
CHAPTER ONE

# INVENTORY

# Eric Marcus Municipal Airport

Ajo, Arizona

Airport Master Plan

Chapter One

# Inventory

The initial step in the preparation of the airport master plan for Eric Marcus Municipal Airport (P01) is the collection of information pertaining to the airport and the area it serves. The information summarized in this chapter will be used in subsequent analyses in this study. It includes:

- Physical inventories and descriptions of the facilities and services currently provided at the airport, including the regional airspace, air traffic control, and aircraft operating procedures.
- Background information pertaining to Pima County and the Ajo community, including descriptions of the regional climate, surface transportation systems, Eric Marcus Municipal Airport's role in the regional, state, and national aviation systems, and development that has taken place recently at the airport.
- Population and other significant socioeconomic data which can provide an indication of future trends that could influence aviation activity at the airport.
- A review of existing local and regional plans and studies to determine their potential influence on the development and implementation of the airport master plan.

The information in this chapter was obtained from several sources, including on-site inspections, interviews with County staff and airport tenants, airport records, related studies, the Federal Aviation Administration (FAA) and a number of internet sites.

A complete listing of the data sources is provided at the end of this chapter.

## *AIRPORT SETTING*

Eric Marcus Municipal Airport is located approximately five miles north of downtown Ajo on Arizona Highway 85, as illustrated on **Exhibit 1A**. Eric Marcus Municipal Airport is situated on 1,375 acres at 1,458 feet above mean sea level (MSL) and serves as one of four general aviation public-use airport facilities in Pima County. Tucson International Airport, Ryan Airfield, and Marana Regional Airport all serve the Tucson metropolitan area and eastern Pima County, while Eric Marcus Municipal Airport serves the western portion of the County.

Pima County encompasses approximately 9,189 square miles of southern Arizona. The western portion of the county is sparsely populated with the largest communities including Sells and Ajo. The most recent census of the unincorporated Ajo community is from the 2000 U.S. Census Report, which indicated a total population of 3,705. Ajo is located approximately 43 miles north of the Mexican border and 18 miles north of the Organ Pipe Cactus National Monument. The 517 square mile national monument area features a variety of cacti and other Sonoran Desert vegetation and wildlife. Annual visitation of the national monument in 2007 totaled 338,603. Pima County contains the San Xavier Indian Reservation and the majority of the Tohono O'odham National Native American Reservation.

## *OWNERSHIP AND MANAGEMENT*

Eric Marcus Municipal Airport is owned, operated, and maintained by Pima County Department of Transportation, Real Property Division. Administrative duties and management of the airport is conducted offsite at the Department of Real Property offices in downtown Tucson. Airport maintenance duties are conducted by Pima County Department of Transportation personnel.

## *AIRPORT DEVELOPMENT HISTORY*

Eric Marcus Municipal Airport began as the Ajo Army Air Field during World War II. Throughout the war it served as a flying and fixed gunnery training facility for American fighter pilots. Between 1942 and 1946, jurisdiction of the base fluctuated between Williams Field and Luke Field, two larger Army Air Fields located near Phoenix. The Air Field remained a sub-base of Williams Field until 1949 when it was acquired by Pima County through quitclaim deed from the U.S. government. The original base layout, including runway configuration as well as building pads and access roads, are still in existence today. Of the three original runways, only the northwest/southeast runway (Runway 12-30) remains active. The Air Field included approximately 85,000 square yards of aircraft parking apron, of which only a small portion is currently used. During its peak wartime opera-

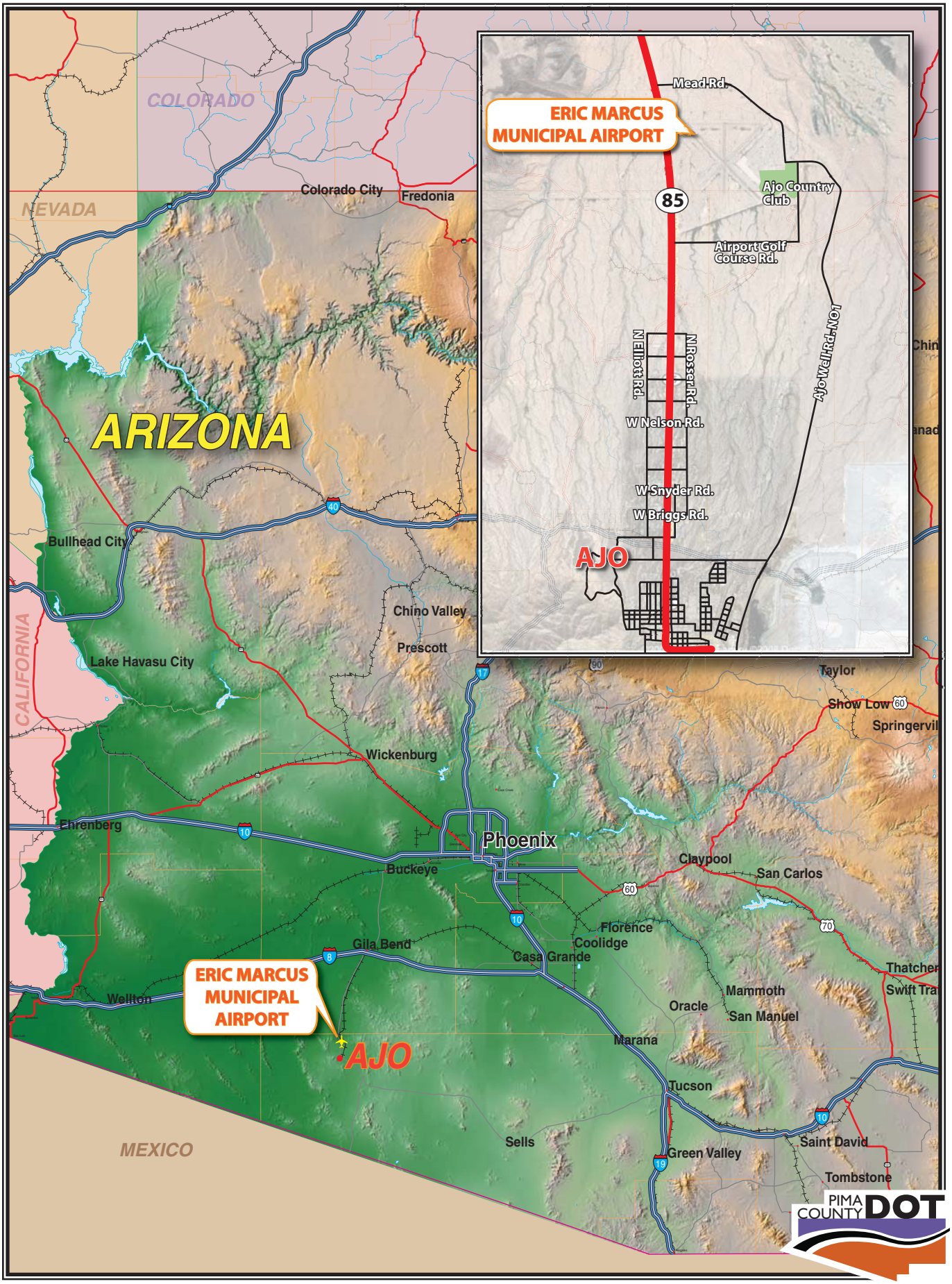


Exhibit 1A
AIRPORT LOCATION

tions, the base had 117 buildings, of which all but those used for the neighboring golf course clubhouse have been removed. Utility systems such as water, sewer, and electrical were initially left in place; however, little is known as to their present existence, condition, and location.

## GRANT HISTORY

To assist in funding capital improvements, the FAA has provided funding assistance to Eric Marcus Municipal Airport through the Airport Improvement Program (AIP). The AIP is funded through the Aviation Trust Fund, which was established in 1970 to provide funding for aviation capital investment programs (aviation development, facilities and equipment, and research and development). The Trust Fund also finances a portion of the operation of the FAA. It is funded by user fees, taxes on airline tickets, aviation fuel, and various aircraft parts.

**Table 1A** summarizes more than $564,000 in FAA AIP and ADOT grants received by Pima County for use on projects at Eric Marcus Municipal Airport in recent years.

**TABLE 1A**
**Recent AIP & ADOT Grants for Eric Marcus Municipal Airport**

| AIP Grant Number | ADOT Grant Number | Project Description | Total Grant Funds |
|---|---|---|---|
| 03-04-0001-01 | 2F45 | Install Perimeter Fencing | $157,363 |
| 03-04-0001-02 | 4F34 | Rehabilitate Taxiway, Install Apron Lighting, Improve Access Road | $272,595 |
| N/A | 7S28 | Master Plan Update | $135,000 |
| Total Grant Funds | | | $564,958 |

Source: Airport Records

## THE AIRPORT'S SYSTEM ROLE

Airport planning exists on many levels: local, regional, state, and national. Each level has a different emphasis and purpose. This master plan is the primary local airport planning document.

The previous *Ajo Municipal Airport Master Plan* was approved in 1999. Primary recommendations included a 1,700-foot extension to Runway 12-30 for a total length of 5,500 and a new full-length parallel taxiway for Runway 12-30. Additionally, it was recommended that deactivated Runway 5-23 be reactivated and repaved for use as a crosswind runway. A full-length parallel taxiway was also recommended for Runway 5-23. Airfield lighting recommendations included the installation of medium intensity taxiway lights (MITL) to all existing and future taxiways and the installation of precision approach path indicator (PAPI) approach lighting systems to all runway ends. Landside development recommendations included a general aviation terminal building, fixed base operator (FBO) and hangar development sites, fuel-storage farm,

and expansion of aircraft aprons and auto parking facilities. Since the last master plan, PAPI-2 approach lighting systems were installed on both runway ends.

At the regional level, Eric Marcus Municipal Airport (Ajo Municipal Airport) was included in the Pima County Association of Governments (PAG) *Regional Aviation System Plan* (RASP), which was prepared in 2002. The purpose of the RASP is to provide a 30-year outlook for the airport, aviation, and air transportation needs of Pima County. The RASP provides a general assessment of aviation needs within the System and serves as a blueprint for future airport master planning undertaken for airports in the Regional System. According to the RASP, Eric Marcus Municipal Airport is classified as a Level II, or support airport in the region. Eric Marcus Municipal Airport was rated as the second least important airport in regards to meeting general aviation needs in the region.

At the state level, Eric Marcus Municipal Airport is included in the *Arizona State Aviation System Plan* (SASP). The purpose of the SASP is to ensure that the State has an adequate and efficient system of airports to serve its aviation needs. The SASP defines the specific role of each airport in the State's aviation system and establishes funding needs. Through the State's continuous aviation system planning process, the SASP is updated every five years. The most recent update to the SASP was in 2000, when the *State Aviation Needs Study* (SANS) was prepared. The SANS provides policy guidelines that promote and maintain a safe aviation system in the State, assess the State's airports' capital improvement needs, and identify resources and strategies to implement the plan. Eric Marcus Municipal Airport (then known as Ajo Municipal Airport) is one of 112 airports in the 2000 SANS, which includes all airports and heliports in Arizona that are open to the public, including American Indian and recreational airports. The SANS classifies Eric Marcus Municipal Airport as a general aviation community airport.

At the national level, Eric Marcus Municipal Airport is a part of the FAA's *National Plan of Integrated Airport Systems* (NPIAS). Inclusion within the NPIAS is required to be eligible for Federal Airport Improvement Program (AIP) funding. Eric Marcus Municipal Airport is classified as a general aviation (GA) airport in the NPIAS. There are 3,489 existing and proposed airports included in the NPIAS. Eric Marcus Municipal Airport is one of 59 NPIAS Arizona airports, and one of 39 of the State's airports with a GA classification.

## *AIRPORT FACILITIES*

Airport facilities can be functionally classified into two broad categories: airside and landside. The airside category includes those facilities directly associated with aircraft operations. The landside category includes those facilities necessary to provide a safe transition from surface to air transportation and support aircraft servic-

ing, storage, maintenance, and operational safety.

## AIRSIDE FACILITIES

Airside facilities include runways, taxiways, airfield lighting, and navigational aids. Airside facilities are identified on **Exhibit 1B**. **Table 1B** summarizes airside facility data.

### Runway

Eric Marcus Municipal Airport is served by a single asphalt Runway 12-30 that measures 3,800 feet long and 60 feet wide. Runway 12-30 is oriented northwest-southeast and has a strength rating of 12,000 pounds single wheel loading (SWL). SWL refers to aircraft with a single wheel on each main landing gear. The runway slopes from its low point at 1,411 feet MSL on the northwest end, to its 1,445 feet MSL high point on the southeast end. Thus, the runway gradient (elevation difference between runway high and low points divided by the length of the runway) is 0.9 percent.

**TABLE 1B**
**Airside Facility Data**
**Eric Marcus Municipal Airport**

| | Runway 12-30 | |
|---|---|---|
| Length (ft.) | 3,800 | |
| Width (ft.) | 60 | |
| Surface Material | Asphalt | |
| Load Bearing Strength (lbs.)<br>Single Wheel Loading (SWL) | 12,000 | |
| Instrument Approach Procedures | None | |
| Runway Edge Lighting | Medium Intensity | |
| Pavement Markings | Basic | |
| Taxiway Edge Lighting | Delineators | |
| Approach Aids | **Rwy 12** | **Rwy 30** |
| Global Positioning System (GPS) | Yes | Yes |
| Precision Approach Path Indicators (PAPI) | Yes | Yes |
| Runway End Identifier Lights | No | No |
| Approach Lighting System | No | No |
| End Elevation (ft.) | 1,411 | 1,445 |
| Fixed-Wing Aircraft Traffic Pattern | Left | Left |
| Weather or Navigational Aids | Segmented Circle; Lighted Wind Cone; Rotating Beacon | |

Source: 5010 Airport Master Record

### Taxiways

The runway is served by two entrance/exit taxiways (A1 and A2) that connect to the aircraft parking apron. Taxiway A1, which connects at the midpoint of Runway 12-30, has a width of 40 feet. Taxiway A2, which connects to the end of Runway 30, has a width of 30 feet. The runway does

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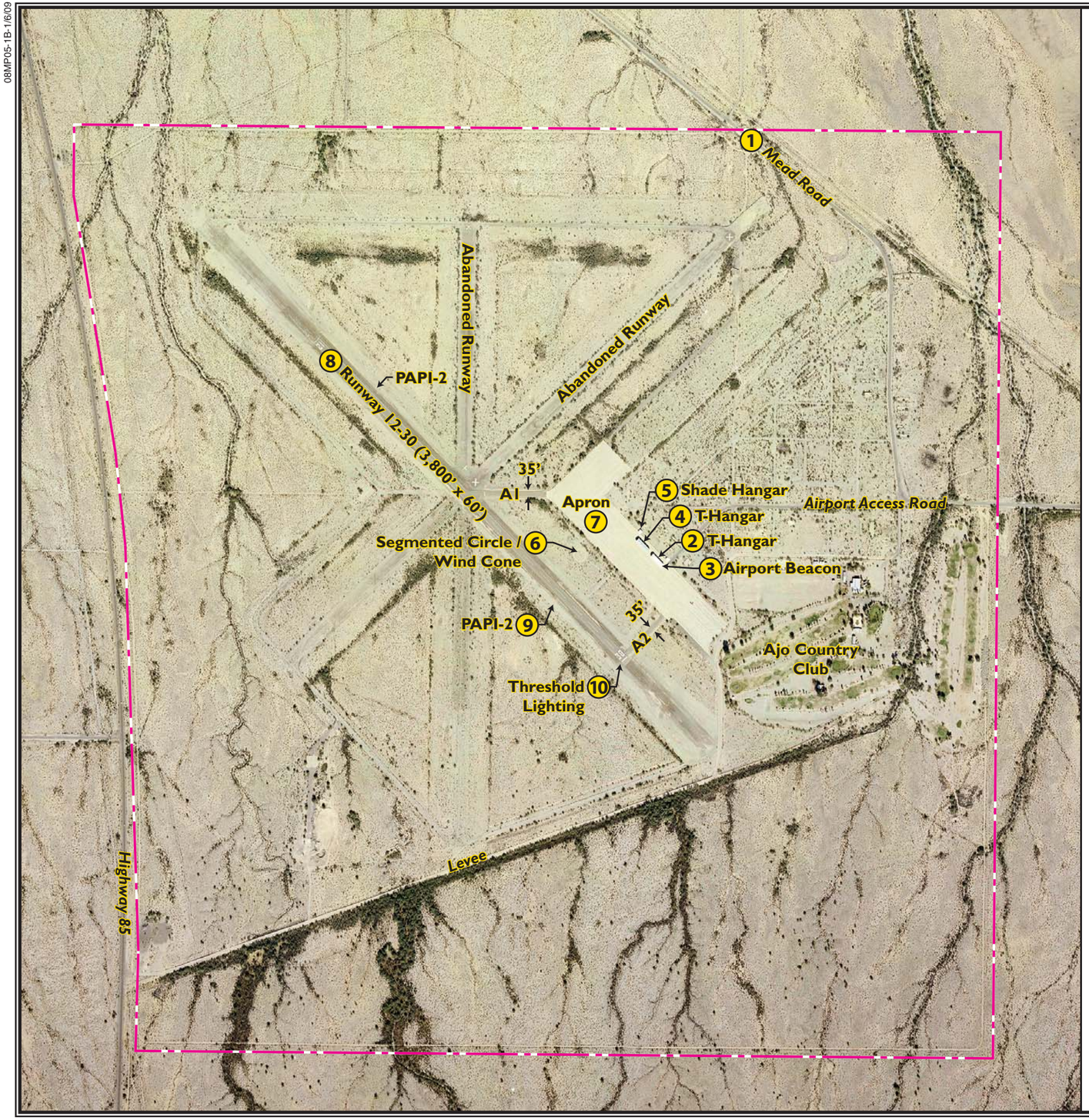


1 Mead Road

2 T-Hangar

3 Airport Beacon

4 T-Hangar

5 Shade Hangar

6 Segmented Circle/Wind Cone

7 Apron

8 Runway

9 PAPI-2

10 Threshold Lighting

Taxiway Edge Delineator

**LEGEND**

Airport Property Line

0 1000 2000

SCALE IN FEET

NORTH

PIMA COUNTY DOT

Exhibit 1B
AIRPORT FACILITIES

not have a full-length parallel taxiway; therefore, aircraft must back-taxi when departing on Runway 12. The taxiway edges on both taxiways are identified at night by delineators. Delineators are colored reflective markers resembling taxiway lighting. These reflective markers serve the same purpose as taxiway lights, but are illuminated by the landing lights of the aircraft.

**Pavement Condition**

As a condition of receiving federal funds for the development of the airport, the Federal Aviation Administration requires the airport sponsor receiving and/or requesting federal funds for pavement improvement projects to implement a pavement maintenance management program.

Part of the pavement maintenance management program is to develop a Pavement Condition Index (PCI) rating. The rating is based on the guidelines contained in FAA Advisory Circular 150/5380-6, *Guidelines and Procedures for Maintenance of Airport Pavements*.

The PCI procedure was developed to collect data that would provide engineers and managers with a numerical value indicating overall pavement conditions and that would reflect both pavement structural integrity and operational surface condition. A PCI survey is performed by measuring the amount and severity of certain distresses (defects) observed within a pavement sample unit.

In April 2006, a pavement inspection was conducted at Eric Marcus Municipal Airport by the Arizona Department of Transportation. Runway 12-30 received a PCI rating of 85 out of a possible 100. The runway was found to have light to moderate levels of longitudinal and transverse cracking. Taxiway A1 had a PCI rating of 77, Taxiway A2 had a PCI rating of 98, and the aircraft parking apron had a PCI rating of 58.

The Arizona Pavement Preservation Program (APPP), which provides pavement repair recommendations, lists Eric Marcus Municipal Airport as planned to receive funds to seal coat Runway 12-30, thin overlay Taxiway A1, and seal coat Taxiway A2 sometime between 2012 and 2015. It also lists the aircraft parking apron as pavement needing major rehabilitation.

**Airfield Lighting**

Airfield lighting systems extend an airport's usefulness into periods of darkness and/or poor visibility. A variety of lighting systems are installed at the airport and are summarized as follows.

**Identification Lighting:** The location of an airport at night is universally identified by a rotating beacon. A rotating beacon projects two beams of light, one white and one green, 180 degrees apart. Eric Marcus Municipal Airport's beacon is located on top of the southerly T-hangar facility, as shown on **Exhibit 1B**.

**Pavement Edge Lighting:** Pavement edge lighting utilizes light fixtures placed to define the lateral limits of the pavement. This lighting is essential for safe operations at night and/or times of low visibility in order to maintain safe and efficient access to and from the runway and aircraft parking areas. Runway 12-30 is equipped with medium intensity runway lighting (MIRL).

**Visual Approach Lighting:** Two-unit precision approach path indicators (PAPI-2s) are available for both runway approaches. The PAPIs provide approach path guidance by giving the pilot an indication of whether their approach is above, below, or on-path, through a pattern of red and white lights visible from the light units.

**Pilot-Controlled Lighting:** Airfield lighting systems can be controlled through a pilot-controlled lighting system (PCL). PCL allows pilots to turn on or increase the intensity of the airfield lighting systems from the aircraft with the use of the aircraft's radio transmitter. The Runway 12-30 MIRL and the PAPIs are connected to the PCL system at Eric Marcus Municipal Airport.

**Airfield Signs:** Airfield identification signs assist pilots in identifying their location on the airfield and directing them to their desired location. Eric Marcus Municipal Airport is not currently equipped with airfield signage.

## Pavement Markings

Pavement markings aid in the movement of aircraft along airport surfaces and identify closed or hazardous areas on the airport. Runway 12-30 is equipped with basic markings that identify the runway centerline, designation, and aircraft holding positions.

Taxiway and apron taxilane centerline markings are provided to assist aircraft using these airport surfaces. Centerline markings assist pilots in maintaining proper clearance from pavement edges and objects near the taxilane/taxiway edges. Pavement markings also identify aircraft parking positions.

Aircraft hold positions are marked at each runway/taxiway intersection. All hold position markings are located 125 feet from the runway centerline.

## Weather Reporting

Eric Marcus Municipal Airport is not equipped with a weather reporting system. Local weather information can be attained by contacting the Prescott Flight Service Station.

Eric Marcus Municipal Airport is equipped with a lighted wind cone and segmented circle. The wind cone provides wind direction and speed information to pilots. The segmented circle provides aircraft traffic pattern information. This equipment is located between the runway and the aircraft parking apron.

## Area Airspace and Air Traffic Control

The *Federal Aviation Administration* (FAA) *Act of 1958* established the FAA

as the responsible agency for the control and use of navigable airspace within the United States. The FAA has established the National Airspace System (NAS) to protect persons and property on the ground and to establish a safe and efficient airspace environment for civil, commercial, and military aviation. The NAS covers the common network of U.S. airspace, including air navigation facilities; airports and landing areas; aeronautical charts; associated rules, regulations, and procedures; technical information; and personnel and material. The system also includes components shared jointly with the military.

**Airspace Structure**

Airspace within the United States is broadly classified as either "controlled" or "uncontrolled." The difference between controlled and uncontrolled airspace relates primarily to requirements for pilot qualifications, ground-to-air communications, navigation and air traffic services, and weather conditions. Six classes of airspace have been designated in the United States, as shown on **Exhibit 1C**. Airspace designated as Class A, B, C, D, or E is considered controlled airspace. Aircraft operating within controlled airspace are subject to varying requirements for positive air traffic control. Airspace in the vicinity of Eric Marcus Municipal Airport is depicted on **Exhibit 1D**.

**Class A Airspace:** Class A airspace includes all airspace from 18,000 feet mean sea level (MSL) to flight level (FL) 600 (approximately 60,000 feet MSL). This airspace is designated in Federal Aviation Regulation (F.A.R.) Part 71.193 for positive control of aircraft. The Positive Control Area (PCA) allows flights governed only under instrument flight rules (IFR) operations. The aircraft must have special radio and navigation equipment, and the pilot must obtain clearance from an air traffic control (ATC) facility to enter Class A airspace. In addition, the pilot must possess an instrument rating.

**Class B Airspace:** Class B airspace has been designated around some of the country's major airports to separate arriving and departing aircraft. Class B airspace is designed to regulate the flow of uncontrolled traffic, above, around, and below the arrival and departure airspace required for high-performance, passenger-carrying aircraft at major airports. This airspace is the most restrictive controlled airspace routinely encountered by pilots operating under visual flight rules (VFR) in an uncontrolled environment. The nearest Class B airspace to Eric Marcus Municipal Airport is located at Phoenix Sky Harbor International Airport.

In order to fly within Class B airspace, an aircraft must be equipped with special radio and navigational equipment and must obtain clearance from air traffic control. To operate within the Class B airspace of Phoenix Sky Harbor International Airport, a pilot must have at least a private pilot's certificate or be a student pilot who has met the requirements of F.A.R. Part 61.95, which requires special ground and flight training for the

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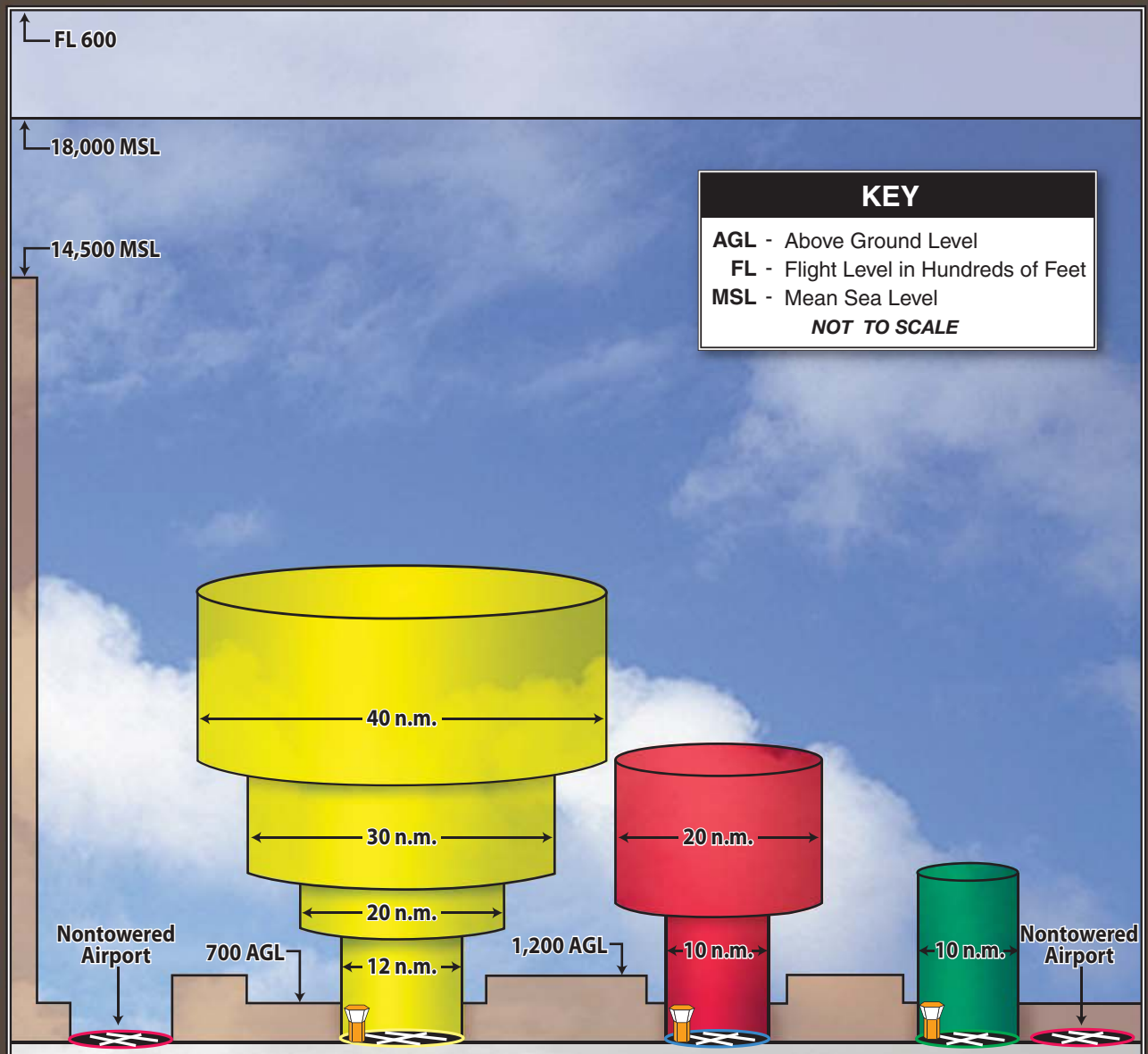


| CLASSIFICATION | DEFINITION |
|---|---|
| CLASS A | Generally airspace above 18,000 feet MSL up to and including FL 600. |
| CLASS B | Generally multi-layered airspace from the surface up to 10,000 feet MSL surrounding the nation's busiest airports. |
| CLASS C | Generally airspace from the surface to 4,000 feet AGL surrounding towered airports with service by radar approach control. |
| CLASS D | Generally airspace from the surface to 2,500 feet AGL surrounding towered airports. |
| CLASS E | Generally controlled airspace that is not Class A, Class B, Class C, or Class D. |
| CLASS G | Generally uncontrolled airspace that is not Class A, Class B, Class C, Class D, or Class E. |

Source: "Airspace Reclassification and Charting Changes for VFR Products," National Oceanic and Atmospheric Administration, National Ocean Service. Chart adapted by Coffman Associates from AOPA Pilot, January 1993.

Exhibit 1C
AIRSPACE CLASSIFICATION

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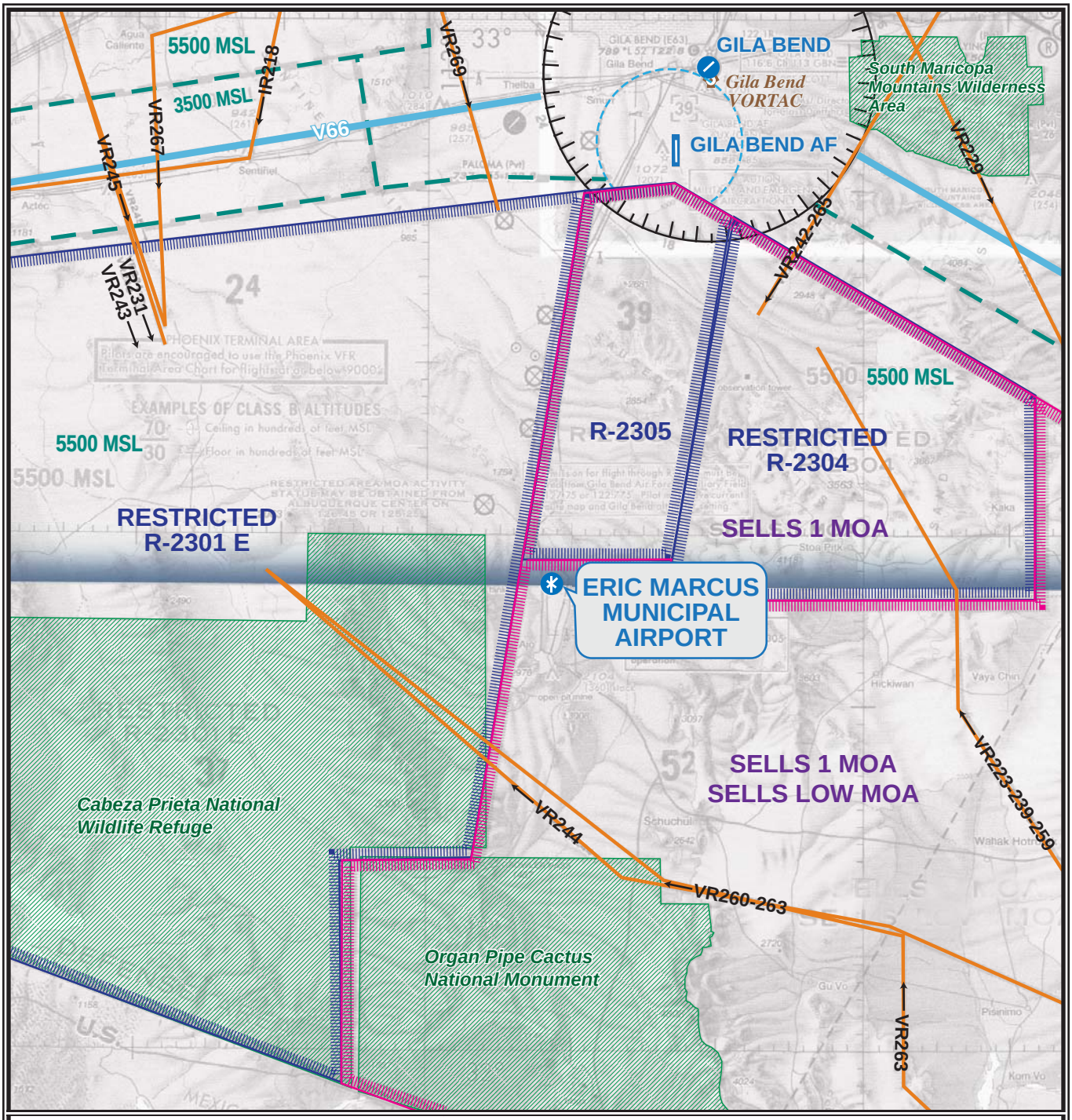


Airport with hard-surfaced runways 1,500' to 8,069' in length

VORTAC

Compass Rose

Victor Airways

Military Training Routes

Wilderness Area

Class D Airspace

Class E Airspace with floor 1200 ft. or greater above surface that abuts Class G Airspace

Differentiates floors of Class E airspace greater than 700' above surface

MOA - Military Operations Area

Prohibited, Restricted, Warning and Alert Areas

NORTH

NOT TO SCALE

PIMA COUNTY DOT

Source: Phoenix North Sectional Charts, Federal Aviation Administration, National Charting Office 7/31/08

Exhibit 1D
AIRPORT VICINITY AIRSPACE

Class B airspace. Helicopters do not need special navigation equipment or a transponder if they operate at or below 1,000 feet and have made prior arrangements in the form of a Letter of Agreement with the FAA controlling agency. Aircraft are also required to have and utilize a Mode C transponder within a 30-nautical-mile (nm) range of the center of the Class B airspace. A Mode C transponder allows the ATCT to track the location of the aircraft.

The Phoenix Terminal Radar Approach Control Facility (TRACON) controls all aircraft operating within the Phoenix Class B airspace. The TRACON operates 24 hours per day.

**Class C Airspace:** The FAA has established Class C airspace at 120 airports around the country as a means of regulating air traffic in these areas. Class C airspace is designed to regulate the flow of uncontrolled traffic above, around, and below the arrival and departure airspace required for high-performance, passenger-carrying aircraft at major airports. In order to fly inside Class C airspace, the aircraft must have a two-way radio, an encoding transponder, and have established communication with ATC. Aircraft may fly below the floor of the Class C airspace or above the Class C airspace ceiling without establishing communication with ATC. There is no Class C airspace in the vicinity of Eric Marcus Municipal Airport.

**Class D Airspace:** Class D airspace is controlled airspace surrounding airports with an airport traffic control tower (ATCT). The Class D airspace typically constitutes a cylinder with a horizontal radius of four or five nautical miles (nm) from the airport, extending from the surface up to a designated vertical limit, typically set at approximately 2,500 feet above the airport elevation. If an airport has an instrument approach or departure, the Class D airspace sometimes extends along the approach or departure path. The Gila Bend Air Force Auxiliary Airport located approximately 26 nautical miles north of the Eric Marcus Municipal Airport is a Class D airspace airport.

**Class E Airspace:** Class E airspace consists of controlled airspace designed to contain IFR operations near an airport and while aircraft are transitioning between the airport and enroute environments. Unless otherwise specified, Class E airspace terminates at the base of the overlying airspace. Only aircraft operating under IFR are required to be in contact with air traffic control when operating in Class E airspace. While aircraft conducting visual flights in Class E airspace are not required to be in radio communication with air traffic control facilities, visual flight can only be conducted if minimum visibility and cloud ceilings exist.

A boundary of Class E airspace with a floor of 5,500 feet MSL bisects Eric Marcus Municipal Airport. This airspace continues north, encompassing several restricted airspace areas. The south half of Eric Marcus Municipal Airport is in an area of Class E airspace with a floor of 700 feet MSL.

**Class G Airspace:** Airspace not designated as Class A, B, C, D, or E is considered uncontrolled, or Class G, airspace. Air traffic control does not have the authority or responsibility to exercise control over air traffic within this airspace. Class G airspace lies between the surface and the overlaying Class E airspace (700 to 1,200 feet above ground level [AGL]). Class G airspace extends below the floor of the Class E airspace at Eric Marcus Municipal Airport.

While aircraft may technically operate within Class G airspace without any contact with ATC, it is unlikely that many aircraft will operate this low to the ground. Furthermore, federal regulations specify minimum altitudes for flight. F.A.R. Part 91.119*, Minimum Safe Altitudes*, generally states that except when necessary for takeoff or landing, pilots must not operate an aircraft over any congested area of a city, town, or settlement, or over any open air assembly of persons, at an altitude of less than 1,000 feet above the highest obstacle within a horizontal radius of 2,000 feet of the aircraft. Over less congested areas, pilots must maintain an altitude of 500 feet above the surface, except over open water or sparsely populated areas. In those cases, the aircraft may not be operated closer than 500 feet to any person, vessel, vehicle, or structure. Finally, this section states that helicopters may be operated at less than the minimums prescribed above if the operation is conducted without hazard to persons or property on the surface. In addition, each person operating a helicopter shall comply with any routes or altitudes specifically prescribed for helicopters by the FAA.

**Special Use Airspace**

Special use airspace is defined as airspace where activities must be confined because of their nature or where limitations are imposed on aircraft not taking part in those activities. These areas are depicted on **Exhibit 1D** by blue and pink-hatched lines, as well as with the use of green shading.

**Military Operating Areas:** Military Operating Areas (MOAs) are depicted in **Exhibit 1D** with pink-hatched lines. Eric Marcus Municipal Airport is located within the boundaries of the Sells 1 and Sells Low MOA. The Sells 1 MOA has an operational altitude of 10,000 feet MSL and is active from 6:00 a.m. to 7:00 p.m. Monday through Friday. The Sells Low MOA has an operational altitude range from 3,000 feet AGL up to but not including 10,000 feet MSL and is active from 6:00 a.m. to 7:00 p.m. Monday through Friday. The Albuquerque Air Route Traffic Control Center (ARTCC) is the controlling agency for these MOAs.

**Military Training Routes:** Military training routes near Eric Marcus Municipal Airport are identified with the letters VR and a four-digit number or with IR and a three-digit number. The arrows on the route show the direction of travel. Military aircraft travel on these routes below 10,000 feet MSL and at speeds in excess of 250 knots.

**Wilderness Areas:** As depicted on **Exhibit 1D**, several wilderness areas exist around the Ajo area. These include the Organ Pipe Cactus National Monument and the Cabeza Prieta National Wildlife Refuge south and southwest of the airport, and the South Maricopa Mountains Wilderness Area northeast of the airport. Aircraft are requested to maintain a minimum altitude of 2,000 feet above the surface of designated National Park areas, which includes wilderness areas and designated breeding grounds. FAA Advisory Circular 91-36C defines the "surface" as the highest terrain within 2,000 feet laterally of the route of flight or the uppermost rim of a canyon or valley.

**Victor Airways:** For aircraft arriving or departing the regional area using very high frequency omnidirectional range (VOR) facilities, a system of Federal Airways, referred to as Victor Airways, has been established. Victor Airways are corridors of airspace eight miles wide that extend upward from 1,200 feet AGL to 18,000 feet MSL and extend between VOR navigational facilities. Victor Airways are shown with solid blue lines on **Exhibit 1D**.

**Restricted/Alert Areas:** Restricted and alert areas are depicted on **Exhibit 1D** with blue-hatched lines. Restricted airspace is off-limits for public-use unless granted permission from the controlling agency. The restricted areas in the vicinity of Eric Marcus Municipal Airport are used by the military for training purposes. The controlling agency for each of these restricted areas is the Albuquerque ARTCC.

Restricted area R-2301E, located west of Ajo, is used up to flight level (FL) 800 (80,000 feet MSL) from 6:30 a.m. to 10:30 p.m. Monday through Friday. Restricted area R-2305, located north of Ajo, is used up to FL 240 (24,000 feet MSL) from 7:00 a.m. to 11:00 p.m. daily. Restricted area R-2304, located northeast of Ajo, is used up to FL 240 from 7:00 a.m. to 10:00 p.m. daily.

## Airspace Control

The FAA is responsible for the control of aircraft within the Class A, Class C, Class D, and Class E airspace described above. The Albuquerque ARTCC controls aircraft operating in Class A airspace. The Albuquerque ARTCC, located in Albuquerque, New Mexico, controls IFR aircraft entering or leaving the Eric Marcus Municipal Airport area. The area of jurisdiction for the Albuquerque center includes most of the states of New Mexico and Arizona, and portions of Texas, Colorado, and Oklahoma.

## Navigational Aids

Navigational aids are electronic devices that transmit radio frequencies which pilots of properly equipped aircraft translate into point-to-point guidance and position information. The types of electronic navigational aids available for aircraft flying to or from Eric Marcus Municipal Airport include the Loran-C, VOR, and GPS.

Loran-C is a ground-based enroute navigational aid, which utilizes a system of transmitters located in various places across the continental United States. Loran-C allows pilots to navigate without using a specific facility. With a properly equipped aircraft, pilots can navigate to any airport in the United States using Loran-C.

The very-high frequency omnidirectional range (VOR) provides azimuth readings to pilots of properly equipped aircraft by transmitting a radio signal at every degree to provide 360 individual navigational courses. Frequently, distance measuring equipment (DME) is combined with a VOR facility to provide distance as well as direction information to the pilot. Military tactical air navigation aids (TACANs) and civil VORs are commonly combined to form a VORTAC. A VORTAC provides distance and direction information to civil and military pilots. The Gila Bend VORTAC, located 32 nautical miles north of the airport, is the only VORTAC within close range to Eric Marcus Municipal Airport.

GPS was initially developed by the United States Department of Defense for military navigation around the world. However, GPS is now used extensively for a wide variety of civilian uses, including the civil aircraft navigation.

GPS uses satellites placed in orbit around the globe to transmit electronic signals, which pilots of properly equipped aircraft use to determine altitude, speed, and navigational information. This provides more freedom in flight planning and allows for more direct routing to the final destination.

**Instrument Approach Procedures**

Instrument approach procedures are a series of predetermined maneuvers established by the FAA, using electronic navigational aids that assist pilots in locating and landing at an airport, especially during instrument flight conditions. Eric Marcus Municipal Airport does not have published instrument approach procedures.

**Visual Flight Procedures**

Without instrument approach capabilities, flights into and out of Eric Marcus Municipal Airport are conducted exclusively under visual flight rules (VFR). Under VFR flight, the pilot is responsible for collision avoidance. Typically, the pilot will make radio calls announcing his/her intentions and the position of the aircraft relative to the airport.

Eric Marcus Municipal Airport is a particularly difficult airport to access due to its location within an MOA and its close proximity to restricted airspace. Heavy military jet aircraft traffic within the local airspace of the airport makes communication with the Albuquerque ARTCC vital.

When the MOAs and restricted airspace are active, aircraft departing Eric Marcus Municipal Airport will typically depart to the south to avoid entering restricted airspace and remain below the MOA floor altitude of 3,000

feet AGL. Communication with the Albuquerque ARTCC will provide pilots with course and collision avoidance guidance as they arrive or depart from local airspace.

Aircraft arriving to Eric Marcus Municipal Airport follow established traffic patterns for the airport. The traffic pattern is the traffic flow that is prescribed for aircraft landing or taking off from an airport. The components of a typical traffic pattern are upwind leg, crosswind leg, downwind leg, base leg, and final approach.

**a.** Upwind Leg - A flight path parallel to the landing runway in the direction of landing.

**b.** Crosswind Leg - A flight path at right angles to the landing runway off its upwind end.

**c.** Downwind Leg - A flight path parallel to the landing runway in the direction opposite to landing. The downwind leg normally extends between the crosswind leg and the base leg.

**d.** Base Leg - A flight path at right angles to the landing runway off its approach end. The base leg normally extends from the downwind leg to the intersection of the extended runway centerline.

**e.** Final Approach - A flight path in the direction of landing along the extended runway centerline. The final approach normally extends from the base leg to the runway.

Essentially, the traffic pattern defines the side of the runway on which aircraft will operate. For example, at Eric Marcus Municipal Airport, both Runways 12 and 30 have established left-hand traffic patterns resulting in aircraft making a left turn from base leg to final for landing.

While the traffic pattern defines the direction of turns that an aircraft will follow on landing or departure, it does not define how far from the runway an aircraft will operate. The distance laterally from the runway centerline an aircraft operates or the distance from the end of the runway is at the discretion of the pilot, based on the operating characteristics of the aircraft, number of aircraft in the traffic pattern, and meteorological conditions. The actual ground location of each leg of the traffic pattern varies from operation to operation for the reasons of safety, navigation, and sequencing, as described above. The distance that the downwind leg is located laterally from the runway will vary based mostly on the speed of the aircraft. Slower aircraft can operate closer to the runway as their turn radius is smaller.

The FAA has established that piston-powered aircraft operating in the traffic pattern fly at 1,000 feet AGL (2,458 feet MSL) when on the downwind leg. The traffic pattern altitude (TPA) is established so that aircraft have a predictable descent profile on base leg to final for landing.

### Area Airports

A review of airports within the vicinity of Eric Marcus Municipal Airport has been made to identify and distinguish the type of air service provided in the area surrounding the airport. Information pertaining to each airport was obtained from FAA records.

**Gila Bend Air Force Auxiliary Airport (GBN)**, located approximately 26 nautical miles north of Eric Marcus Municipal Airport, is privately owned by the United States Air Force and managed by Base Operations at Luke Air Force Base. GBN has a single asphalt runway that measures 8,500 feet long and 150 feet wide. GBN is an auxiliary airport to Luke Air Force Base and is only used in cases of emergency. It is closed to public use.

**Gila Bend Municipal Airport (E63)**, located approximately 31 nautical miles north of Eric Marcus Municipal Airport, is owned and managed by the Town of Gila Bend. E63 is equipped with a single asphalt runway measuring 5,200 feet long and 75 feet wide. E63 currently experiences approximately 3,550 operations annually with no aircraft based at the airport. The airport is unattended with no general aviation services available.

## LANDSIDE FACILITIES

Landside facilities are the ground-based facilities that support the aircraft and pilot/passenger handling functions. These facilities typically include aircraft storage/maintenance hangars, aircraft parking aprons, and support facilities such as fuel storage, automobile parking, and roadway access. Landside facilities are identified on **Exhibit 1B** and consist of three aircraft storage facilities and an aircraft parking apron. The airport is currently without a fixed base operator (FBO), fuel storage, and aircraft refueling equipment.

### Hangars & Apron

The airport has two four-unit T-hangar facilities totaling approximately 9,100 square feet. Each storage unit has the capability of holding a single aircraft. These storage units are 100 percent occupied and are leased by the County on a monthly basis. A portable sun shade unit is located immediately northwest of the T-hangar facilities. This unit is privately owned; however, a monthly fee is charged for use of the land.

Eric Marcus Municipal Airport is equipped with 82,000 square yards of aircraft parking apron. As it was discussed in the pavement condition section, much of the pavement is in fair to bad condition with cracking and weeds growing through seams in the pavement. The apron is rarely utilized; however, there are nine designated aircraft tie-down positions available south of the T-hangar facilities.

### Utilities

The airport is currently supplied with electricity for the operation of the

runway lighting units as well as the T-hangar facilities. The apron is also equipped with lighting fixtures along its easternmost perimeter adjacent to the hangar facilities. Water, sanitary sewer, telecommunications, or natural gas utilities are not currently available.

### Security Fencing

Portions of the airport's perimeter are currently equipped with cattle fencing. This fencing type does not provide for the security of the airfield and its facilities. The hangar facilities and the apron are not equipped with any perimeter fencing.

## *ACCESS AND CIRCULATION*

The airport is located immediately east of Arizona Highway 85 (Ajo Gila Bend Highway), a paved two-lane roadway. Highway 85, which runs north to south, extends from the airport entrance approximately six statute miles south to downtown Ajo. It continues approximately 45 statute miles south to Lukeville at the Mexican border. Highway 85 extends approximately 35 statute miles north from the airport entrance to Gila Bend where it intersects with Interstate Highway 8.

Mead Road serves as the airport entrance road. The unmarked asphalt roadway intersects with Highway 85 and extends to a gravel airport automobile parking area adjacent to the T-hangar facilities and the Ajo Country Club located immediately east of the airport. These roadways are identified on **Exhibit 1B**.

## *SOCIOECONOMIC PROFILE*

The socioeconomic profile provides a general look at the socioeconomic makeup of the community that utilizes Eric Marcus Municipal Airport. It also provides an understanding of the dynamics for growth and the potential changes that may affect aviation demand. Aviation demand forecasts are often directly related to the population base, economic strength of the region, and the ability of the region to sustain a strong economic base over an extended period of time. Current demographic and economic information was collected from the Arizona Department of Economic Security and the United States Department of Commerce.

### POPULATION

Population is a basic demographic element to consider when planning for future needs of the airport. The State of Arizona has been one of the fastest growing states in the country in recent history. **Table 1C** shows the total population growth since 1960 for the State of Arizona, Pima County, and the Ajo census-designated place (CDP). Since 1960, Pima County has grown steadily along with the State, while Ajo CDP has experienced a decline in total population. The vast majority of the County's population and population growth is centered in the Tucson metropolitan area at the east side of the County. Ajo's population

dropped significantly after the 1985 closing of the Phelps Dodge open pit mine. The mine is not expected to reopen in the foreseeable future; therefore, no significant changes to the recent population trends in Ajo are anticipated.

**TABLE 1C**
**Population Trends**

| Year | State of Arizona | Avg. Annual % Change | Pima County | Avg. Annual% Change | Ajo CDP | Avg. Annual % Change |
|---|---|---|---|---|---|---|
| 1960 | 1,302,161 | -- | 265,660 | -- | 7,049 | -- |
| 1970 | 1,770,900 | 3.1% | 351,667 | 2.8% | 5,881 | -1.8% |
| 1980 | 2,718,215 | 4.4% | 531,896 | 4.2% | 5,189 | -1.2% |
| 1990 | 3,665,228 | 3.0% | 668,500 | 2.3% | 2,919 | -5.6% |
| 2000 | 5,130,632 | 3.4% | 843,746 | 2.4% | 3,705 | 2.4% |
| 2008 | 6,629,455 | 2.6% | 1,014,023 | 1.9% | N/A | N/A |

Sources: U.S. Census Bureau (1960-2000)
Arizona Department of Economic Security (2008)

## EMPLOYMENT

Employment opportunities affect migration to the area and population growth. As shown in **Table 1D**, the Ajo CDP unemployment rate has been significantly higher than national, State, and County unemployment rates. This indicates a weak local job market, which can slow or even reverse population growth.

**TABLE 1D**
**Historical Unemployment Rate**
**United States, State of Arizona, Pima County, Ajo CDP**

| Year | United States | State of Arizona | Pima County | Ajo CDP |
|---|---|---|---|---|
| 2000 | 4.0% | 4.0% | 3.7% | 7.0% |
| 2001 | 4.7% | 4.7% | 4.3% | 8.0% |
| 2002 | 5.8% | 6.0% | 5.7% | 10.4% |
| 2003 | 6.0% | 5.7% | 5.3% | 9.8% |
| 2004 | 5.5% | 4.9% | 4.6% | 8.5% |
| 2005 | 5.1% | 4.6% | 4.4% | 8.2% |
| 2006 | 4.6% | 4.1% | 3.9% | 7.3% |
| 2007 | 4.6% | 3.7% | 3.7% | 6.8% |
| 2008 | 5.8% | 5.1% | 4.9% | 9.0% |

Source: Arizona Department of Economic Security

**Table 1E** summarizes total employment by sector for Pima County from 1970 to 2008. As shown in the table, total employment in the County has experienced steady growth over this timeframe with an average annual growth rate of 3.4 percent. The sectors that experienced the greatest growth were the Real Estate, Rental, Lease sector (4.7 percent); Services sector (4.4 percent); and the Wholesale Trade sector (4.0 percent). While the average annual growth rate over the past 38 years for all sectors has been

positive, several sectors have seen employment declines since 2000, including Agricultural Services, Other; Mining; Manufacturing; and Information.

**TABLE 1E**
**Pima County Employment by Sector**

| Sector | 1970 | 1980 | 1990 | 2000 | 2008 | Avg. Annual % Growth |
|---|---|---|---|---|---|---|
| Farm Employment | 1,087 | 931 | 1,044 | 992 | 1,155 | 0.2% |
| Agricultural Services, Other | 119 | 224 | 385 | 566 | 294 | 2.4% |
| Mining | 1,183 | 2,039 | 2,119 | 2,536 | 2,320 | 1.8% |
| Utilities | 707 | 1,042 | 1,144 | 1,636 | 2,282 | 3.1% |
| Construction | 12,676 | 18,506 | 20,279 | 29,592 | 36,069 | 2.8% |
| Manufacturing | 10,049 | 23,071 | 28,708 | 35,205 | 30,589 | 3.0% |
| Wholesale Trade | 2,616 | 4,410 | 6,184 | 8,755 | 11,702 | 4.0% |
| Retail Trade | 18,068 | 28,148 | 40,532 | 49,139 | 57,334 | 3.1% |
| Transportation and Warehousing | 4,001 | 5,901 | 6,477 | 9,259 | 10,056 | 2.5% |
| Information | 2,274 | 4,200 | 6,381 | 9,140 | 8,907 | 3.7% |
| Finance and Insurance | 4,511 | 8,365 | 9,595 | 13,909 | 18,084 | 3.7% |
| Real Estate, Rental, Lease | 6,678 | 12,384 | 14,205 | 20,593 | 37,571 | 4.7% |
| Services | 43,538 | 76,191 | 125,204 | 182,914 | 219,970 | 4.4% |
| Government | 36,751 | 49,342 | 59,452 | 80,130 | 85,431 | 2.2% |
| Total | 144,258 | 234,754 | 321,709 | 444,366 | 521,764 | 3.4% |

Source: Woods & Poole CEDDS 2008

## PER CAPITA PERSONAL INCOME

Per capita personal income (PCPI) for the United States, the State of Arizona, and Pima County is summarized in **Table 1F**. PCPI is determined by dividing total income by population. For PCPI to grow significantly, income growth must outpace population growth. As shown in the table, PCPI average annual growth in Pima County (1.3 percent) has been on pace with the State (1.3 percent) and only slightly behind the national growth rate (1.5 percent).

**TABLE 1F**
**Historical Per Capita Personal Income (2004 $)**
**United States, State of Arizona, Pima County**

| Year | United States | Arizona | Pima County |
|---|---|---|---|
| 1970 | $19,810 | $18,505 | $18,632 |
| 1980 | $23,038 | $21,384 | $20,930 |
| 1990 | $28,150 | $24,577 | $23,128 |
| 2000 | $32,737 | $28,144 | $26,515 |
| 2006 | $34,401 | $29,924 | $29,440 |
| Average Annual Growth Rate | 1.5% | 1.3% | 1.3% |

Source: United States Department of Commerce, Bureau of Economic Analysis

## *CLIMATE*

Weather plays an important role in the operational capabilities of an airport. Temperature is an important factor in determining runway length required for aircraft operations. Cloudy days can determine whether visual flight rule (VFR) conditions or instrument flight rule (IFR) conditions may be in affect.

Temperatures typically range from 71 to 103 degrees Fahrenheit (F) during the summer months. The hottest month is typically July with an average high of 103.0 degrees. August is the wettest month averaging 1.92 inches of precipitation annually. January is the coldest month with average minimum temperatures around 41.5 degrees.

Ajo typically experiences ideal flying conditions year round with only 23 percent cloudy days during the year and below average annual precipitation. **Table 1G** summarizes typical weather conditions for the Ajo region.

**TABLE 1G**
**Temperature and Precipitation Data**
**Ajo, Arizona**

| | Temperature (Fahrenheit) | | | |
|---|---|---|---|---|
| | Mean Maximum | Mean Minimum | Precipitation (Inches) | % Cloudy Days |
| January | 64.0 | 41.5 | 0.71 | 31% |
| February | 68.9 | 45.4 | 0.62 | 31% |
| March | 73.8 | 49.2 | 0.77 | 30% |
| April | 81.9 | 55.6 | 0.28 | 29% |
| May | 90.3 | 63.0 | 0.10 | 21% |
| June | 99.6 | 71.8 | 0.07 | 10% |
| July | 103.0 | 77.7 | 1.18 | 15% |
| August | 100.8 | 76.0 | 1.92 | 24% |
| September | 97.2 | 71.9 | 0.84 | 20% |
| October | 87.0 | 61.5 | 0.54 | 17% |
| November | 74.3 | 49.8 | 0.56 | 19% |
| December | 65.9 | 43.5 | 0.82 | 30% |
| Annual | 83.9 | 58.9 | 8.41 | 23% |

Source: Western Regional Climate Center

## *ENVIRONMENTAL INVENTORY*

The purpose of this inventory is to disclose potential environmental sensitivities that might affect future improvements at the airport. Available information about the existing environmental conditions at Eric Marcus Municipal Airport has been derived from internet resources, agency maps, and existing literature.

Research was done for each of the 23 environmental impact categories described within the FAA's *Environmental Desk Reference for Airport Actions*. It was determined that the following resources are not present within the

airport environs or cannot be inventoried:

- Coastal Barriers
- Coastal Zone Management Areas
- Construction Impacts
- Energy Supply, Natural Resources, and Sustainable Design
- Induced Socioeconomic Impacts
- Noise
- Social Impacts
- Wild and Scenic Rivers

**Air Quality**

The U.S. Environmental Protection Agency (EPA) has adopted air quality standards that specify the maximum permissible short-term and long-term concentrations of various air contaminants. The National Ambient Air Quality Standards (NAAQS) consist of primary and secondary standards for six criteria pollutants which include: Ozone ($O_3$), Carbon Monoxide (CO), Sulfur Dioxide ($SO_2$), Nitrogen Oxide (NO), Particulate matter ($PM_{10}$ and $PM_{2.5}$), and Lead (Pb). Various levels of review apply within both NEPA and permitting requirements. Potentially significant air quality impacts, associated with an FAA project or action, would be demonstrated by the project or action exceeding one or more of the NAAQS for any of the time periods analyzed.

The airport is located in Pima County which has been classified by the EPA as being in non-attainment for Particulate Matter ($PM_{10}$). A nonattainment classification indicates that the area has pollution levels which consistently exceed the NAAQS.

**Fish, Wildlife, and Plants**

The Fish and Wildlife Service (FWS) and the National Marine Fisheries Service (NMFS) are charged with overseeing the requirements contained within Section 7 of the *Endangered Species Act*. This Act was put into place to protect animal or plant species whose populations are threatened by human activities. Along with the FAA, the FWS and the NFMS review projects to determine if a significant impact to these protected species will result with implementation of a proposed project. Significant impacts occur when the proposed action could jeopardize the continued existence of a protected species, or would result in the destruction or adverse modification of federally designated critical habitat in the area.

In a similar manner, states are allowed to prepare statewide wildlife conservation plans through authorizations contained within the *Sikes Act*. Airport improvement projects should be checked for consistency with the State or Department of Defense (DOD) Wildlife Conservation Plans where such plans exist.

The native vegetation in the area is described as Lower Colorado Sonoran Desert Scrub. A search of the Arizona Heritage Data Management System online environmental review tool did not indicate any occurrences of special status species or critical habitat within three miles of the Airport.

According to the U.S. Fish and Wildlife Service, numerous threatened, endangered, and candidate species have suitable habitat within Pima County. These species are identified in **Table 1H**.

**TABLE 1H**
**Federally listed Threatened, Endangered, and Candidate Species with Habitat in Pima County**

| Common Name | Scientific Name | Habitat | Status |
|---|---|---|---|
| Arizona Hedgehog | Echinocereus triglochidiatus var. arizonicus | Ecotone between interior chapparal and madrean evergreen woodland. | Endangered |
| Brown Pelican | Pelecanus occidentalis | Coastal land and islands; species found around many Arizona lakes and rivers. | Endangered |
| Desert Pupfish | Cyprinodon macularius | Shallow springs, small streams, and marshes. Tolerates saline and warm water. | Endangered |
| Gila Chub | Gila intermedia | Pools, springs, cienegas, and streams. | Endangered |
| Gila Topminnow | Poeciliopsis occidentalis occidentalis | Small streams, springs, and cienegas, vegetated shallows. | Endangered |
| Huachuca Water-Umbel | Lilaeopsis schaffneriana var. recurva | Between 4,000 and 6,500 feet in cienegas, springs, and other healthy riverine systems. | Endangered |
| Jaguar | Panthera onca | Found in thornscrub, desertscrub, and grasslands. | Endangered |
| Kearney's Blue-Star | Amsonia kearneyana | Partially shaded coarse alluvium along dry washes under deciduous riparian trees and shubs in Sonoran desertscrub or desertscrub-grassland ecotone. | Endangered |
| Lesser Long-nosed Bat | Leptonycteris curasoae yerbabuenae | Desert scrub habitat with agave and columnar cacti present as food plants. | Endangered |
| Masked Bobwhite | Colinus virginianus ridgwayi | Savannah grasslands where grass and shrubs provide sufficient ground cover. | Endangered |
| Mexican Spotted Owl | Strix occidentalis lucida | Nests in canyons and dense forests with multi-layered foliage structure. | Threatened |
| Nichol Turk's Head Cactus | Echinocactus horizonthalonius var. nicholii | Sonoran desert scrub. | Endangered |
| Northern Mexican Gartersnake | Thamnophis eques megalops | Source-area wetlands. | Candidate |
| Southwestern Willow Flycatcher | Empidonax traillii extimus | Cottonwood/willow and tasmarisk vegetation communities along rivers and streams. | Endangered |
| Ocelot | Leopardus paradalis | Brushlands. | Endangered |
| Pima Pineapple Cactus | Coryphantha scheeri var. robustispina | Alluvial basins and hillsides in semi-desert grasslands, desert scrub, and the transition area between the two. | Endangered |
| Sonoran Pronghorn | Antilocapra Americana sonoriensis | Found in broad, alluvial valleys separated by granite mountains and mesas. | Endangered |
| Sonoyta Mud Turtle | Kinosternon sonoriense longifemorale | Springs, creeks, ponds and waterholes of intermittent streams. | Candidate |
| Yellow-billed Cuckoo | Coccyzus americanus | Large blocks of riparian woodlands (cottonwood, willow, or tamarisk galleries). | Candidate |

Source: U.S. Fish and Wildlife Service, Pima County Species List, January 2009

## Floodplains

Floodplains are defined in Executive Order 11988, *Floodplain Management*, as "the lowland and relatively flat areas adjoining inland and coastal waters…including at a minimum, that area subject to a one percent or greater chance of flooding in any given year" (i.e., that area would be inundated by a 100-year flood). Federal agencies, including the FAA, are directed to "reduce the risk of loss, to minimize the impact of floods on human safety, health, and welfare, and to restore and preserve the natural and beneficial values served by floodplains." According to the Federal Emergency Management System (FEMA) Federal Insurance Rate Map (FIRM) panel number 04019C0675K, the airport is not located within a 100-year floodplain.

## Wetlands and Waters of the U.S.

The U.S. Army Corps of Engineers regulates the discharge of dredged and/or fill material into waters of the United States, including adjacent wetlands, under Section 404 of the *Clean Water Act*. Wetlands are defined in Executive Order 11990, *Protection of Wetlands*, as "those areas that are inundated by surface or groundwater with a frequency sufficient to support and under normal circumstances does or would support a prevalence of vegetation or aquatic life that requires saturated or seasonably saturated soil conditions for growth and reproduction." Categories of wetlands include swamps, marshes, bogs, sloughs, potholes, wet meadows, river overflows, mud flats, natural ponds, estuarine areas, tidal overflows, and shallow lakes and ponds with emergent vegetation. Wetlands exhibit three characteristics: hydrology, hydrophytes (plants able to tolerate various degrees of flooding or frequent saturation), and poorly drained soils.

According to the United States Geologic Survey (USGS) topographic map, there are two waters (washes) that enter airport property from the north. Both washes run north to south, one is parallel to the western border of airport property, the other runs along the eastern border of airport property. These waters branch off from the Tenmile Wash which originates near the Palomas Mountains northwest of the airport. The Tenmile Wash flows to the southeast where it ends east of Ajo near the Batamote Mountains.

## Historical, Architectural, and Cultural Resources

Determination of a project's impact to historical and cultural resources is made in compliance with the *National Historic Preservation Act* (NHPA) *of 1966*, as amended for federal undertakings. Two State acts also require consideration of cultural resources. The NHPA requires that an initial review be made of an undertaking's *Area of Potential Effect* (APE) to determine if any properties in or eligible for inclusion in the National Register of Historic Places are present in the area.

During the preparation of the previous *Ajo Municipal Airport Master Plan*

approved in 1999, the Arizona State Historic Preservation Officer (SHPO) was contacted regarding the potential presence of cultural resources within the airport vicinity. The response dated January 5, 1999 indicated that the area had not been surveyed and that other cultural resources had been identified during surveys in connection with other projects in the area. It was also recommended that a survey of the site be conducted to determine whether any significant resources are present prior to any implementation of development.

**Department of Transportation Act: Section 4(f)**

Section 4(f) properties include publicly owned land from a public park, recreational area, or wildlife and waterfowl refuge of national, state, or local significance; or any land from a historic site of national, state, or local significance. There are no Section 4(f) resources located on airport property. The nearest Section 4(f) land is the Cabeza Prieta National Wildlife Refuge, which is located approximately 3.5 miles west of Eric Marcus Municipal Airport.

## *LAND USE*

**Exhibit 1E** depicts the planned land use of the local Ajo area from the *Pima County Comprehensive Land Use Plan*, which was readopted on December 18, 2001. This map shows the Eric Marcus Municipal Airport as Urban Industrial land use encompassed by the Goldwater Air Force Range. The only other land use shown in the vicinity of the airport is Low Intensity Rural. Ajo to the south is shown to have areas of Low Intensity Urban and Activity Centers focused along Arizona Highway 85. The southeast side of Ajo is identified as a Resource Extraction area due to the location of the open-pit mine in this area.

## *PUBLIC AIRPORT DISCLOSURE MAP*

Arizona Revised Statutes (ARS) 28-8486, *Public Airport Disclosure*, provides for a public airport owner to publish a map depicting the "territory in the vicinity of the airport." The territory in the vicinity of the airport is defined as the traffic pattern airspace and the property that experiences 60 day-night noise level (DNL) or higher in counties with a population of more than 500,000, and 65 DNL or higher in counties with less than 500,000 residents. The DNL is calculated for a 20-year forecast condition. ARS 28-8486 provides for the State Real Estate Office to prepare a disclosure map in conjunction with the airport owner. The disclosure map is recorded with the county. As part of this Master Plan, a Public Airport Disclosure Map has been prepared and is included in **Appendix B**. The Public Airport Disclosure Map was filed with Pima County on June 2, 2010.

## *SUMMARY*

The information discussed on the previous pages provides a foundation upon which the remaining elements of

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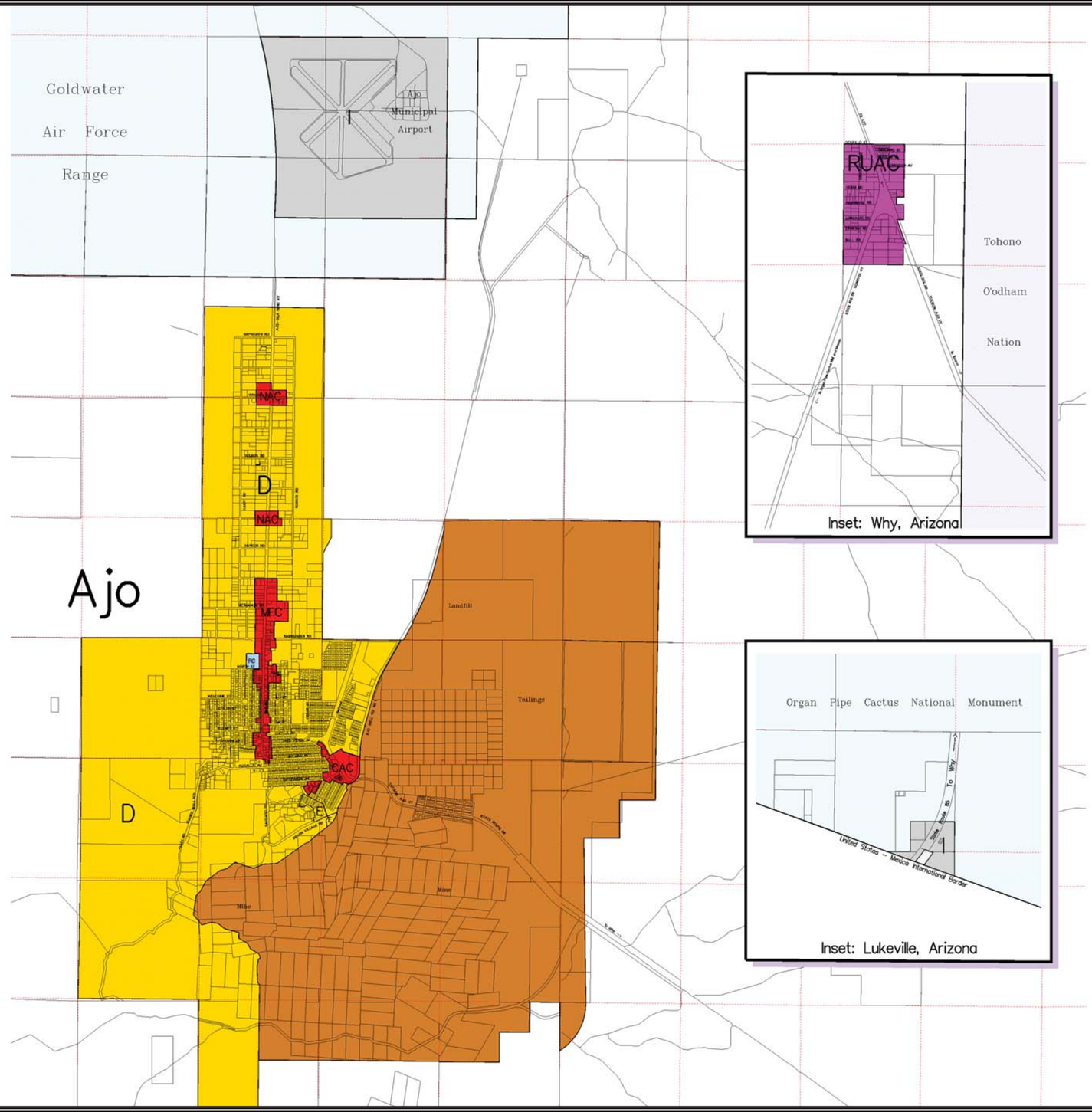


## Planned Land Use

- **Activity Centers**
  - REAC Regional Activity Center
  - CAC Community Activity Center
  - NAC Neighborhood Activity Center
  - MFC Multifunctional Corridor
- **Medium/High Intensity Urban**
  - D Medium Intensity Urban
  - E Medium High Intensity Urban
  - F High Intensity Urban
- **Low Intensity Urban**
  - C 3.0 Low Intensity Urban 3.0
  - C 1.2 Low Intensity Urban-1.2
  - C 0.5 Low Intensity Urban-0.5
  - C 0.3 Low Intensity Urban-0.3
- Rural Forest Village
- **Rural Activity Centers**
  - RUAC Rural Activity Center
  - RX Rural Crossroads:wq
- Medium Intensity Rural
- Low Intensity Rural
- Resource Transition
- Resource Extraction / Resource Productive
- **Industrial**
  - I Urban Industrial
  - HI Heavy Industrial
- Military Airport
- RP-1 Special Areas (S) and Rezoning Policy Areas (RP)
- S-2 Large Special Areas
- Trail Access Special Area S-19
- Rural Equestrian Routes and National Historic Trail Special Area S-19
- Growth Areas
- Specific Plans
- Subregion Boundary

## Basemap

- Public Preserves/ Resource Conservation
- Cities and Towns
- Tribal Nations
- Sections
- Parcels
- Major Washes

NOTE: There are no Special Areas, Rezoning Policy Areas, Growth Areas, or Specific Plans in the Western Pima County Subregion.

SOURCE: "Pima County Comprehensive Land Use Plan" Readopted Dec. 18, 2001.

PIMA COUNTY DOT

Exhibit 1E
PLANNED LAND USE

the planning process will be constructed. Information on current airport facilities and utilization will serve as a basis, with additional analysis and data collection, for the development of forecasts of aviation activity and facility requirement determinations. The inventory of existing conditions is the first step in the process of determining those factors which will meet projected aviation demand in the community and the region.

## *DOCUMENT SOURCES*

A variety of sources were used in the inventory of existing facilities. The following listing presents a partial list of reference documents. The list does not reflect some information collected by airport staff or through interviews with airport personnel.


AirNAV Airport information, website: http://www.airnav.com

*Airport/Facility Directory, Southwest U.S.,* U.S. Department of Transportation, Federal Aviation Administration, National Aeronautical Charting Office, January 15, 2009 Edition

Arizona Department of Economic Security; 2009

Arizona Department of Transportation

Ajo Municipal Airport, Airport Master Plan; 1999

FAA 5010 Form, Airport Master Record; 2009

*National Plan of Integrated Airport Systems* (NPIAS), U.S. Department of Transportation, Federal Aviation Administration, 2009-2013

U.S. Census Bureau

U.S. Department of Commerce, Bureau of Economic Analysis

U.S. Fish and Wildlife Service, *Pima County Species List*, December 2009

Western Regional Climate Center; 2009

Woods & Poole Economics, *The Complete Economic and Demographic Data Source; 2008*