

Final Report

**PAHRUMP VALLEY
AIRPORT SITE SELECTION STUDY**

NYE COUNTY, NEVADA

March 1987



Aries Consultants Ltd.

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March 1987

Mr. Stephen T. Bradhurst
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RE: Final Report, Pahrump Valley Airport Site Selection Study

Dear Mr. Bradhurst:

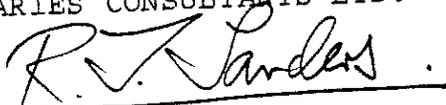
Aries Consultants Ltd. is pleased to submit the Final Report for the Pahrump Valley Airport Site Selection Study prepared as part of the County-wide Airport Master Plan Study.

The report presents the findings, conclusions, and recommendations of the comprehensive technical study of airport sites in the Pahrump Valley. The principal findings and recommendations of the study are presented in Chapter I, Introduction and Summary. The succeeding chapters describe the economic analysis and aviation demand forecasts, airport requirements, potential airport site areas, evaluation of selected airport site areas, airport layout plan and master plan, and implementation plan. An environmental reconnaissance of the airport sites in the Pahrump Valley is also included as an appendix.

Aries Consultants Ltd. and Consulting Engineering Services, Inc. have enjoyed working with Nye County on this project, and we have appreciated the cooperation and contributions made by the Nye County Commissioners and County staff.

Yours sincerely,

ARIES CONSULTANTS LTD.



R. John Sanders
President

RJS/gdr
Enclosure



A Corporation

FINAL REPORT

PAHRUMP VALLEY
AIRPORT SITE SELECTION STUDY

prepared for
NYE COUNTY, NEVADA

The preparation of this report was financed in part through an Airport Improvement Program Grant from the Federal Aviation Administration under the provisions of Section 505 of the Airport and Airway Improvement Act of 1982.

prepared by
ARIES CONSULTANTS LTD.
in association with
CONSULTING ENGINEERING SERVICES, INC.

March 1987

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Chapter I

INTRODUCTION AND SUMMARY

BACKGROUND

In October 1985, Nye County, Nevada, initiated a County-wide Airports Master Plan Study under the Federal Aviation Administration's Airport Improvement Program (AIP). The purpose of the Study is to determine the type and extent of aviation facilities needed on a County-wide basis through the year 2005. The major objectives of the Study are to prepare updated Airport Layout Plans for the Tonopah, Beatty and Gabbs Airports and to perform site selection studies for new airports in the Pahrump and Amargosa Valleys. Each objective is documented in a separate report. This report contains the findings and recommendations of the Site Selection Study for a County-owned airport in the Pahrump Valley. The location of the Pahrump Valley, in relation to Nye County, is illustrated on Figure 1.

ECONOMIC ANALYSIS AND AVIATION FORECASTS

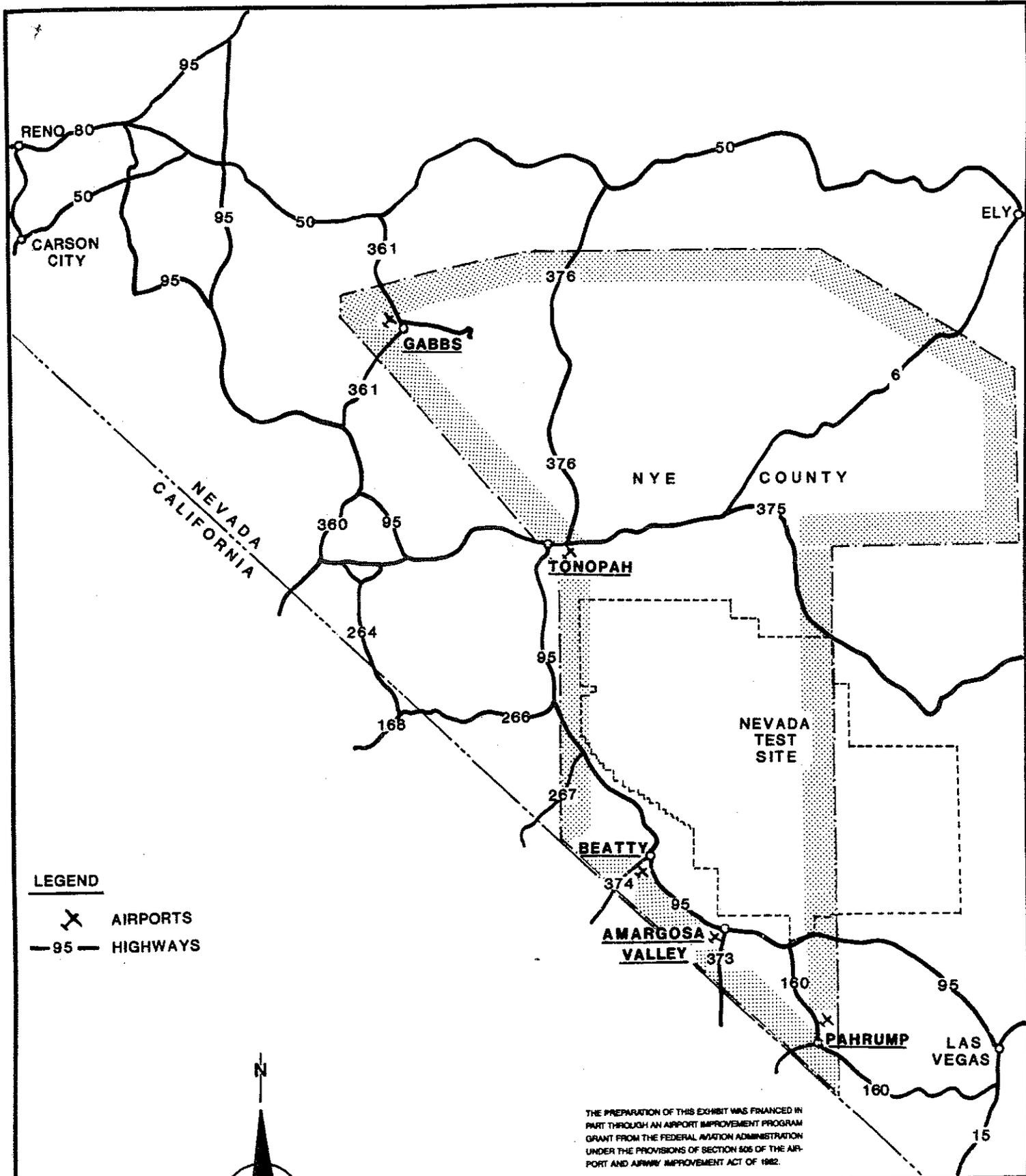
Current development trends in the Valley, including residential, commercial, government services and recreational, and those supporting socioeconomic factors that could impact the demand for aviation facilities and services indicate the need for a County-owned airport in the Pahrump Valley. The airport would serve that portion of Nye County for which it is the most convenient airport. The provision of a safe, efficient and environmentally-compatible airport, attractive facilities, and a high-quality level of general aviation services would make the airport attractive to both based and itinerant aircraft owners and pilots and other potential airport users.

AIRPORT REQUIREMENTS

In order to provide a basis for evaluating alternative airport site areas, the physical facilities that will be required to serve potential air traffic requirements in the Pahrump Valley were prepared. For purposes of this Study, long-range (20-year) airport requirements were used as the basis for comparing alternative sites.

POTENTIAL AIRPORT SITE AREAS

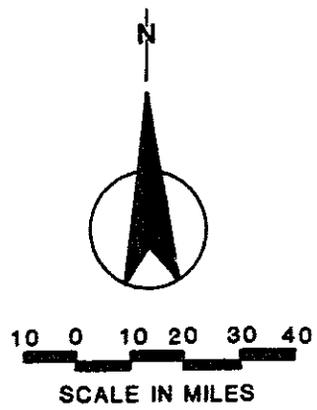
For the site selection process in the Pahrump Valley, the Nye County line is established as a boundary to the east, south and southwest, and the mountains surrounding the Valley determine the boundaries to the north and northwest. The Valley is 26 miles long and 12 miles wide. It is surrounded by the Spring Mountain and Nopah Mountain Ranges. Located at an elevation of



THE PREPARATION OF THIS EXHIBIT WAS FINANCED IN PART THROUGH AN AIRPORT IMPROVEMENT PROGRAM GRANT FROM THE FEDERAL AVIATION ADMINISTRATION UNDER THE PROVISIONS OF SECTION 505 OF THE AIRPORT AND AIRWAY IMPROVEMENT ACT OF 1982.

Figure 1
 NYE COUNTY, NEVADA

LOCATION MAP



approximately 2,700 feet above mean sea level (MSL), the Valley encompasses some 364 square miles. The Pahrump Valley is shown on Figure 2.

At the outset of the Study, the Pahrump Town Board was designated by the County Board of Commissioners to play an advisory role in the site selection process. An initial public presentation was made to the Board in February of 1986 to present the preliminary findings of the initial screening of potential airport site areas, a process whereby those areas unsuitable for an airport were then excluded from further consideration. Based on input received at the February public meeting, discussions with Nye County representatives, FAA site selection and planning criteria, and other input, the following two areas illustrated on Figure 3 were selected by the County for further evaluation.

Site A: An area in the northeast part of the Valley, that includes the existing airport owned by Preferred Equities Corporation

Site B: An area in the southwest part of the Valley, south of Gamebird Road and west of Pahrump Valley Boulevard

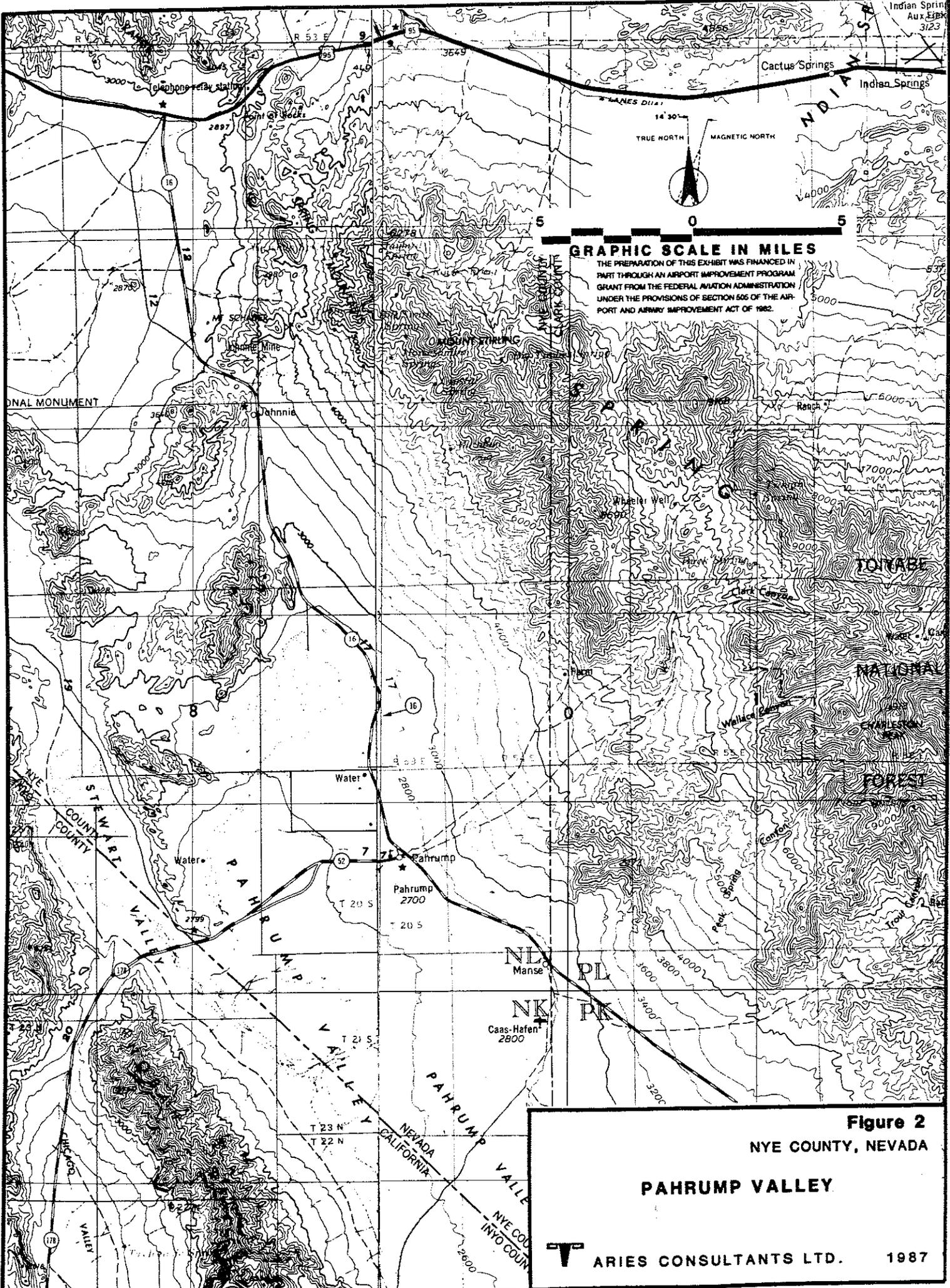
EVALUATION OF SELECTED AIRPORT SITE AREAS

The two areas selected as potential airport site areas have been evaluated in more detail on the basis of several FAA evaluation criteria. A comparative analysis of the advantages and disadvantages of each site has been prepared.

The comparative evaluation of the two sites, A and B, was presented at a public meeting of the Pahrump Town Board in May of 1986 and to a public meeting of the Nye County Board of Commissioners in June of 1986. The evaluation was also reviewed with the Nye County staff.

The Pahrump Town Board voted to recommend that Site B be selected as the Airport site. The County selected Site B for the Airport site for which the detailed site layout/master plan would be prepared. Site B, often referred to as the Bureau of Land Management or BLM Site, is the area in the southwest part of the Valley, south of Gamebird Road and west of Pahrump Valley Boulevard.

As a result of input received at both the Pahrump Town Board and Nye County Board of Commissioners public meetings, some refinements were made to the preliminary airport layout for Site B. At the meetings it was suggested that the Airport runway be located as far to the west as feasible so as to minimize any potential for overflights of residential areas southeast of Pahrump Valley Boulevard and Thousandaire Boulevard. A runway alignment addressing this concern was presented at the County Board of Commissioners meeting in June of 1986.



GRAPHIC SCALE IN MILES

THE PREPARATION OF THIS EXHIBIT WAS FINANCED IN PART THROUGH AN AIRPORT IMPROVEMENT PROGRAM GRANT FROM THE FEDERAL AVIATION ADMINISTRATION UNDER THE PROVISIONS OF SECTION 506 OF THE AIRPORT AND AIRWAY IMPROVEMENT ACT OF 1982.

Figure 2
NYE COUNTY, NEVADA

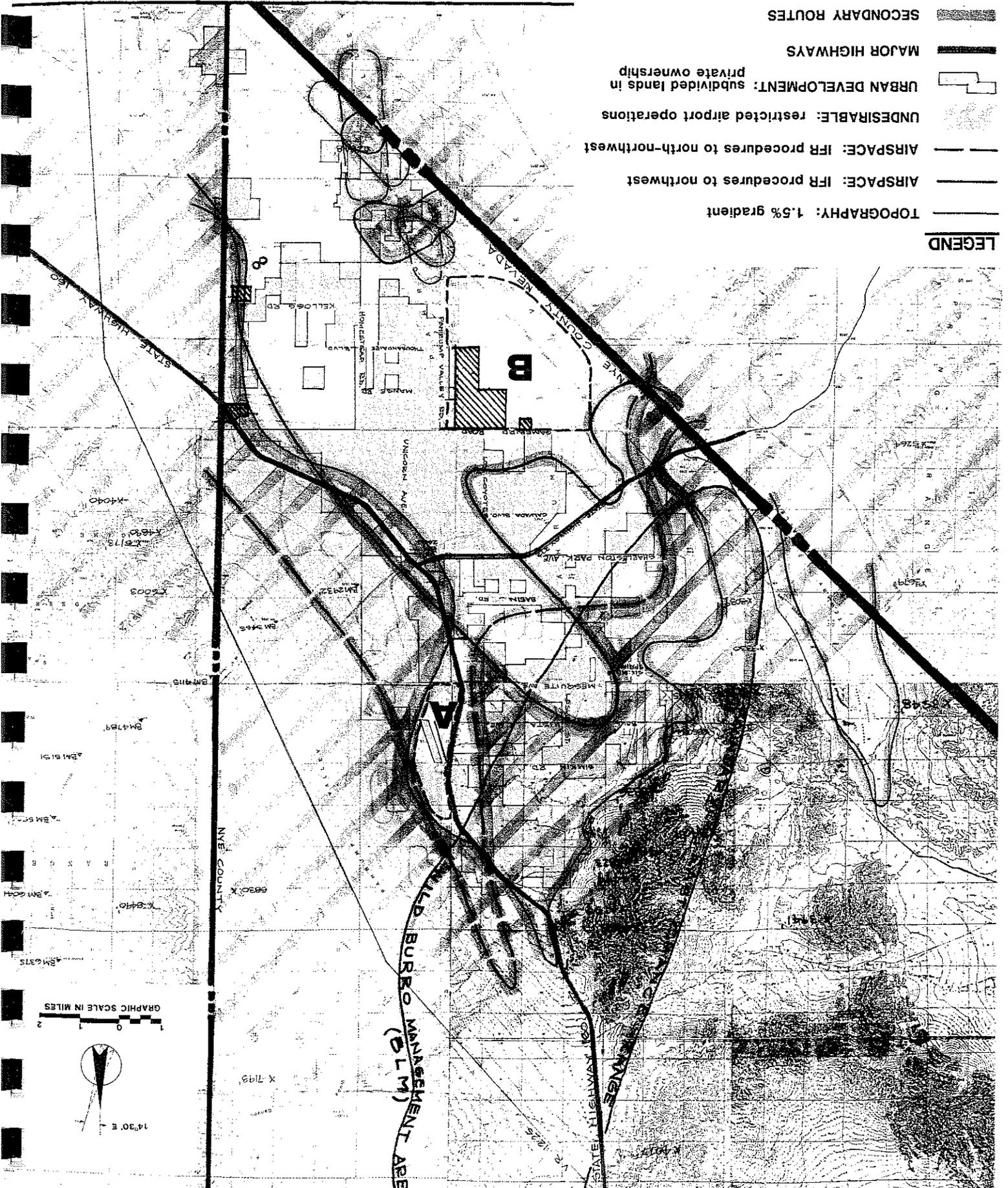
PAHRUMP VALLEY

LEGEND

- TOPOGRAPHY: 1.5% gradient
- AIRSPACE: IFR procedures to north-west
- AIRSPACE: IFR procedures to north-north-west
- UNDESIRABLE: restricted airport operations
- URBAN DEVELOPMENT: subdivided lands in private ownership
- MAJOR HIGHWAYS
- SECONDARY ROUTES
- ENVIRONMENTAL RECONNAISSANCE: cultural resources
- VR1225
- EXISTING AIRPORT/AIRSTRIP
- POTENTIAL SITE LOCATIONS

PAHRUMP VALLEY AIRPORT
 PRELIMINARY SCREENING MAP
 ARIES CONSULTANTS LTD.
 1987

FIGURE 3



GRAPHIC SCALE IN MILES



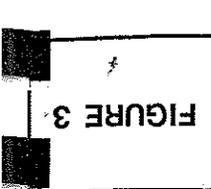
WILD BURRO MANAGEMENT ARE (SLM)

STATE HIGHWAY 160

STATE HIGHWAY 163

A

B



The refined runway alignment is reflected in the Airport Layout Plan described in this report.

AIRPORT LAYOUT PLAN AND MASTER PLAN

A recommended Year 2005 Airport Layout and Master Plan for the Pahrump Valley Airport has been prepared. The Plan integrates long-term airfield and terminal area requirements with forecast aviation demands, airport access and parking needs. It represents a guide for airport development through the year 2005 planning period and indicates possible developments beyond the year 2005 for which land should be reserved at this time.

Recommendations for the use of land adjacent to the Airport boundary to ensure long-term compatibility with airport and aircraft operations are also presented.

IMPLEMENTATION PLANS

An overall capital improvement program and staging plan for 1990, 1995 and 2005 has been prepared. This presents the cost estimates associated with individual airport construction items. The potential funding sources for airport development are identified, and a preliminary financial plan for implementing the airport development program has been established including potential revenues and expenses associated with operating the Airport. The potential advantages and disadvantages of alternative forms of airport ownership and management have been evaluated.

ENVIRONMENTAL RECONNAISSANCE

Components of both the natural (biological, etc.) as well as human-related (noise, etc.) environmental conditions in the Pahrump Valley Airport Site Selection Study Area have been analyzed and are presented in this report. The Environmental Reconnaissance is intended to serve as the data base upon which the effects of future airport operations on the environment can be projected and impacts/mitigations hypothesized in any required future site-specific documentation. Environmental conditions which may affect airport development and/or operations have been evaluated and presented as pertinent to the level of detail of this analysis.

Chapter II

ECONOMIC ANALYSIS AND AVIATION DEMAND FORECASTS

In determining the need for a publicly-owned general aviation airport in the Pahrump Valley, it is necessary to evaluate socioeconomic factors and other indicators of potential future activity in the Valley. These form the basis for developing forecasts of future aviation activity and requirements for airport facilities to support that activity. The forecasts and requirements are then used to plan the geometric layout of the airport and its facilities and to estimate preliminary airport development costs, the environmental effects, and the compatibility of the airport and airport operations with the surrounding existing and planned-for land uses.

Before projecting future airport requirements, it is first necessary to identify those characteristics which will influence future aviation demand in the Pahrump Valley. This chapter outlines those socioeconomic characteristics and identifies the potential volume and type of aviation activity that could be accommodated at an airport. National trends in general aviation were reviewed, and also available historical and forecast data for Nye County and the study area. The Nevada State Air System Plan (NSASP) and the National Plan of Integrated Airport Systems (NPIAS) were also reviewed.

SOCIOECONOMIC CHARACTERISTICS

A review of socioeconomic characteristics of Nye County and the Pahrump Valley is helpful in preparing the aviation demand forecasts presented later in this chapter. Because detailed population and employment data are not generally available for the Pahrump Valley, the following analyses must necessarily be defined to include all of Nye County. However, where available, data pertaining specifically to Pahrump Valley has been used. The data have been analyzed for their potential impact on aviation demand. As such, the information presented should not be considered a comprehensive economic analysis of the Pahrump Valley.

Population

Nye County covers an area of 18,155 square miles and is the largest Nevada County, and third largest County in the Continental United States. A Special Census completed in 1985 showed the County's total population to be 14,250. Over 80 percent (approximately 11,500) of the population reside in the western portion of the County, with approximately 38 percent of that population concentrated in the Pahrump Valley.

As shown in Table II-1, Nye County has been growing considerably faster than both the State and the United States, particularly over the most recent five-year period. The average annual rate of population growth between 1980 and 1985 for the County was 9.5 percent; for the State of Nevada, 3.9 percent; and for the United States as a whole, 1.0 percent.

The most significant increase in population in Nye County over the past five years appears to be in the Pahrump Valley with a population increase from 1,350 in 1980 to 5,200 in 1985, a 285 percent increase. (There are about 150 people in Crystal.) However, discussions with the preparers of the 1985 Special Census and information published by the Pahrump Valley Economic Development Council, Inc. would indicate the 1980 population of the Pahrump Valley to be 3,300, which represents a 58 percent increase to 1985, or an average annual increase of 9.5 percent. There is no indication of this substantial growth pattern changing in the immediate future. The Special Census conducted by the University of Nevada-Reno for Nye County indicated 38 percent of the population of the western part of the County, and 27 percent of the total County population are in the Pahrump Valley.

Employment and Economy

Table II-2 presents the distribution of historical nonagricultural employment in Nye County for 1981, 1982 and 1983. As shown, the economy of Nye County depends largely on the mining and services sector, which combined accounted for approximately 74 percent of the total nonagricultural employment in 1981 and increased to approximately 80 percent in 1982 and 1983. The services sector includes government-related employment at the Nevada Test Site, and although the County's economic base appears to be heavily dependent on the Test Site, according to the State of Nevada, Office of Community Services, many workers at the Test Site are not Nye County residents and some are from out-of-state.

According to the Nye County Master Education Plan prepared in 1984 by the University of Nevada-Reno, the Pahrump Valley has been influenced by military and government activity. Because of the proximity of the Valley to both the Test Site and Las Vegas, a significant number of people choose to live in the Valley and commute. As the population in the Valley continues to expand, diversification of the local economic base is becoming more apparent.

Table II-3 presents a distribution of employment by economic sector for the years 1975 and 1982. A comparison of the two years indicates the diversification of the economic base, particularly in the agricultural sector which has decreased substantially. This decline is due in part to agricultural land being converted to residential uses. Employment in the remaining economic sectors has increased with the exception of the

Table II-1

HISTORICAL AND FORECAST POPULATION TRENDS
Nye County, State of Nevada and United States
1960-2005

	Historical			Base Year			Forecast		
	1960	1970	1980	1985	1990	1995	2005	2005	2005
Nye County	4,374 ^a	5,599 ^a	9,048 ^a	14,250 ^b	19,765 ^c	22,514 ^c	25,631 ^c	29,166 ^c	29,166 ^c
State of Nevada	285,278 ^d	488,738 ^d	800,493 ^d	970,228 ^c	1,255,687 ^c	1,255,687 ^c	1,414,403 ^c	1,587,612 ^c	1,587,612 ^c
United States	179,323,175 ^d	203,302,031 ^d	226,545,805 ^d	237,604,912 ^e	249,203,000 ^d	258,171,000 ^e	267,461,000 ^d	277,087,000 ^e	277,087,000 ^e

	Average Annual Percentage Change		
	1960-1980	1980-1985	1985-1990
Nye County	3.7	9.5	6.8
State of Nevada	5.3	3.9	2.7
United States	1.2	1.0	1.0

- a. Nye County, Nevada Profile, State of Nevada, Office of Community Services, 1985 Editions
- b. Bureau of Business and Economic Research, College of Business Administration, University of Nevada-Reno, Special Census of Nye County, Summary Report, August 1985
- c. Bureau of Business and Economic Research, College of Business Administration, University of Nevada-Reno
- d. Census of Population, U.S. Department of Commerce, Bureau of the Census
- e. Interpolated and Extrapolated by Arles Consultants Ltd.

Table II-2

DISTRIBUTION OF HISTORICAL
NONAGRICULTURAL EMPLOYMENT
Nye County, Nevada
1981-1983

Industry Sector	1981		1982		1983	
	Number	Percent	Number	Percent	Number	Percent
Mining	1,550	19.2%	1,430	16.6%	1,130	13.1%
Construction	420	5.2	160	1.2	110	1.3
Manufacturing	90	1.1	90	1.0	80	0.1
Transportation, communications and utilities	150	1.2	160	1.2	140	1.6
Wholesale and retail trade	500	6.2	480	5.6	440	5.1
Finance, insurance and real estate	320	4.0	170	2.0	150	1.7
Services	4,400	54.6	5,470	63.3	5,820	67.4
Government	660	8.1	670	7.8	760	8.8
Total	8,130	99.6%	8,630	98.7%	8,630	99.1%

Note: Reflects employment by place of work.

Note: Percentages do not add due to rounding.

Source: Nye County Nevada Profile, 1985 Edition.

Table II-3

PERCENT DISTRIBUTION OF EMPLOYMENT
BY ECONOMIC SECTOR
Pahrump Valley
1975 and 1982

<u>Economic Sector</u>	<u>1975</u>	<u>1982</u>
Agriculture	27.92%	3.96%
Construction	4.15	10.68
Manufacturing	0.0	0.92
Mining	0.0	10.77
Wholesale and retail trade	18.49	5.34
Finance, insurance and real estate	0.0	4.14
Transportation, communications and utilities	3.40	7.56
Services	29.81	30.48
Other ¹	<u>16.23</u>	<u>26.15</u>
	100.00%	100.00%

1. Education, government and unclassified.

Source: Pahrump Resource Analysis

wholesale and retail trades. Employment in the retail sector appears to be increasing, however.

The location of the Valley, approximately 70 miles northwest of Las Vegas, is making the Valley a more attractive location for residential and industrial development. This is evidenced by both the substantial increase in the population over the past five years and the location of commercial and manufacturing facilities in the Valley in recent months. Approximately 43,000 residential lots have been created in the Valley, and approximately 4.5 percent (2,000) have been developed. According to the Pahrump Valley Chamber of Commerce, there were an estimated 300 local businesses in the Valley in 1985. This continuing diversification will provide a stronger economic base in the Pahrump Valley in future years.

GENERAL AVIATION TRENDS AND EXISTING FORECASTS

General aviation includes all civil flying except that of scheduled and nonscheduled service of certificated airlines, commuter air taxis and military aviation. It includes many activities ranging from transportation of personnel and cargo by business firms in privately-owned aircraft to recreational flying, and specialized activities such as the provision of air ambulance service, aerial photography, police patrol and fire control. General aviation also includes agricultural, industrial, private business, air charter, and federal, State, and local government aviation.

Historical data on general aviation activity at airports in Nye County are limited, as is the case at most airports without control towers. Therefore, related available data were used in developing the aviation demand forecasts for an airport in Pahrump Valley. General aviation trends on a national level were reviewed; and applicable information and data from the NPIAS (federal) and NSASP (State) aviation system plans are included. Data on historical aircraft registrations in Nye County are also presented.

National Trends in General Aviation

Basic indicators of historical and forecast general aviation growth at the national level are presented in Table II-4. As shown, the total number of active general aviation aircraft in the nation are forecast to increase by 27 percent from 213,300 in 1984 to 270,500 in 1996, or an average annual increase of 2.0 percent.

Single-engine aircraft, which are forecast to account for 73 percent of the estimated active general aviation aircraft in 1996, are expected to increase at a more moderate rate of 1.4 percent per year from 1984 through 1996. This moderate increase is due in part to the increased costs of owning and operating

Table II-4

**ESTIMATED ACTIVE GENERAL AVIATION
AIRCRAFT BY TYPE OF AIRCRAFT^{1,2}**
(thousands)

	Fixed Wing					Rotorcraft			Balloons/ Dirigibles/ Gliders
	Total	Piston		Turbo- prop	Turbo- jet	Piston	Turbine		
		Single- Engine	Multi- Engine						
<u>Historical</u> ³									
1980	210.3	168.4	25.1	3.5	2.7	3.1	2.7	4.8	
1981	211.0	168.4	24.6	4.1	3.0	2.8	3.2	4.9	
1982	213.2	167.9	25.5	4.7	3.2	3.3	3.7	5.2	
1983	209.8	164.2	25.0	5.2	4.0	2.4	3.7	5.2	
1984	213.3	166.4	25.1	5.5	3.9	2.5	4.0	5.9	
<u>Forecast</u>									
1985	210.2	161.9	25.1	6.0	4.2	2.4	4.5	6.1	
1986	214.5	164.0	25.6	6.6	4.6	2.4	4.9	6.4	
1987	218.9	166.1	26.5	7.1	4.9	2.3	5.3	6.7	
1988	223.6	168.4	27.5	7.6	5.2	2.3	5.6	7.0	
1989	228.7	170.8	28.8	8.1	5.5	2.3	5.9	7.3	
1990	235.0	174.8	29.6	8.6	5.7	2.3	6.3	7.7	
1991	241.9	179.6	30.5	9.1	5.9	2.2	6.6	8.0	
1992	249.0	184.2	31.4	9.6	6.2	2.2	7.1	8.3	
1993	255.7	188.8	32.2	10.1	6.5	2.1	7.4	8.6	
1994	261.7	192.5	33.0	10.5	6.7	2.1	8.0	8.9	
1995	266.8	195.6	33.7	10.9	6.9	2.1	8.3	9.3	
1996	270.5	197.4	34.4	11.4	7.1	2.0	8.6	9.6	

1. An active aircraft must have a current registration and it must have been flown at least one hour during the previous calendar year.

2. Includes commuter aircraft.

3. FAA Statistical Handbook of Aviation.

Note: Detail may not add to total because of independent rounding.

Source: FAA Aviation Forecasts, Fiscal Years 1985-1996

conventional aircraft and the continuing decline in the numbers of student and private pilots.

Multiengine piston aircraft are forecast to increase at an average annual rate of 2.7 percent through 1996; turboprop aircraft at 6.3 percent; and turbojet aircraft at 5.1 percent, emphasizing the increasing use of aircraft for business and corporate flying. All other aircraft including rotorcraft, balloons, gliders and ultralights are forecast to increase at an average annual rate of 4.2 percent.

National Plan of Integrated Airport Systems

The National Plan of Integrated Airport Systems (NPIAS) report was published in August 1985 and was designed by the U.S. Department of Transportation, Federal Aviation Administration, to estimate the costs of airport development associated with establishing a system of U.S. airports to meet and anticipate the needs of civil aviation and support the Department of Defense and Postal Service. The NPIAS is structured to provide each community with access to a safe and adequate airport.

The NPIAS includes Pahrump as a new public general aviation airport within the first five-year planning period (through 1988). Forecasts of based aircraft and total aircraft operations were prepared for Pahrump as part of the NPIAS. There are nine based aircraft forecast for the first five-year planning period (through 1988). Total 1988 aircraft operations are forecast at 6,000 annually with 50 percent of the total operations (3,000) forecast as itinerant.

Over the ten-year planning period (through 1993) twelve based aircraft are forecast with a total of 7,000 aircraft operations per year. Of the total aircraft operations, 57 percent (4,000) have been forecast as itinerant.

Nevada State Air System Plan

The Nevada State Air System Plan (NSASP) was published by the Nevada Department of Transportation, Planning Division, in 1983. A major goal of the plan is to provide for the orderly and timely development of a system of airports which will meet the aeronautical and air transportation needs of Nevada for the period 1980-2000 and which will be compatible with the National Plan of Integrated Airport Systems and local planning activities. The NSASP emphasizes that because of the large geographic area of the State and the small population of rural Nevada, concerted efforts must be made to provide an adequate public air transportation system for all the citizens, including those outside of the two major metropolitan areas of Las Vegas and Reno.

According to the NSASP, the overall decline in general aviation in recent years has not been apparent in the State of Nevada as based aircraft have surpassed previous forecasts. Although the

number of pilots per 1,000 population has been decreasing, the geographic size of the State and its affluence will maintain aviation as a valued form of transportation.

Nevada general aviation airports are unique for their utilization as origins and destinations for itinerant aircraft. Approximately 70 percent of general aviation flights in the State are itinerant operations, while on a national level, the average is only 45 percent. This factor indicates the importance of general aviation as a major mode of transportation to, from, and in Nevada.

A Pahrump Valley Airport is included in the NSASP. Based aircraft over the planning period are forecast to increase from six in 1980, to 18 in 1990, and to 35 in 2000.

Aircraft operations over the planning period are forecast to increase from an estimated 4,500 in 1980 to 8,000 in 1990, and to 17,000 in 2000.

Historical Aircraft Registrations: Nye County

According to the NSASP, the mobility of aircraft and attractive taxing policies of Nevada have meant more aircraft units are registered within Nevada than are based here. In 1980, 3,169 aircraft were registered in Nevada as opposed to 1,978 aircraft actually based in the State. This would indicate that approximately 62 percent of the aircraft registered in the State are actually based here.

Although actual statistics of general aviation based aircraft are not available for the County, the historical growth in the number of general aviation aircraft registrations in the County are reported in the Federal Aviation Administration's "Census of U.S. Civil Aircraft," and are presented in Table II-5.

The total number of registrations increased from 26 in 1970 to 64 in 1984, representing an average annual increase of 6.7 percent. The most significant annual increase has been over the most recent four-year period, averaging 9.2 percent.

The number of aircraft registrations in the single-engine category increased from 24 in 1970 to 52 in 1984, an average annual increase of 5.7 percent. The single-engine share of total registrations declined from 92 percent in 1970 to 81 percent in 1984. Registrations in the multiengine piston category increased from one to eight between 1970 and 1984, an average annual increase of 16 percent. The multiengine piston share of total registrations increased from 4 percent to 13 percent over the period. The number of registered turboprop aircraft in 1984 was four compared to one in each of the previous five years.

Table II-5

**HISTORICAL AIRCRAFT REGISTRATIONS IN NYE COUNTY
1970-1984**

Year	Fixed Wing						Total
	Piston		Turbo- prop	Turbo- jet	Roto- craft	All Other	
	Single- Engine	Multi- Engine					
1970	24	1	-0-	-0-	-0-	1	26
1971	21	3	-0-	-0-	-0-	1	25
1972	33	3	-0-	-0-	1	4	41
1973	25	2	-0-	-0-	1	2	30
1974	20	4	-0-	-0-	-0-	1	25
1975	31	4	-0-	-0-	2	-0-	37
1976	34	6	-0-	-0-	1	-0-	41
1977	29	3	-0-	-0-	-0-	-0-	32
1978	37	4	-0-	-0-	-0-	1	42
1979	37	3	1	-0-	-0-	1	42
1980	39	4	1	-0-	-0-	-0-	45
1981	35	6	1	-0-	-0-	-0-	42
1982	39	7	1	-0-	-0-	-0-	47
1983	47	9	1	-0-	-0-	-0-	57
1984	52	8	4	-0-	-0-	-0-	64

Note: Data from "Census of U.S. Civil Aircraft" are not strictly comparable. Data for 1972 through 1976 are total registered general aviation aircraft based on aircraft owners' residence. Data for 1977 through 1984 are total active (registered aircraft that flew one or more hours) general aviation aircraft based on where the aircraft is actually based. The resultant statistical discrepancy is probably minor, but unknown.

Source: Federal Aviation Administration, "Census of U.S. Civil Aircraft," Calendar Years 1970-1984.

AVIATION DEMAND FORECASTS

According to the Pahrump Valley Economic Development Council, Inc., continuing efforts are being made to promote the Valley's economic development, not only for clean, environmentally-responsive business and industry, but also for residential and commercial development, which will build and support the diversified economic base of the Valley mentioned earlier in this chapter.

The promotion of tourist/recreational packages to include camping, hunting, rodeos and golf, and the proximity of the Valley to the Death Valley National Monument; the U.S. Fish and Wildlife Service Ash Meadows Wildlife Refuge; Las Vegas; and other area attractions will also play an important role in furthering the growth and support of the tourism/recreational economic base in the Valley. The construction of a new road from the Pahrump Valley to the Amargosa Valley will provide not only the most scenic, but also the shortest route between Las Vegas and the Death Valley National Monument and the new Ash Meadows Wildlife Refuge.

Growth in the population and economy in the Pahrump Valley over the past five years has been substantial. According to the University of Nevada-Reno, Research and Education Planning Center, this growth is forecast to continue, and with the generation of more people will come additional employment and further opportunities. All of the socioeconomic factors that are presented herein will exert varying degrees of influence on the demand for aviation services and facilities in the Valley.

Forecasts of aviation demand provide a basis for determining the types of facilities needed at an airport and the extent of development required in future years. The forecasts presented in Table II-6 are for the twenty-year period through the year 2005. A comparison of the available forecasts for both general aviation based aircraft and aircraft operations at an airport in the Pahrump Valley are presented on Figures 4 and 5. Because of the uncertainties surrounding the factors that influence aviation, long-term forecasting is approximate in nature; however, it is important to consider a long-term horizon when planning for an airport.

The aviation demand forecasts were prepared on the basis of the information presented in the text. The achievement of any forecast may be affected by fluctuating economic conditions and is dependent upon the occurrence of other future events which cannot be assured. Therefore, the actual results achieved may vary from the forecasts, and such variations could be material.

General Aviation Based Aircraft

As shown in Table II-6, the total number of aircraft based at a Pahrump Valley Airport is forecast to be 15 by 1990; 25 by 1995 and 40 by 2005. Multiengine based aircraft are forecast to

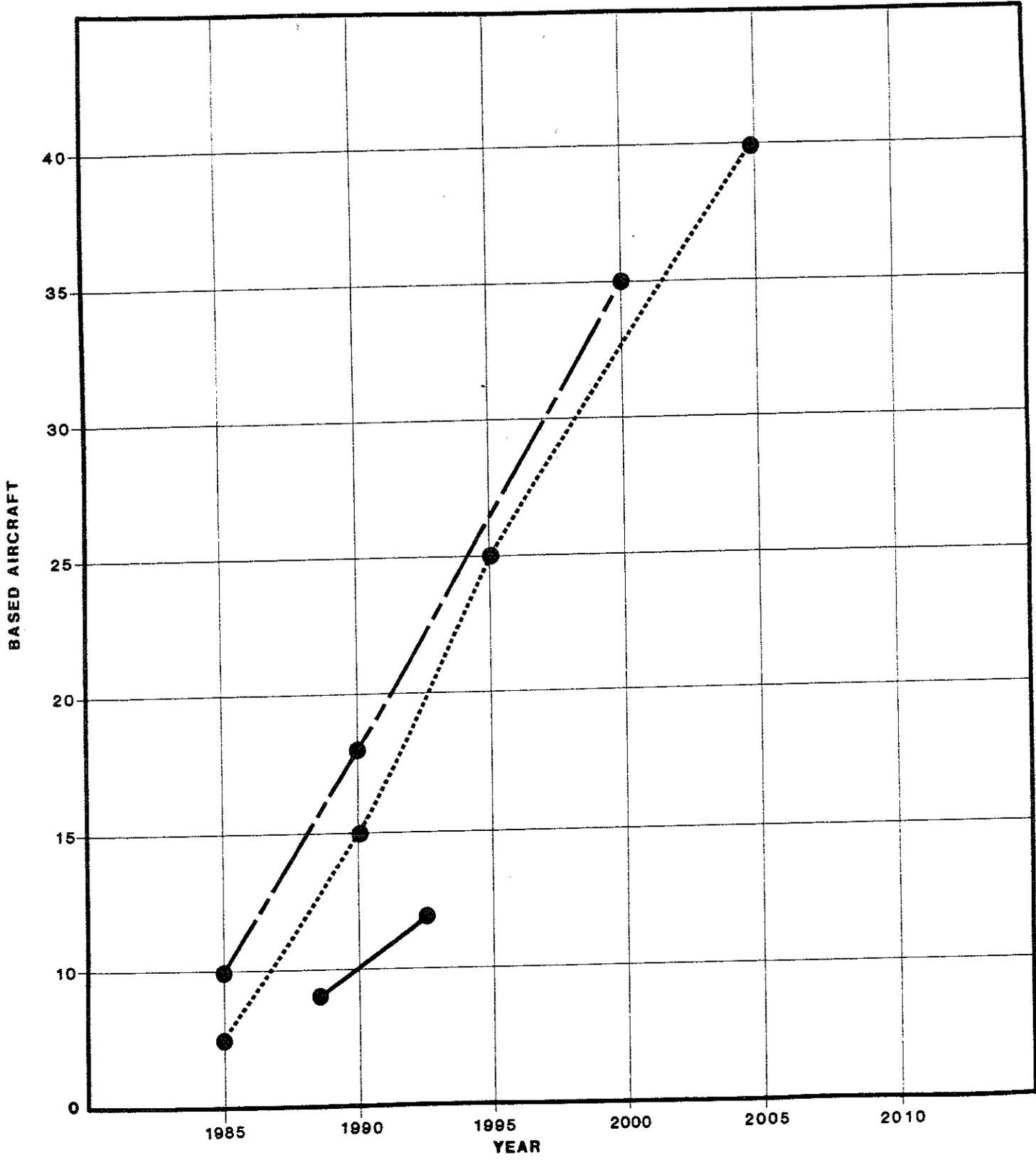
Table II-6

AVIATION DEMAND FORECASTS
Pahrump Valley Airport
1985-2005

	Existing ^a	Forecast		
	<u>1985</u>	<u>1990</u>	<u>1995</u>	<u>2005</u>
<u>Based aircraft</u>				
Single-engine	5	12	18	28
Multiengine	<u>2</u>	<u>3</u>	<u>7</u>	<u>12</u>
Total	7	15	25	40
<u>Aircraft operations</u>				
Itinerant	1,500	5,000	10,000	18,000
Local	<u>500</u>	<u>1,000</u>	<u>2,000</u>	<u>4,000</u>
Total	2,000	6,000	12,000	22,000

a. Estimated

Source: Aries Consultants Ltd.



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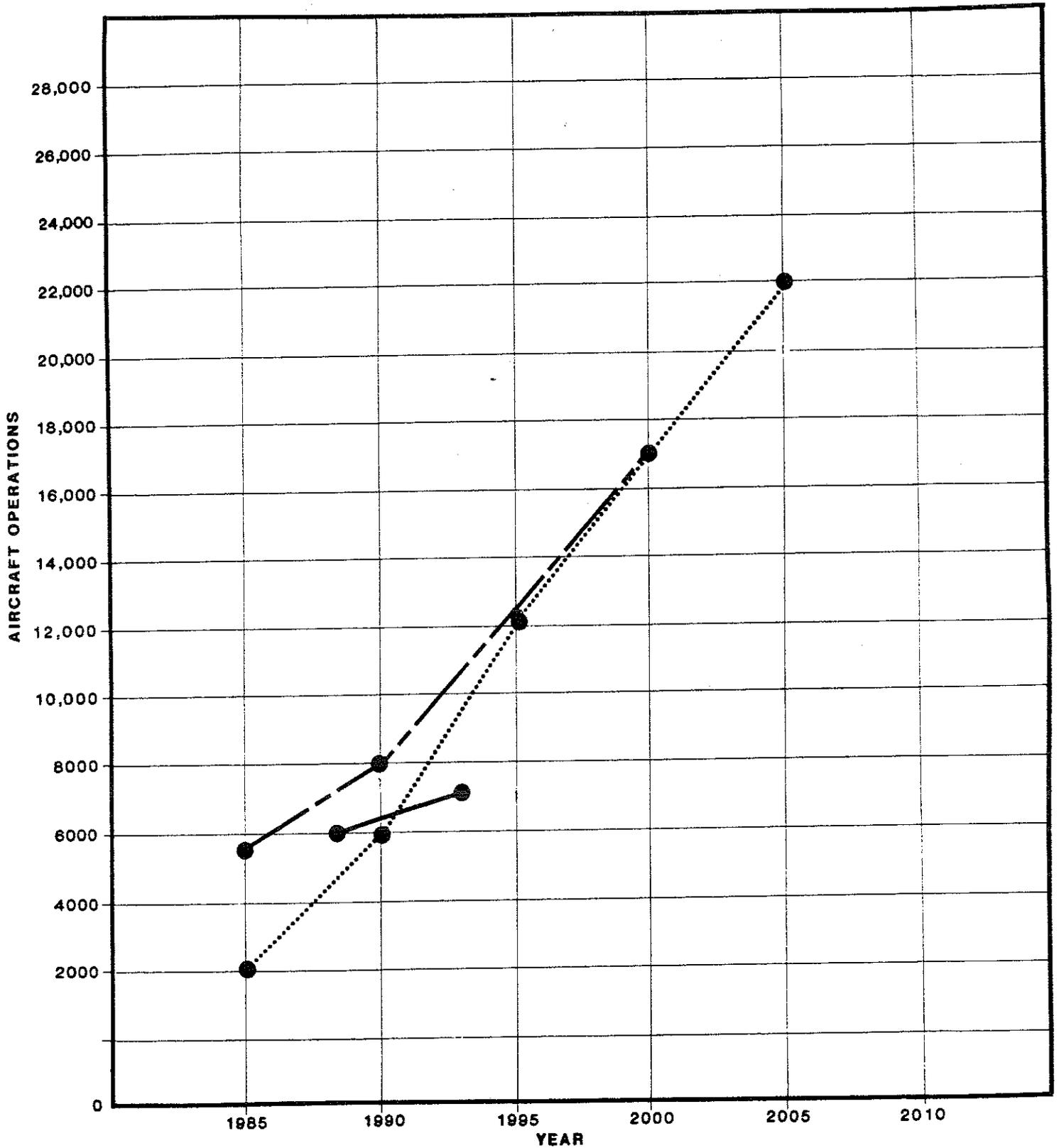
- NATIONAL PLAN OF INTEGRATED AIRPORT SYSTEMS
- - - NEVADA STATE AIR SYSTEM PLAN
- ARIES CONSULTANTS LTD.

Figure 4

PAHRUMP VALLEY AIRPORT NYE COUNTY, NEVADA

BASED AIRCRAFT

ARIES CONSULTANTS LTD. 1987



LEGEND

- NATIONAL PLAN OF INTEGRATED AIRPORT SYSTEMS
- - - NEVADA STATE AIR SYSTEM PLAN
- ARIES CONSULTANTS LTD.

Figure 5

PAHRUMP VALLEY AIRPORT NYE COUNTY, NEVADA

AIRCRAFT OPERATIONS


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increase from 2 in 1985 to 12 by 2005, and single-engine based aircraft are forecast to increase from 5 in 1985 to 28 by the year 2005.

General Aviation Aircraft Operations

Total annual aircraft operations are forecast to increase from an estimated 6,000 in 1990 to 22,000 in 2005. Itinerant operations are forecast to account for the greatest share of all operations in the future. By 1990, 5,000 itinerant operations are forecast (83 percent of the total), and 1,000 (17 percent) local operations are forecast. By 2005, 18,000 itinerant operations are forecast (82 percent of the total), and 4,000 (18 percent) local operations are forecast.

Chapter III

AIRPORT REQUIREMENTS

In order to provide a basis for evaluating alternate airport site areas, it is first necessary to define the physical facilities that will be required to serve potential air traffic requirements in the Pahrump Valley, irrespective of which site is ultimately selected as the airport. For purposes of this study, long-range (20-year) airport requirements have been used as the basis for comparing alternative sites. A staged development program for short- (5 years), intermediate- (5 to 10 years) and long-term (10 to 20 years) improvements will be developed later in the study for the selected site.

The major airport requirements for an airport in the Pahrump Valley are discussed in the following paragraphs as a basis for establishing gross space requirements for the selected airport site.

LAND AVAILABILITY AND POTENTIAL EXPANSION CAPABILITY

An important consideration in selecting a site for development of any new airport facility is to acquire sufficient land now (before the surrounding land develops) for the development of airport facilities capable of accommodating possible long-range air traffic requirements. Future community development can then be guided by the long-range air traffic potential so that the airport site will be protected from future encroachment by incompatible land uses, and the surrounding community will be protected from airport operations.

In addition, the site selection process should provide for the acquisition of sufficient land to accommodate facilities that may be required beyond 2005. Such land acquisition preserves the long-range development potential of the airport site, thereby guaranteeing the longevity of the airport site beyond the current planning period.

There are several reasons for planning in this manner. If air traffic demand should grow more rapidly than forecast in this report, facilities beyond those forecast herein through 2005 may be needed. On the other hand, if the air traffic growth rate is lower than forecast, the construction of facilities may be deferred until the demand develops.

The important point is to acquire sufficient land to accommodate possible future requirements so that, if and when the requirements materialize, land within the Airport boundaries will be available when needed to accommodate such requirements. If it is determined at a later date that further airport expansion is not required, the land can be released for uses compatible with airport activity.

AIRPORT FACILITY REQUIREMENTS

It is first necessary to determine the facility requirements that should be planned for an airport to serve the Pahrump Valley in order to ensure that sufficient land areas will be available to accommodate those requirements.

Based on the aviation demand forecasts set forth on Table II-6, the physical facilities required to serve the long-term air traffic potential of the Pahrump Valley are listed on Table III-1 and described below.

Airfield

In order to determine future airfield requirements for a County airport in the Pahrump Valley, it was necessary to analyze the types and volumes of aircraft expected to use the airport, anticipated airfield usage, and meteorological conditions.

Runway Length. The aircraft expected to use a County airport in the Pahrump Valley include a variety of aircraft. Some of these aircraft would be turbojet-powered aircraft requiring runway lengths somewhat greater than for small- and medium-sized general aviation propeller-powered aircraft.

A runway length of 6,000 feet should be planned for to provide sufficient length for the expected turbojet-powered aircraft. The 6,000-foot length would provide adequate length for 75 percent of the business jet fleet with 60 percent useful load, using FAA design criteria set forth in FAA Advisory Circular (AC) 150/5300-12, "Airport Design Standards--Transport Airports." This runway length would handle such business jet aircraft as the Learjet, Sabreliner, Cessna, Citation and HS-125. This length would also accommodate essentially all single and multiengine propeller aircraft of less than 12,500 pounds maximum gross take-off weight.

A new airport most likely will be developed in phases, and initially a new airport might be built to handle small propeller-powered aircraft. A runway length of 4,500 to 5,000 feet would be required for the small single and multiengine propeller-powered aircraft of 12,500 pounds maximum gross take-off weight or less. This is based on FAA recommended design criteria set forth in FAA Advisory Circular (AC) 150/5300-4B, "Utility Airports--Air Access to National Transportation."

A runway width of 100 feet is recommended for all forecast aircraft types.

Airfield Lateral Separations. Airfield lateral separation dimensions depend on aircraft wingspans, type of approach, and aircraft approach category. The aircraft expected to use the airport require the airfield lateral separations listed on Table III-1.

Table III-1

**AIRPORT FACILITY REQUIREMENTS
Pahrump Valley Airport
2005**

<u>Description</u>	<u>Dimensions</u>
Runway	6,000 feet by 100 feet
Taxiways	35 feet
Runway safety areas	1,000 feet by 500 feet
Clear zones	2,500 feet by 1,750 feet by 1,000 feet 1,700 feet by 1,510 feet by 1,000 feet
Aircraft parking area	150,000 square feet
Access road	2 lanes
Automobile parking	50 cars

AIRFIELD LATERAL SEPARATIONS

<u>Runway Centerline</u>	<u>Dimensions</u>
To - taxiway centerline	400 feet
- aircraft parking area	500 feet
- property line	750 feet
- building restriction line	750 feet

Source: FAA Advisory Circulars (ACs) 150/5300-4B and 150/5300-12
and Aries Consultants Ltd.

Airfield Pavement. Initially the airfield pavement would be designed to handle aircraft with single-wheel landing gear of 12,500 pounds maximum gross take-off weight and 30,000 pounds maximum gross take-off weight for dual-wheel aircraft. Ultimately, the airfield pavement may require strengthening to accommodate heavier aircraft.

Airfield Capacity. Based on the air traffic forecasts presented in Chapter II, a single runway will provide adequate capacity through the 20-year planning period.

Meteorological Conditions. It is important to orient the runway as nearly as possible to prevailing winds because aircraft have crosswind operational limitations. For a general aviation airport, it is desirable to provide wind coverage 95 percent of the time with a crosswind component of 12.5 miles per hour (10 knots) or less. A runway orientation with less than 95 percent coverage may require a crosswind runway.

Other meteorological conditions that affect the airport facility requirements and planning considerations include ceiling and visibility conditions, average daily maximum temperature during the hottest month, and precipitation.

Avigation

The runway should be aligned to provide the capability for a precision instrument approach procedure in the principal direction of use for all-weather operations. A precision instrument approach procedure is highly desirable for the principal arrival runway to provide vertical guidance close to the approach end of a runway for turbojet aircraft, even in visual flight rules (VFR) conditions. Approach speeds for turbojet aircraft are greater than small and medium propeller aircraft. Therefore, the required response time is much less for jet aircraft pilots to correct for any unexpected deviation from the final glide path at low altitudes close to the runway threshold. As a consequence, turbojet aircraft must be stabilized both in terms of air speed and rate of descent as early as possible on any approach.

Aircraft Approach Path Conditions. Aircraft approach conditions should conform with criteria set forth in the FAA United States Standard for Terminal Instrument Procedures (TERPS), and in Federal Aviation Regulations (FAR) Part 77.

For final approach on the instrument landing system (ILS), a 3.0 degree glide slope is the recommended maximum permissible angle. For ILS missed approaches, the terrain conditions should permit procedures to be established with a decision height of 200 feet above the runway threshold, and provide an obstacle free missed approach path above a 40:1 missed approach surface.

Aircraft Departure Path Conditions. Aircraft departure path conditions should provide an obstacle free departure path above

an obstacle identification surface (OIS) of 40:1, and conform with other departure criteria as set forth in TERPS.

Clear Zones and Approach Surfaces. The recommended clear zones for both ends of the runway should be within airport property boundaries to the maximum extent feasible. If acquisition of the clear zones is not practical or feasible, aviation easements should be acquired. The approach surface over the clear zones should be 50:1 for the ILS runway end and 34:1 for the other runway end to provide for a nonprecision approach.

Navigational Aids. The planning for a runway should provide for a full ILS capability with an appropriate approach lighting system with runway alignment indicator lights (MALSR) to be installed at the approach end of the runway in the principal direction of use.

Additionally, provision for an omnidirectional approach lighting system (ODALS) in the opposite direction should be made. These approach lighting systems will facilitate instrument approaches to the runway: MALSR for precision approaches in the principal direction of use and ODALS for nonprecision approaches in the opposite direction.

A segmented circle with traffic pattern indicators, a rotating beacon, and a wind indicator will also be required.

General Aviation

Based on the aviation demand forecasts presented in Chapter II, the primary general aviation requirements will be for aircraft storage space (tiedowns, apron and hangars) for general aviation aircraft. Based on the forecasts, it is estimated that by 2005, space for about 50 based and itinerant aircraft requiring about 150,000 square feet will be required to accommodate these aircraft.

General aviation requirements also include space for potential hangar development, fixed base operator plots, aircraft refueling, aircraft washrack, and automobile parking areas.

Airport Support Facilities

Airport support facilities, depending on the level of activity, may include the airport administration/terminal building, air traffic control tower, crash/fire/rescue, fuel farm, utilities and weather service. Although the precise need for any, or all, of these facilities cannot be determined at this time, approximately 5 acres should be reserved for planning purposes. Space should also be reserved for other potential building areas such as any commercial or industrial lease plots.

Airport Access and Parking

A two-lane access road to the airport site will have sufficient capacity to accommodate projected volumes of traffic. Service roads and a perimeter road will be required on the airport.

Up to 50 automobile parking spaces should be provided for public and employee use. For any lease plots, parking for visitors and employees should be provided within the lease plot boundaries.

Land Area

Based on the above airport requirements, the land area required for a new airport site is estimated to be about 400 acres. This area will provide adequate space for airfield, clear zones, terminal area, airport support services, and potential nonaviation uses such as any commercial or industrial development.

Chapter IV

POTENTIAL AIRPORT SITE AREAS

General areas for more detailed airport site selection analysis were identified using a preliminary screening process. The Pahrump Valley was screened on the basis of critical factors, including FAA dimensional criteria, or characteristics, important to the location and operation of an airport. A map was prepared highlighting the results of the screening process and identifying both desirable and less desirable areas based on the factors considered, as illustrated earlier on Figure 3.

This method was utilized to assure that the more desirable areas would receive detailed site analysis by eliminating undesirable and unacceptable site areas as expeditiously as possible. This is based on the premise that if sufficient desirable areas could be identified then it would not be necessary to perform detailed analysis on less desirable sites and possibly compromise key airport planning criteria. This process allows more time to be spent concentrating on the more desirable sites.

The airport site should be capable of supporting a 6,000-foot primary runway and parallel taxiway. A minimum of 400 acres, in a configuration suitable for airport development, should be available.

The factors and characteristics analyzed in the preliminary site screening process included the Nye County boundary; topography; airspace; land availability and urban development; environmental considerations; accessibility and overall airport site area.

NYE COUNTY BOUNDARY

The Nye County boundary is considered a limiting factor in defining the desirable site areas. Jurisdictional factors make consideration outside of Nye County undesirable. Therefore, all potential site areas considered are within the County.

TOPOGRAPHY

It is desirable to consider sites where longitudinal and transverse slopes are 1.5 percent or less to minimize earthwork and site grading requirements during airport construction. This factor considers not only runway longitudinal slope but also takes into account taxiway, aircraft parking apron and building areas.

AIRSPACE

It is desirable for the airport site to be in an area where instrument flight rules (IFR) procedures can be established. Criteria contained in "The United States Standard for Terminal Instrument Procedures" (TERPS) were used to ensure required terrain clearance for IFR approach, missed approach and departure procedures. In order to determine the operational feasibility of potential airport site areas, it was necessary to consider all segments of approach, missed approach and departure from the en route phase of flight to landing or missed approach and from departure up to the en route phase of flight. For the preliminary screening an average approach descent gradient of 300 feet per nautical mile (NM) with an obstacle clearance plane of 30:1 was used. This would provide terrain clearance of 500 feet at 5NM and 1,000 feet at 10NM from the runway threshold. More detailed criteria will be used for site specific evaluations. For departure a climb gradient of 200 feet per NM with an obstacle clearance plane of 40:1 was used.

Other airspace factors considered in the preliminary screening were military Restricted Areas (R-4806W, R-4808N, and R-4808S) and the Military Operational Area (Complex 4 Alfa MOA). In addition, published military low-level high-speed jet training routes (IR 286, VR 1214 and VR 1225) are plotted on the screening map and will be considered in more detail in site specific evaluations.

The terrain in the Pahrump Valley primarily limits the number of areas that are available for an IFR airport and that have no impact on traffic at other airports.

LAND AVAILABILITY AND URBAN DEVELOPMENT

All areas of existing or planned "Urban Development" and "human settlement", are undesirable for consideration as potential airport sites. The impacts of overflight of these areas and aircraft noise is described later in the more detailed site specific analyses.

All areas of existing contiguous "privately-owned subdivided land" or "human settlement", were eliminated from further consideration. Areas in the noncompatible land use classification comprise those in residential, public use, commercial, industrial, and areas planned or subdivided for future urban development as shown on the official Bureau of Land Management, Nye County Plans, and the "Whole Pahrump Valley Map". These areas are shown on Figure 3.

ENVIRONMENTAL CONSIDERATIONS

Areas eliminated because of environmental considerations include the following: all natural areas (State and federal wildlife

refuges, national monuments, U.S. Forest Service areas, nature study areas, etc.); federal, State, and County parks; and archaeological and historic sites. In the Pahrump Valley this includes the Last Chance Range Wild Burro Management Area. This area is shown on Figure 3.

ACCESSIBILITY

Ground access to potential airport site areas and to existing airports is considered in the site location screening evaluations. The site areas were initially identified based on the other factors cited in this section and later compared on the basis of access distance and travel time from the approximate centroid of the Pahrump Valley.

OVERALL AIRPORT SITE AREA

Although this factor is not plotted on the screening map, templates of schematic layouts of airports development were used to determine adequacy of overall airport site areas. Shown on the templates in schematic form are basic requirements for runway, taxiway, aircraft parking apron, terminal area, clear zones and airport boundary. Additionally, aircraft traffic patterns are shown for overflight considerations.

Those areas that passed the screening process as potential site areas and are large enough to satisfy the overall site area size requirements are identified on the screening map, Figure 3.

SUMMARY

As a result of the evaluations of all potential site areas in the Pahrump Valley described above, input received at the February 25, 1986 Pahrump Town Board public meeting, and discussions with Nye County representatives, the following site areas were selected to be evaluated in detail in the next phase of the Pahrump Valley Airport Site Selection Study as described in Chapter V.

The two site areas shown on Figure 3 to be evaluated in more detail are:

- Site A: An area in the northeast part of the Valley, that includes the existing airport owned by Preferred Equities Corporation.
- Site B: An area in the southwest part of the Valley, south of Gamebird Road and west of Pahrump Valley Boulevard.

Chapter V

EVALUATION OF SELECTED AIRPORT SITE AREAS

Based on the preliminary screening of airport site locations in the Pahrump Valley, as presented in Chapter IV, two areas were selected as potential sites for a public airport to serve the Pahrump Valley. These are an existing airstrip (Site A) north of the center of Pahrump and an area southwest of the center of Pahrump (Site B). The general locations of the two areas are shown on Figure 3. Site A is often referred to as the Preferred Equities or PEC Site, and Site B is often referred to as the Bureau of Land Management or BLM Site.

The specific objectives of the following evaluation are to develop a general concept for an airport located on each of these potential sites and conduct a detailed investigation of each site, identifying the advantages and disadvantages of each based on appropriate planning factors and evaluation criteria.

However, before applying the evaluation criteria it is first necessary to identify airport facility requirements that permit determination of gross land requirements at each site. (The airport requirements are described in Chapter III.) Once the facility and gross land requirements are established it is then necessary to translate these requirements into an optimum layout for each site. After these layouts are prepared, the planning factors and evaluation criteria may then be applied to each site.

AIRPORT SITE LAYOUTS

Potential airport layout concepts have been prepared for each site representing the range of potential alternatives and reflecting the facility requirements developed in Chapter III.

The two concepts prepared for Site A represent the range of possible north and south locations. The concept shown for Site B is representative of the range of runway orientations and locations that could be established at this site.

EVALUATION CRITERIA

The analysis includes a comparison of the ability to satisfy airport design criteria; potential expansion capabilities; land availability; meteorological conditions; airspace; land use compatibility; accessibility; engineering factors; utility systems; preliminary land acquisition and development cost estimates, and environmental considerations. The results of these analyses are presented in the following pages. An environmental reconnaissance was performed of the Pahrump Valley and the results are included in Appendix A.

EVALUATION OF SITE A

Two preliminary alternative airport layout concepts for Site A were considered as illustrated on Figures 6 and 7. Alternative 1 has the clear zones for both ends of the runway within the Airport boundaries, with the northerly clear zone south of Simkin Road and within the present private PEC Airport boundary. Alternative 2 retains the north end of the runway approximately in its present location and the northerly clear zone extends north of Simkin Road. The 20:1 visual approach surface would clear Simkin Road. The land north of Simkin Road in the clear zone should be acquired if feasible, or an aviation easement obtained. In both alternatives a portion of Bell Vista Road would have to be closed.

Land Availability

The land area within the existing Airport boundary planned for aviation and related services areas is about 100 acres, as shown on the Airport Layout Plan, dated February, 1983. To meet the gross land area required to accommodate physical facility requirements would mean acquisition of an additional 270 acres for Alternative 2, and an additional 300 acres for Alternative 1.

An additional 70 acres to the east and 30 acres to the west would be required to meet FAA airfield lateral separation requirements for both alternatives. The privately-owned land surrounding the site has been subdivided and the parcels sold. Approximately 200 subdivided lots within the Calvada Meadows Unit 2 area would have to be acquired between Simkin and Bell Vista Roads for either alternative. This acquisition process could be both lengthy and costly.

To the south of Bell Vista Road, approximately 170 acres would have to be acquired for Alternative 1 and approximately 140 acres for Alternative 2 to provide the required runway length and clear zone. This area includes at least one home that would have to be removed or relocated.

No additional land would have to be acquired to the north of Simkin Road for Alternative 1. About 20 acres of land should be acquired, or an aviation easement obtained, north of Simkin Road for Alternative 2. This area includes three mobile homes, a service station and convenience store, a new motel and a commercial/industrial building that would have to be removed or relocated.

Airport Design Criteria

The existing paved runway is 4,400 feet by 30 feet. The existing runway gradient is approximately 1.0 percent.

For Alternative 1, the north end of the runway would have to be relocated 700 feet south so that the clear zone is entirely within airport property and south of Simkin Road. Therefore, the

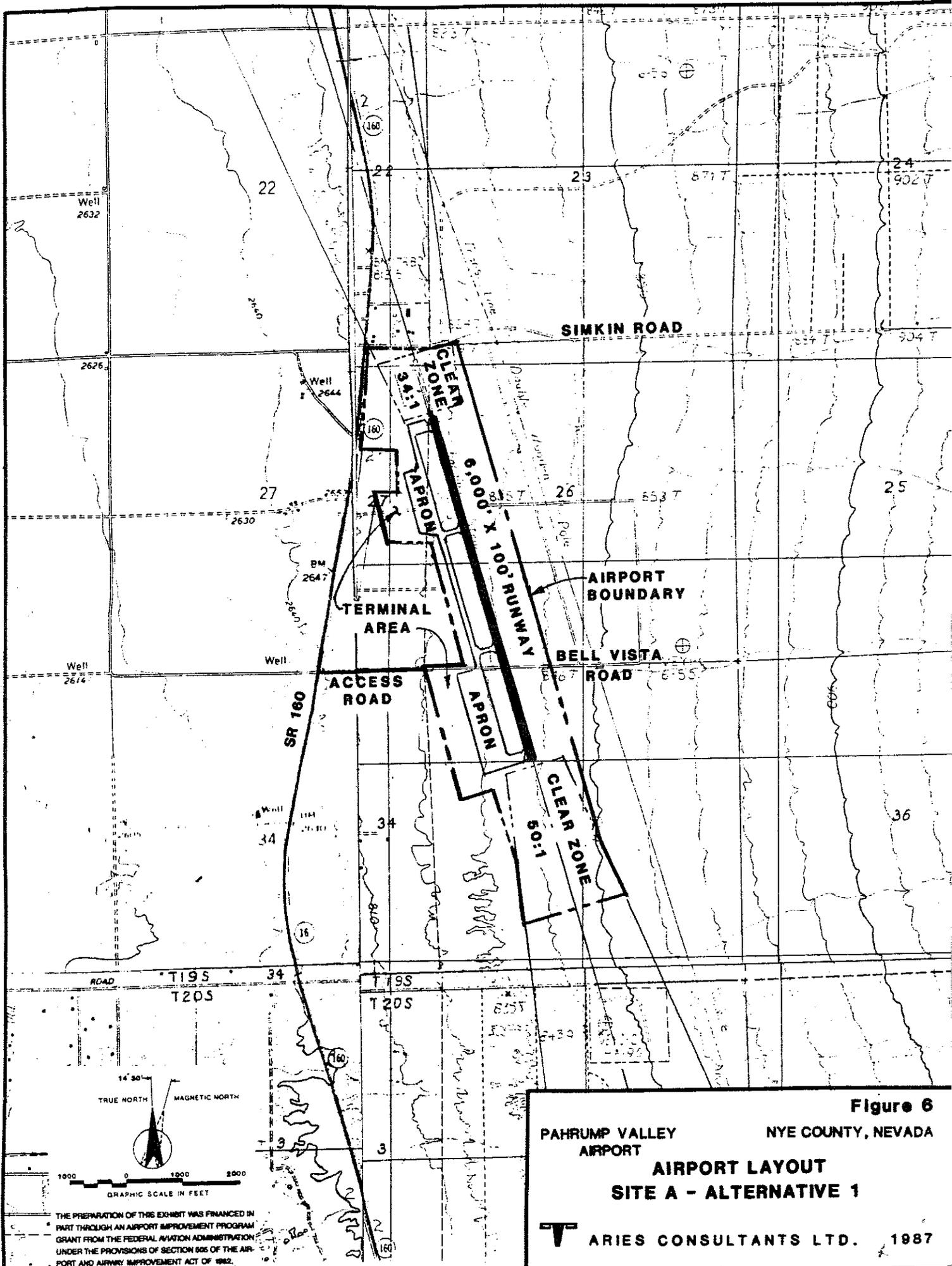


Figure 6

PAHRUMP VALLEY AIRPORT **NYE COUNTY, NEVADA**

AIRPORT LAYOUT
SITE A - ALTERNATIVE 1

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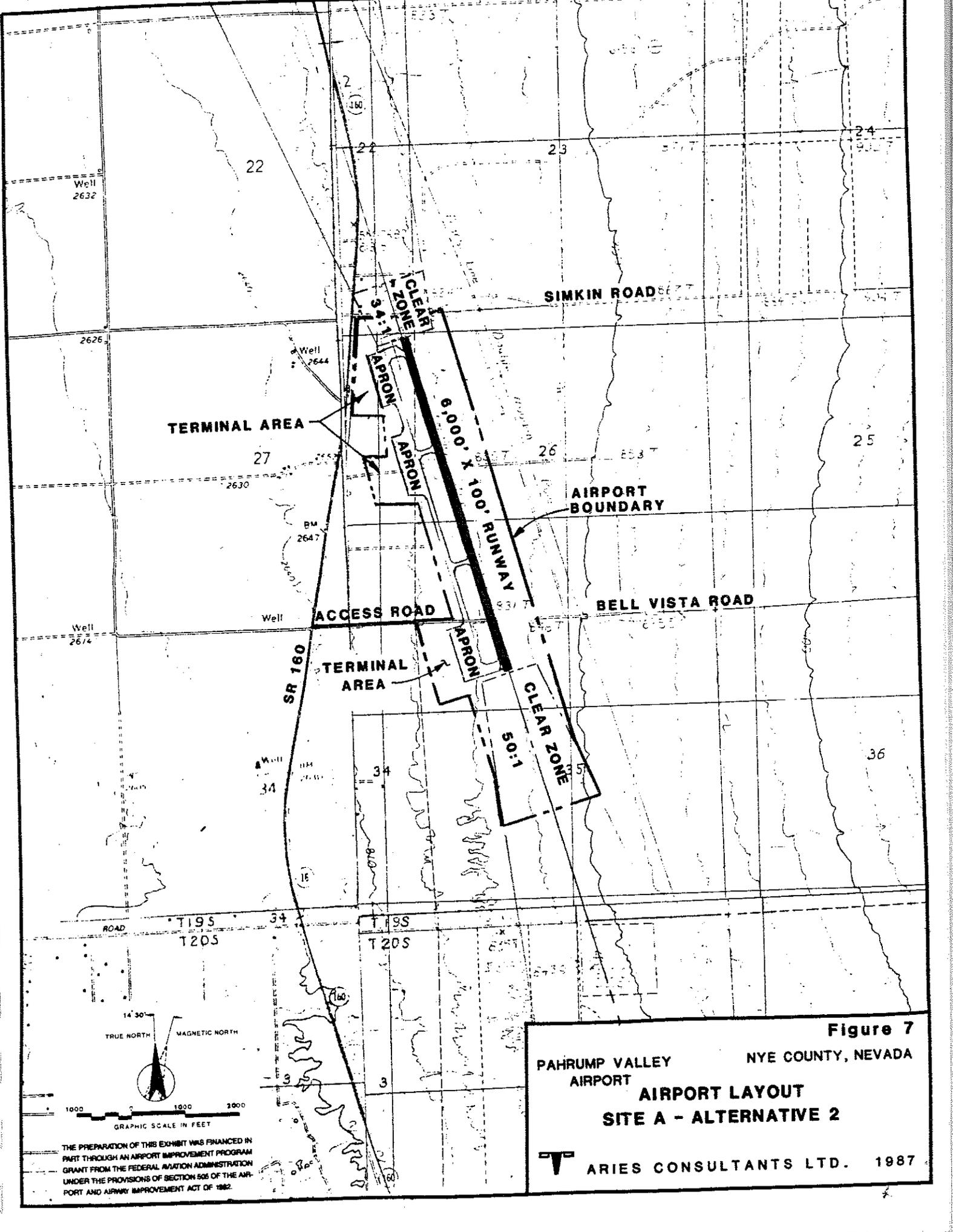


Figure 7
PAHRUMP VALLEY
NYE COUNTY, NEVADA
AIRPORT
AIRPORT LAYOUT
SITE A - ALTERNATIVE 2

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runway would have to be lengthened by 2,300 feet to the south to provide 6,000 feet. The runway would eventually have to be widened to 100 feet.

For Alternative 2, the runway would have to be lengthened by 1,600 feet to the south and eventually widened to 100 feet.

As noted earlier, additional land beyond the present airport area would have to be acquired to satisfy FAA dimensional criteria for lateral separations between the runway, taxiways, and property lines. Additional land would have to be acquired to the south to satisfy runway length and clear zone criteria for Alternative 1 and to both the north and south for Alternative 2.

FAA was requested to review the Deed of Restrictions for the Calvada Meadows Unit II Subdivision which includes aircraft taxiway easements and rights-of-way for 352 lots for the purpose of creating and constructing an aircraft taxiway for the benefit and use of the lot owners. FAA was asked to review this deed as it relates to a public County-owned airport and they had the following comments:

1. This taxiway access would be recognized by FAA as an encumbrance upon the airport property and would not meet the land interest requirements for a federal-aid project unless the County retains the legal right to, and in fact, does require the off-site property owners to conform to all respects to the requirements of any existing or proposed grant agreement (Grant Assurance Numbers 4 and 5).
2. The County must operate the airport in a safe and serviceable condition. It appears from the Deed of Restrictions that the County will not have sufficient control to accomplish this, Grant Assurance Number 19. Any arrangement that permits aircraft access to a public landing area from off-site properties introduces additional hazards and complicates the control of vehicular and aircraft traffic. Further, it appears that the County will not be able to prevent any inadvertent or intentional access by unauthorized persons or ground vehicles to the runway and taxiway.
3. In order for the Airport to meet the Grant Assurance Number 24 to maintain a fee and rental structure for the facilities and services to be provided the airport users to make the airport as self-sustaining as possible, this aircraft access appears to be a loss of income to the County. We would require that all off-Airport users be charged a comparable amount as an on-Airport user. The off-Airport user who parks an aircraft off the airport should be charged a comparable amount. If the off-Airport user parks his aircraft in his own hangar off the airport, he should be charged a comparable amount as an open tiedown user on the Airport.

4. Any off-Airport users should not be allowed to provide any aeronautical services to the public. This includes tiedown of any aircraft other than their own, or fueling of any aircraft. The County also should require these off-Airport users to conform to any airport rules and regulations applicable to on-Airport users.

Potential Expansion Capability

Expansion capabilities are somewhat limited because adjacent lands have been subdivided and are no longer in large single ownership parcels. Additional small parcels would have to be acquired for any further expansion to either the east or west.

Airspace

The existing runway orientation is adequate for a precision instrument approach procedure to Runway 33, the principal direction of use. However, neither a precision nor a nonprecision approach from the north appears possible. IFR departures in both directions could be established. In general the site is acceptable as to airspace considerations.

Meteorological Conditions

Based on an analysis of wind data collected at the University of Nevada-Reno, Nevada Cooperative Extension Office, in Pahrump, the existing Runway 15-33 alignment provides over 98.5 percent wind coverage for crosswinds of 12 mph (10.5 knots) or less. Therefore, a crosswind runway would not be required at this site.

Environmental and Land Use Considerations

There are no homes within the Ldn 60 noise contour. There are some homes within the Ldn 55 noise contour and within 1,000 feet of the end of the runway directly under the runway approach and departure paths to the north. A third home and new motel are just to the west of the extended runway centerline.

For Alternative 1, it would be necessary to relocate one home between Bell Vista and Mesquite Roads.

For Alternative 2, it would be necessary to relocate three homes north of Simkin Road and also the gas station/convenience store, commercial/industrial building and new motel at the corner of SR160 and Simkin Road. It would also be desirable to remove the earth berm located approximately 600 feet north of the end of the present runway as it penetrates a 34:1 nonprecision approach surface but clears a 20:1 visual approach surface in accordance with FAR Part 77, "Objects Affecting Navigable Airspace." The 20:1 visual approach surface would clear Simkin Road by 15 feet. One home south of Bell Vista Road would also have to be relocated.

According to the latest Flood Insurance Rate Map prepared by the Federal Emergency Management Agency, in April 1983, Site A is in Zone C. Zone C is described as an area of minimal flooding.

Development of a County-owned airport to satisfy recommended FAA design criteria is not compatible with planned land uses in the area. As noted earlier, approximately 200 lots that have been sold for single family residences would have to be acquired. Also several subdivisions ranging in size from 4.6 acres to 60 acres, south of Bell Vista Road would have to be acquired.

In addition, aircraft approach and departure paths and traffic patterns would be over other lands planned for single family residences, school and recreational areas and a church to the west; mobile home and single family residences to the north and east and subdivisions to the south.

There is a possibility of some habitat disruption in developing an expanded airport at Site A.

Airport Access

The site has good accessibility. It is approximately 4 miles north of the intersection of SR160 and SR372 and is located along SR160, the primary highway through the Pahrump Valley.

Access into the airport site could be provided off Jenny Circle and Bell Vista Road. Development of this site would require realignment or closure, of part of Bell Vista Road.

Engineering Assessment

The site slopes at approximately 3 percent towards State Highway 160. The runway alignment closely parallels the contour lines at about a 1 percent slope.

A preliminary analysis of soils data indicates a sandy-gravelly soil which is a better foundation to build the pavement section on as sandy-gravelly soil has a higher soil support value which reduces the pavement section required. The preliminary airfield pavement design is based on a 30,000 pound aircraft maximum gross weight and preliminary soils data from the Soil Conservation Service. The structural section would consist of 2-1/2 inches of asphaltic concrete and 7 inches of aggregate base.

Use of the existing Runway 15-33 pavement was not assumed in the cost estimate. The primary reasons for not utilizing the existing runway were its narrow width (30 feet) and the unknown pavement strength. To incorporate the existing 30-foot width into a 100-foot wide runway would require two lateral cold joints, which would inevitably crack through any future overlays. With the pavement strength being unknown, without adequate field sampling and laboratory tests, it cannot be determined if an adequate foundation underlays the pavement. Therefore, a new

pavement section, to be constructed the full width and length, was assumed.

The structural section for automobile parking is based on 2 inches of asphaltic concrete and 6 inches of aggregate base. Fencing around the airport property line would be a four-strand barbed-wire fence.

Water service to the site would be dependent on the existing water line service location and service availability by Central Nevada Utilities Company. The cost estimate for water service is based on the Calvada Meadows Unit II Deed of Restrictions for commercial water service. An individual leach field system would be used for sewage.

Power would be provided by Valley Electric and telephone service by Nevada Bell.

Preliminary Cost Estimates

The preliminary total base-year (1986) project cost estimate for land acquisition and airport construction for developing a County-owned Airport at Site A is estimated to be about \$5.9 million as presented in Table V-1.

It should be noted that the land acquisition costs shown in Table V-1 would be increased by about \$550,000 if Alternative 2, with land acquisition north of Simkin Road, was used rather than Alternative 1. These costs estimates do not include any costs for relocation or reconstruction of any structures that would have to be removed or other administrative costs involved in acquiring all the individual subdivision parcels.

Table V-1

**PRELIMINARY COST ESTIMATES
SITE A
Pahrump Valley Airport**

<u>DESCRIPTION</u>	<u>COSTS (\$)</u>
1. <u>Land Acquisition:</u>	
Calvada Meadows Lots 353 through 359	-0-
Calvada Meadows land east and west	3,482,500
199 lots x \$17,500/lot	<u>255,000</u>
Private land south - 170 acres x \$1,500/acre =	=
Subtotal	= 3,737,500
2. <u>Construction:</u>	
Aircraft Pavement = 960,000 sf @ \$1.90/sf =	1,824,000
Parking = 16,000 sf @ \$1.57/sf =	25,100
Access Road =	-0-
Fencing = 25,300 LF @ \$1.00/ft =	<u>25,300</u>
Subtotal	= 1,874,400
3. <u>Utilities:</u>	
Power - = 2,800 ft @ \$4.00/ft =	11,200
Water - (Dependent on water line service location) =	2,700
Sewage - Leach Field System =	3,000
Telephone - Nevada Bell =	<u>3,700</u>
Subtotal	= 20,600
4. <u>Engineering:</u>	
Design and Construction (12% of construction cost) =	<u>288,000</u>
TOTAL	= <u>5,860,500</u>

Source: Consulting Engineering Services, Inc.

EVALUATION OF SITE B

An airport layout concept, representative of the potential range of runway orientations and locations at Site B is shown on Figure 8. The range of potential runway orientations is approximately from north 25 degrees west, true to north 50 degrees west, true.

Land Availability

Land availability is good at Site B. All of the land that would be required to meet gross land requirements, for the range of runway orientations and locations considered is within the Bureau of Land Management properties. Approximately 400 acres would be required to accommodate the facility requirements described earlier.

Airport Design Criteria

A new airport could be developed at this site to satisfy FAA design criteria described earlier for both airport facilities and to provide the recommended lateral separation between the runway, taxiways and property lines.

Potential Expansion Capability

Expansion capabilities are good to the south, southeast and west. The airport would be south of Gamebird Road and Pahrump Valley Boulevard so no expansion would be planned to the north.

Airspace

The range of runway orientations and locations considered meets criteria for a precision instrument approach procedure for both runway directions. IFR departures for both runway directions could be established. In general the site meets airspace considerations and criteria.

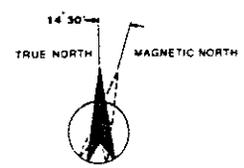
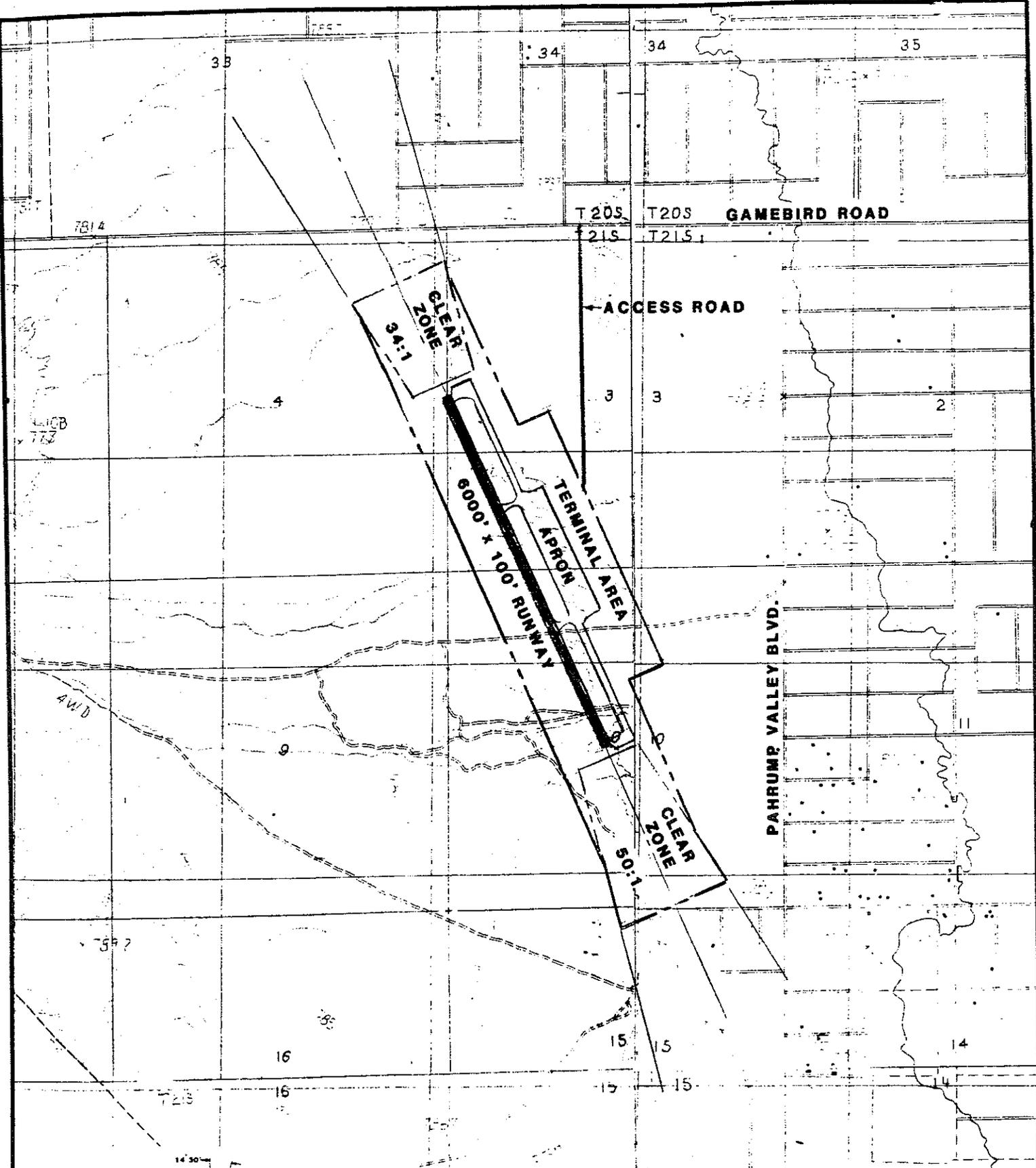
Meteorological Conditions

Based on an analysis of wind data collected at the University of Nevada-Reno, Nevada Cooperative Extension Office, in Pahrump, the wind coverage for crosswinds of 12 mph (10.5 knots) or less is over 95 percent. Therefore, a crosswind runway would not be required within the range of runway alignments being considered.

Environmental and Land Use Considerations

There are no homes or other development within the Ldn 55 noise contours for the range of alternatives considered. No relocations of homes, businesses or other structures would be required.

According to the latest Flood Insurance Rate Map, prepared by the Federal Emergency Management Agency in 1983, Site B is in Zone C. Zone C is described as an area of minimal flooding.



THE PREPARATION OF THIS EXHIBIT WAS FINANCED BY PART THROUGH AN AIRPORT IMPROVEMENT PROGRAM GRANT FROM THE FEDERAL AVIATION ADMINISTRATION UNDER THE PROVISIONS OF SECTION 505 OF THE AIRPORT AND AIRWAY IMPROVEMENT ACT OF 1982.

Figure 8

PAHRUMP VALLEY AIRPORT
 AIRPORT LAYOUT
 SITE B - ALTERNATIVE 1

NYE COUNTY, NEVADA

T ARIES CONSULTANTS LTD. 1987

In 1984, the County filed with the BLM to reserve 2,209 acres comprising all of Sections 4 and 9 and most of Sections 3 and 10 southwest of Gamebird Road and Pahrump Valley Boulevard for a potential airport site. The airport layout shown on Figure 8 is entirely within this area.

Arrival and departure traffic patterns north of the site may overfly a small area that could be subdivided for residential use north of Gamebird Road.

There are residential subdivisions east of this site along Pahrump Valley Road, and to the north of Gamebird Road, but they would not be impacted by an airport at this site.

There would likely be some habitat disruption in developing an airport at Site B.

Airport Access

The site is approximately 4 miles southwest of the center of Pahrump (i.e., the intersection of SR160 and SR372) and 6 miles west of SR160.

A new two-lane access road would be required to the site from either Gamebird Road or Pahrump Valley Boulevard, a distance of less than one mile.

Engineering Assessment

The site is gently sloping, with approximately a 0.1 percent airfield gradient, which would not create any drainage problems. The site is sloping towards Pahrump Valley Boulevard at approximately one percent. Three drainage ditches run across the site which must be considered during the design phase in order to properly design drainage structures.

A preliminary analysis of soils data indicates silty-clayey soils in the site area which provide a lower soil support value to build the pavement section than Site A due to an increase in the aggregate base and subbase depth required. This lower soil support value increases the pavement section thickness which increases construction costs.

The aircraft pavement design is based on a 30,000 pound maximum gross weight aircraft and preliminary soils data from the Soil Conservation Service. The structural section would consist of 2-1/2 inches of asphaltic concrete, 8 inches of aggregate base and 17-1/2 inches of subbase.

The structural section for automobile parking is based on 2 inches of asphaltic concrete, 6 inches of aggregate base and 6 inches of subbase. The access road would be a paved 24-foot wide standard roadway.

Fencing around the airport property line was calculated assuming a four-strand barbed-wire fence.

An independent water and sewer system would be required to serve Site B. An equipped domestic well would be installed along with an individual leach field system.

Power would be provided by Valley Electric. Telephone service would be provided by Nevada Bell.

Preliminary Cost Estimates

The preliminary total base-year (1986) project cost estimates for land acquisition and airport construction for developing a County-owned Airport at Site B is estimated to be about \$3.4 million, as presented in Table Y-2.

It should be noted that the BLM is considering revising the method for determining the lease cost of land. Based on recent proposals, currently under consideration, this could involve charging 50 percent of fair market value to government agencies times a fair rate of return as determined by the BLM on a year-to-year basis. If this proposal was implemented in the near future it could add about \$100,000 to the cost of land acquisition at Site B.

Table V-2

PRELIMINARY COST ESTIMATES
SITE B
Pahrump Valley Airport

<u>DESCRIPTION</u>	<u>COSTS (\$)</u>
1. <u>Land Acquisition:</u>	
BLM Lease - \$10/yr per section x 4 over 20 yrs. =	800
Subtotal =	800
2. <u>Construction:</u>	
Aircraft Pavement = 960,000 sf @ \$3.00/sf =	2,880,000
Parking = 16,000 sf @ \$1.90/sf =	30,400
Access Road = 0.76 miles @ \$40,000/mile =	30,400
Fencing = 25,300 LF @ \$1.00/ft =	25,300
Subtotal =	2,996,100
3. <u>Utilities:</u>	
Power - = 5,000 ft @ \$4.00/ft =	20,000
Water - Equipped Domestic Well =	6,000
Sewage - Leach Field System =	3,000
Telephone - Nevada Bell =	2,000
Subtotal =	31,000
4. <u>Engineering:</u>	
Design and Construction (12% of construction cost) Subtotal =	360,000
TOTAL =	3,387,900

Source: Consulting Engineering Services, Inc.

COMPARISON OF SITES

A summary comparison of Sites A and B is presented on Table V-3. This indicates that, for land availability, Site B is preferable because land availability is constrained at Site A. In particular, FAA airfield lateral separation requirements cannot be met at Site A without acquisition of 70 acres to the east and 30 acres to the west of the existing runway. This would require the purchase of approximately 200 small, subdivided lots paralleling the existing runway that could be both time consuming and costly. Additional larger subdivisions and parcels would have to be acquired south of Bell Vista Road.

Site B is also preferable in terms of potential expansion capability, airspace, environmental considerations and land use compatibility. A precision or nonprecision instrument approach procedure could be developed in either direction at Site B. At Site A, a precision or nonprecision approach procedure could be developed from the south but it appears that only a visual approach could be provided from the north. Some residential and commercial development would require relocation north and south of Site A, and a portion of Bell Vista Road would have to be realigned or closed. Site B would also be less costly than Site A, an estimated \$3.4 million versus \$5.9 million, to acquire the land and develop a County-owned airport.

It should be noted that this is a comparative analysis of the two sites. Therefore, some items that would be required at both sites, such as navigational aids, are not included in the preliminary comparative cost estimates. However, the cost of these items are included in the detailed capital improvement program for the selected site presented later in Chapter VII.

Site A would be more accessible than Site B and would require less in terms of roadway improvements. Site A would also be slightly better than Site B from an engineering and construction standpoint because of soil conditions. Utility connections would also involve shorter distances to connect to existing systems for Site A than for Site B.

The following listing presents a comparative rating of the two sites for each evaluation criteria.

<u>Evaluation Criteria</u>	<u>Site A</u>	<u>Site B</u>
Land Availability	Constrained	Good
Meteorological Conditions	Good	Good
Airspace	Acceptable	Good
Land Use Compatibility	Poor	Good
Airport Access	Good	Acceptable
Engineering Factors	Good	Acceptable
Utility Systems	Acceptable	Acceptable
Preliminary Cost Estimate	\$5.9 million	\$3.4 million

Table V-3

**COMPARISON OF ALTERNATIVE SITES
Pahrump Valley Airport**

<u>Factor</u>	<u>Site A</u>	<u>Site B</u>
Cost for land and Airport development (\$M)	\$5.9	\$3.4
Land required (acres)	370 to 400	400
Runway length (feet)	6,000	6,000
Runway gradient (percent)	1.0	0.1
Airspace potential	ILS from south; only VFR from north	ILS in both directions
Noise impacts (homes and sub- divided lots within Ldn 60)	0	0
Homes or residential lots requiring relocation	Over 200 lots and four homes	0
Other relocations	Commercial development and roads	0
Other environmental impacts	Overflight noise impacts and possible habitat disruption	Habitat disruption

Source: Aries Consultants Ltd. and
Consulting Engineering Services, Inc.

Chapter VI

AIRPORT LAYOUT PLAN AND MASTER PLAN

The comparative evaluation of the two sites, A and B, described in Chapter V was presented at a public meeting of the Pahrump Town Board on May 27, 1986 and to a public meeting of the Nye County Board of Commissioners on June 3, 1986. The evaluation was also reviewed with the Nye County staff.

The Pahrump Town Board voted to recommend that Site B be selected as the Airport site. The County selected Site B for the Airport site for which the detailed site layout/master plan would be prepared. Site B, often referred to as the Bureau of Land Management or BLM Site, is the area in the southwest part of the Valley, south of Gamebird Road and west of Pahrump Valley Boulevard.

As a result of input received at both the Pahrump Town Board and Nye County Board of Commissioners public meetings some refinements were made to the preliminary airport layout for Site B illustrated on Figure 8. At the meetings it was suggested that the airport runway be located as far to the west as feasible so as to minimize any potential for overflights of residential areas southeast of Pahrump Valley Boulevard and Thousandaire Boulevard. A runway alignment addressing this concern was presented at the County Board of Commissioners meeting on June 3, 1986.

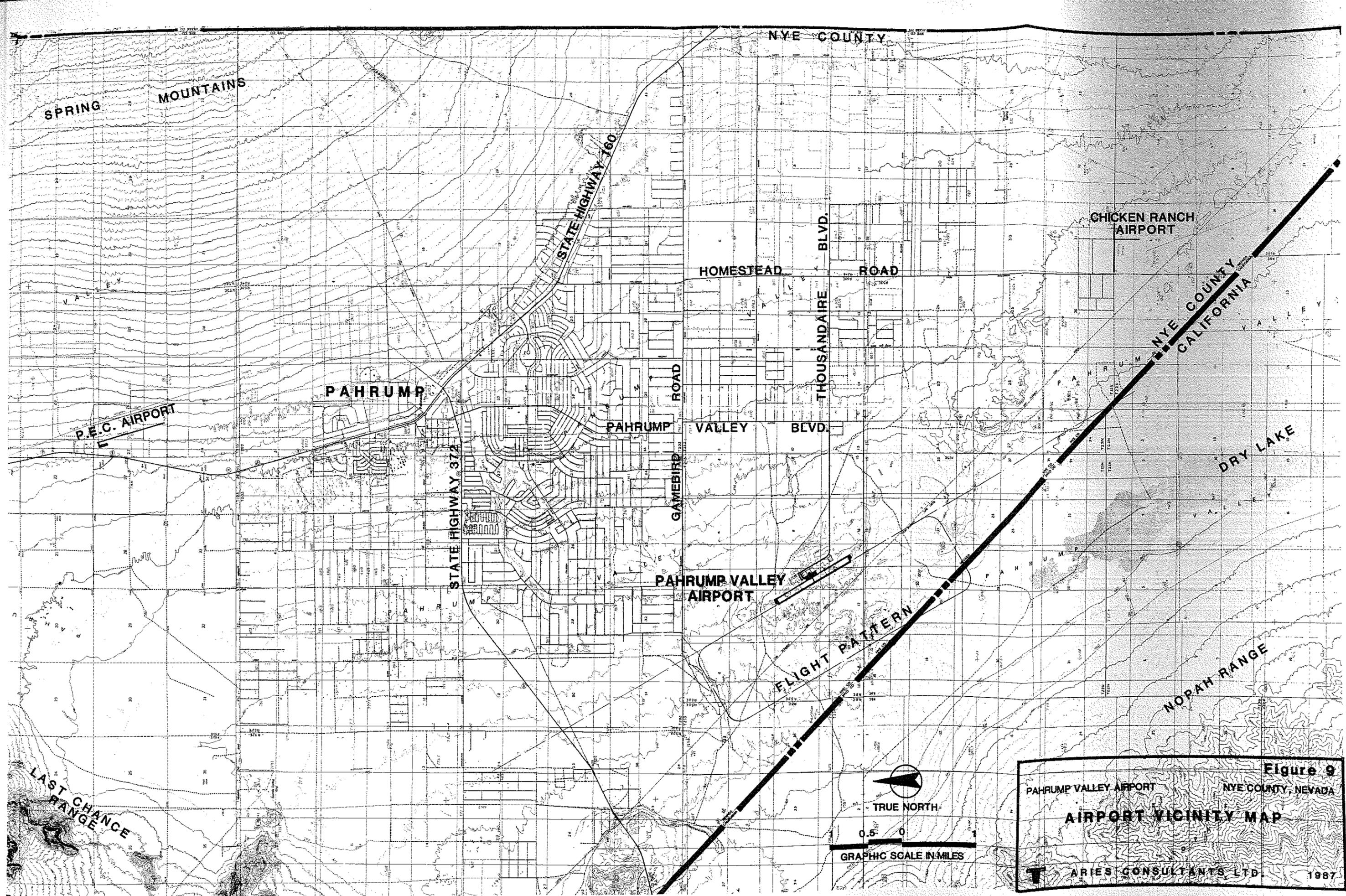
Even though the site is in an area of minimal flooding, as described by the latest FEMA Flood Insurance Rate Map, it was suggested that the Airport be located at as high an elevation as feasible to minimize any flooding potential and reduce the extent of drainage work required.

The refined runway alignment is reflected in the Airport Layout Plan described in this chapter. The location of the proposed airport and potential aircraft traffic patterns, at Site B, relative to the Pahrump Valley are illustrated on Figure 9.

Recommended Airport Layout Plan and Master Plan

The recommended year 2005 Airport Layout Plan and Master Plan for Pahrump Valley Airport is illustrated on Figure 10. The Terminal Area Plan is shown in more detail on Figure 11. The Plan integrates long-term airfield and terminal area requirements with forecast aviation demands and airport access and parking needs. It represents a guide for airport development through the year 2005 planning period and indicates possible developments beyond the year 2005 for which land should be reserved at this time.

The primary functional areas of the Plan, as illustrated on Figure 10, are:



NYE COUNTY

SPRING MOUNTAINS

CHICKEN RANCH AIRPORT

P.E.C. AIRPORT

PAHRUMP

PAHRUMP VALLEY BLVD.

HOMESTEAD ROAD

THOUSANDAIRE BLVD.

GAMEBIRD ROAD

STATE HIGHWAY 372

STATE HIGHWAY 160

NYE COUNTY CALIFORNIA

DRY LAKE

PAHRUMP VALLEY AIRPORT

FLIGHT PATTERN

NOPAH RANGE

LAST CHANGE RANGE



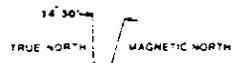
TRUE NORTH



GRAPHIC SCALE IN MILES

Figure 9
 PAHRUMP VALLEY AIRPORT NYE COUNTY, NEVADA
AIRPORT VICINITY MAP
 ARIES CONSULTANTS LTD 1987

OPEN RANGE GRAZING AND
OUTDOOR RECREATIONAL ACTIVITIES



500' 0' 500'

GRAPHIC SCALE IN FEET

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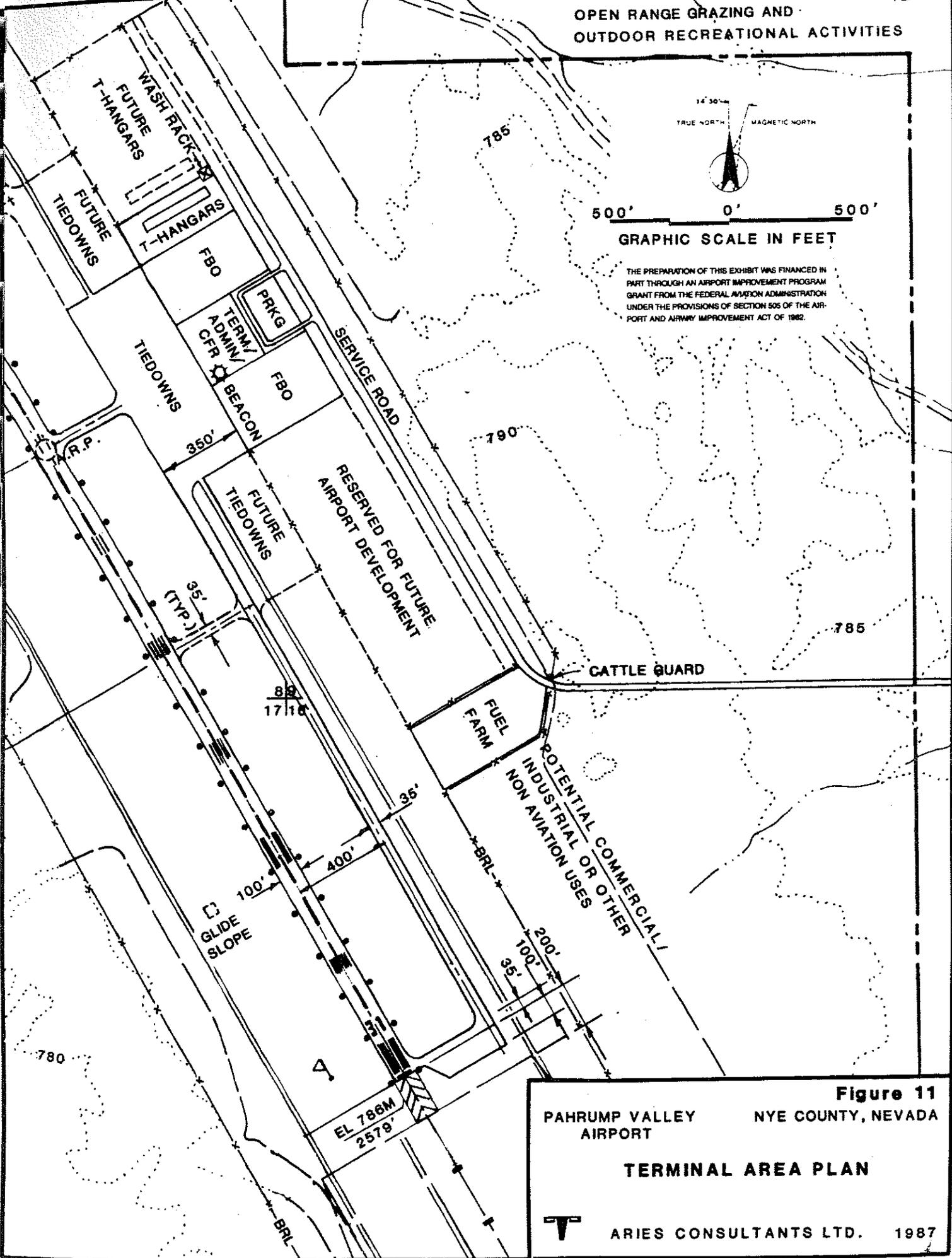


Figure 11
PAHRUMP VALLEY AIRPORT
NYE COUNTY, NEVADA

TERMINAL AREA PLAN

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- Airport Property
- Airfield
- Airport Approach and Protection Areas
- General Aviation Facilities
- Airport Access and Automobile Parking
- Terminal/Administration and Airport Support Facilities
- Other Building Areas
- Off Airport Land Use Planning
- Approach and Clear Zone Plan

Recommendations for the use of land adjacent to the Airport boundary to ensure long-term compatibility with airport and aircraft operations are also presented in this chapter.

General adherence to land use recommendations as shown on Figure 10 will ensure that development of the Airport may take place in an orderly manner within the framework of long-range potential development.

From a physical planning standpoint, the important consideration is to reserve sufficient land now (before the surrounding land is developed) for the development of airport facilities capable of accommodating possible long-range air traffic requirements associated with potential demand. Future community development can then be guided by the long-range air traffic potential so that, should the forecast demand become a reality, the Airport will be protected from encroachment by incompatible land uses, and the surrounding community will be protected from airport operations. On the other hand, actual physical facilities should be constructed only as the demand arises.

In addition to the Airport development described in this chapter, the master planning process should properly provide for the reservation of sufficient land to accommodate facilities that may be required beyond the year 2005. The purpose is to preserve the long-range development potential of the Airport, thereby guaranteeing the longevity of the Airport beyond the current planning period.

There are several reasons for planning in this manner. If air traffic demand increases more rapidly than is forecast in this report, facilities beyond those recommended herein through the year 2005 may be needed. Conversely, if air traffic demand increases more slowly than is forecast, the construction of facilities may be deferred until the demand develops.

The important point is to reserve sufficient land in the Plan for possible future requirements so that if, and when, the requirements materialize, land within the Airport boundaries will be available when needed to accommodate such requirements. If it is determined at a later date that further airport expansion is not required, the land can be released for uses compatible with airport activity.

A perspective of the Pahrump Valley Airport is illustrated on Figure 12. The basic elements of the Plan are described below.

AIRPORT PROPERTY

The land the proposed Airport site is located on is owned by the Federal Government and managed by the Bureau of Land Management (BLM). In 1984, the County filed with the BLM to reserve 2,209 acres comprising all of Sections 4 and 9 and most of Sections 3 and 10 south of Gamebird Road and west of Pahrump Valley Boulevard for a potential Airport site. As a result of the comments received during the evaluation of alternative sites, the proposed airport site has been moved approximately one mile to the southwest than the site shown on Figure 8. Therefore, the County should now acquire/lease the following sections from the BLM for an airport site:

- Section 8 - All of this section
- Section 9 - Southwest quarter section
- Section 16 - Western half section
- Section 17 - Northeast quarter section

Ideally the County should acquire/lease all of the 1,280 acres in this area. This would provide sufficient space for airport development as well as areas for airport protection off the ends of the runway and alongside the Airport. The actual area required, and shown, within the Airport perimeter fence line on Figure 10 is approximately 420 acres. An easement may be acquired for a small parcel of land approximately 5 acres to the north in Section 5 for the clear zone for the approach end of Runway 13.

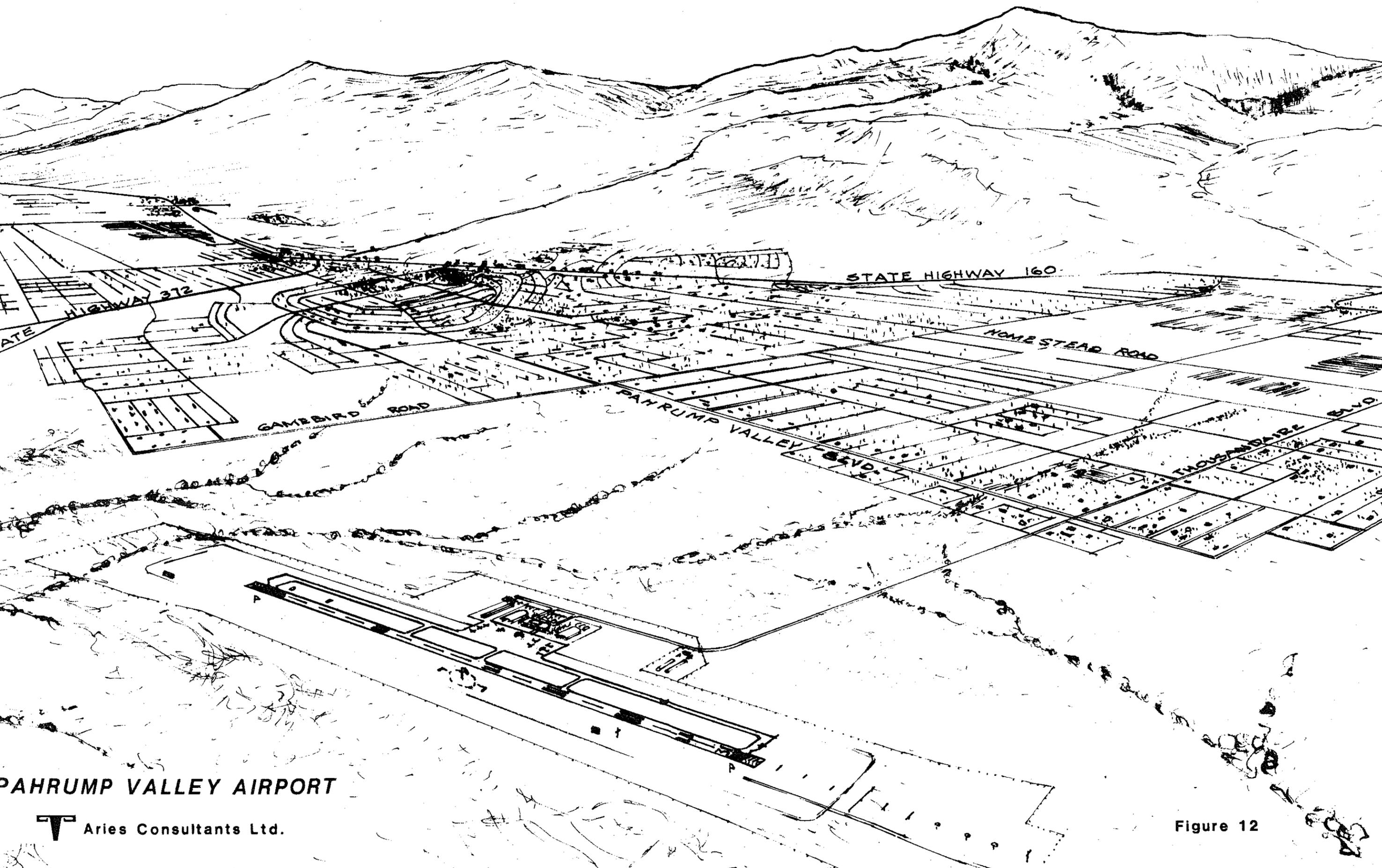
This area will provide land, within the Airport boundaries, for the development of a new runway and associated clear zones, and space for aviation and aviation-related facilities. In the approach areas, beyond the ends of the runways, where land acquisition is infeasible, or not pursued by the County, aviation easements should be acquired, and land subdivision and zoning controls that are compatible with aircraft operations over such affected areas should be imposed.

AIRFIELD

The recommended airfield configuration (Year 2005) shown on Figure 10 is a single Runway 13-31 with several exit/entry taxiways to provide adequate capacity to handle the forecast air traffic demand.

Runway 13-31

The Plan calls for a Runway 13-31 with a length of 6,000 feet and a width of 100 feet to handle the business jet and propeller



PAHRUMP VALLEY AIRPORT

 Aries Consultants Ltd.

Figure 12

aircraft expected to use the Airport during the planning period. Aircraft holding aprons are provided at each end of the runway.

Initially the airfield pavement should be designed to accommodate single-wheel aircraft with a maximum gross weight of 12,500 pounds and 30,000 pounds dual-wheel. Ultimately the airfield pavement may require strengthening to accommodate heavier aircraft.

Medium intensity runway lighting (MIRL) should be installed along the Runway. Precision instrument markings should be painted on Runway 31 to the midpoint of the runway. Nonprecision instrument markings should be painted on Runway 13, to the midpoint of the runway, with fixed distance markings at 1,000 feet from the threshold.

A full-length parallel taxiway, 400 feet east of the Runway 13-31 centerline, is included in the Plan. In addition to the entry/exit taxiways at each end of the runway, three additional exit taxiways are spaced at 2,000, 3,000 and 4,000 feet from the runway ends. The taxiways should be 35 feet in width.

A medium intensity taxiway lighting (MITL) system is planned along the parallel and entry/exit taxiways.

Navigational Aids

The Plan provides for the installation of an instrument landing system/microwave landing system (ILS or MLS) on Runway 31. The Plan also provides for a medium intensity approach lighting system with runway alignment indicator lights (MALSR) to be installed at the approach end of Runway 31.

In addition to the MIRL and MITL systems described previously, precision approach path indicator (PAPI) systems have been planned initially for both ends of Runway 13-31. Wind socks should also be installed adjacent to each runway end, and a wind cone and segmented circle located near the center of the airfield.

An airport rotating beacon should be installed. Initially, a non-directional beacon should be installed and, later, a TVOR installed for nonprecision approaches and as a lead-in to an instrument landing system. Installation of an automated weather observation station (AWOS) would also be required.

AIRPORT APPROACH AND PROTECTION AREAS

Although the proposed Pahrump Valley Airport is located in an undeveloped area, it is necessary to review present and proposed land uses both on and off the Airport site to ensure that approach areas for all runways are clear of obstructions and development incompatible with aviation activity.

All land abutting the proposed airport property is owned by the Federal Government. The surrounding land is presently used primarily for open range grazing and outdoor recreational activities. The long-range plans of the BLM indicate that the area around the Airport will remain rural and undeveloped. It is recommended that the County acquire/lease sufficient lands so that the clear zones (measured from the ends of the ultimate planned runway length) are within the Airport boundaries to ensure the unobstructed passage of aircraft landing on or taking off from the runway.

Ideally, the land underlying the approach zones should be clear of any structural development for 1 to 3 miles from the runway thresholds measured from the ends of the ultimate planned runway length. Such conditions presently exist for the proposed runway.

A precision instrument clear zone with an approach surface of 50:1 is provided for Runway 31. A nonprecision instrument clear zone with an approach surface of 34:1 is provided for Runway 13. Any trees, or other potential obstructions, should be removed as part of the airport construction.

GENERAL AVIATION FACILITIES

The general aviation facilities are proposed east of Runway 13-31 as indicated on Figures 10 and 11.

Space for at least two fixed base operator/commercial aviation lease plots of about 3 acres each are provided north and south of the proposed terminal/administration area. Each plot has ready access to the airfield on the west and to a service road on the east. The plots could be subdivided or expanded to make larger plots if required.

Aircraft parking apron areas for itinerant aircraft and based aircraft tiedowns are provided west of the terminal/administration area and fixed base operator/commercial plots. An apron area is provided for approximately 50 based and transient aircraft tiedown positions. The apron area could be expanded to the north or south to provide additional tiedown space if and when required. Space for helicopter parking would also be provided in the apron area.

The T-hangar facilities are shown consolidated in one area, and space is provided for several T-hangar units (to be developed on an as-required basis) to the north of the terminal area and the fixed base operator plots. In certain areas individual executive type hangars could be developed as needed rather than rows of T-hangars.

Taxiways are provided to connect the commercial aviation lease plots and T-hangar areas to the airfield west of the general aviation areas. To the east, a southeast-northwest service

roadway connects the general aviation areas with the Airport access road.

A public use aircraft washrack is provided for in the hangar area for the convenience of aircraft users.

AIRPORT ACCESS AND PARKING

The Airport site is approximately 6 miles southwest of the intersection of SR160 and SR372 in the center of Pahrump.

The Plan provides for the development of an airport access roadway from Pahrump Valley Boulevard and Thousandaire Boulevard into the proposed terminal area. The entrance roadway should be a two-lane paved road between the Airport and Pahrump Valley Boulevard, a distance of about 2 miles.

Because the land around the Airport is used for open range grazing, a cattle guard should be installed where the access road crosses the Airport perimeter fencing.

Up to 50 automobile parking spaces are provided within the terminal/administration area for passengers, itinerant and based aircraft users, Airport employees and visitors to serve the requirements through the year 2005.

The Plan also provides for a two-lane service road along the east side of the terminal/general aviation area and for a perimeter roadway inside the Airport property line.

TERMINAL/ADMINISTRATION AND AIRPORT SUPPORT FACILITIES

The recommended Terminal Area east of Runway 13-31 is illustrated on Figure 11. This area includes space for a future terminal/airport administration building that would provide space for potential commuter air carrier operations, passenger waiting areas, concessions, restrooms, a pilot's lounge, and airport administration offices. The building should be built only if, and when, the demand warrants it. A curbside roadway and public automobile parking area are included to serve the terminal/administration area.

Space is reserved for a crash/fire/rescue (CFR) facility adjacent to the terminal/administration building should there be a future need for CFR. Space is also reserved within the terminal/administration area for an airport maintenance operations area to accommodate equipment that the County may locate on the Airport.

An area south of the terminal area is reserved for a consolidated fuel storage facility.

At least a four-strand barbed-wire fence should be installed around the Airport as shown on Figure 10.

An independent water supply system will be required to serve new Airport facilities as they are developed. An independent sewer system will be necessary to connect new airport facilities with a septic tank and disposal field system.

Power would be provided by Valley Electric with the nearest point of connection being along Pahrump Valley Boulevard. Telephone service would be provided by Nevada Bell with the nearest point of connection being along Pahrump Valley Boulevard.

OTHER BUILDING AREAS

Space has been reserved for future airport development and this could be used for such potential airport activities as aircraft maintenance and repair, air cargo/small package/freight forwarding, and commuter/air taxi/maintenance facility should such needs materialize in the future.

Additionally, potential commercial, industrial and other nonaviation uses can be accommodated south of the fuel farm area.

OFF-AIRPORT LAND USE PLANNING

Although the proposed Pahrump Valley Airport is located in a relatively undeveloped area, it is necessary to review present and proposed land uses, both on and off the Airport site, to ensure that the runway approach areas are clear of obstructions and development that is incompatible with aviation activity.

All the land abutting the Airport is federally owned. The land around the Airport is primarily used for open range grazing and outdoor recreational activities as well as being a wildlife habitat.

There are no existing or proposed residential subdivisions under the approach paths to the runway for a distance of three miles. The appropriate jurisdiction, Nye County or the Town of Pahrump, should take action to assure continued compatible land uses under the approach paths and around the Airport in general in the future.

The appropriate jurisdiction, Nye County or Town of Pahrump, should prepare a Height Zoning Ordinance to reflect the recommendations of the Plan. The Plan recommendations should be incorporated into the appropriate Nye County and Pahrump Town Board General Plans.

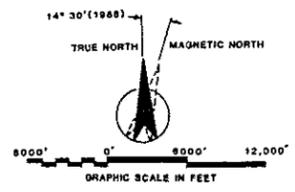
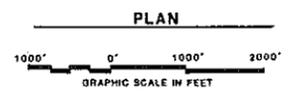
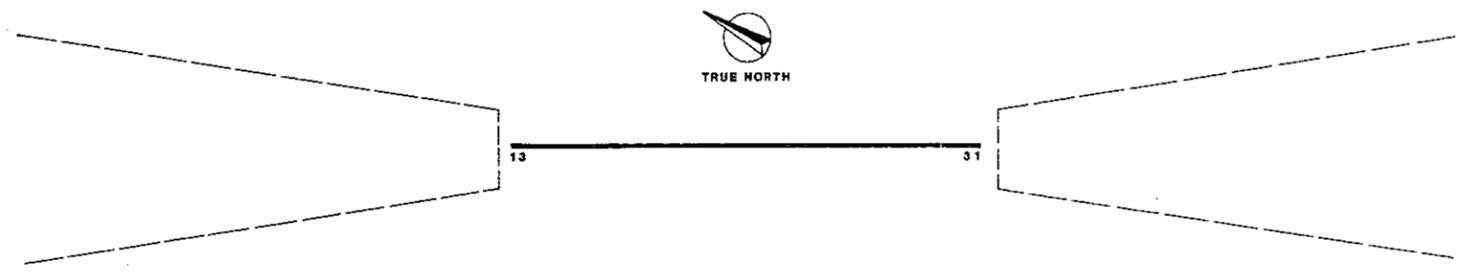
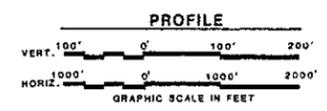
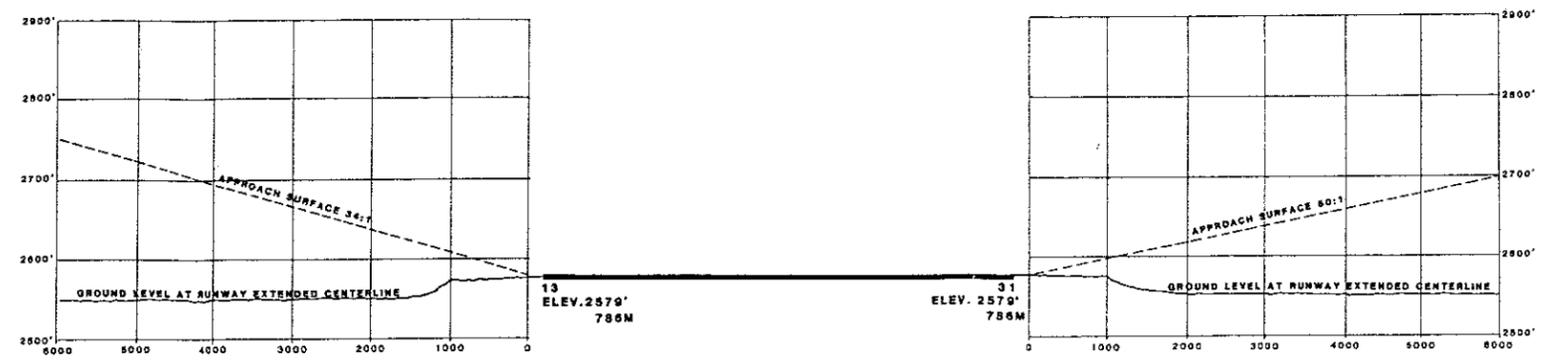
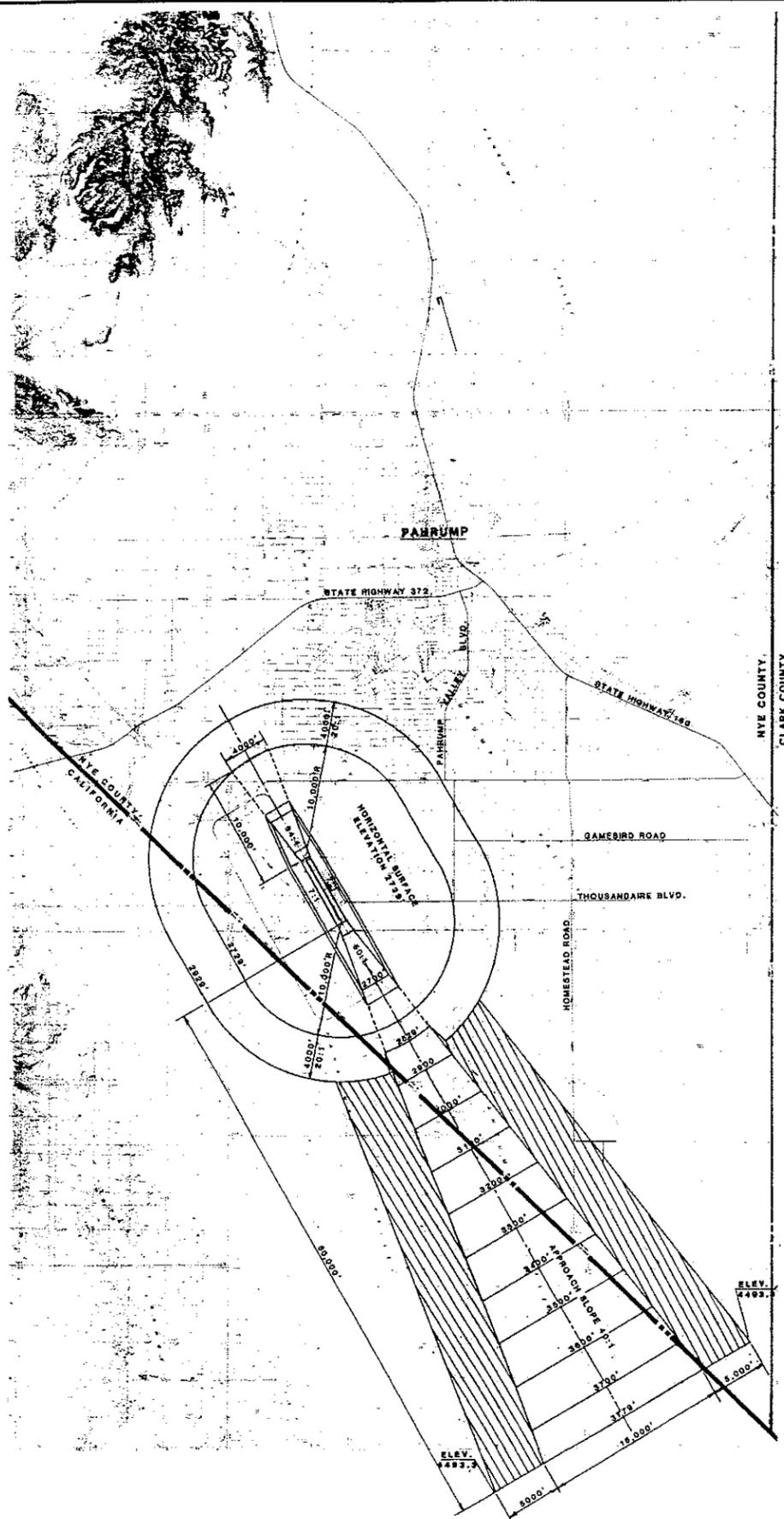
The year 2005 noise contours, discussed in the Environmental Reconnaissance in Appendix A, indicate there are no existing residential areas affected by noise levels above Ldn 60. The Ldn 60 and 65 contours for 2005 are almost entirely within the recommended airport property line.

As noted earlier, it is recommended that the County acquire sufficient lands so that the clear zones (measured from the ends of the ultimate planned runway length) are within the Airport boundaries to ensure the unobstructed passage of aircraft landing on, or taking off from, all runways. Ideally some 1,280 acres of land should be acquired/leased for Airport protection and development even though only approximately 420 acres are shown within the Airport perimeter fence on Figure 10. In those areas where acquisition is not feasible, or not pursued by the County, avigation easements should be acquired. Zoning and land subdivision controls that are compatible with aircraft operations over such affected areas should be imposed.

Nye County should work closely with the Town of Pahrump to ensure that avigation easements are acquired and zoning and subdivision of land controls, compatible with aircraft operations, are imposed in those areas that either are, or may become in the future, within the Town's jurisdiction.

APPROACH AND CLEAR ZONE PLAN

The Approach and Clear Zone Plan for the Pahrump Valley Airport based on the Airport Layout Plan, is presented on Figure 13. This plan shows the Federal Aviation Regulations (FAR) Part 77 surfaces and runway plan and profile. This plan should serve as the basis for a County or Town Height Zoning Ordinance.



THE PREPARATION OF THIS EXHIBIT WAS FINANCED IN PART THROUGH AN AIRPORT IMPROVEMENT PROGRAM GRANT FROM THE FEDERAL AVIATION ADMINISTRATION UNDER THE PROVISIONS OF SECTION 505 OF THE AIRPORT AND AIRWAY IMPROVEMENT ACT OF 1982.

NOTE
THIS DRAWING IS FOR PLANING PURPOSES ONLY AND IS NOT INTENDED FOR CONSTRUCTION OR NAVIGATIONAL PURPOSES.

NO.	REVISIONS	DATE

APPROVALS: REFER TO FAA LETTER DATED

BY: _____ BY: _____

BY: _____ BY: _____

PAHRUMP VALLEY AIRPORT **NYE COUNTY, NEVADA**

APPROACH AND CLEAR ZONE PLAN

ARIES CONSULTANTS LTD. 1987

SHEET: 2 OF 2 **Figure 13**

Chapter VII

IMPLEMENTATION PLANS

The Capital Improvement Program and Staging Plan recommended for a new airport in the Pahrump Valley and the estimated costs of airport development recommended as part of the Airport Layout Plan and Master Plan discussed in Chapter VI, are presented in this chapter. The Capital Improvement Program identifies those projects eligible for Federal Grants-in-Aid at the current funding level of 93.75 percent; projects that could be financed by private investment; and the required County investment.

A preliminary financial analysis for the new airport has been prepared to determine the potential availability of funds from airport operations to meet future maintenance, operational and capital improvement expenses. Alternative methods of financing airport development have been identified, and the potential advantages and disadvantages of alternative forms of airport ownership and management are presented.

RECOMMENDED CAPITAL IMPROVEMENT PROGRAM STAGING PLAN

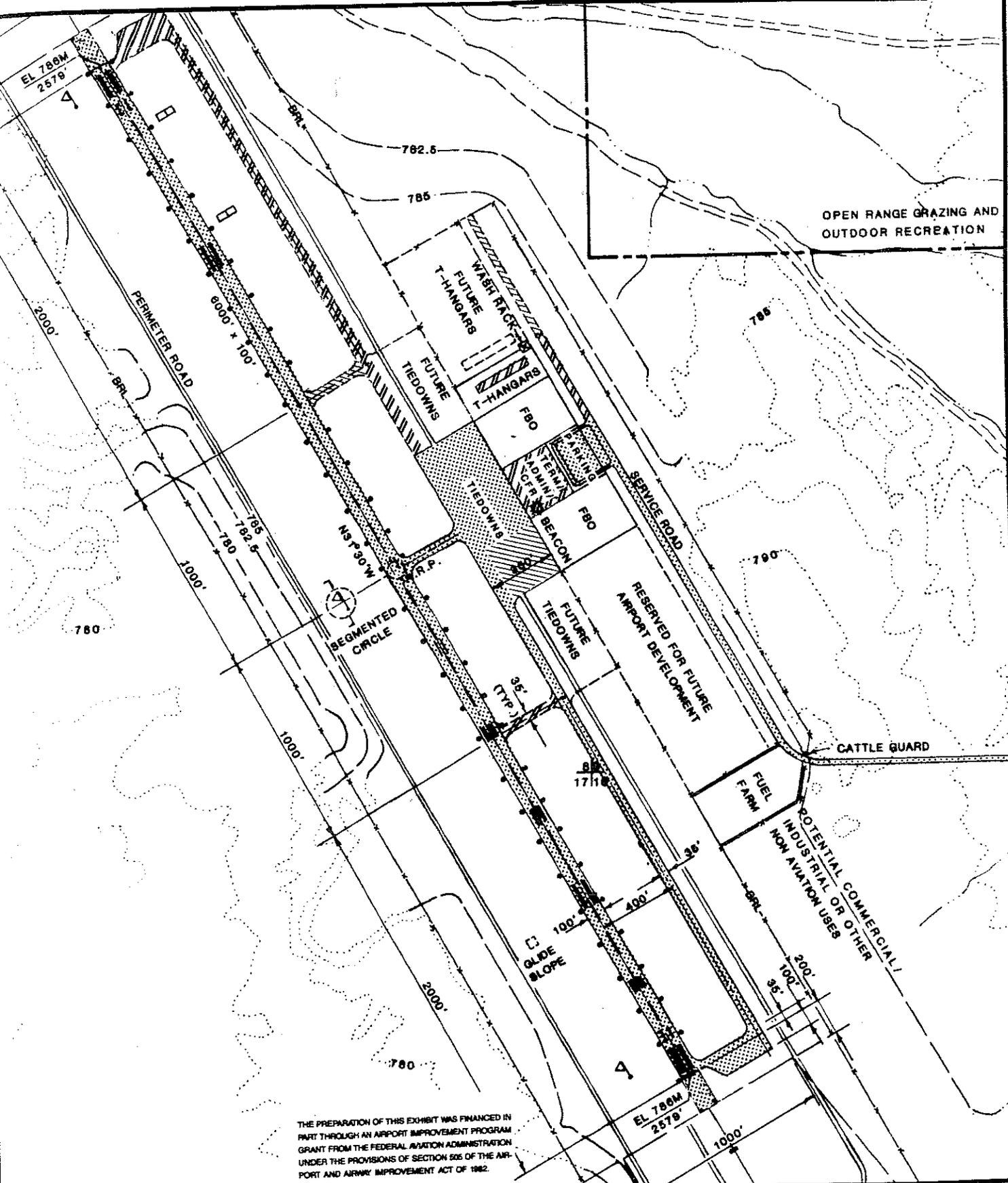
As a guide for future development, a three-phase Capital Improvement Program and Staging Plan has been prepared to accommodate estimated short-range (Phase I through 1990), intermediate-range (Phase II through 1995), and long-range (Phase III through 2005) airport requirements. Staging of the program reflects an assessment of the (1) relative priorities of various proposed projects, and (2) the approximate timing of the anticipated requirements.

The Staging Plan is presented on Figure 14. An approximate planning cost estimate for each capital improvement is presented in Table VII-1.

Phase I projects are considered to be the highest priority items and should be implemented to satisfy the Phase I requirements for facilities and to preserve the capability for future airport expansion. Phase II and III projects should be implemented only as the actual needs arise for additional airport facilities and services and as financing arrangements can be made.

Table VII-1 presents a summary of improvements and estimated project costs for the recommended three-phase Capital Improvement Program. Table VII-2 presents a summary of the total Capital Improvement Program through 2005.

Total development costs for all projects included in the Program through 2005 are estimated to be \$6,542,500 expressed in 1986 dollars. These costs would be incurred as follows:



THE PREPARATION OF THIS EXHIBIT WAS FINANCED IN PART THROUGH AN AIRPORT IMPROVEMENT PROGRAM GRANT FROM THE FEDERAL AVIATION ADMINISTRATION UNDER THE PROVISIONS OF SECTION 505 OF THE AIRPORT AND AIRWAY IMPROVEMENT ACT OF 1982.

LEGEND

-  PHASE I
-  PHASE II
-  PHASE III

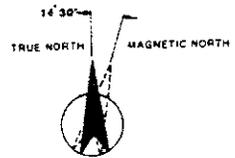


Figure 14
PAHRUMP VALLEY AIRPORT
NYE COUNTY, NEVADA

STAGING PLAN

 **ARIES CONSULTANTS LTD. 1987**

Table VII-1

CAPITAL IMPROVEMENT PROGRAM
Pahrump Valley Airport
1986-2005

Project Description	Total Costs	County	FAA ^a	Other
PHASE I IMPROVEMENTS (1986-1990)				
<u>Land Acquisition</u>				
- BLM Lease ^b	\$ 400	\$ 25	\$ 375	\$ - 0 -
Total Phase I Land Acquisition	\$ 400	\$ 25	\$ 375	\$ - 0 -
<u>Construction^c</u>				
- Airfield Pavement	\$ 3,763,200	\$ 235,200	\$ 3,528,000	\$ - 0 -
- Automobile Parking	34,000	34,000	- 0 -	- 0 -
- Access Road	110,300	6,900	103,400	- 0 -
- Fencing	28,300	1,800	26,500	- 0 -
- Miscellaneous Drainage Structures	11,200	700	10,500	- 0 -
- Fuel Farm	40,000	- 0 -	- 0 -	40,000
- Transformer Vault (including equipment)	12,300	800	11,500	- 0 -
Total Phase I Construction	\$ 3,999,300	\$ 279,400	\$ 3,679,900	\$ 40,000
<u>Utilities^c</u>				
- Power - Valley Electric	\$ 58,200	\$ 3,600	\$ 54,600	\$ - 0 -
- Water (equipped domestic well)	6,700	400	6,300	- 0 -
- Sewage (leach field system)	3,400	200	3,200	- 0 -
- Telephone - Nevada Bell	7,300	500	6,800	- 0 -
Total Phase I Utilities	\$ 75,600	\$ 4,700	\$ 70,900	\$ - 0 -
<u>Navigational Aids</u>				
- Medium Intensity Runway Lights (MIRL)	\$ 168,000	\$ 10,500	\$ 157,500	\$ - 0 -
- Medium Intensity Taxiway Lights (MITL)	126,000	7,900	118,100	- 0 -

Table VII-1 -- continued
 CAPITAL IMPROVEMENT PROGRAM
 Fahrump Valley Airport, 1986-2005

Project Description	Total Costs	County	FAAA	Other
- Precision Approach Path Indicators (PAPI)	\$ 119,500	\$ 7,500	\$ 112,000	\$ - 0 -
- Non-directional Beacon (NDB)	2,700	2,700	- 0 -	- 0 -
- Two Wind Socks	1,400	100	1,300	- 0 -
- Segmented Circle and Wind Cone	15,100	900	14,200	- 0 -
- Rotating Beacon	2,700	200	2,500	- 0 -
Total Phase I Navigational Aids	\$ 435,400	\$ 29,800	\$ 405,600	\$ - 0 -
TOTAL PHASE I IMPROVEMENTS (1986-1990)	\$ 4,510,700	\$ 313,925	\$ 4,156,775	\$ 40,000
PHASE II IMPROVEMENTS (1991-1995)				
<u>Construction</u> ^c				
- Airfield Pavement	\$ 431,200	\$ 26,900	\$ 404,300	\$ - 0 -
- T-Hangers	128,800	- 0 -	- 0 -	128,800
- Terminal/Administration Building	85,000	85,000	- 0 -	- 0 -
- Fuel Farm	40,000	- 0 -	- 0 -	40,000
Total Phase II Construction	\$ 685,000	\$ 111,900	\$ 404,300	\$ 168,800
<u>Navigational Aids</u>				
- Medium Intensity Taxiway Lights (MITL)	\$ 86,800	\$ 5,800	\$ 81,000	\$ - 0 -
- Instrument (Microwave) Landing System (ILS/MLS) including Medium Intensity Approach Lighting System with Runway Alignment Indicator Lights (MALSR)	500,000	- 0 -	500,000	- 0 -
- Terminal VOR (TVOR)	200,000	- 0 -	200,000	- 0 -
Total Phase II Navigational Aids	\$ 786,800	\$ 5,800	\$ 781,000	\$ - 0 -
TOTAL PHASE II IMPROVEMENTS (1991-1995)	\$ 1,471,800	\$ 117,700	\$ 1,185,300	\$ 168,800

Table VII-1 --- continued
CAPITAL IMPROVEMENT PROGRAM
Pahrump Valley Airport, 1986-2005

Project Description	Total Costs		County	FAA ^a	Other
PHASE III IMPROVEMENTS (1996-2005)					
<u>Construction^c</u>					
- Airfield Pavement	\$ 548,800	\$ 34,300	\$ 514,500	\$ - 0 -	
Total Phase III Construction	\$ 548,800	\$ 34,300	\$ 514,500	\$ - 0 -	
<u>Navigational Aids</u>					
- Medium Intensity Taxiway Lights (MITL)	\$ 11,200	\$ 700	\$ 10,500	\$ - 0 -	
Total Phase III Navigational Aids	\$ 11,200	\$ 700	\$ 10,500	\$ - 0 -	
TOTAL PHASE III IMPROVEMENTS	\$ 560,000	\$ 35,000	\$ 525,000	\$ - 0 -	
TOTAL CAPITAL IMPROVEMENT PROGRAM	\$ 6,542,500	\$ 466,625	\$ 5,867,075	\$ 208,800	

- Assuming FAA funds of 100 percent for ILS/MLS, MALSR and TVOR and 93.75 percent for all other eligible projects.
- The Bureau of Land Management promulgated new Airport Leasing Procedures in November 1986 for publicly owned lands. The annual rental rate for Airport Leases shall be appraised at fair market value of the land, less 50 percent for states, political subdivisions, counties and municipalities, times a fair rate of return as determined by the Bureau of Land Management on a year-to-year basis.
- Includes an allowance of 12 percent for design and construction fees.

Source: Arles Consultants Ltd. and Consulting Engineering Services, Inc.

Table VII-2

**SUMMARY OF CAPITAL IMPROVEMENT PROGRAM
Pahrump Valley Airport
1986-2005**

<u>Phase</u>	<u>Total</u>	<u>County</u>	<u>FAA</u>	<u>Other</u>
<u>Project</u>				
PHASE I				
Land Acquisition	\$ 400	\$ 25	\$ 375	\$ - 0 -
Construction	3,999,300	279,400	3,679,900	40,000
Utilities	75,600	4,700	70,900	- 0 -
Navigational Aids	<u>435,400</u>	<u>29,800</u>	<u>405,600</u>	<u>- 0 -</u>
Total Phase I .	\$4,510,700	\$313,925	\$4,156,775	\$ 40,000
PHASE II				
Construction	\$ 685,000	\$111,900	\$ 404,300	\$168,800
Navigational Aids	<u>786,800</u>	<u>5,800</u>	<u>781,000</u>	<u>- 0 -</u>
Total Phase II .	\$1,471,800	\$117,700	\$1,185,300	\$168,800
PHASE III				
Construction	\$ 548,800	\$ 34,300	\$ 514,500	\$ - 0 -
Navigational Aids	<u>11,200</u>	<u>700</u>	<u>10,500</u>	<u>- 0 -</u>
Total Phase III.	\$ 560,000	35,000	\$ 525,000	\$ - 0 -
Total All Phases				
Land Acquisition	\$ 400	\$ 25	\$ 375	\$ - 0 -
Construction	5,233,100	425,600	4,598,700	208,800
Utilities	75,600	4,700	70,900	- 0 -
Navigational Aids	<u>1,233,400</u>	<u>36,300</u>	<u>1,197,100</u>	<u>- 0 -</u>
Total	\$6,542,500	\$466,625	\$5,867,075	\$208,800

Sources: Aries Consultants Ltd. and
Consulting Engineering Services, Inc.

Phase I	\$ 4,510,700
Phase II	1,471,800
Phase III	<u>560,000</u>
Total	\$ 6,542,500

The estimated net project cost to Nye County for the three-phase Capital Improvement Program is \$466,625 after recognition of the receipt of Federal Grants-in-Aid and private funding sources. The estimated net project costs eligible for federal funding are \$5,867,075, based on the assumption that the current funding level of 93.75 percent in Nevada continues throughout the three-phase period. Potential private investment is estimated at \$208,800 throughout the planning period.

FINANCIAL RESOURCES

The ultimate goal of airport financial planning is to provide an adequate level of public facilities and service and to minimize the general taxpayers' burden by developing the maximum financial return from airport user rates and charges. Since there will be no revenue-producing activities until a new airport is commissioned, alternative financial resources will be required to proceed with the initial airport development.

There are a variety of sources from which potential financing for airport facilities may be obtained, including Federal Grants-in-Aid, Economic Development Administration programs, private development, leaseback arrangements, certificates of participation, direct loans, and in many instances, the sale of general obligation and/or revenue bonds.

The State of Nevada does not currently have an aviation fund whereby State grants and/or loans could be made available for airport improvements or development as occurs in other states. Revenue bonds are issued secured only by a pledge of the net revenues of the Airport, and since no revenue-producing facilities will be available for the initial development, the issuance of revenue bonds is not a viable financial resource at this stage.

The major financial resources available to the County, representing alternative means of financing airport development, are described below. Any of the following alternative methods of financing or any combination of the following methods, may be considered by the County.

- Federal Grants-in-Aid
- General Fund
- General Obligation Bonds
- Short-term Financing
- Private Funds

Federal Grants-in-Aid

The current grant program, known as the the Airport Improvement Program (AIP), was established by the Airport and Airway Improvement Act of 1982. It provides funding for airport planning and development under a single program, unlike the prior 1970 Airport and Airway Development Act. The Airport and Airway Trust Fund, which was established by the Airport and Airway Revenue Act of 1970, provides the revenues used to fund AIP projects. Taxes or user fees are collected from the various segments of the aviation community and placed in the Trust Fund. The 1982 Act, as amended, authorizes the use of monies from the Airport and Airway Trust Fund to make grants under the Airport Improvement Program through September 30, 1987.

Projects eligible for FAA AIP funding at the current level of 93.75 percent in Nevada are identified on Table VII-1, Capital Improvement Program.

General Fund

Financing airport improvements by direct appropriation from general tax revenues may be the most realistic method of financing development as such financing may eliminate any interest payments. For airport capital improvements, general fund appropriations would be made on an as-required basis through the regular budgeting process or as a special budget item with or without special tax assessments.

General sales or property taxes could provide the basis for such appropriations should they be considered justified by the County on the basis that an airport provides certain direct economic and social benefits to the local community and to the local taxpayers.

General Obligation Bonds

If adequate funds are not available from the County's general fund, then the sale of general obligation bonds, backed by the taxing power of the County, is generally the most economic method for financing airport development. General obligation bonds are repaid from property taxes and must be approved by the County General Obligation Bond Commission and by a majority vote of the residents and property owners in the County. Proceeds from the sale of general obligation bonds, however, are not generally available to finance any privately-owned, exclusive-operation facilities on a public airport, such as hangars and exclusive-use aprons; however, hangars and apron areas could be public/non-exclusive use areas owned and operated by the County with the revenues going directly to the County.

Short-term Financing

Short-term financing may be secured for financing capital improvement projects. Under applicable State statutes, the

County may temporarily borrow for a period of up to five years and pay interest not-to-exceed 8 percent. The total loan is only limited by the anticipated availability of tax revenues approved by the Nevada Tax Commission, and no voter approval is required. This type of temporary borrowing would be a general obligation of the County.

Private Funds

The importance of the airport to local economic development is enhanced with active involvement on the part of both public officials and the private business community. The County may require that all nonexclusive-use facilities such as hangars, fuel farm, tiedowns, fixed base operations, and other commercial aviation facilities be provided and financed by the tenant. The County can place the burden of financing on the tenant while increasing the value of the Airport which will, in turn, add to its economic attractiveness.

PRELIMINARY FINANCIAL PLAN

This section describes the financial aspects of the phased development plan recommended for a new airport in the Pahrump Valley to meet estimated Phase I (1986-1990), Phase II (1991-1995) and Phase III (1996-2005) airport requirements. Because of the uncertainties involved in forecasting financial data and precise implementation dates of capital improvement programs, detailed financial planning is usually limited to 3 to 5 years. Therefore, only the initial phase of the recommended airport development plan is discussed in detail. The financial implications of proceeding with the development plan beyond Phase I are discussed in general terms at the end of this section.

The financial forecasts in this section have been prepared on the basis of information and assumptions set forth in the text. These rely on information and assumptions from the sources indicated without verification of such data. Although the information and assumptions used constitute reasonable bases for preparation of the forecasts, the achievement of any financial projection may be affected by fluctuating conditions and is dependent upon the occurrence of future events which cannot be assured. Therefore, the actual results achieved may vary from the projections, and such variation could be material.

This preliminary financial plan is intended to indicate order-of-magnitude capital cost requirements and to suggest general financing strategies. It is not intended to be used to support the sale of bonds or other financial programs.

Operating Revenues and Expenses

Table VII-3 presents a preliminary pro forma of the annual financial operating revenues and expenses that could be expected from FY 1987 through FY 1992. Forecasts of revenues and expenses have been made based on the following assumptions and notes:

1. The new airport will be operational by the end of December 1987. Fiscal year 1988, (January to June, 1988) represents the first six months of operation.
2. Overall aviation demand forecasts presented in Chapter II will be realized.
3. The County will secure the services of a County-wide airport manager - it is assumed that 50 percent of the manager's time will be allocated to the Pahrump Valley Airport, particularly through the design and construction stages.
4. All sources of income derived from airport users will be credited to an aviation fund and will be used only for maintaining, operating and improving the Airport.
5. Property and sales taxes collected at the Airport will not accrue to the aviation fund.
6. The dollars projected are based on the 1986 dollar value.
7. The development of facilities recommended in this report will be developed and managed to produce the maximum net revenue to the County consistent with reasonable levels of public facilities and services.
8. Airport use agreements and contracts will be developed to insure maximum financial return to the County.
9. A right-of-way is secured by the County for the access road from the proposed airport property line to Pahrump Valley Boulevard at Thousandaire Boulevard.
10. Federal Grants-in-Aid will be available for those items eligible under the Airport Improvement Program. Development will be financed to the maximum extent possible with federal funds.
11. Salaries and wages will increase at an annual rate of 5 percent; maintenance and miscellaneous items will increase at an annual rate of 6 percent; and utilities will increase at an annual rate of 8 percent.

Table VII-3

PRELIMINARY PRO FORMA OPERATING STATEMENT
 Pahump Valley Airport
 Fiscal Years 1987-1992

	Fiscal Years					
	1987	1988	1989	1990	1991	1992
<u>Operating Revenues</u>						
Ground Leases	\$ -0-	\$ 3,500	\$ 7,000	\$ 7,000	\$ 14,000	\$ 16,200
Fuel flowage	-0-	300	800	1,000	1,300	1,600
Aircraft storage/tiedowns	-0-	2,600	5,500	6,500	7,500	8,500
Total Operating Revenues .	\$ -0-	\$ 6,400	\$ 13,300	\$ 14,500	\$ 22,800	\$ 26,300
<u>Operating Expenses</u>						
Salaries and Wages	\$ -0-	\$ 5,000	\$ 10,500	\$ 11,000	\$ 11,500	\$ 12,000
Maintenance	-0-	1,000	2,100	2,200	2,400	2,500
Utilities	-0-	2,000	4,300	4,600	5,000	5,400
Miscellaneous	-0-	500	1,100	1,100	1,200	1,300
Total Operating Expenses .	\$ -0-	\$ 8,500	\$ 18,000	\$ 18,900	\$ 20,100	\$ 21,200
Operating Profit (Loss) . . .	\$ -0-	\$ (2,100)	\$ (4,700)	\$ (4,400)	\$ 2,700	\$ 5,100
Capital Improvement						
Program - Phase 1	\$ 313,925	\$ -0-	\$ -0-	\$ -0-	\$ 115,000	\$ -0-
County Contribution	\$ 313,925	\$ 2,100	\$ 4,700	\$ 4,400	\$ 115,000	\$ -0-

Source: Aries Consultants Ltd.

12. Ground leases are based on the assumption that a full-service fixed base operator will be located on the Airport at the time of commissioning. Additional land will be leased for nonaviation/industrial purposes.
13. Fuel flowage fees assume fuel farm privately installed and administered with a fuel flowage fee to the County.
14. Aircraft storage and tiedown fees include forecast based aircraft and 10 percent of itinerant operations will have overnight requirements with 100 percent of the revenue going to the County.
15. The Capital Improvement Program, Phase I development projects, will be funded by the County prior to commissioning of the Airport.

As presented on Table VII-3, operating revenue is projected to increase from \$6,400 in FY 1988 to \$26,300 in FY 1992. Airport operating expenses are forecast to increase from \$8,500 in FY 1988 to \$21,200 in FY 1992. As a result, the County's contribution requirement will decrease from \$2,100 in FY 1988 to a surplus of \$5,100 in FY 1992.

A variable of particular importance in a financial analysis for a program of this type is the level of user fees and rental rates upon which projections of operating revenue are based. User rates and charges comparable to an airport the size of the proposed new airport are assumed in the analysis; however, it is appropriate to consider the estimated impact of adjustments in user fees and charges, along with the development of new sources of airport revenue.

Financial Conditions of the Phase II and Phase III Capital Improvement Program

Beyond Phase I, it is assumed that development of the airport will proceed according to the priorities proposed in the recommended development plan.

It is also assumed that the implementation of Phase II and Phase III projects will be arranged to be compatible with the financing resources and capability of the County, as identified at the time of implementation, without regard to the technical requirements that may be demonstrated.

It should be recognized that the financial feasibility of projects in the later phases will be linked to the provisions of user agreements, leases and contracts during the initial phase of airport construction, funding levels available from Federal Grants-in-Aid programs, and establishing County policies for the administration of the Nye County Airport System.

AIRPORT OWNERSHIP AND MANAGEMENT ALTERNATIVES

The airport ownership and management alternatives available for a new Pahrump Valley Airport are described in this section.

Two of the most important considerations in considering the ownership options for an airport include the liability responsibility and the possible future sources of development and operating funds. If the County owns the Airport, the ultimate liability responsibility will be with the County. Based on the results of the financial analyses performed for the recommended Airport Layout and Master Plan, the source of development and operating funds will be a major concern under any form of airport ownership or management particularly in the first phase of development.

The public management of an airport is unlike most other public administration functions inasmuch as the ultimate burden to the taxpayer is determined to a large extent by the financial success of the activities performed by airport management that are outside the typical roles of public administration. Activities performed by airport management include the provision of facilities and services to the public for the purpose of obtaining a net profit for the airport owner, whether they are a private corporation or individual, or in the case of government, a municipality or county. The aggressive promotion and development of the airport and its facilities and services by airport management is fundamental to the fiscal success of an airport.

The following summarizes the potential advantages and disadvantages of alternative forms of airport ownership and management for the new airport. With the exception of contract management as a management alternative, ownership and management under Nevada State statutes are synonymous.

Airports in the State of Nevada are currently operated under the following forms of ownership:

- Federal
- State
- County
- Municipal
- Airport Authority
- Private

In evaluating the potential ownership of a new airport in the Pahrump Valley, ownership by the federal government and the State as well as private ownership were eliminated as possible alternatives. The federal government owns and operates airports in the State under administrative or legislative assignments to meet necessary needs (e.g., Department of Defense and Department of Energy.) The State of Nevada Air System Plan indicates that the State has chosen not to operate airports other than Sunnyside Kirch which is operated by Nevada Fish and Game and available as

an emergency airport. The State has not identified any additional areas where the State would assume the sponsorship/ownership of airports.

A privately-owned airport in Pahrump will not be eligible for Federal or other public agency grants-in-aid, and, based on the foregoing financial analyses, it is unlikely that the private sector would finance the development of a new airport.

County and Municipal Ownership

County and Municipal ownership are considered to have the same advantages and disadvantages in Nevada as the Nevada Municipal Airports Act, Chapter 496, defines "Municipal" as any county, city or town in the State. It should be noted that cities and towns would not have the same range of taxing powers as the County.

The advantages of County ownership over municipal ownership could include:

- Net revenues from individual airports could be used system-wide to support all County airports.
- Economies of scale in maintenance and operating expenses compared to the need for separate staffing, equipment and services required for individual airport ownership.
- No new entity required to own and operate the Airport.
- The County has taxing power, powers of eminent domain and zoning and can issue bonds.

The disadvantages of County ownership over Municipal ownership could include:

- Competition for County general funds needed to support the Airport by other County facilities.
- Perceived absence of local control or input in determining what improvements are needed at the Airport.
- The Airport is part of a much larger County operation and could be presumed not to receive appropriate attention.

Airport Authority

An airport authority is formed in the State of Nevada to create a special quasi-governmental corporation to provide specific facilities and services to the public. An authority is typically formed when multiple contiguous communities being served by a single airport are unable to operate the airport within the traditional framework of local government.

Airport authorities are considered in many instances to be the best ownership alternative for an airport inasmuch as the authority has only one interest, that being the airport. The formation of an airport authority in the State of Nevada requires special enabling legislation, and the legislation itself would determine what advantages and disadvantages an authority might have in owning a new airport in the Pahrump Valley.

Contract Management

As mentioned previously, one form of management alternative that may be available to the County would be a contract management agreement. This agreement could be structured to include the leasing of the entire airport facility, whereby the contract manager essentially performs the role of the airport owner to the extent of managing the airport as the County's agent.

Contract management could serve as a public relations and marketing agent for the Airport including the marketing and development of available land and facilities. A contract manager would have the ability to provide the necessary expertise and personnel to efficiently operate the Airport.

A disadvantage of this type of management could be that any net revenues may no longer be available to support the County-wide system of airports. Contract management may also increase, or duplicate, the cost of operating the Airport as the County would still have to provide County-wide Airport Management while Contract Management may require full-time personnel at the individual airport.

Appendix A

ENVIRONMENTAL RECONNAISSANCE

The Environmental Reconnaissance incorporates information from available reports and referenced works, communications with appropriate agencies, companies, and individuals, onsite data collection, and derived information utilizing one or more of these sources and accepted procedures and analytical techniques. The topics considered in this Reconnaissance are based on consultations with the Nye County Planning Department Staff and include the following:

- Land Use Plans
- Public Utilities and Services
- Geology/Soils/Seismology
- Hydrology/Water Quality/Flood Zones
- Traffic and Circulation
- Biological Components
- Air Quality
- Land Resources
- Conservation and Recreational Areas
- Cultural Resources
- Noise
- Social Impacts - Relocations

LAND USE PLANS

Information on current and planned land uses in the Pahrump Valley was obtained from several sources. These include the Bureau of Land Management (BLM) maps, the "Whole Pahrump Map" and information and data provided by the Nye County Planning Department.

The planning responsibilities for the unincorporated Town of Pahrump currently lie with the Nye County Board of Commissioners and Nye County Planning Department. In July of 1985, the Governor of Nevada signed Senate Bill 463 giving special planning powers to the Pahrump Town Board. By resolution the Board has created a Planning Commission to take planning control in the Town from the County to the Pahrump Planning Commission. This shift of planning control has not taken place as of this writing. A General Plan for Nye County was prepared in 1970, however, the majority of the Plan is out-of-date and is not considered usable for purposes of planning.

The primary designated land use in the vicinity of Site A is residential and commercial. An existing privately-owned airport and proposed related service areas are located within a subdivision designated as Calvada Meadows Unit 2. A total of 352 residential 1/2-acre lots are adjacent to the airfield along the entire east side and on the southwest side of the airfield. Airfield access has been granted to each owner of these residential lots by taxiway easements and rights-of-way both east and west of the runway. An additional 27 commercial-zoned lots

are adjacent to the airfield on the west side along SR160 and Jenny Circle with deeded airfield access.

Additional subdivisions are planned, and the lots sold, east and west of SR160 include residential and commercial lots. Space has also been provided for park and school areas and recreational vehicle sites within the subdivision west of SR160.

Although the Calvada Meadows Unit 2 subdivision has largely been purchased by individuals, there is very little existing residential and commercial development in the vicinity of the existing airport. There are three mobile homes located immediately north of Simkin Road, about 900 feet from the end of the runway. A service station and convenience store is located on SR160 at the corner of Simkin Road approximately 900 feet northwest of the threshold of Runway 15. A new building has been constructed during preparation of this study next to the service station.

Residential subdivisions are scattered throughout the airport vicinity. There is one subdivision approximately one mile to the northeast and two additional subdivisions located approximately one mile to the southeast and one mile to the southwest of the existing airfield.

There is a planned residential area 1/4 mile northwest of Runway 15-33 on the west side of SR160. A church is the only existing structure within this area.

Development of a County-owned airport to satisfy recommended FAA design criteria is not compatible with planned land uses in the area. Approximately 200 lots that have been sold for single family residences would have to be acquired. Also, several subdivisions ranging in size from 4.6 acres to 60 acres, south of Bell Vista Road would have to be acquired.

Site B is located on federally-owned land which is managed by the Bureau of Land Management. The land uses include wildlife habitats, livestock grazing, and outdoor recreational uses such as hunting and off-road vehicle use.

The closest subdivisions are located to the north, north of Gamebird Road, and to the east, west of Pahrump Valley Road.

Land availability is good at Site B. All of the land that would be required to meet gross land requirements, for the range of runway orientations and locations considered, is within the Bureau of Land Management properties.

PUBLIC UTILITIES AND SERVICES

Water service to Site A would be dependent on the existing water line service location and service availability by the Central Nevada Utilities Company. The cost for water service would be

based on the Calvada Meadows Unit 2 Deed of Restrictions for commercial water service. An individual leach field system would be used for sewage. Power would be provided by Valley Electric and telephone service by Nevada Bell.

An independent water and sewer system would be required to serve Site B. An equipped domestic well would have to be installed along with an individual leach field system. Power would be provided by Valley Electric and telephone service by Nevada Bell.

GEOLOGY/SOILS/SEISMICITY

Geology

The two airport sites are located in the central Pahrump Valley. The Valley area is typically filled with unconsolidated sediments from the Spring Mountains directly northwest of the present airport (Site A) and proposed airport (Site B). The Valley sediments are of Sedimentary, Igneous and Metamorphic rocks deposited in the Quarternary Age. The deposits are probably interlayered gravels, sands, silts, and clays, which could consist of limestone, dolomite, sandstone, siltstone, quartzite, schist, marble and granitic sediments that are grading outward from the mountains (N.B.M.G., Bulletin 77, 1972). The depth of the alluvium beneath the airport sites is unknown, but is probably on the order of several hundred feet.

Soils

Site A slopes at approximately 3 percent towards State Highway 160. The runway alignment closely parallels the contour lines at about a one percent slope.

A preliminary analysis of soils data for Site A indicates a sandy-gravelly soil which is a better foundation to build the pavement section on as sandy-gravelly soil has a higher soil support value which reduces the pavement section required.

Site B is gently sloping, with approximately a 0.1 percent airfield gradient, which would not create any drainage problems. The site is sloping towards Pahrump Valley Boulevard at approximately one percent. Three drainage ditches run across the site which must be considered during the design phase in order to properly design drainage structures.

A preliminary analysis of soils data for Site B indicates silty-clayey soils in the site area which provides a lower soil support value to build the pavement section than Site A due to an increase in the aggregate base and subbase depth required. This lower soil support value increases the pavement section thickness that would be required.

Seismicity

The sites are located in UBC Seismic Zone 2. A review of the literature indicates no surface faults in the immediate vicinity of the airport sites. The U.S.G.S. map of southern Nye County, Nevada (1971) shows an active fault approximately 5 miles east of Site A and 9 miles northeast of Site B. This fault line cuts through recent alluvium deposits and is therefore considered active. A probable ground acceleration of 42 percent of gravity could be produced at Site A and 25 percent of gravity at Site B (Housner and Jennings, 1982 and Seed and Idriss, 1982).

The U.S.G.S. Water Supply Paper No. 1832 geologic map shows a concealed fault located approximately 10 miles south of Site A and 1-1/2 miles southwest of Site B. The concealed fault is considered inactive. In the event this fault were considered active, a ground surface acceleration of 32 percent of gravity could be produced at Site A and 60 percent of gravity could be produced at Site B (Housner and Jennings, 1982 and Seed and Idriss, 1982).

HYDROLOGY/WATER QUALITY/FLOOD ZONES

Hydrology

The Spring Mountains form the northeast border of the Pahrump Valley Area and are the primary source for virtually all of the Valley's water supply. The precipitation which falls in these high mountains, mostly from winter storms, exceeds fifteen inches annually.

The ground water is recharged from these mountains where water moves through bedrock fractures to the alluvial deposits at depth. This valley-fill reservoir contains the most productive known aquifers in the area and supports most of the existing development. The valley-fill reservoir is composed of unconsolidated alluvial, colluvial and lacustrine deposits with some volcanic tuff interbedded with the fill. Wells drilled in the valley-fill reservoir range from several 10s of feet to more than a 1,000 feet in depth.

The average static water level for T.21S., R.53E. is 20 to 40 feet which was derived from well logs and U.S.G.S. open-file report No. 81-635. Within this particular area, the clays, silts, and some gravel that are partly cemented by caliche generally do not yield large quantities of water to wells.

Water level in wells generally have been declining since the first wells were developed in 1913. Exceptions to this decline are found in some shallow wells on, or near irrigated land due to the irrigation recharge.

Subsidence for this area can be a problem due to all the past and future pumping. Any problems with the Pahrump Valley ground

water most likely will not come from lack of water but from deteriorating water quality, land subsidence or too closely spaced pumping activity. Although it should be noted that there is no factual data available on land subsidence within the Pahrump Valley.

Water Quality

For the most part, the water quality in T21S., R.53E. meets the State of Nevada Drinking Water Standards. Although in one water analysis in Section 10, the water quality exceeded the standard of total dissolved solids (T.D.S.) by 19 percent in 1985 and another analysis in Section 5 exceeded the standard of iron by 158 percent in 1981. For a more detailed analysis of the water quality of this area, a small drilling program for water quality and sampling, flow rate test and checking static levels of ground water should be conducted.

Flood Zones

The existing Pahrump Airport, Site A, is located in Zone C, as illustrated on Figure A-1 which is an area of minimal flooding according to the Federal Emergency Management Agency, Flood Insurance Rate Map, dated April 1983. The nearest area of the 100-year flooding is located approximately 7,000 feet to the east. This 100-year flood zone runs in a north-south direction through the Valley.

Airport Site B is also located in Zone C, as illustrated on Figure A-2, an area of minimal flooding according to the Federal Emergency Management Agency, Flood Insurance Rate Map, dated April 1983. However, the 100-year flood zone outer boundary is located just to the west, north and northwest of the proposed airport site. It should be noted that the airport site is outside the 100-year flood zone and at a higher elevation than the flood zone areas.

TRAFFIC AND CIRCULATION

The primary highways serving the Pahrump Valley are State Route (SR) 160 and State Route (SR) 372. SR160 provides access from Las Vegas approximately 60 miles to the east, and for traffic using US95 to the north. SR372 provides access to and from the west.

There are plans to develop a new road that will connect the Pahrump and Amargosa Valleys (near the Ash Meadows Wildlife Refuge). This road will connect to SR373 in the Amargosa Valley and provide improved accessibility for people traveling between Las Vegas and Death Valley, California.

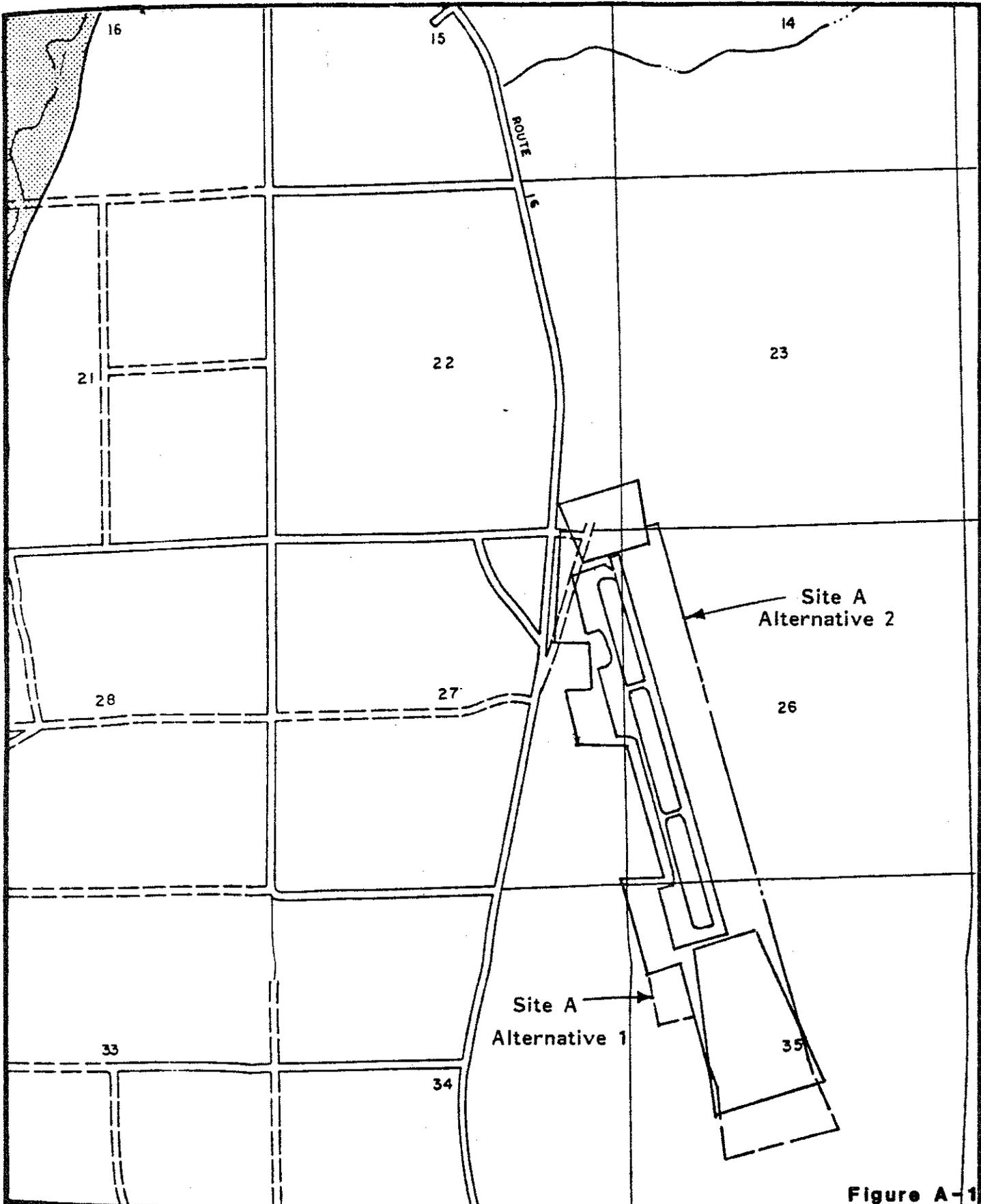


Figure A-1

CONSULTING
ENGINEERING
SERVICES, INC.
1108 TERMINAL WAY, SUITE 304
RENO, NEVADA 89502
782-786-5673



FLOOD PLAIN MAP
Flood Insurance Rate Map
Nye County Panel #168
**PAHRUMP VALLEY AIRPORT SITE
SELECTION**

SITE A - Alternatives 1 & 2

SCALE 1" = 2000'

DRAWN BY KRS	CHECKED BY
DATE 5/19/86	DESIGNED BY KRS
SHEET	OF
DRAWING NO. R85024.0	

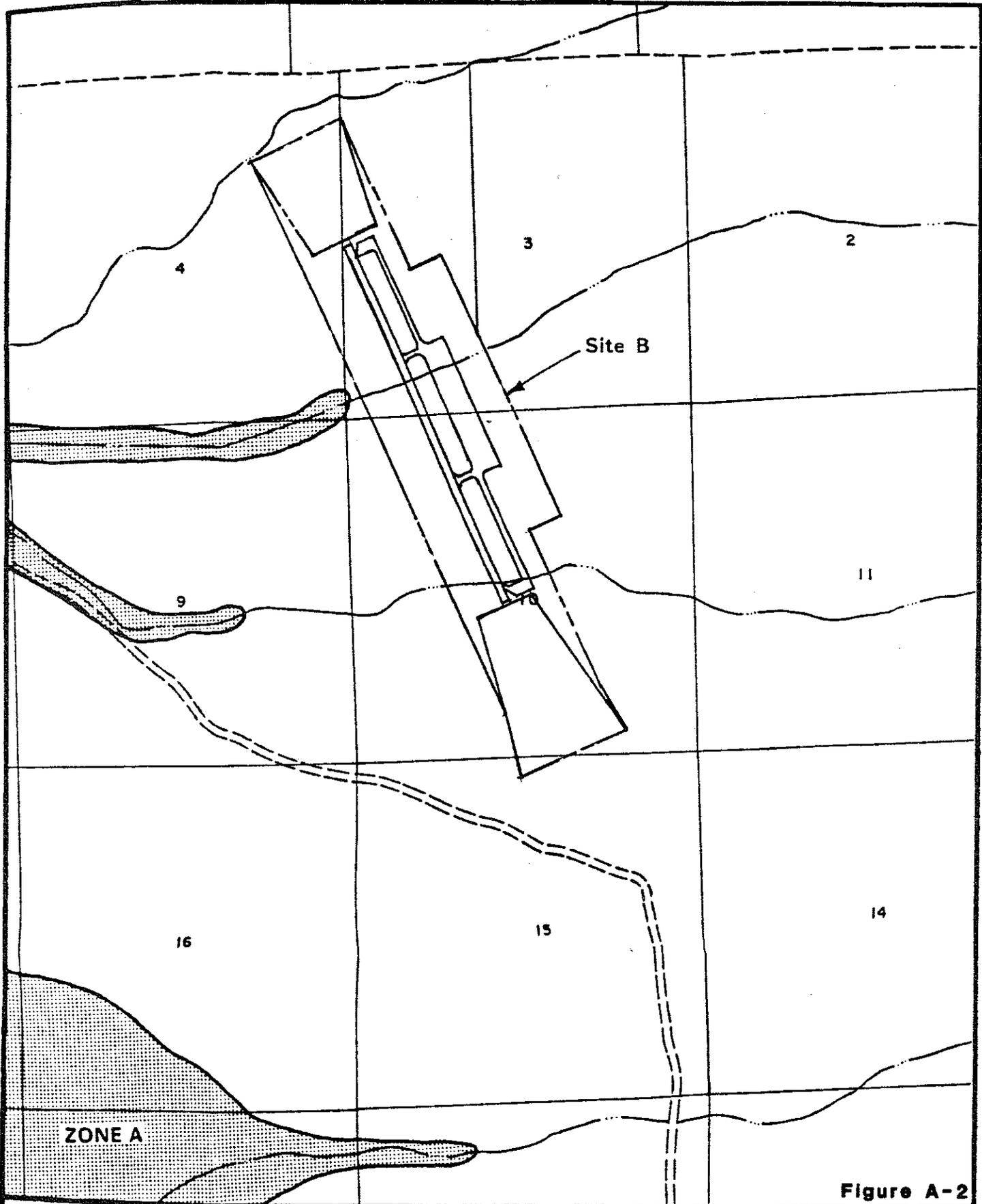
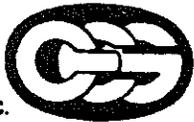


Figure A-2

CONSULTING
ENGINEERING
SERVICES, INC.



1100 TERMINAL WAY, SUITE 304
RENO, NEVADA 89502
702-788-5873

FLOOD PLAIN MAP
Flood Insurance Rate Map
Nye County Panel #169
PAHRUMP VALLEY AIRPORT SITE
SELECTION
SITE B

SCALE 1" = 2000'

DRAWN BY KRS	CHECKED BY
DATE 5/19/86	DESIGNED BY KRS
SHEET	OF

DRAWING NO.
R85024.0

Average daily traffic (ADT) counts are made annually by the State of Nevada, Department of Transportation, at various stations in the State. Selected traffic counts in the Pahrump Valley are presented on Table A-1 for the period 1975-1984. The average daily traffic volumes are relatively low. The highest recorded ADT in 1984 was 4,165 vehicles on SR160 in Pahrump just east of SR372.

The traffic volumes that will be generated by a public airport in the Pahrump Valley are expected to be low based on the air traffic forecasts presented in Chapter II of the Airport Site Selection Study. The airport-generated traffic could reach an ADT of 200 trips by 2005.

The traffic impact of an airport, together with the low traffic volumes on highways in the Pahrump Valley, should not result in any adverse traffic impacts.

Depending upon the airport site selected, it may be necessary to build a new airport access road to connect to the existing road system in the Pahrump Valley. A two-lane access road could handle forecast airport traffic volumes.

Site A is located adjacent to SR160 approximately 4 miles north of the center of Pahrump (i.e., the intersection of SR160 and SR372). Only a relatively short access road, less than 1/2 mile, would probably be required to serve this site. Site B is located southwest of the intersection of Gamebird and Pahrump Valley Roads and about 4 miles from the center of Pahrump. Access into the site would be provided off either Gamebird or Pahrump Valley Roads and require about a one mile access road.

BIOLOGICAL COMPONENTS

The Study Area is the Pahrump Valley which is considered biologically as a portion of the Mojave Desert. The transition from Mojave Desert habitat area to Great Basin occurs slightly north of the Study Area, within the confines of the restricted access Nevada Test Site. Within the Mojave Desert, variations in habitat and species distribution may vary greatly. Such variations are influenced by annual rainfall, elevation, terrain, and soil type/alkalinity, as being consistent with the following determinate factors.

Annual Rainfall:
4 ± inches

Average Temperature:
60° F (summer 100 degrees +, winter generally above 32 degrees with frosts limited to the period between November and March)

Table A-1

AVERAGE DAILY TRAFFIC IN PAHRUMP VALLEY
1975-1984

<u>STATION</u>	<u>1975</u>	<u>1980</u>	<u>1984</u>
SR160 in Pahrump Valley, at Clark/Nye County Line	820	925	1,290
Old SR16 in Pahrump Valley, 0.1 miles west of SR160	145	235	310
Old SR16 in Pahrump Valley, 2.0 miles south of SR160	125	155	165
Homestead Road, 0.1 miles south of SR160	400	610	1,030
SR160 in Pahrump Valley, 200 feet east of SR372	2,040	2,595	4,165
SR372 in Pahrump Valley, 0.85 miles west of SR160	710	1,200	2,170
SR372 to Shoshone, at Nevada/California State Line	305	255	410
SR160 at Pahrump Valley, 0.1 miles north of SR372	820	1,300	2,515
SR160 in Pahrump Valley, 7.65 miles north of SR372	190	320	490
SR160, 150 feet south of US95	150	245	410

Source: State of Nevada, Department of Transportation

Study Area Elevations:

Maximum - 3,200 feet above sea level

Minimum - 2,500 feet above sea level

Terrain:

For consideration as possible airport sites, the Study Area was restricted to generally level terrain in the Valley floor.

Soil Type:

Alluvium, well-drained, relatively low alkalinity.

The floor of the Pahrump Valley is the former bed of a large pre-historic lake which has been overlaid by alluvial wash from the surrounding mountain ranges. Bajadas, formed by the coalescence of several alluvial fans from adjacent canyons, dominate the gently sloping perimeter of the Valley floor.

Natural as well as human-altered drainage channels traverse the Valley. Their seasonal drainage and relatively shallow available water sources are indicated by the concentrations of vegetation, particularly Mesquite, along these drainage courses. Whether viewed from the surface or from the air, these vegetation groupings delineate the availability of water quite accurately. Likewise, random clumpings of vegetation are indicative of available water near the surface of a seasonal or permanent basis. Both of these concentrations of vegetation contain more intensively utilized habitat values when compared to the relatively open desert conditions adjacent to these areas. On a like basis, the alteration of portions of the Valley floor for agricultural purposes have, by providing greater than normal water flows and increased vegetation, intensified the habitat values of these particular locations. The modified habitats resulting from agricultural land uses have increased the flood resources throughout the food chain from vegetative materials to rodents to upper-scale predators such as snakes, raptors, and mammals (e.g., coyotes, foxes, etc.). Whether by natural or human-altered means, as water becomes available, it is the prime determining factor in the intensity of habitat values. Increased water allows for increases in plant growth which provide concealment from predators, nesting locations, food resources for herbivores, shade during the hot days, and protected movement corridors through populated areas.

While human occupation of the Valley floor and subsequent alteration of the desert for agricultural purposes can, in some instances, be viewed as an enhancement of habitat values, other aspects of human activities are detrimental to the increased numbers of animals attracted by the increased food and habitat values. Such effects include: feral dogs and cats predation, collecting of species, pest control poisons which may progress upward through the food chain, hunting, and the direct destruction of certain species which are desert adaptive and cannot tolerate increased available water. Additionally,

conversion of desert land to agricultural uses entails the direct removal and destruction of plant species and animal species which cannot adapt or relocate.

Plant and animal species expected and/or observed in the Study Area are listed in Table A-2.

Development of a Pahrump Valley Airport will have multi-faceted impacts upon the flora and fauna of the site as well in areas adjacent to the facility proper.

Runway, apron, service areas, building, and other facility-related construction will displace/destroy species occupying the project area. Some plant and animal species will be able to relocate near the facility; certain human activity-tolerant species will exist onsite; other species will be permanently removed from the area of the airport.

Airport activities will generate traffic (both road and air) which will have impacts upon species in the area. Roadkills, bird strike potential, increased noise levels, fuel spill potential, etc., are impacts which will be associated with the inclusion of the airport facility into the natural environment.

Certain species will enjoy a potential habitat enhancement through the introduction of landscaping, irrigation, and nesting/concealment areas (hangars, in aircraft, etc.) to be afforded by the airport.

With the enhancement of habitat for smaller vertebrates (mice, birds, etc.) predator food resource opportunities will likewise improve, perhaps to such an extent that measures may become necessary to mitigate snake, coyote/fox, and raptor incursions into the airport area.

The potential exists for incursion into the airport area by wild burros insofar as a portion of the Study Area is within the Last Chance Range Wild Burro Management Area of the Bureau of Land Management (refer to Figure 3 in the Pahrump Valley Airport Site Selection Study).

At this level of investigation, it is not possible to ascertain if, and to what extent, any Endangered/Protected Species (Listed or Candidate) will be impacted by the proposed airport project.

Construction of the Pahrump Valley Airport at the BLM Site location will have a quantitative greater impact on species in the Valley due to the necessary alteration of the currently natural, vacant area. The PEC Site has already been developed to an extent for aircraft operations and expansion of this airstrip to serve as the primary airport in the Valley would not entail as great a magnitude of construction activities as the BLM Site.

Table A-2

SPECIES LISTING
Pahrump Valley Airport Study Area

FLORA

Beavertail Cactus (*Opuntia basilaris*)
Claret Cup Cactus (*Echinocereus triglochidiatus*)
Desert Five Spot (*Malvastrum rotundifolium*)
Crescent Milkvetch (*Astragalus amphioxys*)
Desert Sand Verbena (*Abronia villosa*)

Purple Mat (*Nama demissum*)
Fagonia (*Fagonia californica*)
Filaree Storksbill (*Erodium cicutarium*)
Long-leaved Phlox (*Phlox longifolia*)
Trailing Four O'Clock (*Allionia incarnata*)

Mojave Aster (*Machaeranthera tortifolia*)
Chia (*Salvia columbariae*)
Penstemon (*Penstemon sp.*)
Coulter's Lupine (*Lupinus sparsiflorus*)
White Horsenettle (*Solanum elaeagnifolium*)

Bladder Sage (*Salazaria mexicana*)
Spike Broomrape (*Orobanche multiflora*)
Western Peppergrass (*Lepidium montanum*)
Fremont's Peppergrass (*L. fremontii*)
Californis Spectacle Pod (*Dithyrea californica*)

Clammyweed (*Polanisia dodecandra*)
Climbing Milkweed (*Sarcostemma cyanchoides*)
Esteve's Pinchusion (*Chaenactis stevioides*)
Tobacco Weed (*Atrichoseris platyphylla*)
Desert Chicory (*Rafinesquia neomexicana*)

Spreading Fleabane (*Erigeron divergens*)
Mojave Desert Star (*Monoptilon bellioides*)
Desert Anemone (*Anemone tuberosa*)
Birdcage Evening Primrose (*Oenothera deltoides*)
Great Deserty Poppy (*Arctomecon merriami*)

Yellow Desert Poppy (*A. californica*)
Apache Plume (*Fallugia paradoxa*)
Spotted Langloisia (*Langloisia punctata*)
Desert Lily (*Hesperocallis undulata*)
Jimsonweed (*Datura stramonium*)

Southwestern Thorn Apple (*D. wrightii*)
Sweet-scented Heliotrope (*Heliotropium convolvulaceum*)
Rattlesnake Weed (*Euphorbia albomarginata*)
Desert Tobacco (*Nicotiana trigonophylla*)
Coyote Tobacco (*N. attenuata*)

Table A-2 -- continued
Species Listing, Pahrump Valley Airport Study Area

FLORA - continued

Southwestern Ringstem (*Anulocaulis leiosolenus*)
Desert Trumpet (*Eriogonum inflatum*)
Golden Prince's Plume (*Stanleya pinnata*)
Jackass Clover (*Wislizenia refracta*)
Yellow Bea Plant (*Cleome lutea*)

Golden Spider Flower (*C. platycarpa*)
Sulphur Flower (*Eriogonum umbellatum*)
Yellow Peppergrass (*Lepidium flavum*)
Yellow Twining Snapdragon (*Antirrhinum filipes*)
Devil's Claw (*Proboscidea altheaefolia*)

Desert Velvet (*Psathyrotes ramosissima*)
Plains Pricklypear (*Opuntia polyacantha*)
Yellow Head (*Trichoptilium incisum*)
Desert Dandelion (*Malacothrix glabrata*)
Snakehead (*Malacothrix coulteri*)

Wooly Daisy (*Eriophyllum wallacei*)
Desert Marigold (*Baileya multiradiata*)
Yellow Spiny Daisy (*Haplopappus spinulosus*)
Sunray (*Enceliopsis nudicaulis*)
Desert Sunflower (*Geraea canescens*)

Brittlebush (*Encelia farinosa*)
Paperflower (*Psilostrophe cooperi*)
Buffalo Gourd (*Curcubita foetidissima*)
Rough Menodora (*Mendora scabra*)
Puncture Vine (*Tribulus terrestris*)

Desert Gold (*Linanthus aureus*)
Ghost Flower (*Mohavea confertiflora*)
Desert Rock Nettle (*Eucnide urens*)
Desert Primrose (*Cenothera brevipes*)
Desert Globemallow (*Sphaeralcea ambigua*)

Coulter's Globemallow (*S. coulteri*)
Desert Paintbrush (*Castilleja chromosa*)
Skyrocket (*Ipomopsis aggregata*)
Freckled Milkvetch (*Astragalus lentiginosus*)
Desert Candle (*Caulanthus inflatus*)

Yucca (*Yucca* sp.)
Parry Saltbush (*Atriplex parryi*)
Mojave Sage (*Salvia mohavensis*)
Wooly Bur Sage (*Ambrosia eriocentra*)
Creosote Bush (*Larrea tridentata*)

Table A-2 -- continued
Species Listing, Pahrump Valley Airport Study Area

FLORA - continued

Shadscale (*Atriplex confertifolia*)
Cattle Spinach (*Atriplex polycarpa*)
White Bur Sage (*Ambrosia dumosa*)
Desert Holly (*Atriplex hymenelytra*)
Burrobush (*Hymenoclea salsola*)

Catclaw (*Acacia greggii*)
Honey Mesquite (*Prosopis glandulosa*)
Screwbean Mesquite (*P. pubescens*)
Tamarisk (*Tamrix* sp.)
Arrow Weed (*Pluchea sericea*)

Desert Willow (*Chilopsis linearis*)
Fremont Cottonwood (*Populus fremontii*)

Plus introduced agricultural, landscape, and ornamental species.

FAUNA

Reptiles and Amphibians

Desert Tortoise (*Gopherus agassizii*) - Endangered
Western Banded Gecko (*Coleonyx variegatus*)
Gila Monster (*Heloderma suspectum*) - Venemous
Desert Night Lizard (*Xantusia vigilis*)
Black-collared Lizard (*Crotaphytus insularis*)

Desert Iguana (*Dipsosaurus dorsalis*)
Chuckwalla (*Sauromalus obesus*)
Brush Lizard (*Urosaurus graciosus*)
Longnose Leopard Lizard (*Bambelia wislizenii*)
Yellowback Spiny Lizard (*Sceloporus magister uniformis*)

Side-blotched Lizard (*Uta stansburiana*)
Zebra-tail Lizard (*Callisaurus draconoides*)
Western Whiptail (*Cnemidophorus tigris*)
Sagebrush Lizard (*Sceloporus graciosus*)
Western Patchnose Snake (*Salvadora hexalepis*)

Striped Whipsnake (*Masticophis taeniatus*)
Red Coachwhip (*Masticophis flagellum piceus*)
Western Blind Snake (*Leptotyphlops humilis humilis*)
Western Blackhead Snake (Utah) (*Tantilla planiceps utahensis*)
Ground Snake (*Sonora semiannulata*)

Racer (*Coluber constrictor*)
Kingsnake (*Lampropeltis getulus californae*)

Table A-2 -- continued
Species Listing, Pahrump Valley Airport Study Area

FAUNA - Reptiles and Amphibians - continued

Western Shovelnose Snake
(Mojave) (*Chionactis occipitalis occipitalis*)
Western Shovelnose Snake
(Nevada) (*Chionactis occipitalis talpina*)
Longnose Snake (*Rhinocheilus lecontei lecontei*)
Sidewinder (*Crotalus cerastes*) - Venemous

Western diamondback Rattlesnake (*Crotalus atrox*) - Venemous
Mojave Rattlesnake (*Crotalus scutulatus*) - Very Venemous
Gopher Snake (*Pituophis melanoleucus deserticola*)
Spotted Leafnose Snake (*Phyllorhynchus decurtatus*)
Night Snake (*Hypsiglena torquata deserticola*)

Glossy Snake (Mojave) (*Arizona elegans candida*)
Glossy Snake (Desert) (*Arizona elegans eburnata*)
Red-spotted Toad (*Bufo punctatus*)

Mammals

Yuma Myotis (*Myotis yumanensis*)
California Myotis (*M. californicus*)
Silver-haired bat (*Lasionycteris noctivagans*)
Western Pipistrelle (*Pipistrellus hesperus*)
Spotted Bat (*Euderma maculatum*)

Townsend's Big-eared Bat (*Plecotus townsendii*)
Pallid Bat (*Antrozous pallidus*)
Brazilian Free-tailed Bat (*Tadarida brasiliensis*)
Botta's Pocket Gopher (*Thomomys bottae*)
Desert Shrew (*Motiosorex crawfordi*)

Arizona Pocket Mouse (*Perognathus amplus*)
Little Pocket Mouse (*P. longimembris*)
Long-tailed Pocket Mouse (*P. formosus*)
Chisel-toothed Kangaroo Rat (*Dipodomys microps*)
Desert Kangaroo Rat (*D. deserti*)

Merriam's Kangaroo Rat (*D. merriami*)
Western Harvest Mouse (*Reithrodontomys megalotis*)
Southern Grasshopper Mouse (*Onychomys torridus*)
Deer Mouse (*Peromyscus maniculatus*)
Brush Mouse (*P. boylii*)

Desert Woodrat (*Neotoma lepida*)
House Mouse (*Mus musculus*)
Sagebrush Vole (*Lagurus curtatus*)
White-tailed Antelope Squirrel (*Ammospermophilus leucurus*)
Townsend's Ground Squirrel (*Spermophilus townsendii*)

Table A-2 -- continued
Species Listing, Pahrump Valley Airport Study Area

FAUNA - Mammals continued

Round-tailed Ground Squirrel (*S. tereticaudus*)
Desert Cottontail (*Sylvilagus audobonii*)
Black-tailed Jack Rabbit (*Lepus californicus*)
Raccoon (*Procyon lotor*)
Striped Skunk (*Mephitis mephitis*)

Badger (*Taxidea taxus*)
Bobcat (*Felis rufus*)
Gray Fox (*Urocyon cinereoargenteus*)
Coyote (*Canis latrans*)
Pronghorn (*Antilocapra americana*)
Mule Deer (*Odocoileus hemionus*)

Plus Wild Burros, and feral dogs and cats

BIRDS

Turkey Vulture (*Cathartes aura*)
Northern Harrier (*Circus cyaneus*)
Cooper's Hawk (*Accipter cooperii*)
Harris' Hawk (*Parabuteo unicinctus*)
Swainson's Hawk (*Buteo swainsoni*)

Red-tailed Hawk (*B. jamaicensis*)
Ferruginous Hawk (*B. regalis*)
Rough-legged Hawk (*B. lagopus*)
Golden Eagle (*Aquila chrysaetos*)
American Kestrel (Sparrow Hawk) (*Falco sparverius*)

Chukar (*Alectoris chukar*) - introduced gamebird
Sage Grouse (*Centrocercus urophasianus*)
Gambel's Quail (*Callipepla gambelii*)
Mourning Dove (*Zenaida macroura*)
Greater Roadrunner (*Geococcyx californianus*)

Common Barn Owl (*Tyto alba*)
Great Horned Owl (*Bubo virginianus*)
Burrowing Owl (*Athene cunicularia*)
Lesser Nighthawk (*Chordeiles acutipennis*)
Common Nighthawk (*C. minor*)

Common Poorwill (*Phalaenoptilus nuttallii*)
Black-chinned Hummingbird (*Archilochus alexandri*)
Costa's Hummingbird (*Calypte costae*)
Northern Flicker (*Colaptes auratus*)
Black Phoebe (*Sayornis nigricans*)

Table A-2 -- continued
Species Listing, Pahrump Valley Airport Study Area

FAUNA - Birds continued

Say's Phoebe (*S. saya*)
Ash-throated Flycatcher (*myiarchus cinerascens*)
Western Kingbird (*Tyrannus verticalis*)
Horned Lark (*Eremphila alpestris*)
Violet-green Swallow (*Tachycineta thalassina*)

Black-billed Magpie (*Pica pica*)
Common Raven (*Corvus corax*)
Cactus Wren (*Campylorhynchus brunneicapillus*)
Black-tailed Gnatcatcher (*Poliophtila melanura*)
Western Bluebird (*Sialia mexicana*)

Northern Mockingbird (*Mimus polyglottos*)
Sage Thrasher (*Oreoscoptes montanus*)
LeConte's Thrasher (*Toxostoma lecontei*)
Loggerhead Shrike (*Lanius ludovicianus*)
European Starling (*Sturnus vulgaris*)

Blue Grosbeak (*Guiraca caerulea*)
Green-tailed Towhee (*Pipilo chlorurus*)
Brewer's Sparrow (*Spizella breweri*)
Vesper Sparrow (*Pooecetes gramineus*)
Black-throated Sparrow (*Amphispiza bilineata*)

Sage Sparrow (*A. belli*)
Dark-eyed Junco (*Junco hyemalis*)
Brown-headed Cowbird (*Molothrus ater*)
House Finch (*Carpodacus mexicanus*)

AIR QUALITY

The air quality of the Pahrump Valley air basin is considered to be very good. Impacts to the quality of the basin result from vehicular (automobile, farm equipment, aircraft, truck)

emissions, localized agricultural operations (crop stubble burning, dust from plowing, etc.), and meteorological conditions (blowing dust, windborne smog from the Las Vegas area, etc.). Given the large size of the regional air basin and the relatively low intensity of air pollutant activities, it may be projected that the air quality of the Pahrump Valley air basin will continue to be very good in the future.

Development of the Pahrump Valley Airport will have both short-term and long-term effects upon the quality of the air basin.

During construction of the airport facility, dust from excavation activities, and exhaust emissions from construction equipment and vehicles and construction-related vehicular trips to and from the project site will contribute temporary, incremental degradation of the air basin.

After completion of the airport and aircraft operations commence, the long-term effects of increased aircraft emissions will begin to affect the air quality basin. Aircraft-generated emissions factors (as promulgated by the Environmental Protection Agency) were utilized in evaluating the pollutant levels for an airport (existing airports in the area are shown for comparison) and are presented in Table A-3.

Surface vehicle traffic (airport support/administration vehicles, aircraft owners/passengers, etc.) trips will also contribute to increased emissions into the air quality basin. Table A-3 illustrates the projected emission levels that could result from these sources (assuming an average of 3.5 trips per flight operation; average trip length of 10 miles; an average vehicle speed of 20 mph; and EPA MOBILE2 emissions factors for the year 2000).

The incremental contribution of pollutants, by aircraft and vehicular traffic, at a Pahrump Valley Airport is presented in Table A-3. In order to correlate these quantitative amounts to the Federal Standards shown on Table A-4, a cylindrical air basin, 20 miles in diameter and one mile deep was assumed. This basin, centered at the airport site was sized based upon the 10 mile trip length utilized in the quantification of the emissions levels for vehicle trips to/from the airport. As illustrated in Tables A-3 and A-4, the incremental contribution to the air quality of the Pahrump Valley (as compared to Federal Standards) is insignificant.

Table A-3

AIRCRAFT OPERATIONS EMISSIONS

AIRPORT (YEAR)	# OF FLIGHTS ¹	CARBON MONOXIDE ²	HYDRO- CARBONS ²	NO _x ²	SO _x ²	PARTICU- LATES ²
PEC ³ (1985)	5,500	82.5	2.7	0.3	0.09	0.15
CHICKEN RANCH (1981)	4,200	63.3	2.1	0.2	0.06	0.12
PROPOSED PVA ⁴ (1990)	7,500	113.0	3.7	0.4	0.12	0.21
PROPOSED PVA (1995)	12,500	180.8 (1.11 mg/m ³) ⁵	5.9 (36.26) ⁵	0.7 (4.30) ⁵	0.20 (1.23) ⁵	0.33 (2.03) ⁵
PROPOSED PVA (2005)	20,000	301.4 (1.85 mg/m ³) ⁵	9.8 (60.23) ⁵	1.1 (6.76) ⁵	0.33 (2.03) ⁵	0.55 (3.38) ⁵

VEHICULAR EMISSIONS FACTORS

AIRPORT (YEAR)	TRIPS/ DAY	CARBON MONOXIDE ²	HYDRO- CARBONS ²	NO _x ²	SO _x ²	PARTICU- LATES ²
PEC (1985)	53	8.5	20.9	0.53	0.10	0.16
CHICKEN RANCH (1981)	40	6.4	0.7	0.40	0.08	0.12
PROPOSED PVA ⁴ (1990)	80	11.5	1.2	0.72	0.14	0.22
PROPOSED PVA (1995)	115	12.6 (0.08 mg/m ³) ⁵	1.3 (7.9) ⁵	0.79 (4.86) ⁵	0.16 (0.98) ⁵	0.23 (1.43) ⁵
PROPOSED PVA (2005)	196	31.3 (0.19 mg/m ³) ⁵	3.3 (20.3) ⁵	1.96 (12.05) ⁵	0.39 (2.39) ⁵	0.59 (3.63) ⁵

1. The number of flights is per year. Each flight is considered as one landing/takeoff cycle.
2. Kilograms per day.
3. Preferred Equities Corporation Airport.
4. New Pahrump Valley Airport.
5. (ug/m³ [except where noted] per day in hypothetical air basin).

Source: Aries Consultants Ltd.

Table A-4

FEDERAL AIR QUALITY STANDARDS

Pollutant (Averaging Time)	Federal Standard		Objective
	Primary	Secondary	
CARBON MONOXIDE			
8 - Hour	10 mg/m ³	Same	To prevent carboxyhemo- globin levels greater than 2%
1 - Hour	40 mg/m ³	Same	
NITROGEN DIOXIDE			
Annual	100 mg/m ³	Same	To prevent health risk and to improve visibility
SULFUR DIOXIDE			
Annual	80 ug/m ³	----	To prevent increase in respiratory disease, plant damage, and order
24 - Hour	365 ug/m ³	----	
PARTICULATES			
24 - Hour Average	260 ug/m ³	150 ug/m ³	To improve visibility and prevent health effects

(No standards for hydrocarbons)

Source: Environmental Protection Agency, AP-42

LAND RESOURCES

The 244 square mile Study Area contains a variety of uses of the land resource potential. Residential and commercial areas, farms, proposed subdivisions, public lands (administered by the Bureau of Land Management), and a portion of the Last Chance Range Wild Burrow Management Area are included within the boundaries of the Study Area. The specific areas of public, cultivated, and the Burrow Management lands are shown on Figure 3 in the Site Selection Study. Proposed developments as well as County land plans are described in the Land Use Plans section.

The two site areas being considered in the detailed airport site selection offer land resource potentials of markedly different types. The land area immediately adjacent to Site A, while largely vacant at present, has been planned for a residential and commercial subdivision. Development of the Pahrump Valley Airport at this site would entail considerable modification of the current residential plans and require purchase of sufficient property to accommodate the airport facility. Fiscal considerations should be evaluated in detail prior to the decision to develop the Pahrump Valley Airport at this location.

Site B and adjacent land areas which may be required for the development of the Pahrump Valley Airport, are currently vacant. The site is under the jurisdiction of the Bureau of Land Management and is available for livestock open range grazing, wildlife habitat, and outdoor recreational opportunities. The property offers the potential for agricultural development in a manner similar to other areas of the Pahrump Valley. In recent years the emphasis has switched from cotton crops to alfalfa hay. The abundant sunshine, soil conditions, available irrigation, and ready market have combined to such a favorable degree that the average yield of 4 to 5 tons per acre (over 5 crops per year) of alfalfa hay in the Pahrump Valley is in excess of the State average. To date, no proposal has been put forth to acquire the subject property from BLM for agricultural development. In a like manner, the Pahrump Valley Airport on these BLM-managed lands would require acquisition or land use lease in order to operate the facility as proposed. Such use acquisition and legal ramifications should be addressed prior to finalization of decisions regarding the primary site for the new airport facility.

CONSERVATION AND RECREATIONAL AREAS

The Study Area is largely made up of public land holdings administered by the Bureau of Land Management. Particular portions of these holdings include the Last Chance Range Wild Burrow Management Area, Mount Charleston/Cathedral Rock area of the Toiyabe National Forest, Red Rock Canyon Recreation Lands, the Devil's Hole portion of Death Valley National Monument, and the Ash Meadows Wildlife Refuge (currently proposed for expansion) in the Amargosa Valley (refer to Figures 2 and 3 in

the Site Selection Study). With the exception of a segment of the Last Chance Range area, none of these conservation/recreation areas are within the limits of the areal extent involved in this Environmental Reconnaissance.

Improved access to be afforded by the development of the Pahrump Valley Airport will have a negligible effect upon the conservation and/or recreation holdings in and adjacent to the Study Area. The physical construction of the facility will remove about 400 acres from the conservation holdings managed by BLM should Site B be selected for the airport.

CULTURAL RESOURCES

The Pahrump Valley area contains numerous sites of pre-historic and historic occupation. Petroglyphs and pictograms (Indian rock art) may be found in areas with large rock outcroppings and in the canyons surrounding the Valley. Minimal survey/inventory studies for archaeological remains have been conducted in the Study Area (refer to Figure 3 in the Site Selection Study). However, in the areas which have been evaluated, several sites have been cataloged.

Concurrent with a 1978 proposal to BLM for an airport in this area, the area of the BLM site was surveyed for archaeological resources with no sites or remains being recorded. Should this area be selected for the Pahrump Valley Airport, then cultural resources survey and inventory will be required for only those areas not assessed in the 1978 study.

Site A was not surveyed for indications of pre-historic/historic activity prior to development. Should the County airport facility be developed at this location, the necessary cultural resources clearances must be obtained as a portion of the development process.

No impacts upon archaeological resources are anticipated in the portion of the BLM Site previously surveyed and inventoried.

The effects on Cultural Resources in other areas are not predictable at this stage and level of analysis.

After the selection of the preferred site for the Pahrump Valley Airport, detailed Cultural Resources analysis and, if necessary, recommendations for mitigation should be prepared.

NOISE

The development of the Pahrump Valley Airport will cause increases in the noticeable noise levels in the vicinity of the facility on both a short-term and long-term basis. Construction noise will be a temporary effect, generally occurring during normal working hours/days. After completion, aircraft operations

and vehicular traffic to and from the airport may affect the surrounding area.

Due to the rural nature of the Study Area, the ambient noise levels are predominately below 50 dBA, or sufficiently quiet for most activities, normal conversation, relaxation, etc. Figures A-3 and A-4 indicate Aircraft Operations Noise Impacts on Human Activities and Aircraft Noise/Land Use Compatibility Levels, respectively.

The construction noise levels to be perceived emanating from the airport site area will occur during normal (daylight) working periods, and will be of a relatively short-term duration. Construction traffic to and from the airport site will also tend to increase the noise levels along the roadways serving the selected site area. The specific noise levels are not assessable at this level of investigation.

The estimated noise levels to be generated by aircraft operations at the Pahrump Valley Airport in the long-term (2005) are illustrated by the L_{dn} noise contours shown on Figures A-5 and A-6 for Sites A and B, respectively. The noise generated by aircraft operations would be most noticeable both adjacent to the airport as well as in areas subjected to overflights by arriving/departing flights. The relatively low forecast volume of aircraft operations, presented in Table A-5, should not contribute unacceptable noise levels to the areas affected by the development of the Pahrump Valley Airport.

It should be noted that the noise contours depicted in Figures A-5 and A-6 are intended to be utilized for general (overlay) purposes for comparative analysis of the potential site areas. The precise location of these contours and the areas they affect will be contingent upon the site selected, the alignment, length, and siting of the runway within the airport boundary. Such precise determination of areas affected by projected noise contours is not within the scope of this preliminary level of investigation.

The noise contours are also intended to illustrate if there are likely to be any potential adverse noise impacts on any existing, or planned for, development in the vicinity of the airport sites. The FAA standards for the boundaries of impacted areas for residential land uses near airports identify the 65 dBA L_{dn} (exterior) as the acceptable noise determinant. L_{dn} is a 24-hour descriptor of noise exposure.

The L_{dn} 60 and 65 noise contours would lay entirely within the airfield and clear zones included on Figures A-5 and A-6 and have therefore not been illustrated. The L_{dn} 55 has been shown on these figures and is (almost) entirely within the proposed Figure 6 airport boundaries at both Sites A and B. Therefore, based on the land use compatibility guidelines from FAR Part 150, "Airport Noise Compatibility Planning", presented on Figure A-4 an airport

HUMAN ACTIVITY	IMPACT ESTIMATE FOR COMMUNITY NOISE EQUIVALENT LEVEL (CNEL) VALUE						
	40	50	60	70	80	90	100
Intensive Conversation							
Casual Conversation							
Telephone Use							
Sleeping							
Eating							
Reading							
Classroom, Lecture							
Live Theater							
Watching Television & Films							
Listening to Music							
Public Events, Assemblies							
Spectator Sports							
Physical Recreation							
Outdoor Activities							
Extended Child Care							
Shopping							
Technical Manual Work							
Manual Work							



Low Impact: Activity can be performed with little or no interruption from aircraft noise, though noise may be noticeable above background levels.

Moderate Impact: Activity can be performed but with some interference from aircraft noise due to level or frequency of interruptions.

Serious Impact: Activity can be performed but only with difficulty in the aircraft noise environment due to level or frequency of interruptions.

Critical Impact: Activity cannot be performed acceptably in the aircraft noise environment.

TABLE 2
LAND USE COMPATIBILITY* WITH YEARLY DAY-NIGHT AVERAGE SOUND LEVELS

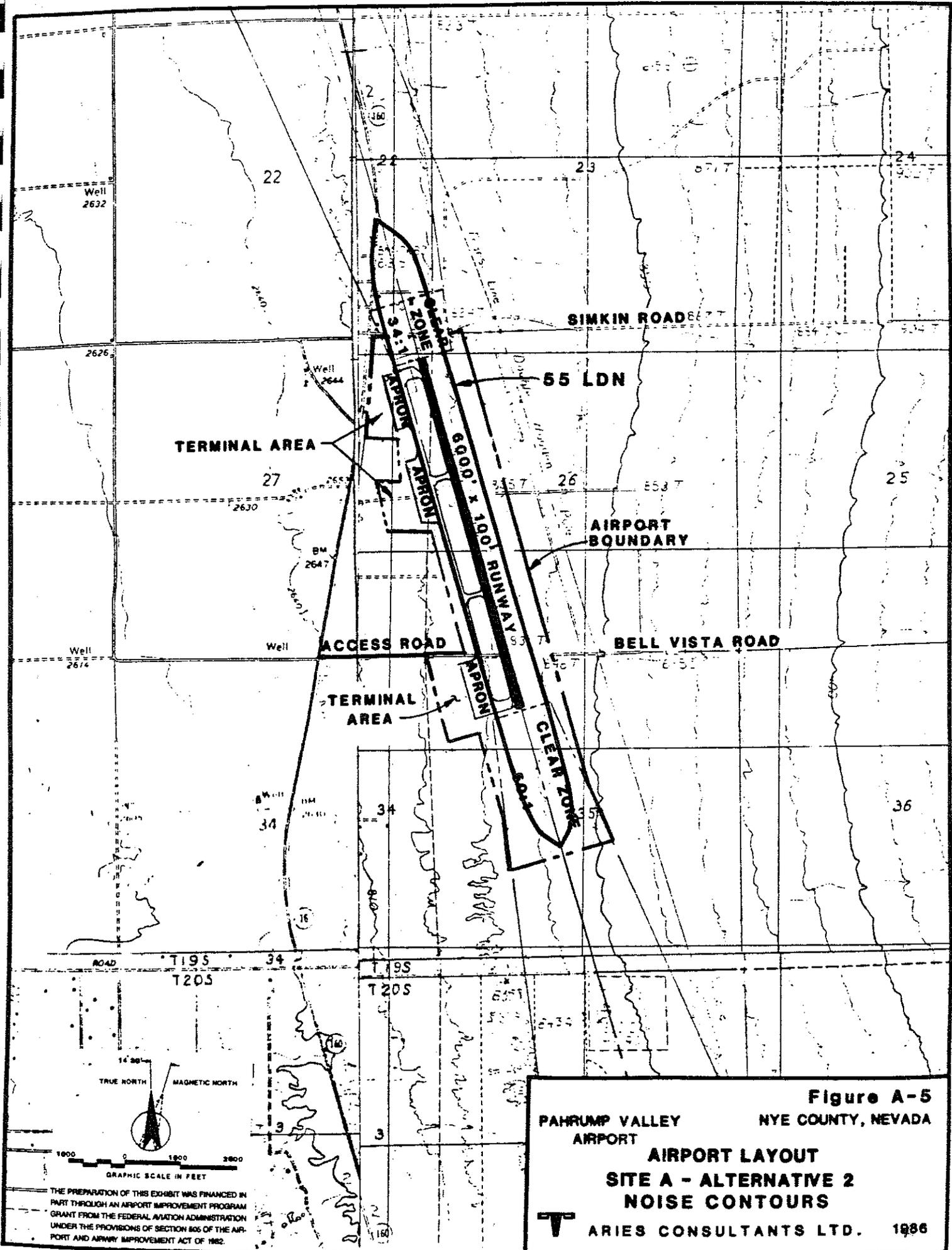
<i>Land Use</i>	<i>Yearly Day-Night Average Sound Level (L_{dn}) in Decibels</i>					
	<i>Below 65</i>	<i>65-70</i>	<i>70-75</i>	<i>75-80</i>	<i>80-85</i>	<i>Over 85</i>
<i>Residential</i>						
Residential, other than mobile homes and transient lodgings	Y	N(1)	N(1)	N	N	N
Mobile home parks	Y	N	N	N	N	N
Transient lodgings	Y	N(1)	N(1)	N(1)	N	N
<i>Public Use</i>						
Schools, hospitals and nursing homes	Y	25	30	N	N	N
Churches, auditoriums, and concert halls	Y	25	30	N	N	N
Governmental services	Y	Y	25	30	N	N
Transportation	Y	Y	Y(2)	Y(3)	Y(4)	Y(4)
Parking	Y	Y	Y(2)	Y(3)	Y(4)	N
<i>Commercial Use</i>						
Offices, business and professional	Y	Y	25	30	N	N
Wholesale and retail—building materials, hardware and farm equipment	Y	Y	Y(2)	Y(3)	Y(4)	N
Retail trade—general	Y	Y	25	30	N	N
Utilities	Y	Y	Y(2)	Y(3)	Y(4)	N
Communication	Y	Y	25	30	N	N
<i>Manufacturing And Production</i>						
Manufacturing, general	Y	Y	Y(2)	Y(3)	Y(4)	N
Photographic and optical	Y	Y	25	30	N	N
Agriculture (except livestock) and forestry	Y	Y(6)	Y(7)	Y(8)	Y(8)	Y(8)
Livestock farming and breeding	Y	Y(6)	Y(7)	N	N	N
Mining and fishing, resource production and extraction	Y	Y	Y	Y	Y	Y
<i>Recreational</i>						
Outdoor sports arenas and spectator sports	Y	Y(5)	Y(5)	N	N	N
Outdoor music shells, amphitheaters	Y	N	N	N	N	N
Nature exhibits and zoos	Y	Y	N	N	N	N
Amusements, parks, resorts and camps	Y	Y	Y	N	N	N
Golf courses, riding stables and water recreation	Y	Y	25	30	N	N

(Numbers in parentheses refer to notes.)

* The designations contained in this table do not constitute a Federal determination that any use of land covered by the program is acceptable or unacceptable under Federal, State, or local law. The responsibility for determining the acceptable and permissible land uses remains with the local authorities. FAA determinations under Part 150 are not intended to substitute federally determined land uses for those determined to be appropriate by local authorities in response to locally determined needs and values in achieving noise compatible land uses.

KEY TO TABLE 2

SLUCM	Standard Land Use Coding Manual.
Y (Yes)	Land Use and related structures compatible without restrictions.
N (No)	Land Use and related structures are not compatible and should be prohibited.
NLR	Noise Level Reduction (outdoor to indoor) to be achieved through incorporation of noise attenuation into the design and construction of the structure.
25, 30, or 35	Land used and related structures generally compatible; measures to achieve NLR or 25, 30, or 35 must be incorporated into design and construction of structure.



TERMINAL AREA

SIMKIN ROAD

55 LDN

AIRPORT BOUNDARY

ACCESS ROAD

BELL VISTA ROAD

TERMINAL AREA

CLEAN ZONE

TRUE NORTH

MAGNETIC NORTH



1000 0 1000 2000
GRAPHIC SCALE IN FEET

THE PREPARATION OF THIS EXHIBIT WAS FINANCED IN PART THROUGH AN AIRPORT IMPROVEMENT PROGRAM GRANT FROM THE FEDERAL AVIATION ADMINISTRATION UNDER THE PROVISIONS OF SECTION 805 OF THE AIRPORT AND AIRWAY IMPROVEMENT ACT OF 1982.

Figure A-5

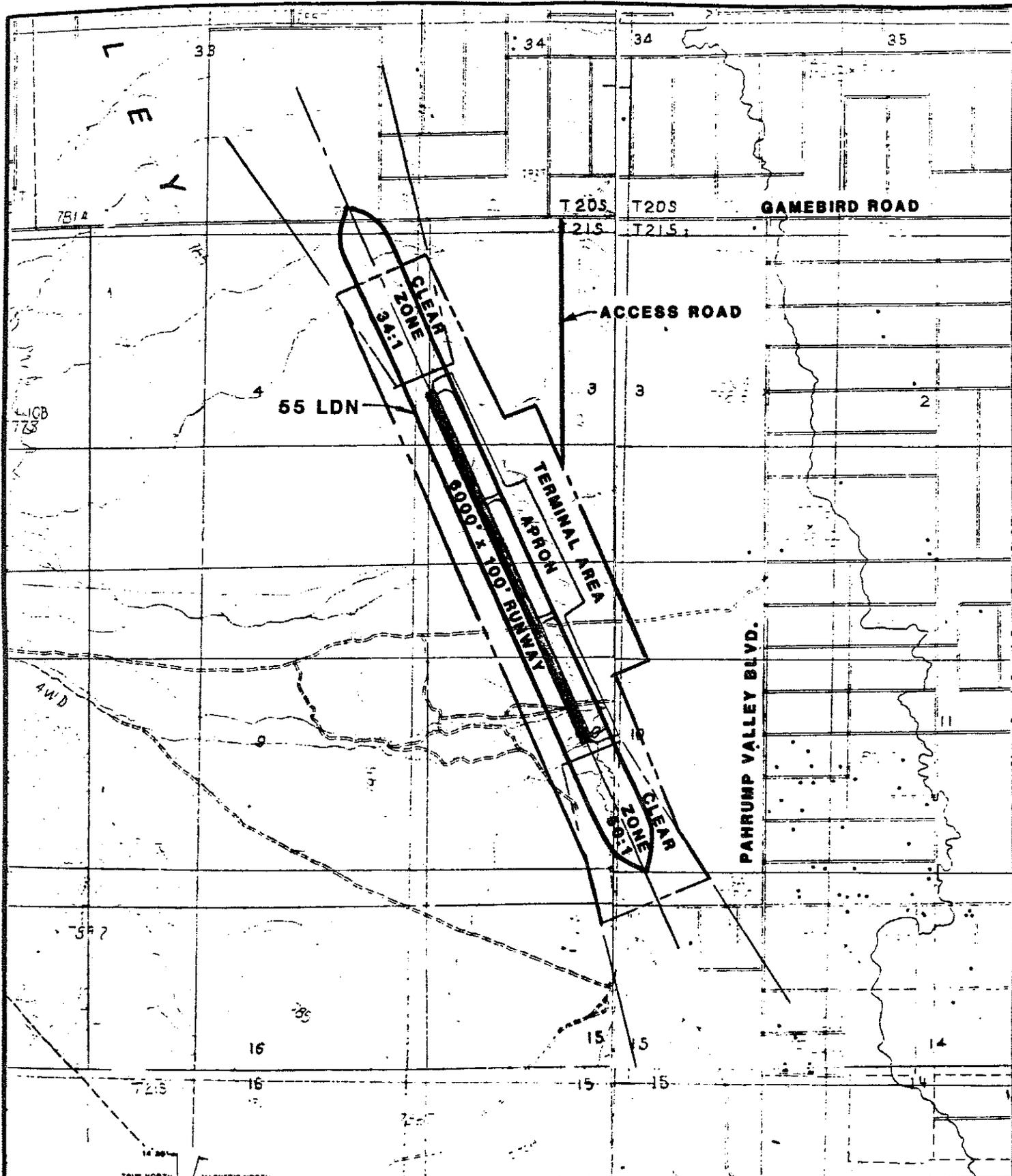
PAHRUMP VALLEY AIRPORT

NYE COUNTY, NEVADA

AIRPORT LAYOUT
SITE A - ALTERNATIVE 2
NOISE CONTOURS



ARIES CONSULTANTS LTD. 1986



TRUE NORTH
MAGNETIC NORTH



1800 0 1800 3600
GRAPHIC SCALE IN FEET

THE PREPARATION OF THIS EXHIBIT WAS FINANCED IN PART THROUGH AN AIRPORT IMPROVEMENT PROGRAM GRANT FROM THE FEDERAL AVIATION ADMINISTRATION UNDER THE PROVISIONS OF SECTION 506 OF THE AIRPORT AND AIRWAY IMPROVEMENT ACT OF 1982.

Figure A-6
PAHRUMP VALLEY AIRPORT
 NYE COUNTY, NEVADA
AIRPORT LAYOUT
SITE B - ALTERNATIVE 1
NOISE CONTOURS
T ARIES CONSULTANTS LTD. 1988

Table A-5

FORECAST AIRCRAFT OPERATIONS - 2005

<u>Aircraft Type</u>	<u>Number of Daily Operations*</u>
Single-engine prop	42
Multiengine prop	14
Business jet	<u>4</u>
Total	60

*One take-off or one landing is counted as one operation.

Source: Aries Consultants Ltd.

at either Site A or B would have no significant noise impacts on existing or planned land uses around the sites.

At Site A, while there are no homes within the L_{dn} 60 noise contour, there are some homes within the L_{dn} 55 noise contour and within 1,000 feet of the end of the runway directly under the runway approach and departure paths to the north. A third home and new structure are just to the west of the extended runway centerline.

In addition, aircraft approach and departure paths and traffic patterns would be over other lands planned for single-family residences, school and recreational areas and a church to the west; mobile home and single-family residences to the north and east and subdivisions to the south.

At Site B, there are no homes or other development within the L_{dn} 55 noise contour for the range of alternatives considered.

Arrival and departure traffic patterns north of the site may overfly a small area subdivided for residential use north of Gamebird Road. There are residential subdivisions east of this site along Pahrump Valley Road, and to the north of Gamebird Road, but they would not be impacted by an airport at this site.

SOCIAL IMPACTS - RELOCATIONS

At Site A, depending upon how the airport was developed, it would be necessary to relocate one home between Bell Vista and Mesquite Roads.

Alternatively, it would be necessary to relocate three homes north of Simkin Road and also the gas station/convenience store, commercial/industrial buildings and a new structure at the corner of SR160 and Simkin Road. One home south of Bell Vista Road would also have to be relocated.

No relocation of homes, businesses or other structures would be required for an airport at Site B.

SUMMARY

The evaluation of appropriate land areas for airport use, conducted concurrently with the Environmental Reconnaissance, used both aeronautical and engineering criteria in its analysis of the Pahrump Valley Study Area.

The combination of environmental, engineering feasibility, aeronautical and other assessment factors resulted in the recommendation of two (2) site areas for more detailed analyses to determine their suitability as the long-range airport facility for the Pahrump Valley.

Site A is an existing airport, constructed by Preferred Equities Corporation, adjacent to Highway 160, which would be expanded to serve as the primary airport facility for the Pahrump Valley. This site is situated in a developed/proposed-for-development area, and is surrounded by largely vacant land at present that has been subdivided into 1/4-acre parcels and sold. The implementation of airport development plans for this site should be preceded by environmental, engineering, and financial analyses if it is to be the primary location for the airport.

Site B is currently vacant land and includes part of the land area previously suggested to BLM as an airport site in 1978. An airport facility for the Pahrump Valley would occupy an area larger than the site assessed by the Bureau of Land Management in the Environmental Assessment (NV-050-8-81) for this area. If this site is selected the location for the Pahrump Valley Airport, additional environmental and engineering evaluations would be necessary to establish site-specific conditions, potential impacts, and available mitigative measures. This would be the responsibility of the BLM for Site B.

The level of analysis involved in this Environmental Reconnaissance, being of a general nature, indicated no conditions which would preclude the development of the Pahrump Valley Airport at either location. Rather, each site possesses both attributes and potential drawbacks which could affect the feasibility of airport development upon each site. The majority of these development-affecting parameters are non-environmental in nature and are, as such, discussed elsewhere in the Report.

A summary of the potential environmental impacts of developing a County-owned airport at each site is presented on Table A-6.

Table A-6

SUMMARY OF POTENTIAL ENVIRONMENTAL IMPACTS

<u>Environmental Concern</u>	<u>Site A</u>	<u>Site B</u>
Land Use Planning	Existing and designated residential and commercial uses in immediate areas and on all sides	Open BLM land. Residential areas to north and east.
Public Utilities and Services	Acceptable	Acceptable
Geology/Soils/Seismology	Acceptable	Acceptable
Hydrology/Water Quality /Flood Zones	Acceptable	Acceptable
Traffic and Circulation	Access readily available (adjacent to SR160)	New one mile access roadway necessary from Gamebird Road or Pahrump Valley Boulevard.
Biological Components	Disturbed site - No impact. Site biological survey needed prior to expansion for additional area. Possible habitat disruption.	Open site - specific biological inventory needed prior to development. Habitat disruption.
Air Quality	Not significant.	Not significant.
Land Resources	Designed for development or developed at present. Land availability constrained.	Vacant land - Airport would preclude other potential uses.
Conservation and Recreational Areas	No impact.	No impact.
Cultural Resources	Disturbed site - No impact. Additional survey would be required for expansion area.	Previous survey for portion of site. Additional survey would be required for additional area.
Noise	Overflight noise impact potential for developed and proposed development areas close to runway alignment.	Remote location and runway alignment options would minimize low noise disturbance potential.
Relocations	Four homes, over 200 residential lots, commercial development and roads.	None.