

ALAMOGORDO COMPREHENSIVE PLAN 2000

Prepared for the
City of Alamogordo

Prepared by
Taschek Environmental Consulting

MARCH 4, 2003
APPROVED



RESOLUTION NO. 2003-02

A RESOLUTION ADOPTING A COMPREHENSIVE MASTER PLAN AND THE ASSOCIATED TECHNICAL APPENDICES FOR THE CITY OF ALAMOGORDO, A NEW MEXICO MUNICIPAL CORPORATION.

WHEREAS, a *Comprehensive Master Plan* for the City of Alamogordo, Otero County, New Mexico, was prepared by McMorries and Associates et al in 1971; and,

WHEREAS, the governing body of the City of Alamogordo adopted said plan; and,

WHEREAS, the 1971 plan established goals and policies for growth in the city’s population, housing stock, economic base, transportation system, public services, and community facilities; and

WHEREAS, some policies and predictions from the 1971 plan have come to pass while other areas are in need of revision; and

WHEREAS, it is appropriate that a new plan be completed to help direct the growth of Alamogordo’s second century; and

WHEREAS, separate technical studies have been adopted and should be incorporated in the new plan (where discrepancies occur, the more current material shall apply); and

WHEREAS, the City Commission finds and determines that adoption of a new comprehensive plan for the City of Alamogordo, New Mexico, is in the public interest and is consistent with proper planning procedures.

NOW, THEREFORE, BE IT RESOLVED by the City Commission of the City of Alamogordo, New Mexico that pursuant to Article 3-19, *New Mexico Statutes Annotated, Comprehensive Plan 2000*, as prepared by Taschek Environmental Consulting, is adopted together with maps and referenced technical appendices for the City of Alamogordo, Otero County, New Mexico.

DONE this 4th day of March, 2003.

**CITY OF ALAMOGORDO, NEW MEXICO,
a New Mexico municipal corporation**
By: /s/ Donald E. Carroll, Mayor

ATTEST:
/s/ Angie J. Rahn, City Clerk

APPROVED AS TO FORM:
/s/ William Kirschner, City Attorney

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ACRONYMS

AASHTO	American Association of State Highway and Transportation Officials
AICP	American Institute of Certified Planners
APS	Alamogordo Public Schools
AWDT	Average Weekday Traffic
BBER	University of New Mexico Bureau of Business and Economic Research
BLM	Bureau of Land Management
CAA	Clean Air Act
CBD	Central Business District
CHAT	Citizens Highway Assessment Taskforce
CIP	Capitol Improvement Program
CPTED	Crime Prevention through Environmental Design
EPA	Environmental Protection Agency
FHWA	Federal Highway Administration
FY	Fiscal Year
GAF	German Air Force
GIS	Geographic Information System
GPS	Global Positioning System
HAFB	Holloman Air Force Base
HUD	US Department of Housing and Urban Development
MHU	Manufactured Housing Unit
MTP	Metropolitan Transportation Plan
NAFTA	North American Free Trade Agreement
NEPA	National Environmental Policy Act
NLC	National League of Cities
NMDOL	New Mexico Department of Labor
NMED	New Mexico Environment Department
NMSHTD	New Mexico State Highway and Transportation Department
PZC	Planning and Zoning Commission
SIP	State Implementation Plan
TAC	Technical Advisory Committee
USFS	United States Forest Service
USGS	United States Geological Survey
WSMR	White Sands Missile Range
WSNM	White Sands National Monument

A. INTRODUCTION

1. Purpose

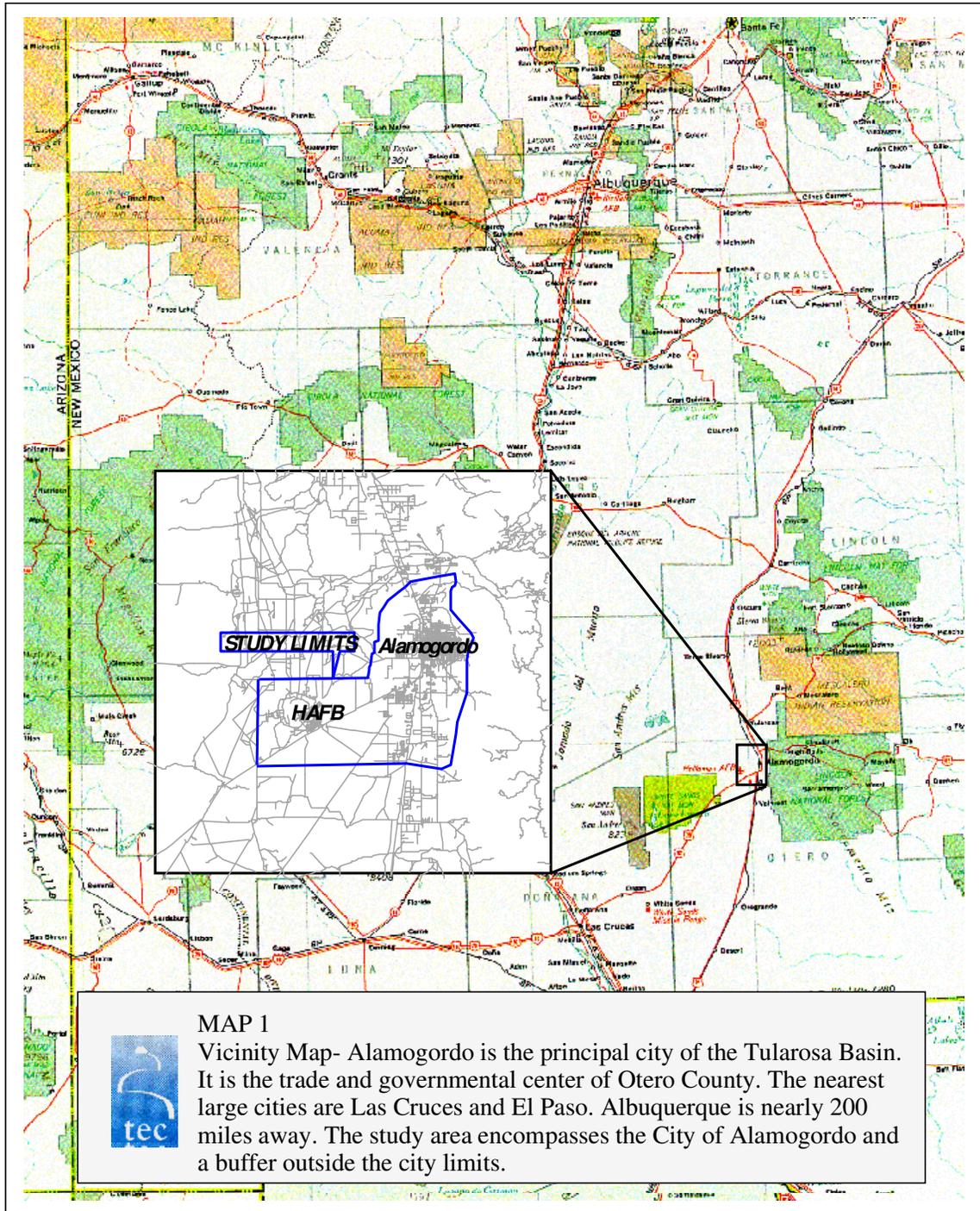
The 1971 *Alamogordo Comprehensive Plan* (McMorries and Associates) established goals and policies for growth in the city’s population, housing stock, economic base, transportation system, public services, and community facilities. In the nearly 30 years that have elapsed, some policies and predictions from the plan have come to pass; however, other areas are in need of revision. Thus it is appropriate that a new Plan be completed during 2000, the first year of Alamogordo’s second century.

The 1999 *Alamogordo Comprehensive Traffic Study* (URS-Greiner) provided the opportunity to revise the 1971 *Alamogordo Comprehensive Plan*, because it required developing an extensive land use database and established an ongoing planning process. The *Comprehensive Plan 2000* is the result of this process. It addresses land use, public infrastructure, development controls, and community needs in the City of Alamogordo and a five-mile area around the city limits (see **Map 1**). This wider area includes Holloman Air Force Base (HAFB) and parts of unincorporated Otero County. The study area, although partially outside the city limits, is within its five-mile planning and platting jurisdiction and is important to Alamogordo's economy and future. The *Comprehensive Plan 2000* was designed to meet the dual purposes of:

- 1) advising local decision makers and staff of growth pressures likely to confront the city during the coming decades and suggesting means of managing them, and
- 2) informing citizens and private sector developers of the desired and probable direction and impacts of growth.

The *Comprehensive Plan 2000* involved public participation and a technical advisory committee and includes:

- A review of existing conditions and information;
- Population, housing and employment projections;
- Analysis of growth trends, opportunities, and constraints;
- Identification of planning issues;
- Development of planning goals and objectives;
- Evaluation of alternatives; and
- Planning policies to address Alamogordo’s future.



The Plan evaluates the city's form and growth potential in the context of current planning issues. These include the need to create opportunities for diverse and affordable housing, regulate the compatibility of land uses, and control the city's responsibilities for capital expenditures. To accommodate growth in an orderly manner, policies are provided that address development controls, transportation, water/sewer service, drainage systems, trails/open space, historic preservation, environmental protection, and public services.

The cornerstone of the *Comprehensive Plan 2000* is a land use analysis that includes data on existing and projected population, housing, and employment in and immediately adjacent to the city. The *Plan* is intended to meet three goals:

- 1) to summarize existing conditions in each of the planning elements;
- 2) to present an analysis of probable growth patterns and options; and
- 3) to establish a frame of reference for further, more specific planning studies that can address the issues facing Alamogordo.

Several more specific planning studies have already been completed and are incorporated by reference into the *Comprehensive Plan 2000*. These are listed as technical appendices and include the *Alamogordo Comprehensive Traffic Study* (URS-Greiner, 1998), the *Alamogordo-White Sands Regional Airport Master Plan Study: 1992-2012* (Muller, Sirhall and Associates, 1992), and the *City of Alamogordo, New Mexico Water Master Plan* (Gordon Herkenhoff and Associates, 1975). Other future studies will also be incorporated into the plan. The *Comprehensive Plan 2000* is not a static document; rather it is intended to be subject to an ongoing process of review and refinement.

2. Process

The *Comprehensive Plan 2000* was prepared in conjunction with the City of Alamogordo's *Comprehensive Traffic Study*. A Technical Advisory Committee (TAC), consisting of personnel from the city's major departments and representatives from Alamogordo Public Schools (APS), HAFB, and Otero County were invited to work with the planning team to define major planning and transportation issues in the project area.

Public meetings and group workshops were held to engage interested citizens, the Planning and Zoning Commission (PZC), City Commission, and city staff. Written comments were solicited from the participants. These efforts helped the study team and consultants to better appreciate the community's values and to refine their understanding of planning issues and relationships. The information and perspectives gleaned from the workshops contributed to the alternatives, goals, and policy recommendations presented in the *Comprehensive Plan 2000*.

B. ALAMOGORDO'S PLANNING CONTEXT

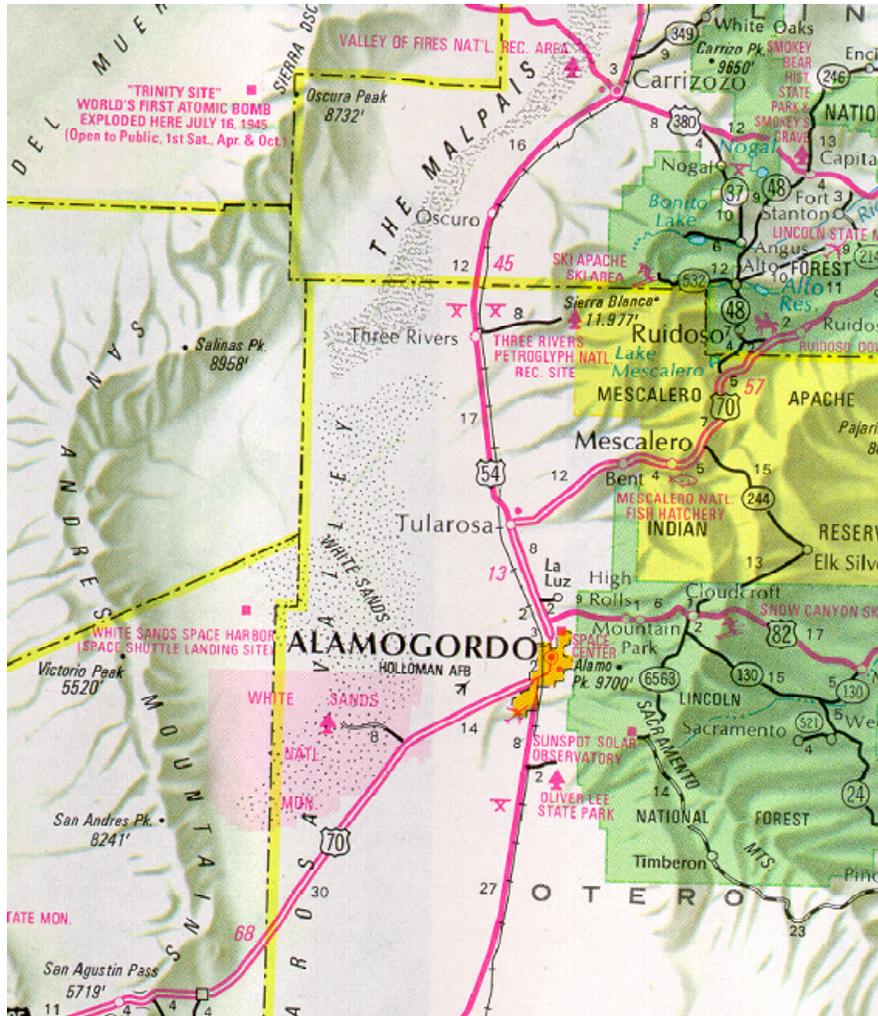
Alamogordo is located in the Tularosa Basin, in the Sacramento section of the Basin and Range physiographic region. This part of southeastern New Mexico overlays the Permian Basin. The Sacramento Mountains boldly define the eastern boundary of the city while the western fringes are defined by the White Sands National Monument (WSNM), White Sands Missile Range (WSMR), and HAFB as shown on **Map 2**.

Alamogordo is a desert city, receiving varying but low levels of precipitation each year. The Sacramento Mountains affect the amount of precipitation directly falling on the area during the summer. These mountains have captured runoff over the eons and provide a source for groundwater recharge as well as surface reservoir storage. They also diminish the impacts of winter storms on the city, and store some of the annual snowfall.

Prior to modern settlements, the Tularosa Basin was home to the Apache Indians. Later the region was used for grazing by Hispanic and Anglo cattle and sheep ranchers. The City of Alamogordo was created as a railroad town in 1898, when the El Paso and Northeastern Railway, and its various sister companies, extended service to southeastern New Mexico and southwestern Texas.

Guided by investor Charles B. Eddy, his brother John Eddy, and his lawyer, William A. Hawkins, the railroad shaped Alamogordo's development pattern. The townsite was established on what had formally been Oliver Lee's Alamo Canyon Ranch. Lee sold Eddy the ranch and the water rights in April of 1898 for \$5,000, and Alamogordo was established in June, as the railroad was extended past the townsite. Eddy's idea was to provide the transportation needed to exploit the area's natural resources such as timber and to serve the gold mines and coal fields of White Oaks.

Alamogordo originally was settled east of the tracks, at the base of the Sacramento Mountains, because of the availability of water from Alamo Canyon, and to take advantage of the natural drainage for storm water and sewers provided by the alluvial landforms. Alamogordo was modeled after the towns of the eastern United States and was laid out in a grid pattern with Tenth Street as its central east-west axis. The majority of the town's original businesses and a number of homes were located on Tenth Street, with additional housing to the north. Eddy himself designed many of the early residences. He hoped that the eastern influence would be conducive to order and make the town attractive to visitors and prospective residents. Eddy designated a region south of Tenth Street "Chihuahua," which had smaller, less expensive dwellings to house the "working class." (Dobson, 1991).



MAP 2

Alamogordo occupies a central strategic location at the base of the nearby Sacramento Mountains. Its neighbors include other jurisdictions that are mostly agencies of the Federal Government such as Holloman Air Force Base and White Sands Missile Range (Department of Defense), White Sands National Monument (Department of the Interior, National Park Service), the Lincoln National Forest (Department of Agriculture), the Bureau of Land Management (BLM), the New Mexico State Land Office, and Otero County. The city is approximately 20 square miles and has a population density of about 1,780 persons per square mile (2000 population).



Alamogordo's early success was the result of the availability of numerous natural resources, combined with a successful development strategy enacted by Eddy and Hawkins. When the branch railroad into the Sacramento Mountains was completed in 1898, it provided access to 45,000 acres of timber rights. The lumber that was harvested for the railroad also helped to build the town. Many of the stores and homes constructed one hundred years ago still stand in the city's original downtown core. Water from mountain canyons supported the small community and helped to sustain an active agricultural and ranching economy. The railroad provided the means to transport these resources to other regions, thereby generating income to support the new town.

Although the railroad created Alamogordo, by 1905 most railroad activity had been relocated. During the early part of the century, and through the 1940's, the city's economy was driven primarily by the lumber industry. Huge volumes of timber were harvested from what was to become the Lincoln National Forest and its environs east of the city. Remnants of the impressive wooden railroad trestles can still be seen along the way up to Cloudcroft in these mountains.

In more recent history, government sector activity provided much of the impetus for Alamogordo's growth. In 1942, the Alamogordo Army Air Field, Bombing and Gunnery Range, was built as a temporary wartime facility. In 1945, the world's first atomic bomb was detonated in a remote corner of the airfield's bombing range. Following the Second World War, the airfield was briefly deactivated but in 1947 it began use as a site for experimental pilotless aircraft and guided missile research. In 1948, the installation became the Air Force Missile Development Center. Later it was renamed Holloman Air Force Base (HAFB) in honor of Colonel George V. Holloman who had pioneered guided missile research. HAFB has played an integral part in the Tularosa Basin and southeastern New Mexico economy ever since. HAFB is now home base for all F-117 (Stealth) fighters.

Presently HAFB is home to several mission units including the 49th Fighter Wing (and associated groups) which can rapidly mobilize and deploy the F-117 aircraft worldwide. Another major unit is the 46th Test Group staffed by 650 military, civilian and contractor personnel. In 1997, personnel associated with HAFB, including active military and civilian workers, their dependents, and retirees, accounted for more than 15,000 people which is nearly 50% of Alamogordo's population base. Approximately half these personnel reside on HAFB and half within the city limits of Alamogordo (HAFB General Plan, March 1997).

Since 1992, the German Air Force (GAF) has had squadrons training at HAFB for use of the F4 Phantom and Tornado aircraft. Most of these personnel and their families live in Alamogordo. They are given housing stipends that stimulate the local housing demand, but may also drive up rental rates. To support the GAF, the

German government constructed a German school in town. Ultimately, the German community in Alamogordo is expected to reach 2000 people.

Other government sector activity, including the New Mexico State University branch campus, has also played a significant role in the shaping of modern Alamogordo. Major employers in the area also include 1-800-Flowers.com, the APS, Big K-Mart, Casa Arena Blanca, First National Bank, the Gerald Champion Regional Medical Center, Lowe's IGA, Roper ASW, Wal-Mart Super Center, and current contractors at HAFB.

Tourism is also playing an increasing role with the city's proximity to the WSNM, Sacramento Mountains, Apache Point Observatory, and Sunspot Solar Observatory. White Sands Missile Range remains the only place in the world—outside of Edwards Air Force Base in California and Cape Canaveral in Florida—where a space shuttle has landed.

Alamogordo has also become somewhat of a retirement magnet given its relatively affordable housing, pleasant climate, and quality of life. The city is cited in the *Atlas of the New West* (University of Colorado, 1997) as one of the emerging babyboomer retirement centers of the southwest. The city scored 63 (where 100 = national average) in one cost of living index available on the Internet (VirtualRelocation.com). In the future, smaller self-contained western cities like Alamogordo are expected to grow in attractiveness as Americans seek places to relocate that have airport and highway access, nearby open space, low costs of living, and other perceived amenities that can be attributed to a variety of national socio-economic trends.

In addition, Alamogordo is in the path of increasing trade between the United State and Mexico. Both U.S. 54 and U.S. 70 are major trade routes to the border region and the increased economic activity stimulated by the North American Free Trade Agreement (NAFTA) in this area. U.S. 54 has been expanded from two to four lanes between El Paso, Texas and Alamogordo to enhance economic development and safety and accommodate increased traffic.

C. LAND USE AND DEMOGRAPHICS

1. Existing Conditions

Current information on total population, housing, and employment in the study area was obtained from the 1990 U.S. Census, the Holloman Air Force Base General Plan, city building permit data, the New Mexico Department of Labor, and the University of New Mexico's Bureau of Business and Economic Research (BBER). In 1990, the city itself had a population of 27,596 persons. The land inside the study area but outside HAFB had a population of 30,276.

By 1995, the Alamogordo Division (the study area outside HAFB) had an estimated population of 33,180, while the total study area had an estimated 39,047 people.¹ In contrast, the 1971 plan predicted there would be approximately 57,000 people living in Alamogordo by 1990, and 70,000 in Otero County overall.

- Approximately 83% of the study area population is Anglo, 6% is Black, and 25% is of Hispanic origin (including all races). Seventeen percent (17%) of the population over 5 years old speaks Spanish.
- 64% report living in Otero County more than 5 years.
- The majority of city residents have completed high school (82%); about half have taken at least some college courses (50%); and 17% have received at least one college degree.
- In 1997, approximately 15,000 people in the area were directly associated with HAFB, including active U.S. and German military and civilian personnel, their dependents, and military retirees.

Housing data were obtained from the 1990 Census, when there were 11,974 housing units in Alamogordo. Additional data were drawn from 1991-1995 building permits issued by the city:

- In 1995, the study area had 16,187 housing units, including 12,310 single-family units (76%) and 3,877 multi-family units (24%) as depicted in **Figure 1**.
- Approximately 63% of these residences were owner occupied and 37% were renter occupied.

¹ The Alamogordo Division described in this document varies slightly from the 1990 Census boundaries. It includes the slightly larger study area around the city (shown on **Map 1**) but excludes the area within HAFB.

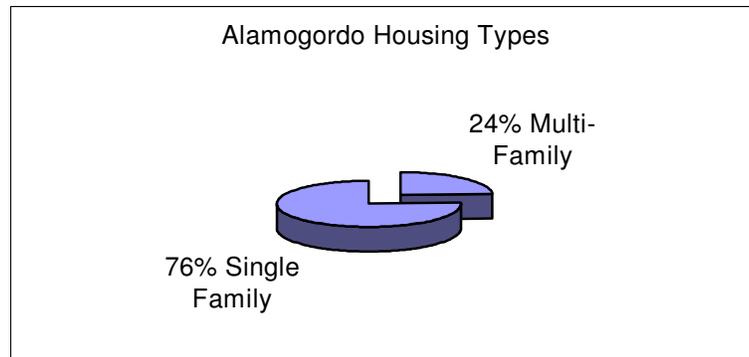


Figure 1. In 1995, the study area had 16,187 housing units, including 12,310 single family units (76%) and 3,877 multi-family units (24%).

- Rental units had an average of 2.1 residents, while owner occupied units had an average of 2.3 residents.
- One in eight units (12%) were vacant in 1990. The arrival of the German Air Force has reduced the vacancy rate since that time.
- The median value of an owner occupied home was \$57,900 in 1990; the average value was \$61,600. The 1995 median value reported in the *New Mexico Business Resources Guide* (1995) had increased to \$71,000. However, one source now cites the average cost of a 2,000 square foot home being \$140,000.
- In 1990, homes rented for about \$300 per month (median \$294, mean \$314). Currently, three-bedroom houses rent for \$700 to \$800 a month, and two-bedroom apartments rent for \$400 to \$600 a month (*Otero County Economic Development Council Factbook*, 1999).
- In 1990, the majority of the housing stock (52%) was built before 1970. Housing data, based upon building permits, show a boom in construction from about 1982 to 1987. Construction then slowed in the late 1980s and early 1990s, but began increasing again in 1992. Between 1992 and 1995, an average of about 130 single family building permits per year were issued within the Alamogordo city limits. The number of townhouses and apartments also increased. New construction has been partially driven by the increasingly tight housing market created by the arrival of the GAF personnel and their families.

According to 1990 Census data, Alamogordo had the following economic make-up:

- Median household income was \$24,579 and the mean income was \$29,483. 1995 median household income was reported to be about 13% more (see **Figure 2**), and has probably continued to increase. The arrival of the GAF has been a stimulus to the economy.

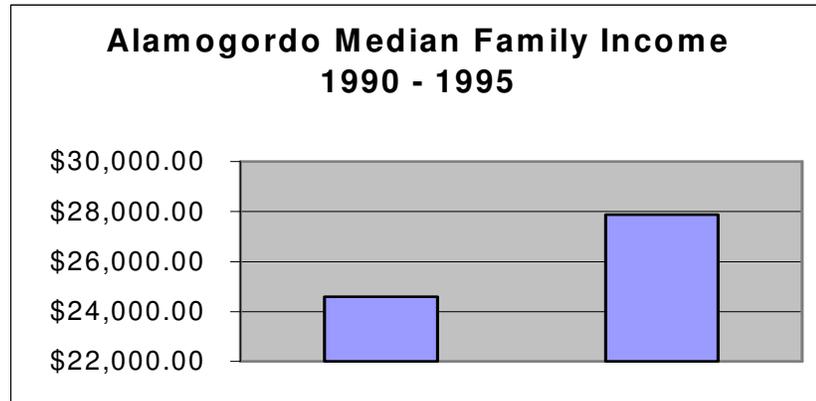


Figure 2. Median family income increased 13% over the first half of the 1990's (not adjusted for inflation).

- Families with children under 18 earned an average of \$31,064.
- About 14% of the city's population had a reported income below the poverty level, and almost half of this 14% of the population were children under 18; approximately 18% of families with children under 18 had reported incomes below the poverty level.
- About one in three residents participated in the workforce (37.6%).
- There was 8.9% unemployment in 1990 compared to 5.5% in 1998.
- Retail trade made up the largest single non-governmental sector in the economy (23%). Gross receipts grew 21% from \$8,153,895. in FY93/94 to \$9,860,323. in FY95/96 (approximately \$340 per capita). (See **Figure 3**. on the following page)

Employment data for the base year were obtained from two sources; the State Business Directory (compiled by American Business Directories, Inc.) and the 1995 third quarter "New Mexico Company List" maintained by the Employment Security Division of the New Mexico Department of Labor (NMDOL). According to these sources there were an estimated 16,140 jobs in the Alamogordo Study Area with 6,463 in trade and 9,677 in non-retail trade sectors.

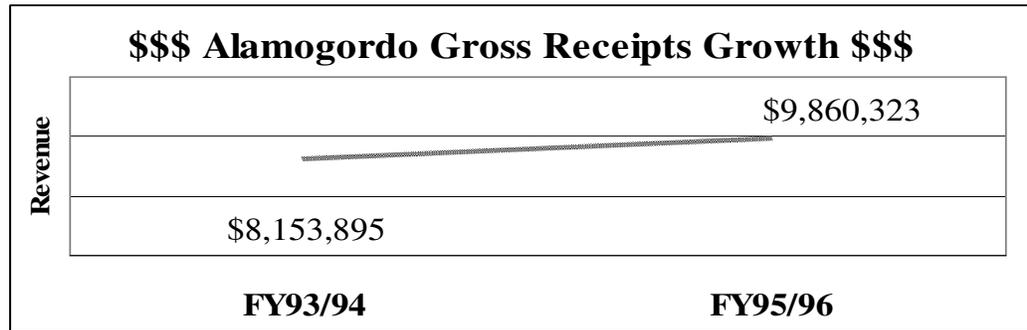


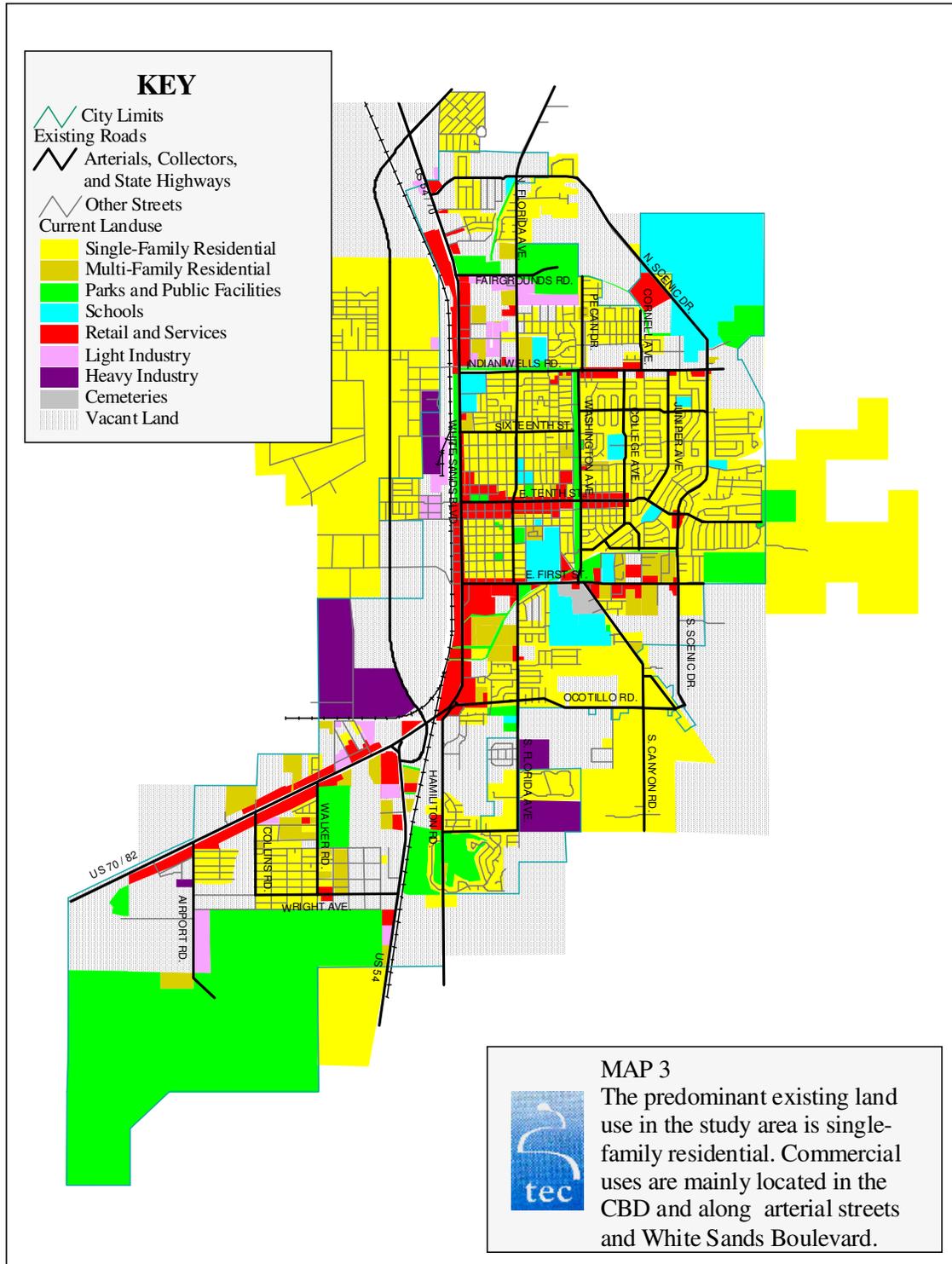
Figure 3. Gross receipts increased 21% from FY93/94 to FY95/96.

To represent existing conditions, a land use map was prepared to depict development within the study area (see **Map 3**). The extent and composition of existing development within the urbanized portion of Alamogordo was estimated from aerial photographs (Bohannon-Huston, Inc., 1997). For outlying areas, the land use was determined from field visits and review of area-specific demographic data. **Table 1** summarizes the current land use categories.

TABLE 1: EXISTING LANDUSE SUMMARY

Designation	Included Uses
Single Family Residential	Low and Medium Density Single Family Housing
Multi-Family Residential	Apartments and Mobile Home Parks
Parks and Public Facilities	Public Parks and Open Space Areas; City and County Operated Facilities
Schools	Public and Private Schools
Retail and Services	Commercial uses: sales, services, office, etc.
Light Industry	Light Manufacturing
Heavy Industry	Heavy Manufacturing
Cemeteries	Cemeteries (public and private)
Vacant Land	Undeveloped land

The predominant land use within the city limits is single-family residential. The Alamogordo Zoning Ordinance provides five residential dwelling districts (including two for manufactured homes). The city is bordered by federal lands of the Lincoln National Forest in the Sacramento Mountains to the east, and considerable BLM and State Land Office holdings to the north and south. Private lands extend north and south offering considerable expansion potential within and adjacent to the current city limits. Future use of the land west of White Sands Boulevard is more problematic because it lies below the sewerage treatment plant and, to some extent, beyond the present water service availability area.



2. Projected Population Growth

Population, housing, and employment projections for the study area were prepared by the Bureau of Business and Economic Research (BBER) at the University of New Mexico. A cohort-component model was used to project population for the study area, including components of change in fertility, mortality, and migration (**Appendix 1**)². Alamogordo's past growth patterns have been irregular, due largely to periodic changes in the mission of HAFB. Consequently, a range of future projections were developed that would cover low, medium, and high-growth conditions. With the medium series projections, the study area's population (the city, adjacent parts of the county, and HAFB) is projected to increase from a 1995 level of about 39,000 people to 51,600 in 2020³. **Table 2** shows the projected 2020 housing and employment values for the various land use categories.

TABLE 2: LAND USE CATEGORIES

LAND USE TYPE	1995	2020*	Change
Single-Family Housing Units	12,310	19,266	57 %
Multi-Family Housing Units	3,877	5,157	33 %
Hotel/Motel Rooms	1,126	1,667	48 %
Industrial, Manufacturing Jobs	2,667	3,374	27 %
Retail Trade Jobs	6,463	8,707	35 %
Service and Office Jobs	4,784	6,052	27 %
Finance, Insurance, Real Estate Jobs	962	1,216	26 %
Medical Jobs	1,040	1,314	26 %
Agriculture, Forestry, Mining Jobs	202	253	25 %
School Students	4,689	5,879	25 %
Miscellaneous Jobs	22	30	36 %

* Medium Series Projections

The population projections assume fertility and mortality to be constant and based upon trends observed in the local population. However, different migration levels were employed for each series, reflecting different assumptions about the vitality of the local economy and activity at HAFB. Projections are included in **Table 3**.

² The study area includes the Alamogordo Division (the City of Alamogordo and portions of the county). Unincorporated portions of Otero County within this boundary are part of the extra-territorial jurisdiction and fall under shared city and county jurisdiction. Growth at Holloman is tied to the demand for city services, though HAFB itself is outside of the city's jurisdiction.

³ In June 2000, the BBER updated its housing, population, and employment projections for the Alamogordo study area for the years 2025 to 2040 to provide planning data for an ongoing water supply study (Livingston and Associates). These projections were based on the medium series projections for this plan and do not change the underlying assumptions.

According to these projections, the population in the city and study area will increase to between 44,008 and 59,606 inhabitants by the year 2020.

TABLE 3: STUDY AREA POPULATION PROJECTIONS

Projection Series / Geographic Area	2000	2010	2020
LOW SERIES			
Alamogordo Division	34,149	37,353	39,957
Holloman AFB	5,297	4,666	4,051
Study Area Total – approx. .58% growth	39,446	42,020	44,008
MEDIUM SERIES			
Alamogordo Division	35,969	41,283	46,366
Holloman AFB	5,786	5,537	5,234
Study Area Total – approx. 1.2% growth	41,756	46,820	51,600
HIGH SERIES			
Alamogordo Division	37,340	45,124	53,560
Holloman AFB	6,007	6,052	6,046
Study Area Total – approx. 1.9% growth	43,347	51,176	59,606

- In the low projection series, migration is initially assumed to start at the same level as the average number of (net) migrants between 1980 and 1990. In the 1980s, as in the first part of the 1990s, Otero County was an out-migration area. In this scenario, Holloman and areas outside of the study area would experience continued population losses, but the City of Alamogordo and its immediate surrounding area would still gain some population through in-migration.
- The medium projection series starts with the assumption that the migration level will be the same as the first half of the decade during which the tide of out-migration declined, partially as a result of the establishment of the German mission at Holloman. In this scenario the city and its environs would experience greater, though still moderate, population gains. In this scenario, the proportion of people residing within the Alamogordo Division Study Area (relative to all of Otero County) increases from 63% in 2000 to 72% in 2020 (See **Figure 4**).
- The high series assumes that the level of migration will be the same as the level between 1993 and 1995 when in-migration to Otero County exceeded out-migration. While Holloman itself is still assumed to lose some population during the planning period, city and county population would increase. This estimate is consistent with an increase in foreign military personnel.

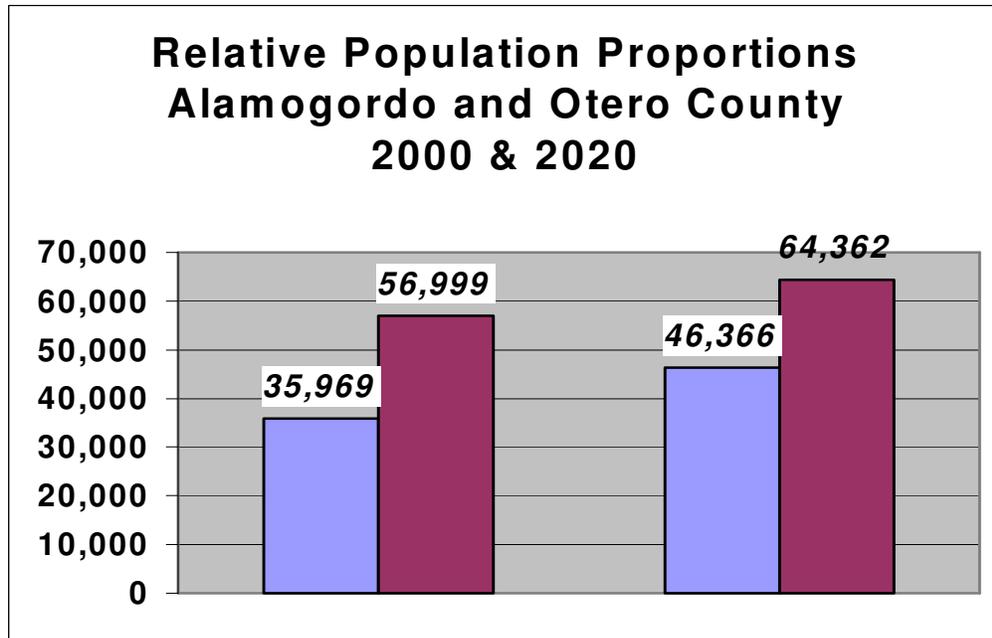


Figure 4. The proportion of people residing within the Alamogordo Division Study Area (relative to all of Otero County) will increase from 63% in 2000 to 72% in 2020. (Source: Tables 3 & 5 in *Housing, Population, and Employment Projections for the Alamogordo, NM Transportation Planning Area 1995-2020*, UNM Bureau of Business and Economic Research, 1997).

Population histograms (See **Figure 5**) illustrate how the study area's population structure will change during the planning period, and suggest several unique characteristics of the city's population. This data can help in planning future city services such as parks, senior centers, and schools.

- The city has a disproportionately high percentage of young adults (particularly 20 to 29 year olds) due in part to the military presence.
- The presence of HAFB personnel in Alamogordo will be even more striking by 2020. The town's population remains largely under 45 years old, while the state's population will include nearly even representation from various age groups.
- Despite this unusual age structure, the city can still expect an increase in its elderly population. This is predicated on an influx of retirees into the area, and retirees from HAFB. Although the percentage values in the 45+

year old categories remain largely unchanged, the population increases from 36,179 to 51,603, and a corresponding increase in the elderly population can be expected.

Population Histograms

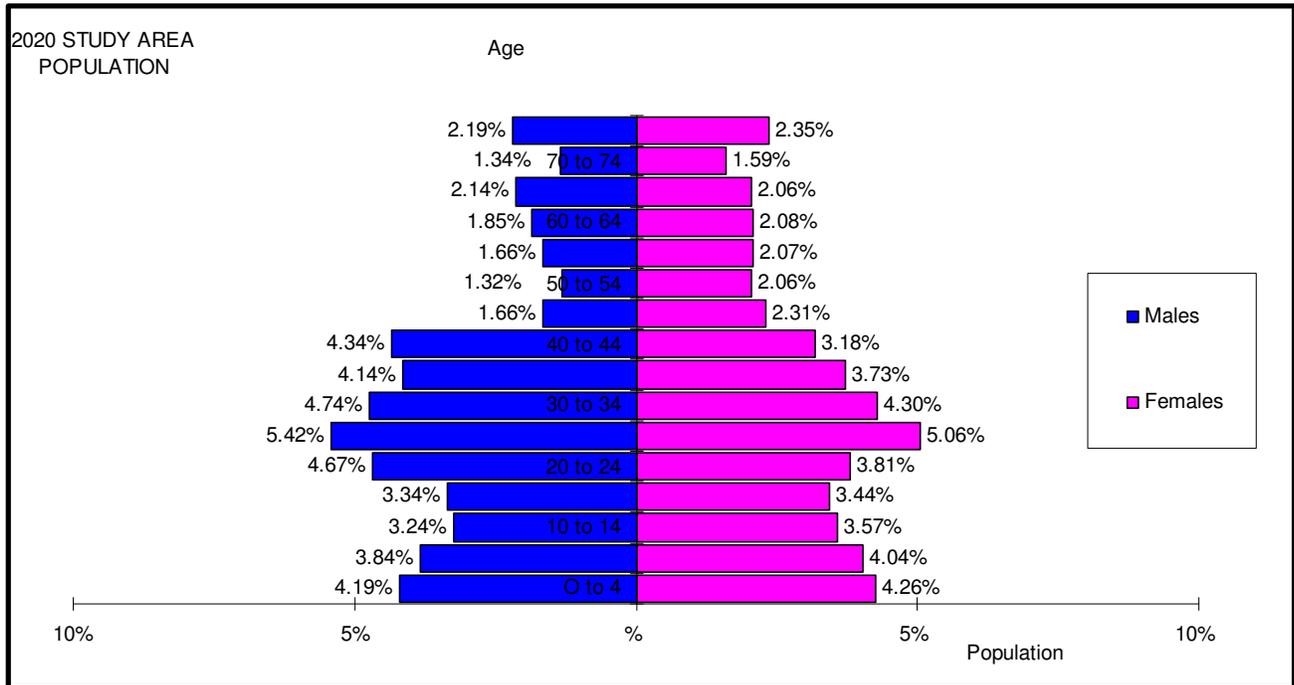
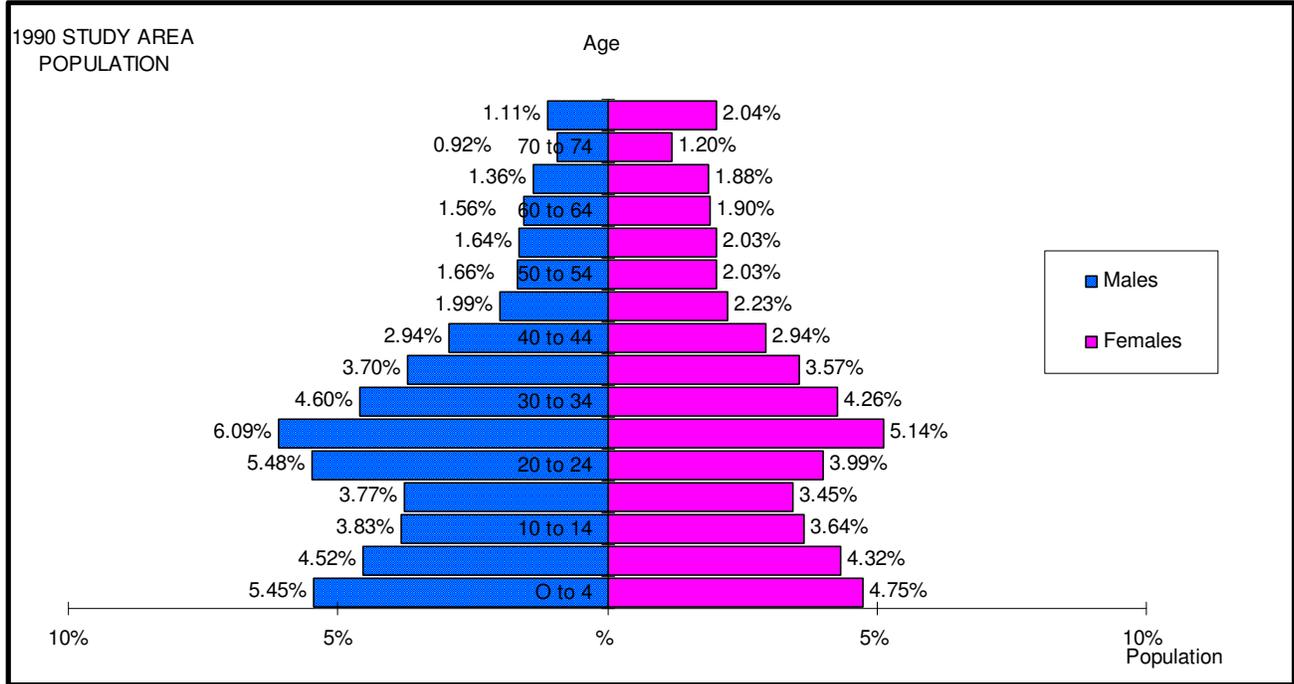


Figure 5. Future age and sex characteristics and related service needs can be inferred from population projections for Alamogordo.

3. Housing Growth

Otero County building permit data (on construction occurring between 1990 to 1995) and housing data provided by the Holloman Air Force Base Public Affairs Office were used to update 1990 Census data, and establish a baseline upon which to estimate future housing stock. Growth in expected population is the principal factor explaining the number of housing units. Other factors include expectations about future household size and vacancy rates.

The mix of single family versus multi-family housing in the study area is expected to follow the 1980-1990 trend in Otero County and multi-family percentage will fall from its current 24% share of the housing stock.

- Projections show potential housing increases between 4,368 and 12,752 units (27 and 79%). The medium series projection shows an increase of 8,219 units (51%).
- The medium series housing projection includes an estimated 19,249 single family and 5,157 multi-family residences. These figures assume that the multi-family part of the market will decline from the current 24% to about 21% by 2020 ($5,157/19,249+5,157 = 0.21$).

4. Economic Development Trends

Economic conditions and their effect on migration influence growth in population and housing. HAFB will have a significant economic impact on the planning area since it employs more than 3,300 civilians, nearly 20% of the county workforce.

The county ranked 15th in per capita personal income in 1987 (in New Mexico), but it had slipped to number 20 (out of 33) by 1997, according to the U.S. Department of Commerce Bureau of Economic Analysis.

- In the low series employment projection it was assumed that the study area would grow at only 40.0% of the statewide rate. This represents an economic scenario similar to what occurred in the 1970's and 1990's.
- The middle series employment projections assume that the Alamogordo study area would grow at its 1960 to 1995 average rate, 60.7% of the state rate and defense downsizing would limit growth at Holloman.
- In the high series employment projection, it was assumed that the area would grow at the same growth rate as the state of New Mexico. This projection represents the case where there is further expansion of defense spending at Holloman.

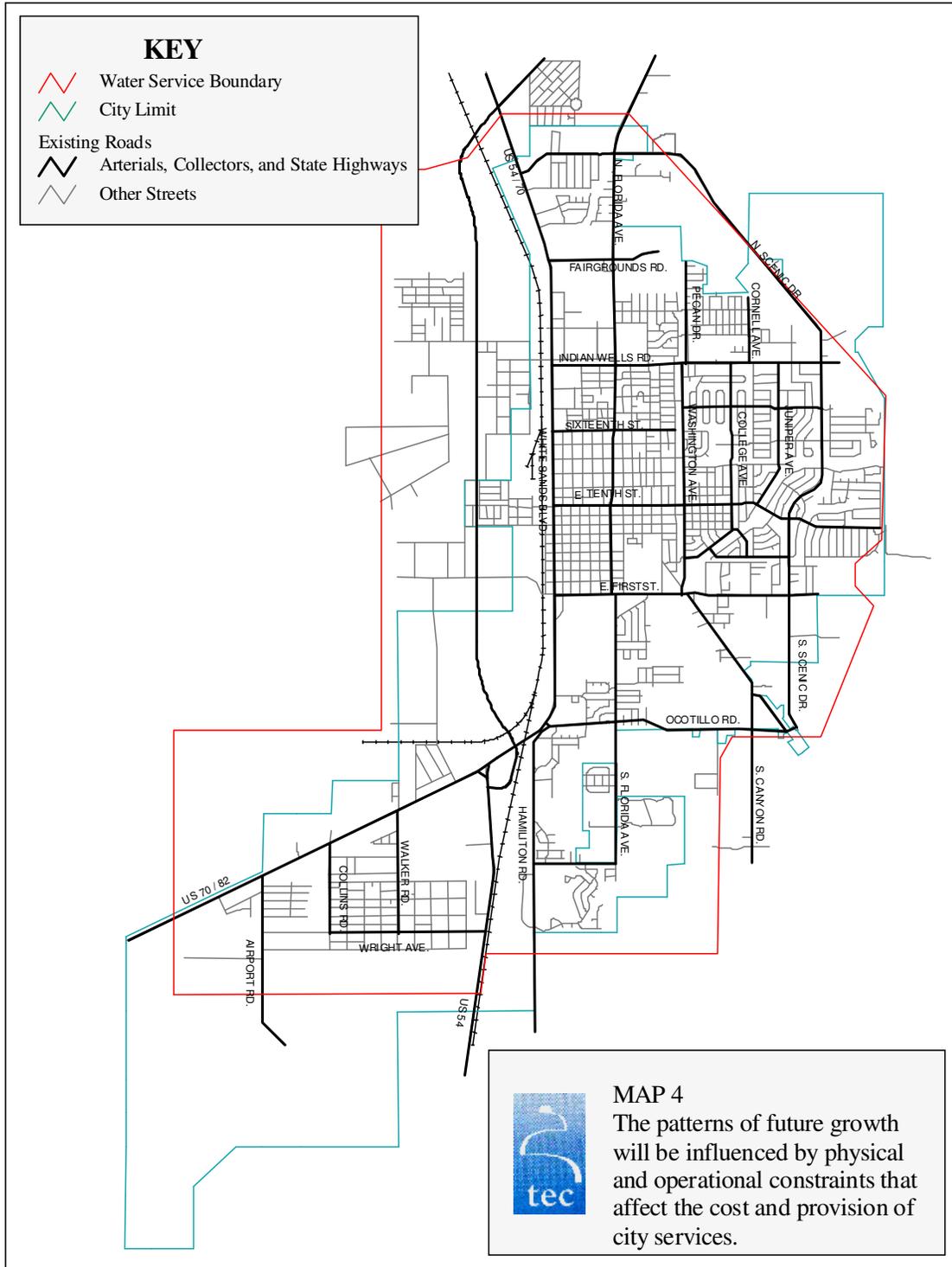
D. GROWTH OPPORTUNITIES AND CONSTRAINTS

An analysis of development opportunities, constraints, and growth trends was performed to help understand where the areawide-projected growth will locate within the plan area. This was accomplished through several steps that involved assembling information on the potential for future growth geographically in the plan area and identifying growth trends and development opportunities. The constraints and opportunities are described below and illustrated on **Map 4**.

1. Planning Assumptions.

Certain planning assumptions have been made about Alamogordo's future:

- Existing Land Use - It was assumed that the potential for infill development in the urbanized portion of Alamogordo is limited and, although there is some developable land within the city, most new growth will occur in the privately-owned areas south and southwest of town.
- Ownership - Large areas of otherwise developable land are owned by federal and state governmental agencies and will not be available for urban uses. To the east of town is the Lincoln National Forest. Large tracts of land to the north and south are owned by NM State Land Office or the U.S. Bureau of Land Management. Holloman is located west of the city.
- Growth Trends - Certain areas of the city have experienced more recent growth than others. The majority of building permits between 1990 and 1995 were issued in four areas: 1) both sides of North Scenic Drive just east of North White Sands Boulevard and west of North Florida Avenue; 2) south of First Street and west of Florida Avenue; 3) along Panorama Boulevard between White Sands Boulevard and Florida Avenue; and 4) around the golf course on the south side of the city.
- Future Water and Sewer Service Areas - The city's ability to provide services is limited by topographic features and facility service zones. **Map 4** illustrates the approximate boundaries of water service availability, which is determined by the capacity of the city's water distribution system. Current water supplies are assumed to be sufficient to serve an estimated 40,000 residents under normal circumstances. Provision of sewer service is limited by the ability of the system to gravity flow to the treatment plant, which is located just west of the airport. Much of the area west of the railroad tracks is below the treatment plant. Although lift stations could be constructed to serve the low areas, these would increase long-term operational and maintenance costs. The benefits gained (perhaps in revenues of increased tax base) would need to outweigh these costs.



- Floodplains - Development is limited to some extent by the area's susceptibility to flooding from the major drainages. Alamogordo is situated at the base of the Sacramento Mountains, and many of the mountain canyons and arroyos drain through town. The city's drainage system currently includes an extensive curb and gutter system, numerous small drainage ditches, and a large flood control ditch which runs north/south in the area east of downtown. Three new drainage canals and several detention structures have been proposed by the U.S. Army Corps of Engineers. The potential for future development will be influenced by implementation of these flood protection facilities.

- Transportation Network – Accessibility is a limiting factor for growth in newly developing areas that do not have adequate connections to the region's transportation system, for example the area south of Panorama Boulevard. The only railroad crossing and connection to U.S. 54 in this area is an unpermitted underpass at Desert Lakes Road, so the primary access is on Florida Avenue and Hamilton Road. A new railroad crossing and connection to US 54 is planned at the South Scenic Drive extension, which would also extend east and north to connect with existing Scenic Drive at Ocotillo Road. Until this connection and the development of a regularly spaced grid of streets is completed, access to the large amount of potential development in this area will be limited. The consequences of not taking action to improve the street system will likely be gradual increases in congestion on South Florida Avenue and other existing streets. Improvements such as these, at the developing edge of the existing urbanized area, will require cooperation and joint-planning between the city and county. The *Alamogordo Comprehensive Traffic Study* (URS-Greiner, 1998), which is incorporated by reference as a technical appendix to this document, addresses improvements to the street network in more detail.

2. Future Land Use Growth Allocations

Map 5 shows where Alamogordo's future growth is likely to occur and where it would be most suitable based upon an analysis of development constraints and opportunities and their effect upon different land uses.

- Single-Family Residential - The greatest opportunity for single-family residential growth is in the area east of U.S. 54 and south of Ocotillo Drive, within the vacant private lands that have access to city water and sewer service. This area is expected to absorb much of the single-family development within the next 20 years. The highest concentration of growth is expected directly south of Ocotillo Road and east of South Florida Avenue and between U.S. 54 and South Florida due to the availability of services and easy access to commercial and school areas.

Residential areas west of U.S. 54 and south of U.S. 70, around Walker Avenue and Collins Avenue, are also expected to grow. In the northern part of the city, the area east of North Scenic Drive, north of Indian Wells Road, and west of Oregon Avenue is projected to grow due to available land and services (**Map 5**).

- **Multi-Family/Trailer Park Residential** - The area with the greatest potential for multi-family growth (including mobile homes) is bordered by U.S. 70/82 on the north, Airport Road on the west, U.S. 54 on the east, and the Alamogordo airport on the south. This region is zoned for manufactured housing units (mhu) and is expected to develop significantly by the year 2020 due to its proximity to HAFB. The area bordered by First Street on the north, South Scenic Drive on the east, and South Florida on the west is also expected to attract additional high-density development in the next 20 years. Several developments are already proposed in this area.
- **Commercial Development** - Future retail growth will most likely concentrate in the southwest area of the city along U.S. 70/82 and U.S. 54. There has already been commercial growth at the interchange of these two highways, and the area is projected to undergo considerable future commercial development. The intersection of First Street and White Sands Boulevard is a prime retail area. High levels of residential growth to the south and east are expected to stimulate commercial growth. Residential growth south of Ocotillo Road may also encourage commercial development in this region. The expectation for increased residential growth east of the junction of U.S. 70/54 and U.S. 82 will likely increase the demand for commercial development. Increases in commercial traffic on U.S. 54 may also stimulate commercial development on White Sands Boulevard. Another area of potential commercial development is the connector routes leading to the Relief Route. There are also opportunities for growth through revitalization of existing commercial areas, including the central business district.
- **Industrial Development** - The long narrow area west of White Sands Boulevard is zoned for industrial use. Although some of this area (the landfill site) is limited for redevelopment and might be more suitable for recreational reuse, the remaining acres are prime industrial acreage. Low impact industrial and manufacturing uses, particularly those not emitting air pollutants would be appropriate. Another prime industrial area is in the region north of and including the Alamogordo-White Sands Regional Airport.

- Schools and Public Uses - The high potential for residential growth south of First Street makes this area a natural location for future school sites. The Mountain View Middle School was recently completed in this area. It should be noted that existing schools are a major capital investment for a community that should be fully used. New schools are expensive to build and staff. Therefore, new development should provide for meeting this expense. For example, the German government has constructed a school in town to support the children of GAF personnel.

E. PLANNING ISSUES

There are a number of important planning issues that Alamogordo must face during the next 20 years. These can be categorized into three major categories: development controls, public infrastructure, and community needs. These issues are discussed in this section of the *Comprehensive Plan 2000*. Goals, objectives, and policies are proposed in the next section to address the issues.

1. Development Controls

- **Growth Management** - The city and county have different philosophies and perspectives on growth. It is difficult to manage the impacts of growth outside the city even though it ultimately has fiscal impacts upon city services and infrastructure. Another aspect of growth management is the need to plan to maintain compatible land uses on the east side of HAFB so as not to jeopardize its primary mission or within the noise contour of the Alamogordo Regional Airport. Growth should be encouraged in areas where it is most compatible with land uses, and where public expenditures in new infrastructure and services are minimized. However, expenditures may be necessary to entice new business to the community and the merit of using public funds in that regard should not be overlooked.
- **Zoning** - The city is revising its zoning ordinance to better implement current planning goals and policies. The new ordinance would provide discrete zoning districts and more specific regulations to prevent incompatible adjacent land uses and accommodate more housing choices and appropriate mixed uses in the downtown core. The ordinance might also provide criteria for making quasi-judicial determinations such as changes to the zoning map. There is currently only one master map of these zoning districts maintained at City Hall. In the future, it would be advantageous to develop a relational geographic information database so that the zoning map can be updated and validated as accurate. The current zoning system relies on relatively inaccessible designations recorded on the city's property maps to document parcel level zoning. Historical zoning practices have resulted in dissimilar zones in many parts of the city with conflicting land uses allowed in some areas.
- **Extraterritorial Jurisdiction** - While Otero County does not have a zoning ordinance, state law provides for overlapping city and county planning and platting jurisdiction within an area five miles outside the city limits. This helps the city and county to coordinate planning issues within this extraterritorial area where development is occurring. As the city grows and comes into contact with county development, incompatibilities could occur between infrastructure systems, streets, and other features.

There is a need to coordinate city and county development standards, which would enhance infrastructure compatibility in the long run.

- **Annexation** - Alamogordo is now about 20 square miles. The city will grow faster than the surrounding county over the next 20 years, yet it has little control over development occurring on the urban fringe that takes advantage of city services but does not generate revenues for the city. In certain cases, the city may want to consider annexing selected lands that hold the greatest potential for municipal revenue enhancement and/or to address service, safety, health, or other public welfare concerns.
- **Commercial and Industrial Development** – It is very important for Alamogordo to diversify its economic base, since HAFB is such a major player in the region. Adequate land should be identified and reserved for light industrial uses that could take advantage of existing infrastructure while being water-friendly.

Commercial areas need to be carefully designated so that an oversupply does not result in lots of empty storefronts or adversely impact adjacent established residential areas. The city could take advantage of partnerships with New Mexico State University and other educational venues to assure that there is a skilled and trained workforce. Investment in the telecommunications infrastructure necessary to attract high-tech industries - perhaps in partnership with HAFB - could foster economic development.

- **Infill** - Most new development will occur on “raw” land that has not been previously used but is adjacent to existing city services and infrastructure or pays for extending new facilities. There is also an opportunity to develop and fill in existing sites that have either been passed over or could be redeveloped. In some cases this infilling can have a positive effect upon the surrounding neighborhood and also generate revenues while taking advantage of available service capacity. Infill can occur as renovation, revitalization, redevelopment, or new construction. City policies should differentiate between the approach to infill that is appropriate in historic, affordable housing, or more affluent areas. Other opportunities may exist where a “brownfield” site can be remediated and recycled⁴.
- **Affordable Housing** – The average cost of a 2,000 square-foot home in Alamogordo is now \$140,000. The median housing price increased from about \$58,000 to \$71,000 (22%) between 1990 and 1995. Rents have doubled since 1990 while the city has experienced a major residential building boom since 1993. Vacancy rates have remained low. Most of

⁴ Brownfield sites are previously used commercial and industrial properties that suffer from environmental contamination and require special treatment to be redeveloped.

these trends can be attributed to the influence of HAFB, and the presence of foreign training missions, some of which provide housing stipends.

The 2000 Census will provide data that can be used to determine appropriate city policies regarding affordable housing. Another aspect of housing is maintenance and improvements – there are areas of Alamogordo that might benefit from loan programs to assist lower income owners in this regard. The city could take an active role in ensuring that financing and affordable housing is available to low income residents.

- **Community Character** – Participants at the public meetings emphasized that Alamogordo is a desirable place to live for many reasons. Participants suggested a number of strategies and ideas that could be used to maintain the quality of life and amenities that characterize Alamogordo.

Screening, tree planting and controlling commercial signs could beautify the city, especially along its major entryways. A dust abatement program was thought important by some. Parks and green space are needed to provide visual relief and recreation, and more teen activities would be of benefit. Economic diversification and the creation of new jobs paying competitive wages were emphasized. Renovation and investment in the city's downtown historic area should occur. Assuring and protecting water supplies along with conservation was another major theme echoed by many who attended the meetings. Adherence to the city's outdoor lighting control ordinance for existing and new developments was suggested as a way to maintain Alamogordo's "dark skies" character, which would benefit aesthetics, safety, energy conservation, and astronomical research in the nearby mountains.

2. **Public Infrastructure**

- **Transportation System** - The *Alamogordo Comprehensive Traffic Study* (URS-Greiner, 1998) identified major traffic issues, which will need to be addressed in the next 20 years. A summary of these issues is listed below. There are deficiencies on existing streets and some new roadways will be needed to provide an efficient future roadway network. The current transportation system is also lacking in bicycle and pedestrian facilities and there is a need for amenities to accommodate non-motorized, alternative modes of travel.

Issue 1 - Alamogordo's location at the confluence of three major US Highways (US 54, US 70, and US 82) connects the city with other communities such as El Paso, Las Cruces, Tularosa and Cloudcroft; however, all traffic is directed along White Sands Boulevard. This corridor is a major problem area as a result of high accident levels at many

intersections, access conflicts, traffic congestion, and high pedestrian use.

Issue 2 - Tenth Street experiences high accident rates and congestion. Some of the problems include opposing traffic accidents in the continuous left-turn lane, a bottleneck at New York Avenue due to the offset intersection, and high parking needs because of the commercial uses and government buildings.

Issue 3 - North Florida Avenue has several high accident areas at the intersections of Indian Wells Road, First Street, and Sixteenth Street.

Issue 4 - Along North Florida Avenue near Fairgrounds Road, nine new softball fields, for a total of 17 fields, and additional senior citizen's housing are planned. Single-family housing also has grown rapidly in this area in recent years, and additional development is anticipated. To address growth, several new street corridors are needed, including extensions of Fairgrounds Road, Pecan Drive, and Cornell Avenue.

Issue 5 - The strip of land between Oregon Avenue and Washington Avenue, from Indian Wells Road to First Street, is a popular public park. A family recreation center, library, tennis and basketball courts, and elementary school are located in this area. Narrow lanes, traffic congestion, limited access between Oregon and Washington, high bicycle and pedestrian use, and a lack of off-street parking are concerns.

Issue 6 - Safe pedestrian routes from the soccer complex to the high school, and vehicular access to the street system are issues.

Issue 7 - Only two north-south arterial roads (Florida and Hamilton) serve the growing area around the golf course. The only east-west roads to the area are Ocotillo/Panorama, a light-duty street with a narrow easement at the northern edge of this area, and Desert Lakes, a railroad underpass that is impassable during storms. These roads provide inadequate service to a growing area. A new railroad crossing and connection to US 54 is planned at the South Scenic Drive extension. Until this connection and the development of a regularly spaced grid of streets are completed, access to the large amount of potential development in this area will be limited.

Issue 8 - Access is needed to the industrial area west of Airport Road.

Issue 9 - The Alamogordo Relief Route provides an alternate to White Sands Boulevard and improves emergency vehicle response to the area. However, other north-south and east-west roadways are needed on the city's west side to connect to the Relief Route and create a functional street network in this area.

- **Water and Sewer Service** - The city currently draws most of its water from an extensive surface water collection and treatment system, which includes La Luz and Alamo Canyons and Bonito Lake. Available water from Alamo Canyon was one of the principal reasons that Alamogordo developed in this desert landscape. It is moderately difficult to obtain and convey sufficient high quality surface water to meet the city's needs, in part due to the aging water supply system. Water from Bonito Lake is conveyed to the city by a 76-mile long 22-inch pipeline that was constructed in 1957. This aging pipeline facility is being repaired and upgraded from Carrizozo to La Luz. HAFB and the city periodically maintain and improve sections of the pipeline. Ultimately complete replacement of the line is planned.

It is estimated that the city has enough water rights or supplies of water to handle a population of about 40,000 residents under normal circumstances. This figure excludes water provided to HAFB, which has its own supply system, and is based on a variety of assumptions about water consumption and potential future sources of water. Demand from population growth could approach the capacity of the limited water supply. The city is currently conducting a study of water availability and future delivery systems, which will serve to supplement the information in this *Plan* on water service and supplies.

In 1990, the average per capita water consumption in Alamogordo was 252 gallons per day, which is similar to that of other New Mexico towns in arid climates (see **Figure 6**). Per capita water use in Alamogordo in recent years (1999 and 2000) has declined to under 200 gallons per day, which appears to be the result of water conservation programs.

The city limits summer water use depending upon the quantity of water in the reservoir. Water conservation, including alternating lawn irrigation requirements, is in effect during the "daylight savings time" period. Heightened conservation requirements come into effect when water reserves fall to 50% of storage capacity and become increasingly stringent as reserves diminish. Water rationing requirements include more stringent controls on lawn irrigation, car washing and filling of swimming pools. The city itself has instituted a program to reuse sewage treatment plant reclaimed water for irrigation of city parks and the golf course.

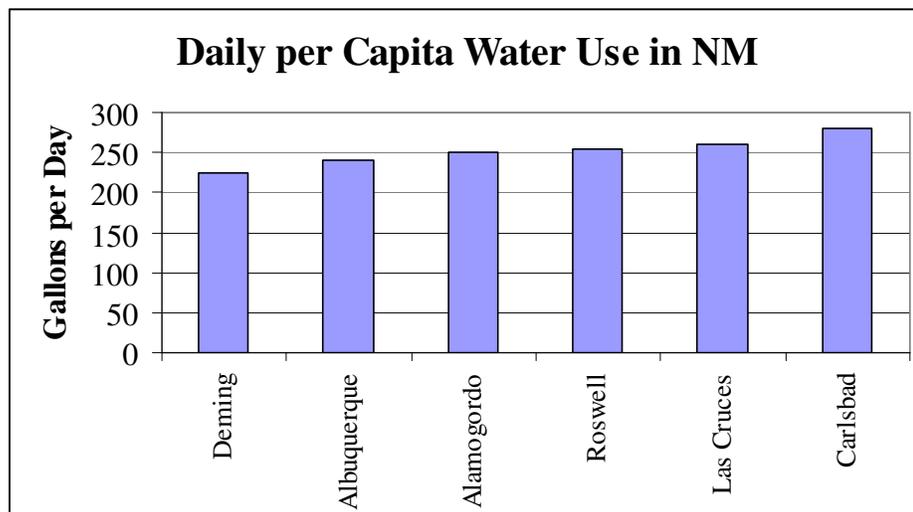


Figure 6. 1990 per capita water consumption in Alamogordo was comparable to other New Mexico cities, but appears to be declining in recent years.

Alamogordo overlies the Tularosa Basin, a large aquifer of moderately saline water. Although it is estimated that 90% of the water in this aquifer is non-potable, improvements in water resource and treatment technologies may allow this aquifer to be used in the future. The city is pursuing the use of reverse osmosis technology to make use of some of the water.

The city's residents generate approximately 3 million gallons of wastewater per day. The capacity of the city's wastewater treatment plant is approximately 4 million gallons per day. Provision of sewer service is limited by the ability of the system to gravity flow to the treatment plant, which is just west of the airport.

- **Drainage** - Alamogordo is situated at the base of the Sacramento Mountains, and many of the mountain canyons and arroyos drain through town. The city's drainage system currently includes an extensive curb and gutter system, numerous small drainage ditches, and a large flood control ditch which runs north/south in the area east of downtown.

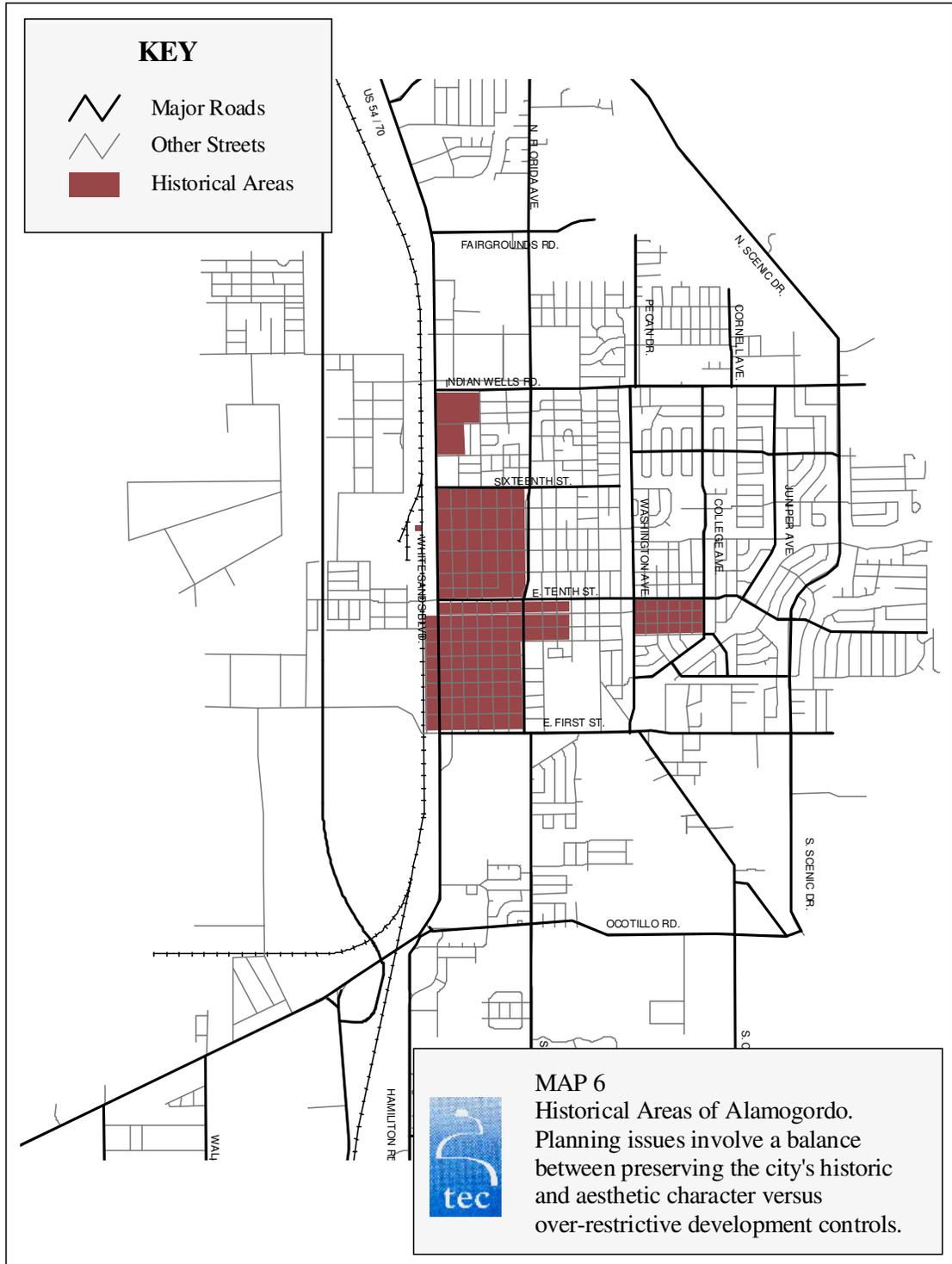
Three new drainage canals and several detention structures have been proposed by the Army Corps of Engineers. Construction on the south channel has begun. The potential for future development will be enhanced by these flood protection facilities. The floodplain below the mouth of Alamo Canyon, however, is still unprotected from flooding. A

considerable area of residential development below the canyon could be impacted by a large flood.

3. Community Needs

- **Recreational Facilities and Trails** - City-owned public recreation facilities include: Alameda Park and Zoo, baseball diamonds, Desert Lakes Golf Course, Jim R. Griggs Sports Complex, and Desert Foothills Park at the base of the Sacramento Mountains. Other recreational facilities within the city include the Riner Steinhoff Soccer Complex and Otero County Fairgrounds. Alamogordo residents also make use of an extensive set of official and unofficial trails and open space. One component of this system is an informal trail running along the McKinley Channel, a major flood control feature crossing the city. Nearly every canyon east of town has a trail leading into the Lincoln National Forest, although in some cases, it is impossible to access these trails without crossing private land. In addition, the nationally organized "rails to trails" program in Otero County envisions an extensive trail system that would create a loop through Alamogordo, extending south to Oliver Lee State Park, east to Sunspot, north to Cloudfcroft, west to La Luz, and then south back to Alamogordo. This trail should be connected with the network in the city.
- **Historic Preservation** - A comprehensive study of Alamogordo's older buildings was completed in 1990 with sponsorship of the New Mexico Office of Cultural Affairs (See **Map 6**). This study identified four historic regions and two multi-building compounds within the city. The city does not currently have a historic preservation ordinance or historic districts. Planning issues involve a balance between preserving the city's historic and aesthetic character versus over-restrictive development controls.

In addition to historic properties, the city contains at least three major prehistoric ruins, including the original "type" site for the Jornada Mogollon. Under state and federal law, the locations of these properties must remain confidential, and public funds cannot be expended on activities that would adversely impact them; unless appropriate affects minimization and mitigation plans are developed in coordination with the appropriate state and/or federal agencies. The sites may also contain human remains, which are protected by state and federal law even on private land. These properties are a community asset with potential to contribute to education and tourism; however, realizing these values is dependent on effective preservation and management.



- **Environmental Protection** - Urban development unavoidably involves the loss of wildlife habitat, and subsequent loss or relocation of wildlife species. Approximately 196 vertebrates (130 birds, 37 mammals, 24 reptiles, and 5 amphibians) and 9 invertebrates potentially can be found in the Alamogordo area. This is a Chihuahuan semi-desert shrubland and grassland; however, plant communities in and around the city itself tend to be heavily disturbed.

A number of threatened and endangered species may also occur in the area; however, it is unlikely that any of these species remain in the urbanized portions of Alamogordo. None of the vegetative communities in the Alamogordo area are rare or unique.

Another environmental issue that has been identified in the Alamogordo plan area is the need to maintain dark skies protection. Control of outdoor night lighting provides benefits to the area's aesthetics, energy conservation, and astronomical research.

- **Public Services and Facilities** - The city provides a full range of community services which include public safety operations, schools and public libraries, city utilities, roads, and parks and recreation facilities. As the city grows, corresponding increases in services will be necessary. *How* the city grows will have some impact on the average and marginal costs of providing these services and facilities.
- **Public Safety** - The primary function of the Alamogordo Department of Public Safety is to provide professional and effective law enforcement and fire protection service. As the city grows, the Department expects shifts in the demand for its services. In 1997, the Department estimated that they responded to 2,221 accidents, made 3,867 arrests, issued about 13,000 traffic citations, handled about 38,500 telephone calls, and conducted over 3,200 community programs. Fire protection is provided through one central station and four sub-stations that serve the incorporated area. In addition, two new fire stations were constructed (2001-2002) and improvements to existing stations are planned. There is an opportunity for enhancing safety and reducing crime by using appropriate planning and design methods. This field is called crime prevention through environmental design (CPTED). Aspects of CPTED can be incorporated into the development process.
- **Schools and Libraries** - At the beginning of the 1996/97 school year, the Alamogordo Public Schools (APS) system had a total enrollment of 7,855 students including children in special education classes and kindergarten. APS operates 16 schools, including three middle schools, the Alamogordo High School, an alternative high school, and 11 elementary schools

(including Holloman, La Luz, and High Rolls). APS has recently completed a new middle school, Mountain View, to serve the growing southern part of Alamogordo. APS owns a number of other facilities and parcels in the city. Some of these are used by the school system for auxiliary purposes (maintenance and administration), and others are leased to a variety of other users. The German government constructed a school to support the GAF mission. Several private schools also offer services in the community along with "home schooling" being available.

The City of Alamogordo Library currently maintains a collection of approximately 80,000 volumes and circulates about 210,000 books annually from its single facility adjacent to City Hall. Over the last two years, the library has increased its circulation by 25% and is still experiencing rapid growth in its circulation. This growth is largely the result of an increased budget which has allowed the library to increase the services it offers, automate its circulation system, and add a variety of computer access opportunities. There is a need to expand the existing library or construct a new facility to accommodate this growing use.

- **Other City Services** - The City of Alamogordo contracts with a private company to provide solid waste collection. The city itself operates a Solid Waste Convenience Center, which provides residents the opportunity to dispose of rubbish not collected curbside (items such as tree branches and furniture) at no charge. Area businesses are also eligible to use the service, although they are assessed a minimal fee. The Public Works Department operates the area's regional landfill, located approximately 23 miles south of Alamogordo. The landfill receives all of the city's solid waste, plus waste from numerous other nearby communities.

The City of Alamogordo also operates the Alamogordo-White Sands Regional Airport, which is located on the southwest side of the city, adjacent to U.S. 70. The *Alamogordo-White Sands Regional Airport Master Plan Study: 1992-2012* (Muller, Sirhall and Associates, 1992), establishes a strategy for maintaining and enhancing the airport's economic viability in the community by expanding the two airport runways and improving the taxiways and terminal building facilities. This document is incorporated into the *Alamogordo Comprehensive Plan 2000* by reference.

F. PLANNING GOALS AND OBJECTIVES

These goals and objectives address the issues facing Alamogordo during the next 20 years. They are derived from the analysis of existing conditions presented in this Comprehensive Plan 2000. The goals and objectives can be used to guide decisions about the future of Alamogordo.

1. Development Controls

• **Growth Management**

GM-1: Encourage development to locate in appropriately designated high- and low-density residential, commercial, industrial, and mixed-use areas within the city limits and extraterritorial planning area as depicted on the Future Land Use Map (**Map 9**).

Objectives:

GM-1.1 Identify areas that have adequate services, access, and environmental conditions for development.

GM-1.2 Develop incentives and/or regulations that encourage appropriate development in identified growth areas.

GM-1.3 Enact annexation policies that bring suitable areas into the city.

GM-1.4 Develop a new, updated subdivision ordinance and require its periodic review and update.

• **Zoning**

Z-1: Develop zoning categories that discourage adjacent, incompatible land uses in the future and minimize or resolve existing conflicts.

Z-2: Implement zoning that will provide a proper mix of land uses and densities, good neighborhoods, housing variety for all incomes, while respecting property rights and meeting community needs.

Z-3: Revise development review procedures where appropriate to assure public involvement, and facilitate legal decision-making.

Z-4: Periodically review and update the zoning ordinance in coordination with the subdivision ordinance to ensure consistency and address issues.

• **Extraterritorial Intergovernmental Coordination**

EIG-1: Ensure development decisions made in the county that influence the city are coordinated with the respective governing authorities.

EIG-2: Coordinate planning with HAFB to assure proper land use in buffer areas for noise attenuation and safety, particularly to preserve the approach to the wide body runway.

EIG-3: Coordinate the extension of city infrastructure into the county.

EIG-4: Work with Otero County to resolve common health, safety, welfare, and aesthetic issues typically addressed by zoning, for example maintenance of the dark skies policy.

EIG-5: Work with the Lincoln National Forest, the BLM, the New Mexico State Highway and Transportation Department, and State Land Office to assure continued access to public lands from Alamogordo and enhance the region's trails system.

- **Annexation**

A-1: Expand the city limits through annexation to match logical boundaries where it is financially feasible for the city to deliver services.

A-2: Expand the city limits to encompass areas that are already growing or expected to grow rapidly in the extraterritorial areas of the county.

- **Infill**

I-1: Encourage reuse of vacant parcels for compatible infill development.

I-2: Develop criteria for appropriate infill development in different neighborhoods, for example historic, affordable housing, or affluent areas.

- **Economic Development**

ED-1: Recognize the need to diversify the local economy and provide additional economic base and provide jobs.

ED-2: Work closely with HAFB to maintain and enhance the local factors that contribute to its mission success.

ED-3: Continue to develop and strengthen ties with the Otero County Economic Development Council to maintain a coordinated strategy for economic development.

- **Industrial Development**

ID-1: Designate an adequate supply of lands appropriate for non-polluting, light industrial uses.

- **Housing**

H-1: Assure ample housing supply and diversity.

H-2: Provide opportunities for development of affordable housing.

- **Community Character**

CC -1: Improve the visual quality of Alamogordo's main entranceways.

CC-2: Identify and acquire choice park lands as part of the development process, and develop appropriate parks with new housing.

CC-3: Provide linkages from the city into the abutting public lands and natural open spaces and to the proposed regional trails system.

CC-4: Provide recreational activities and civic opportunities for youth to feel that they belong and can be involved in the community.

CC-5: Develop a pro-active plan for the identification, condemnation, and systematic removal of dilapidated buildings within the city.

2. Public Infrastructure

- **Transportation System**

T-1: Provide a safe and reliable street system that is efficient and provides alternate routes as shown on the Long Range Street Plan (**Map 7**).

T-2: Provide links between different modes of travel, including bicycle and pedestrian traffic, while minimizing conflicts between them.

T-3: Identify areas where off-street parking is insufficient to take care of localized parking needs and develop parking plans for those areas.

- **Water and Sewer Service**

WS-1: Limit development to levels that can be accommodated within the capacity of the city's water supply and ability to provide sewer services.

WS-2: Extend services where most feasible to developing areas.

WS-3: Manage development to conserve water resources.

WS-4: Encourage water conservation, including the use of reclaimed water and other potential conservation measures, including xeriscaping.

WS-5: Develop additional wet water supply for unusual circumstances and future growth.

- **Drainage**

D-1: Prevent flooding to protect the public health, safety and welfare.

D-2: Continue to work with the Corp of Engineers on a flood control project for the city.

- 3. **Community Needs**

- **Trails and Recreational Facilities**

TR-1: Define and acquire public accessways for open space that connect to the existing and proposed trail systems.

- **Historic Preservation**

HP-1: Acknowledge the role of historic preservation in keeping the best of Alamogordo's past century while looking forward to the future.

HP-2: Preserve and manage prehistoric sites, and make use of their potential to contribute to education and tourism.

- **Environmental Protection**

EP-1: Protect and preserve the landscape elements that make Alamogordo a distinctive and wonderful place to live.

EP-2: Enforce Alamogordo's outdoor lighting control ordinance for existing and new development to maintain the city's dark skies character.

- **Public Services and Facilities**

PSF-1: Assure availability of public services and facilities through coordinated, continuing, and comprehensive planning.

G. POLICIES AND RECOMMENDATIONS

The policy recommendations that are presented in this section of the Comprehensive Plan 2000 are intended to be used in daily decision-making as a means to implement the plan goals.

1. Development Controls

• **Growth Management**

GMP-1: Adhere to the concepts on the Future Land Use Map (**Map 9**) so that Alamogordo grows in a planned, predictable, cost-effective manner.

GMP-2: Identify and encourage proper locations for commercial development, but discourage over supply of commercial land.

GMP-3: Recognize and enhance the unique mixed use potential of the central business area.

GMP-4: Develop a new, updated subdivision ordinance and require its periodic review and update.

• **Zoning**

ZP-1: Develop a geographic information system (GIS) with relational database capability to provide accurate zoning and land use information.

ZP-2: Consider modifying the high-density residential district regulations to allow limited office and retail use as a conditional use.

ZP-3: Investigate making accessory dwelling units a conditional use in certain residential districts.

ZP-4: Periodically review and update the zoning ordinance in coordination with the subdivision ordinance to ensure consistency and address issues.

• **Extraterritorial Intergovernmental Zone**

EIZP-1: Work with Otero County and HAFB to coordinate planning on the east side of the Base.

EIZP-2: Maintain relations with other governmental agencies (U.S. Forest Service, BLM, National Solar Observatory, and Apache Point Observatory) and ensure that their interests in the community are recognized.

- **Industrial Development**

EDP-1: Reserve suitably located parcels for future low impact, low emissions manufacturing.

- **Housing**

HP-1: Establish a program that provides assistance and incentives to revitalize substandard housing stock and blighted neighborhoods, with particular attention to the downtown area.

HP-2: Consider minimal aesthetic standards for all single-family residential dwellings to promote harmony when different housing types are built in established neighborhoods.

- **Community Character**

CCP-1: Preserve scenic views enjoyed by citizens and visitors.

CCP-2: Maintain the dark skies policy and enforce the city's outdoor lighting ordinance.

2. Public Infrastructure

- **Transportation System**

Map 7 is the *Long-Range Major Street Plan*, adopted in 1998 by the City Commission as part of the *Comprehensive Traffic Study* (URS-Greiner). In addition to the transportation policies in the *Comprehensive Traffic Study*, the following transportation related policies have been identified.

TP-1: Conduct a needs analysis and determine the feasibility of providing some kind of transit or paratransit service in Alamogordo to serve those without cars and those who do not drive.

TP-2: Investigate the need for a commuter shuttle between HAFB and the city, and if justified pursue funding.

TP-3: Work with the NMSHTD, HAFB, and Otero County to make bicycling a safer travel option for those using this mode to get to HAFB.

TP-4: Designate bicycle routes and trails throughout the city and construct improvements in a prioritized and sequential way. **Map 8a** highlights the proposed Bicycle Route System.

TP-5: Improve the quality of walking in Alamogordo by providing adequately wide sidewalks along major streets, and by creating an off-road multi-use trail system using existing public rights-of-way such as drainage and water line easements. **Map 8b** shows the proposed trail system.

TP-6: Support the development of the regional trails system, in addition to the internal city system, by cooperating with the other participating agencies and providing connections to city trails. Consider allowing joint use of city-owned property. **Map 8c** shows the proposed trails system.

TP-7: Protect the community investment in the relief route by carefully zoning adjacent lands so that they do not cause adverse traffic impacts such as congestion. Conversely, retain a commercial focus along White Sands Boulevard to protect and promote established local businesses.

- **Water and Sewer Service**

WSP-1: Maintain city water lines to prevent leakage and assure maximum flowthrough of available potable water.

WSP-2: Maintain water conservation policies that encourage more efficient use of water by city residents and consider other potential conservation measures, including xeriscaping.

WSP-3: Maintain and enhance the city's reclaimed water use program.

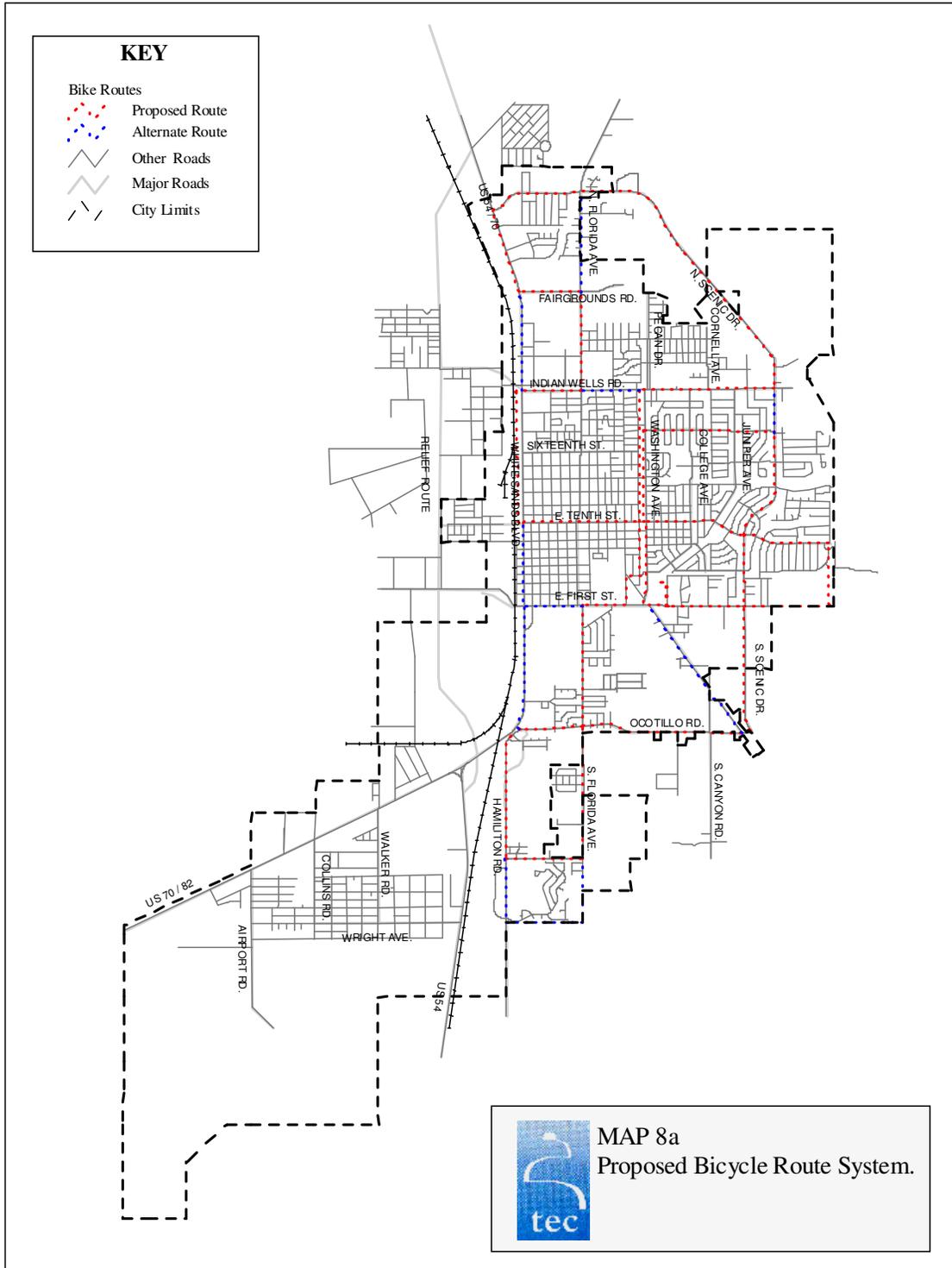
WSP-4: Develop new city water sources and additional water storage facilities.

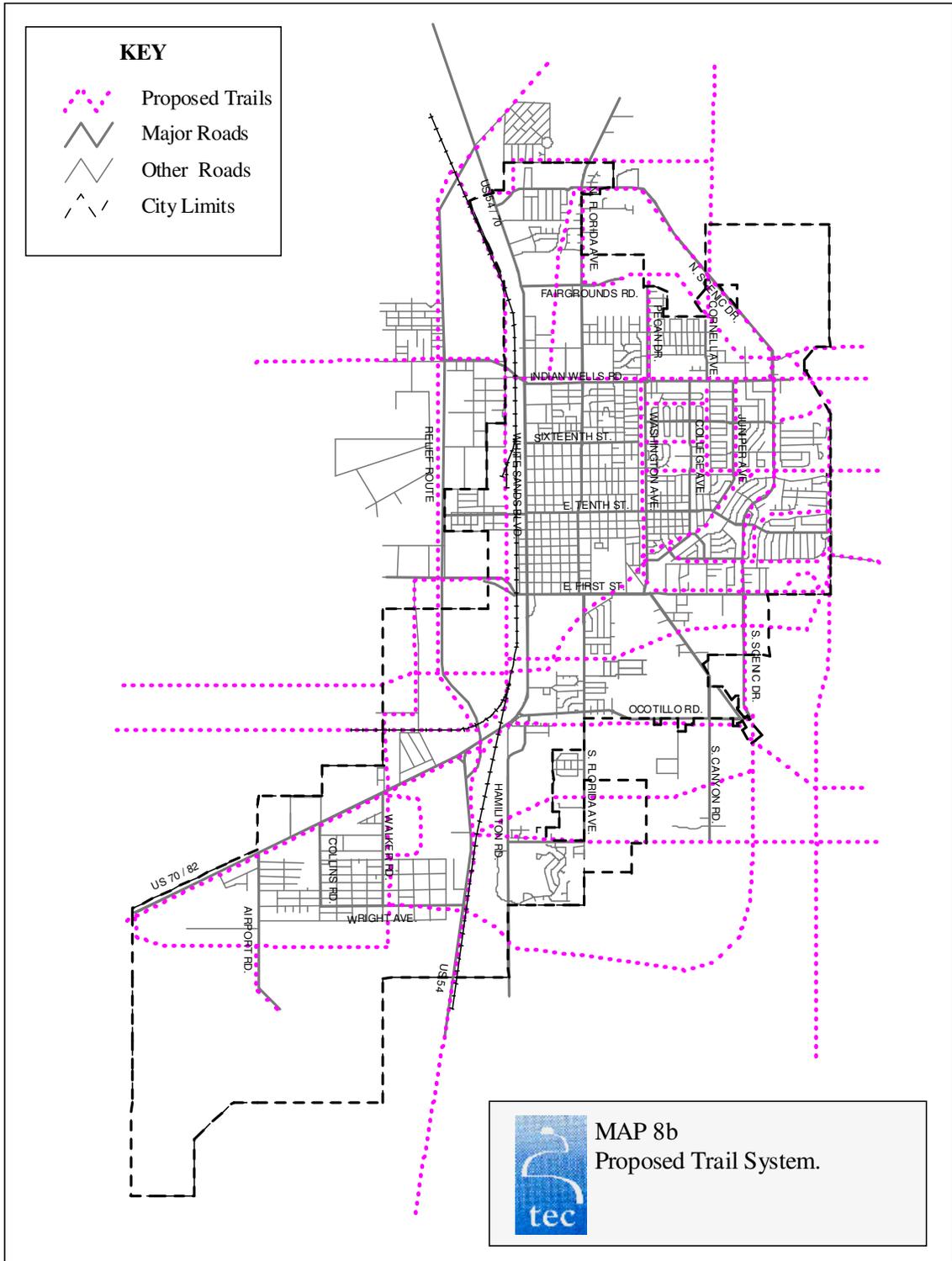
WS-5: Develop additional wet water supply for unusual circumstances and future growth.

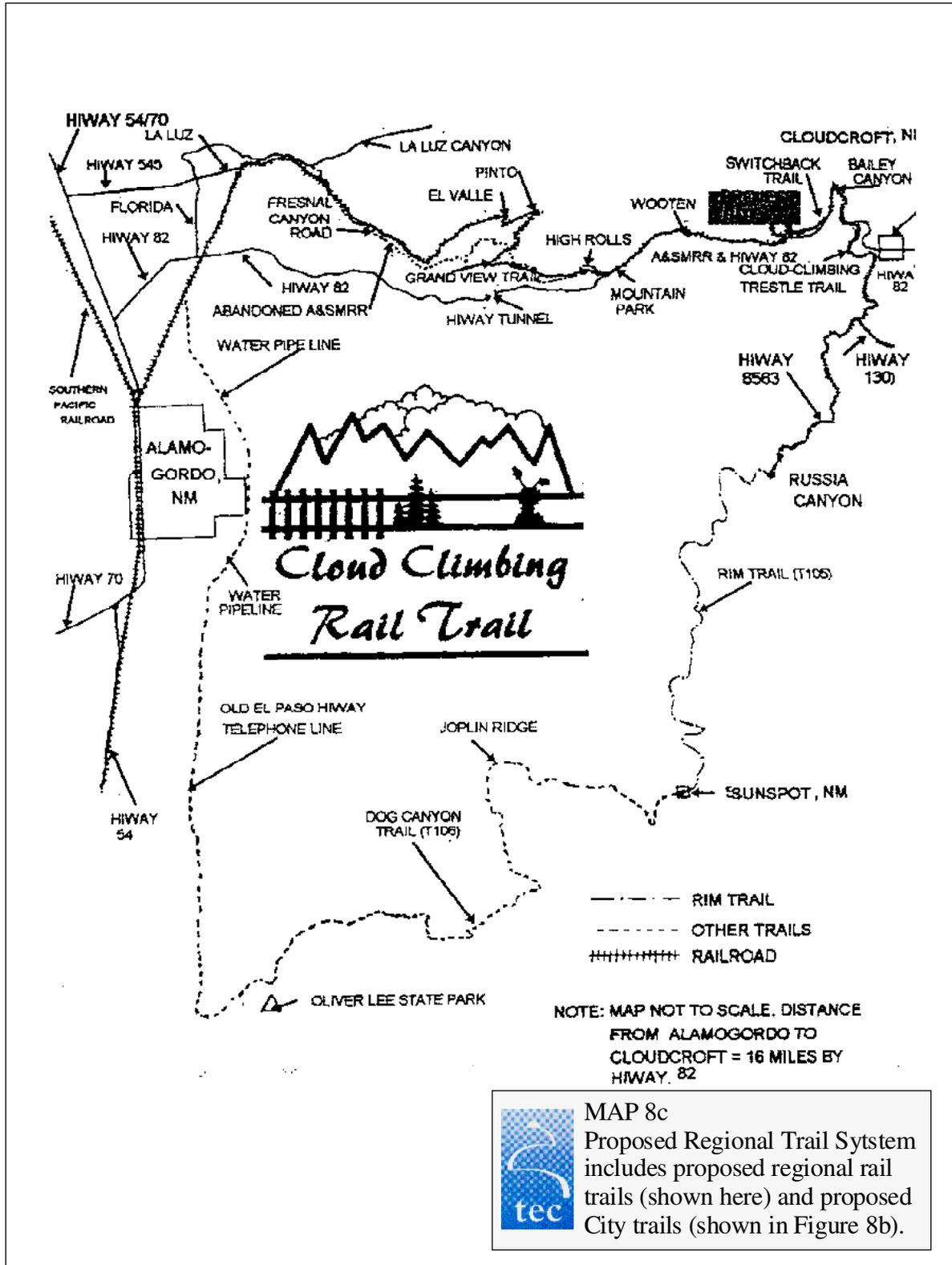
- **Drainage**

DP-1: Pursue funding to address flooding problems, especially below canyons or require that development within the flood hazard area protect the public health, safety, and welfare.

DP-2: Address flooding problems throughout the study area due to infill and existing development.







3. Community Needs (see also Transportation)

• **Trails and Recreational Facilities**

TRP-1: Provide dedicated easements to access Lincoln National Forest trails, particularly at Marble Canyon.

TRP-2: Allow joint use of city water tank areas for parking and staging to access Forest Service trails.

TRP-3: Require parkland dedication and/or "cash in lieu" of dedication as part of the subdivisions and land development process. Establish a means for the city and land developer to work together to identify and develop choice park sites that provide an appropriate and balanced ratio of park land to housing throughout the city.

TRP-4: Maintain and enhance the park blocks between Oregon and Washington Streets as a unique community recreational asset.

TRP-5: Support regional trail initiatives by cooperating with the other participating agencies, providing connections to city trails, considering joint use of city-owned property, and other appropriate actions.

TRP-6: Develop neighborhood recreational areas, possibly as multi-use features with other public facilities such as detention basins.

• **Historic Preservation**

HP-1: Consider establishing an historical overlay district for parts of the downtown Alamogordo area.

HP-2: Consider designating and then preserving specific structures within an historic overlay district, such as the Avis Building.

HP-3: Encourage adaptive reuses for buildings in the historical overlay district.

HP-4: Recognize the value of prehistoric sites as a cultural resource.

• **Environmental Protection**

EP-1: Encourage additional voluntary water conservation measures including xeriscaping to maximize use of existing water.

EP-2: Enact controls on large area grading to minimize blowing dust and prevent soil erosion. Dust reduction is important to the continued operation of the astronomical research facilities in the area.

EP-3: Maintain dark skies policies and ordinances.

- **Public Services and Facilities**

PSP-1: Support and help craft changes to impact fee legislation at the state level that is suitable for use in cities like Alamogordo. Work with the NM Municipal League and similar organizations toward this end.

PSP-2: Explore joint use of schools for community events and neighborhood recreational opportunities.

PSP-3: Investigate the feasibility of expanding or enhancing library services to serve city residents.

PSP-4: Consider applying traffic calming solutions such as speed bumps, constricted streets, and planters to enhance neighborhood safety.

- **Quality of Life**

QLP-1: Control off-premise advertising and billboards to enhance the appearance of major public streets and improve views of the region's remarkable natural setting.

QLP-2: Strengthen landscape regulations so that parking lots provide shade and allow for on-site ground water infiltration.

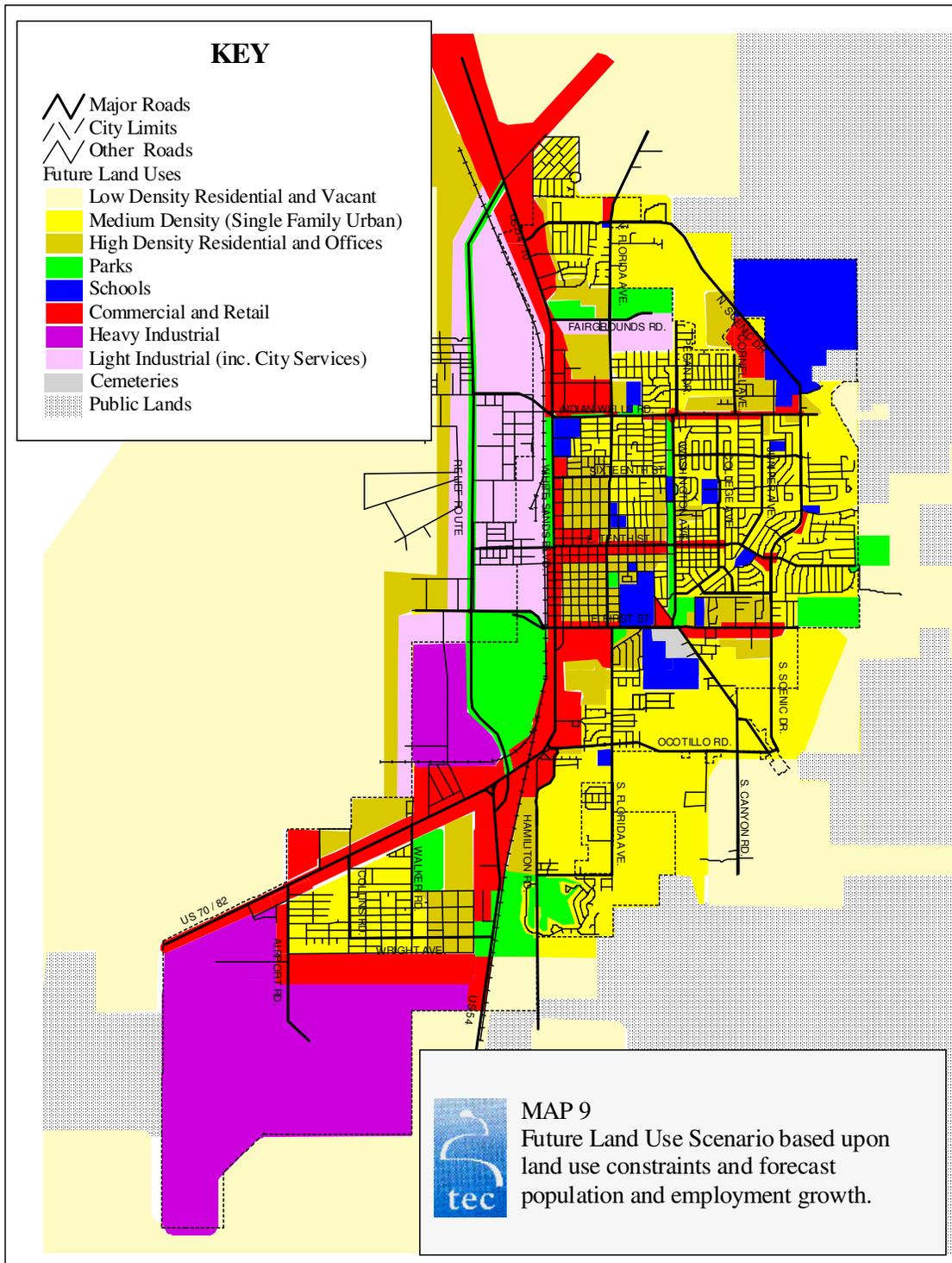
QLP-3: Work with organizations such as National Arbor Day and Scenic America to promote beautification of the city's major entries, particularly using drought-tolerant trees to screen unsightly land uses.

QLP-4: Establish a plan for future reuse of large vacant buildings (such as the old Gerald Champion Memorial Hospital) and vacant land that will enhance the city.

4. Future Land Use

Map 9 depicts general land use patterns that will likely emerge in the City of Alamogordo as population, housing and employment growth occur. The map is based upon existing land use patterns, development constraints and growth

management recommendations. It illustrates potential new growth areas at the edges of the currently developed areas and in potential in-fill areas. The map is not a recommended zoning map, but rather it highlights development patterns that are likely to emerge given existing zoning, infrastructure, and development constraints. This general land use pattern should be considered during proposed zoning revisions; however, variations may be granted.



H. REFERENCES

Bureau of Business and Economic Research: University of New Mexico, *Housing, Population, and Employment Projections for the Alamogordo, New Mexico Transportation Planning Area: 1995-2020*, Prepared for Taschek Environmental Consulting, May 1997.

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Appendix 1:

Housing, Population, and Employment Projections

Technical Appendices

The following reports are adopted by reference
as part of the *Comprehensive Plan 2000*
for the City of Alamogordo

- A. *Alamogordo Comprehensive Traffic Study* (URS-Greiner, 1998).
 - B. *Alamogordo-White Sands Regional Airport Master Plan Study: 1992-2012* (Muller, Sirhall and Associates, 1992).
 - C. *City of Alamogordo, New Mexico: Water Master Plan* (Gordon Herkenhoff and Associates, 1975).
 - D. *City of Alamogordo, Parks & Recreation Department - Five Year Master Plan 2003-2007* (City of Alamogordo, 2002).
 - E. *City of Alamogordo, 40-Year Water Development Plan 2000-2040* (Livingston Associates, P.C., in association with John Shomaker & Associates, Inc., 2003).
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Taschek Environmental Consulting

Prepared for

By

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Bureau of Business and Economic Research

University of New Mexico

May, 1997

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A. INTRODUCTION

This report contains the research methodology and the projections for the Alamoogordo, New Mexico transportation planning area for single family and multi-family housing, population, and retail and non-retail trade employment for the years 1995 through 2020. The study area includes the city of Alamoogordo and a three-mile zone around the city.

The population methodology and projections are presented first, as these provide the basis for the projections of the number of housing units. Next, the methodology and projections for housing units in the study are presented. Finally, the employment projection methodology and results are presented for the Alamoogordo area.

B. POPULATION PROJECTION METHODOLOGY

Population projections are primarily extrapolation from historical and current trends. The general assumption is that, everything else being equal, future trends will resemble the past barring war, epidemic, and catastrophic changes in the environment. In this particular study, demographic trends from 1960 to 1995 were examined to determine the future population growth of Otero County and the study area. This 35 year period captures the major economic and demographic changes in the absence of a global war or a major economic disaster such as the Depression, the effects of which on population growth will be difficult to incorporate in a projection model.

This section will detail both the methodology that was used to establish the baseline populations for the county and study area and the methodology used in projecting the population of the county and the sub-county areas.

General Baseline Methodology

Population counts from the four most recent censuses (1960, 1970, 1980, 1990) were used to establish the historical trends which served as the basis for extrapolating the future population at the county and sub-county areas. From the four decennial censuses (1960, 1970, 1980, 1990) the share of the study area which is divided into Alamogordo Division and Holloman Census Designated Place (Holloman Air Force Base) were estimated. The Alamogordo Division in this study refers only to the City of Alamogordo and its immediate environs and not to the entire Alamogordo Division as defined by the 1990 Census. In addition, housing data provided by the

Holloman Air Force Base Public Affairs Office and housing permit data made available to the Bureau of Business and Economic Research by John Taschek were used to determine the current population of the study area. Post-census population estimates from July 1, 1990 to July 1, 1995

were also used to establish the most recent trends at the county level. School enrollment data were used indirectly to estimate current levels of migration for the population under the age of 65.

The following details the coverage of the study area:

I. 1990 Census Geography

A.. Alamogordo Division (part):

- 1) City of Alamogordo;
- 2) Census Tract 6.01 : Block Group (BG) 2;
- 3) Census Tract 6.02 :
BG 1 - Block #s:104-110, 111A, 111B, 112-115, 117A, 118A, B, 119-123, 140-141;

BG 2-- Block #s 204E, G, H, J, L, M, P, 205-207, 209-210, 212-214;

- 4) Census Tract 5;
 - 5) Boles Acres; and
 - 6) Tract 3.01.
 - 7) La Luz CCD: Block #s 202, 211, 214E, 215, 229-230;
- B). Holloman CDP or Census Tract 6.01, BG 9.

II. 1970 and 1980 Census Geography

A) Alamogordo Division:

- 1) 1970: ED 6-25B (Alamogordo City); ED 27 (Boles Acres, except Dog Canyon Estates); ED 31, ED 32 (part 5); and ED 33 (part 4).
- 2) 1980: ED 696--Alamogordo City; Tract 5 -- ED 699 and ED 711A; ED 708 (except Dog Canyon Estates which is in Tract #6), ED 710A, ED 712A (Tract #4); ED 701, ED 705; ED 692-ED 694 (equivalent 1990 La Luz CCD blocks)

B) Holloman Air Force Base CDP:

- 1). 1970: ED 26, ED 30.
- 2). 1980: Holloman CDP.

III. 1960 Census Geography: Maps for the 1960 Census were unavailable at the time of the study hence the subcounty populations were allocated according to their share in the 1970 Census.

Geographic comparability was established by redrawing the 1970 and 1980 maps to conform to the 1990 Census geographic boundaries. In 1990, counties were divided into Census County Divisions (CCD) or Block Numbering Areas (BNA) which in turn were subdivided into Census Tracts. CCDs were designated for metropolitan counties whereas BNAs were for nonmetropolitan counties. Census Tracts were further subdivided into smaller areas called Census Blocks. The Census Block is the smallest geographic area for which data were collected. A cluster of blocks having the same first digit form a Block Group (BG). Before 1990, the smallest geographic area for which data were collected was the Block, in urbanized areas or incorporated areas with population of 10,000 people or more and the Enumeration District (ED), in all other areas (*1980 Census of Population and Housing Users' Guide, p. 56*). Although the geographic boundaries between the decennial censuses have changed, comparison in this instance was fairly straightforward. With very minor alterations, the EDs in the 1970 and 1980 censuses corresponded to the 1990 Census Tracts.

The census data provided the basis for disaggregating the county population into the study area components and the rest of the county. This historical subcounty population were used as the denominator in estimating the historical fertility, mortality, and migration rates. Births and deaths data were taken from the annual reports of the New Mexico Department of Health Bureau of Vital Records and Health Statistics. Migration was estimated as a residual, that is what is left over after the contribution of natural increase (difference between births and deaths) to population change has been accounted for. Births and deaths are allocated by the Department of Health to geographic areas which correspond, more or less, to the study area.

The starting population for the projection was the modified 1990 Census population count.

This modified population distribution was corrected for age-reporting errors resulting from an omission of "April 1" as a reference date in the question which asks for the age of individual household members. This omission resulted in the undercount of the population in the youngest age groups. The projected population, however, was made consistent with the 1995 Bureau of the Census county population estimates.

Projection Methodology

A combination of projection techniques were used to project the county and subcounty populations. Initially, a ratio-based technique was used to estimate the county population. This was based on the historical share of Otero County in the state population. This was done to ensure that when all the subcounty populations were aggregated, the total did not exceed the county population by a significant amount.

The next step was to use a cohort-component method of population projection. This technique not only projects the total population but also the population for each sex--male/female--and each age cohort.¹ This is achieved by projecting each component of change--fertility, mortality, and migration. These different components are then brought together using a demographic balancing equation.² The population change for each year is calculated and disaggregated into two components: natural increase and net migration. The basic formula is

$$P_{t+1} = P_t + NI + NM$$

¹Except for the oldest age group, 75 years and older, each age cohort is made up of five age groups; for example, 0 - 4, 5 - 9, and so forth.

²Shryock, H., et al. *The Methods and Materials of Demography*. US Department of Commerce Bureau of the Census, p. 730. 1975.

where P_{t+1} is the population at time $t + 1$,
 P_t is the (base) population at time t ,

N_t is the natural increase or the difference between births and deaths between time t
and $t+1$;

NIM is the net migration, the difference between in-and out-migration, between time t

Natural increase is obtained by subtracting the deaths from the births. This natural increase

plus the base population (P) represents the expected population in the absence of migration.

Because of the lack of timely data on both in-migration and out-migration for small areas, net migration is used in small area estimation and projection. Net migration is computed residually.

Using the bookkeeping equation presented above, migration is determined by taking the population change between two time periods ($P_{t+1} - P_t$) and adjusting it for the effects of natural increase. The change in the population is the result of the interaction of births, deaths and migration.

To obtain the low, medium, and high series, different migration levels were estimated based on the following assumptions:

- e) high series assumes that the level of migration will be the same as the level between 1993 and 1995 when in-migration to Otero County outnumbered out-migration. As in the low and medium series, the biggest gainer is the City of Alamogordo and its environs. Holloman CDP is still a net loser but at a lower level. The assumption being that there will be an increase in the number of foreign military personnel.
- d) fertility and mortality assumptions are the same for all three series.

The results of the population projections are presented in Tables 1 - 14.

- a) in the low projection series, migration is initially assumed to start at the same level as the average number of (net) migrants between 1980 and 1990. In the 1980s as in the first part of the 1990 decade, Otero County has been an out-migration area. Holloman CDP and areas outside of the study area contributed to this migration trend. The City of Alamogordo and its surrounding areas, however, gained population through in-migration. The 1980s level was used as the basis for the low series.

- b) the medium projection series starts with the assumption that the migration level will be at the same as the first half of the decade when the tide of out-migration has abated. Otero County as a whole still suffered loss of population due to out-migration albeit at a significantly lower level than in the 1980s. Between 1990 and 1995, Otero County has lost, on average, about 500 people as a result of out-migration. Again, as in the 1980s, the City of Alamogordo and its environs were the biggest gainers. The arrival of German military personnel to the area has compensated for some of the losses from out-migration of Otero County residents, primarily those in the college and early adult ages.

Table 2
 Projected Population for Holloman AFB, by Age and Sex
 July 1, 1990 to July 1, 2020
 MEDIUM SERIES

Age Group	July 1...									
	1990	1995	2000	2005	2010	2015	2020			
Females										
0-4	491	490	485	475	464	454	440			
5-9	322	325	320	315	309	302	293			
10-14	199	203	200	200	194	191	185			
15-19	172	169	167	165	163	160	156			
20-24	350	350	345	339	332	325	316			
25-29	407	477	473	463	444	444	430			
30-34	316	314	310	304	299	292	284			
35-39	197	197	194	194	191	187	183			
40-44	75	78	78	78	78	77	76			
45-49	13	14	15	16	18	18	20			
50-54	8	8	8	8	8	8	8			
55-59	4	4	4	4	4	4	4			
60-64	5	5	5	5	5	5	5			
65-69	1	1	1	1	1	1	1			
70-74	1	1	1	1	1	1	1			
75+	2	0	0	0	0	0	0			
All Ages	2,623	2,620	2,600	2,559	2,516	2,468	2,407			
Males										
0-4	413	475	463	448	435	420	403			
5-9	340	332	332	323	313	303	291			
10-14	212	214	208	202	197	191	184			
15-19	235	233	228	222	216	209	209			
20-24	621	635	619	600	581	560	538			
25-29	623	619	602	583	564	544	523			
30-34	348	337	348	338	327	316	305			
35-39	266	269	262	235	248	240	231			
40-44	93	89	88	84	87	83	81			
45-49	24	20	20	21	21	22	23			
50-54	2	2	3	3	5	6	7			
55-59	4	4	2	3	3	6	8			
60-64	2	2	2	2	4	5	7			
65-69	3	1	1	2	4	5	8			
70-74	1	0	2	3	4	5	7			
75+	1	0	2	3	4	6	7			
All Ages	3,278	3,249	3,185	3,101	3,019	2,928	2,827			

Table 1
 Low, Medium, and High Series Population Projection for Otero County, by Alamoergo Study Area
 July 1, 1990 - July 1, 2020

Projection Series/Geographic Area	July 1...						
	1990	1995	2000	2005	2010	2015	2020
MEDIUM SERIES							
Otero County	52,028	54,681	56,999	58,938	60,939	62,765	64,361
Alamoergo Division Study Area	30,276	33,180	35,969	38,583	41,283	43,896	46,366
Holloman AFB	5,901	5,808	5,786	5,660	5,537	5,395	5,234
Study Area Total	36,177	39,047	41,756	44,244	46,820	49,291	51,600
Remainder of County	15,851	15,634	15,243	14,694	14,120	13,473	12,762
LOW SERIES							
Otero County	51,960	53,091	53,919	54,354	54,795	55,022	55,005
Alamoergo Division Study Area	30,239	32,281	34,149	35,761	37,353	38,764	39,957
Holloman AFB	5,895	5,601	5,297	4,972	4,666	4,359	4,051
Study Area Total	36,134	37,882	39,446	40,733	42,020	43,123	44,008
Remainder of County	15,826	15,209	14,473	13,620	12,775	11,899	10,977
HIGH SERIES							
Otero County	52,071	55,640	59,172	62,793	66,609	70,493	74,247
Alamoergo Division Study Area	30,301	33,762	37,340	41,107	45,124	49,301	53,560
Holloman AFB	5,912	5,971	6,007	6,030	6,032	6,039	6,046
Study Area Total	36,213	39,733	43,347	47,137	51,176	55,260	59,606
Remainder of County	15,858	15,907	15,825	15,656	15,433	15,133	14,741

Age Group	Birth Series									
	1990	1995	2000	2005	2010	2015	2020			
0-4	947	965	947	924	899	874	843			
5-9	662	657	653	637	622	605	584			
10-14	411	417	408	400	391	381	369			
15-19	407	402	398	387	379	369	358			
20-24	971	985	964	928	913	885	853			
25-29	1,090	1,095	1,074	1,046	1,018	988	953			
30-34	684	671	658	642	626	609	585			
35-39	462	466	459	449	427	414	414			
40-44	167	168	167	165	163	161	158			
45-49	37	37	33	35	38	40	42			
50-54	11	11	11	11	10	11	14			
55-59	8	8	8	8	8	9	10			
60-64	7	7	7	7	7	8	9			
65-69	4	4	4	4	4	5	6			
70-74	2	2	2	2	2	2	3			
75+	3	0	0	0	0	0	0			
All Ages	5,501	5,809	5,786	5,660	5,536	5,395	5,234			

Table 3
Projected Population for Alameda County Division in the Study Area,
by Age and Sex: July 1, 1990 to July 1, 2020
MEDICAL SERVICES

Age Group	July 1, ...						
	1990	1995	2000	2010	2020		
Females							
0-4	1,227	1,330	1,426	1,513	1,601	1,684	1,759
5-9	1,242	1,347	1,446	1,536	1,627	1,712	1,790
10-14	1,118	1,219	1,314	1,401	1,491	1,576	1,655
15-19	1,076	1,176	1,272	1,361	1,452	1,539	1,621
20-24	1,093	1,195	1,292	1,383	1,476	1,565	1,648
25-29	1,391	1,531	1,666	1,794	1,927	2,057	2,181
30-34	1,227	1,511	1,877	1,972	1,706	1,822	1,933
35-39	1,094	1,207	1,318	1,423	1,532	1,640	1,743
40-44	990	1,091	1,189	1,282	1,378	1,473	1,563
45-49	794	866	933	995	1,058	1,118	1,178
50-54	725	789	848	902	958	1,010	1,058
55-59	712	795	855	909	965	1,017	1,065
60-64	682	751	817	880	946	1,010	1,071
65-69	678	745	811	872	936	998	1,058
70-74	433	492	552	613	679	747	817
75+	734	815	894	971	1,052	1,133	1,211
All Ages	15,217	16,700	18,105	19,422	20,783	22,100	23,346
Males							
0-4	1,490	1,570	1,633	1,679	1,719	1,746	1,759
5-9	1,297	1,389	1,468	1,534	1,597	1,649	1,689
10-14	1,173	1,251	1,317	1,371	1,422	1,461	1,490
15-19	1,128	1,215	1,292	1,358	1,422	1,477	1,522
20-24	1,360	1,470	1,569	1,654	1,728	1,811	1,872
25-29	1,580	1,720	1,850	1,966	2,080	2,185	2,275
30-34	1,296	1,443	1,588	1,726	1,869	2,009	2,141
35-39	1,072	1,209	1,347	1,482	1,625	1,768	1,907
40-44	972	1,123	1,278	1,439	1,611	1,791	1,946
45-49	695	748	802	853	908	963	1,017
50-54	600	628	646	666	669	675	714
55-59	590	643	691	735	777	816	850
60-64	561	627	692	755	820	884	967
65-69	490	574	664	760	865	978	1,034
70-74	333	385	439	494	555	617	714
75+	402	489	587	697	823	966	1,123
All Ages	15,039	16,480	17,844	19,161	20,500	21,796	23,020
Both Sexes							
0-4	2,717	2,900	3,059	3,192	3,320	3,430	3,518
5-9	2,539	2,736	2,915	3,070	3,224	3,361	3,479
10-14	2,291	2,469	2,631	2,772	2,911	3,037	3,145
15-19	2,204	2,491	2,564	2,719	2,873	3,016	3,142
20-24	2,433	2,664	2,861	3,037	3,213	3,376	3,520
25-29	2,971	3,251	3,516	3,790	4,008	4,236	4,456
30-34	2,533	2,795	3,060	3,313	3,575	3,830	4,074
35-39	2,167	2,416	2,664	2,905	3,157	3,407	3,650
40-44	1,489	1,614	1,735	1,857	1,986	2,081	2,199
45-49	1,489	1,614	1,735	1,857	1,986	2,081	2,199
50-54	1,325	1,415	1,495	1,562	1,627	1,684	1,731
55-59	1,322	1,438	1,546	1,644	1,742	1,834	1,915
60-64	1,243	1,377	1,509	1,635	1,766	1,893	2,027
65-69	1,168	1,319	1,475	1,632	1,802	1,976	2,091
70-74	767	876	991	1,107	1,234	1,365	1,531
75+	1,136	1,303	1,481	1,668	1,876	2,098	2,335
All Ages	30,276	33,180	35,959	38,583	41,283	43,896	46,366

Table 4
Projected Population for Study Area, by Age and Sex
July 1, 1990 to July 1, 2020
MEDICAL SERVICES

Age Group	July 1, ...						
	1990	1995	2000	2010	2020		
Females							
0-4	1,718	1,820	1,911	1,989	2,065	2,138	2,199
5-9	1,564	1,672	1,767	1,851	1,926	2,015	2,083
10-14	1,317	1,421	1,514	1,599	1,685	1,767	1,840
15-19	1,248	1,345	1,439	1,525	1,614	1,699	1,777
20-24	1,443	1,545	1,637	1,721	1,808	1,890	1,964
25-29	1,838	2,007	2,139	2,258	2,381	2,501	2,611
30-34	1,543	1,665	1,782	1,891	2,004	2,114	2,217
35-39	1,291	1,404	1,514	1,617	1,723	1,827	1,925
40-44	1,065	1,169	1,267	1,360	1,456	1,550	1,640
45-49	808	879	948	1,011	1,076	1,137	1,194
50-54	734	791	852	906	961	1,014	1,063
55-59	716	776	837	892	948	1,003	1,070
60-64	687	751	819	883	948	1,013	1,075
65-69	679	746	812	874	938	1,001	1,061
70-74	434	492	552	613	681	749	821
75+	737	815	894	972	1,054	1,134	1,214
All Ages	17,860	19,320	20,785	22,249	23,719	24,928	26,753
Males							
0-4	1,973	2,045	2,096	2,273	2,333	2,366	2,463
5-9	1,637	1,721	1,801	1,937	1,910	1,952	1,980
10-14	1,385	1,465	1,535	1,634	1,617	1,652	1,674
15-19	1,363	1,448	1,521	1,634	1,638	1,666	1,724
20-24	1,981	2,105	2,188	2,308	2,371	2,410	2,410
25-29	2,203	2,339	2,431	2,583	2,645	2,729	2,798
30-34	1,644	1,800	1,956	2,016	2,197	2,252	2,445
35-39	1,338	1,478	1,609	1,661	1,873	2,007	2,138
40-44	1,064	1,227	1,403	1,409	1,793	2,011	2,200
45-49	719	754	786	875	833	850	899
50-54	602	628	650	630	676	642	643
55-59	595	628	644	694	732	783	824
60-64	563	628	694	733	825	890	953
65-69	493	575	667	671	870	944	1,104
70-74	334	385	441	451	559	623	689
75+	403	487	588	571	828	971	1,130
All Ages	18,317	19,737	21,050	22,362	23,519	24,724	26,847
Both Sexes							
0-4	3,691	3,865	4,007	4,262	4,219	4,304	4,562
5-9	3,201	3,399	3,568	3,788	3,846	3,966	4,063
10-14	2,702	2,866	3,039	3,235	3,203	3,418	3,514
15-19	2,611	2,793	2,960	3,160	3,252	3,385	3,500
20-24	3,424	3,649	3,823	4,029	4,126	4,281	4,374
25-29	4,061	4,346	4,590	4,840	5,026	5,229	5,409
30-34	3,207	3,466	3,718	3,906	4,201	4,439	4,682
35-39	2,629	2,882	3,124	3,277	3,596	3,834	4,063
40-44	2,129	2,296	2,470	2,789	3,280	3,562	3,879
45-49	1,527	1,633	1,734	1,806	1,909	1,987	2,053
50-54	1,336	1,419	1,502	1,639	1,637	1,695	1,746
55-59	1,311	1,441	1,532	1,664	1,751	1,844	1,928
60-64	1,269	1,379	1,513	1,615	1,773	1,903	2,028
65-69	1,172	1,320	1,478	1,545	1,809	1,985	2,165
70-74	789	877	993	1,064	1,240	1,375	1,510
75+	1,140	1,302	1,483	1,543	1,881	2,108	2,345
All Ages	36,177	39,047	41,735	44,343	46,819	49,291	51,600

Table 5
 Projected Population for Otero County, by Age and Sex
 July 1, 1990 to July 1, 2020
 MEDICAL SERVICES

Age Group	July 1...						
	1990	1995	2000	2005	2010	2015	2020
Females							
0-4	2,427	2,404	2,365	2,405	2,436	2,475	2,478
5-9	2,347	2,437	2,505	2,534	2,577	2,620	2,671
10-14	2,029	2,123	2,197	2,236	2,321	2,371	2,413
15-19	1,810	1,900	1,982	2,047	2,121	2,182	2,237
20-24	1,938	2,035	2,117	2,182	2,256	2,316	2,371
25-29	2,419	2,566	2,688	2,791	2,902	3,001	3,090
30-34	2,174	2,294	2,400	2,492	2,591	2,678	2,738
35-39	1,833	1,965	2,067	2,135	2,250	2,333	2,413
40-44	1,577	1,679	1,769	1,847	1,933	2,008	2,080
45-49	1,237	1,302	1,359	1,406	1,458	1,500	1,543
50-54	1,137	1,188	1,237	1,275	1,318	1,352	1,383
55-59	1,110	1,165	1,215	1,255	1,298	1,334	1,366
60-64	1,012	1,076	1,138	1,192	1,251	1,303	1,353
65-69	998	1,024	1,085	1,138	1,197	1,249	1,299
70-74	619	679	741	800	869	934	1,002
75+	1,025	1,105	1,186	1,259	1,339	1,413	1,470
AB Aves	25,672	27,041	28,251	29,253	30,317	31,248	32,122
Males							
0-4	2,611	2,645	2,690	2,837	2,887	2,665	2,628
5-9	2,275	2,341	2,396	2,502	2,445	2,453	2,448
10-14	2,038	2,113	2,141	2,235	2,160	2,156	2,152
15-19	1,976	2,042	2,088	2,170	2,144	2,158	2,162
20-24	2,763	2,887	2,981	3,088	3,127	3,184	3,225
25-29	2,379	2,487	2,535	2,602	2,768	2,876	2,974
30-34	2,268	2,406	2,448	2,490	2,590	2,597	2,620
35-39	1,879	2,022	2,148	2,203	2,300	2,401	2,407
40-44	1,704	1,869	2,039	2,033	2,403	2,601	2,807
45-49	1,220	1,220	1,233	1,288	1,216	1,200	1,178
50-54	1,034	1,033	1,044	1,094	1,006	982	952
55-59	1,035	1,076	1,112	1,163	1,182	1,182	1,195
60-64	982	1,049	1,113	1,143	1,227	1,280	1,327
65-69	858	945	1,037	1,049	1,220	1,336	1,444
70-74	582	636	691	748	803	861	919
75+	711	815	942	930	1,200	1,354	1,521
AB Aves	26,356	27,640	28,748	29,684	30,632	31,497	32,340
Both Sexes							
0-4	5,038	5,169	5,325	5,442	5,323	5,340	5,306
5-9	4,622	4,778	4,901	5,036	5,022	5,072	5,119
10-14	4,087	4,236	4,338	4,471	4,481	4,536	4,533
15-19	3,785	3,942	4,070	4,318	4,286	4,340	4,399
20-24	4,317	4,526	4,675	4,842	4,907	5,071	5,071
25-29	5,183	5,453	5,669	5,878	6,030	6,184	6,316
30-34	4,442	4,700	4,935	5,093	5,360	5,554	5,733
35-39	3,732	3,987	4,215	4,344	4,640	4,840	5,022
40-44	3,281	3,548	3,808	3,880	4,336	4,610	4,887
45-49	2,457	2,532	2,593	2,694	2,675	2,700	2,717
50-54	2,191	2,241	2,281	2,369	2,324	2,334	2,335
55-59	2,146	2,241	2,321	2,420	2,461	2,515	2,561
60-64	1,994	2,125	2,251	2,477	2,477	2,585	2,681
65-69	1,817	1,969	2,122	2,187	2,427	2,584	2,743
70-74	1,201	1,315	1,432	1,499	1,671	1,795	1,921
75+	1,735	1,971	2,128	2,189	2,539	2,767	2,990
AB Aves	52,028	54,681	56,999	58,937	60,939	62,765	64,562

Table 6
 Projected Population for Holdover AFR, by Age and Sex
 July 1, 1990 to July 1, 2020
 LOW SERVICES

Age Group	July 1...						
	1990	1995	2000	2005	2010	2015	2020
Females							
0-4	491	465	439	413	387	343	337
5-9	322	309	290	272	257	241	224
10-14	198	193	182	172	162	152	142
15-19	172	160	151	143	136	128	119
20-24	350	333	313	294	277	260	241
25-29	467	453	438	428	403	378	359
30-34	316	296	286	281	264	249	233
35-39	196	187	178	178	168	159	140
40-44	75	74	71	71	68	65	62
45-49	13	13	14	14	14	15	15
50-54	8	8	8	8	8	8	8
55-59	4	4	4	4	4	4	4
60-64	5	5	5	5	5	5	5
65-69	1	1	1	1	1	2	2
70-74	1	1	1	1	1	2	2
75+	2	0	0	0	0	1	1
AB Aves	2,621	2,490	2,356	2,232	2,097	1,970	1,842
Males							
0-4	483	455	427	398	370	342	315
5-9	340	318	307	286	266	247	228
10-14	212	205	192	179	167	156	144
15-19	224	223	211	197	184	171	158
20-24	621	624	608	572	494	457	420
25-29	623	623	592	555	517	480	444
30-34	368	342	321	311	299	279	258
35-39	265	258	242	226	211	196	181
40-44	92	86	81	77	73	68	63
45-49	24	19	19	19	19	19	18
50-54	2	2	2	2	2	2	2
55-59	4	4	4	4	4	4	4
60-64	2	2	2	2	2	2	2
65-69	3	3	3	3	3	3	3
70-74	1	1	1	1	1	1	1
75+	1	0	0	0	0	0	0
AB Aves	3,374	3,111	2,941	2,750	2,569	2,388	2,210
Both Sexes							
0-4	973	921	866	811	756	705	652
5-9	661	627	597	560	524	488	452
10-14	410	397	373	359	329	308	285
15-19	406	383	362	340	319	298	277
20-24	970	941	884	826	771	716	662
25-29	1,089	1,045	984	919	839	798	755
30-34	683	640	602	564	528	492	458
35-39	462	445	421	395	370	345	320
40-44	167	160	152	145	137	130	122
45-49	145	145	132	132	133	134	134
50-54	10	10	10	10	10	10	10
55-59	8	8	8	8	8	8	8
60-64	7	7	7	7	7	7	7
65-69	4	4	4	4	4	4	4
70-74	2	2	2	2	2	2	2
75+	3	0	0	0	0	0	0
AB Aves	5,895	5,601	5,397	4,972	4,666	4,359	4,051

Table 7
 Projected Population for Alameda County Division in the Study Area,
 by Age and Sex: July 1, 1990 to July 1, 2020
 LOW SERIES

Age Group	July 1, 1990 to July 1, 2020				
	1990	1995	2000	2010	2020
Females					
0-4	1,209	1,277	1,317	1,433	1,499
5-9	1,223	1,294	1,316	1,406	1,470
10-14	1,102	1,170	1,232	1,333	1,336
15-19	1,061	1,130	1,192	1,286	1,310
20-24	1,077	1,147	1,211	1,319	1,341
25-29	1,371	1,470	1,552	1,726	1,805
30-34	1,209	1,298	1,380	1,453	1,591
35-39	1,078	1,159	1,233	1,303	1,432
40-44	976	1,048	1,114	1,233	1,333
45-49	783	831	875	946	1,000
50-54	715	757	795	836	902
55-59	721	764	802	833	888
60-64	672	721	766	806	881
65-69	668	716	760	799	872
70-74	427	472	517	607	697
75+	724	782	839	888	989
All Ages	15,014	16,036	16,972	18,594	19,993

Age Group	July 1, 1990 to July 1, 2020				
	1990	1995	2000	2010	2020
Males					
0-4	1,509	1,547	1,570	1,574	1,560
5-9	1,313	1,369	1,412	1,440	1,472
10-14	1,188	1,233	1,267	1,286	1,299
15-19	1,142	1,197	1,242	1,302	1,336
20-24	1,377	1,449	1,508	1,591	1,618
25-29	1,600	1,696	1,779	1,905	1,983
30-34	1,312	1,423	1,527	1,620	1,712
35-39	1,085	1,192	1,295	1,391	1,488
40-44	984	1,107	1,229	1,350	1,579
45-49	703	738	771	800	861
50-54	607	617	622	618	633
55-59	598	634	665	689	741
60-64	568	618	665	708	789
65-69	496	566	639	713	814
70-74	318	379	422	508	622
75+	407	482	564	654	851
All Ages	16,325	16,348	17,177	17,979	19,469

Age Group	July 1, 1990 to July 1, 2020				
	1990	1995	2000	2010	2020
Both Sexes					
0-4	2,717	2,824	2,907	2,962	3,020
5-9	2,537	2,663	2,768	2,916	2,968
10-14	2,289	2,403	2,495	2,634	2,681
15-19	2,202	2,327	2,438	2,590	2,707
20-24	2,650	2,956	3,219	3,488	3,606
25-29	2,970	3,165	3,340	3,628	3,841
30-34	2,531	2,720	2,907	3,237	3,417
35-39	2,164	2,351	2,530	2,694	3,010
40-44	1,860	2,035	2,244	2,523	2,708
45-49	1,486	1,569	1,646	1,711	1,837
50-54	1,322	1,375	1,417	1,445	1,523
55-59	1,319	1,397	1,466	1,532	1,649
60-64	1,260	1,339	1,431	1,514	1,735
65-69	1,164	1,281	1,399	1,511	1,802
70-74	764	831	939	1,025	1,318
75+	1,130	1,264	1,403	1,542	1,832
All Ages	30,339	31,281	34,149	35,572	39,463

Table 8
 Projected Population for Study Area, by Age and Sex
 July 1, 1990 to July 1, 2020
 LOW SERIES

Age Group	July 1, 1990 to July 1, 2020				
	1990	1995	2000	2010	2020
Females					
0-4	1,699	1,742	1,776	1,800	1,830
5-9	1,545	1,603	1,646	1,680	1,710
10-14	1,305	1,363	1,413	1,454	1,522
15-19	1,212	1,280	1,344	1,389	1,471
20-24	1,426	1,480	1,524	1,560	1,646
25-29	1,837	1,923	1,990	2,045	2,188
30-34	1,532	1,596	1,661	1,717	1,824
35-39	1,275	1,346	1,413	1,471	1,581
40-44	1,050	1,122	1,186	1,242	1,348
45-49	796	844	888	925	991
50-54	723	759	798	829	885
55-59	723	765	804	835	890
60-64	677	722	768	808	884
65-69	669	716	761	800	879
70-74	428	472	518	562	694
75+	726	783	839	888	990
All Ages	17,635	18,658	19,318	20,005	21,245

Age Group	July 1, 1990 to July 1, 2020				
	1990	1995	2000	2010	2020
Males					
0-4	1,991	2,002	1,997	1,973	1,944
5-9	1,653	1,687	1,719	1,726	1,720
10-14	1,399	1,438	1,458	1,468	1,461
15-19	1,376	1,420	1,433	1,471	1,490
20-24	1,997	2,057	2,084	2,084	2,074
25-29	2,222	2,288	2,334	2,361	2,395
30-34	1,679	1,765	1,848	1,919	2,052
35-39	1,331	1,449	1,537	1,617	1,774
40-44	1,076	1,193	1,311	1,427	1,648
45-49	727	756	790	819	879
50-54	609	619	619	632	638
55-59	602	635	668	693	717
60-64	570	619	668	712	795
65-69	499	566	641	716	819
70-74	319	380	424	467	627
75+	408	482	566	656	867
All Ages	18,499	19,338	20,118	20,729	22,348

Age Group	July 1, 1990 to July 1, 2020				
	1990	1995	2000	2010	2020
Both Sexes					
0-4	3,691	3,745	3,774	3,773	3,735
5-9	3,198	3,289	3,365	3,405	3,456
10-14	2,700	2,801	2,872	2,963	2,994
15-19	2,609	2,710	2,797	2,866	2,961
20-24	3,424	3,537	3,604	3,644	3,700
25-29	4,060	4,211	4,324	4,406	4,487
30-34	3,204	3,361	3,509	3,636	3,876
35-39	2,626	2,796	2,951	3,088	3,356
40-44	2,127	2,315	2,495	2,668	3,016
45-49	1,574	1,601	1,744	1,811	1,921
50-54	1,332	1,379	1,423	1,452	1,477
55-59	1,327	1,400	1,471	1,528	1,635
60-64	1,246	1,340	1,435	1,520	1,679
65-69	1,168	1,283	1,402	1,516	1,732
70-74	767	832	941	1,028	1,312
75+	1,134	1,264	1,404	1,544	1,838
All Ages	36,134	37,882	39,446	40,734	44,008

Table 9
 Projected Population for Otero County, by Age and Sex
 July 1, 1990 to July 1, 2020
 LOW SERIES

Age Group	July 1, 1990 to July 1, 2020						
	1990	1995	2000	2005	2010	2015	2020
Females							
0-4	2,407	2,407	2,394	2,368	2,331	2,303	2,243
5-9	2,327	2,345	2,343	2,328	2,285	2,265	2,250
10-14	2,011	2,044	2,039	2,061	2,057	2,057	2,040
15-19	1,799	1,829	1,837	1,871	1,888	1,894	1,892
20-24	1,921	1,955	1,977	1,985	1,998	1,998	1,993
25-29	2,298	2,463	2,509	2,537	2,569	2,488	2,296
30-34	2,135	2,206	2,245	2,271	2,300	2,217	2,232
35-39	1,835	1,890	1,936	1,967	2,001	2,024	2,039
40-44	1,561	1,617	1,669	1,691	1,725	1,748	1,765
45-49	1,225	1,255	1,277	1,280	1,294	1,309	1,309
50-54	1,128	1,144	1,163	1,170	1,179	1,181	1,178
55-59	1,099	1,122	1,141	1,151	1,161	1,165	1,163
60-64	1,002	1,036	1,069	1,095	1,119	1,138	1,133
65-69	948	986	1,019	1,044	1,071	1,090	1,106
70-74	612	654	696	734	777	816	833
75+	1,013	1,065	1,114	1,153	1,198	1,234	1,252
All Ages	26,624	26,620	26,620	26,714	26,973	27,126	27,156
Males							
0-4	2,628	2,607	2,544	2,498	2,430	2,347	2,234
5-9	2,289	2,291	2,286	2,232	2,167	2,108	2,108
10-14	2,071	2,070	2,046	2,005	1,910	1,848	1,848
15-19	1,988	1,999	1,970	1,964	1,911	1,867	1,867
20-24	2,294	2,433	2,403	2,412	2,389	2,370	2,305
25-29	2,782	2,823	2,830	2,831	2,838	2,801	2,764
30-34	2,283	2,355	2,419	2,465	2,512	2,544	2,565
35-39	1,892	1,980	2,031	2,110	2,171	2,220	2,263
40-44	1,715	1,819	1,917	2,008	2,104	2,194	2,254
45-49	1,227	1,220	1,216	1,204	1,191	1,184	1,184
50-54	1,060	1,033	1,001	999	920	876	864
55-59	1,042	1,056	1,066	1,078	1,064	1,054	1,041
60-64	988	1,030	1,067	1,093	1,122	1,142	1,175
65-69	864	927	994	1,068	1,135	1,192	1,203
70-74	586	634	662	697	734	768	828
75+	715	802	903	991	1,097	1,209	1,325
All Ages	26,526	27,071	27,460	27,640	27,822	27,896	27,849

Table 10
 Projected Population for Hobbsman AFB, by Age and Sex
 July 1, 1990 to July 1, 2020
 HIGH SERIES

Age Group	July 1, 1990 to July 1, 2020						
	1990	1995	2000	2005	2010	2015	2020
Females							
0-4	492	499	504	507	507	510	508
5-9	323	331	334	335	338	340	338
10-14	199	206	208	210	213	214	214
15-19	172	172	173	176	178	180	180
20-24	351	358	358	361	363	365	365
25-29	468	483	480	494	497	498	497
30-34	317	320	321	324	327	328	328
35-39	197	200	204	207	209	210	211
40-44	75	80	81	83	85	87	88
45-49	13	14	16	17	19	21	22
50-54	8	8	8	8	8	8	8
55-59	4	4	4	4	4	4	4
60-64	5	5	5	5	5	5	5
65-69	1	1	1	1	1	1	1
70-74	1	1	0	1	2	2	2
75+	2	2	0	0	0	1	2
All Ages	2,628	2,669	2,700	2,724	2,751	2,771	2,790
Males							
0-4	484	483	480	478	475	471	466
5-9	341	337	345	344	342	340	336
10-14	212	218	216	215	215	214	213
15-19	235	227	227	227	226	225	223
20-24	622	645	643	639	635	629	621
25-29	625	629	625	621	617	611	604
30-34	369	363	363	360	358	355	352
35-39	266	273	272	272	271	269	267
40-44	93	91	92	92	93	94	94
45-49	24	20	21	21	21	21	21
50-54	2	2	3	3	3	3	3
55-59	4	4	4	4	4	4	4
60-64	2	2	3	3	3	3	3
65-69	3	3	2	2	2	2	2
70-74	1	1	0	1	1	1	1
75+	1	0	2	2	3	5	8
All Ages	3,284	3,302	3,287	3,294	3,281	3,288	3,266

Age Group	July 1, 1990 to July 1, 2020						
	1990	1995	2000	2005	2010	2015	2020
Both Sexes							
0-4	5,035	5,014	4,938	4,866	4,763	4,650	4,497
5-9	4,617	4,637	4,630	4,593	4,432	4,357	4,357
10-14	4,082	4,114	4,104	4,065	4,029	3,966	3,888
15-19	3,781	3,828	3,851	3,836	3,805	3,759	3,759
20-24	4,316	4,389	4,410	4,397	4,387	4,369	4,369
25-29	5,179	5,288	5,349	5,346	5,394	5,388	5,360
30-34	4,438	4,561	4,664	4,736	4,812	4,861	4,890
35-39	3,727	3,870	3,987	4,077	4,172	4,244	4,302
40-44	3,252	3,436	3,577	3,699	3,829	3,942	4,019
45-49	2,452	2,475	2,493	2,494	2,504	2,500	2,493
50-54	2,187	2,178	2,178	2,129	2,099	2,057	2,042
55-59	2,141	2,178	2,207	2,229	2,225	2,219	2,204
60-64	1,990	2,066	2,136	2,186	2,241	2,280	2,328
65-69	1,812	1,913	2,013	2,112	2,196	2,282	2,310
70-74	1,198	1,278	1,359	1,431	1,511	1,584	1,681
75+	1,729	1,867	2,017	2,144	2,295	2,442	2,577
All Ages	51,969	53,091	53,919	54,354	54,795	55,032	55,095

Age Group	July 1, 1990 to July 1, 2020						
	1990	1995	2000	2005	2010	2015	2020
Both Sexes							
0-4	976	982	984	984	982	981	974
5-9	663	669	679	679	680	679	675
10-14	411	424	424	425	428	428	426
15-19	407	409	411	413	414	415	413
20-24	972	1,002	1,001	1,000	998	994	986
25-29	1,092	1,114	1,114	1,114	1,113	1,109	1,101
30-34	683	683	683	684	683	684	680
35-39	463	474	477	478	480	480	480
40-44	168	171	173	175	178	181	182
45-49	37	34	34	37	40	44	47
50-54	11	11	11	11	11	11	11
55-59	8	8	8	8	8	8	8
60-64	7	7	7	7	7	7	7
65-69	4	4	4	4	4	4	4
70-74	2	2	2	2	2	2	2
75+	3	0	2	2	3	6	8
All Ages	5,973	5,971	6,007	6,030	6,023	6,009	6,044

Table 12
 Projected Population for Study Area, by Age and Sex
 July 1, 1990 to July 1, 2020
 HIGH SERIES

Age Group	July 1, 1990						
	1990	1995	2000	2005	2010	2015	2020
0-4	1,720	1,838	1,999	2,145	2,297	2,458	2,616
5-9	1,945	1,708	1,849	1,998	2,156	2,320	2,483
10-14	1,318	1,432	1,585	1,727	1,879	2,037	2,196
15-19	1,290	1,374	1,506	1,669	1,800	1,959	2,122
20-24	1,445	1,578	1,712	1,838	2,013	2,175	2,339
25-29	1,660	2,050	2,226	2,426	2,651	2,877	3,110
30-34	1,345	1,701	1,864	2,042	2,223	2,435	2,644
35-39	1,292	1,434	1,583	1,747	1,921	2,107	2,289
40-44	1,066	1,193	1,327	1,471	1,626	1,791	1,961
45-49	809	899	993	1,094	1,202	1,314	1,429
50-54	715	808	893	981	1,074	1,172	1,273
55-59	777	814	899	987	1,081	1,180	1,281
60-64	667	768	838	915	1,060	1,171	1,288
65-69	680	762	831	906	1,049	1,157	1,271
70-74	435	502	579	664	761	867	983
75+	777	833	917	1,032	1,178	1,312	1,451
All Ages	17,882	19,737	21,674	23,752	25,982	28,332	30,752

Age Group	Males						
	1990	1995	2000	2005	2010	2015	2020
0-4	1,975	2,073	2,159	2,237	2,311	2,373	2,422
5-9	1,639	1,744	1,855	1,952	2,048	2,136	2,214
10-14	1,386	1,467	1,570	1,652	1,732	1,805	1,869
15-19	1,364	1,467	1,566	1,650	1,735	1,844	1,925
20-24	1,983	2,134	2,235	2,372	2,491	2,601	2,702
25-29	2,206	2,371	2,526	2,681	2,839	2,991	3,133
30-34	1,665	1,825	1,994	2,169	2,355	2,543	2,736
35-39	1,339	1,498	1,657	1,825	2,006	2,194	2,386
40-44	1,065	1,228	1,406	1,600	1,814	2,045	2,287
45-49	719	778	846	916	994	1,075	1,158
50-54	602	636	668	696	722	743	763
55-59	595	633	656	675	693	707	719
60-64	563	636	656	675	693	707	719
65-69	493	582	645	700	759	811	864
70-74	335	390	453	522	597	679	761
75+	403	495	603	713	834	964	1,103
All Ages	18,331	19,996	21,674	23,382	25,196	27,028	28,854

Age Group	Both Sexes						
	1990	1995	2000	2005	2010	2015	2020
0-4	3,695	3,931	4,158	4,382	4,608	4,831	5,037
5-9	3,584	3,416	3,699	3,950	4,204	4,456	4,697
10-14	2,704	2,896	3,155	3,379	3,611	3,843	4,085
15-19	2,613	2,841	3,072	3,299	3,535	3,803	4,047
20-24	3,428	3,712	3,984	4,230	4,503	4,776	5,042
25-29	4,066	4,401	4,783	5,117	5,489	5,888	6,243
30-34	3,210	3,526	3,838	4,211	4,588	4,979	5,373
35-39	2,631	2,933	3,242	3,572	3,928	4,301	4,686
40-44	2,131	2,423	2,733	3,071	3,440	3,833	4,218
45-49	1,328	1,677	1,839	2,011	2,196	2,390	2,588
50-54	1,337	1,445	1,561	1,677	1,796	1,915	2,036
55-59	1,332	1,467	1,613	1,762	1,918	2,077	2,236
60-64	1,251	1,404	1,572	1,729	1,891	2,041	2,201
65-69	1,173	1,344	1,536	1,746	1,979	2,230	2,439
70-74	769	893	1,032	1,186	1,359	1,546	1,731
75+	1,141	1,328	1,542	1,785	2,062	2,370	2,711
All Ages	36,313	39,733	43,347	47,137	51,178	55,500	59,604

Table 11
 Projected Population for Alamogordo Division in the Study Area,
 by Age and Sex July 1, 1990 to July 1, 2020
 HIGH SERIES

Age Group	July 1, 1990						
	1990	1995	2000	2005	2010	2015	2020
0-4	1,228	1,339	1,495	1,638	1,790	1,948	2,107
5-9	1,343	1,377	1,515	1,663	1,818	1,980	2,145
10-14	1,119	1,246	1,377	1,517	1,666	1,823	1,982
15-19	1,077	1,202	1,333	1,473	1,623	1,780	1,942
20-24	1,094	1,221	1,354	1,497	1,649	1,810	1,975
25-29	1,392	1,564	1,746	1,942	2,154	2,379	2,613
30-34	1,228	1,381	1,543	1,718	1,906	2,107	2,316
35-39	1,095	1,224	1,381	1,540	1,713	1,896	2,088
40-44	891	1,113	1,246	1,388	1,541	1,704	1,873
45-49	795	885	978	1,077	1,183	1,293	1,406
50-54	726	806	889	977	1,070	1,168	1,267
55-59	733	813	896	983	1,078	1,176	1,276
60-64	683	767	856	933	1,027	1,128	1,233
65-69	679	762	849	944	1,046	1,155	1,267
70-74	434	502	578	653	739	824	909
75+	735	833	937	1,052	1,176	1,310	1,451
All Ages	15,353	17,068	18,973	21,028	23,230	25,561	27,972

Age Group	Males						
	1990	1995	2000	2005	2010	2015	2020
0-4	1,491	1,590	1,679	1,759	1,836	1,902	1,956
5-9	1,298	1,407	1,510	1,608	1,706	1,796	1,877
10-14	1,174	1,267	1,354	1,437	1,517	1,591	1,657
15-19	1,128	1,230	1,328	1,423	1,519	1,609	1,692
20-24	1,361	1,489	1,613	1,734	1,856	1,972	2,081
25-29	1,581	1,742	1,902	2,060	2,222	2,379	2,529
30-34	1,296	1,462	1,633	1,809	1,997	2,188	2,379
35-39	1,073	1,225	1,385	1,554	1,736	1,923	2,120
40-44	972	1,118	1,272	1,438	1,611	1,791	2,000
45-49	695	758	825	894	970	1,049	1,131
50-54	600	634	663	691	715	733	753
55-59	591	631	651	670	680	689	694
60-64	561	635	651	671	676	683	687
65-69	490	581	643	706	764	818	864
70-74	334	390	451	518	592	673	759
75+	402	495	603	720	849	984	1,129
All Ages	15,048	16,620	18,346	20,081	21,895	23,749	25,588

Age Group	Both Sexes						
	1990	1995	2000	2005	2010	2015	2020
0-4	2,719	2,949	3,174	3,398	3,626	3,850	4,063
5-9	2,441	2,784	3,025	3,271	3,524	3,776	4,022
10-14	2,293	2,513	2,731	2,954	3,184	3,414	3,639
15-19	2,206	2,433	2,661	2,886	3,114	3,349	3,633
20-24	2,655	2,970	3,287	3,604	3,920	4,236	4,556
25-29	2,973	3,293	3,648	4,002	4,376	4,739	5,142
30-34	2,252	2,483	2,803	3,127	3,493	3,899	4,295
35-39	2,168	2,439	2,766	3,094	3,448	3,822	4,208
40-44	1,964	2,233	2,560	2,885	3,261	3,634	4,008
45-49	1,491	1,643	1,802	1,971	2,153	2,342	2,537
50-54	1,326	1,441	1,553	1,668	1,785	1,903	2,021
55-59	1,322	1,464	1,607	1,754	1,909	2,066	2,221
60-64	1,244	1,402	1,568	1,744	1,933	2,130	2,338
65-69	1,169	1,343	1,532	1,741	1,971	2,220	2,416
70-74	767	892	1,029	1,182	1,351	1,537	1,772
75+	1,137	1,328	1,541	1,782	2,056	2,363	2,700
All Ages	30,301	33,782	37,340	41,107	45,136	49,201	53,500

Table 13
 Projected Population for Otero County, by Age and Sex
 July 1, 1990 to July 1, 2020
 HICGH SERIES

Age Group	July 1, 1990 - July 1, 2020						
	1990	1995	2000	2005	2010	2015	2020
Females							
0-4	2,429	2,546	2,656	2,761	2,858	2,971	3,033
5-9	2,349	2,477	2,590	2,701	2,786	2,898	3,020
10-14	2,030	2,157	2,271	2,385	2,504	2,615	2,743
15-19	1,811	1,932	2,052	2,171	2,299	2,421	2,543
20-24	1,549	1,670	1,794	1,919	2,053	2,192	2,311
25-29	2,422	2,611	2,788	2,954	3,103	3,256	3,348
30-34	2,176	2,332	2,485	2,643	2,810	2,975	3,139
35-39	1,854	1,997	2,140	2,285	2,439	2,591	2,744
40-44	1,578	1,707	1,831	1,958	2,095	2,229	2,363
45-49	1,238	1,323	1,407	1,490	1,578	1,662	1,745
50-54	1,138	1,207	1,280	1,350	1,423	1,496	1,566
55-59	1,111	1,184	1,258	1,331	1,406	1,480	1,552
60-64	1,013	1,094	1,179	1,265	1,357	1,449	1,542
65-69	999	1,041	1,125	1,210	1,300	1,394	1,488
70-74	619	691	769	851	946	1,043	1,148
75+	1,825	1,125	1,220	1,339	1,458	1,578	1,688
All Ages	24,609	27,498	29,238	31,029	32,879	34,740	36,573
Males							
0-4	2,614	2,712	2,795	2,874	2,952	3,016	3,071
5-9	2,277	2,383	2,492	2,590	2,691	2,781	2,866
10-14	2,069	2,152	2,230	2,306	2,385	2,455	2,518
15-19	1,977	2,079	2,173	2,265	2,363	2,457	2,537
20-24	2,381	2,532	2,652	2,770	2,890	3,009	3,107
25-29	2,796	2,936	3,094	3,251	3,419	3,577	3,729
30-34	2,271	2,449	2,635	2,831	3,041	3,253	3,470
35-39	1,881	2,039	2,234	2,432	2,638	2,839	3,059
40-44	1,796	1,890	2,087	2,295	2,507	2,805	3,048
45-49	1,221	1,358	1,524	1,703	1,883	2,065	2,248
50-54	1,055	1,074	1,090	1,103	1,119	1,129	1,179
55-59	1,036	1,097	1,161	1,241	1,293	1,358	1,424
60-64	983	1,070	1,162	1,258	1,364	1,472	1,606
65-69	839	943	1,042	1,227	1,362	1,525	1,632
70-74	583	648	721	801	890	985	1,123
75+	711	833	984	1,139	1,332	1,531	1,801
All Ages	26,381	28,148	29,917	31,764	33,738	35,750	37,774

Table 14

Projected Births, Deaths, and (Net) Migration for Holstonan CDP, Alamogordo in the Study Area, and Total Study Area: July 1, 1990 - July 1, 2020

Area/Projection Series	Low, Medium, High Series					
	1990-95	1995-00	2000-05	2005-10	2010-15	2015-20
Holstonan Medium Series						
Births	1,614	1,775	1,725	1,700	1,695	1,650
Deaths	88	90	95	95	100	100
(Net) Migration	(1,558)	(1,768)	(1,756)	(1,729)	(1,735)	(1,711)
Holstonan Low Series						
Births	1,600	1,650	1,625	1,600	1,600	1,500
Deaths	88	85	85	85	85	80
(Net) Migration	(1,807)	(1,869)	(1,865)	(1,821)	(1,823)	(1,727)
Holstonan High Series						
Births	1,625	1,700	1,725	1,725	1,740	1,745
Deaths	88	95	95	100	105	105
(Net) Migration	(1,479)	(1,569)	(1,606)	(1,603)	(1,628)	(1,653)
Alamogordo Medium Series						
Births	2,760	2,775	2,800	2,910	2,995	3,100
Deaths	1,200	1,225	1,300	1,360	1,450	1,500
(Net) Migration	1,344	1,229	1,114	1,150	1,068	870
Alamogordo Low Series						
Births	2,753	2,500	2,250	2,150	2,100	1,950
Deaths	1,193	1,200	1,300	1,350	1,400	1,450
(Net) Migration	481	569	662	792	711	692
Alamogordo High Series						
Births	2,806	2,841	3,040	3,304	3,556	3,773
Deaths	1,223	1,205	1,300	1,371	1,444	1,517
(Net) Migration	1,878	1,943	2,028	2,084	2,064	2,004
Study Area Medium Series						
Births	4,374	4,550	4,525	4,610	4,690	4,750
Deaths	1,288	1,315	1,395	1,455	1,550	1,600
(Net) Migration	(214)	(529)	(642)	(579)	(667)	(841)
Study Area Low Series						
Births	4,353	4,150	3,875	3,750	3,700	3,450
Deaths	1,281	1,285	1,385	1,435	1,485	1,530
(Net) Migration	(1,325)	(1,300)	(1,203)	(1,029)	(1,111)	(1,035)
Study Area High Series						
Births	4,431	4,541	4,765	5,029	5,296	5,518
Deaths	1,311	1,300	1,395	1,471	1,549	1,622
(Net) Migration	400	373	421	481	436	351

() Values in parentheses are negative.

C. HOUSING PROJECTIONS

Total housing unit projections to the year 2020 are based upon a methodology which considers population growth in the transportation study area, changes in average household size and thus the household/population ratio, and changes in the vacancy rate for housing. The mix of single family and multi-family housing units uses the actual 1995 mix as a baseline and projects a changing mix based upon historical data for the 1980-1990 time period for Otero County.

Growth in the number of expected households is the principal factor explaining the number of housing units. Households grow as the study area population grows. However, households grow at a faster rate than population, if average household size is declining; and vice versa. If in the base year (1995) housing vacancy rates were unusually high, then some of the expected future growth in households can be accommodated by the existing vacant housing stock rather than by the requirement for new housing units. Thus, if housing vacancy rates are expected to fall, housing unit growth will be somewhat less than expected growth in household; and vice versa.

The housing projections made use of available data for the study area, the city of Alamogordo, and Otero County to determine past trends as well as existing conditions. For example, the historical trend in average household size was based upon census data for Otero County for the years 1960 through 1990. The actual 1995 average household size for the study area was based upon data provided by Taschek Environmental Consulting. Housing stock data for 1995 for the study area was also provided by Taschek Environmental Consulting, although recent additions to the housing stock (permits) were obtained for the city of Alamogordo. Housing vacancy rates were determined not to play a role in the housing projections, since the housing situation in Alamogordo is deemed to be very tight now with the recent arrival of members of the German Air Force.

Middle Series-Housing

The middle series housing projections (See Table 15) are based upon the middle series population projections in Section B above. Average household size is expected to decline from 2.412 in 1995 to 2.114 by 2020. This rate of decline is somewhat less than the actual Otero County experience in the 1980-1990 time period when average household size fell 6.1 percent over the decade.

Given the expected middle series population growth, the decline in average household size, the no change in the housing vacancy rates, total housing units are expected to increase 50.8 percent in the total study area from 16,187 in 1995 to 24,406 in 2020.

In 1995 24.0 percent of the study area's housing stock was multi-family. Single family, including mobile homes, accounted for the other 76.0 percent. Between 1980 and 1990 in Otero County, the percentage of the housing stock that was multi-family fell a small amount. Because mobile homes are an important source of low income housing in New Mexico, it was assumed that in the future the mix of single versus multi-family housing would follow the 1980-1990 trend in Otero County. By 2020 21.1 percent of the housing stock is expected to be multi-family.

Low Series-Housing

The low series housing projection for the total study area was based upon the low series population projection. Average household size declines, but at a somewhat lower rate than in the middle series—from 2.412 in 1995 to 2.141 in 2020. Housing vacancy rates remain unchanged. These assumptions then translate into a 27.0 percent increase in total housing units from 16,187 in 1995 to 20,555 in 2020.

In the low series projection the single family and multi-family share of the housing stock is assumed to be the same as in the middle series. See Table 15.

TABLE 15

ALAMOGORDO STUDY AREA HOUSING PROJECTIONS

1995 - 2020

YEAR	LOW SERIES			MID SERIES			HIGH SERIES		
	SINGLE FAMILY	MULTI-FAMILY	TOTAL	SINGLE FAMILY	MULTI-FAMILY	TOTAL	SINGLE FAMILY	MULTI-FAMILY	TOTAL
1995	12,310	3,877	16,187	12,310	3,877	16,187	12,310	3,877	16,187
2000	12,935	3,942	16,877	13,693	4,173	17,866	14,214	4,332	18,546
2005	13,799	4,071	17,870	15,027	4,433	19,460	16,074	4,742	20,816
2010	14,666	4,189	18,855	16,424	4,691	21,115	18,143	5,182	23,325
2015	15,465	4,277	19,742	17,810	4,926	22,737	20,399	5,642	26,042
2020	16,212	4,343	20,555	19,249	5,157		22,824	6,115	

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Source: UNM Bureau of Business and Economic Research, March, 1997.

High Series-Housing

The high series housing projection for the total study area was based upon the high series population projections. It assumes that average household size declines more sharply than in the case of the middle series—from 2,412 in 1995 to 2,060 in 2020. Housing vacancy rates remain unchanged. These assumptions then translate into a 78.8 percent increase in total housing units from 16,187 in 1995 to 28,939 by 2020. The single family and multi-family share of the total housing stock is the same as the middle series. See Table 15.

D. EMPLOYMENT PROJECTIONS

The employment projection methodology is based upon an historical analysis and projection of Otero County, since the Alamogordo study area is the most significant part of the Otero County economy. Projected employment growth rates for Otero County are applied to the 1995 actual employment level for the study area, which was provided by Taschek Environmental Consulting. A low-middle-high series employment projection was prepared with sectoral employment breakdowns for retail and non-retail trade.

The county employment projection methodology starts with a controlling growth rate for the state of New Mexico in the 1995-2020 time period. The state employment growth forecast is tied to the national employment outlook of the WFEA Group, a national economic consulting firm. In the 1960-1995 time period New Mexico Employment has grown at a faster rate than U.S. employment.³ This historical New Mexico-to-U.S. employment growth rate relationship is expected to continue in the future.

Listed below are the expected growth rates for various time intervals for U.S. employment and New Mexico employment:

	U.S.	N.M.
1995-2000	1.6%	2.3%
2000-2005	1.2	1.73
2005-2010	1.2	1.73
2010-2020	1.0	1.44

³ In the 1960-1995 time period New Mexico employment has grown at an annual rate of 3.08 percent compared to 2.14 percent for the U.S.

County employment projections are prepared by first examining the historical (1960-1995) performance of the county's economy compared to that of the state. Thus, for example, between 1960 and 1995 Otero County employment grew on average 1.87 percent per year, while the comparable rate for the state was 3.08 percent. Otero County grew at only 60.7 percent of the statewide employment growth rate between 1960-1995. Listed below are the annual employment growth rates for Otero County and New Mexico employment by various time intervals in the past:

	<u>Otero</u>	<u>New Mexico</u>
1960-1995	1.87%	3.08%
1960-1970	2.13	2.16
1970-1980	1.98	4.75
1980-1990	1.82	2.23
1990-1995	1.26	3.28

Employment growth in Otero County in these time intervals has never exceeded the comparable rate for the state. In the 1960s it came closest to matching the state employment growth rate. Otero County has not participated in the state economic booms of the 1970s (energy) or the 1990s (high tech). Otero's economy is dominated by the government sector, because of the location of Holloman AFB. In FY95 Holloman AFB employed 4,554 active duty military and 1,135 federal civil servants. Total employment in Otero County in 1995 (including the active duty military) was 21,091. The government sector accounted for 9,142 of these jobs, or a large 43.3 percent. The next largest sectors are services (24.2 percent) and trade (16.1 percent). There is a small manufacturing sector in Otero County, and little or no mining activity.

Middle Series-Employment

In 1995 there are an estimated 16,140 jobs in the Alamogordo study area with 6,463 in retail trade and 9,677 in non-retail trade sectors. In the middle series employment projection it was assumed that Otero County (and the Alamogordo study area) would grow at its 1960-1995 historical relationship to expected statewide growth. That is, the study area would grow at 60.7 percent of the expected employment growth for New Mexico (see above).

Total study area employment is projected to increase from 16,140 in 1995 to 20,945 in 2020, which is an average annual compound rate of growth of 1.05 percent. See Table 16. Retail trade employment will expand its share of total employment by 1.5 percentage points, based on the historical trends in Otero County trade employment. Defense downsizing will limit growth at Holloman AFB, although the F-117 stealth fighter stationed there is the Air Force's state of the art fighter jet. No base closing is expected. Growth in the defense area will come from the use of Holloman AFB facilities and airspace for training by the German Air Force. There are an estimated 600 Germans (including dependents) now assigned at Holloman AFB representing 180 jobs.

Low Series-Employment

In the low series employment projection it was assumed that the study area would grow at only 40.0 percent of the expected statewide employment growth rate. This represents an economic scenario similar to what occurred in the 1970s and 1990s. Total employment is projected to increase from 16,140 in 1995 to 19,234 in 2020. The low scenario would represent a case where there was little new defense spending at Holloman AFB--U.S. or German--but no base closing either. The mix of employment between retail and non-retail trade would be the same as in the middle series. See Table 16.

ALAMOGORDO STUDY AREA EMPLOYMENT PROJECTIONS
1995 - 2020

TABLE 16

YEAR	LOW SERIES:			MID SERIES			HIGH SERIES:		
	RETAIL	NON-RETAIL	TOTAL	RETAIL	NON-RETAIL	TOTAL	RETAIL	NON-RETAIL	TOTAL
1995	6,463	9,677	16,140	6,463	9,677	16,140	6,463	9,677	16,140
1996	6,532	9,756	16,288	6,563	9,803	16,366	6,628	9,883	16,511
1997	6,602	9,836	16,438	6,665	9,930	16,595	6,798	10,093	16,891
1998	6,673	9,917	16,590	6,769	10,059	16,827	6,971	10,308	17,279
1999	6,744	9,998	16,742	6,874	10,189	17,063	7,149	10,527	17,677
2000	6,817	10,080	16,896	6,980	10,322	17,302	7,332	10,751	18,083
2001	6,875	10,140	17,015	7,064	10,419	17,484	7,478	10,919	18,396
2002	6,933	10,200	17,134	7,148	10,518	17,667	7,628	11,089	18,715
2003	6,992	10,261	17,254	7,235	10,618	17,853	7,777	11,261	19,038
2004	7,052	10,323	17,374	7,322	10,718	18,040	7,932	11,436	19,368
2005	7,112	10,384	17,496	7,410	10,820	18,230	8,089	11,614	19,703
2006	7,172	10,446	17,618	7,499	10,922	18,421	8,250	11,794	20,044
2007	7,233	10,508	17,742	7,589	11,025	18,614	8,413	11,977	20,390
2008	7,295	10,571	17,868	7,680	11,130	18,810	8,580	12,163	20,743
2009	7,357	10,634	17,991	7,773	11,235	19,007	8,751	12,351	21,102
2010	7,420	10,697	18,117	7,866	11,341	19,207	8,924	12,543	21,467
2011	7,475	10,750	18,228	7,946	11,428	19,374	9,075	12,701	21,776
2012	7,531	10,804	18,335	8,027	11,515	19,543	9,229	12,861	22,090
2013	7,588	10,857	18,445	8,109	11,603	19,713	9,385	13,023	22,408
2014	7,645	10,911	18,556	8,192	11,692	19,884	9,544	13,186	22,731
2015	7,702	10,965	18,667	8,276	11,781	20,057	9,706	13,352	23,058
2016	7,760	11,019	18,779	8,360	11,871	20,232	9,870	13,520	23,390
2017	7,818	11,073	18,892	8,446	11,962	20,408	10,037	13,689	23,727
2018	7,877	11,128	19,005	8,532	12,053	20,585	10,207	13,861	24,068
2019	7,936	11,183	19,119	8,619	12,145	20,764	10,380	14,035	24,415
2020	7,996	11,238	19,234	8,707	12,238	20,945	10,556	14,210	24,768

High Series-Employment

In the high series employment projection, it was assumed that the study area would grow at the same employment growth rate as the state of New Mexico. This scenario would represent the historical experience of Otero County in the 1960s and to some extent the 1980s. Total employment is projected to increase from 16,140 in 1995 to 24,766 in 2020.

This high series employment projection represents the case where there is further expansion of defense spending at Holloman AFB. As part of further base closure activities nationwide, additional U.S. military units are re-located to Holloman AFB. The German Air Force also expands their training activities at Holloman AFB. Because of expanding population, retail trade becomes more concentrated within the study area. By 2020, retail trade represents 42.6 percent of total jobs compared to 40.0 percent in 1995. See Table 16.