



# SHAW AIR FORCE BASE



# SUMTER COUNTY

## JOINT COMPATIBLE LAND USE STUDY

SUMTER COUNTY SOUTH CAROLINA

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**SHAW AIR FORCE BASE  
SUMTER COUNTY  
JOINT COMPATIBLE LAND USE STUDY  
SUMTER COUNTY, SOUTH CAROLINA**

Prepared For:

THE SUMTER CITY-COUNTY PLANNING COMMISSION

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## JOINT COMPATIBLE LAND USE STUDY

### BACKGROUND

Shaw Air Force Base (Shaw AFB) has been an integral part of the Sumter Community since the air base opened in 1941. During the past fifty years, the relationship between the City of Sumter, Sumter County and Shaw AFB has been extremely strong for a local community and a federal installation.

When Shaw Field was first built in 1941, it was located approximately ten miles west of the City of Sumter in a largely rural undeveloped portion of Sumter County. During the past fifty years, development has continued to occur immediately surrounding Shaw AFB and much of this development has begun to intensify to the point that Shaw is now considered a portion of the Sumter urbanized area in the 1990 Census. Because the Department of Defense is concerned about the public health, safety and welfare, it established a program in 1973 to advise communities about noise and safety impacts around military installations. Under this program the Air Force prepares Air Installation Compatible Use Zone (AICUZ) studies. The first one for Shaw AFB was released in 1976. In response to the recommendations in that AICUZ report, a county-wide height restriction ordinance was passed in 1981.

When significant mission changes occur (e.g., changes in aircraft, flight patterns, intensity of aviation activity) the AICUZ information is updated. This was done in a 1985 AICUZ release for Shaw AFB. Since local controls were limited to height restrictions, several commercial and residential subdivisions have been developed along Frierson Road on the North, as well as intense commercial development along U.S. Highway 76/378 on the south of Shaw AFB. It is due to these development trends that the Sumter County Council, in 1987, adopted an Airfield Landing Zone Ordinance to protect the health, safety and welfare of the general population in the areas at the north and south ends of the base runways. Also in 1987 the Sumter County Long Range Plan for the period through the Year 2005 (2005 Plan) was adopted. This plan recognized the need for additional local land use controls immediately surrounding the air base within identified aircraft noise contours.

As part of this zoning ordinance expansion, traditional zoning districts were adopted for the areas around Shaw Air Force Base, the Poinsett Gunnery Range located

approximately ten miles southwest of the city in Sumter County, and Sumter Airport located a few miles north of the city. In December 1989, the City of Sumter extended the city limits to incorporate the entire air base and the adjacent base housing areas. Land use compatibility guidelines were also incorporated into the expanded county zoning ordinance which followed the Air Force release of revised noise impact information in the Fall of 1991. This new county-wide zoning ordinance was adopted in December 1991.

Because incompatible development continued to increase around Shaw AFB, and sufficient development control measures had not been taken before 1991, the Air Force asked the Office of Economic Adjustment, Office of the Secretary Defense, to ask local officials to participate in the DoD Joint Land Use Study Program. The Program is designed to help community officials and residents better understand the economic relationship between a military installation and the host community, the noise and safety impacts military operations have on surrounding land, and the measures that may be taken to prevent further incompatible development. Through the study process, recommendations are developed for local implementation measures that would ensure future development around the installation is compatible with the military operations. Thus, both the long-term viability of the installation, and the public, health, safety and welfare are protected.

An initial meeting was held in the Spring of 1991 to explain the Joint Land Use Study Program, and encourage the local leadership to participate. A grant was awarded to the Sumter City-County Planning Commission in the Fall of 1991 to undertake a Joint Compatible Land Use Study for the areas around Shaw AFB, Poinsett Gunnery Range, and Sumter Airport, since its operations affect the Gunnery Range. Although county-wide zoning was quickly implemented later in the year, it was viewed as a stop-gap measure, pending a thorough review in the JCLUS process and subject to modification or refinement, based on study recommendations.

## PURPOSE

The purpose of the study is to achieve resolution of existing or potential conflicts between Shaw AFB operations and surrounding development. Most Air Force installations make noise and create safety hazards as a result of training activities. At an installation such as Shaw AFB, persons living nearby hear aircraft and vehicular traffic

noise on a daily basis. Accidents, while unlikely, could occur especially in areas close to the runway approach and departure zones. Noise impacts are unavoidable since military training is essential to maintain readiness. Pilots must learn to function in an environment similar to an actual combat situation. For the Air Force, such sound levels are unavoidable since training is essential to maintain readiness to defend our nation. Unfortunately, unacceptable sound levels extend beyond the installation and disturb citizens. When this occurs, the sound levels produced by an installation may be perceived as "noise" or "unwanted sound."

It might appear that the best way to solve all conflicts between the sound produced by Air Force activities and noise-sensitive land uses would be to change the operations of the installation. At Shaw AFB, the Air Force has instituted procedures to minimize the off-base effects of its operations. These include nighttime quiet hours when planes do not fly, use of hush houses to dampen engine test and runup noise, and modification of flying patterns. However, even on the largest Air Force installation, this is not always possible. Shaw AFB and the Poinsett Gunnery Range are among the installations and facilities required to accommodate larger, technologically complex, larger-range weapons systems. In addition, becoming proficient in fighting has required training at night. Aviation units are training with night vision goggles and other equipment which requires flying at night.

At the same time that Sumter is expanding westward toward Shaw AFB, the unincorporated parts of the county are experiencing development in the vicinity of the installation, Poinsett Gunnery Range and Sumter Airport. These conditions have led to incompatible residential and commercial development and the threat of more.

There are steps that citizens, local government and the Air Force can take to prevent such incompatible development. The JCLUS Program is designed to produce recommendations for local measures that would protect an installation's mission as well as the public safety and welfare. Through the planning process, the installation, interested citizens and local governments work together to understand the economic and physical relationships between the installation and the surrounding areas and develop strategies to minimize noise-sensitive development and the number of people exposed to potential aircraft accidents. This JCLUS contains recommendations for the installation and the civilian community for achieving compatible development in areas impacted by noise and accident potential.

Federal legislation, national sentiment and other external forces which directly affect

the Air Force's mission have served to greatly increase the Air Force's role in environmental and planning issues. The coordination of effective planning which bridges the gap between the Federal government and the local citizen is based upon establishing working relationships with local communities and planning officials. The combined resources of both entities can be more effective than the separate efforts of each in resolving issues of mutual interest. To a great extent, the success of such group efforts depends on mutual trust and understanding.

The JCLUS Program is presented as a statement of the joint perspective on operations and training noise generated in the vicinity of Shaw AFB, Poinsett Gunnery Range and Sumter Airport. This study is intended to serve as input in the local comprehensive/master planning process for all jurisdictions adjacent to the installation, the Poinsett Gunnery Range, and the airport. The overall objective of this study is to examine the effects of military operations on adjacent communities and establish a background for relating land development to noise levels and safety considerations. This will allow for the identification of land uses that are compatible with aircraft activities. It is the intent of this study to exemplify and promote cooperation between the military and local communities in planning efforts.

Chapter

1

*Inventory*

## I. INVENTORY

### A. LOCATION AND SIZE

The city of Sumter, Poinsett Gunnery Range, Shaw Air Force Base and the Sumter Airport are all located in Sumter County, South Carolina. Sumter County is located approximately 25 miles east of the City of Columbia in the central portion of the state. Located at the northern edge of Lake Marion the county is surrounded by three interstate highways including I-20 to the north, I-95 to the east and I-26 to the west.

#### 1. Shaw Air Force Base

- Shaw AFB is located ten miles west of the city of Sumter.
- Shaw AFB occupies a land area of 3,367 acres.
- Shaw AFB is one of 28 Air Combat Command bases in the United States Air Force.
- The major tenants and their mission are the Headquarters 9th Air Force, the 363 Fighter Wing, and the 507th Air Control Wing.

#### 2. Poinsett Gunnery Range

- Poinsett Gunnery Range is located in the Manchester State Forest in the southern portion of Sumter County, approximately 15 miles south of Shaw AFB.
- Poinsett Gunnery Range occupies a land area of 8,800 acres in the state forest.
- Poinsett Gunnery Range is an air to ground bombing range that provides a combat training environment for air crews.

#### 3. Sumter Airport

- Sumter Airport is approximately 4-5 miles north of the city of Sumter.
- Sumter Airport occupies a land area of approximately 300 acres.
- Sumter Airport is a small general aviation airport with no commercial service. There are two crossing runways including a 5500' paved runway and a 2720' unpaved grass landing area.

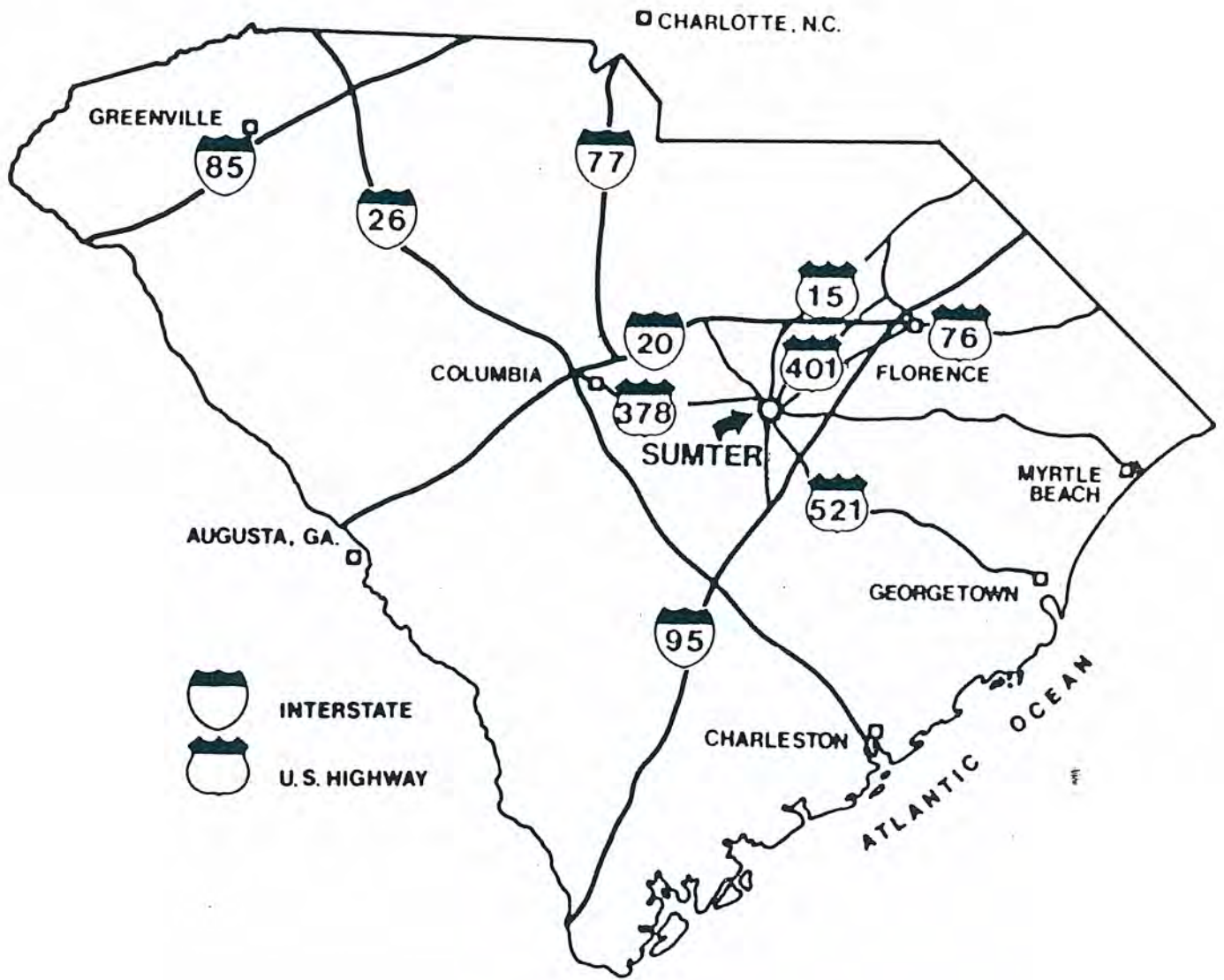


Figure 1: Location of Sumter within South Carolina.

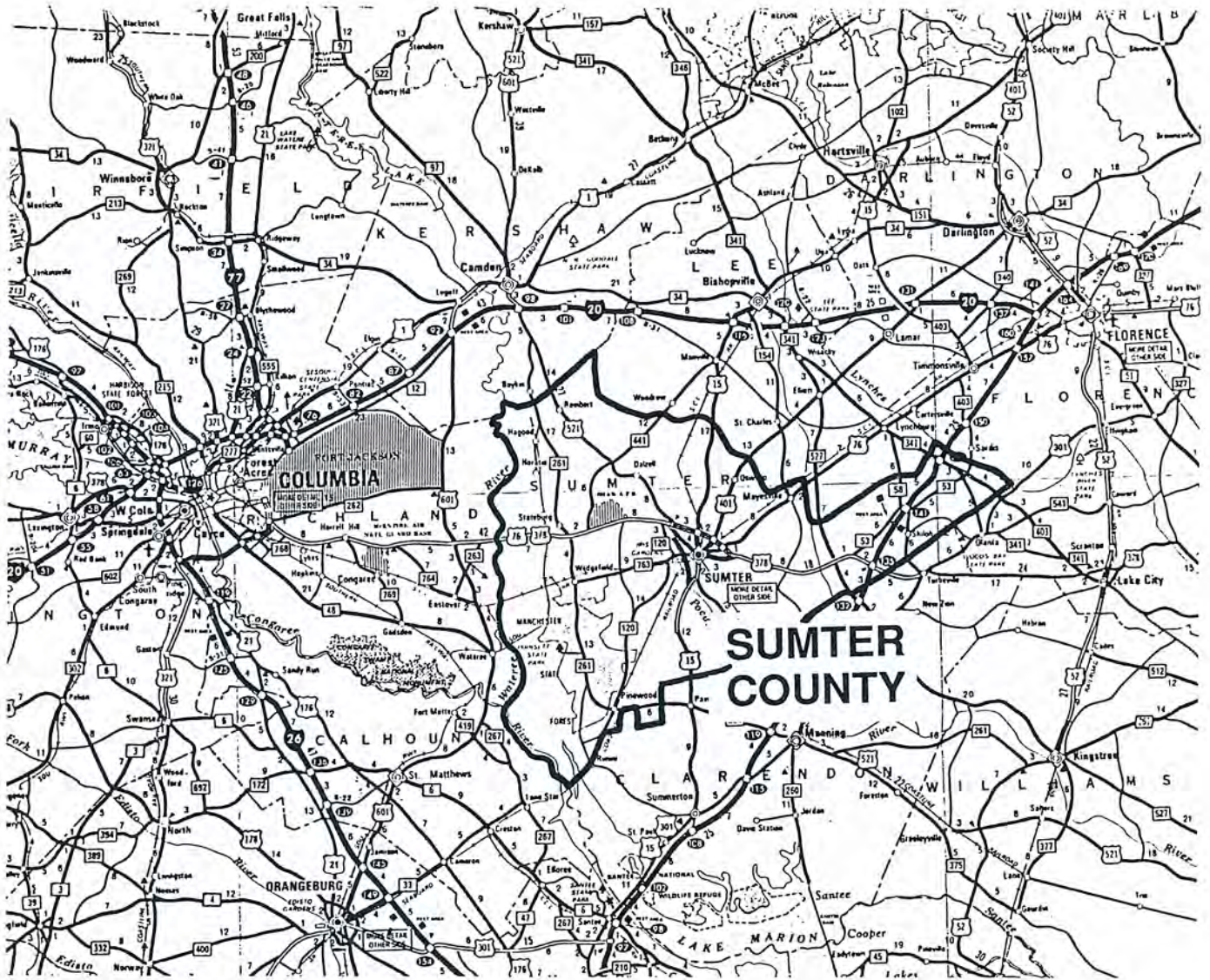


Figure 2: Sumter County, South Carolina, regional area map.



## B. SOCIO-ECONOMICS

### 1. Sumter County and the City of Sumter

#### a. Population

The decade of the 1980s witnessed a higher than normal population increase in Sumter County. The county grew by 14,000 residents with a 16.3% increase between 1980 and 1990. The 16.3% increase is a reversal of the growth rate in the 1970s that lagged behind the state. The state grew only 11.7% in the 1980s. The location of that growth is critical to the long range planning for the county. Census tracts west of Sumter and around Shaw AFB experienced the largest population growth followed closely by the census tracts south of the city of Sumter and northwest around Shaw AFB. Census tracts north and east of the city and in the eastern part of the county experienced only minor gains or losses in population.

**EXHIBIT A  
POPULATION GROWTH, 1960-2010**

YEAR	<u>SUMTER COUNTY</u>		<u>SOUTH CAROLINA</u>
	POPULATION	% CHANGE	% CHANGE
1960	74,941	--	--
1970	79,425	6.0	8.7
1980	88,243	11.1	20.5
1990	102,637	16.3	11.7
2000	111,750	--	--
2010	122,200	--	--

SOURCE: U. S. Bureau of the Census  
Robert and Company Analysis

**EXHIBIT B  
MEDIAN AGE, 1980-1990  
SUMTER COUNTY, S.C.**

	1980	1990
Median Age	25.7	29.6
State Ranks (Low)	3	2

SOURCE: U. S. Bureau of the Census

**EXHIBIT C**  
**POPULATION CHANGE BY CENSUS TRACT**  
**1980-1990, SUMTER COUNTY S.C.**

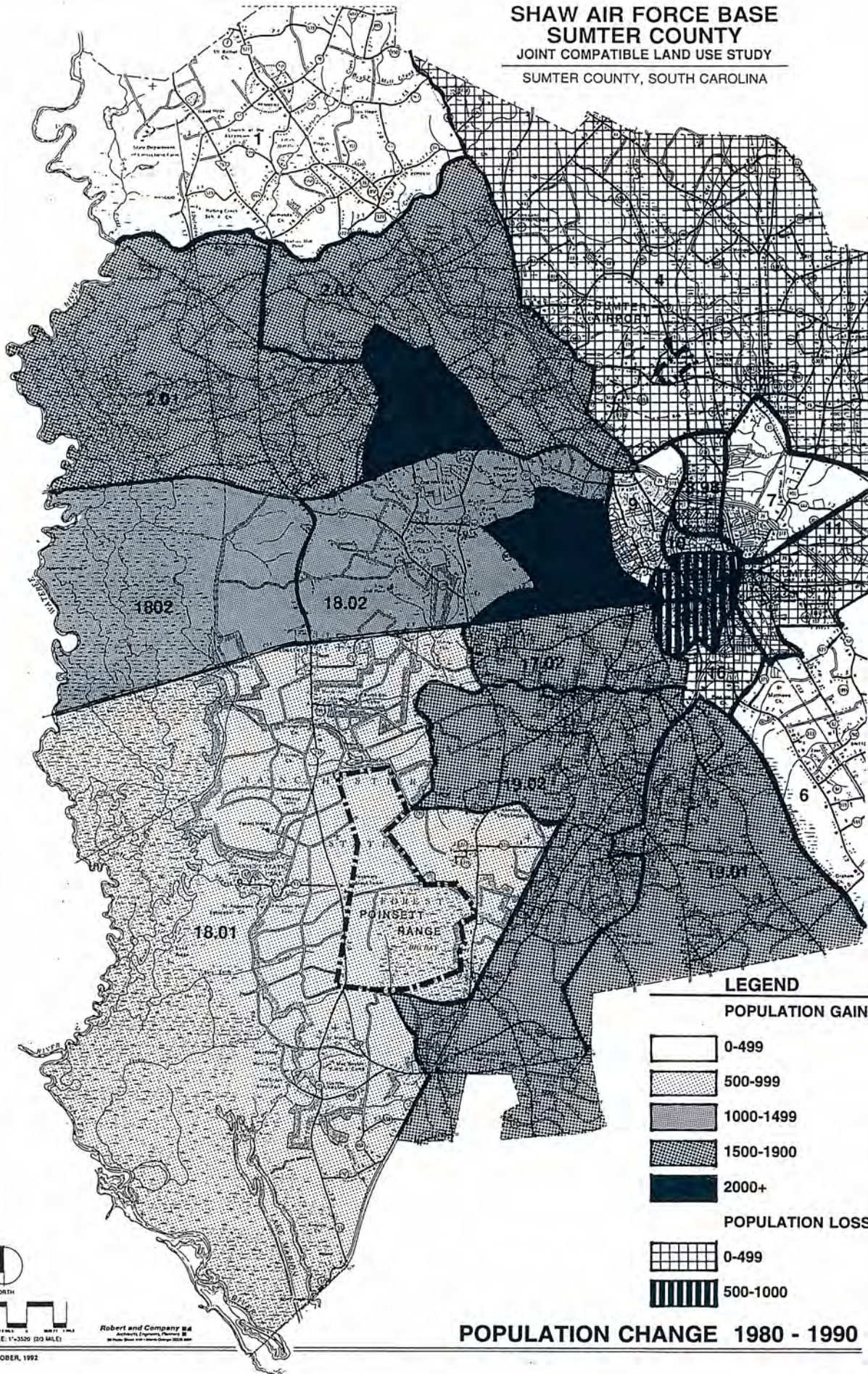
CENSUS TRACT	1980 POPULATION	1990 POPULATION	CHANGE
1.00	2,792	3,251	459
2.01	6,403	4,326	
2.02		3,810	1,733
3.00	7,366	13,236	5,870
4.00	6,261	6,192	(69)
6.00	3,735	3,807	72
7.00	4,966	4,996	30
8.97	5,208	688	
8.96		4,501	(19)
9.00	7,765	8,198	433
10.00	3,624	3,648	24
11.00	4,485	4,313	(172)
13.00	3,447	2,768	(679)
15.00	3,591	3,006	(585)
16.00	4,749	4,740	(9)
17.01	2,888	4,962	2,074
17.02	4,650	6,452	1,802
18.01	1,515	2,181	666
18.02	4,665	5,808	1,143
19.01	7,136	4,944	
19.02		4,061	1,869
TOTAL	88,243	102,637	14,394

SOURCE: U.S. Bureau of the Census

# SHAW AIR FORCE BASE SUMTER COUNTY






JOINT COMPATIBLE LAND USE STUDY

SUMTER COUNTY, SOUTH CAROLINA



## LEGEND

### POPULATION GAIN

-  0-499
-  500-999
-  1000-1499
-  1500-1900
-  2000+

### POPULATION LOSS

-  0-499
-  500-1000

## POPULATION CHANGE 1980 - 1990

NORTH  
SCALE: 1"=2520' (20 MILE)  
OCTOBER, 1992

Robert and Company SA  
Architects, Engineers, Planners &  
Interior Design, Inc. 1000 North George Street

FIGURE 3

**EXHIBIT D**  
**HOUSEHOLDS, 1970-1990**  
**SUMTER COUNTY, S.C.**

YEAR	HOUSEHOLDS	PERSONS/ HOUSEHOLD
1970	20,977	3.65
1980	27,268	3.13
1990	32,723	2.91

SOURCE: U.S. Bureau of The Census

**EXHIBIT E**  
**RACIAL COMPOSITION, 1980-1990**  
**SUMTER COUNTY, S.C.**

	WHITE	%	BLACK	%
1980	48,277	55	39,966	45
1990	56,779	55	44,340	43
CHANGE	8,502		4,374	

SOURCE: U.S. Bureau of the Census

b. Housing

The 1980s saw a steady gain in owner occupied housing in Sumter County with an increase to 65.2% from a 1970 total of only 54.9%. The increase points to a growing stability in the county population. Housing values also increased during the 1980s by 62.5% but lower than the 74% state increase. Sumter County in the 1980s also experienced a dramatic increase in the number of mobile homes. The 1990 total of 7,996 mobile homes is nearly double the 1980 total and represents 24.4% of the total number of owner occupied units.

**EXHIBIT F**  
**HOUSING OCCUPANCY STATUS, 1970-1990**

	RENTER OCCUPIED	OWNER OCCUPIED	% OWNER OCCUPIED
1970	9,456	11,521	54.9
1980	9,939	17,329	63.6
1990	11,395	21,328	65.2

SOURCE: U.S. Bureau of the Census

**EXHIBIT G**  
**OWNER OCCUPIED HOUSING VALUE, 1980-1990**  
**SUMTER COUNTY AND SOUTH CAROLINA**

	1980	1990	% CHANGE
Sumter	35,000	56,900	62.5
South Carolina	35,100	61,100	74.0

SOURCE: U.S. Bureau of the Census

**EXHIBIT H**  
**MOBILE HOME GROWTH, 1970-1990**  
**SUMTER COUNTY, S.C.**

	1970	1980	% CHANGE
Sumter	2,320	3,357	69.1%
% of Total Occupied Units	11.0%	12.3%	24.4%

SOURCE: U.S. Bureau of the Census

c. Economic Impact

The composition and size of a community's labor force is linked very closely with the demographic and economic conditions and trends for the region. The county experienced a large population increase in the 1980s with a corresponding increase in the civilian labor force. The unemployment rate for the county has decreased from a forty year high of 10.9% in 1982 to 9.7% in 1992. However, the county unemployment rate is still much higher than the state's 7.4% unemployment rate. The employment by sector has not experienced large changes in the last ten years. The highest employment by sector is in manufacturing with 29.9% and in wholesale/retail trade with 21.3%. Services and government account for 18.9% and 16.6% of the labor employment respectively. A list of the largest single employers in Sumter County indicates that Shaw AFB is the largest employer in the county and a major job center for central South Carolina. However, five industries, the regional medical center and the schools are also listed as some of the areas major employers. This diversity points to a growing stability in the local economy.

**EXHIBIT I  
CIVILIAN LABOR FORCE, 1974-1992  
SUMTER COUNTY, S.C.**

	1974	1978	1982	1992	
Civilian					
Labor Force	27,640	33,970	36,120	39,960	
Employment	25,200	31,380	32,170	36,080	
Unemployment	2,440	2,590	3,950	3,880	
Rate	8.8%	7.6%	10.9%	9.7%	
Rate (S.C.)	5.9%	5.7%	10.8%	7.4%	



**EXHIBIT J**  
**MAJOR EMPLOYERS, 1991**  
**SUMTER COUNTY, S.C.**

EMPLOYER	NO. OF EMPLOYEES
1. Shaw AFB	1485 (Civ.)
2. School Dist. #2	1100
3. School Dist. #17	1070
4. Sahtee Print Works	1032
5. Tuomey Regional Med. Ctr.	917
6. Becton Dickinson	779
7. Union Camp (Eastover)	750
8. Korn Industries (Sumter Cabinet)	715
9. Carolina Golden Products	670
10. Allied Signal Bendix	650

SOURCE: The Greater Sumter Chamber of Commerce, 8/91

**EXHIBIT K**  
**EMPLOYMENT BY SECTOR, 1980-1990**  
**SUMTER COUNTY, S.C.**

SECTOR	1980 PERCENT	1990 PERCENT
Construction	7.1	6.8
Manufacturing	33.4	29.9
Transport/Utilities	3.7	3.1
Wholesale/Retail	19.3	21.3
Finance/Insur./Real Est.	3.6	3.4
Services	14.2	18.9
Government	18.8	16.6

SOURCE: South Carolina Development Board

2. Shaw Air Force Base
  - a. Population

There are more than 19,000 residents of Sumter County associated with active duty personnel at Shaw AFB including approximately 5,800 active duty personnel and 13,600 active duty military dependents. Approximately 9,900 active duty personnel and dependents live off the base in the Sumter area. The number of military personnel and dependents has recently experienced a temporary increase due to the closure of Homestead AFB in Florida following destruction by Hurricane Andrew. The data above does not reflect the addition of those relocated military families but it is estimated that 700 families temporarily relocated to the Sumter area in 1992-93.

**EXHIBIT L**  
**POPULATION AT SHAW AIR FORCE BASE, 1992**

CLASSIFICATION:	LIVING	LIVING	
APPROPRIATED FUND MILITARY	ON BASE	OFF BASE	TOTAL
Active-Duty Permanent Party	2,859	2,939	5,798
ACTIVE DUTY MILITARY and DEPENDANTS	6,643	6,966	13,609
APPROPRIATED FUND CIVILIAN			
General Schedule			420
Federal Wage Grade			178
Other			<u>0</u>
TOTAL			598
NON-APPROPRIATED FUND			
(Contract Civilian & Private Business)			542
MILITARY RETIREES			
Air Force			10,223
Army			10,344
Navy			8,105
Marines			897
Coast Guard			<u>290</u>
TOTAL			29,859

b. Housing

Shaw AFB maintains a total of 3,870 housing units including approximately 1704 family housing units and 2,166 dormitory quarters. The housing on base provides approximately 50% of the housing necessary for the active duty military and dependents associated with Shaw AFB. The remaining personnel and dependents must seek housing alternatives in the Sumter area. The temporary relocation of 700 families from south Florida following the destruction of Homestead AFB is not reflected in the above data but it is safe to assume that the majority of the relocated families will have sought housing off base.

**EXHIBIT M  
HOUSING AT SHAW AIR FORCE BASE, 1992**

FAMILY HOUSING	2-BR	3-BR	4-BR	TOTAL
Officers	8	119	43	170
Enlisted	<u>719</u>	<u>416</u>	<u>399</u>	<u>1534</u>
TOTAL	727	535	442	1704

DORMITORY QUARTERS

	Number	Capacity
Airman/NCO	14	1,872
Visiting Airmen Quarters	3	164
Visiting Officers Quarters	3	90
Temporary Lodging Facilities	<u>4</u>	<u>40</u>
TOTAL	24	2166

c. Economic Impact

Shaw AFB continues to have a substantial positive economic impact on the Sumter community. Within a surrounding region that encompasses a 50 mile radius, Shaw's total estimated economic impact is over \$482 million annually -- based on payroll, construction and operational expenditures made by the federal government at the base in FY 92. As one of the largest employers in the region, Shaw AFB employs over 6,100 people (including military personnel) with a total annual payroll of \$201 million. The creation of more than 3,600 secondary jobs in the retail and service sector is also attributed to the base.

Through its agreement to be annexed into the City of Sumter in December of 1989, Shaw AFB enabled the Sumter community to boost its population figures for the 1990 Census and status as a Metropolitan Statistical Area (MSA). This will result in additional state and federal funding entitlements for the community.

**EXHIBIT N**  
**ECONOMIC IMPACT SUMMARY**

It is estimated that the total economic impact of Shaw AFB on the surrounding communities in FY92 was \$482,666,445. A summary of the factors considered in calculating the total economic impact is provided as follows:

Military Payroll	\$178,613,223
Civilian Payroll	22,539,293
Construction	12,539,293
Services	9,210,513
Material, Equipment and Supplies	17,648,110
Education/TDY	14,482,142
Secondary Jobs Created (Number)	3,627

This data was compiled and edited by the 363rd Controller Squadron Cost Analysis Branch, at Shaw AFB.

**C. COMMUNITY PLANNING CRITERIA**

This chapter explains additional background data such as land use, transportation, community facilities and development limitations used for planning for the county and city. In addition, this chapter discusses similar background data such as land use and training activities for Shaw AFB.

**1. Sumter County and the City of Sumter**

**a. Land Use**

This section explains the method utilized to inventory land use in Sumter County. Also discussed in this section are the land use classifications which appear on the existing land use map, and observations noted during the

appear on the existing land use map, and observations noted during the survey.

### Survey Method

Identification and location of existing land use within Sumter County was accomplished by conducting a windshield survey and through the use of aerial photographs. The survey was carried out by traveling through the majority of the roads in the county and recording the land uses along them. The windshield survey is a very accurate method of inventory, and is also valuable because survey observations reveal trends, incompatible uses, new construction and building conditions.

### Land Use Classifications

When the survey was complete and every parcel of land within the county was identified by its use, the information was classified and coded by color and transferred on to a base map of the county. Created from field survey observations, eighteen land use classifications were derived and are represented by a unique color on the base map.

The eighteen land use classifications include:

Low Density Residential	Agricultural
Medium Density Residential	Park Land
High Density Residential	Public Buildings/Schools
Mobile Home	Cemetery
Commercial	Quasi Public Buildings/Institutions
Office/Professional	Transportation/Community/Utilities
Light Industrial	Vacant Land
Manufacturing/Distribution	100 Year Flood Plain
Heavy Industrial	Incorporated Areas

#### Survey Observations:

- Low Density Residential growth southwest of the city of Sumter.
- Industrial Growth south of the city of Sumter.
- Mobile home park developments west of the city of Sumter and in all areas surrounding Shaw AFB.
- Strip Commercial growth along U.S. 76/378 from the city of Sumter to Shaw AFB.
- Scattered low density residential development including mobile homes in the vicinity of the eastern edge of Poinsett Range.
- Scattered low density residential development including mobile homes in the vicinity of Sumter Airport. Larger than average homes of higher income families in close proximity to Sumter Airport.
- Extensive areas of 100 year flood plain.
- Numerous historic homes north of Poinsett Range and west of Shaw AFB.
- Extensive areas of the county remain in cultivation or as vacant, undeveloped land.

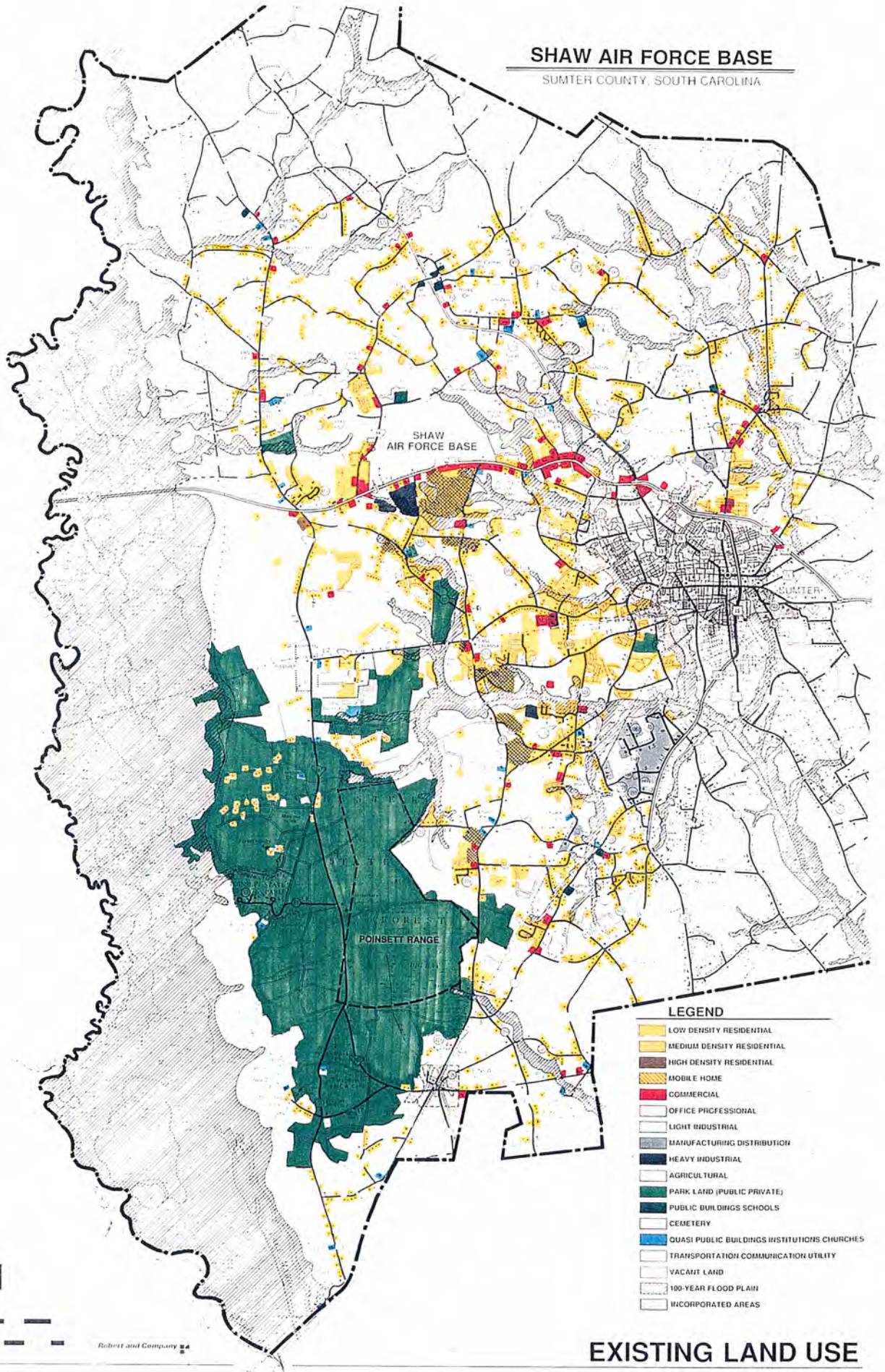
#### b. Transportation

This section provides an inventory and classification of the county's transportation system. In order to evaluate existing roads in the county, it is helpful to describe the functional roadway classification system which classifies roads into four categories including primary divided arterial, primary arterial, secondary arterial and collector. This section also identifies the Transportation Improvement Program projects for city and county through 1997 as approved by the Sumter Area Transportation Study Policy Committee.



# SHAW AIR FORCE BASE

SUMTER COUNTY, SOUTH CAROLINA



EXISTING LAND USE

### Primary Divided Arterials

These roadways provide access into and through the county. They are multi-laned, with a median and serve urban areas or high volume traffic corridors.

- U.S. 76/378 - East and west of the city of Sumter
- U.S. 15 - South of the city of Sumter
- U.S. 521 - Northwest of the city of Sumter

### Primary Arterials

These roadways provide access into and through the county. They are multi-laned and serve urban areas and high volume traffic corridors.

- U.S. 15 - North and south of the city of Sumter
- U.S. 521 - Through the city of Sumter and north and south of the city
- U.S. 401 - Northeast of the city of Sumter

### Secondary Arterials

The primary purpose of these roadways is to funnel traffic from the collector roads onto the primary arterials. They provide access to all parts of the county.

- S.R. 261 - West of Poinsett Range and Shaw AFB
- S.R. 120 - East of Poinsett Range to the city of Sumter
- S.R. 763 - East/West road between S.R. 261 and S.R. 120
- S.R. 441 - North of Shaw AFB linking U.S. 76/378 and U.S. 521

### Collectors

These roads provide internal, reduced volume traffic circulation throughout the county. They provide access between the arterials and the neighborhoods and subdivisions throughout the county.

## Transportation Improvement Program

### South Pike West

Widen to 3 lanes from U.S. 15 (Main Street) to S-55 (Miller Drive).

### Stamey Livestock/Loring Mill Connector

Construct a new connector with possible widening from U.S. 76/378 at Stamey Livestock Road (S-91) to Loring Mill Road (S-204)

### U.S. 76/378 Bypass/U.S. 15 Interchange

Relocate, reconstruct and improve east bound entrance and exit ramps and frontage road in southwest quadrant.

### Wise Drive Extension West

Construct new 2-lane road on right-of-way for 5-lane facility from Loring Mill Road (S-204) to U.S. 76/378 at SC 441 and Shaw AFB.

### RD 466 Red Bay Road and Extension

Improve existing Red Bay Road from U.S. 15 to Boulevard Road (S-82) and construct new facility from Boulevard Road to U.S. 378.

### S-492 South Guignard Parkway (Callen Drive)

Multi-lane and improve existing highway from U.S. 521 (Manning Street) to Guignard Drive (U.S. 15/521 Connector)

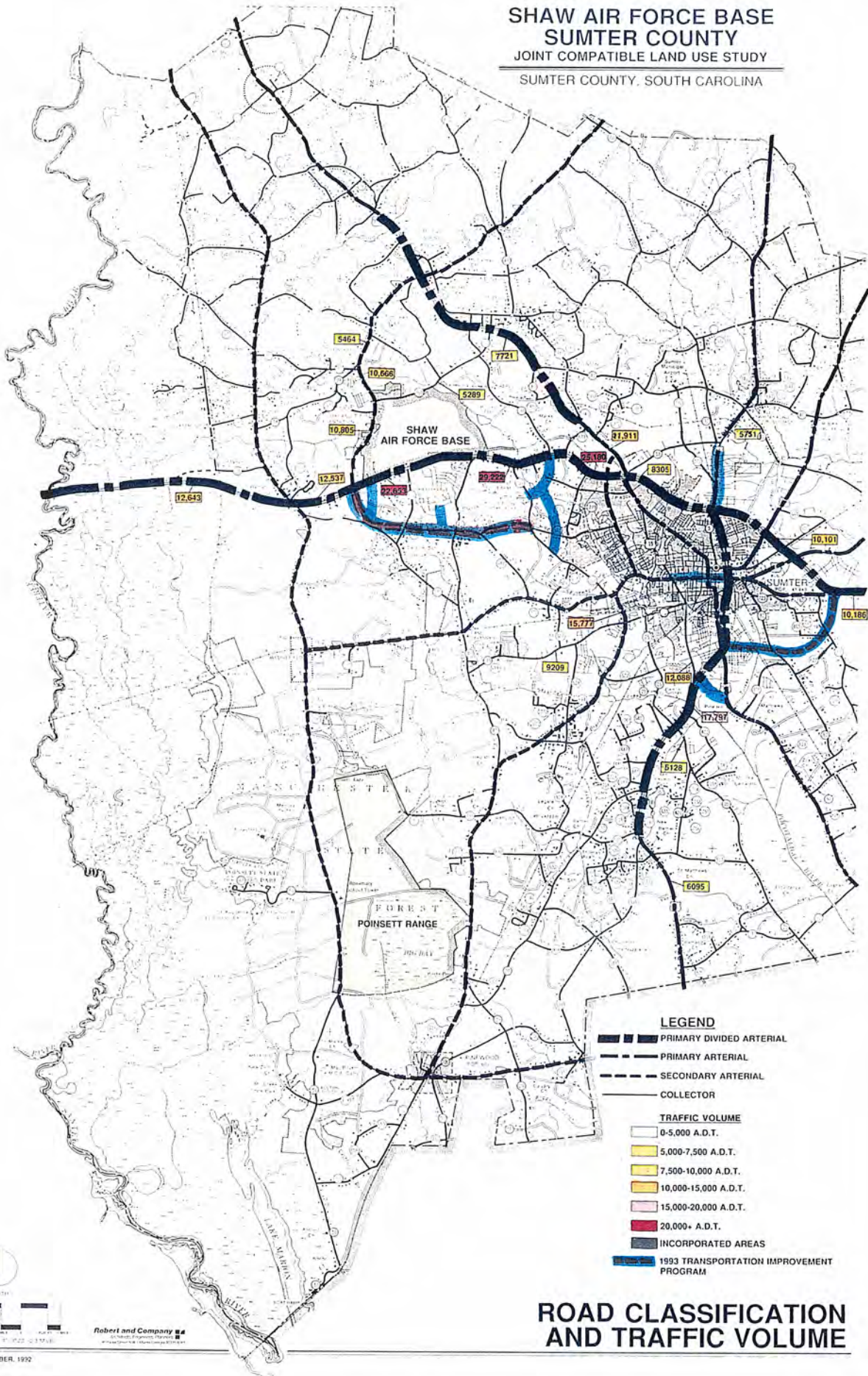
### Santee Wateree RTA

Capital and operating funds  
S9 FTA Section 9

### Sumter County Mental Retardation Board

Capital Purchase  
FTA 16 (b) 2

**SHAW AIR FORCE BASE  
SUMTER COUNTY**  
JOINT COMPATIBLE LAND USE STUDY  
SUMTER COUNTY, SOUTH CAROLINA



North  
SCALE 1" = 0.25 MILES  
Robert and Company  
Civil Engineers, Planners  
and Environmental Scientists

OCTOBER, 1992

**ROAD CLASSIFICATION  
AND TRAFFIC VOLUME**

FIGURE 5

U.S. 15 North Main Street

Widen North Main Street (U.S. 15) to 5 lanes from Lafayette Boulevard to Jefferson Road (S-53)

c. Community Facilities - Water Service

Water systems abound in Sumter County. In 1986 there were 119 according to the South Carolina Department of Health and Environmental Control. These systems serve approximately 69 percent of the total estimated population of 93,500, with the remaining 31 percent being served by individual wells. Nearly one-half of the population (49 percent) is served by the City of Sumter and of those on a community system, Sumter serves 70 percent. Systems serving mobile home parks provide water to nearly 5,000 people. Miscellaneous systems such as schools, motels, etc., serve over 3,000 people, most of whom are also served by other systems.

Community systems generally serve "cluster" developments, where there is sufficient density to justify such systems. Individual wells provide the primary source of water in the more sparsely developed areas of the county.

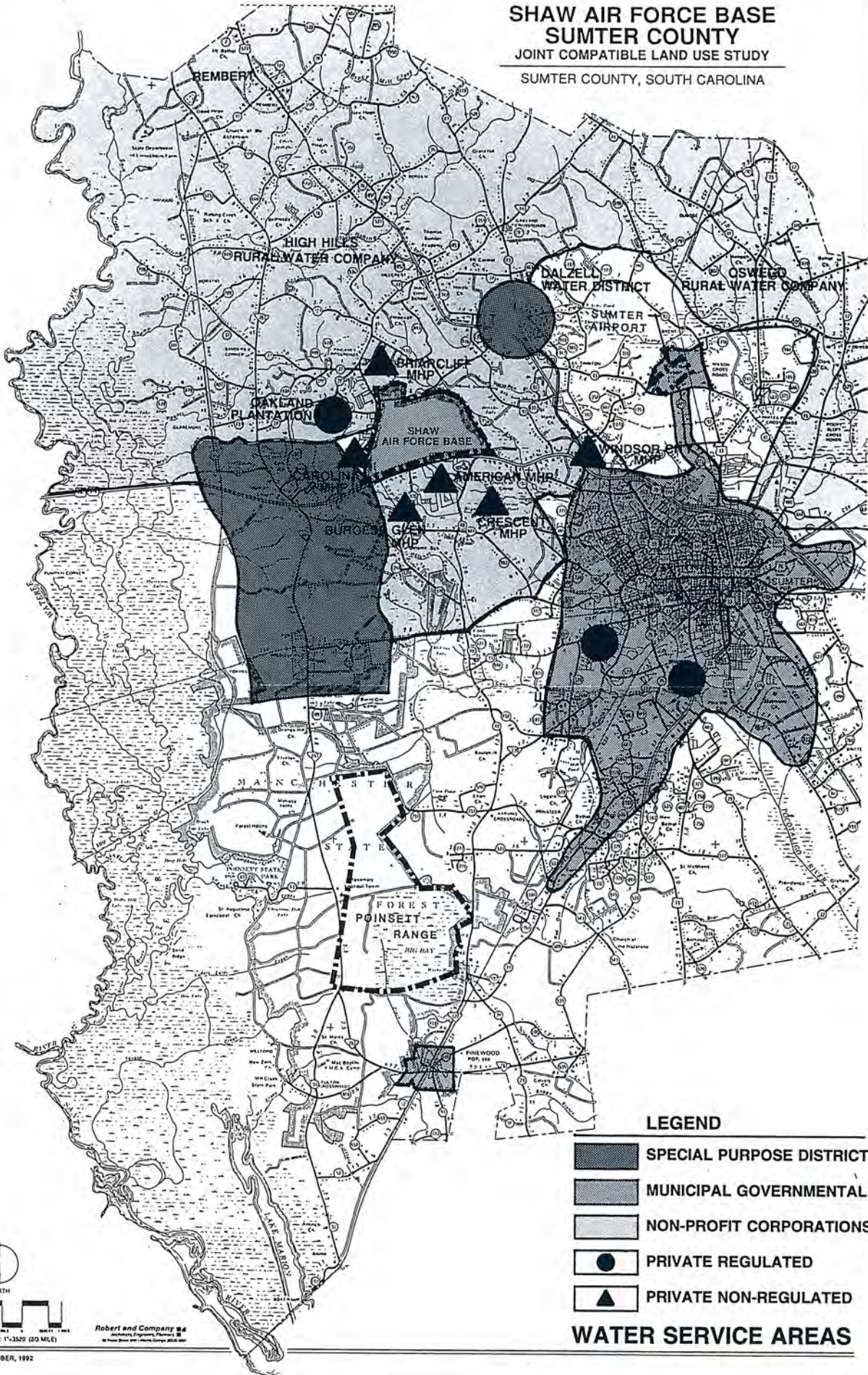
Water supply does not appear to be a problem or detriment to the future growth of the county, as some systems identified have reported capacities far in excess of "average daily consumption" or million gallons per day (MGD). This is also true of Sumter's system, which is capable of pumping 13 MGD, but is consuming only 10 MGD.

The small subdivisions or private systems do not have the same reserve capacity, but their needs are confined generally to serving the specific project they were designed to support, with limited growth potential.

# SHAW AIR FORCE BASE SUMTER COUNTY

JOINT COMPATIBLE LAND USE STUDY



SUMTER COUNTY, SOUTH CAROLINA



## LEGEND

- SPECIAL PURPOSE DISTRICTS
- MUNICIPAL GOVERNMENTAL
- NON-PROFIT CORPORATIONS
- PRIVATE REGULATED
- PRIVATE NON-REGULATED

## WATER SERVICE AREAS

  
 NORTH  
  
 SCALE: 1"=3.20' (2/3 MILE)

Robert and Company, Inc.  
 Architects, Engineers, Planners, etc.  
 1000 South Main Street, Suite 1000  
 Columbia, South Carolina 29201

OCTOBER, 1992

FIGURE 6

Suffice to say, water suppliers and systems have the capacity to keep pace with projected population increases, and as such, enhance the prospects for growth, particularly in the Sumter area. In the event ground water supplies fail to keep pace, however, the county has available large amounts of surface water in the Lynches, Pocotaligo and Wateree Rivers. The basic use, quantity, and quality of water from these sources is shown by Figure 6. In addition, the county also has available a major impoundment area in Lake Marion.

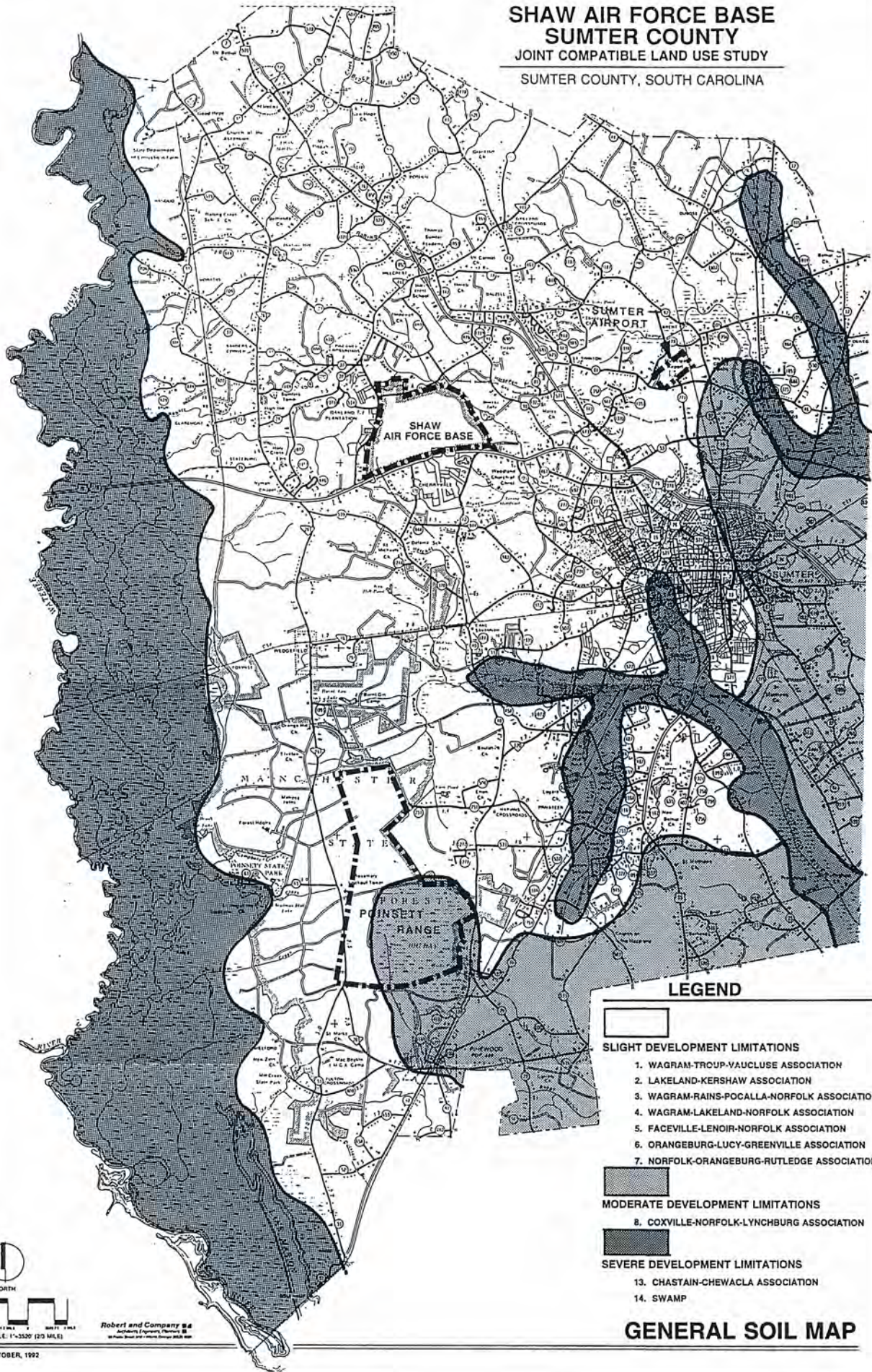
d. Development Limitations - Soils

Soils are generally interpreted in terms of suitability for development of buildings and roads for land use planning. The soil conservation service has identified soils for the entire county and provide interpretation guidelines for eight broad soil associations in the county. Generally, the poorly suited soil associations with severe limitations to building development follow the 100 year flood plain, river and stream corridors, and wetland areas. Large portions of the county along the western boundary at the Wateree River, Towards Lake Marion to the south, the swamp in the Manchester State Forest and Pocotaligo River corridor are virtually impossible to develop. The majority of the remaining areas of the western half of the county pose only slight or moderate limitations to development. North and east of the city of Sumter has less favorable soil conditions for development than the western side. This is also easily translated through analysis of land use and population growth that continues to occur west of the city of Sumter.

# SHAW AIR FORCE BASE SUMTER COUNTY

JOINT COMPATIBLE LAND USE STUDY

SUMTER COUNTY, SOUTH CAROLINA



NORTH

SCALE: 1"=3520' (2.0 MILE)

Robert and Company, Inc.  
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OCTOBER, 1992

FIGURE 7



## 2. Shaw Air Force Base

### a. Land Use

For planning purposes the land use areas of the base have been grouped into eight functional categories as identified below:

- Mission - Areas for the operation and maintenance of aircraft.
- Administrative - Administrative functions
- Community - Shopping areas and support of military families
- Housing - Accommodations as houses or dormitories
- Base Support/Industrial - Storage, maintenance and utilities
- Medical - Hospital and related facilities
- Outdoor Recreation - Athletics, camping, boating and misc.
- Open Space - Buffers and landscape preservation

Included in the facilities at Shaw AFB are 308 buildings (not including residences) that total more than 1.8 million square feet of building space. There are also 1,704 family housing units and 2,166 dormitory quarters. The primary feature of the base land use are the parallel runways heading northeast/southwest. Each runway is 150' wide, with one runway 10,010 feet long and the other 8,000 feet long. The majority of the base land uses are clustered on the northwest side of the two runways. A large portion of the land south of the runways has been revegetated with pine trees and forms a large buffer along U.S. 76/378. Poinsett range is considered as part of Shaw AFB. However, Poinsett range is several miles south of Shaw AFB, in a remote area of the county. The range occupies leased land in the Manchester State Forest. Land use on the range supports the base's mission. Facilities at the range consist of a few clustered buildings and a tower in the center of a large cleared target area for approaching aircraft.

### b. Training

Shaw AFB is one of 28 Air Combat Command bases in the United States Air Force. Shaw is also the home of the 9th Air Force Headquarters. The host organization is the 363 Fighter Wing with 72 F-16 aircraft. Other aircraft on base are operated by the 507th Air Control Wing which operate OA-10 aircraft. Shaw AFB is also responsible for the Poinsett Gunnery Ranges.

The Poinsett Range is an air to ground range that provides a combat training environment for air crews from Shaw AFB, McIntyre Air National Guard Base near Columbia, S.C. and several other military installations on the east coast.

Although numerous types of aircraft come and go from Shaw AFB, the principal aircraft types are the F-16 and OA-10 operating from the four squadrons assigned to the base. The recent devastation of Homestead AFB in south Florida has temporarily relocated an additional squadron of F-16s to Shaw AFB. Operational data does not include the new squadron. However, temporary increases in operational aircraft activity are anticipated. The majority of the flying activity takes place northeast of the base and around the Poinsett Range. Shaw is currently handling approximately 595 operations per day. Less than 1% of the operations occur between the hours of 10:00 pm and 6:00 am. Operations are coordinated with the FAA and flight paths are integrated to minimize conflict with civilian aircraft operations and other private, commercial and government flying activities. It is anticipated that night flying will increase as part of "Lantirn" training activities in the area. Due to experiences from Desert Storm, the Air Force has begun a national initiative to enhance night training activities for their air crews. This increase in night flying would have the largest impact to the areas around the Poinsett Range.

#### D. AIRFIELD AND RANGE PLANNING CRITERIA

In this chapter, all criteria associated with aircraft activities and airfields will be discussed including noise contours, approach-departure clearance surfaces, accident potential zones, restricted airspace, prohibited overflights, and flight tracks. Each of the above criteria will be discussed as it pertains to Shaw AFB, Poinsett Gunnery Range, and Sumter Airport.

##### 1. Shaw Air Force Base

a. Noise Contours

The JCLUS Program is designed to help community officials and residents better understand the relationship between a military installation and the host community, noise and safety impacts military operations have on surrounding land, and the measures that may be taken to prevent further incompatible development. A critical component of the JCLUS Program is identification of noise impacted areas. Once these areas are identified, the affected public, local governments and the installation can coordinate development in these areas. To insure that land uses in noise impacted areas are compatible with military installations, land use planning techniques and compatibility guidelines have been applied to noise level zones. The noise level zones (in decibels) are illustrated on maps as noise contours. The noise contours are defined by three noise zones:

- o Zone I - Less than 65Ldn (acceptable)
- o Zone II - 65Ldn - 75Ldn (normally unacceptable)
- o Zone III - Greater than 75 Ldn (unacceptable)

These compatibility zones are used for land use planning to prevent conflicts with noise-sensitive land uses such as housing, schools and hospitals. Land uses such as commercial, industrial and agricultural (except livestock), are compatible with most noise environments. An abbreviated listing of land use compatibilities is shown in the following chart.

## EXHIBIT O

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### RECOMMENDED LAND USES FOR AICUZ PROGRAM NOISE ZONES

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<u>Land Use</u>	<u>&lt; 65 Ldn</u>	<u>65-75 Ldn</u>	<u>&gt;75Ldn</u>
Residential	Acceptable	*Generally Unacceptable	Unacceptable
Manufacturing	Acceptable	Acceptable	**Acceptable
Transportation, Communication & Utilities	Acceptable	Acceptable	Acceptable
Trade	Acceptable	Acceptable	Acceptable
Public Servcs.	Acceptable	*Generally Unacceptable	Unacceptable
Cultural,Recreational & Entertainment	Acceptable	*Generally Unacceptable	Unacceptable
Agricultural	Acceptable	Acceptable	Acceptable
Livestock Farming & Animal Breeding	Acceptable	Acceptable	Unacceptable

\* Use is generally discouraged; however, if allowed, sound attenuation techniques should be required.

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The noise zone II and III contours for Shaw AFB extend beyond the installation boundaries in all directions. The outer limits of zone II extend approximately 5 miles north and south beyond the runways and installation boundaries. The northern limits extend beyond the community of Dalzell and the southern limits extend to the community of Wedgefield. The zone II contours also extend approximately 1.5 miles east and west of the installation boundaries. Several large mobile home communities including Cherryvale fall within the zone II contour. The smallest zone III contour also extends off the base in all directions. Portions of the Cherryvale mobile home community also fall in zone III.

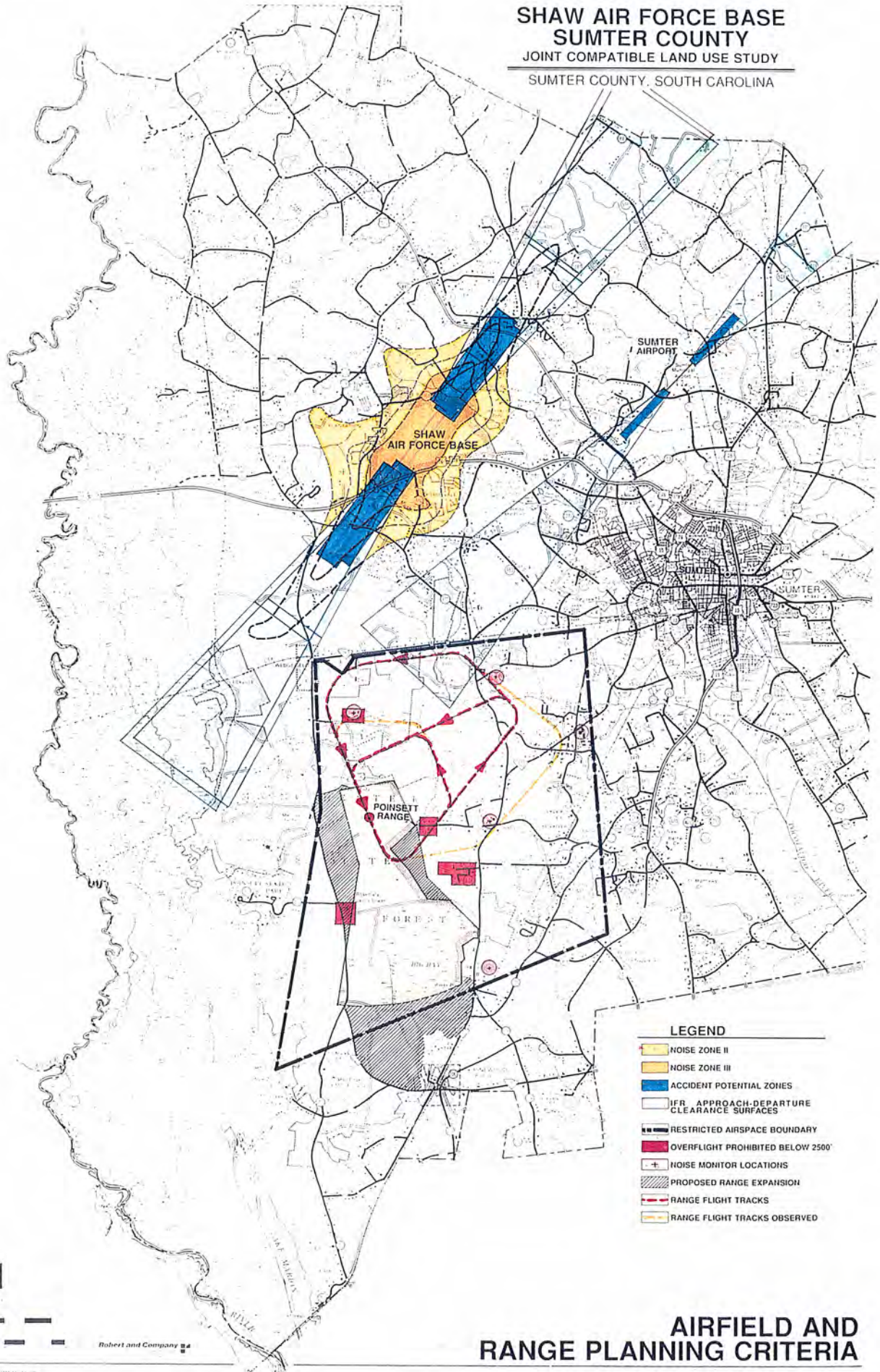
b. Approach/Departure Clearance Surfaces

The approach-departure clearance surface is symmetrical about the runway centerline extended. It begins as an inclined plane (glide angle), at each end of the primary surface using the centerline elevation of the runway end, and extends for 50,000 feet. The slope of the approach-departure clearance surface is 50:1 along the extended runway (glide angle) centerline until it reaches an elevation of 500 feet above the established airfield elevation. It then continues horizontally at this elevation to a point 50,000 feet from the start of the glide angle. The width of this surface at the runway end is 2,000 feet; it flares uniformly, and the width at 50,000 feet is 16,000 feet.

c. Clear Zones and Accident Potential Zones

The clear zones for the runways at Shaw AFB are a surface on the ground, beginning at the runway end and symmetrical about the runway centerline extended. The clear zones for the runways at Shaw AFB are 3,000 feet wide and extend 3,000 feet beyond the end of the runways. The clear zones cannot have any above ground structures and cannot penetrate the clearance surfaces. The accident potential zones are areas beyond the clear zone that possess a significant or measurable potential for accidents. The accident potential zones for the Shaw AFB runways extend 12,000 feet beyond the clear zones along a maintained width of 3,000 feet. The southern clear zones and accident potential zones extend off of the

**SHAW AIR FORCE BASE  
SUMTER COUNTY**  
JOINT COMPATIBLE LAND USE STUDY  
SUMTER COUNTY, SOUTH CAROLINA



- LEGEND**
- NOISE ZONE II
  - NOISE ZONE III
  - ACCIDENT POTENTIAL ZONES
  - IFR APPROACH-DEPARTURE CLEARANCE SURFACES
  - RESTRICTED AIRSPACE BOUNDARY
  - OVERFLIGHT PROHIBITED BELOW 2500'
  - + NOISE MONITOR LOCATIONS
  - PROPOSED RANGE EXPANSION
  - RANGE FLIGHT TRACKS
  - RANGE FLIGHT TRACKS OBSERVED

Robert and Company

**AIRFIELD AND RANGE PLANNING CRITERIA**

FIGURE 8

installation, across US 76/378. Shaw AFB has recently acquired the land for the clear zones. There had been commercial encroachments into this area that threatened the public safety and the installation mission. These uses have been closed. The northern clear zones and accident potential zones extend off of the installation into the community of Dalzell. Existing and proposed developments in this area may be a future source of land use compatibility problems. In October of 1992, an F16 crash landed approximately 1/2 mile from the north end of the base runways into a cotton field. No one was injured but the incident verifies the necessity to limit development in these areas.

## 2. Poinsett Gunnery Range

### a. Restricted Airspace

Poinsett Gunnery Range is located in the western half of a polygon shaped restricted airspace. The restricted airspace is approximately 6.6 miles wide (east/west) and 8.6 miles long (north/south). The area is restricted to military aircraft activities occurring below 13,000 feet. Participating aircraft must be inside the restricted area prior to bomb release or use of weapons.

### b. Restricted Overflights

Four areas on the ground within the restricted airspace boundary around Poinsett Range have been restricted from overflights below 2,500 feet by aircraft using the range. The restricted areas include land around the Burnt Gin Youth Camp north of the range, two residential areas west of the range along county road 251 and county roads 1277 and 1278, and around the Rosemary Lookout Tower on the western edge of the range.

### 3. Sumter Airport

#### a. Approach/Departure Clearance Surfaces

The approach-departure clearance surfaces for Sumter Airport is classified for VFR (visual) approaches and extends a horizontal distance of 10,000 feet with an outer width of 2,500 feet from the paved runway. The slope ratio for the inclined plane would be 40 to 1. If the Sumter Airport upgrades to a full IFR (instrumental) approach, then the clearance surfaces would resemble in size and shape, the surfaces at Shaw AFB. The IFR clearance surfaces would extend into the restricted airspace around the Poinsett Range. However, no conflict is anticipated. Weather conditions that warrant IFR approaches to Sumter Airport would be key to Poinsett Range being closed to training exercises.

#### b. Accident Potential Zones

Accident Potential Zones are only applicable to air installations of the Military Departments of the United States. However, the criteria can be applied to Sumter Airport for land use planning purposes. The accident potential zone for Sumter Airport would extend 8,000 feet north and south of the paved runway ends (including the clear zones), for a continuous width of 1,000 feet. The accident potential zones would therefore cross Brewington Road to the south and Hill and Foxworth Roads to the north. Development in these areas should be limited to uses compatible with the accident potential zones.



Chapter 2

*Analysis*

## II. ANALYSIS

### A. NOISE MONITORING

#### 1. Location

To validate sound level exposure in and around Poinsett Gunnery Range, noise monitoring was conducted of training activity generated at the Range. No previous monitoring or noise validation had ever been attempted at Poinsett. Based on daily training schedules provided by Range personnel, two days of monitoring was conducted. Range users are scheduled at 30 minute intervals and aircraft types monitored included both F16's and A10's. Attempts were made to monitor F18 aircraft type training activity, however, all scheduled F18 activity was canceled during the monitoring period.

Based on visual observations of flight patterns flown at the Range, five locations were selected for monitoring (see JCLUS Monitoring Schedule and Results table). Coincidentally, the observed flight patterns were virtually identical to the actual flight patterns flown at the Range.

#### 2. Equipment

To confirm accuracy of the results, two different monitoring machines were utilized at each location throughout the monitoring period. Both machines were designed to measure aircraft noise audible to the human ear, and are calibrated and programmed to eliminate all background noise. The Bruel & Kjaer 2230 machine is the most widely used aircraft noise monitoring machine in the industry and provides the most versatility for results. The Larson-Davis 700 is the second most widely used monitoring machine and served to confirm the results generated by the Bruel & Kjaer 2230. Each machine was programmed to measure continuous activity in 20 minute intervals at each location.

**EXHIBIT P**  
**JCLUS NOISE MONITORING SCHEDULE AND RESULTS**

<u>Location</u>	<u>Aircraft</u>	<u>Time</u>	<u>Leq (Average)</u>	<u>Single Event Level</u>
<u>September 2, 1992</u>				
Burnt Gin Camp	F16's	10:40 am	68.2	98.8
Burnt Gin Camp	A10's	11:00 am	56.1	87.0
Enon Church	F16's	3:30 pm	73.0	103.6
Enon Church	A10's	2:40 pm	53.5	86.6
Hwy. 33	F16's	4:36 pm	83.6	114.0
Pinewood Stn.	F16's	6:00 pm	54.4	83.7
<u>September 3, 1992</u>				
Manchester				
Downs	F16's	9:00 am	64.0	95.0
Hwy. 33	A10's	11:18 am	52.3	81.9

## B. NOISE ASSESSMENT

### 1. Sound Levels

As described earlier in this report, the Ldn (or 24-hour Leq) noise descriptor which produces average levels, is the recognized system for analyzing aircraft noise. For planning purposes, Ldn values used are 65, 70, 75 and 80. Land use guidelines are based on the compatibility of various uses within these noise exposure levels.

The highest average noise levels were recorded at Hwy. 33 and Enon Church at 83.6 and 73.0 respectively, and the third highest average level was recorded at Burnt Gin Camp at 68.2. These levels were all produced by F16 aircraft activity. In comparison, the lower levels recorded were generated by A16 aircraft activity at average levels below 60 Ldn. Additionally, the single event levels (a single aircraft flyover) were recorded and show significantly high levels of noise exposure in the areas monitored.

Studies on aircraft noise compatibility most frequently recommend that no residential uses be permitted in areas where noise levels exceed 75 Ldn. These studies also recommend that no restrictions based on noise hazards are necessary below the 65 Ldn. Between 65 and 75 Ldn levels, there is no current consensus.

Most industrial and manufacturing uses are considered compatible in the airfield environs. The transportation, communications and utilities categories have a higher noise level compatibility because they generally are not people-intensive. When people occupy or utilize such facilities, it is generally for only a very short duration. The location of commercial/retail trade and personal and business services is compatible without restriction up to 70 Ldn. However, these activities are generally incompatible above 80 Ldn.

Although recreational uses have often been recommended as compatible with high noise levels, the most recent research has resulted in a more conservative view. Above the 75 Ldn, noise becomes a factor which limits the ability to enjoy

outdoor uses. Where the requirement to hear is a function of the use, compatibility is limited. With the exception of forestry activities and livestock farming, uses in the resource production, extraction, and open space category are compatible almost without restriction.

## C. IMPACT AREA AND ANALYSIS

Presented below is a discussion of the direct impacts on adjacent land uses identified within the noise impacted areas of Shaw AFB, Poinsett Gunnery Range, and Sumter Airport. The impacts discussions quantifies the number of housing units and people impacted around each of the air facilities including mobile homes. In addition, non-residential uses that may be incompatible with the noise impacts are identified.

### 1. Shaw Air Force Base

The impact area for Shaw AFB is defined by the noise zones shown as part of the 1991 Air Force AICUZ maps. Analysis of the noise zones indicates that there are 1865 housing units within zone II and 158 housing units within zone III. It is also estimated that there are 216 housing units within the accident potential zones. Due to the close proximity to Shaw AFB of numerous mobile home parks, it can be assumed that a larger than normal ratio of mobile homes are impacted. It is estimated that 1331 mobile homes are included in the impacted areas. Several tracts of undeveloped land in the noise zones are also currently being considered for development. The southern approach to the Shaw AFB runways is over a mining operation and US 76/378 which carries approximately 22,600 vehicles per day. The northern approach to the runways passes over the community of Dalzell and US 521. There are several churches in the area and elementary schools nearby. The area adjacent to Shaw AFB near Frierson Road and Stamey Livestock Road has also been considered for industrial and residential development.

**EXHIBIT Q**  
**AIRFIELD IMPACT ANALYSIS**

**Noise Zone III > 75 Ldn**

158 Total Housing Units  
66 Single Family Homes  
92 Mobile Homes

**Noise Zone II - 70-75 Ldn**

712 Total Housing Units  
220 Single Family Homes  
492 Mobile Homes

**Noise Zone II - 65-70 Ldn**

1153 Total Housing Units  
406 Single Family Homes  
747 Mobile Homes

**NORTH:**

**Clear Zones**

0 Total Housing Units

**Accident Potential Zone I (APZ I)**

2 Total Housing Units

**Accident Potential Zone II (APZ II)**

155 Total Housing Units

**SOUTH**

**Clear Zones**

0 Total Housing Units

**Accident Potential Zone I (APZ I)**

21 Total Housing Units

**Accident Potential Zone II (APZ II)**

38 Total Housing Units

Additional analysis was prepared based on the possibility of range property acquisition and the relocation of night operations to a site in the southern portion of the state forest. The analysis was based on aircraft operations approaching from the south and performing left hand turning movements towards the Santee River. The analysis uses an area defined by the flight track and a 1 mile extension due to night operations. The impact area is based on the recorded noise levels for the existing range and the assumption that the new range and will result in similar noise levels. The geographic area of the impact areas are also quite large. The flight track area is 17.3 square miles and the 1 mile extension is 20 square miles. Based on the above scenario, it is estimated that only 100 homes would be impacted by the two areas. Based on 2.9 persons per household, the total persons impacted would be less than 300. The 1 mile impact area extension falls just outside the small town of Pinewood. A night operations range should be sited to minimize any impacts to this town. The concentration of residents in the town could become a source of future complaints.

**EXHIBIT S  
NIGHT OPERATIONS RANGE**

<u>Impact Area</u>	<u>Single Family Homes</u>	<u>Mobile Homes</u>	<u>Total</u>
Flight Track	26	21	47
1 Mile Extension	<u>44</u>	<u>9</u>	<u>53</u>
TOTAL	70	30	100

### 3. Sumter Airport

The impact area for Sumter Airport is defined by a 1 mile extension from the airfield in all directions. The small number of operations and the small size aircraft based at Sumter Airport would likely result in noise contours that would not extend beyond the airport boundaries. Therefore, a one-mile extension was closer for analysis purposes based on the potential for increased operations, large aircraft and night operations. The impact area is small compared to Shaw AFB and the Range, and only covers approximately 6 square miles. There were only 97 housing units recorded within the impact area. Based on 2.9 persons per household, the total persons impacted is below 300. The majority of these residents are north and south of the airport, under the approach-departure surfaces.

#### **EXHIBIT T SUMTER AIRPORT IMPACT ANALYSIS**

<u>Impact Area</u>	<u>Single Family Homes</u>	<u>Mobile Homes</u>	<u>Total</u>
1 Mile Extension	75	22	97



## D. LAND USE COMPATIBILITY

### 1. Shaw Air Force Base

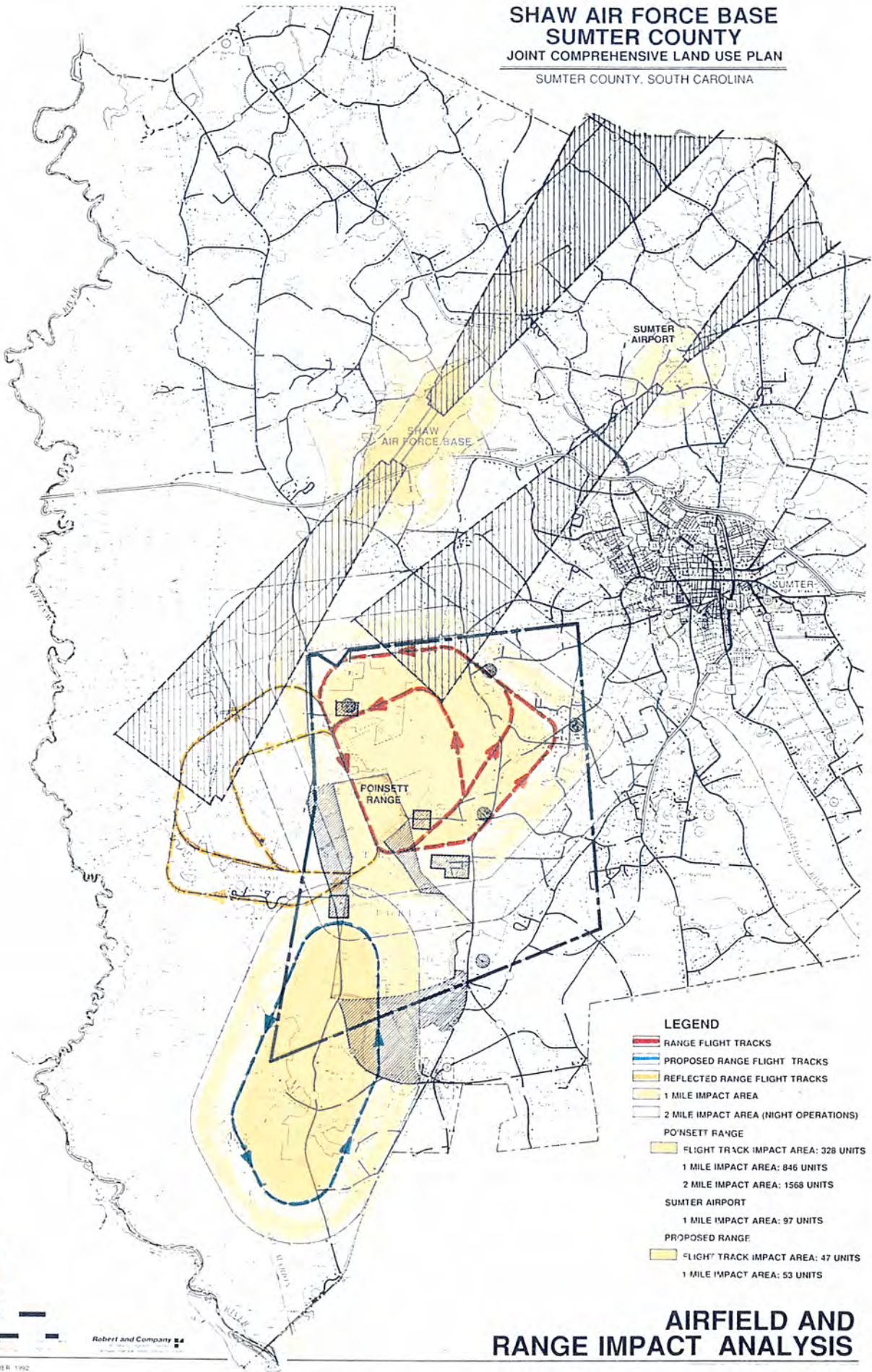
Shaw AFB now comprises the westernmost boundary of the City of Sumter following its annexation by the City in December 1989. It is bounded on the south and west by state highways, on the north by a state road, and on the east by privately owned, undeveloped woodland and swamp. To the south is a mining operation and SC Highway 76/378, a four-lane route with a heavy traffic count. The western boundary is paralleled by SC Highway 441 characterized by small-scale, strip commercial uses mixed with low density residential areas.

The area within the noise contours and accident potential zones contains some undeveloped land but incompatibilities such as a mobile home park, the Cherryvale neighborhood, Lost Creek Subdivision, Kel-Sam Farms Subdivision and other scattered residential areas exist. Additionally, several tracts of undeveloped land in the noise zones have recently been considered for residential development which is incompatible to the area. Although Sumter County has addressed the noise and accident potential concerns with respect to compatible land use with the recent adoption of a countywide zoning ordinance, much of the development in the Shaw AFB area occurred prior to the ordinance's adoption in December 1991.

### 2. Poinsett Gunnery Range

The Range is located southwest of the City of Sumter and due South of Shaw AFB proper in the Manchester State Forest. It is bounded on the west and south by public/private park land which contains a state park, scattered low density residential units, a small number of churches and other institutional buildings, SC Highway 261 and the Town of Pinewood. To the east of the Range exists scattered/mixed residential development, a small number of churches, occasional commercial properties, and agricultural and vacant land. To the north, scattered low density residential, public park land including Burnt Gin Camp, and agricultural uses currently exist. The majority of these uses are well within the defined impact areas around the Range and are exposed to significant noise levels. Consequently, many incompatible land uses exist near the Range.

**SHAW AIR FORCE BASE  
SUMTER COUNTY**  
JOINT COMPREHENSIVE LAND USE PLAN  
SUMTER COUNTY, SOUTH CAROLINA



**LEGEND**

- RANGE FLIGHT TRACKS
- PROPOSED RANGE FLIGHT TRACKS
- REFLECTED RANGE FLIGHT TRACKS
- 1 MILE IMPACT AREA
- 2 MILE IMPACT AREA (NIGHT OPERATIONS)

**POINSETT RANGE**

- FLIGHT TRACK IMPACT AREA: 328 UNITS
- 1 MILE IMPACT AREA: 846 UNITS
- 2 MILE IMPACT AREA: 1568 UNITS

**SUMTER AIRPORT**

- 1 MILE IMPACT AREA: 97 UNITS

**PROPOSED RANGE**

- FLIGHT TRACK IMPACT AREA: 47 UNITS
- 1 MILE IMPACT AREA: 53 UNITS

**AIRFIELD AND  
RANGE IMPACT ANALYSIS**

**FIGURE 9**

### 3. Sumter Airport

Bounded on the north and west by route 478, heavy agricultural uses and scattered residential development comprise this area of the Sumter Airport. To the immediate south is a newly developed industrial park and east of the airport property is predominantly agricultural. These uses are currently compatible with existing airport operations. As the potential for airport expansion develops, however, future compatibility must be protected.

## E. REGULATORY CONTROLS

Sumter County has been aggressive in its recent efforts to incorporate AICUZ concepts into all phases of the community's planning and development process. Development controls for areas adjacent to Shaw AFB, Poinsett Gunnery Range and Sumter Airport are necessary to avoid serious impacts on health and safety that often result where controls are absent and incompatible land use is allowed to develop.

A Height Restriction Ordinance was passed by Sumter County Council in October 1981 and applies to all of Sumter County. This ordinance regulates the height of structures and other activities in the vicinity of Shaw AFB, Poinsett Gunnery Range and Sumter Airport, and provides penalties for violations. The ordinance reflects height restrictions and obstruction criteria established by the Federal Aviation Administration (FAA) and the Air Force to ensure aircraft safety from obstructions in the approach and departure zones of the base. The ordinance is also consistent with the requirements contained in Federal Air Regulation Part 77 under Subpart C. To date, this ordinance has been effectively used to protect the use of land around these facilities.

In October 1985, Sumter County amended its zoning ordinance to add the Airfield Landing Zone Ordinance which regulated the location and use of the land in the vicinity of Shaw AFB and its properties. The ordinance created an Airfield Landing Zone District consisting of all land that fell within an area formed by Safety Zones I and II existing on the north and south sides of the runways. Only certain compatible land uses were permitted in these areas. This ordinance served as an active regulatory control restricting incompatible land uses in the Shaw AFB vicinity until the

Sumter County Council adopted a new county-wide zoning ordinance in December 1991. This ordinance comprehensively addresses the protection of Shaw AFB and the Sumter Airport by creating Special Purpose Districts known as Airfield Compatibility Districts (ACD). These ACD's are intended to prevent incompatible use or the creation of flight hazards in the vicinity of Shaw AFB and the Sumter Airport, and to promote the enhancement of the quality of life and safety of individuals residing in areas affected by these facilities. Although some incompatibilities exist around Shaw AFB, the new Sumter Zoning Ordinance, if implemented, effectively protects these facilities from future encroachment.

The land in the vicinity of Poinsett Gunnery Range is zoned for Rural Development Districts (RDD) which was created to protect the rural areas of Sumter County. With the increased training activity being realized at Poinsett Gunnery Range, it is imperative that future development in this vicinity be monitored very closely for incompatibilities because most land uses are allowable in the RDD.

Chapter

3

***Goals and Policies***

### III. GOALS AND POLICIES

Development of a joint comprehensive land use plan is a complex process involving more than just the physical characteristics of land. Economic, social and demographic dimensions of the area must be considered and incorporated into the plan. The goals and policies below serve to provide the future direction for the military and Sumter communities and defines an agenda that addresses the issues affecting the area.

#### A. VISION STATEMENT

Recognizing the vital role of Shaw Air Force Base and related facilities to the Sumter community and recognizing the vital role of the Sumter community on the region, it is important that a military and community partnership is developed which encourages balanced growth and development.

#### B. COMMUNITY GOALS

1. Control development in the vicinity of Shaw Air Force Base, Poinsett Gunnery Range and the Sumter Airport that would interfere with the continued operation of these facilities.

#### **Policies**

- a. Encourage use of review procedures to evaluate the suitability of proposed developments.
- b. Encourage only the most compatible land uses for noise impacted and accident potential areas when development cannot otherwise be avoided.
- c. Strongly discourage scattered location of new commercial and industrial developments.'
- d. Discourage the extension of continuous and scattered commercial activity along US 76/378 and other major highways and transportation

routes.

- e. Promote and encourage new population growth and land development in urban areas and areas served by community services.
  - f. Sumter County and the City of Sumter should adopt regulatory controls with criteria for mitigating the effects of noise.
2. Plan for the orderly accommodation of new development.

### **Policies**

- a. Encourage all development to be located, sited and designed to carefully fit its surroundings, to protect and enhance the quality of the environment, and to maintain the character of the area.
  - b. Capital improvements such as sewer and water services and road widening should be avoided in or adjacent to areas susceptible to annoying levels of noise or accident potential.
  - c. Sumter County and the City of Sumter should participate in coordinated planning efforts with Shaw Air Force Base and related facilities.
  - d. Discourage development of mobile home parks in areas susceptible to annoying levels of noise.
  - e. Promote the clustering of urban developments and discourage scattered and strip development.
  - f. Improve public education and awareness of planning and zoning in the noise impacted areas.
3. Minimize the impact of growth on existing development, streets and resources.

## **Policies**

- a. Minimize hazardous levels of water, air, noise, and other forms of pollution throughout the Sumter area.
- b. Promote the clustering of development to increase the efficiency of transportation and reduction of energy consumption.
- c. Prohibit encroachment of incompatible developments into established areas. Protect the integrity of aircraft related facilities and flight tracks by not allowing incompatible land uses into the area.
- d. Encourage future development to locate on vacant parcels which are properly zoned areas.
- e. Encourage the implementation of zoning in the City and County that is consistent with the Joint Compatible Land Use Study.

## **C. MILITARY GOALS**

1. Promote the public health, safety, comfort, and general welfare of the inhabitants of Shaw Air Force Base and Sumter County.

## **Policies**

- a. Plan, guide, and promote future growth and development.
- b. Promote orderly development and appropriate land use.
- c. Protect the character and stability of existing conforming land uses.
- d. Take all possible measures to prevent the elimination or impairment of airfield operations and protect the public investment therein.



- e. Enhance the quality of life in the affected areas.
  - f. Protect the general economic welfare of the Sumter community by discouraging incompatible land uses that could threaten or limit existing and future military aircraft operations.
  - g. Establish guidelines for land use compatibility.
  - h. Recognize the economic role of Shaw Air Force Base in the Sumter region and reaffirm the importance of protecting this vital public investment and its socioeconomic contributions to the community.
  - i. Inform community leaders of and discourage the establishment of any land use which would unreasonably endanger aircraft operations and the continued use of the airfield.
  - j. Incorporate all elements of the Air Installation Compatible Use Zone concept into the Sumter County 2005 Comprehensive Development Plan, modifying it when necessary.
  - k. Encourage the adoption and enforcement of appropriate zoning, building code, and subdivision ordinances to implement the land use recommendations.
2. Restrict land uses that are recognized as incompatible in noise sensitive areas and those prohibited in clear zones for aircraft safety.

**Policies**

- a. Uses that release into the air any substance such as steam, dust, or smoke, which could impair visibility or otherwise interfere with the safe operation of aircraft.
- b. Uses that produce light emissions, either direct or indirect (reflective), which could interfere with pilot vision.

- c. Uses that produce electrical emissions which would interfere with aircraft communication systems or navigation equipment.
  - d. Uses that attract birds or waterfowl, such as operation of sanitary landfills, maintenance of feeding stations, construction of lakes and ponds, or growth of certain vegetation.
  - e. Uses that provide for structures within ten feet of aircraft approach-departure and/or transitional surfaces.
3. Certain noise levels of varying duration and frequency can be detrimental to both physical and mental health. A limited, though definite, danger to life exists in certain areas adjacent to airfields. Where these conditions are sufficiently severe, it is not consistent with the public health, safety, and general welfare to allow the following types of uses:
- o Residential.
  - o Retail business.
  - o Office buildings.
  - o Public buildings (school, churches, etc.).
  - o Recreational buildings and structures.
4. Land areas below the take-off and final approach flight paths are exposed to significant danger of aircraft accidents. The density of development and intensity of use must be limited in such areas.
5. Different land uses have different sensitivities to noise. Land use compatibility standards should be based on these noise sensitivities. In addition, a standard Noise Level Reduction Guideline for new construction should be implemented to permit certain uses where they would otherwise be prohibited (Appendix E).
6. Land-use planning and zoning in the airfield environs cannot be based solely on aircraft-generated effects. Designation of land uses within the AICUZ

should be further defined by consideration of:

- o Physiographic factors.
- o Climate and hydrology.
- o Vegetation.
- o Surface geology.
- o Soil characteristics.
- o Intrinsic land use suitabilities and constraints.
- o Existing land use patterns.
- o Land-ownership and values.
- o Socio-economic considerations.
- o Cost and availability of public utilities, transportation, and community facilities.
- o Other noise sources.

Chapter 4

*Future Land Use*

## IV. FUTURE LAND USE

### INTRODUCTION

The preceding chapters of the Joint Compatible Land Use Study information about existing physical, social and economic conditions in Sumter and Sumter County. From this information, future projections were made regarding the city and county's population and housing growth rates. The city's and county's resources as well as needs have also been inventoried and analyzed. This chapter will discuss the city's and county's resources that present opportunities for development and constraints that may inhibit growth and development.

Recommendations for future land use are developed from the data base projections presented in previous chapters. However, the future land use recommendations also take into consideration the goals and policies developed through steering committee meetings. Planning assumptions which form a basis to develop future land use concepts are based on an analysis of existing and projected data, and the JCLUS goals and policies.

Four sections are presented within this chapter including:

- A. Opportunities: Opportunities identify the conditions present within the city and county that provide distinct advantages for future growth.
- B. Constraints: Constraints are conditions present that will negatively affect future growth and development within the city and county. These conditions may or may not be subject to alteration.
- C. Planning Assumptions: Past, current and future trends of land use derived from the analysis of physical and socioeconomic conditions and goals and policies.
- D. Future Land Use Concepts: Based on opportunities, constraints, and planning assumptions, recommendations are made for future development of the city and county around Sumter Airport, Shaw Air Force, and the Poinsett Gunnery Range.

## A. OPPORTUNITIES

### 1. Regional Highway Network

The City of Sumter and Sumter County are centrally located in the state of South Carolina. Both City and County are surrounded on all sides by interstate highways including Interstate 95 to the east and south, Interstate 20 to the north, and Interstate 26 to the west. These 3 interstate highways provide connections to most of the major metropolitan markets in the southeast.

### 2. Local Highway Network

The City of Sumter and Sumter County are supported by a network of U.S. and state highways that radiate in a spoke-like pattern across the county to the surrounding interstate highway system. Key roads in this local highway system include U.S. 76/378, U.S. 15, U.S. 521 and State Routes 261, 120, and 441.

### 3. Historic and Natural Resources

There is a great abundance of natural and historic resources in the area that provide unique opportunities for ecotourism, and outdoor recreation. Natural and historic resources in the area include the Wateree River, Lake Marion, Poinsett State Park, Sumter's Tomb, Historic Stateburg, and Manchester State Forest. State Route 216 provides direct access to the majority of these resources. The numerous antebellum plantations visible from the road also make the character of the road a unique resource.

### 4. Fresh Water

There is a great abundance of fresh water in the city and county with all systems operating below capacity. A key component for growth, the excess water capacity in the area should make it possible for the city or county to be able to provide expanded water service even if growth continues at a rapid rate. Water sources include groundwater and wells and surface water in the Lynches, Pocolaligo, and Wateree Rivers and Lake Marion.

5. 100 Year Flood Plain/Wetlands

The 100 year flood plain is a unique resource that inhibits development but provides opportunities for park and recreational activities, or as a buffer from incompatible development. The western half of Sumter County has a tremendous flood plain associated with the Wateree River and its tributary creeks. The southern part of the county is also bisected by the flood plain associated with the Pocotaligo River and its tributary creeks. Wetlands occur in most of the 100 year flood plains. Other naturally occurring wetlands include a large area south of the Poinsett Gunnery Range referred to as the Big Bay Swamp. Other smaller "swamp" wetlands randomly occur throughout the county. The wetlands provide a unique habitat for animal and plant life that should be preserved throughout the area.

6. Shaw Air Force Base

The influence of Shaw Air Force Base on growth and development in the area cannot be overstated and will continue to be a large contribution to the areas economy for many years. There are more than 9,000 residents of Sumter County associated with the active duty personnel at Shaw Air Force Base and it is estimated that the total annual economic impact was is in excess of \$400 million.

7. Sumter Airport

The Sumter Airport has the potential to significantly affect growth and development north of the city of Sumter. Expansion of the airport would be a benefit to local business and industry and would aid in industrial recruitment.

8. Undeveloped Land

Approximately 90 to 95 percent of the land in the county outside of the city of Sumter is undeveloped and remains in agriculture, forest, swamps, and wetlands. While wetlands, forest and flood plains are extensive throughout the county, there are large tracts of vacant developable land provides the

county with great flexibility and opportunities for development.

9. Homestead Air Force Base Closure

The great tragedy that resulted in the loss of homes and the destruction of Homestead Air Force Base by Hurricane Andrew may be a long term opportunity for Sumter and Sumter County. The destruction of Homestead Air Force Base has led to the relocation of more than 700 families associated with the addition of some of the Homestead Air Force Base military operations to Shaw Air Force Base.

10. Diversified Economy

Shaw Air Force Base is the largest employer in the area. However, the employment base is quite diversified and the city and county have had repeated success in locating new industries in the area. Manufacturing in the city and county has the largest employment share at 29.9% followed by Wholesale and retail trade at 21.3%, the largest growth sector in the last ten years has been the services sector which has grown to employ 18.9% of the workforce.

11. Location

Sumter and Sumter County are located within commuting distance of Columbia, South Carolina and the resort areas along Lake Marion. The county maintains an appealing rural character but also has direct access to metropolitan markets, recreational resources, and several interstate highways.

12. Government Cooperation

The Joint Compatible Land Use Study is a joint effort of the city, the county, and Shaw Air Force Base. The entire project has involved coordination and communication with members of each of the above governments and their associated agencies. The spirit of cooperation has been evident throughout the evolution of this study and is testimony to the long term opportunity for a successfully implemented plan.



## B. CONSTRAINTS

### 1. Soils

The majority of the soil associations in the county are poorly suited for urban uses, including sanitary sewer facilities and building foundations. The majority of the eastern and the far western portions of the county contain soils with severe limitations for development. The sandy soils also contribute to road construction and maintenance problems. The poor subgrade erodes quickly under poorly prepared older roads. New roads with thicker subgrade are more costly to develop due to the weak soils.

### 2. 100 Year Flood Plain/Wetlands

The city and county are criss-crossed in a network of wetlands and flood plains associated with the Wateree and Pocotaligo rivers and associated tributary creeks. These water soaked areas cover more than 20% of the county and randomly divide underdeveloped land and pose severe development restrictions.

### 3. Poinsett Gunnery Range

The Poinsett Gunnery Range occupies 8,800 acres of land in the Manchester State Forest. The physical layout and development of the range does not restrict development. However, the air activities associated with the range including the aircraft flight tracks and restricted airspace may pose limitations on developments that might be impacted by range criteria and activities. Residential development would be the most commonly affected land use, especially at medium and high densities.

### 4. Shaw Air Force Base

Shaw Air Force Base is primarily a catalyst for development. However, several airfield related criteria present a long term constraint to development including the noise zones, accident potential zones and the approach-departure clearance surfaces. Each of the above criteria affects the density, type, and height of development that can occur around the base.

5. Historic and Natural Resources

Historic and natural resources are a great asset to the city and county but they also pose development limitations. Future developments that may impact wetlands, historic properties, or endangered animals and plants are subject to lengthy and costly review and permitting processes coordinated by the U.S. Army Corps of Engineers, the U.S. Fish and Wildlife Service, the State Historic Preservation Office and/or miscellaneous other agencies.

6. Visual Image

The county maintains an appealing rural character. However, several of the major arterial roads are visually dominated by random, strip commercial development including U.S. 76/378, U.S. 521, and U.S. 15. This visual clutter is generally not appealing to visitors and tourists and may discourage potential new residents from locating in the area. In addition, there are many residential developments along arterial and collector roads that are visually dominated by mobile home developments. This type of residential development may also discourage the development and investment in long term permanent housing.

C. PLANNING ASSUMPTIONS:

Six planning assumptions were prepared for the city's and county's land uses based on the analysis of the exiting physical conditions, the socioeconomic forecasts, as well as opportunities and constraints. The six assumptions listed below summarize anticipated future land use trends and requirements for the city and county as projected through the year 2010.

1. Moderate to High Residential Growth

Population projections and historical housing trends indicate that growth should be moderate over the next twenty years in this land use category. Moderate growth can be expected to continue in the county with a slightly higher rate of growth in mobile homes. Growth can be anticipated to remain slow in the city due to the existing nature of the urbanized

development in the city. This land use category has the greatest potential for growth during the next twenty years based on available land in the county and the cyclical nature of the housing industry.

2. Moderate Commercial Growth

The growth in the retail and services sectors is closely tied to the areas population growth and transportation network. Population trends indicate moderate growth and long term road improvement projects will likely continue to boost commercial development opportunities. Development of any type of perimeter road network around Shaw Air Force Base and Sumter is certain to generate new commercial activity. The development of the tourism industry associated with the areas natural and historic resources may lead to increased commercial activity towards the middle and end of the planning period.

3. Moderate Industrial Growth

The manufacturing share of the county's employment base is the largest sector at 29.9%. The city and county have located several new industries every year since the late part of the 1980's witnessing a growing diversification of the industrial base. There is a large industrial park area south of Sumter with rail and highway access and there are plans to develop new industrial areas in proximity to the Sumter Airport. Improvements in the areas highway network would significantly increase the potential to recruit manufacturing and distribution facilities that would directly benefit from the road system.

4. Slow to Moderate Office Growth

Service industries experienced moderate growth in the last twenty years in the city and county. Continued growth in this area is highly desired and is likely to continue with a slow to moderate rate throughout the next twenty years. Improvements in the transportation network and zoning in the county will enhance the potential for expansion of this land use. Continued development of the area's schools and medical facilities should also contribute to steady gains in office development.

5. Slow Agricultural Growth

It is likely that the farming industry will see very little change, however, the importance of the timber forest and forestry practices may grow in response to the steady decline in resources of this magnitude in the state and region. Development of the area's natural resources could spur agricultural development in this area.

6. Slow Open Space Growth

It is difficult to forecast demand for open space, however, the development of the area's natural resources for greenways, trails, parks, scenic highways could contribute significantly to the areas goals for economic development and tourism. Sumter County already has a tremendous amount of acreage dedicated as state forest, swamp, wetland and floodplain but it is apparent that the continued development and expansion of these resources will play a key role in the areas future.

D. FUTURE LAND USE CONCEPTS

This section summarizes recommendations for future land use development and transportation improvements based on the planning assumptions, goals and policies, as well as physical and socioeconomic conditions analysis. These recommendations are intended to be used as a guide for decision-making regarding Sumter, Sumter County, and Shaw Air Force Base's future land use and development.

1. Arterial Highway Enhancements:

Develop the area's U.S. Highways to be four laned entirely within Sumter County including U.S. 521 north and U.S. 15 north and south.

2. Miscellaneous Road Projects:

Develop a perimeter road system in the county northwest of the city and around Shaw Air Force Base. Include, in phases, the expansion and

extension of a perimeter road south of U.S. 76/378 along Folly Road and 380. Develop the connection between U.S. 76/378 and U.S. 521 with improvements to State Road 441. Complete a northern perimeter road with road extensions and improvements to Foxworth Mill Road, Queen Chapel Road, and Red Land Road. In addition to the perimeter road, there are other road projects that would enhance circulation in the area including the extension of County Road 204 (Lorings Mill Road) across U.S. 76/378 to Stamey Livestock Road, and extension of Stamey Livestock Road south to county road 380, the extension of Old Field Road from Stamey Livestock Road to St. Paul's Church Road, and the development of an east/west collector road to County Road 37 (Fish Road). The improvement and extensions to Stamey Livestock Road will enhance the adjoining area's potential for future use for manufacturing and distribution. The development of the east/west collector road will provide a northern perimeter route around Shaw AFB and will reduce traffic through the housing areas of Shaw AFB.

3. Scenic Highways:

Development of a system of scenic highways that link the areas natural and historic resources. Resources to be linked include Sumters Tomb, Statesburg, the Poinsett Gunnery Range, Poinsett State Park, Manchester State Forest, Pinewood and the Iris Gardens. Roads that could be part of the scenic highway system include State Road 261 and 120, County Road 76 and U.S. 521.

4. Cherryvale:

The Cherryvale mobile home communities are poorly sited with regard to the noise levels generated by airfield activities at Shaw Air Force Base. However, the area is ideally located to provide convenient access to Shaw Air Force Base. A long term development concept that gradually renovates Cherryvale mobile homes that are impacted by noise would be a long term benefit to the city and county and would help protect the Cherryvale residents safety and welfare and reduce exposure to noise levels. It is recommended that grant or bond funding be developed to

finance noise level reduction renovations to existing homes in Cherryvale for residents that qualify. It is also recommended that new development in the Cherryvale area should be developed with housing built in accordance with noise level reduction standards.

5. Airport Industrial Park:

Develop and extend roadways in the vicinity of Sumter Airport to provide access to a possible industrial park. Industrial recruitment efforts will be enhanced by the airport and the park development will help to balance the distribution of industrial development in the area.

6. Perimeter Road Office Parks:

Develop office park or business distribution facilities to coincide with the perimeter road improvements. The office parks will provide an employment opportunity that is particularly consistent with the residential growth of the county north of the city.

7. Noise Level Reduction Areas:

Several areas in the county in close proximity to Shaw Air Force Base are exposed to high levels of noise that are not compatible with development. Several of these areas are well suited for residential development except for the noise levels. Therefore, these areas should be designated for noise level reduction areas that allow development but requires building modifications to reduce noise. Areas immediately north and west of Shaw, and Cherryvale, should be targeted for noise level reduction. It is also recommended that grant or bond funding or low interest loans be developed to finance noise level reduction housing renovations for residents that qualify.

8. Manufacturing Distribution Centers:

Several areas of the county fall within the accident potential zones and the approach-departure clearance surfaces of Shaw Air Force Base. These areas could be compatibly developed for manufacturing and distribution

uses with an enhanced road system as well as density and height restrictions. Areas north and south of the Shaw airfield are well located for convenient access to U.S. 76/378 and U.S. 521.

9. Rural Historic Districts:

Preserve existing historic areas and include other known historic properties in the area. The districts could be promoted for tourism and linked with scenic highways.

10. Commercial Center:

Currently, existing commercial developments are randomly spreading along arterial corridors. It is recommended that commercial development be focused and concentrated along the existing developed portions of U.S. 76/378 and as nodes of development along the recommended perimeter road system. A commercial center should be planned with access to 441 that will serve the residents of the western half of the county. The types of retail needs in this portion of the county include grocery stores, banks and pharmacies. Commercial development along U.S. 521 north should be planned to serve residents north of the city of Sumter. However, the current traffic congestion and poor visual image along U.S. 76/378 should not be permitted along U.S. 521 north. Development standards should be modified to regulate type and appearance of future commercial development.

11. Range Expansion:

The acquisition of additional land by Shaw AFB to the south of the existing Poinsett Gunnery Range will allow for the expansion of range activities that would benefit development in the city and county. The range expansion will include a night operations facility that would allow for a large reduction in the number of night operations occurring at the existing range. The shift of operations would dramatically reduce the number of county and city residents impacted by range aircraft activities.

12. **Parks and Open Space Buffers:**  
The large areas of flood plain and undeveloped land allow for the opportunity to preserve these areas or to develop for needed county or neighborhood recreational uses. The parks and open space developments could also be used to buffer airfields from incompatible uses.
  
13. **Mobile Home Communities:**  
Mobile home development provides a valuable resource for the housing needs associated with Shaw Air Force Base and the county's residents. However, the continued random sprawl of mobile homes in the county will likely discourage certain kinds of other long term investment. Therefore, it is recommended that the area's future mobile home communities be concentrated in areas that continue to provide convenient access to Shaw and the city of Sumter. Undeveloped areas southeast of Cherryvale, north of State Route 763, in the vicinity of 458, and north of 441/521 appear well suited to accommodate these types of development. In addition, development design standards should be developed to regulate the quality, appearance, and density of future mobile home park developments.
  
14. **Countywide Regulations:**  
The long term future development of the county and the implementation of the above land use concepts cannot be accomplished without development regulations and can be greatly facilitated with development regulations. Regulations in the county should consider historic preservation, noise level reduction, design guidelines as well as landscape and tree preservation. Included with the regulations should be an update to countywide subdivision regulations which should consider the addition of transfer of development rights. The transfer of development rights may allow for appropriate development in those parts of the county subject to regulation based on noise.



15.     **Zoning Amendment:**  
The zoning in the county should be amended to allow the continued development of the small residential area located south of the Glascock mining operation and John Franklin Road.
  
16.     **Expansion and Rebuilding:**  
Existing homes that are incompatible with high noise and accident potential zones should be permitted for expansion or rebuilding with appropriate noise level reduction standards. The areas of the county close to the intersection of Stamey Livestock Road and Frierson Road and Cherryvale are candidates for the above exception.
  
17.     **Build-Out:**  
Existing platted subdivisions that are incompatible with high noise and accident potential zones should be permitted to build out using noise level reduction and density reduction standards.
  
18.     **Multiple Listing Service:**  
Noise and accident potential zone maps should be included in the Multiple Listing Service (MLS) books and the Sumter Board of Realtors should add a category to property listings that designates that a home is in a high noise area or accident potential area.
  
19.     **Building Codes:**  
Building code jurisdiction should be extended to include the areas in noise zones DNL I, II and III. The county should also provide a full time code enforcement officer selected as a qualified resident of the area to inspect new construction within the high noise areas.
  
20.     **Signs:**  
Areas of the county subject to high noise should be posted with signs indicating a noise area 65 decibels or higher.
  
21.     **Restrictive Covenants:**

All property bought and sold in the county within noise zones II and III should include a declaration of restrictive covenants, release and agreement that acknowledges the presence of a high noise zone. In addition, the declaration should include an easement for the continuation of noise activities. All property rented in the county within noise zones II and III should include the same declaration as stated above in the rental agreement.

22. Land Exchange:

The Shaw AFB property west of Highway 441 could be exchanged for one of the old schools along Frierson Road or for property located in zone III. Due to the high commercial value of the property along Highway 441, an exchange could also include the property needed to develop an east/west collector road. The Shaw AFB property could be developed for a new school with direct access to Highway 441 or alternate access to Edgehill Road or for general commercial development. The old school site could be renovated or developed by the Air Force and would permit the consolidation of Air Force facilities that compliments the concept to develop an east/west collector road. If the property is exchanged for zone II or III property then the high noise property could be used to relocate the Shaw AFB recreational area away from the runway clear zones.

23. Capital Improvements:

Capital improvements such as providing sewer and water services or expanding existing services should be avoided in or adjacent to areas in noise Zone III.

24. Plan Update:

Shaw AFB should update the noise contours when a significant change in mission occurs that changes the noise footprint and monitor growth and development outside the base boundaries on an on-going basis. The JCLUS findings should be updated whenever a significant increase in noise levels occur or when significant numbers of new personnel or equipment are assigned to the base.

25. JCLUS Committee:

The JCLUS Committee and representatives of the surrounding communities should meet quarterly the first year and then annually for the purposes of insuring implementation of study recommendations, coordinated planning and conflict resolution.

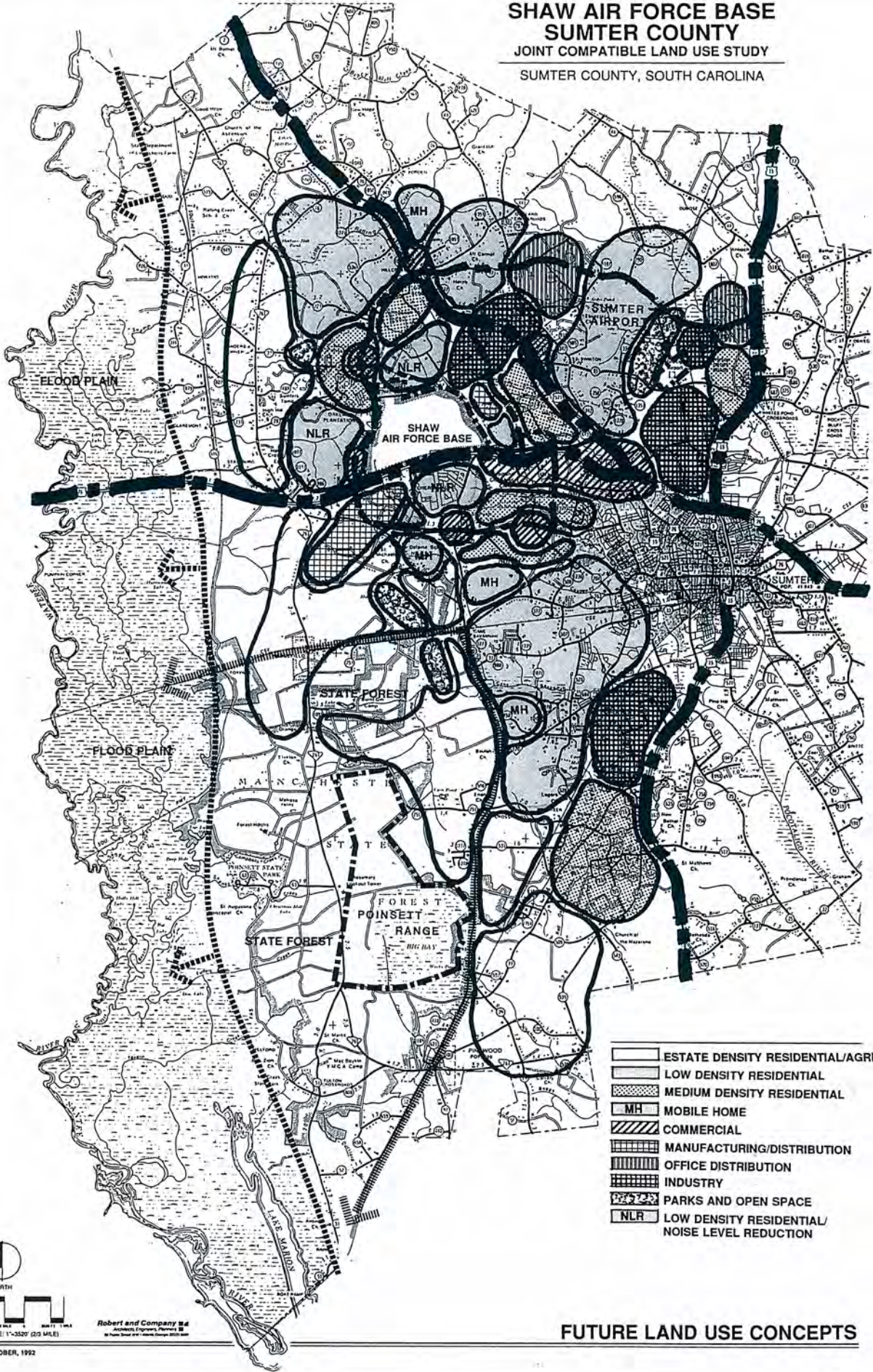
26. Historic District:

The Stateburg Historic District should be protected with overlay, historic district zoning. The zoning should be designed to protect the area's historic resources from incompatible development.

27. Grant and Loan Funding

Appropriate governmental entities should contact the South Carolina Governor's Office to promote and develop funding for noise level reduction housing renovations. The purpose will be to create a new program to provide grant or loan financing coordinated through the State Community Development and/or Housing Authority programs. The new program could be operated similar to the energy conservation programs sponsored by public utility companies.

**SHAW AIR FORCE BASE  
SUMTER COUNTY**  
JOINT COMPATIBLE LAND USE STUDY  
SUMTER COUNTY, SOUTH CAROLINA



**FUTURE LAND USE CONCEPTS**

NORTH
   
 1/4" = 1 MILE
   
 SCALE: 1"=3.529' (212 MILES)

**Robert and Company**
  
 Planning Engineers, Planners, & Architects
   
 400 North State Street, Suite 200, Columbia, SC 29201

OCTOBER, 1992

FIGURE 10

Chapter

5

***Analysis of  
Development Regulations***

## V. ANALYSIS OF DEVELOPMENT REGULATIONS

### A. INTRODUCTION

To achieve the goals and policies of the JCLUS future land use plans and later implement its recommendations and strategies, a comprehensive review of existing development regulations governing land use in the City and County of Sumter was conducted to determine what is permissible to control development in and around the study area. Both the City and County of Sumter have shown considerable effort by enacting development regulations and incorporating recommended AICUZ concepts and other land use techniques into all phases of the planning and development process. Land use controls for areas adjacent to Shaw AFB, Poinsett Gunnery Range and Sumter Airport are crucial to avoid serious impacts on health and safety that often result where controls are absent and incompatible development is allowed to occur.

This review of existing development regulations, however, is not limited to the specific needs of the study area but also considers the total needs of the communities within Sumter County.

## B. OVERVIEW OF EXISTING REGULATIONS

### 1. Sumter Zoning Ordinance

The Zoning Ordinance of the City and County of Sumter was adopted county-wide in December 1991. The ordinance was established to regulate the location and use of buildings, structures and land; and the density and distribution of population within the City of Sumter and the unincorporated areas of Sumter County. The ordinance allows for the creation of special districts for special purposes including the Airfield Compatibility Districts (ACDs) for certain areas around Shaw AFB. The purpose of these districts is to maximize the safety of land use and minimize the affect of aircraft noise thereby ensuring compatibility. Prior to 1991, the ordinance covered only the incorporated limits of the City of Sumter.

### 2. Sumter Subdivision Ordinance

The Subdivision Ordinance of the City and County of Sumter was adopted county-wide in December 1991. The ordinance was established to provide for design standards and required improvements governing the subdivision of land within the City of Sumter and the unincorporated areas of Sumter County. This ordinance further provides for the timely provision of required streets, utilities, and other facilities and services to new land developments; the safe and convenient traffic access and circulation; the provision of needed public spaces and building sites in harmony with the Comprehensive Development Plan of the City of Sumter and Sumter County. Prior to the adoption in 1991, no subdivision regulations existed in Sumter County.

### 3. Height Restriction Ordinance

The Height Restriction Ordinance was adopted by the Sumter County Council in October 1981 and applies to all of Sumter County with the exception of the incorporated City limits. This ordinance was enacted to

regulate the height of structures and other activities in the vicinity of Shaw AFB and Poinsett Gunnery Range, and provides penalties for violations. The ordinance reflects height restrictions and obstruction criteria established by the Federal Aviation Administration (FAA) and the U.S. Air Force to ensure aircraft safety from obstructions in the approach and departure zones of the base. The ordinance is also consistent with the requirements contained in Federal Air Regulation Part 77 under Subpart C.

## C. ANALYSIS AND RECOMMENDATIONS

In general, existing development regulations provides for the protection of land within the study areas as well as other areas throughout Sumter County. Improvements are needed, however, in sections of each of the regulations to further enhance the future compatibility of land near Shaw AFB, Poinsett Gunnery Range and the Sumter Airport. Following are the initial analyses and recommendations by sections of each ordinance.

Additional recommendations are provided for other effective land use techniques which may enhance compatible uses in the study areas but are not included in the existing development regulations.

### 1. Sumter Zoning Ordinance

#### Article V - Section 501, District Boundaries

- o **Analysis** - Because of the constant fluctuation and uncertainty of noise contours around Shaw AFB, the lack of "real" boundaries associated with the Day-Night Levels (DNLs) continue to pose problems for potential developers as well as the Planning Commission in determining where and what types of residential developments should be allowed in the Airfield Compatibility Districts (ACDs).



- o **Recommendation** - Extend the DNL I District (65-75 db) north, west and south to the nearest logical boundary. Extend the district north to State Highway 441 at Gaillard Crossroads and east to County Road 1018 and Queens Chapel Road. Extend the district west along Racoon Road and County Road 1077 and south along the Southern Railroad and Wedgefield Highway. The extension should accommodate any future fluctuation in contours based on operational changes. This extension will provide for a "defined line" for potential developers in the future.

If accepted, a change in zoning classification from Rural Development District (RDD) to Rural Agricultural (RA) within the areas being extended is also recommended. The RA classification allows for considerable development flexibility including a maximum residential density of 2 units per acre while limiting certain other uses and densities which may be incompatible for the area.

- o **Analysis** - Although contours do not exist for Poinsett Gunnery Range, noise measurements taken in the vicinity of the Range generally indicate high levels with a number of people being exposed to levels in excess of 65 db.
- o **Recommendation** - The zoning classification of RDD should be changed to RA north of the range to road 763 and northeast to the city limits of Sumter. The density requirements in the RA classification will allow for development flexibility while at the same time providing land use control in the vicinity of the range by limiting future encroachment.
- o **Analysis** - The General Residential District (GR) is currently designated within an APZ II District. The maximum allowable density could be in direct conflict with the APZ II residential allowances as well as the ACD's safety standards of persons per acre per 24 hour period. The GR classification currently allows for a maximum of 7.2 units per acre.

- o **Recommendation** - This GR classification should be changed to R-15 which still allows for residential development but at a lower density. The R-15 classification allows for a maximum of 2.9 units per acre which is a more acceptable density for safety zones.

#### Article V - Purpose of Districts

- o **Analysis** - The purpose of districts do not include densities in the descriptions. Although densities are provided in the various tables and charts, the purposes are somewhat confusing and hard to distinguish from one to the other.
- o **Recommendation** - To easily distinguish between districts, the maximum allowable densities should be included in the descriptions where applicable. For example: R-6, Residential District - This district is intended to foster, preserve and protect areas for relatively high density development (maximum 7.2 units per acre) on small lots.
- o **Analysis** - The General Residential District (GR) in its description indicates the allowance of a "variety" of housing types. The "variety" is unclear in the description.
- o **Recommendation** - List the variety of housing types in the description of the GR District for clarity and understanding.
- o **Analysis** - The Limited Commercial District (LC) allows for a density of 7.2 units per acre. This level of density is in direct conflict with ACD safety standards of persons per acre during a 24 hour period and is currently designated in an APZ I. Additionally, the description of the LC District indicates "limits" used to promote land compatibility, however, these limits are not clearly specified in the ordinance to distinguish it from other commercial districts.
- o **Recommendation** - The LC District should be restricted to conform to ACD safety standards near Shaw AFB. The description should specify

what limits are being utilized to promote compatibility and list allowable uses.

- o **Analysis** - The General Commercial District (GC) also allows for densities of up to 7.2 units per acre as well as the "broadest possible range of commercial uses determined by market conditions." This level of density allowances is also in direct conflict with ACD safety standards of persons per acre per hour. Additionally, commercial development being determined by "market conditions" allows for a broad legal interpretation of uses. Further, the designation of GC near Shaw AFB is incompatible with the recommended JCLUS future land use concepts.
  
- o **Recommendation** - The GC District should be restricted to conform to ACD safety standards near Shaw AFB. The term "market conditions" should be deleted from the description. Allowable uses are stipulated in the table of non-residential uses as provided.
- o **Analysis** - The Rural Agricultural District (RA) description implies that these areas may be required for urban development in the future. If so, changes to these districts for urban development in the future would allow for incompatible encroachment of Shaw AFB, Poinsett Gunnery Range and Sumter Airport.
  
- o **Recommendation** - The last sentence of the description for RA should be deleted. To ensure future compatibility, the current designations should remain as they are. The densities and allowable uses are compatible with military and commercial airfield operations but higher densities could cause problems in the future.

#### Article V - Special Purpose Districts

- o **Analysis** - The Planned Unit Development Districts (PUD) allows for considerable flexibility in the development of land in order to promote

the land's most appropriate use. The PUD's flexibility could lead to incompatible development in the ACDs. Additionally, no Air Force representative is included on the Plan Review Committee created to ensure adequate review of PUD proposals.

- o **Recommendation** - PUDs should be restricted to all requirements of the ACDs to ensure future compatible land uses in the study areas. A representative of the Air Force should be added to the PUD Plan Review Committee.

Article X - Supplemental Review, Design and Performance Criteria for Certain Buildings, Uses and Projects

- o **Analysis** - Section 1007.11 (Exterior Illumination Performance Standards and Criteria for Manufacturing and Processing Plants) provides standards for governing outdoor lighting for industrial uses. Night lighting around manufacturing and other industrial plants located near airfields could obstruct the vision of pilots during take-offs and landings at night.
- o **Recommendation** - Any planned construction of exterior illumination in the APZ I and II Districts of the ACDs should be reviewed by the Airspace and Safety Director at Shaw AFB for obstruction clearances. Any planned construction requiring exterior illumination within two miles of the Sumter Airport should be reviewed by the Federal Aviation Administration (FAA) for obstruction clearances.

Article X - Section 1008 - Specific Development Standards for Certain Other Uses and Projects

- o **Analysis** - Section 1008.2 (Sanitary Landfills and Inert Dump Sites) The location of sanitary landfills near the end of airfield runways could potentially cause environmental impacts to wildlife because of its

attractiveness to birds and assorted scavengers. Inert landfills (in-ground) are not affected by the potential impact.

- o **Recommendation** - FAA regulations currently prohibit the location of sanitary landfills within 10,000 feet of the end of runways but is allowing individual airports and jurisdictions to set their own distance requirements. Distance requirements should be added to this section, for sanitary landfills only, to insure the environmental protection of the County's wildlife for Shaw AFB and the Sumter Airport. Inert landfills should continue to be permitted as written.

2. Sumter Subdivision Ordinance

- o **Analysis** - Mention is made throughout the ordinance of APZ Zones around Shaw AFB for final plat review and design standards but neither the description of these zones or a map showing their locations are included. Additionally, no Air Force representative is included on the Subdivision Review Committee.

- o **Recommendation** - Include definitions of APZ Zones and a map outlining these zones for easy reference. A representative from Shaw AFB should be added to the Subdivision Review Committee.

3. Other Recommendations

The City of Sumter currently utilizes building codes to regulate the construction of structures in the city limits. It is strongly recommended that this code be extended to the unincorporated areas of Sumter County to include the noise footprint of Shaw AFB and incorporate sound attenuation construction requirements in the APZs.

#### D. ENABLING LEGISLATION

An initial review of the South Carolina State Code regulating land use and zoning indicates that all of the recommendations to existing development regulations listed above are within the statutes of the codes. An inquiry of the possible use of Transfer of Development Rights as a recommended land use technique for the JCLUS was found not legally binding.

#### E. SHORT-TERM RECOMMENDATIONS

##### **Official Sumter Zoning Map**

Amend the Official Sumter Zoning Map to extend the DNL 1 District boundaries north to the intersection of Highways 278 and 43, east to County Road 1018 and Queens Chapel Road, west along Racoon Road and County Road 1077, and south along McLaurin Road to State Highway 40.

Amend the Official Sumter Zoning Map to change the zoning classification of General Residential (GR) to Rural Development District (RDD) within the APZ II District north of Shaw AFB.

Amend the Official Sumter Zoning Map to change the zoning classifications of R-15 to Rural Development District (RDD) north of Shaw AFB.

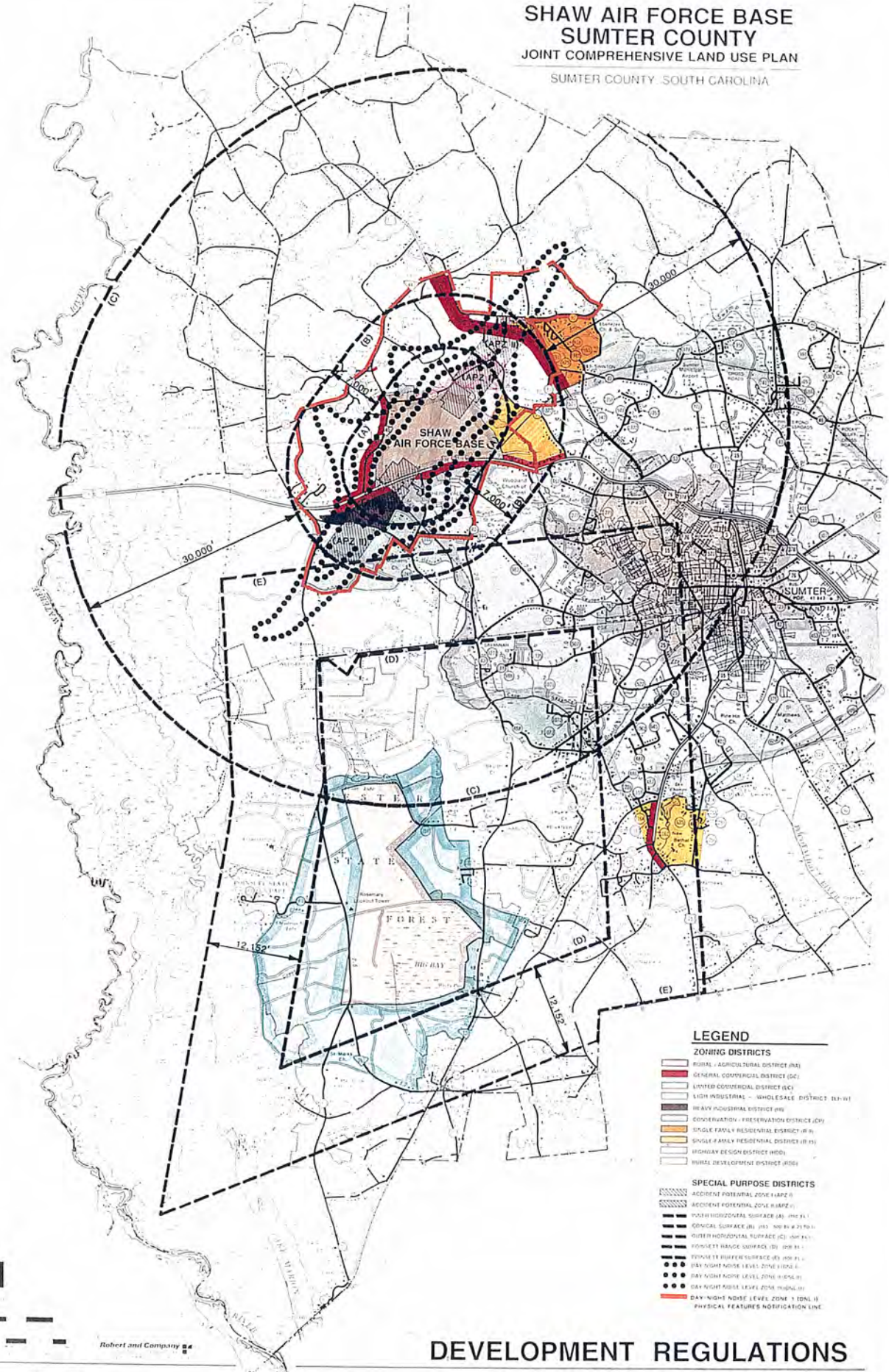
Amend the Official Sumter Zoning Map to change the zoning classification of Heavy Industrial (HI) along John Franklin Road to Rural Agricultural (RA).

Amend the Official Sumter Zoning Map to change the zoning classification of Rural Agricultural (RA) northeast of Shaw AFB between Frierson Road

and Old Frierson Road down to Long Branch to Light Industrial and Wholesale District (LI-W).

Amend the Sumter Zoning Ordinance to allow the development of mobile homes in all commercial districts as defined in Article V, page V-3 and as outlined in Article VI, Tables I, II and III.

SHAW AIR FORCE BASE  
 SUMTER COUNTY  
 JOINT COMPREHENSIVE LAND USE PLAN  
 SUMTER COUNTY SOUTH CAROLINA



**LEGEND**

- ZONING DISTRICTS**
- RURAL - AGRICULTURAL DISTRICT (RA)
  - GENERAL COMMERCIAL DISTRICT (GC)
  - LIMITED COMMERCIAL DISTRICT (LC)
  - LIGHT INDUSTRIAL - WHOLESALE DISTRICT (LI-W)
  - HEAVY INDUSTRIAL DISTRICT (HI)
  - CONSERVATION - PRESERVATION DISTRICT (CP)
  - SINGLE FAMILY RESIDENTIAL DISTRICT (SR-1)
  - SINGLE FAMILY RESIDENTIAL DISTRICT (SR-2)
  - HIGHWAY DESIGN DISTRICT (HDD)
  - RURAL DEVELOPMENT DISTRICT (RDD)
- SPECIAL PURPOSE DISTRICTS**
- ▨ ACCIDENT POTENTIAL ZONE (APZ) II
  - ▨ ACCIDENT POTENTIAL ZONE (APZ) III
  - ▨ POOR HORIZONTAL SURFACE (A) - 100 FT ±
  - ▨ MODERATE SURFACE (B) - 200 FT ±
  - ▨ OUTER HORIZONTAL SURFACE (C) - 500 FT ±
  - ▨ FRONT YARD SURFACE (D) - 100 FT ±
  - ▨ FRONT YARD SURFACE (E) - 200 FT ±
  - DAY-NIGHT NOISE LEVEL ZONE 1 (DNL) I
  - DAY-NIGHT NOISE LEVEL ZONE 1 (DNL) II
  - DAY-NIGHT NOISE LEVEL ZONE 1 (DNL) III
  - DAY-NIGHT NOISE LEVEL ZONE 1 (DNL) IV
  - DAY-NIGHT NOISE LEVEL ZONE 1 (DNL) V
  - DAY-NIGHT NOISE LEVEL ZONE 1 (DNL) VI
  - DAY-NIGHT NOISE LEVEL ZONE 1 (DNL) VII
  - DAY-NIGHT NOISE LEVEL ZONE 1 (DNL) VIII
  - DAY-NIGHT NOISE LEVEL ZONE 1 (DNL) IX
  - DAY-NIGHT NOISE LEVEL ZONE 1 (DNL) X
  - DAY-NIGHT NOISE LEVEL ZONE 1 (DNL) XI
  - DAY-NIGHT NOISE LEVEL ZONE 1 (DNL) XII
  - DAY-NIGHT NOISE LEVEL ZONE 1 (DNL) XIII
  - DAY-NIGHT NOISE LEVEL ZONE 1 (DNL) XIV
  - DAY-NIGHT NOISE LEVEL ZONE 1 (DNL) XV
  - DAY-NIGHT NOISE LEVEL ZONE 1 (DNL) XVI
  - DAY-NIGHT NOISE LEVEL ZONE 1 (DNL) XVII
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  - DAY-NIGHT NOISE LEVEL ZONE 1 (DNL) XIX
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  - DAY-NIGHT NOISE LEVEL ZONE 1 (DNL) XXVII
  - DAY-NIGHT NOISE LEVEL ZONE 1 (DNL) XXVIII
  - DAY-NIGHT NOISE LEVEL ZONE 1 (DNL) XXIX
  - DAY-NIGHT NOISE LEVEL ZONE 1 (DNL) XXX
  - DAY-NIGHT NOISE LEVEL ZONE 1 (DNL) XXXI
  - DAY-NIGHT NOISE LEVEL ZONE 1 (DNL) XXXII
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  - DAY-NIGHT NOISE LEVEL ZONE 1 (DNL) XXXVIII
  - DAY-NIGHT NOISE LEVEL ZONE 1 (DNL) XXXIX
  - DAY-NIGHT NOISE LEVEL ZONE 1 (DNL) XL
  - DAY-NIGHT NOISE LEVEL ZONE 1 (DNL) XLI
  - DAY-NIGHT NOISE LEVEL ZONE 1 (DNL) XLII
  - DAY-NIGHT NOISE LEVEL ZONE 1 (DNL) XLIII
  - DAY-NIGHT NOISE LEVEL ZONE 1 (DNL) XLIV
  - DAY-NIGHT NOISE LEVEL ZONE 1 (DNL) XLV
  - DAY-NIGHT NOISE LEVEL ZONE 1 (DNL) XLVI
  - DAY-NIGHT NOISE LEVEL ZONE 1 (DNL) XLVII
  - DAY-NIGHT NOISE LEVEL ZONE 1 (DNL) XLVIII
  - DAY-NIGHT NOISE LEVEL ZONE 1 (DNL) XLIX
  - DAY-NIGHT NOISE LEVEL ZONE 1 (DNL) L
- PHYSICAL FEATURES NOTIFICATION LINE

Robert and Company

**DEVELOPMENT REGULATIONS**

MAY, 1994

FIGURE 11



Appendix **A**

***Land Use  
Techniques Summary***

## **APPENDIX A: DEVELOPMENT CONTROL TECHNIQUES SUMMARY**

A list of creative yet effective techniques local governments and the military may utilize in dealing with land use planning in a noise-impacted environment are presented below for consideration in controlling land uses in the Sumter area. The techniques are listed in alphabetical order rather than in the order of importance, since the application of land uses are influenced by local situations. Many of these techniques have been used successfully in jurisdictions around the country to control development near airports and military operations. Each technique, however, must be analyzed individually when being considered for application at the local government level as what may work for one government may not necessarily work for another. These techniques are also being analyzed through the South Carolina enabling legislation to determine if they are allowable under law.

Building Code - A building code prescribes the basic requirements that regulate construction of structures.

### Development Loan Restrictions: Performance Requirements

In order for developers to fund projects, they often need to borrow funds from lending institutions. If these funds could not be obtained, then development would not occur.

Disclosure of Noise Levels - Noise levels in a community can be measured and recorded. By making these levels public information, incompatible uses around airports might be prevented, and prospective owners of property will know they will be located in high noise areas.

Easements and Trusts - An easement is the right of the owner of one parcel of land to use the land of another, or to restrict the uses to which that owner may put his land.

Public/Private Leaseback - Leaseback is a financial arrangement in which the land is acquired and controlled, but not necessarily occupied by the owner.

Purchase Development Rights - A title to real property contains several rights. Among these rights is that of "development". By purchasing this one right, incompatible land uses might be prevented from occurring near installations.

Site Design - Site design deals with the process by which a review procedure is established through a public agency whereby the environmental factors are considered and integrated into a plat or land plan.

Sound Insulation - Sound insulation refers to the use of acoustical related building materials for the reduction of noise.

Special (Preferential) Tax Treatment - Special or preferential tax assessment of land by a local government allows an owner of a piece of property to pay lower or no property tax.

Transfer Development Rights - The transfer of development rights (TDR) involves a purchase of the development rights in a property and the transferring of those rights to another piece of property.

## **BUILDING CODE**

### **DEFINITION**

A building code prescribes the basic requirements that regulate construction of structures.

### **CHARACTERISTICS**

The building code is adopted by the local governing body in order to protect the health, safety and general welfare of the occupants of these structures. The code establishes a set of requirements covering such matters as fire protection, building materials, light and ventilation, exits, plumbing and other related matters.

### **APPLICATION**

Although not a technique to actually prevent development, building codes can, however, restrict development. A code can require that walls, partitions and floor-ceiling construction have minimum sound transmission capabilities. The code can specify a certain sound transmission class (STC) that must be obtained. The specific construction techniques and materials can be stated in the code. Also, the code should require that certain noise levels are maintained after the structure is completed. In some states such as the state of New York, sound attenuation standards are incorporated.

### **POSITIVE FEATURES**

The positive feature of the building code is that it does promote construction and development of structures that contain noise proofing features.

### **NEGATIVE FEATURES**

The negative feature of the building code is that they do not prevent or restrict any type of land use around installations, and sound attenuation is only effective when inside the structure with the doors and windows closed.

### **LEGAL STANDING**

Building codes have their legal standing in the charter of local governments. The charter not only will require building codes, but will call for their enforcement by a public official and his or her staff.

## **DEVELOPMENT LOAN RESTRICTIONS: PERFORMANCE REQUIREMENTS**

### **DEFINITION**

In order for developers to fund their projects, they often need to borrow funds from lending institutions. If these funds could not be obtained then development would not occur. Restricting or prohibiting mortgage and/or other type loans, would accomplish this task.

### **CHARACTERISTICS**

State and local governments would designate areas around military bases that would not be allowed to receive loans for development. Currently, HUD, FmHA and VA do not provide loan guarantees for residential properties in areas subject to high noise.

### **APPLICATION**

The designated areas would coincide with certain noise contours which have already been determined. The local government would then prohibit banks and other lenders from making development funds available to developers.

### **POSITIVE FEATURES**

The attractiveness of this program stems from the fact that it will cost nothing for local governments to implement and will still prevent development.

### **NEGATIVE FEATURES**

The program, however, may not be implemented immediately because of possible court litigation. It is likely that lending institutions may bring suit against the local government for not allowing them to use their money as they see fit, i.e., making loans to developers.

### **LEGAL STANDING**

State legislation would be necessary to accomplish this since it is unlikely that lenders would implement the program on their own.

## **DISCLOSURE OF NOISE LEVELS**

### **DEFINITION**

Noise levels in a community can be measured and recorded. By making these levels public information, incompatible uses around military installations might be prevented.

### **CHARACTERISTICS**

Disclosure of noise levels could be accomplished in several ways. One method is by an ordinance or an amendment to an existing ordinance, which could be passed by the local governing body requiring disclosure. Another method would be to implement a voluntary program among realtors in the community. The realtors would inform the potential purchaser of any unacceptable noise levels.

### **APPLICATION**

There are several ways in which this program can be applied at the local level. First, a statement of noise levels could be included in the deed so that the purchaser of the property knows about them. Second, real estate or leasing agents could be required to inform prospective purchasers or tenants about the potential noise problem. Also, the noise level for that area could be posted on any "for sale" or "for lease" sign that is placed on the property. Finally, noise contours could be published on all subdivision plots and possibly all municipal, land use and zoning maps.

### **POSITIVE FEATURES**

The program would make information available to the public that they may have had no previous knowledge of. The public could then make more informative choices about the location of their residences or businesses.

### **NEGATIVE FEATURES**

By simply disclosing the noise level information does not mean that the information will be used. Programs would have to be undertaken to assure that the public remains informed in the future. The program could become costly and time consuming if noise contours were required to be put on all municipal maps.

## **LEGAL STANDING**

To be effective, this program would have to be passed as an ordinance by the local governing body. A voluntary program would not have legal standing.

## **EASEMENTS AND TRUSTS**

### **DEFINITION**

An easement is the right of the owner of one parcel of land to use the land of another, or to restrict the uses to which that other owner may put his land.

A conservation trust involves the outright donation of a piece of land by its owner for a specified period of time, after which ownership reverts back to the donator.

### **CHARACTERISTICS**

Easements are property rights or privileges generally obtained through purchase agreements, written into deeds, or by the use of eminent domain. The owner of one property obtains rights on the property of another. Easements may be negative, wherein one owner can specify how the other may use his property, or positive, whereby one owner has the right to use all or part of another's property. In either case, only the rights, and not the property itself, are transferred.

Easements are considered a form of direct land use control, since there is no dependence on local government jurisdiction for enforcement or adoption of these agreements.

Rights of easements are often obtained for a price. However, this will usually be much less expensive than a fee simple purchase of the property would be.

Outright land donations can be used to establish a conservation trust. The land is held for a specified period of time, and actual ownership is transferred. At the end of the time period, ownership reverts back to the original donator.

In both easements and trusts, the grantor may be relieved of the burden of property taxes, in whole or in part, and may be able to deduct the land value from his income taxes.



## **APPLICATION**

Easements may be used in several ways. If land surrounding an installation is undeveloped, then negative easements can be sought by local governments to prevent incompatible development. If existing development is in place, then positive "noise" easements can be used. This is the purchase of the right to create a certain level of noise, with the purchase money acting as compensation for the property owners' inconvenience.

Conservation trusts are an obviously attractive alternative, since no purchase costs are involved. Advantage should be taken of this means, if the circumstances presents itself.

## **POSITIVE FEATURES**

Easement purchases are very straightforward transactions, and almost always cheaper than fee simple purchases. They allow the installation to retain control over adjacent land without the burden of actual ownership. They are also usable in cases where development already surrounds the installation. Conservation trusts are attractive due to their negligible cost.

## **NEGATIVE FEATURES**

There may be difficulty in obtaining the necessary easements, particularly when many land owners are involved, because their cooperation is required. Unless otherwise specified, the rights are not automatically transferred upon resale of the land, so further negotiations may be required.

## **LEGAL STANDING**

Properly worded agreements for the purchase of easements, or the granting of trusts, are enforceable in the courts of law. Care needs to be taken in specifying the terms, particularly for the time period and exact portion of land involved, to insure the legal validity of these agreements.

## **PUBLIC/PRIVATE LEASEBACK**

### **DEFINITION**

Leaseback is a financial arrangement in which the land is acquired and controlled, but not necessarily occupied by the owner. This method can be used by both the public and private sectors.

### **CHARACTERISTICS**

The leaseback arrangement in the private sector requires two simultaneous steps. First, an investor purchases real estate owned and used by a business firm or government. Second, the property is leased back to the firm or government by the purchaser. In the public sector, a public agency can acquire lands and lease them to private persons for specific uses, in accordance with the approved plan for the area. Customarily, the terms of the lease ranges from 20 to 40 years.

### **APPLICATION**

Leaseback can be used as an alternative to restrictive sales. An airport or local government may purchase a parcel of land and lease it with restrictions or permitted uses. Agriculture, industrial, open space and commercial facilities are possible permitted uses.

### **POSITIVE FEATURES**

Leasebacks offer a way for public agencies to acquire land, yet provide for the continued use of the land. Public agencies can limit the use of the land, while acquiring some income from the property. The leaseback method is popular in the private sector because it provides equity capital from outside sources, and it is a flexible form of financing.

### **NEGATIVE FEATURES**

The public agency often has the usual landlord's management problems. The leaseback arrangement also keeps land off the tax roles when used by the public sector. Problems arise in the private sector when there is no re-purchase option and the value of the property appreciates. Without this option, the lease will not share in any value increases.

### **LEGAL STANDING**

The leaseback arrangement involves legal contracts, signed by the lessor and lessee.

## **PURCHASE OF DEVELOPMENT RIGHTS**

### **DEFINITION**

A title to real property contains several rights as opposed to just one. Among these rights is that of development. By purchasing this one right, incompatible land uses might be prevented from occurring near military installations.

### **CHARACTERISTICS**

Purchasing development rights would resemble a fee simple purchase in terms of the actual transaction and necessary legal paperwork. The difference would be that only one right is purchased rather than all of them.

The development right of any property is usually the most valuable and most sought after. The cost of the right is equal to the difference between the value of that parcel at its highest and best use and its existing value.

### **APPLICATION**

A program of purchasing development rights could be used when insufficient funds are available for fee simple purchases of land. The program would work best where development rights of agricultural land are purchased. The land is kept productive and yet no incompatible use can be developed.

### **POSITIVE CHARACTERISTICS**

By purchasing development rights, incompatible development can be kept at a minimum. The purchase of these rights on lands surrounding an military installation would thus accomplish the goal of preventing development of any kind. After all the purchases have been made, no more administrative work would be needed. If the program could be accomplished in a relatively short period of time, administrative and land acquisition costs could be reduced. Also, purchasing development rights is much less expensive, in most cases, than fee simple purchase.

### **NEGATIVE CHARACTERISTICS**

The program still requires an expenditure of considerable amounts of money because of the amount of land that encompasses military bases. Unwilling sellers may present a

problem as well. If the highest and best use of the land is a high density one (multi-family for example), then the price of the development rights is not much less than the price for fee simple ownership.

### **LEGAL STANDING**

All transactions must be recorded in the appropriate governmental offices for the purchase to be valid.

## **SITE DESIGN**

### **DEFINITION**

Site design deals with the process by which a review procedure is established through a public agency whereby the environmental factors are considered and integrated into a plat or land plan.

### **CHARACTERISTICS**

A site design review procedure can address the subject of noise and land use impact. Where there are identified possible impacts such as noise and land use compatibility, the proposed site design must then be modified to insure that the proposed site plan is compatible with adjacent land uses.

### **APPLICATION**

This procedure is most frequently applied to proposed residential plats for development. Often a checklist of design characteristics that can be impacted by noise or alternatively generate noise. Ground terrain, landscaping, plant and vegetative cover, line of site set back, etc., are important site design factors to be considered. Discussions between planning staff and developers regarding these factors can also be helpful. This technique may be very useful for parcels straddling APZ or Ldn boundaries so that structures can be sited outside the APZ or noise contour line.

### **POSITIVE FEATURES**

A site design process is a proactive approach since it deals with ways to solve problems before they are constructed. It can also be an instructive method of bringing out information and resolving design problems before development occurs.

### **NEGATIVE FEATURES**

Although design control recommendations for noise are often recommended, actual implementation and checking compliance may not occur. An individual familiar with acoustics is essential and may not always exist.

### **LEGAL STANDING**

Such a technique is commonly used by local governments.

## **SOUND INSULATION**

### **DEFINITION**

Sound insulation refers to the use of acoustical related building materials for the reduction of noise for architectural abatement purposes. These materials apply to any areas of a structure that may be part of a sound transmission path including windows, doors, roof systems, ventilation, wall systems (exterior), and utility access points through a building envelope.

### **CHARACTERISTICS**

The application of sound insulation techniques can involve existing and/or planned structures or buildings. Often the benefits for noise control, such as double pane windows have additional benefits in terms of energy conservation and reduced heat loss. The primary objective of an airport sound insulation program is to reduce the sound transmission through the building envelope (e.g., exterior wall, window, and roof system), thereby having lower interior noise levels. The implementation of such a program may be the adoption of a building code or performance requirements established by a public agency.

### **POSITIVE FEATURES**

The primary benefit of a sound insulation program is to protect the noise receiver, while they are indoors. Frequently, there are associated benefits of energy conservation when there is building insulation. Such efforts have the flexibility of applying to both existing structures, as well as buildings that will be constructed, therefore, it can be more comprehensive than a building code. Since building codes generally are applicable only to planned or new structures.

### **NEGATIVE FEATURES**

Sound insulation controls apply directly to structure, therefore it does not improve the outdoor environments, when the individual is outside the home for example. Often times, sound insulation is considered for selected areas or buildings, rather than being a comprehensive approach.

## **LEGAL STANDING**

Sound insulation programs are frequently mandates for certain geographical areas as a policy of a jurisdiction with matching federal and local funds involved. Since a program is adopted by a jurisdiction it does represent legal standing.

## **SPECIAL (PREFERENTIAL) TAX TREATMENT**

### **DEFINITION**

Special or preferential tax assessment of land by a local government allows an owner of a piece of property to pay lower or no property tax. By taxing land around military installations differently, open space can be maintained.

### **CHARACTERISTICS**

There are three primary methods of using taxes to keep open space. First, tax exemption of open property would be encouragement to keep the land open. Second, preferential assessment of land allows agricultural or open land to be taxed at a substantially lower rate. Third, tax deferral allows the owner of open property to forego property tax payments until a non-open space use is developed. Before such is approved, however, all tax deferred payments would have to be made.

### **APPLICATION**

The states of Maryland and Pennsylvania have used preferential assessment in their efforts to keep open space, while Virginia pioneered the tax deferral scheme.

### **POSITIVE FEATURES**

These special tax treatment methods are, again, one technique of preventing development at no cost to the military. The preservation of existing uses, especially agricultural, is promoted as well. Property which abuts the open space will become more valuable because of the added amenity that the open space provides. The added value translates into increased tax revenue for the local government. Because the open space is adjacent to a military installation, the value of the amenity is somewhat diminished. Even if the value of the abutting land uses stays constant, however, the tax program has worked.

### **NEGATIVE FEATURES**

The cost of the program is placed upon the local government. They may refuse to implement it for this reason.



The preferential tax assessment program in Maryland has not succeeded as expected. Farmers, whose property had been assessed low, chose to speculate and develop the land, taking advantage of the benefits.

### **LEGAL STANDING**

The tax policies of any local area are governed by that area's legislature. Any change in tax policy must be passed by that body.

## **TRANSFER OF DEVELOPMENT RIGHTS**

### **DEFINITION**

The transfer of development of rights (TDR) involves a purchase of the development rights of property and the transferring of those rights to another piece of property. Thus, development of the original property is prevented.

### **CHARACTERISTICS**

The rights that are transferred do not necessarily need a monetary value attached to them. Rather, they can be floor areas, bulk or dwelling units.

The effect of the TDR is that development is prevented in areas near military bases and airports, yet, because the rights of developments are purchased, they can be transferred to an area where the municipality wishes to encourage development.

There are several steps involved in creating a transferable development right. First, the area to be preserved must be specifically identified and conform to the community's master plan. Second, the local government must determine the development capacity of the property and then convert that value into development rights. Finally, the community must designate other districts in which higher density development caused by the TDR will be permitted.

### **APPLICATION**

Preserving open space around military bases and airports would be the goal in the use of TDR. The State of New Jersey has proposed using TDR to preserve open space. Their proposal attempts to create a market for the TDR by following the steps to create a TDR. Similarly, all municipalities could create a market for development rights of land around military bases and airports by designating these areas as open space.

### **POSITIVE FEATURES**

The program would be inexpensive or cost-free to the airfield since the local government would administer it. The program could also stimulate growth and development of the property to which the development rights were being transferred to.

### **NEGATIVE FEATURES**

One potential problem is the record keeping. Because of the complexity of the transaction, it is often difficult to keep track of the principals and the exact amount of rights that are sold or bought.

### **LEGAL STANDING**

The legal concept supporting TDR is that the title to real estate is not a single right, but instead, a "bundle of rights". The different rights that make up this bundle can be separated and sold to someone else. Thus, the owner can be left with whatever rights he or she chooses.

Appendix **B**

*Interviews*

## APPENDIX B

### SUMMARY MINUTES SHAW AFB - BASE CIVIL ENGINEERING Sumter/Shaw AFB Joint Compatible Land Use Study

**Date:** October 7, 1992

**Attendees:** Lt. Col. Joseph P. DiRosario - Base Civil Engineer  
Ron Huffman - Robert & Company  
Inga Kennedy-Tucker - PEQ

This meeting was held to discuss issues and concerns about the Joint Compatible Land Use Study with Shaw's Base Civil Engineering office and to receive pertinent input and direction that will enable the study team to prepare an effective and usable plan.

The following is a summary of the key issues and concerns raised during the meeting:

- o The Base Civil Engineering Office is responsible for leasing and overseeing construction activity at Shaw AFB and Poinsett Gunnery Range. Plans are underway for the expansion of Poinsett Gunnery Range pending land acquisition transactions.
- o Poinsett Gunnery Range is currently being leased from the State of South Carolina's Forestry Department, however, negotiations are currently being conducted between the State and the Federal Government to obtain a land swap from the recently closed Myrtle Beach AFB. There are approximately 4,000 acres of land at the former Myrtle Beach site.
- o Several hundred active military personnel are expected to be relocated to Shaw as a result of damage incurred to Homestead AFB by Hurricane Andrew. Consequently, additional housing will be needed, and operations at Shaw and the range are expected to increase.
- o Additional names of Shaw AFB personnel who might assist in providing more information were given to the study team.

**SUMMARY MINUTES**  
**SHAW AFB - ENGINEERING AND CONSTRUCTION**  
**Sumter/Shaw AFB Joint Compatible Land Use Study**

**Date:** October 7, 1992

**Attendees:** Gary Cox - Chief of Engineer & Construction  
Ron Huffman - Robert & Company  
Inga Kennedy-Tucker - PEQ

This meeting was held to discuss issues and concerns about the Joint Compatible Land Use Study with Shaw's Engineering & Construction office and to receive pertinent input and direction that will enable the study team to prepare an effective and usable plan.

The following is a summary of the key issues and concerns raised during the meeting:

- o The office is responsible for the construction and maintenance of Shaw AFB proper as well as Poinsett Gunnery Range. Currently, the range consists of approximately 8,400 acres.
- o Although major improvements are needed at the range, additional land is needed to accomplish these improvements. It is hoped that the land swap negotiations between the State and the Federal Government will be successful.
- o No major capital improvements are being planned. Requests for master and capital improvements plans were requested by the study team. A copy of the Shaw 2000 Plan (master plan) was provided.

**SUMMARY MINUTES**  
**SHAW AFB - MASTER PLANNING**  
**Sumter/Shaw AFB Joint Compatible Land Use Study**

**Date:** October 7, 1992

**Attendees:** Jay Stutz - Base Master Planner  
Ron Huffman - Robert & Company  
Inga Kennedy-Tucker - PEQ

This meeting was held to discuss issues and concerns about the Joint Compatible Land Use Study with Shaw's Master Planning office and to receive pertinent input and direction that will enable the study team to prepare an effective and usable plan.

The following is a summary of the key issues and concerns raised during the meeting:

- o The Master Planning Office is responsible for all planning activity at Shaw AFB and the Poinsett Gunnery Range.
- o Several documents were provided to the study team including a 1991 Economic Summary for Shaw AFB; a draft AICUZ study; and blue lines of the Base plan.

**SUMMARY MINUTES**  
**SHAW AFB - AIR SPACE MANAGEMENT**  
**Sumter/Shaw AFB Joint Compatible Land Use Study**

**Date:** October 7, 1992

**Attendees:** Roland Richardson - Air Space Manager  
Ron Huffman - Robert & Company  
Inga Kennedy-Tucker - PEQ

This meeting was held to discuss issues and concerns about the Joint Compatible Land Use Study with Shaw's Air Space Management office and to receive pertinent input and direction that will enable the study team to prepare an effective and usable plan.

The following is a summary of the key issues and concerns raised during the meeting:

Shaw AFB and Poinsett Gunnery Range

- o Air Space management is responsible for the coordination and assignment of air space for Shaw AFB and the Poinsett Gunnery Range. The office also works closely with the Federal Aviation Administration and the South Carolina Aeronautics Division for local air space coordination. Some conflict exists between the use of the airfield at Shaw AFB proper and the range but is manageable.
- o Aircraft using the range approach in a north to south direction with a left hand pattern (approximately 140 degree angle). Noise generally occurs as a result of aircraft being flown at low altitudes and using pop flying patterns (consisting of rapid descending and ascending). Aircraft altitudes range from a 500 feet minimum to a 9,000 feet maximum.
- o Flights are scheduled at the range every 30 minutes monday through friday from 6:00 am - 12:00 midnight. Night operations (known as Lantirn flights) at the range are increasing. Efforts are made, however, to complete all flying by 10:00 pm.



Occasional weekend operations are permitted between the hours of 8:00 am - 4:00 pm. Between October 1990 and September 1991 over 11,000 operations were flown at the range. A breakdown of aircraft types and number of uses are provided below.

<u>Aircraft type</u>	<u># of Operations</u>
F15s	6
F16s	2,296
A10s	9,371
F18s	140

- o Currently, there are 5 squadrons (4 F16s and 1 A10) assigned to Shaw AFB including those recently assigned from Homestead AFB. Each squadron has 24 aircraft. Other squadrons using the facilities include:

Pope AFB - A10s

McIntyre National Guard - F16s

Beaufort - F18s

Cherry Point Marine Air Wing - AV8s

- o Restricted airspace at the range includes area from the surface to 13,000 feet and flights by aircraft other than those using the range are prohibited. Designated air space is oriented to allow the delivery of weapons inside the restricted area prior to the release of bombs. For night flying, aircraft require longer approaches to the range and are sometimes prohibited. The land acquisition would enable aircraft to complete deliveries.

### Sumter Airport

- o The Sumter Airport is currently used by corporations such as Westinghouse, Bendix, and Beckton-Dickerson among others. Currently, there is no commuter service. Approximately 20 aircraft are based at the airport consisting of both twin and single engine types.

- o The airport's main runway was recently lengthened to 5,500 feet and construction of a new \$300,000.00 terminal is being planned. The airport is also in need of an upgraded ILS (Instrument Landing System) to assist pilots in using the facilities. Currently, a non-directional beacon is being used. The goal is to reduce the minimum visual approach to 200 - 300 feet.
- o FAA (Federal Aviation Administration) oversees the airspace for the airport as well as grants airspace to special groups flying in the area. The local FAA liaison is with the (Radar Approach Control) office and coordinates all local airspace including Shaw and Poinsett Gunnery Range.
- o The ceiling for local Shaw approaches is 10,000 feet and covers an extensive area locally. Flights above 10,000 feet are handled by the FAA's Jacksonville (Florida) Control Center which also manages the Mid-air Collision Avoidance Program (MACA).
- o The process for filing local flight plans begins with local Shaw pilots first submitting plans to squadron administration.

The plans are then sent to the Base Ops office who forwards them to the Jacksonville Center for approval. Once approved, clearance is then sent back to RAPCON. Pilots typically fly 40 minutes in advance of using the Gunnery Range. Military training routes are typically below 10,000 feet at 250 knots.

**SUMMARY MINUTES**  
**CITY OF SUMTER - SUMTER CITY/COUNTY PLANNING COMMISSION**  
**Sumter/Shaw AFB Joint Compatible Land Use Study**

**Date:** October 8, 1992

**Attendees:** Steve Creech - Mayor of Sumter  
Sam Roddey, Jr. - Chairman, Sumter Planning Commission  
Ron Huffman - Robert & Company  
Inga Kennedy-Tucker - PEQ

This meeting was held to discuss issues and concerns about the Joint Compatible Land Use Study with Sumter's Mayor and Chairman of the City/County Planning Commission, and to receive pertinent input and direction that will enable the study team to prepare an effective and usable plan.

The following is a summary of the key issues and concerns raised during the meeting:

- o It is generally felt that land use protection is needed to prevent further incompatible encroachment around Shaw AFB. In addition to land use, the local road system should be examined to look at alternatives to existing routes around the Base.
- o Shaw AFB is critical to the economy of Sumter. Approximately 30 percent of its economy is generated through Shaw AFB. Close to 35 percent is industrial and 5 percent agriculture. The industrial base is experiencing an increase and has become quite diversified. An industrial park consisting of 1,000 acres is being proposed near the Sumter airport. Santee Printworks is largest industrial employer with close to 1,300 employees.
- o Sumter also has a good housing stock and mix. More mobile homes are sold in Sumter than any other County in South Carolina. They are only allowed in planned mobile home developments, however.

- o Citizens in the community are generally against zoning because it is perceived as a tool designed to tell land owners what to do with their property. County-wide zoning was opposed by many, but was eventually adopted in December 1991. Some individuals have unrealistic dreams of what their land can be used for.
  
- o In addition to zoning, the City also has zoning, sub-division regulations and building codes. The City has Mayor-Council form of government with a City Manager who runs the day-to-day operations of city government. The six council members are elected by district. The County is governed by a seven member council and the chair of the council is elected by the other members.
  
- o Noise complaints in the area generally come from activity at Poinsett Gunnery Range. Very few complaints are received from activity at the Sumter airport.

**SUMMARY MINUTES  
CHAMBER OF COMMERCE  
Sumter/Shaw AFB Joint Compatible Land Use Study**

**Date:** October 8, 1992

**Attendees:** Phil Ballinger - President and CEO  
Greer Blackwelder - General Manager  
Ron Huffman - Robert & Company  
Inga Kennedy-Tucker - PEQ

This meeting was held to discuss issues and concerns about the Joint Compatible Land Use Study with the Sumter Chamber of Commerce and to receive pertinent input and direction that will enable the study team to prepare an effective and usable plan.

The following is a summary of the key issues and concerns raised during the meeting:

- o Sumter's industrial base is the largest of the economy and continues to grow steadily. Shaw AFB is the largest single contributor. The proposed industrial park near the airport is in the planning stages and would likely increase the current industrial base. Many would like to see the airport expand
- o The Chamber currently has close to 750 member businesses and is very active in the community. The Sumter County Development Board, which consists of 7 appointed members (2 city, 2 county, 2 chamber and 2 from the Town of Pinewood) is also a function of the Chamber.
- o The County also has an Economic Development Board consisting of 7 appointed members (the same as the Development Board) who encourage and actively pursue continued development for the area.

- o The Chamber is an active supporter of Shaw and its operations and feels it needs to be protected. A memorandum of understanding exists between Sumter and Shaw to work together in each other's best interest. Relationships between Shaw AFB and the community are good and representatives from Shaw regularly attend Chamber meetings and other associated functions. The study should be well received in the community.
  
- o There are several areas near the base that must be protected from incompatible development; particularly to the northeast and highway 378 along the base property. The racetrack has also become a focus of noise complaints by surrounding residents. An excess capacity in infrastructure and utilities could make future encroachment easier.

**SUMMARY MINUTES**  
**SUMTER COUNTY COUNCIL**  
**Sumter/Shaw AFB Joint Compatible Land Use Study**

**Date:** October 8, 1992

**Attendees:** Louis Flemming - Vice Chair, Sumter County Council  
Ron Huffman - Robert & Company  
Inga Kennedy-Tucker - PEQ

This meeting was held to discuss issues and concerns about the Joint Compatible Land Use Study with the Sumter County Council and to receive pertinent input and direction that will enable the study team to prepare an effective and usable plan.

The following is a summary of the key issues and concerns raised during the meeting:

- o Every community needs a planned land use component that addresses growth and all citizens must participate for it to be accepted. County zoning was a necessity and eventually passed. Rural residents, farmers and big land owned fought the zoning. Parcel size was a major issue but was satisfied.
- o Zoning was welcomed in the Black community which for 25 years, had no infrastructure and no planning. Zoning was supported because it allows for controlled growth. Planning is essential to growth but must include all citizens.
- o Another land use of concern to the area is the GSX hazardous waste site located near Pinewood. Waste is received from all over the country and the facility is near Lake Marion which is used widely for recreational purposes. Some people in the Cherry Vale community also complain about mining operations and possible water contamination.
- o Education in planning needs attention in this community for total acceptance.

**SUMMARY MINUTES**  
**SHAW AFB - RANGE CONTROL (Poinsett Gunnery Range)**  
**Sumter/Shaw AFB Joint Compatible Land Use Study**

**Date:** October 7, 1992

**Attendees:** Gary Melton - Range Control, Poinsett Gunnery Range  
Ron Huffman - Robert & Company

This meeting was held to discuss issues and concerns about the Joint Compatible Land Use Study with range control at Poinsett Gunnery Range and to receive pertinent input and direction that will enable the study team to prepare an effective and usable plan.

The following is a summary of the key issues and concerns raised during the meeting:

- o Night training covered between 8:15 pm and 9:00 pm included A10s firing left/east of range which occurs only at night. A10s usually make 15 passes through the range. F15s and F16s usually make 11 passes.



**SUMMARY MINUTES**  
**SUMTER CITY MANAGEMENT**  
**Sumter/Shaw AFB Joint Compatible Land Use Study**

**Date:** October 8, 1992

**Attendees:** Talmadge Tobias - Sumter City Manager  
Ron Huffman - Robert & Company  
Inga Kennedy-Tucker - PEQ

This meeting was held to discuss issues and concerns about the Joint Compatible Land Use Study with Sumter City Management and to receive pertinent input and direction that will enable the study team to prepare an effective and usable plan.

The following is a summary of the key issues and concerns raised during the meeting:

- o Concrete protection of the base is needed in order to sustain its current economic presence. Land off the end of the runway should be acquired because safety is necessary for the continued operations of the base.
  
- o Another problem near the base is the lack of utilities. Rural water companies only supply residential properties and are incapable of serving industry and fire fighting requirements. The City has attempted to consolidate city and county water services but to no avail. There are approximately 6 separate water companies serving the County. Wells are still widely used and PCP chemical have been found in the wells at Shaw.
  
- o Currently, growth is taking place in the Ravenwood, Wedgefield, and Pinewood Road areas. Between 1980 and 1990, the City grew from 22,000 to 42,000. The implementation of county wide zoning was an asset to the area.

**SUMMARY MINUTES**  
**SUMTER COUNTY ECONOMIC DEVELOPMENT BOARD**  
**Sumter/Shaw AFB Joint Compatible Land Use Study**

**Date:** October 8, 1992

**Attendees:** Leon McDonald - Chair, Economic Development Board  
Ron Huffman - Robert & Company  
Inga Kennedy-Tucker - PEQ

This meeting was held to discuss issues and concerns about the Joint Compatible Land Use Study with the Sumter County Economic Development Board and to receive pertinent input and direction that will enable the study team to prepare an effective and usable plan.

The following is a summary of the key issues and concerns raised during the meeting:

- o The Economic Development Board consists of 7 members charged with advocating continued development, particularly industrial, in the County. The agency is a function of the Chamber of Commerce with one full-time economic developer and is funded two thirds by the County and one third by the City.
- o The Board actively supports the viability of Shaw AFB and has noticed continued interest in residential development near the base. Sumter Airport is also very important to the County but will probably never realize commuter service because of the nearness of Columbia and Florence.
- o Three industrial park areas exist in the County and are economic mainstays as well. A steel company is currently being constructed which will increase the number of manufacturing jobs in the County to over 10,000.

- o Tourism is another growing industry for the County with golf packages becoming very competitive with Myrtle Beach. Local motels are actively recruiting golfers to use the local facilities. The business climate is very good in the County.
- o Sumter qualified as a SMSA (Standard Metropolitan Statistical Area) and receives funding associated with this status. Some downtown store fronts are in need of renovations.
- o No new road projects have been funded by DOT for a number of years but are needed.
- o The educational system in the area has done well and financial conditions of the City and County are good. Debts are low and well managed. Taxes are also relatively low when compared with other areas.

**SUMMARY MINUTES**  
**SUMTER AIRPORT**  
**Sumter/Shaw AFB Joint Compatible Land Use Study**

**Date:** October 8, 1992

**Attendees:** Howe Koenig - Sumter Airport Manager  
Ron Huffman - Robert & Company  
Inga Kennedy-Tucker - PEQ

This meeting was held to discuss issues and concerns about the Joint Compatible Land Use Study with the Sumter Airport and to receive pertinent input and direction that will enable the study team to prepare an effective and usable plan.

The following is a summary of the key issues and concerns raised during the meeting:

- o The airport consists of two runways; one paved and one grass. The main runway was extended to 5,500 feet four years ago. A master plan was also done at that time and a copy will be provided. The S.C. Aeronautics Commission in Columbia maintains all records on the airport.
- o There is no set schedule of flights but several major corporations use the facilities including Goldkist, Becton-Dickerson and Bendix. There are over 30 based aircraft currently and three operators including a maintenance function, a spray operation and an aircraft school. The airport experiences approximately 15-20 operations per day.
- o Currently, there are no applications for capital improvements but a new terminal is being planned. Complaints about noise are rarely received but spraying activities often get complaints. There is no helicopter activity with the exception of emergency medical uses.

**SUMMARY MINUTES**  
**SUMTER COUNTY ECONOMIC DEVELOPMENT BOARD**  
**Sumter/Shaw AFB Joint Compatible Land Use Study**

**Date:** October 9, 1992

**Attendees:** Jim Alexander - General Manager, Econ. Development Bd.  
Ron Huffman - Robert & Company  
Inga Kennedy-Tucker - PEQ

This meeting was held to discuss issues and concerns about the Joint Compatible Land Use Study with the Sumter Chamber of Commerce and to receive pertinent input and direction that will enable the study team to prepare an effective and usable plan.

The following is a summary of the key issues and concerns raised during the meeting:

- o The Board mainly handles industrial development for the area with very little commercial development recruitment activity. The area has had good luck in recruiting new industry as well as getting existing industries to expand. Sales are up to \$95 million and are \$10 million over last year.
- o It is imperative to do what is necessary to protect Shaw AFB. The importance of economic impacts are difficult to communicate to the average citizen. A public relations campaign is almost needed.
- o In a 30 mile radius, there are 12,000 - 15,000 retired military personnel living in the area. These people are well travelled and bring a wealth of experience to Sumter.
- o The Board is looking beyond the year 2000 in developing additional industrial parks but utilities must be improved to accommodate future growth. An improved highway system is also needed to enhance and control growth. Highway 521 would be a good access to I-20.

**SUMMARY MINUTES**  
**SUMTER COUNTY ADMINISTRATION**  
**Sumter/Shaw AFB Joint Compatible Land Use Study**

**Date:** October 16, 1992

**Attendees:** Bill Noonan - County Administrator  
Ron Huffman - Robert & Company  
Inga Kennedy-Tucker - PEQ

This meeting was held to discuss issues and concerns about the Joint Compatible Land Use Study with the Sumter County Administration and to receive pertinent input and direction that will enable the study team to prepare an effective and usable plan.

The following is a summary of the key issues and concerns raised during the meeting:

- o This study is very pertinent as well as enlightening to the City and County. Local developers are skeptical. Existing information shows pressure may not be applied to manage growth issues. Some portions of the County are being ignored. Highway improvements show growth is going in the wrong direction.
- o Requests for development in the Pinewood area are often received. There is a proposed recreation development concept near Rimini golf courses, etc. Development in the area may be pushed by a state representative from Pinewood.
- o Currently, the County has no sewer service and water is handled by several small privately owned water companies. A county-wide commission was formed to address the need for county-wide water and sewer service and to allow financial resources to build for the growth of all citizens. New state standards require a pool of resources to accomplish the improvements.

- o Growth is hampered by inadequate fire flow. Infrastructure is concentrated in the City only and the industrial base cannot expand because of a lack of facilities. The County has a volunteer fire department, managed by the City.
- o County-wide zoning was imperative and several examples exist in the County prior to the adoption of zoning that are incompatible with surrounding uses.
- o The demand for additional services exceeds the County's ability to provide them. The County is the 12th largest in the State but falls 30th in the generation of revenues. Funding is being depleted in many areas including transportation.
- o Landfills and jails are two administrative problems currently facing the County. Funding is not available and regional cooperation must be accomplished to meet these needs.

**SUMMARY MINUTES**  
**SUMTER COUNTY ADMINISTRATION**  
**Sumter/Shaw AFB Joint Compatible Land Use Study**

**Date:** January 15, 1993

**Attendees:** Lauren Booth - Private Land Owner  
Ron Huffman - Robert & Company  
Inga Kennedy-Tucker - PEQ

This meeting was held to discuss issues and concerns about the Joint Compatible Land Use Study with private citizens in the Sumter area and to receive pertinent input and direction that will enable the study team to prepare an effective and usable plan.

The following is a summary of the key issues and concerns raised during the meeting:

- o Mr. Booth is a former chairman of the Sumter County Council and also chaired the transportation committee. During his representation on the transportation committee, a number of related projects were proposed including a circumvential highway around the County. Politics, however, prohibited the development.
- o He owns approximately 1,300 acres east of Shaw AFB and attempted to sell some of it to the base but did not want it at the time. The property is zoned R-15 but a written agreement with the County allows him to be taxed based on the rural agricultural zoning classification. The property is currently being farmed including cattle, soybean and cotton.
- o Approximately 4-5 years ago, he had discussions with the base Colonel regarding the development of a highway along the boundary of the base. At the same time, there were discussions with the City regarding the annexation of Shaw and the desire to have Mr. Booth put a 200 ft. wide corridor through his property. He refused, but suggested the development of a road along the western boundary as discussed with the base Colonel.



- o Mr. Booth's property has been in the family for several decades and his father gave some of the property to the AFB for development. As the family trustee of the property, he would like to develop it to its fullest potential while maintaining the rural character of the property. Water and sewer lines exist approximately 300 - 400 yards away from the property line. Mr. Booth feels he is not impacted by either noise or safety from the AFB.

**SUMMARY MINUTES**  
**SUMTER COUNTY ADMINISTRATION**  
**Sumter/Shaw AFB Joint Compatible Land Use Study**

**Date:** January 15, 1993

**Attendees:** Tyler Dunlap - Private Land Owner  
Ron Huffman and Robert Benson - Robert & Company  
Inga Kennedy-Tucker - PEQ

This meeting was held to discuss issues and concerns about the Joint Compatible Land Use Study with private citizens in the Sumter area and to receive pertinent input and direction that will enable the study team to prepare an effective and usable plan.

The following is a summary of the key issues and concerns raised during the meeting:

- o Mr. Dunlap is a local residential developer and bought 450 acres four years ago and subdivided the property into 260 lots for residential development. At the time, the property fell in the 65 Ldn noise contour from Shaw AFB. He checked with the VA for approval which he was granted but Shaw discouraged the development because of incompatible encroachment.
- o At the same time, Sumter County was developing an ordinance to control the types of development occurring near the base. The development of the ordinance and the media caused the subdivision to experience slow sales. He was eventually forced to reduce prices.
- o Base operations expanded and the entire subdivision is in a 65 Ldn or above. He developed another subdivision in the same noise level and is using sound attenuation construction materials. The publicity still hinders sales and potential buyers have backed away. Shaw maintained its position on the incompatible encroachment by discouraging further residential development in the area.

- o Zoning in the area was also changed from R-9 to the less dense classification of R-15. Both properties were purchased by Mr. Dunlap because of a housing need in the area. Additionally, he has made several infrastructure improvements in the area. The noise issue has caused a financial burden to him because of slow sales.
  
- o Mr. Dunlap has requested new contour maps but was told it would be a few months before they are released. County zoning has restricted the development potential of a lot of property in the area and still does not seem to adequately achieve the goal of protecting land uses around Shaw AFB.

Appendix

C

***JCLUS Committee***

**APPENDIX C:**

**JOINT COMPATIBLE LAND USE STUDY  
STEERING COMMITTEE**

VOTING MEMBERS

Theo Moss  
728 Estate Drive  
Sumter, SC 29150

Douglas C. Darran  
2881 Brownfield Way  
Sumter, SC 29150

Elliott H. Lynam, III  
595 Sierra Drive  
Sumter, SC 29150

Retta Sanders  
Route 3, Box 270-C  
Sumter, SC 29154

Colonel Ronald T. Sconyers  
Commander  
363D Combat Support Group  
Shaw AFB, SC 29152-5000

Lt. Colonel Joseph Dirosario  
363 CES/CC  
Shaw AFB, SC 29152-5000

William W. Goodson  
Carolina Furniture Works  
405 Brooklyn Street  
Sumter, SC 29150

D. Gene Rickenbaker  
P.O. Box 1796  
Sumter, SC 29151

Jay Stutz  
363 CSG/DEEP  
Shaw AFB, SC 29152-5230

Gary Hallmark  
363 CSG/DEEP  
Shaw AFB, SC 29152-5230

David MacKinnon  
Office of the Secretary of Defense  
Washington, DC 20301-4000

Appendix

D

***Public Meetings***

## **APPENDIX D:**

### **PUBLIC MEETINGS**

The general public was invited to attend a series of public meetings and have input into the proposed development plans included in the Joint Compatible Land Use Study. The meetings were scheduled over a four-day period in June and occurred in four different areas of the county around Shaw AFB and the Poinsett Gunnery Range. The purpose of these open public meetings was to provide the public an opportunity to meet directly with the team of planners preparing the study and to allow residents and property owners the ability to address their concerns, opinion, or comments regarding the development concepts. Written comments by residents and property owners who attended the meetings were encouraged and a survey was distributed with a July 23 deadline for return. Approximately 85-90 residents registered their attendance at the public meetings and approximately 40-45 survey forms were completed and returned.