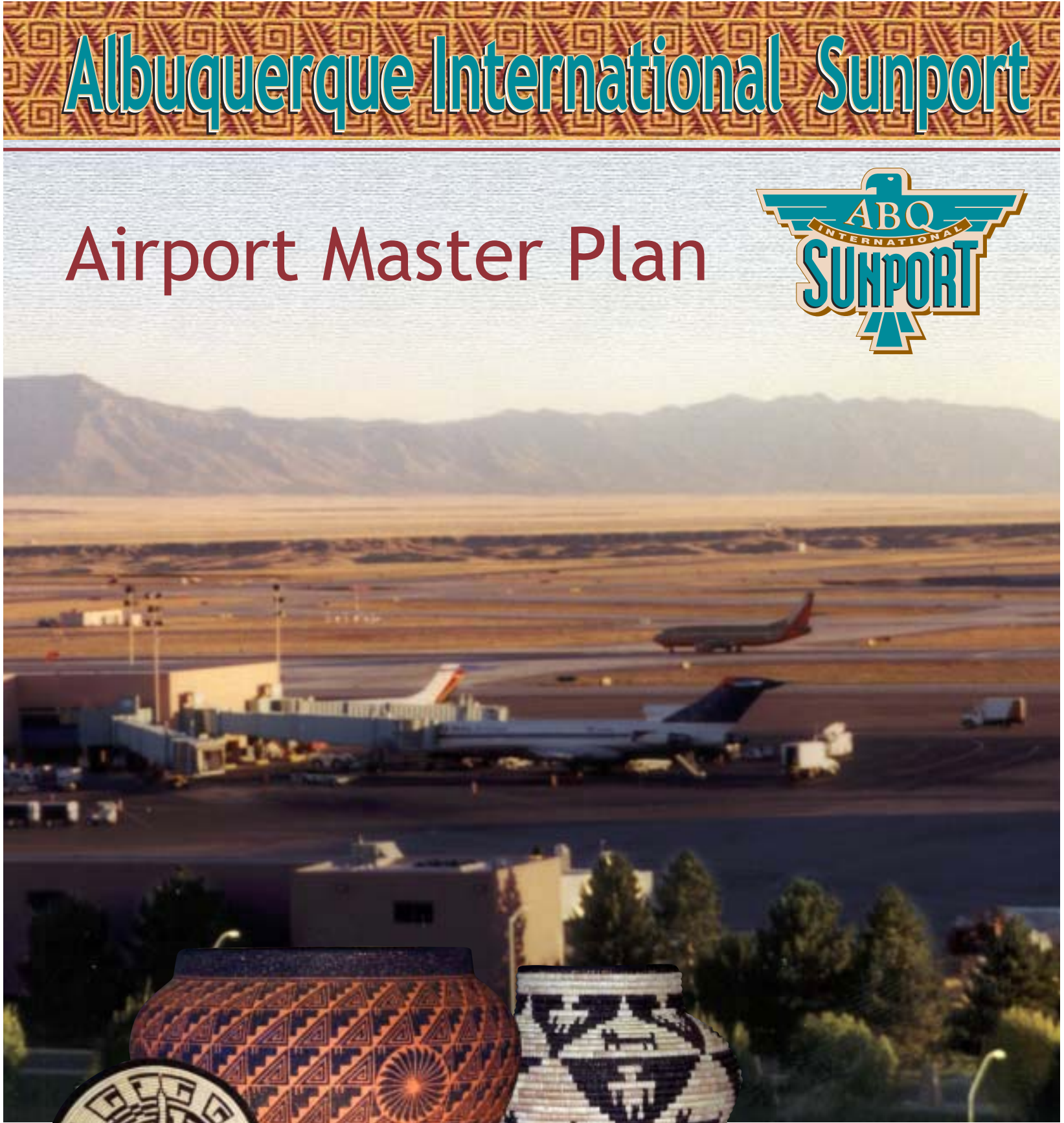


Albuquerque International Sunport

Airport Master Plan



Executive Summary

**ALBUQUERQUE
INTERNATIONAL
SUNPORT**

**AIRPORT MASTER PLAN
EXECUTIVE SUMMARY**

Prepared By:

Coffman Associates, Inc.

In Association With:

**Molzen-Corbin and Associates
NBBJ West Limited Partnership
Leigh Fisher Associates**

September 2002

***C*ONTENTS**

ALBUQUERQUE INTERNATIONAL SUNPORT Albuquerque, New Mexico

EXECUTIVE SUMMARY REPORT

Executive Summary Report

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Executive Summary Report

The Albuquerque International Sunport Master Plan Study was undertaken to evaluate the airport's capabilities and role, to forecast future aviation demand and to plan for the timely development of new or expanded facilities that may be required to meet that demand. The ultimate goal of the Master Plan is to provide systematic guidelines for the airport's overall development and operation.

The Master Plan was a cooperative effort between the City of Albuquerque and Federal Aviation Administration (FAA). Technical work was prepared by Coffman Associates, Inc., NBBJ West Limited Partnership, Molzen-Corbin Associates, Inc., and Leigh Fisher Associates.

Specific objectives of the Master Plan are:

- To determine projected needs of airport users through the year 2025;
- To identify existing and future facility needs;



- To evaluate future airport facility development alternatives which will promote safety and optimize airport capacity, while not significantly impacting the environment;
- To provide a graphic representation of the ultimate airport development;
- To present land use strategies for the use of airport property;
- To screen the recommended plan for potential environmental impacts;
- To establish a schedule of development priorities and a program for improvements;
- To analyze the airport's financial requirements for capital improvement needs and grant options;



- To coordinate this Master Plan with local, regional, state, and federal agencies; and
- To develop active and productive public involvement through the planning process.

COORDINATION

The Albuquerque International Sunport Master Plan is of interest to many within the local community. This includes local citizens, community organizations, airport users, airport tenants, areawide planning agencies, and aviation organizations.

To assist in the development of the Albuquerque International Sunport Master Plan, the City of Albuquerque identified a cross-section of community members and interested persons to serve in an advisory role in the development of the Master Plan. As members of the Advisory Committee or the Technical Committee, they reviewed working papers and provided comment throughout the study to help ensure that a realistic, viable plan was developed.

A series of public information workshops were also scheduled to allow the public to provide input and learn about the study. The public information workshops were designed to give the public access to general information concerning the Master Plan. The consultants and airport staff were available to answer individual questions.

The working papers were also made available to the general public over the

internet shortly after submission to the committees. The web site also allowed persons to e-mail comments to the consultants. Comments received from the committee meetings, public workshops, and the web site are included in Appendix D in Volume III.

ALBUQUERQUE INTERNATIONAL SUNPORT

Albuquerque International Sunport (ABQ) is positioned to serve all segments of the air transportation industry. As shown on **Exhibit ES-1**, Albuquerque International Sunport has facilities to accommodate commercial airline activity, air cargo and general aviation users. Military aviation needs are accommodated at the adjacent Kirtland Air Force Base, which shares the airfield facilities.

Table ES-1 summarizes runway data at Albuquerque International Sunport. There are currently four operational runways at Albuquerque International Sunport: Runway 8-26, Runway 3-21, Runway 12-30, and Runway 17-35.

Commercial airline activities are conducted from the passenger terminal facilities located in the northwest quadrant of the airport, north of Runway 8-26 and west of Runway 17-35. Primary access to the passenger terminal building is from Interstate 25 via Sunport Boulevard. Yale Boulevard and Girard Boulevard also provide access to the passenger terminal building.



**TABLE ES-1
Airfield Facility Data**

	Runway 8-26	Runway 3-21	Runway 12-30³	Runway 17-35
Runway Length (feet)	13,793 ¹	10,000	6,000	10,000 ²
Runway Width (feet)	150	150	150	150
Runway Surface				
Surface Material	Concrete	Concrete	Concrete	Asphalt/Concrete
Surface Treatment	Grooved	Grooved	Grooved	Grooved
Condition	Good	Good	Good	Poor
Load Bearing Strength (lbs.)				
Single Wheel Loading	100,000	100,000	65,000	100,000
Dual Wheel	210,000	210,000	120,000	210,000
Dual Tandem Wheel	360,000	360,000	N/A	360,000
Double Dual Tandem Wheel	720,000	720,000	N/A	700,000
Runway Pavement Markings				
Condition	Precision Good	Precision Good	Non-Precision Good	Non-Precision Good
Arresting Device	BAK-9 (26) BAK-12/14 (8)	BAK-12/14 (3)	N/A	N/A
Airfield Lighting	HIRL RCL (8) TDL (8)	HIRL RCL (3) TDL (3)	MIRL	MIRL
Approach Aids	MALSR (8) VASI-6 (8, 26) RVR (8) REIL (26)	MALSR (3) PAPI-4 (3, 21) RVR (3)	PAPI-4 (30) REIL (30)	VASI-4 (17, 35) REIL (17, 35)
Traffic Pattern	Right (8) Left (26)	Right (3) Left (21)	Right (12) Left (30)	Right (17) Left (35)
Instrument Approach Procedures	ILS (8) VOR or TACAN or GPS (8)	ILS (3)	N/A	NDB or GPS (35)
Departure Procedures	Albuquerque One Largo Two			
Weather Reporting	ASOS, ATIS			
Other Facilities	Airport Beacon, Lighted Wind Cone			
Airport Elevation	5,352'			
Taxiway Lighting Aids	MITL, Directional Signs			
Taxiway Markings	Centerline, Hold Positions			

¹ Runway 8 threshold displaced 991'.

² Runway 17 threshold displaced 890'.

³ 155,000 pounds single-tandem (ST).

Source: FAA 5010 Airport Master Record Form, U.S. Terminal Procedures, Southwest Volume 1 of 2, Airport Records.

Air cargo facilities are located along Runway 3-21 and accessed from Spirit Drive. Access to Interstate 25 is available via the University Boulevard interchange located approximately one mile south of the Spirit Drive/University Boulevard intersection.

General aviation facilities at Albuquerque International Sunport are located west of the Runway 12-30/Runway 3-21 intersection. General aviation facilities are accessed from University Boulevard via Access Road B to Clark Carr Road.

Kirtland Air Force Base encompasses approximately 52,000 acres of land along the eastern boundaries of Albuquerque International Sunport.

The 377th Air Base Wing is the host organization for Kirtland AFB. The Wing supports more than 200 tenant organizations, including the Air Force Research Laboratory, Air Force Operational Test and Evaluation Center, 58th Special Operations Wing, New Mexico Air National Guard, Field Command Defense Special Weapons Agency, Air Force Inspection Agency, Air Force Safety Center, the Department of Energy Albuquerque Office and Sandia National Laboratories.

Albuquerque International Sunport is owned and operated by the City of Albuquerque. The City's Aviation Department is responsible for the management, operation, and development of the airport. The Aviation Department is one of 13 departments within the City.

The airport is included in the *National Plan of Integrated Airport Systems* (NPIAS), where it is classified as a medium hub, primary commercial service airport. An airport must be included in the NPIAS to be eligible for federal funding assistance.

FORECASTS

An important factor in any facility plan is a definition of the demand that it should reasonably be expected to accommodate during the useful life of its key components. In airport master planning, this involves projecting aviation activity indicators over at least a 20-year period. Forecasts of passengers, cargo, based aircraft, and operations (takeoffs and landings) serve as the basis for airport facility planning.

Aviation activity can be affected by many influences on the local, regional, and national level, making it virtually impossible to predict year-to-year fluctuations over 20 years with any certainty. Therefore, it must be remembered that forecasts are to serve only as guidelines and planning must remain flexible enough to respond to a range of unforeseen developments.

Recognizing this, it was intended to develop the Albuquerque International Sunport Master Plan to be demand-based rather than time-based. As a result, the reasonable levels of activity potential that are derived from the forecasting effort will be related to planning horizon levels rather than dates in time. These planning horizons are established as levels of activity that

will call for consideration of the implementation of the next step in the master plan program.

The service area of an airport is defined by its proximity to other airports providing similar service. Albuquerque's service area is rather extensive in that it is the only airport in the state of New Mexico with commercial service by the major airlines. Over 95 percent of the commercial passengers enplaning in New Mexico do so at Albuquerque International Sunport.

Over the years, studies have shown that over two-thirds of the ABQ originating passengers come from within a 30-mile radius of the airport. The next largest contributor has been the Santa Fe/Los Alamos area. Thus, the six-county area of Bernalillo, Sandoval, Valencia, Torrance, Los Alamos, and Santa Fe generates over 75 percent of the passengers at ABQ.

There is good potential that passenger traffic at Santa Fe Municipal Airport will grow in the future. F.A.R. Part 139 certification is under consideration. This could eventually lead to 19-passenger aircraft being supplemented or replaced by 30- to 60-seat aircraft including regional jets at Santa Fe.

While improving, the level of air service at Santa Fe is still not expected to approach that available at ABQ. Thus, ABQ can be expected to continue to draw a slightly smaller, but still significant share of the Santa Fe market area in the future.

The general aviation service area is more localized due to the availability of other airports that serve general

aviation exclusively. Therefore, the general aviation market area is limited to the MSA, and primarily to Bernalillo County. In fact, much of that market is shared with Double Eagle II (the City of Albuquerque's reliever airport).

Exhibit ES-2 is a graphic presentation of annual passenger enplanements at Albuquerque International Sunport from 1962 through 1999, the base year for the Master Plan forecasts. During this time, the airport experienced an annual average growth rate of 7.8 percent.

Exhibit ES-3 graphically compares the non-stop flight destinations from Albuquerque International Sunport to its top 20 destinations. ABQ has daily non-stops to eight of its top ten markets and 15 of its top 20 markets. Daily non-stop service is currently not available to New York, Washington D.C., Baltimore, Boston, and Portland. Since the last Master Plan, service has been added to the top 20 destinations of San Diego, Atlanta, Seattle, Minneapolis, and Orlando.

Table ES-2 provides a summary of the aviation forecasts for Albuquerque International Sunport.

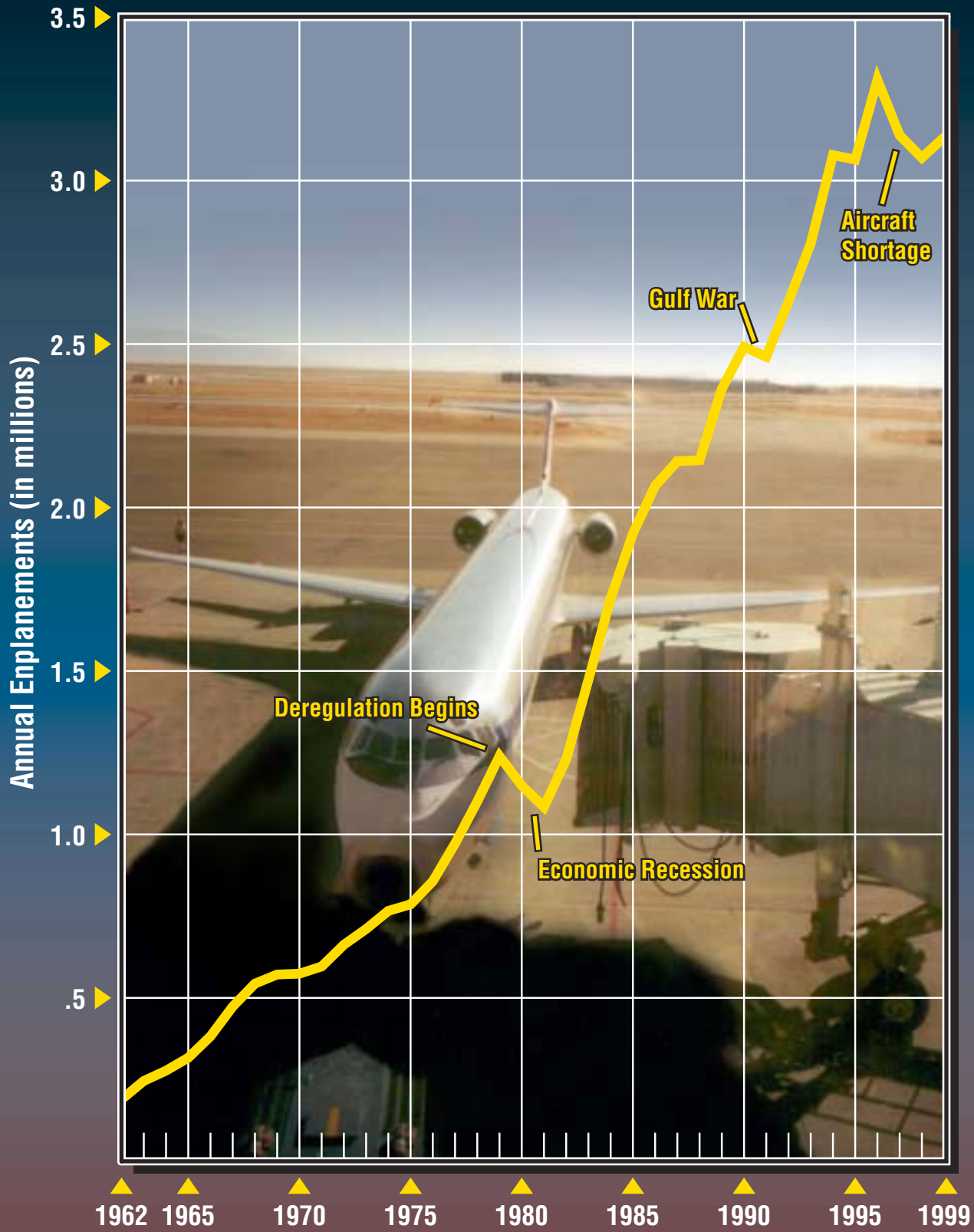
In summary, airline passenger activity can reasonably be expected to grow at an average annual rate of between three and four percent over the next 20-plus years. Normal growth of enplaned freight and mail tonnage should be between five and six percent annually. Annual aircraft operations, or takeoffs and landings, can be reasonably anticipated to grow at an average annual rate of less than two percent.

TABLE ES-2 Aviation Forecast Summary Albuquerque International Sunport					
	2000	2001	2005	2010	2025
<i>ANNUAL OPERATIONS</i>					
<i>Air Carrier & Air Taxi</i>	116,558	122,096	128,600	145,100	192,000
<i>General Aviation</i>					
Itinerant	63,214	59,637	70,700	77,000	93,500
Local	11,409	14,222	13,600	14,400	15,900
Total GA	74,623	73,859	84,300	91,400	109,400
<i>Military</i>					
Itinerant	22,232	23,338	24,000	24,000	24,000
Local	20,078	23,440	20,000	20,000	20,000
Total Military	43,761	46,778	44,000	44,000	44,000
Total Annual Operations	233,491	292,733	256,900	280,500	345,400
<i>Annual Enplanements</i>	3,146,208	3,089,703	3,902,000	4,703,000	7,105,000
<i>Based Aircraft</i>					
General Aviation	219	216	247	262	313
Military	64	58	58	58	58
Total Annual Air Cargo (tons)	95,045	80,093	127,000	168,000	335,000

The Albuquerque International Sunport is the most important interface to the air transportation system, not only for the city and the metropolitan area, but also for the entire state of New Mexico. The airport's forecasts and facility requirements analyses indicate future needs for facility improvements primarily in the landside components of the airport. The passenger terminal building, which is often the first and last memory of Albuquerque for visitors, will need to be able to grow to accommodate future needs. This is evidenced by simply reviewing history. Today's airport must handle 10 times more passengers than it did in 1965, and nearly three times more than it did 20 years ago. Growth in air cargo has

been even more dramatic. General aviation needs continue to change as use of business and corporate aircraft become more commonplace.

If Albuquerque International Sunport had not been capable of responding to this need, the community's and state's ability to participate and compete in the national and global economy would have been compromised. If facilities are not maintained and improved so the airport remains a pleasant experience to the visitor or business traveler, or if delays and queues become unacceptable, then these individuals may consider doing their business elsewhere or choose another location to spend their vacation dollars.





● ALBUQUERQUE

● TOP 20 DESTINATIONS (1999)

- | | | | |
|---------------------------|--------------------|-------------------|------------------------|
| 1. PHOENIX, AZ | 6. HOUSTON, TX | 11. SAN DIEGO, CA | 16. MINNEAPOLIS, MN |
| 2. LOS ANGELES BASIN, CA | 7. NEW YORK, NY | 12. SEATTLE, WA | 17. ORLANDO, FL |
| 3. DALLAS / FT. WORTH, TX | 8. CHICAGO, IL | 13. ATLANTA, GA | 18. BOSTON, MA |
| 4. SAN FRANCISCO BAY, CA | 9. WASHINGTON D.C. | 14. EL PASO, TX | 19. SALT LAKE CITY, UT |
| 5. LAS VEGAS, NV | 10. DENVER, CO | 15. BALTIMORE, MD | 20. PORTLAND, OR |

● NON-STOP SERVICE MARKETS (June 2000)

- | | | |
|------------------------|----------------------|--------------------|
| ALAMOGORDO, NM | FARMINGTON, NM | PHOENIX, AZ |
| AMARILLO, TX | GALLUP, NM | ROSWELL, NM |
| ATLANTA, GA | HOUSTON, TX | SALT LAKE CITY, UT |
| CARLSBAD, NM | KANSAS CITY, MO | SAN DIEGO, CA |
| CHICAGO, IL | LAS CRUCES, NM | SAN FRANCISCO, CA |
| CINCINNATI, OH | LAS VEGAS, NV | SEATTLE, WA |
| CLOVIS, NM | LOS ALAMOS, NM | SILVER CITY, NM |
| COLORADO SPRINGS, CO | LOS ANGELES, CA | ST. LOUIS, MO |
| DALLAS / FT. WORTH, TX | LUBBOCK, TX | TAMPA, FL |
| DENVER, CO | MIDLAND / ODESSA, TX | TUCSON, AZ |
| DURANGO, CO | MINNEAPOLIS, MN | |
| EL PASO, TX | ORLANDO, FL | |



The following sections address future needs and recommended plans by each of the four major components of the airport, as well as their support facilities.

AIRFIELD

The development undertaken since the last Master Plan has put the airfield in good shape. In fact, there are only a few improvements that would be necessary to carry the airfield through the long range planning horizon milestone. These include planning for an 11,000-foot length capability for the secondary commercial service runway and evaluating the taxiway system for possible efficiency improvements, as well as to serve future landside development.

Exhibit ES-4 presents a summary of the facility requirements for this airfield.

Two of the biggest public issues related to Albuquerque International Sunport are the future justification of Runway 17-35 and the relocation of the airport to another site. The evaluation of Runway 17-35 considered the capacity and wind coverage analysis of the previous chapter. It also considered other factors such as the cost of continuing to maintain the runway, compatible land use factors, and the effect on providing future landside needs at the airport.

AIRPORT RELOCATION ANALYSIS

The relocation of an airport's operations either to another existing airport or to a new airport is an alternative that will typically be favored by many residing close to the existing airport. The relocation of an airport, however, is a very complex and expensive development, particularly when it involves a major commercial service airport such as Albuquerque International Sunport.

It must be noted that Albuquerque International Sunport does not experience any serious constraints at the present time. The airfield has adequate runway length for all types of civilian aircraft. The airfield capacity should be adequate for at least the next quarter of a century as well. The Master Plan is examining alternatives for ensuring that landside facility needs can also be accommodated over the long range. A new commercial service airport site would only be feasible in the next quarter century if landside facilities at ABQ cannot be improved in a cost-effective manner without significant, unmitigable environmental impacts.

A key to the long range viability of the new airport site would be to invest in enough property acquisition to ensure compatible land use. History has shown that, over time, the presence of a commercial service airport attracts urban development. While the

surrounding property may be undeveloped where a new airport is constructed, it would not stay that way. A replacement airport for ABQ could require as much as 56 square miles of property acquisition. As site-specific refinements are made, it may be possible to reduce this envelope, but it can still be anticipated that at least 40 square miles should be reserved.

Space for major airport development is limited first by the mountainous terrain throughout the area. Indian reservations are present on three sides and comprise a large portion of the area.

The next major consideration is transportation and utility access. This level of facility will require freeway access similar to that provided by I-25 adjacent to the Sunport. The further a new airport is from existing freeways, the more expensive that access will become. Similarly, the further the airport is from the city, the further any future mass transportation would need to be extended.

With a site as large as this airport would command, the chances for environmental impacts are increased. Since the site would be primarily undeveloped, the potential for impacts to wildlife and its habitat, wetlands, farmland, and previously undisturbed cultural resources will generally be greater than the existing site which still has development capability.

The cost for development of a new site to meet the long range planning horizon milestone is estimated in the range of \$2.0 billion. Also to be considered is the

joint-use association of Albuquerque International Sunport with Kirtland Air Force Base (AFB). If the relocation were to include the Air Force Base, the resultant airport relocation could quickly become the most expensive ever undertaken in the United States. This does not even consider the potential ramifications relating to the Sandia National Laboratories.

At some point in the next century, Albuquerque International Sunport may reach its practical capacity. As that time approaches, it may be necessary to begin to consider a large, new airport site or, at least, relocating some commercial service activities elsewhere. That time, however, is well beyond the next quarter of a century, leaving Albuquerque International Sunport a serviceable airport with a significant useful life.

AIRFIELD PLANNING CONSIDERATIONS

With minimum improvements the existing airfield will be adequate for the long range planning horizon of 345,000 annual operations. This level is not anticipated to be reached for at least a quarter of a century.

Therefore, the remaining airfield alternatives concentrate on optimizing the existing airfield.

Runway 8-26

Over the past decade, the primary Runway 8-26 has undergone reconstruction of its entire length as

CATEGORY	EXISTING	SHORT TERM	LONG RANGE
<p>RUNWAYS</p> 	<p>Runway 8-26 13,793' x 150' • 210,000# DWL</p> <p>Runway 3-21 10,000' x 150' • 210,000# DWL</p> <p>Runway 12-30 6,000' x 150' • 65,000# DWL</p> <p>Runway 17-35 10,000' x 150' • 210,000# DWL</p>	<p>Primary Runway 13,793' x 150' • 210,000# DWL</p> <p>Secondary Runway 10,000' x 150' • 210,000# DWL</p> <p>General Aviation Runway 6,000' x 100' • 65,000# DWL</p>	<p>Primary Runway Same</p> <p>Secondary Runway 11,000' x 150' • 210,000# DWL</p> <p>General Aviation Runway Same</p>
<p>TAXIWAYS</p> 	<p>Runway 8-26 Full Parallel (both sides) Partial Dual Parallel High Speed Exits/Bypasses</p> <p>Runway 3-21 Parallel, High Speed Exits Holding Apron - South</p> <p>Runway 12-30 Full Parallel, Partial Parallel Right Angle Exits Holding Apron/Bypasses</p> <p>Runway 17-35 Full Parallel, Partial Parallel Right Angle Exits/Bypasses</p>	<p>Primary Runway Full Parallel (both sides) Partial Dual Parallel High Speed Exits/Bypasses</p> <p>Secondary Runway Parallel, High Speed Exits Holding Apron/Bypass</p> <p>General Aviation Runway Full Parallel, Partial Parallel Right Angle Exits Holding Apron/Bypass</p>	<p>Primary Runway Same</p> <p>Secondary Runway Add Parallel</p> <p>General Aviation Runway Same</p>
<p>NAVIGATIONAL AIDS</p> 	<p>ASOS, RVR, ASR-9, ATCT</p> <p>Runway 8-26 ILS (8) VORTAC/GPS (8) VASI-6</p> <p>Runway 3-21 ILS-3 PAPI-4</p> <p>Runway 12-30 PAPI-4</p> <p>Runway 17-35 NDB/GPS (35) VASI-4</p>	<p>ASOS, RVR, ASR-9, ATCT</p> <p>Primary Runway ILS GPS VASI-6</p> <p>Secondary Runway ILS PAPI-4</p> <p>General Aviation Runway GPS PAPI-4</p>	<p>ASOS, RVR, ASR-9, ATCT</p> <p>Primary Runway CAT I GPS VASI-6</p> <p>Secondary Runway CAT I GPS PAPI-4</p> <p>General Aviation Runway GPS PAPI-4</p>
<p>LIGHTING AND MARKING</p> 	<p>Rotating Beacon, MITL</p> <p>Runway 8-26 HIRL, CL, TDZ MALSR (8)/REIL (26) Precision Marking</p> <p>Runway 3-21 HIRL, CL, TDZ, MALSR Precision Marking</p> <p>Runway 12-30 MIRL Basic Marking</p> <p>Runway 17-35 MIRL Nonprecision Marking</p>	<p>Rotating Beacon, MITL</p> <p>Primary Runway HIRL, CL, TDZ MALSR/REIL Precision Marking</p> <p>Secondary Runway HIRL, CL, TDZ, MALSR Precision Marking</p> <p>General Aviation Runway MIRL Nonprecision Marking</p>	<p>Rotating Beacon, MITL</p> <p>Primary Runway Same</p> <p>Secondary Runway Same</p> <p>General Aviation Runway Same</p>



well as its parallel taxiway system. This included the reconstruction and extension of parallel Taxiway E on the south side of the runway.

All the taxiway exits from the primary runway recommended by the previous Master Plan have been constructed; therefore, the runway's exit capabilities have been optimized. The only taxiway recommendation not completed was the extension of dual parallel Taxiway B west to the easternmost high speed exit.

The greatest benefit of the east Taxiway B extension would be for the military aircraft stationed near the east end of the runway during east flow. Because of its effects on military facilities and because the primary beneficiaries of its construction would be the military, further extension of Taxiway B should be included in the plan only at the request of Kirtland Air Force Base.

Runway 3-21

As indicated earlier, one of the primary recommendations from the previous Master Plan was to upgrade Runway 3-21 to accommodate air carrier aircraft. The runway is now 10,000 feet long, 150 feet wide, and is equipped with a Category I instrument approach from the southwest.

The facility requirements indicated the airport should plan for a long range need for a secondary runway 11,000 feet in length. This can be added to the southwest end of the runway as depicted on [Exhibit ES-5](#). There is an adequately graded area available for a 1,000-foot extension as well as the

associated extended runway safety area.

The landing threshold could be left in its present location to ensure that aircraft approaches over areas to the southwest are not lowered. At the same time, the limited departures to the northeast would be able to climb out higher with the departure threshold located 1,000 feet further southwest.

Runway 12-30

The reconstruction and extension of Runway 12-30 to 6,000 feet makes it a better option for general aviation aircraft to avoid heavier traffic on the other runways. The proximity of the runway to the general aviation area makes Runway 12 convenient for departures in east flow and Runway 30 convenient for arrivals in west flow.

Runway 17-35

As indicated earlier, Runway 17-35 is the fourth runway orientation on an airfield where the other three runways provide sufficient wind coverage as well as sufficient airfield capacity.

Runway 17-35 offers the airport a limited amount of additional capability. It is a second back-up for commercial and military airlines, and a third back-up for general aviation and commuters. It can be a runway of convenience for the airlines on the easternmost terminal concourse. This must be weighed against the following considerations.

- **Safety:** Runway 17-35 intersects all three other runways and increases the opportunity for runway incursions. The existing three-runway intersection is a condition that FAA seeks to avoid or eliminate due to its high potential for runway incursions.
- **Wind Coverage:** Runway 17-35 is needed for less than 1,400 operations per year. In extreme conditions, general aviation aircraft can use the north-south runway at Double Eagle II Airport.
- **Capacity:** The five highest airfield operations capacity scenarios do not include Runway 17-35. Increased use of Runway 17-35 would lower airfield capacity and increase aircraft delays.
- **Costs:** Short term runway rehabilitation costs are estimated at \$27.0 million. The minimal benefits of this runway will not survive a benefit-cost analysis.
- **Other Considerations:** The north approach directly overflies residential neighborhoods. The physical space and safety clearances required for this runway are in locations that can support future landside development on a land-poor airport.

Various options were considered to shift the runway south as well as to shorten the runway. These alternatives were still too expensive, both financially and operationally, to consider retaining Runway 17-35. As a result, Runway 17-35 is recommended to be closed before

extensive rehabilitation or reconstruction is required.

AIRFIELD PROGRAM

The minimal recommendations for the airfield program are depicted on [Exhibit ES-5](#).

AIR CARGO

Requirements for new facilities to accommodate projected growth in air cargo activity are summarized on [Exhibit ES-6](#).

As shown in the exhibit, there is a potential need for an additional 250,000 square feet (s.f.) of building space to accommodate cargo processing in the long term planning horizon. An additional 143,000 square yards (s.y.) of automobile parking areas and truck staging areas are also anticipated. This would accommodate employee parking and provide areas for the transfer of air cargo from the planes to ground vehicles for delivery and distribution. An additional 80,200 square yards of apron area are projected to accommodate aircraft parking. While the existing air freight building (which primarily accommodates the needs of passenger airline belly freight) is anticipated to be adequate through the planning period, an additional 27,200 square feet of space is projected for the air mail facility.

While a requirement for additional air mail processing area has been projected by the Master Plan, expansion of the air mail facility would be at the discretion







LEGEND

-  Airport Property Line
-  Lease Line
-  Runway Pavement Eliminated
-  Ultimate Runway Protection Zone
-  Intermediate Term
-  Long Term


SHORT TERM PLANNING HORIZON

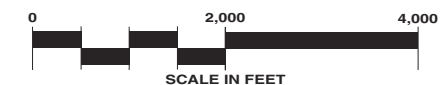
No Short Term Airfield Projects Proposed

INTERMEDIATE PLANNING HORIZON

-  Close/Remove Runway 17-35
-  Connecting Taxiway Between C & D
-  Extend Runway 3-21 1,000 feet Southeast
-  Taxiway Exit on Runway 3-21

LONG RANGE PLANNING HORIZON

-  Eastside Partial Parallel Taxiway



DATE OF PHOTO: 9-30-99



	AVAILABLE	CURRENT	SHORT TERM	INTERMEDIATE	LONG RANGE
 <p>APRON (sq. yds.)</p>	89,700	60,100	75,500	93,900	169,900
 <p>CARGO BUILDING (sq. ft.)</p>	52,000	75,770	108,000	143,000	302,000
 <p>TRUCK DOCKS</p>	30	23	32	43	91
 <p>TRUCK STAGING/AUTO PARKING (sq. yds.)</p>	25,000	42,000	60,000	80,000	168,000
 <p>AIR MAIL FACILITY (sq. ft.)</p>	49,800	24,000	32,000	43,000	77,000
 <p>AIR FREIGHT (Belly Haul) (sq. ft.)</p>	39,900	ADEQUATE THROUGH PLANNING PERIOD.			



of the United States Postal Service (USPS). This Master Plan assumes any expansion would be contiguous with the existing air mail facility, which is planned to remain in its existing location.

The passenger airlines' air freight building, located west of the passenger terminal building, is planned to be replaced at the west end of the apron at the terminus of Yale Boulevard. The existing building accommodating the administrative and operations activities for the airline refueling contractor is planned to be removed to accommodate the new air freight building.

A second air freight building is planned near Gibson Boulevard with road access from Girard Boulevard. This building would be located near the end of the existing Runway 17-35 alignment, parallel with Gibson Boulevard. This air freight building is planned to serve the scheduled air carriers using the planned second terminal building.

The primary air cargo facility used by the all-cargo carriers is located west of Runway 3-21, south of Runway 8-26, along Spirit Drive.

The plan for accommodating air cargo activity at Albuquerque International Sunport is shown on [Exhibit ES-7](#). The plan builds upon the investments made in the existing air cargo facilities to accommodate future demand. The existing air cargo area is expanded to the north and south to accommodate apron, building, truck courts, and automobile parking areas.

Prior to extending the apron to the north, two existing T-hangar facilities and four airport maintenance buildings would need to be removed. The T-hangar facilities are planned to be relocated to the western portion of the general aviation area as shown on [Exhibit ES-7](#). The airport maintenance facilities would be replaced east of Runway 3-21.

The southern air cargo area would be linked to the existing air cargo facility by a roadway extending parallel to the air cargo apron.

GENERAL AVIATION

[Exhibit ES-8](#) summarizes the projected general aviation facility needs for Albuquerque International Sunport. As shown in the table, the requirements analysis determined that existing general aviation facilities could be expected to accommodate projected general aviation demand through at least the intermediate term planning horizon demand levels. At long term planning horizon demand levels, the Master Plan projected a need for an additional 40,300 square feet of conventional hangar space and 9,000 square feet of terminal building space.

While the existing hangar space appears to be adequate, the facility requirements analysis did indicate the need for hangar facilities to more adequately accommodate the tail heights of common business class aircraft utilizing Albuquerque International Sunport.

It is the policy of the Aviation Department to encourage the use of Double Eagle II Airport by general aviation. Double Eagle II Airport was specifically constructed to serve as a general aviation reliever airport for Albuquerque International Sunport.

The Aviation Department policy should not be viewed as diminishing the role of general aviation at Albuquerque International Sunport. General aviation services will be needed, and are planned, for the foreseeable future at Albuquerque International Sunport. There is a segment of general aviation, particularly business-class aircraft, that use Albuquerque International Sunport because of the capabilities of the airfield system at Albuquerque International Sunport and the general aviation services provided at the airport.

The general aviation facility requirements for Albuquerque International Sunport recognize that any significant growth in general aviation beyond the capabilities of the existing general aviation area will be accommodated at Double Eagle II Airport or other general aviation airports.

The recommended plan for accommodating general aviation activity at Albuquerque International Sunport is shown on [Exhibit ES-9](#). The plan considers opportunities for new conventional hangar development within the existing general aviation area to serve business aircraft use of the airport. This includes two potential hangar areas along the existing apron area and a hangar development parcel along Taxiway E1.

The recommended general aviation plan reserves areas for the relocation of the existing T-hangar facilities. Relocation of the T-hangar facilities will be required prior to expansion of the air cargo apron to the north.

PASSENGER TERMINAL

The existing airline passenger terminal has a gross area of 596,000 square feet. The evaluations indicated that the current building could accommodate over 3.6 million annual enplaned passengers.

At the short term planning horizon of 3.9 million enplaned passengers, 601,000 square feet will be required. At the intermediate term planning horizon of 9.4 million total annual passengers, a single terminal of 722,000 square feet will be required. At the long term planning horizon of 7.1 million annual enplanements, a single terminal of 893,000 square feet will be required. (See [Exhibit ES-10](#).)

These figures reflect the continued expansion of a single consolidated terminal facility. If a second separate terminal is constructed, then the facilities requirements could be 20 to 40 percent larger due to plan layout and duplication of required facilities (i.e. general circulation, concessions, etc).

Following a broader search that considered replacement locations for the passenger terminal, the terminal alternatives analysis came to focus on options at the existing location in the northwest quadrant of the airport. As it became evident that the existing

SHORT TERM PLANNING HORIZON

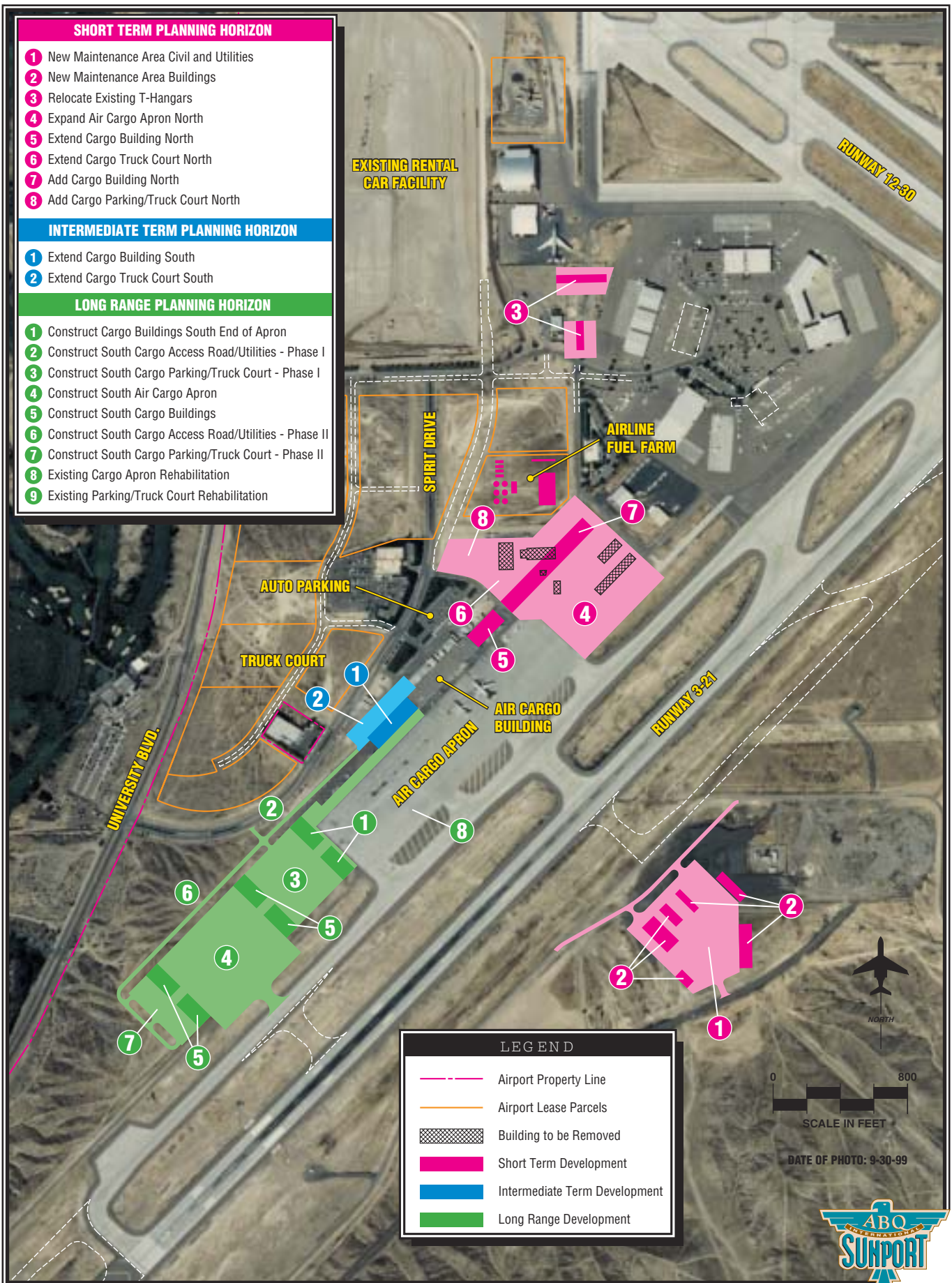
- 1 New Maintenance Area Civil and Utilities
- 2 New Maintenance Area Buildings
- 3 Relocate Existing T-Hangars
- 4 Expand Air Cargo Apron North
- 5 Extend Cargo Building North
- 6 Extend Cargo Truck Court North
- 7 Add Cargo Building North
- 8 Add Cargo Parking/Truck Court North

INTERMEDIATE TERM PLANNING HORIZON

- 1 Extend Cargo Building South
- 2 Extend Cargo Truck Court South

LONG RANGE PLANNING HORIZON

- 1 Construct Cargo Buildings South End of Apron
- 2 Construct South Cargo Access Road/Utilities - Phase I
- 3 Construct South Cargo Parking/Truck Court - Phase I
- 4 Construct South Air Cargo Apron
- 5 Construct South Cargo Buildings
- 6 Construct South Cargo Access Road/Utilities - Phase II
- 7 Construct South Cargo Parking/Truck Court - Phase II
- 8 Existing Cargo Apron Rehabilitation
- 9 Existing Parking/Truck Court Rehabilitation







LEGEND

- Airport Property Line
- Airport Lease Parcels
- Building to be Removed
- Short Term Development
- Intermediate Term Development
- Long Range Development

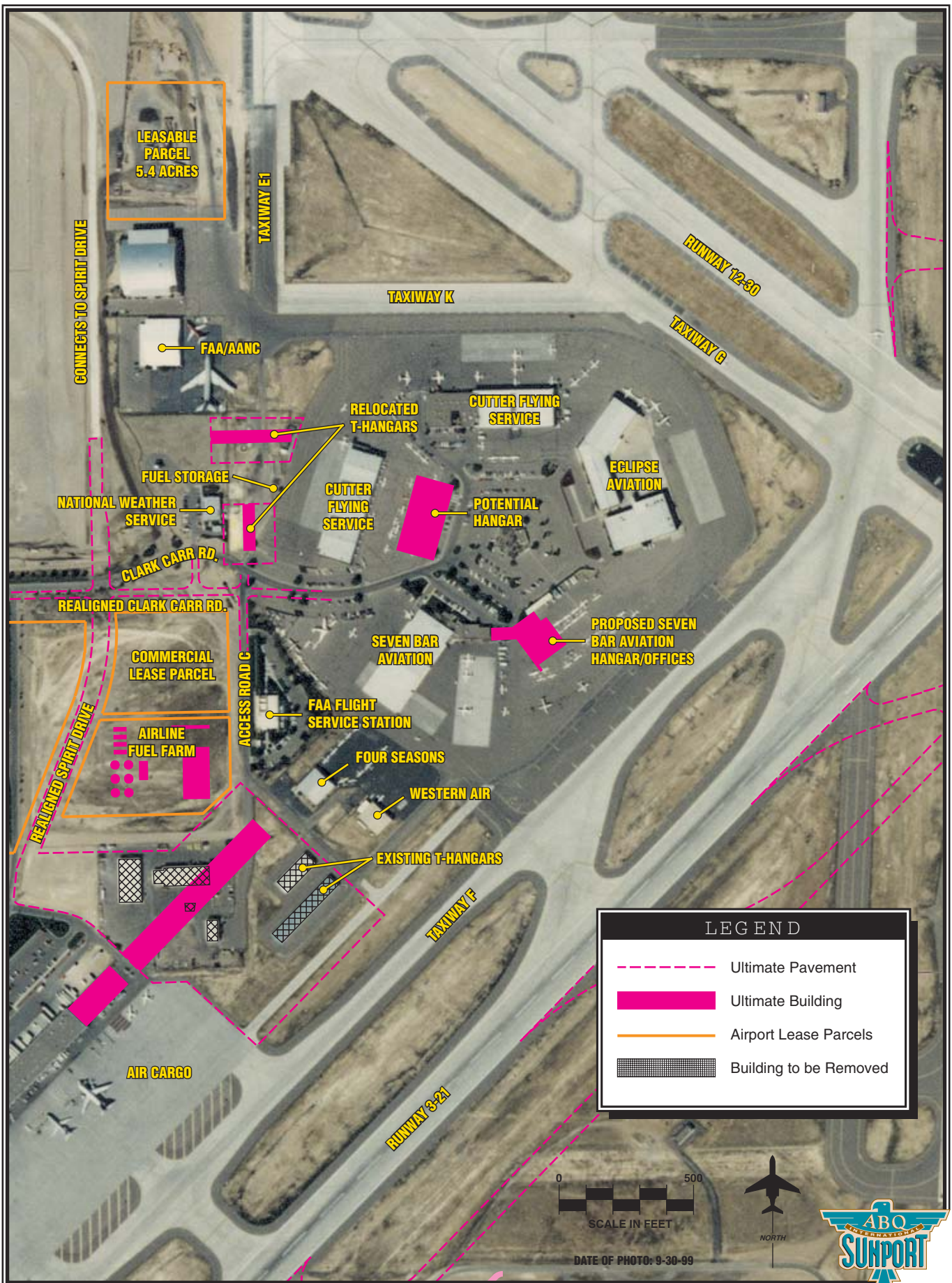


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	Available	Current	Short Term	Intermediate	Long Range
 <p>Conventional Hangars (sq. ft.) 281,700 Positions 150±</p>	184,000 116	222,000 128	244,000 138	322,000 172	
 <p>Parking Apron (sq. yds.) 126,500 Transient Positions 100± Local Positions 140</p>	79,800 62 111	88,100 69 119	93,900 75 124	111,900 91 141	
 <p>Terminal/Office Space (sq. ft.) 55,000</p>	37,000	44,000	49,000	64,000	
 <p>Public Parking Area (sq. ft.) 300,000 Parking Spaces 953</p>	65,000 184	78,000 222	86,000 244	113,000 322	





		ENPLANEMENT HORIZONS (millions)			
CATEGORY	AVAILABLE	3.9	4.7	7.1	
Airline Counter/Office					
 Counter Length (l.f.)	298	298	347	430	
Counter Area (s.f.)	3,000	3,000	3,500	4,300	
Ticket Queue (s.f.)	9,724	5,500	6,400	8,000	
Ticket Lobby (s.f.)	7,740	7,500	8,100	10,800	
Office Area (s.f.)	14,235	8,900	10,400	12,900	
Bag Make-up (s.f.)	17,900	17,900	20,900	25,800	
Security Processing					
 Stations	4	5	6	7	
Security Area (s.f.)	1,920	2,300	2,800	3,400	
Security Offices (s.f.)	300	500	600	700	
Baggage Claim					
 Devices	8	9	11	13	
Claim Display (l.f.)	934	1,137	1,329	1,576	
Claim Lobby (s.f.)	28,908	24,100	34,200	40,500	
Circulation (s.f.)	10,800	10,800	12,800	15,100	
Bag Input (s.f.)	9,300	9,300	11,000	13,000	
Baggage Service Offices (s.f.)	2,340	2,400	2,800	3,300	
Concourse/Gates					
 MAJORS					
Gates	23	24	31	44	
Hold Room Area (s.f.)	49,000	45,500	60,600	85,600	
Circulation (s.f.)	23,600	22,900	30,800	43,700	
Airline Operations (s.f.)	15,515	15,100	20,200	28,700	
COMMUTER					
Hold Room Area (s.f.)	7,653	1,900	2,200	3,000	
Airline Operations (s.f.)	7,170	700	800	1,200	
Public Spaces					
 Restrooms (s.f.)	14,000	14,000	28,200	31,300	
Concessions (s.f.)	75,441	78,090	91,972	112,920	
Gross Terminal Area					
 Program Area (s.f.)	579,000	584,000	700,500	867,000	
Gross Building Area (s.f.)	596,000	601,000	722,000	893,000	



terminal building could not be sufficiently expanded to meet long term ticketing, bag claim, and access roadway requirements, the options concentrated on evaluating: 1) the development of a second terminal to work in conjunction with the existing terminal; or 2) the development of a new, larger central terminal on the site.

As shown on **Exhibit ES-11**, two concepts for each alternative were considered. The central terminal concepts (1A and 1B) involved placement of the new terminal, while the second terminal concepts (2A and 2B) differed in the layout of the access road systems.

Alternative 2B is the preferred terminal area development alternative. Unlike Alternatives 1A and 1B, Alternative 2B maximizes the use of the existing terminal building and departure concourse. This preserves the existing terminal infrastructure development as well as public and private investments inside the building. While this alternative duplicates ticketing and baggage claim functions in the second unit terminal, it allows for the continued use of the existing terminal building. Alternatives 1A and 1B would have replaced these functions in a new, central terminal building. This would have rendered a large portion of the existing terminal unusable, requiring additional costs to modify the structure for alternative uses or to be removed.

This alternative also provides development and phasing opportunities which do not impact the operation or use of the existing terminal building and departure concourse. Since

Alternative 2B focuses on new terminal development northeast of the existing terminal building, in an area currently not in use, Alternative 2B can be implemented with little or no impacts on the operation of the existing terminal building. Alternatives 1A and 2A would impact the existing parking structure.

Exhibit ES-12 depicts the proposed terminal program. It is important to note that the new unit terminal is an addition alongside the existing terminal. It is not a replacement for the existing terminal. In fact, one of the key factors in the selection of the unit terminal over the central terminal was that the unit terminal will continue to maximize the use of the existing terminal infrastructure.

The passenger terminal has been undergoing several modifications in the months since the events of September 11, 2001. Security has been increased, putting an even greater strain on the security checkpoint in the terminal. Modifications are underway in this area, as well as throughout the terminal, to upgrade security and maintain the capacity of the facility. While they will be incorporated into future terminal design, they are being implemented separately from the long range terminal plan.

Still, the initial terminal recommendations are to focus on maintaining and modifying the existing terminal building to meet the short term needs of the airport. This will involve apron rehabilitation and improvements to add more space for gates at the existing concourses.

Additions to Concourses A and B and an extension to the west of Concourse B will allow for re-spacing existing aircraft gates plus adding three new B737-700 equivalent gates.

An addition to the east end of the main terminal will provide more space for baggage claim and ticketing facilities including all circulation, concessions, airport and airline support space, vertical circulation elements (elevators and stairs), building services, airport special systems, and baggage handling space.

The intent of the improvements in the existing terminal is to maximize the use and efficiency of the terminal and delay the need for the second terminal.

Once the current terminal has been optimized, the focus will then turn to development of the second unit terminal.

The aircraft parking apron and dual taxilane circulation will be developed on the east side of the terminal and between the concourses. Dual taxilanes running north-south from Taxiway A will provide ingress and egress to the second terminal. Parallel Taxiway D will be incorporated into this system as the outboard taxilane. The inboard taxilane will be a ramp taxiway.

The new unit terminal will be able to operate independently of the existing terminal but will still have the capability for a public interface between the terminals. These elevated enclosed

walkways will connect between terminals, concourses, and parking structures.

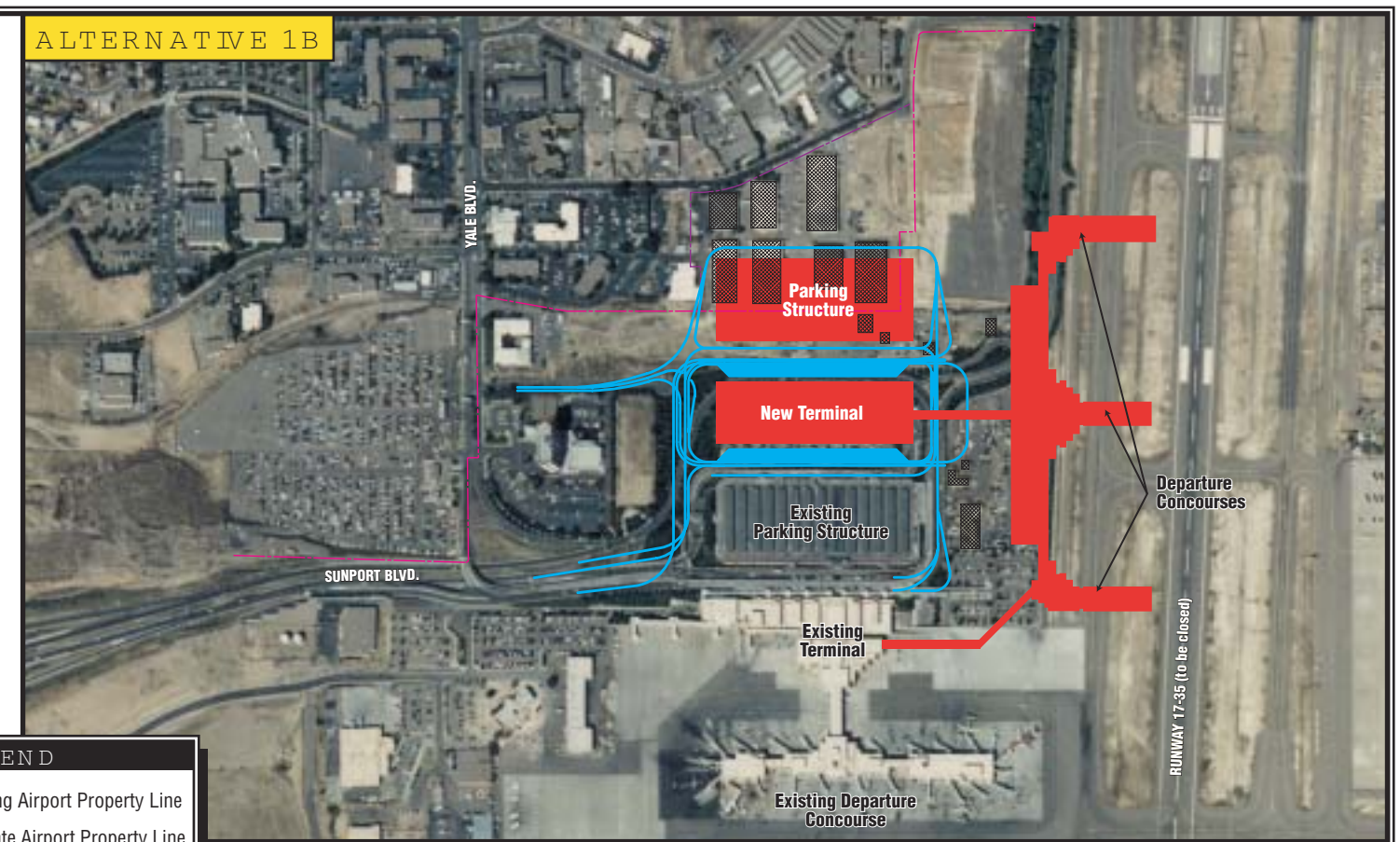
The second unit terminal will also be capable of accommodating Federal Inspection Services (F.I.S.) processing facilities.

The second terminal will require a major change in the access loop system in the terminal area. The new roadway plan, however, will allow the airport to continue to utilize the same access corridors to Sunport, Yale, and Girard Boulevards. In the terminal area, the roadway systems will allow vehicles to bypass one of the terminals or go between both terminals.

The terminal curb length available will be increased with the addition of the second terminal. Curbfront will be available on both the upper and lower levels as it is with the existing terminal. Additional lane capability will be built into the second terminal design to avoid the limitations that currently face the existing terminal.

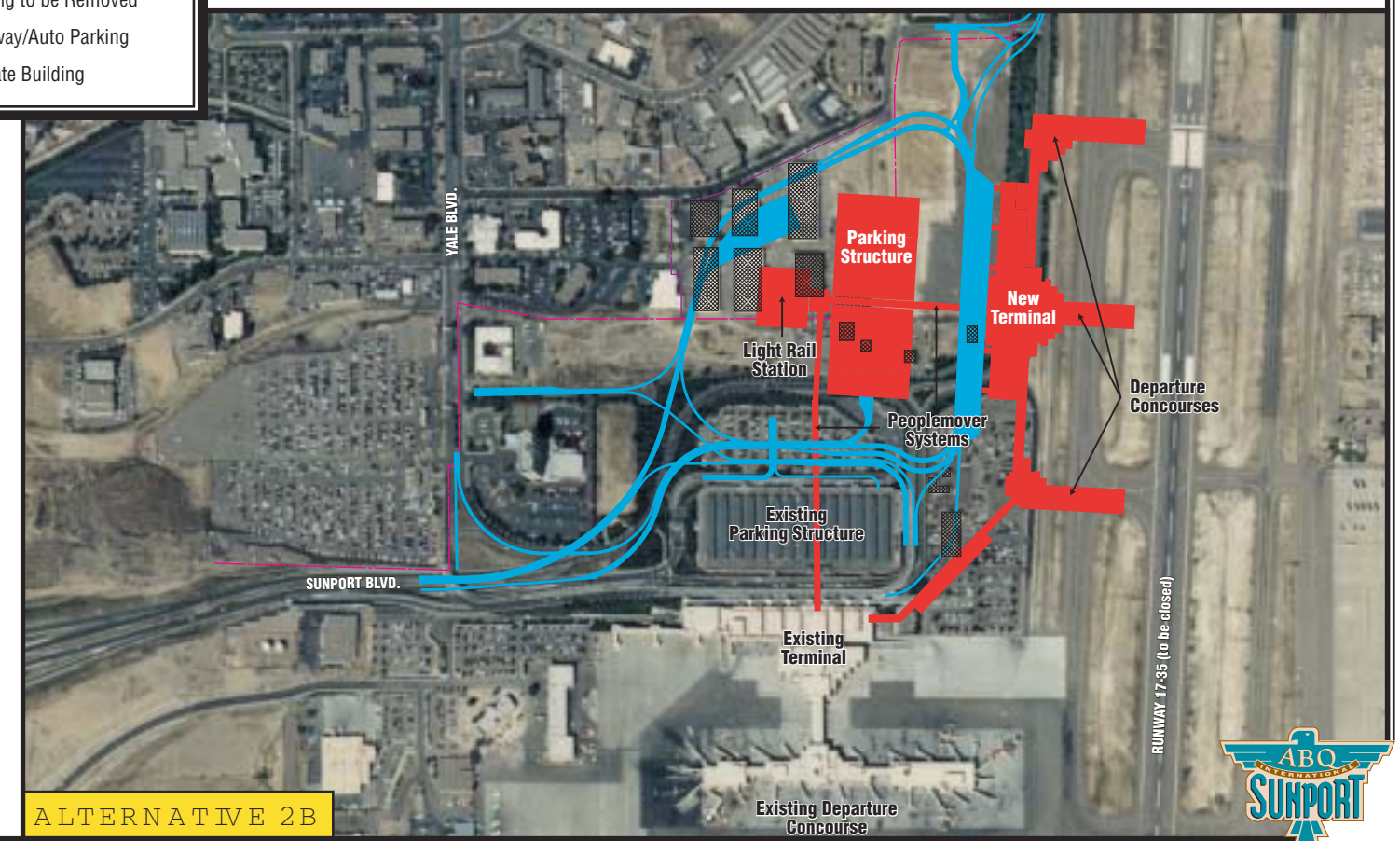
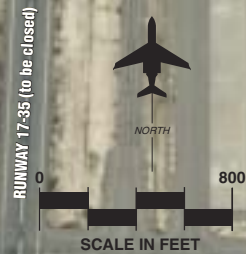
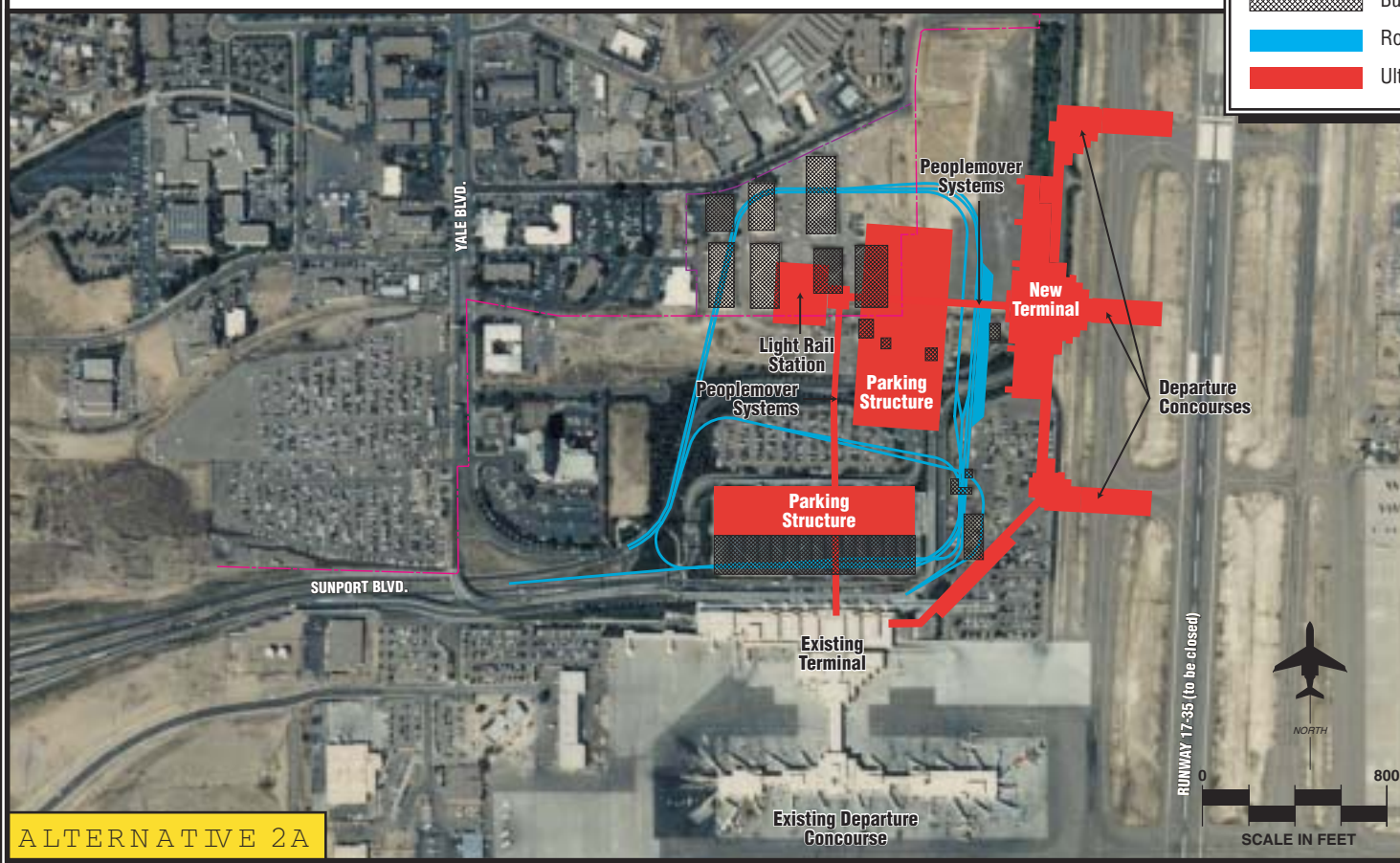
A second parking structure adjacent to the second terminal will provide for additional on-airport parking as passenger traffic grows.

A regional transit center for interface with the potential light rail system is included in the plan as well. To connect the transit center with the terminals, a peplemover system utilizing automated vehicles is allowed for in the plan.



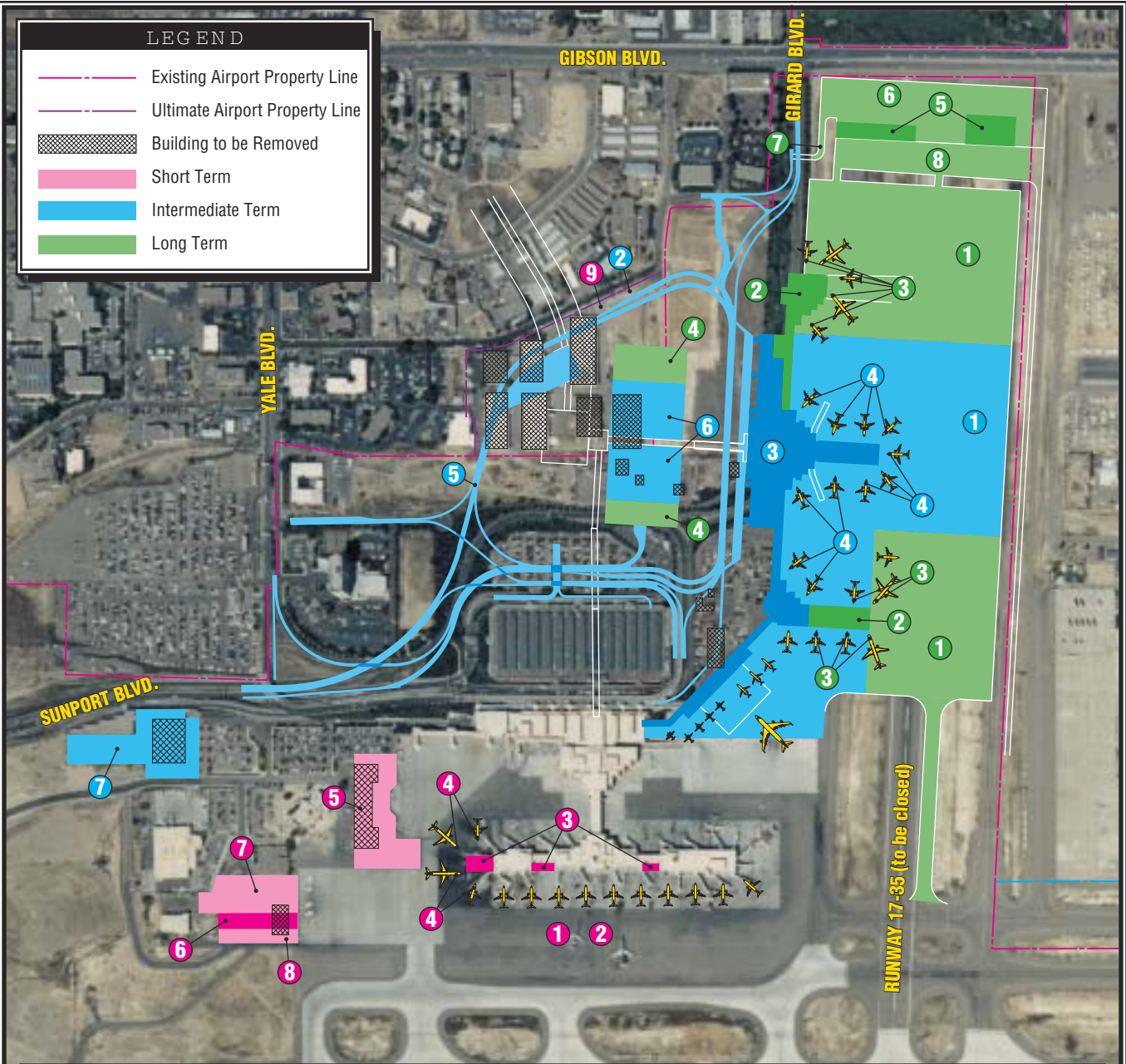
LEGEND

- Existing Airport Property Line (dashed pink line)
- Ultimate Airport Property Line (dashed purple line)
- Building to be Removed (hatched pattern)
- Roadway/Auto Parking (blue fill)
- Ultimate Building (red fill)



LEGEND

- Existing Airport Property Line
- Ultimate Airport Property Line
- Building to be Removed
- Short Term
- Intermediate Term
- Long Term



SHORT TERM PLANNING HORIZON	
1	Terminal Apron Rehabilitation
2	Terminal Apron Improvements
3	Existing Terminal and Concourse Projects
4	Aircraft Loading Bridge Systems
5	Remove Existing Belly Freight Facility
6	Construct Belly Freight Building
7	Construct Belly Freight Parking/Truck Court
8	Construct Belly Freight Airside Access
9	Terminal Area Property Acquisition

INTERMEDIATE PLANNING HORIZON	
1	Second Terminal Apron
2	Terminal Area Property Acquisition
3	Second Terminal and Concourse - Phase I
4	Second Terminal Loading Bridges - Phase I
5	Second Terminal Road System
6	Second Terminal Parking - Phase I
7	Expand Employee Parking

LONG RANGE PLANNING HORIZON	
1	Second Terminal Apron - Phase II
2	Second Terminal Concourse - Phase II
3	Second Terminal Loading Bridges - Phase II
4	Second Terminal Parking - Phase II
5	Construct North Belly Freight Building
6	Construct North Belly Freight Parking/Truck Court
7	Construct North Belly Freight Access Road
8	Construct North Belly Freight Airside Access

