is typically 400,000 to 1.5 million square feet.

Special Use Commercial

Special Use Commercial denotes area where mixed-use destination oriented and high quality commercial development may take place. Special commercial areas may include a combination of retail, service, entertainment and office development. These areas are intended to develop as retail and entertainment uses along the Paseo System. Mixed-use developments are preferred over single-use projects as a means of maximizing the economic use of land and promoting a vibrant, pedestrian-oriented urban environment. Several of the special use commercial areas located in the Hospital Gateway Area Plan, as per the approved area plan on file, north of Pecos Road between Ellis Street and Dobson Road, may be well-suited for medium and high density residential, including adult assisted-care living subject to quality, site suitability, demand/need, compatibility and infrastructure.

Office/Industrial Uses

Office

Office denotes attractive corporate and professional buildings, supporting professional business and services such as law offices, corporate headquarters and business associations. Buildings are mid- to high-rise with appropriate landscape screening adjacent to residential areas.

Commercial/Office/Business Park

Commercial/Office/Business Park denotes major, campus-like employment centers that may include support retail services, research and development, or office/showroom development. Design standards should be applied to ensure a consistent and high quality physical project.

Light Industrial

Light Industrial identifies locations suitable for appropriate manufacturing, warehousing and distribution, back office space, and high tech uses. Site and facility design should balance function with aesthetics and amenities.

Other Uses

Public/Semi-Public Facilities

Public/Semi-Public Facilities encompasses existing or planned public uses such as schools, community centers, government facilities, libraries, hospitals, educational campuses, and similar uses.

Parks and Open Space

Parks and Open Space applies to areas used for active and passive recreation, formal parks, or natural resource conservation areas.

Development Influence Factors

Development within the Santan Freeway Corridor Study Area will continue to be influenced by a number of regional elements. These elements provide variable levels of influence based on economic, transportation and quality of life relationships. Relative to the Santan Freeway Corridor, the following seven influence factors were evaluated.

- Santan Freeway (AZ Loop 202)
- Union Pacific Railroad Corridor
- Consolidated Canal (Paseo System)
- Arterial Roadways
- Public Facilities
- Price Freeway (AZ Loop 101)
- Chandler Municipal Airport
- Gila River Indian Community

Santan Freeway (AZ Loop 202)

The Santan Freeway (Arizona State Route 202) alignment runs through the north end of the Study Area just south of the Pecos Road alignment and north of Germann Road. Within the Study Area, freeway construction between the Price Freeway and Arizona Avenue is scheduled for completion in 2004. The remaining alignment within the Study Area from Arizona Avenue to Gilbert Road is scheduled for completion in 2005.

The Santan Freeway represents the most influential component of the Study Area serving as a regional transportation link for residents of southeast portions of the Phoenix Metropolitan Area. Interchanges at nearly every arterial intersection throughout the Study Area will facilitate access to and from the freeway onto the local roadway network. Interchange locations will exist within the Study Area at Price Road, Dobson (restricted access to/from west), Alma School Road, Arizona Avenue, McQueen Road, Cooper Road and Gilbert Road.

By establishing a high level of regional connectivity, opportunities for employment oriented activity will increase significantly. Freeway interchanges provide for the development of commercial nodes, office parks, or other high intensity land uses. The freeway will also provide regional access to Downtown Chandler from Arizona Avenue and the Airpark Area from Cooper Road.

When considering potential uses directly adjacent to the Santan Freeway corridor, priority was given to those uses most compatible with the freeway. Construction plans for the Santan Freeway do not currently include frontage roads, so uses adjacent to the freeway will not benefit from the additional buffer that frontage roads often provide. In residential areas, sound walls and/or large landscaped areas may be needed to mitigate freeway impacts. These potential impacts include noise, dust, pollution, and visual intrusion.

Union Pacific Railroad Corridor

The Union Pacific Railroad Corridor runs north and south through the Study Area approximately one-quarter mile east of Arizona Avenue. Rail activity through the existing corridor is minimal, with intermittent use primarily for agricultural/produce transport.

The rail line has been recognized as a potential shared commuter and freight rail corridor within the Study Area and could potentially see a re-intensification of use as opportunities for heavy rail freight transport and commuter rail alternatives evolve.

Consolidated Canal (Paseo System)

The Consolidated Canal currently provides irrigation for local farming activity in South Chandler and the Gila River Indian Community. As agricultural land uses continue to be displaced by development, the irrigation role of the canal will diminish, establishing a need for the City to investigate the future role of the canal system within the study area.

The City of Chandler has identified the Consolidated Canal as an area of significant recreational opportunity and is prepared to fund development of the corridor to allow pedestrian, bicycle and equestrian uses to achieve shared access. The City of Chandler Paseo Design Guidelines for the Consolidated Canal have identified appropriate adjacent uses that could include retail, restaurants, offices, resort/hotel, cultural facilities and high density residential, in addition to existing low density residential uses, as per the Chandler Land Use Element and Airpark Area Plan.

Arterial Roadways

An important component of development within the Santan Freeway Corridor relates to vehicular access throughout the area. The City's regional arterial roadway network is typical of circulation patterns found within the Phoenix Metropolitan Area, forming a grid-like network on one-mile section lines. These arterial roadways serve as the primary traffic facilitation elements and assist the transition of traffic movement from freeways to reduced volume roadways and commercial nodes. The arterial roadways located within the Santan Study Area include:

- | | |
|---|--|
| <i>North-South
Arterial Streets</i> | <ul style="list-style-type: none">• Price Road• Dobson Road• Alma School Road• Arizona Avenue• McQueen Road• Cooper Road• Gilbert Road |
| <i>East-West
Arterial Streets</i> | <ul style="list-style-type: none">• Pecos Road• Germann Road |

Arterial roadways (excluding Cooper Road) will have an ultimate width of six lanes with separate sidewalk and bicycle lanes in a 130-foot right-of-way. These streets provide the main source of vehicular mobility and access to the various activity centers located in the Study Area, and serve as a link between the freeway and the airport. The intersections of these arterials are the preferred locations for neighborhood and community commercial nodes, as well as other service-oriented facilities such as hotels, gas stations, and restaurants. Where these arterials intersect with the freeway, commercial office uses or regional commercial centers are appropriate.

Public Facilities

Public facilities within the study area assist in supporting development throughout the study area. Public infrastructure is comprised of area roadways, utilities and additional City improvements. Public facilities serve a social and cultural role in supporting the community

and include schools, institutions, hospitals, infrastructure support and recreational areas. Land uses adjacent to these facilities must be carefully evaluated in some cases, with an emphasis placed on buffering and screening.

Price Freeway (AZ Loop 101)

The Price Freeway, when completed, will serve as the primary artery for traffic movement in and out of Chandler from the Mesa and Tempe areas. Linking with the Santan Freeway at an interchange located on the western boundary of the Study Area, the freeway will serve as a catalyst for economic development adjacent to the alignment. The Chandler Santan Fashion Center is a result of the improved regional access afforded by the freeway, in addition to a large number of existing high-tech and industrial employment sites.

Chandler Municipal Airport

The Chandler Municipal Airport, located southeast of the Santan Study Area, is situated on 394 acres surrounded by a variety of fixed-base operations. As the Chandler Municipal Airport continues to develop under the Chandler Airpark Area Plan, the facility will become a dominant economic and employment generator within Chandler. An integrated approach to regional commerce and transportation development within the context of the Airport and established links to the Metropolitan Area, is the key to the success of the Airpark's growth potential.

An inventory of airside facilities at the Municipal Airport includes a parallel runway system, the longest measuring 4,850 feet, with associated taxiway, lighting and navigational systems. The Airport estimates that approximately 167,300 flight operations occurred during 1998, rising to 300,000 annual flight operations by 2020 (Airport Master Plan, 1998). The airport will continue to function as a general aviation airport.

Gila River Indian Community

The Gila River Indian Community borders the Study Area on the western edge, parallel to the Price Road alignment. The Indian Community has a population of approximately 11,500 and has not established any commercial or housing development adjacent to the Study Area. Development within the Chandler municipal boundaries, coupled with the regional access opportunities of the Santan and Price freeways, may create a demand for housing and employment growth on community land. A combination of regional freeway access, projected development densities and a planned retail/employment core at the Santan and Price Freeway interchange may create a market for retail or employment type land uses.

Buffering Requirements

All new developments within the Study Area should adhere to City of Chandler guidelines for appropriate noise mitigation including sound walls, substantial physical separation, absence of noise impacts or other functional barriers. Residential development adjacent to the freeway corridor is discouraged and if approved, should include provisions to include appropriate setback and open space criteria for separation and impact mitigation.

In areas where opportunities for planned development exist, lower density residential should be discouraged. High density residential may be acceptable but should implement noise mitigation techniques into the development process, as approved by the City. Residential areas should observe proper transitional techniques to include landscaped and open space buffers (i.e., parks and retention basins) and separations, such as roads and canals.

Commercial and industrial areas should be adequately buffered from residential areas through open space and landscaping, as well as other design techniques. Roads, freeways, railroad tracks and canals also provide good separation from non-residential land uses when combined with appropriate setbacks. Building heights should be graduated from highest to lowest to conform to those on adjacent parcels. Colors and materials should blend with the character of the surrounding developments and neighborhoods. Non-residential buildings should be designed to respect the scale, mass and privacy of surrounding developments. Architectural designs should apply to all four sides of buildings and avoid unbroken building facades and repetition.

Streetscapes should be pedestrian-friendly and provide for attractive landscaping and building setbacks. Wall and fence treatments should include staggering and variety of color to achieve a unique design form. Streets should be well lighted with easy-to-read monumentation and street signs.

Phasing

Development within the Study Area should be phased in response to market demands and absorption rates according to a logical and orderly extension of roadways, public utilities, and other infrastructure. Water, sewer, electricity, and other utility improvements, when phased properly, will ensure the Study Area reaches full buildout without creating leap-frog development or increased infrastructure costs. Ideal phasing should occur in a general northwest to southeast direction, with development occurring along the freeway corridor first.

Demand for development in the City of Chandler is centered on residential and neighborhood commercial. These land use designations will most likely be the first to reach buildout capacity. As residential single family and multi-family housing are completed, the community will be able to support neighborhood and community commercial services. The completion of the Santan Freeway will also enhance the rate of development adjacent to the freeway corridor.

2.5 Land Use Implementation Program

Table 2.3, *Land Use Implementation Program*, identifies the land use implementation measures that the City should take to implement the goals and policies of the Santan Freeway Corridor Land Use Plan. The implementation program lists the specific implementation measures, timeframe, key participants, and the resources necessary to accomplish each implementation measure.

**Table 2.3
Land Use Implementation Program**

Implementation Measure	Timeframe (Years)				Key Participants	Resources
	1-2	3-5	5-10	10-20		
Establish buffer zones adjacent to the freeway corridor through process of an open space acquisition plan	*	*			City Planning Staff, Planning and Zoning Commission and City Council	Developer Dedications or Reservations, Heritage Funds, G.O. Bonds
Annex remaining County islands within the Study Area as warranted by development opportunities	*	*	*	*	City Planning Staff, Planning and Zoning Commission and City Council	Staff Resources
Establish a process for integrating recommended land uses with zoning actions	*				City Planning Staff, Planning and Zoning Commission and City Council	Incorporate in General Plan, Rezoning Applications
Enhance buffering requirements for future development adjacent to the freeway corridor	*	*	*		City Planning Staff, Planning and Zoning Commission and City Council	Developer Reservations or Dedications, Heritage Funds, G.O. Bonds
Construct a Gateway monument north of the Arizona Avenue/Santan Freeway interchange		*			Public Works Department and City Council	Developer Contributions, General Funds
Encourage redevelopment south of the downtown area through land acquisition and assemblage along Arizona Avenue	*	*	*		City Planning Staff, Economic Development Staff, Planning and Zoning Commission and City Council	G.O. Bonds, Private/Public Redevelopment Partnerships
Continue to pursue availability of funding sources for purposes of neighborhood revitalization	*	*			City Planning Staff, Redevelopment Services, Planning and Zoning Commission and City Council	State, Federal and Private Funding Sources

Source: BRW, Inc., 1999.

Definitions:

- *Implementation Measure* - Lists the action necessary to carry out the Land Use Plan Element of the Santan Area Plan.
- *Purpose* - Identifies the intent of accomplishing that particular action.
- *Timeframe* - Establishes the target 5-year priority within the 20-year planning horizon for implementation of the action.
- *Key Participants* - Assigns the elected or appointed public body, agency, group, individuals or volunteers principally responsible to initiate the implementation action.
- *Resources* - Lists the potential funding, City staff, volunteer or other community resources necessary to carry out the implementation action.

3.0 Transportation and Circulation Element

The Transportation and Circulation Element of the Santan Area Plan is presented in the following sections:

- 3.1 Introduction
- 3.2 Existing Setting
- 3.3 Transportation and Circulation Plan Vision, Goals, Objectives, and Policies
- 3.4 Transportation and Circulation Plan
- 3.5 Transportation and Circulation Implementation Program

3.1 Introduction

Construction of the Santan Freeway will have dramatic impact on the nature of future development within the Study Area. This component of the Regional Freeway System will facilitate a significant amount of traffic into the City of Chandler. Planned interchanges at one-mile intervals will allow for the efficient movement of traffic throughout the roadway network, increasing potential for employment and residential development. In addition to the network, additional transportation elements exist within, or proximate to, the Study Area. The Chandler Municipal Airport, located southeast of the Study Area, is continuing to expand its service capacity, becoming one of the region's strategic fixed-base operation facilities. The Union Pacific Railroad, while currently underutilized as a regional transportation element, may experience renewed activity for heavy and light rail transport. Full development of the identified transportation and circulation network will ensure access and mobility to commuters throughout the Study Area.

The Transportation and Circulation Element is a guide to decision making for the Santan Area that:

- Identifies the needs of the Study Area for development of transportation-related facilities,
- Recommends transportation-related development priorities, and
- Ensures managed growth within the Study Area that is compatible with the existing Transportation Plan Element.

3.2 Existing Setting

The circulation network within the Study Area consists of primarily two-lane improved roadways, established on a one-mile grid system. These roadways define the arterial roadway system and promote efficient traffic movement through the Study Area.

Roadway of regional significance within the Study Area is Arizona Avenue (State Route 87). Arizona Avenue, the primary north-south roadway in the City and runs through the downtown area. It is also the dominant connector roadway between the southeast Chandler and the City of Mesa. The Price Road/Freeway also plays a large role in the movement of traffic through the Price Road Employment Corridor.

Roadways within the Study Area that have undergone improvements to meet the roadway design standards established by the City of Chandler include Arizona Avenue, a six-lane facility. Each of the arterial roadways in the Study Area share an ultimate buildout right-of-way of 130 feet for inclusion of six traffic lanes, bike lanes adjacent to both curbs, a raised and landscaped median and setback sidewalk with landscaped buffering. Median breaks at mid-block locations allow for left turn movement and major intersections are flared to incorporate dedicated right turn lanes and dual left turn lanes.

Pedestrian movement within the Study Area is restricted by a lack of urban facilities such as dedicated sidewalks, linkages and other amenities. A majority of the local arterial roadways have not been programmed as high priority improvement projects that would include sidewalks and bike lanes adjacent to the roadway.

3.3 Transportation/Circulation Plan Vision, Goals, Objectives, and Policies

Vision Statement:

Develop and maintain a multi-modal circulation system that integrates multiple levels of local and regional serviceability through the encouragement of network continuity and adherence to Chandler roadway design guidelines and standards.

Freeway Interchange Nodes

Objective: To promote an appropriate level of serviceability at freeway interchange locations so as to enhance community and economic opportunities within the Study Area.

- The City shall encourage the development of high intensity employment and retail commercial uses adjacent to freeway corridors with proper access, density transitions and buffering.

Functional Roadway Network

Objective: To evaluate existing and projected roadway requirements within the Study Area, to establish a quantitative needs assessment for the future circulation network.

- The City shall require developers to utilize minor arterial and collector roadways to adequately service property access and building orientation.
- The City shall require the construction of all streets in an orderly and logical progression. This includes ensuring that collector streets in all new developments are planned to connect with collector streets in existing and planned adjacent development.

Access Control

Objective 3.1

To create an environment conducive to traffic circulation and movement throughout the Santan Freeway Corridor Study Area without negatively impacting access to properties.

- Policy 3.1.1 The City shall encourage parcel access in high intensity areas adjacent to freeway interchanges, to be oriented onto collector and internal roadways with planned access onto arterial roadways.
- Policy 3.1.2 The City shall encourage land uses adjacent to the freeway corridor that minimize traffic access points and controlled intersections.
- Policy 3.1.3 The City shall require access and frontage for multi-family residential uses to be oriented to collector and local streets.
- Policy 3.1.4 The City should regulate median breaks and driveway spacing in close proximity to the freeway interchanges.

Pedestrian/Bicycle Orientation

Objective 3.2

To promote increased accessibility and safety for pedestrian and bicycle oriented transportation throughout the Study Area.

- Policy 3.2.1 The City will encourage retail and residential developers to incorporate pedestrian and bicycle oriented design characteristics into site plans.
- Policy 3.2.2 The City shall enhance pedestrian and bicycle oriented facilities by requiring proposed developments to address issues related to community linkages and enhancement.
- Policy 3.2.3 The City shall encourage the development of integrated pedestrian, bicycle and equestrian trails along the Paseo System.
- Policy 3.2.4 The City shall require that all arterial roadways include a bicycle lane for each direction of traffic flow, as per City standards adopted.

- Policy 3.2.5 The City shall investigate the need for a pedestrian linkage across the Santan Freeway at the existing Arrowhead Drive alignment within the Pecos Ranch community.
- Policy 3.2.6 The City will encourage proposed retail centers to promote pedestrian oriented facilities and design.
- Policy 3.2.7 Encourage bicycle lockers and other bicycle user facilities.

Transit

Objective 3.3

To provide realistic alternatives to reduce traffic congestion and air pollution in the Santan Freeway Corridor Study Area by promoting regional transit and utilizing existing transportation facilities as a foundation for development.

- Policy 3.3.1 The City should seek to reduce local traffic congestion by promoting (local) transit alternatives along major arterials and at high intensity commercial nodes.
- Policy 3.3.2 The City should develop the Bicycle Element and should address issues related to the linkage of private development with public transit and recreational facilities within the Chandler Municipal Planning Area.
- Policy 3.3.3 The City should work with the Regional Public Transportation Authority to determine potential alignment alternatives and station locations for a fixed guideway transit system.
- Policy 3.3.4 The City should study the development of a transit center located adjacent to the Santan Freeway Corridor and Union Pacific Railroad alignment.
- Policy 3.3.5 The City will seek to reduce local traffic congestion by promoting alternative transit points along major arterials and at high intensity employment nodes.
- Policy 3.3.6 The City should work with the Regional Public Transportation Authority to investigate expansion of the metropolitan transit system as ridership demand increases.
- Policy 3.3.7 The City should work with the Regional Public Transportation Authority to secure TEA-21 Federal Funding for a light rail transit system.

- Policy 3.3.8 The City should require all developers to assess the need for the incorporation of transit facilities into project design prior to approval for all properties adjacent to major arterials.
- Policy 3.3.9 The City should designate a feasible location within the vicinity of Arizona Avenue and the Santan Freeway interchange for a park-and-ride lot.
- Policy 3.3.10 Developers shall dedicate the necessary right-of-way for bus pullouts, as per the City's Transportation Plan.

3.4 Transportation and Circulation Plan

Functional Roadway Classification System

The land uses proposed for the Study Area indicate the need for a well-developed roadway network that will adequately service residential- and employment-related commuter traffic. Roadways within the Study Area are defined using the Functional Roadway Classification System. The City of Chandler currently employs this system to classify its roadway network in order to apply a standardized method for design and construction. The functional Roadway Classification System is utilized to assesses distinguishing features such as capacity/volume, continuity, access control, and facility spacing. Table 3.1, *Study Area Roadway Characteristics*, provides an inventory of existing and projected roadway conditions within the Santan Freeway Corridor Study Area, and provides projected traffic volumes for arterial roadway segments north and south of the Santan Freeway. The following five roadway classification categories are found within the Santan Study Area:

- Principal Arterials/Freeways
- Major Arterials
- Minor Arterials
- Collector Streets
- Local Streets

The intent of the classification system is to identify and develop roadways that facilitate the efficient, safe, and continuous movement of traffic through the Santan Area and to reduce traffic volume on residential roadways.

Table 3.1
Study Area Roadway Characteristics

Roadway Segment	Roadway Classification	R.O.W. Width (ft.)	Current # of Lanes	Buildout # of Lanes	Interchange Roadway Volumes (Average Daily Traffic)	
					South of Interchange	North of Interchange
Price Rd.	Major Arterial		4	6	42,100	N/A
Dobson Rd.	Major Arterial	130'	4	6	35,300	35,300
Alma School Rd.	Major Arterial	130'	4/6	6	47,600	34,700
Arizona Ave.	Major Arterial	130'	6	6	44,000	38,300
McQueen Rd.	Major Arterial	130'	2/4	6	56,600	28,500
Cooper Rd.	Major Arterial	130'	2	4/6	52,300	34,100
Gilbert Rd.	Major Arterial	130'	2	6	54,700	30,200
Pecos Rd.	Major Arterial	130'	2/4	4-6	N/A	N/A
Germann Rd.	Major Arterial	130'	2/4	6	N/A	N/A
Arrowhead Dr.	Collector	N/A	N/A	N/A	N/A	N/A
Frye Rd	Collector	100'	2/4	N/A	N/A	N/A
Willis Rd.	Collector	110'	2	4-5	N/A	N/A
Ellis St.	Collector		2		N/A	N/A

Source: Maricopa Association of Governments, 1999.

¹City of Chandler, 1999.

Principal Arterials/Freeways

Principal arterials are designed to service a major portion of trips entering and leaving the urban area and are designed with traffic mobility and facilitation through the urban area as the highest priority. The principal arterials within the Santan Study Area include the Santan Freeway (AZ Loop 202) and Price Freeway (AZ Loop 101). Each of these facilities will be developed as six-lane freeways with access limited to arterial interchanges at one-mile intervals along the alignment.

Major Arterials

Major arterials are high volume, high speed roadways that carry a large volume of traffic. Along with freeways, major arterials should carry a larger proportion of trips entering and leaving the region, as well as the majority of through movements desiring to bypass portions of a region. Within the Santan Study Area, principal and major arterials will function to facilitate internal traffic movement from residential areas to business, activity centers and the Santan Freeway. Major arterials are generally aligned with the one-mile grid system.

Major Arterials typically utilize a right-of-way of 130 feet, flaring to approximately 150 feet at arterial-arterial intersections with dual left-turn lanes and single right-turn lanes.

The existing and proposed roadways designated for major arterial classification in the Santan Study Area include:

- Price Road
- Dobson Road
- Alma School Road
- Arizona Avenue
- McQueen Road
- Cooper Road
- Gilbert Road
- Pecos Road
- Germann Road

Minor Arterials

These roadways are similar to major arterials with respect to controlled access and travel speeds but generally support lower traffic volumes. Minor arterial roadways are intended to provide service trips of moderate length and a limited level of mobility in comparison with major and principal arterial roadways. Minor arterial roadways provide inter-community continuity, but should not penetrate identifiable neighborhoods. Minor arterials are generally aligned with the one-half mile grid system. While the city does have a Minor Arterial designation, there are no Minor Arterials in the Study Area.

Collector Streets

Collector streets act as intermediate roadways to facilitate traffic from neighborhoods or business centers onto the arterial roadway network. By penetrating neighborhood areas, collectors have the ability to distribute traffic without adversely affecting arterial circulation. As the Study Area develops, the collector street network will generally be established along the quarter mile-grid system. The City permits flexibility in the development of the collector street network for large developments where a mix of residential, employment and supportive services are part of a planned unit development project. The following roadway was identified as existing and proposed collector streets:

- Arrowhead Drive
- Frye Road
- Ellis Street
- Willis Road

The collector street system within the Santan Study Area is continually evolving as development occurs. New developments will be required to concentrate their access to large residential developments through the collector street network, thereby reducing impacts to arterial traffic movements.

Local Streets

The local street system in the Study Area consists of all residential, commercial, and industrial streets not included in the other functional classifications. The local street system provides direct access to adjacent land uses and linkage with arterial and collector roadways in the Study Area.

Roadway Design Guidelines

Roadway Design Guidelines for the Santan Study Area should comply with those standards specified by the Chandler Transportation Plan Element of the Chandler General Plan. Figures 3-1 and 3-2, *Arterial Street Cross Sections and Collector and Local Street Cross Sections*, illustrate typical cross sections from the City Transportation Plan for major arterial, minor arterial, major collector, minor collector, and local roadways.

While major and minor arterial alignments are expected to occur along the one- and one-half mile grid, the City should allow the collector and local street network within the Study Area to be defined by future development. Existing alignments will largely be preserved and proposed alignments should show continuity and connectivity with the existing system. Improvements to collector and local roadways will be the responsibility of the developer and must conform to the design guidelines established by the General Plan Transportation Element. Roadway improvements will be approved by the City by individual development and will consider projected traffic volumes, impact on existing and adjoining roadways, and efficiency of traffic movement.

Pedestrian, Bicycle, and Equestrian Facilities

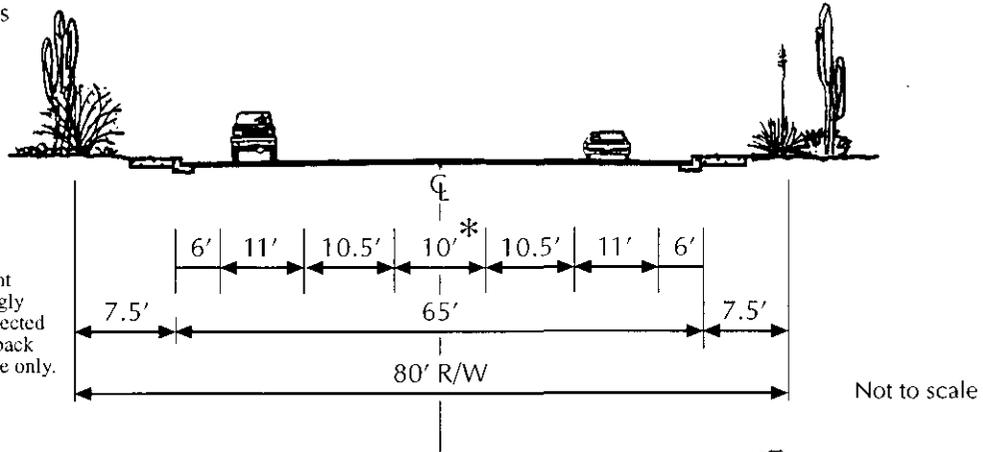
Facilities for pedestrians and bicyclists in the Study Area are an important component of the Circulation framework. Advance planning for such facilities can contribute to a reduction in levels of vehicular traffic and increased safety for pedestrians, cyclists, and motorists. The Study Area's pedestrian circulation framework dictates the development of sidewalks and other pedestrian facilities within residential areas and along roadways of high traffic volume near activity centers, such as commercial areas, schools, and parks.

Bicycle circulation is an integral component in the development of the Study Area. By designing a continuous network of bicycle paths, lanes, and routes, the system will support the objectives outlined by the Land Use Plan and City Transportation Plan. Types of bicycle facilities to be utilized within the Study Area include:

Major Collector Street

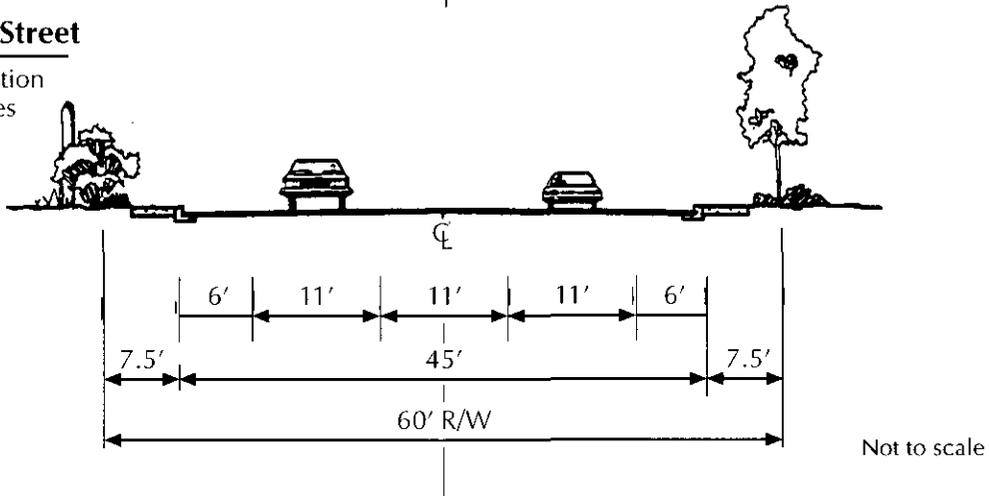
Typical Cross Section
With Bike Lanes

* Center turn lane may be eliminated and pavement width reduced accordingly when warranted by projected traffic and shall be 55' back of curb with bicycle lane only.



Minor Collector Street

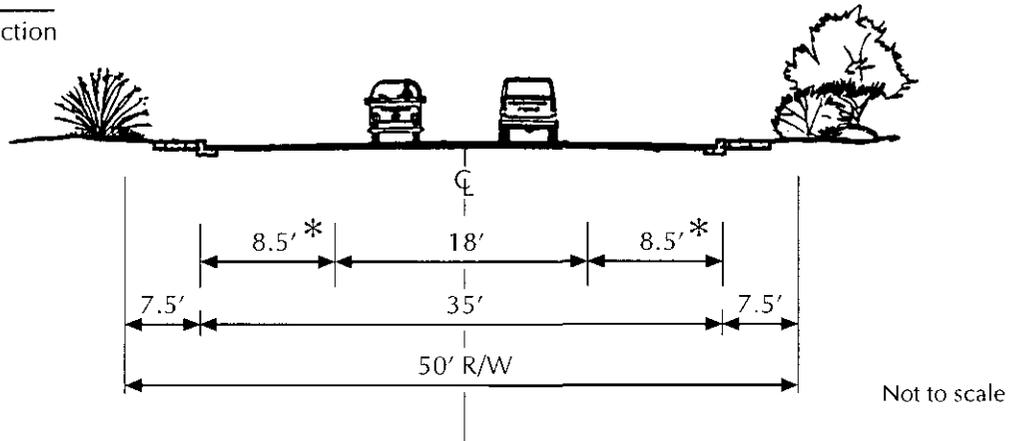
Typical Cross Section
With Bike Lanes



Local Street

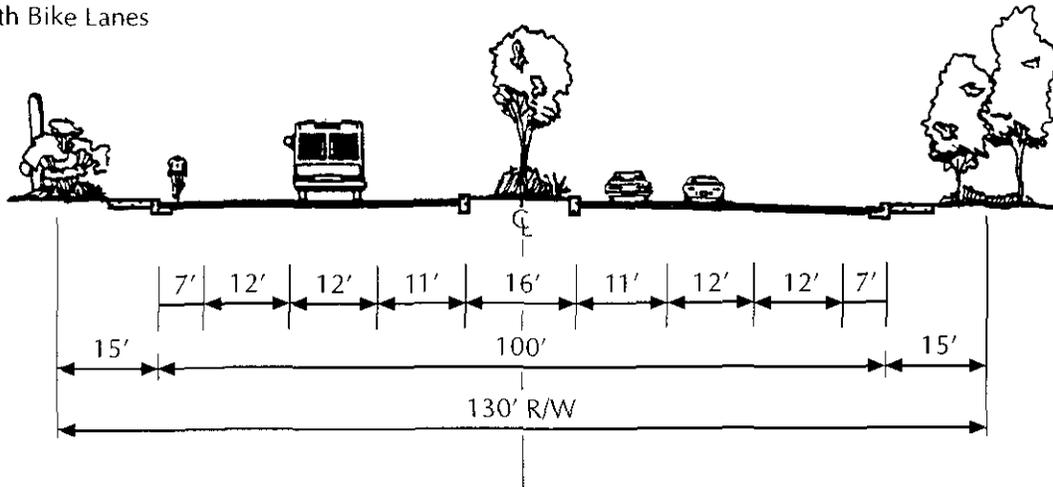
Typical Cross Section

* Parking lane not marked by striping.



Major Arterial Street

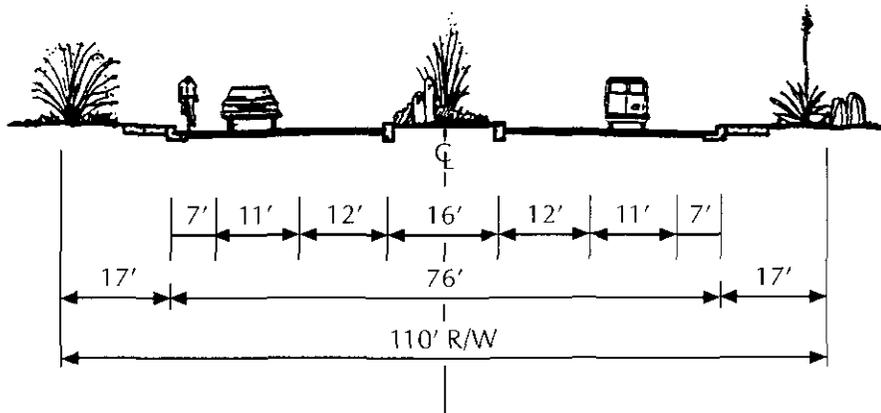
Typical Cross Section
With Bike Lanes



Not to scale

Minor Arterial Street

Typical Cross Section
With Bike Lanes



Not to scale



**Santan Freeway Corridor
Area Plan**
City of Chandler

Figure 3-2
Arterial Street Cross Sections

Bike Path

An exclusive bike path is a separated right-of-way designated for the exclusive use of bicycles. Cross-flows by pedestrians and motorists are minimized. A paved pathway is provided accompanied by signage designating the location of the bike path. Bike paths are specifically located to establish links between major destination points, such as parks and schools. Bike paths shall be adequately buffered from roadways by the use of a landscaping strip or other barrier to avoid conflicts.

Bike Lane

A delineated bike lane is a shared, designated by signs and pavement for the semi-exclusive use of bicycles. Through-travel by motor vehicles or pedestrians is not allowed. Vehicle parking within designated bike lanes may be allowed where warranted.

Bike Route

A bike route is a shared right-of-way (roadway) designated by posted signs. This class of facility is the least expensive to develop and maintain and appropriate signage should be posted as development occurs.

The City is actively assessing the status of continuous pedestrian- and bicycle-oriented facilities within the Study Area, particularly land use adjacent to the Consolidated Canal for the proposed Paseo System. This Element would define a continuous pedestrian/bicycle/equestrian corridor, linking portions of south Chandler to the Downtown and adjacent commercial, residential, and open space areas. City design guidelines for future arterial roadways incorporate the inclusion of bike lanes and sidewalks, providing users with an adequate separation from vehicular traffic.

Public Transit

As densities increase and regional activity centers are established, public transit facilities will become an important component of the Transportation and Circulation Element. The Santan Freeway will facilitate employment growth in the area, thus defining initial transit needs and the pace at which services develop. Additional increases in employment and housing densities within the Study Area will establish the demand for transit services, particularly in response to a potential multi-modal transit center located at the intersection of Germann Road and the Union Pacific Railroad corridor. The need for this center is strictly predicated by employment-based development densities and the development of a regional light rail transit service that would utilize the existing railroad right-of-way.

Necessary components of a public transit system should adhere to the principles of affordability and convenience for system users within the Study Area. A study of public transit in the Santan Study Area should address these issues prior to implementation of future City Transit Plan Updates. The Transit Plan should adhere to the Land Use and Transportation and Circulation Elements of the Santan Area Plan, prior to its adoption. This will ensure that a public transit system evolves in accordance with development and activity centers and will require City staff to work closely with developers. This type of cooperative effort will ensure that the proper and adequate transit facilities are provided for future residents and employees.

Santan Freeway Corridor

The Santan Freeway, when completed, will act as a catalyst to enhance regional commercial and industrial access to the Study Area. Preliminary design plans for the freeway have identified the inclusion of six traffic lanes, with portions of the alignment above and below grade with interchanges at Dobson Road, Alma School Road, Arizona Avenue, McQueen Road, Cooper Road and Gilbert Road. Table 3.2, *Average Daily Traffic Volumes 2020: Santan Freeway Segments*, identifies freeway segments within the Study Area and the predicted volumes for those segments in 2020. The westernmost segments will facilitate the largest volumes of traffic, with volumes decreasing significantly towards the east.

Table 3.2
Average Daily Traffic (ADT) Volumes 2020:
Santan Freeway Segments

Freeway Segment	2020 Roadway Volume
Price Rd - Dobson Rd	121,000
Dobson Rd - Alma School Rd	123,700
Alma School Road - Arizona Ave	106,237
Arizona Ave - McQueen Rd	87,400
McQueen Rd - Cooper Rd	84,293
Cooper Rd - Gilbert Rd	77,980

Source: Maricopa Association of Governments, 1999.

The freeway corridor should utilize noise attenuation measures when possible and apply landscaping design standards to promote a positive visual environment while reducing negative urban impacts. Disruption of normal traffic patterns should be kept to a minimum during freeway construction with adequate detours and traffic management practices provided. Development within the Study Area may dictate the need to mitigate disruption to affected businesses and residents during the freeway construction phase.

Traffic Impacts

The Santan Area Plan has recommended a residential development intensity level that will equate to approximately 32,932 persons at built-out. The projected resident population, compounded by area employment (approximately 45,859 jobs, will significantly impact circulation patterns.

Traffic projections within the Santan Study Area were extracted from the Maricopa Association of Government's modeling database. The model is consistent with the City Transportation Plan through the Year 2020 and assumes ultimate buildout conditions for all Study Area Arterial Roadways.

3.5 Transportation and Circulation Implementation Program

Table 3.4, *Transportation and Circulation Implementation Program*, identifies the transportation implementation measures that the City should take to implement the goals and objectives of the Santan Freeway Corridor Area Plan.

The implementation program lists a specific implementation measure, timeframe, key participants, project location and the resources necessary to accomplish each implementation measure.

Definitions:

Implementation Measure - Lists the action necessary to carry out the Transportation and Circulation Plan Element of the Santan Area Plan.

Purpose - Identifies the intent of accomplishing that particular action.

Timeframe - Establishes the target 5-year priority within the 20-year planning horizon for implementation of the action.

Key Participants - Assigns the elected or appointed public body, agency, group, individuals or volunteers principally responsible to initiate the implementation action.

Resources - Lists the potential funding, City staff, volunteer or other community resources necessary to carry out the implementation action.

**Table 3.4
Transportation and Circulation Implementation Program**

Implementation Measure	Timeframe (Years)				Key Participants	Resources
	1-2	3-5	5-10	10-20		
Develop strategies to enhance/encourage development of pedestrian/bicycle linkages throughout the planning area	*				City Planning Staff, Public Works, Parks and Recreation Staff	Staff Resources
Establish access control criteria for development in proximity to freeway interchanges	*				City Planning Staff and Public Works	Staff Resources
Upgrade traffic control systems along existing arterial roadways with volumes exceeding 15,000 per day	*	*	*	*	Public Works	TEA – 21, LTAF, HURF
Expand transit network within the Study Area as demand densities warrant services		*	*	*	Public Works, Regional Public Transportation Authority	Staff Resources
Integrate transit facilities with development and promote the development of a regional transportation system	*	*	*	*	Public Works, Regional Public Transportation Authority	LTAF
Realign Pecos Road		*			Public Works	Developer Contributions
Realign Willis Road		*			ADOT	ADOT
Realign Germann Road			*		City Planning Staff, Public Works	Developer Contributions
Establish a coordination dialogue with ADOT through the freeway development process	*				City Planning Staff, Public Works and ADOT	Staff Resources
Promote establishment of pedestrian/bicycle easements adjacent to the freeway corridor	*				City Planning Staff, Public Works and Parks and Recreation Department	TEA – 21, Developer Contributions
Coordinate the establishment and preservation of a dedicated right-of-way to accommodate a future fixed guide-way transit system	*	*	*	*	Regional Public Transportation Authority	Staff Resources

Source: BRW, Inc., 1999.

4.0 Infrastructure Element

The Infrastructure Element of the Santan Freeway Corridor Area Plan is presented in the following sections:

- 4.1 Introduction
- 4.2 Existing Setting
- 4.3 Infrastructure Plan Vision, Goals, Objectives, and Policies
- 4.4 Infrastructure Plan
- 4.5 Infrastructure Implementation Program

4.1 Introduction

The importance of providing basic public infrastructure to manage community growth and implementation of the Land Use Element cannot be overstressed. Without water for commercial and domestic use, provisions for the removal of waste, electricity and natural gas, the development of otherwise usable land becomes a complex problem. Through development of an efficient infrastructure network, growth and development can be stimulated in targeted regions of the Study Area. Conversely, if the infrastructure network is inappropriate for the needs of the community or is inappropriately located, infrastructure development can lead to a wasteful or unnecessary expenditure of public funds.

The Infrastructure Element identifies a recommended public utilities improvement plan to provide adequate levels of service to the Study Area through the year 2020. It is designed to compliment and promote orderly development in accordance with the Land Use Plan. The need for balanced and managed growth of the area requires the infrastructure to develop in response to projected community need and in accordance with established timeframes.

The Infrastructure Element is a guide to decision making for the Santan Study Area that achieves the following:

- Identify the utility improvements necessary to promote and maintain sustainable development within Santan Study Area.
- Identify implementation measures that will facilitate utility development and improvement.
- Identify a prioritized timeframe for infrastructure project implementation.

4.2 Existing Setting

As a result of expanding growth to the southeast within the City of Chandler, the City and private utility companies has been forced to expand their service network at a very rapid pace. The City has been very successful at anticipating the needs of new development and has been able to maintain the viability of the infrastructure system. Pecos, the primary east-west utility corridor within the Study Area, contains many of the trunk lines that support existing development.

Because of the City's success at anticipating demand for infrastructure services, and developing those services, the Study Area will require only a limited amount of future infrastructure investment in the near-term. Issues concerning the realignment of utilities through the Santan Freeway alignment are currently being evaluated.

A full spectrum of municipal and private utilities are currently available to Study Area residents. Water, wastewater, reclaimed water (limited), natural gas, electric, phone (telecommunications) and cable are available to a large proportion of the Study Area residents, particularly in the urbanized areas. This network will continue to be enhanced as development warrants these services. A majority of new utility segments will be developer sponsored with little to no contribution from the City.

Public Facilities

The Santan Study Area contains a number of public facilities that enhance the quality of life for area residents. These facilities range in scope from infrastructure support to government and recreational facilities.

The Study Area contains a number of parks and recreational areas including Pecos Ranch Park, Winn Park, Elgin Park and San Marcos Park. The Paseo System, a linear park that utilizes the existing Consolidated Canal right-of-way, is in the process of developing a network of multi-use pathways for pedestrians, cyclists and equestrian users. The ultimate intent of the Paseo will be to link neighborhoods and other recreational facilities adjacent to the consolidated canal.

The Chandler Water Treatment Facility, located south of Pecos Road between McQueen and Cooper Roads, will enhance the capacity of the municipal water supply and provide potable water for new development in the southern portions of the City. The facility was commissioned in 1989 and currently purchases water from the Salt River Project (SRP) for municipal water supply after a stringent treatment process. The site currently operates at the daily treatment capacity of approximately 45 million gallons per day (mgd).

The City of Chandler has completed an expansion of their sanitary sewer processing infrastructure to include a new sewage treatment plant as of May 1999. This facility is located at the southwest corner of Queen Creek and McQueen Roads.

The existing municipal landfill site, located on the northwest corner of McQueen and Ocotillo Roads south of the Study Area, is currently in use until about 2005 and undergoing a phased closure process. The site processed approximately 277 tons of non-reusable refuse per day and does not accept hazardous and industrial wastes. The City has budgeted nearly \$1.2 million over the next two years to prepare the landfill for closure. After closure, the site is expected to develop as an open space area after meeting all environmental mediation criteria for landfill closure.

Both the Salt River Project and Arizona Public Service provide electrical service to the Study Area. A majority of the area's electrical service enters the Santan Area through an existing above-ground high-voltage power line. This line runs north to south along the Southern Pacific Railroad corridor.

Southwestern Gas Corporation provides natural gas service within the Study Area. Below-grade infrastructure is currently in place for a majority of the Santan Area, with rights-of-way running parallel along major arterial roads.

Cox Communications provides cable services to the Study Area and US West provides local telephone service. Infrastructure for these two utilities is typically put in place as growth and development warrants demand.

4.3 Infrastructure Plan Vision, Goals, Objectives, and Policies

Vision Statement

Evaluate future infrastructure needs within the Santan Study Area through analysis of proposed land uses and population/employment projections.

Goal

To assess near-term and long-term public facility and infrastructure needs, and identify potential property acquisitions within the Santan Freeway Corridor Study Area.

Objective 4.3

To assess the level of public and private contributions necessary to provide residents and employment areas with adequate services and infrastructure.

- Policy 4.3.1 The City shall establish a periodic review process with the local school district to conduct due diligence in the investigation of school construction needs.
- Policy 4.3.2 The City should consider potential impacts to City residents as a result of freeway construction impacts with respect to the integrity of existing utility network.
- Policy 4.3.3 The City shall promote the use of reclaimed water for the irrigation of all public and private recreation areas where non-potable water sources can be accessed.
- Policy 4.3.4 The City shall require developers to fund all on-site infrastructure improvements and share the cost of off-site improvements as deemed appropriate by City Staff.

4.4 Infrastructure Plan

The Infrastructure Plan details the improvements currently planned by the City of Chandler for the Santan Study Area and any improvements adjacent to the area that would impact the infrastructure of the Study Area. Projects identified within the Capital Improvement Program (CIP) are programmed for funding between fiscal year 1998 to 2003, and are outlined in detail in the CIP document.

Telecommunications

A Fiber Optic Duct Bank is planned for an alignment along McQueen Road with extensions to the Airport and Water Reclamation Plant. This will connect the Downtown Campus of city facilities with city facilities existing and expanding to the south through the Study Area. Total cost of the project will be \$575,000.

Parks and Trails

The City has earmarked \$4,340,000 for the development of neighborhood parks throughout the City. Two park sites within the Study Area that have been identified for improvements include Winn Park and Pecos Ranch Park. A needs assessment for park facilities will be conducted at each park site and will include items such as playgrounds, lighting, landscaping, shade ramadas, sidewalks and various sport facilities. The newest significant recreational component in the City, the Paseo System will receive \$1.2 million in funding for the preliminary construction of six miles of the multi-use trailway, including the linear segment that passes through the Santan Study Area. Additional pedestrian corridors and linkages between existing recreational facilities in neighborhood areas should be investigated.

Public Safety

The City of Chandler has identified the Municipal Property and Evidence Building at the corner of Pecos Road and Hartford Street as a candidate for facility expansion. The expansion project will enlarge the current facility by 12,000 square feet at a cost of \$1,415,000. The City of Chandler is also investigating the relocation of Fire Station #6. The proposed 9,000 square foot facility will be located in the area of Frye Road between Price and Dobson Roads. The existing facility will experience reduced access as a result of Price Freeway construction and the new location will offer enhanced access to the local area.

Solid Waste

Chandler is in the process of closing the municipal landfill site currently in use until 2005, located on the northwest corner of Ocotillo and McQueen Roads. The landfill will undergo a phased closure program that will allow the site to comply with EPA subtitle "D" regulations. The closure is expected to be complete by FY 2005. The impact of the site closure on the solid waste disposal system is being offset by the construction of a new waste transfer site on the southwest corner of Queen Creek Road and McQueen Road at a cost of \$4.48 million.

Reclaimed Water

Chandler is expanding its existing reclaimed water infrastructure in an attempt to reduce potable water consumption. Reclaimed water has been identified as a safe and viable option for many of the irrigation and groundwater recharge demands existing throughout the City. Through development of the reclaimed water infrastructure, the City is projected to observe dramatic cost savings in its municipal water system due to reductions in import costs and purification costs.

The 1998 Reclaimed Water System Master Plan has identified a number of capital improvement program projects within the Study Area through the year 2014. The 5-year reclaimed water system summary has identified the need for two effluent pipe crossings within the Study Area within the Dobson and McQueen Road alignments. The projected cost of the program is estimated at \$180,000 with construction to start in 2000-2001. The 10-year Capital Improvement Program has identified the installation of two transmission mains within the Study Area. The first segment parallels the Santan Freeway through the City from Interstate-10 in the west to Gilbert Road to the east. The second segment will carry reclaimed water along the McQueen Road alignment from Ryan Road up to the Santan Freeway.

Water

As the City of Chandler continues to grow, water demands will increase accordingly. Citywide, the projected water demand by residents is projected to exceed 90 million gallons per day by 2020. Due to the high intensities of land use within the Study Area, demand will be proportionately high in comparison to residentially dominated areas of the City. Land use demand factor assesses water consumption need based on standardized water use per acre of land. Multi-family, retail and office uses have been identified as the highest water use per acre users of all land use types.

The City of Chandler will continue to meet water demands by utilizing multiple water sources. These sources include the Salt River Project, the Central Arizona Project and groundwater supplies. Planned improvements to the existing water system include the installation of three 30-inch transmission mains. The first will run in Cooper Road from Pecos to Germann across the Santan Freeway alignment. This line is programmed for fiscal year 2001-2002 at an estimated cost of \$987,000. The second line is planned to run down Germann Road from Cooper Road to 132nd Street. The 5-year CIP has identified this project for funding in fiscal year 2002-2003 at a projected cost of \$513,000. The third segment will establish a transmission main in Pecos Road from the Surface Water Treatment Plant at the corner of Pecos and McQueen Roads to Cooper Road. This project is programmed for FY 2001-2002 at a projected cost of \$679,000. Additional water system improvements programmed for construction within the Study Area include a 24-inch transmission main in Dobson Road from Pecos Road to Ocotillo Road. This line, identified in the 10-year CIP, will convey water from existing wells in the northern portions of the City to the southern areas across the Santan Freeway alignment.

In addition to the installation of water transmission lines, the City will also expand the Water Treatment Plant facility at a cost of \$702,000. A sedimentation basin located at the Water Treatment Plant will be improved at a cost of \$610,000. In addition to upgrading the Water Treatment Plant, a \$1.57 million program will be implemented to inspect water reservoir and storage tanks to ensure compliance with Maricopa County Health Standards. The City will also spend \$1.83 million to acquire land for additional storage tank and reservoir sites.

Wastewater

The wastewater collection system within the Study Area will continue to use the Ocotillo Water Reclamation Plant (WRP) and Airport WRP for treatment purposes. These facilities will be able to expand their treatment capacities as development densities increase within the Study Area. The Ocotillo facility, at buildout, will have a influent treatment capacity of 10 million gallons per day with the Airport WRP eventually operating at a buildout capacity of 20 MGD.

Planned collection system enhancements to the wastewater infrastructure within the Study Area as identified by the 1998 Wastewater System Master Plan, include the relocation of the Pecos Ranch sewer main to the west to avoid a crossing at the Santan Freeway alignment at Dobson Road. A second relocation within the corridor will occur at the McQueen Road/Santan Freeway crossing. A new 12-inch line will run south from the Santan alignment to the Airport WRP. A new transmission line segment is planned for Germann Road from the Arizona Avenue intersection and will run west to an existing line at the Alma School Road intersection. Expansion of the Airport WRP is included in the 5-year Water Reclamation Plant Expansion CIP Summary, with a budgeted cost of \$18,600,000 between 2000 and 2002.

Electric

The Salt River Project and Arizona Public Service provide power to the Study Area and provides improvements to existing infrastructure as development warrants. SRP has no near-term plans to enhance the existing network infrastructure in the Santan Study Area.

4.5 Infrastructure Implementation Program

A series of implementation measures have been established for the infrastructure within the Study Area, as shown on Table 4.1, *Infrastructure Implementation Program*. These measures will serve as a tool in the recommendation of improvements to existing public services. These recommendations will provide the City Council with public utility improvement priorities as defined here and within the Capital Improvements Program for fiscal years 1998 through 2003.

The implementation program lists the specific implementation measure, timeframe, key participants, project location and the resources necessary to accomplish each implementation measure.

Definitions

Implementation Measure -Lists the action necessary to carry out the Infrastructure Element of the Santan Area Plan.

Purpose - Identifies the intent of accomplishing that particular action

Timeframe - Establishes the target 5-year priority within the 20-year planning horizon for implementation of the action.

Key Participants - Assigns the elected or appointed public body, agency, group, individuals or volunteers principally responsible to initiate the implementation action.

Resources - Lists the potential funding, City staff, volunteer or other community resources necessary to carry out the implementation action.

**Table 4.1
Infrastructure Implementation Program**

Implementation Measure	Timeframe (Years)				Key Participants	Resources
	1-2	3-5	5-10	10-20		
Mitigate freeway lighting impacts on adjacent housing through implementation of appropriate screening methods	*	*	*	*	City Planning Staff, ADOT	Amend Zoning Ordinance, ADOT
Update the Capital Improvement Program (CIP) to include utility alignment modification and costs incurred through Freeway construction	*				City Planning Staff, Public Works	Staff Resources
Encourage pedestrian linkages between parks & other municipal facilities	*	*			City Planning Staff,	Heritage Funds, Developer Contributions
Promote the use of reclaimed water	*	*			Development Services	Adopt policies encouraging reclamation
Encourage all service providers to coordinate their plans & programs	*	*			Development Services, SRP, Southwestern Gas, etc.	Staff Resources
Encourage developers to fund on-site & off-site improvements related to their development	*	*			City Planning Staff; Development Services, City Council	Developer Fees

Source: BRW, Inc., 1999.

5.0 Economic Development Element

The Economic Development Element of the Santan Area Plan is presented in the following sections:

- 5.1 Introduction
- 5.2 Existing Setting
- 5.3 Economic Development Plan Vision, Goals, Objectives, and Policies
- 5.4 Economic Development Plan
- 5.5 Economic Development Implementation Program

5.1 Introduction

The City of Chandler has experienced a population boom over that last 20 years that has made it on the larger cities in the Phoenix Metropolitan Area and one of the fastest growing cities in the nation. Population estimates for 1998 estimated the population at approximately 175,000 persons, with the highest densities in the north and west portions of the City. The Santan Study Area is located at the fringe of the current development growth pattern and is likely to see pressure for increases in both residential and commercial services in the near-term. The establishment of employment-based development such as commercial and industrial business will likely occur at a more moderate pace as the City approaches buildout.

Chandler's high-tech industrial clusters are a reciprocating function of a well-educated workforce, low development costs and high standard of living. The unemployment rate in 1998 was below three percent and its labor force has grown to over 60,000. Large firms such as Intel and Motorola dominate the City's employment base and constitute large, important revenue generators for the local economy. Also, various aerospace and aviation industries involved in manufacturing have located and expanded in Chandler

In 1990, Chandler's housing stock consisted of 34,967 units, a 13 percent annual growth rate since 1980. Currently there are nearly 60,000 units in the City. Between 1990 to 1998, Chandler has issued approximately 20,000 building permits citywide. Between 1994 and 1998 the average price for a new single family home jumped from \$113,671 to over \$142,000.

The current population of the Santan Study Area is estimated at 15,574 residents, representing less than 10 percent of the total Chandler population. With construction of the freeway and peripheral expansion of the urban growth boundary, the Study Area is expected to experience heightened levels of development in the future.

Economic Overview

Office, Retail and Industrial Development

Approximately 1,715 acres of Chandler's 15,000 acres of developed area are devoted to industrial development, the majority situated in the City's 12 industrial parks. Many of the areas have an abundance of available parcels ready for development, with infrastructure and zoning in place. There are approximately 12.3 million square feet of built industrial space in the City, with a vacancy rate of less than five percent. Additionally, 1.5 million square feet, representing the new Intel "FAB-12" semiconductor fabrication in South Chandler, is complete, along with an additional 200,000 square feet under construction in other locations. In 1994, approximately 310,889 square feet of industrial space was absorbed, representing about 900 new manufacturing jobs. Office space consists of nearly 350,000 square feet.

Chandler is currently encouraging the attraction of large retail establishments. While the city has its fair share of neighborhood and community shopping centers, attracting a regional mall would enhance the tax base. Westcor, a regional retail developer, will break ground in late 1999 on a 1.3 million square foot regional mall site to the west of the Study Area.

5.2 Existing Setting

Existing economic land uses are limited to the commercial strip adjacent to Arizona Avenue in the northern portion of the Study Area and the presence of small to moderate scale livestock and dairy operations. In addition, several industrial properties continue to operate in the southern portions and in the northwest corner of the Study Area

Agricultural, public and quasi-public land uses generate a majority of the existing employment in the Study Area. These public/quasi-public properties include the Chandler Regional Hospital, Hartford Elementary School and the Chandler Wastewater Treatment Facility. MAG Year 2000 employment projections have identified the total employment of the Study Area to exceed 8,211.

Agriculture and dairy farms represent the largest land use category within the Study Area. While full-time employment is limited, part-time or migrant farm workers may be employed in fairly large numbers during seasonal harvests or plantings. While these farming operations provide a stable income to the owners of the land, the real value lies in the property and its potential for development within the Phoenix Metropolitan Market Area. Total full-time employment in the Study Area's existing agriculture industry is currently estimated to be less than 50 to 100 persons.

5.3 Economic Development Plan Vision, Goals, Objectives, and Policies

Vision Statement

Create an area of diversified moderate-intensity economic activity within the Santan Study Area that utilizes public facilities and infrastructure, employment corridors and freeway interchanges for the promotion of local and regional economic growth.

Goal

Initiate economic development and reinvestment strategies to attract desirable employers and retain existing businesses.

Objective 5.2

Promote a highly diversified economic environment that will influence regional economic conditions while reinforcing development initiatives set forth to provide sustainable and well managed growth.

Policy 5.2.1 The City shall promote the integration of the Santan Freeway transportation opportunities with the Union Pacific Railroad and the Chandler Municipal Airport from an economic development perspective.

Policy 5.2.2 Develop a program that will study successful components of other interchanges in the region and initiate dialogue with appropriate parties.

Policy 5.2.3 The City should encourage the development of mixed-use projects (i.e. commercial/residential/ recreational)

Policy 5.2.4 The City shall promote the use of mixed-use retail/residential adjacent to the planned Paseo System and in retail commercial/high-density residential transition areas.

Policy 5.2.5 The City shall work to aggressively attract employment use that will generate a *specified market for recommended uses*.

Policy 5.2.6 The City should discourage over-development of similar commercial land use types and encourage unique commercial opportunities for development

Policy 5.2.7 The City should work with developers to attract family-oriented retail and entertainment services to specified areas of the Study Area

5.4 Economic Development Plan

The Santan Freeway will be the driving force behind economic development within the freeway corridor. With the heightened potential for regional economic commerce, there should be ample opportunities for the City to attract new business into the area. By dictating an aggressive economic development plan in adherence to the Area Plan, the City will establish a prosperous development zone that will continue to enhance the existing revenue base.

In an effort to encourage the development of commerce generating land uses compatible with the Chandler Municipal Airport, the City has established an enterprise zone for the nine square miles surrounding the Airport. Three square miles of the enterprise zone overlap the Santan Study Area, safeguarding the area for much needed commercial and industrial development. The Chandler Economic Enterprise Zone allows qualified businesses the ability to take advantage of state corporate income tax and property tax benefits. Businesses that create new quality jobs within the enterprise zone can receive up to \$3,000 in state income tax credits for each quality job created. A quality job is defined as one that pays the county minimum wage, is full time and permanent and the employer provides a minimum of 50 percent of the health insurance. A minimum of 35 percent of positions for which credits are taken must be filled by residents of the enterprise zone. Small (100 employees or less), minority-owned or woman-owned manufacturing businesses that generate at least a \$2 million investment in fixed assets within the enterprise zone may receive a 40 to 60 percent property tax reduction on both real and personal property. This reduction is good for a five-year period.

The Area Plan identifies multiple economic nodes, in which commercial and industrial developments will be focused. The Price Road Corridor, located on the western edge of the Study Area represents an area of high industrial and commercial/office/business park use. The City will encourage technology-based operations to locate in this area as part of its plan to continue the promotion of high-tech companies to locate within the corridor. These business types will join existing high-tech operations within the corridor to the north and south of the Study Area. Industrial clustering within the corridor will aid in the establishment of a local employment base for the City of Chandler, with adjacent land uses dictating an appropriate location for an employment node.

The continued expansion of the Chandler Regional Hospital on Frye Road has initiated the development of professional and medical offices in addition to assisted care facilities. Land uses identified in the Santan Area Plan coordinate with land uses in the Gateway Area Plan, a specific plan for the area north of the Santan Study Area. The Plan evaluated the land use objectives of the area based on a community vision for future growth and economic development. The product of this effort has been the completion of a strategic guide, outlining unique criteria for residential, commercial and industrial growth within the area.

The Chandler Airpark Area, located southeast of the Study Area presents an aggressive approach to employment growth for the City of Chandler. The total area, at buildout, is projected to provide nearly 70,000 jobs, with a focus on fixed base operators on the Airport property and industrial/manufacturing adjacent to the Airport property. The northern portions of the Study Area overlap with the Santan Area transitions into primarily residential land uses, but does specify a large proportion of employment based activity.

Potential Industrial Cluster Development

The Chandler Airpark has tremendous potential for the development of industrial clusters that would compliment the already developing high technology sector located in the area. Industrial clustering is a concept of business development where companies with similar or complimentary products locate in close proximity to one another to take advantage of reduced transportation costs and shared infrastructure improvements.

While Chandler in particular, and the Southeast Valley in general, pursue high-technology clusters, a significant potential for additional cluster development exists. A cluster of warehouse/distribution and transportation industries could take advantage of the intermodal air, road and rail connections available in the Airpark Area. Also, with the Chandler Airport located in the center of the nine square mile Airpark Area, there exists the potential for Aerospace Industry cluster development. The Aerospace cluster could interface with the high tech and transportation clusters.

5.5 Economic Development Implementation Program

A series of implementation measures have been established for economic development in the Study Area, as outlined in Table 5.1, *Economic Development Implementation Program*. These measures will serve as a tool in the development of economic strategies and initiatives and provide the City with guidance in prioritizing marketing opportunities.

The implementation program lists the specific implementation measure, timeframe, key participants, project location and the resources necessary to accomplish each implementation measure.

Definitions:

Implementation Measure - Lists the action necessary to carry out the Economic Development Element of the Santan Freeway Corridor Area Plan.

Purpose - Identifies the intent of accomplishing that particular action.

Timeframe - Establishes the target 5-year priority within the 20-year planning horizon for implementation of the action.

Key Participants - Assigns the elected or appointed public body, agency, group, individuals or volunteers principally responsible to initiate the implementation action.

Resources - Lists the potential funding, City staff, volunteer or other community resources necessary to carry out the implementation action.

**Table 5.1
Economic Development Implementation Program**

Implementation Measure	Timeframe (Years)				Key Participants	Resources
	1-2	3-5	5-10	10-20		
Encourage development of employment-based land use within the Study Area	*	*	*		Chamber of Commerce; City Council; E.D. Dept.	Enterprise Zone; General/Area Plans; E.D. Incentives
Ensure commercial access to regional transportation facilities	*	*			Plan Commission; Public Works Dept.	Access Management Plan; Truck Route Ordinance
Target high-tech, office, and medical employers	*	*			AZ Dept. of Commerce; E.D. Department Chamber of Commerce; City Council	Enterprise Zone; State Funding; E.D. Incentives
Promote mixed-use developments	*	*			Plan Commission; City Council	Planning Staff Resources
Study best use of freeway interchanges	*				Plan Commission	Staff Resources, City Funds

Source: BRW, Inc., 1999.