COALINGA MUNICIPAL AIRPORT MASTER PLAN

CITY OF COALINGA

May 2007

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Prepared for

CITY OF COALINGA

The preparation of this report was financed in part through a planning grant from the Federal Aviation Administration as provided under Section 505 of the Airport and Airway Improvement Act of 1982, as amended. The contents do not necessarily reflect the official view or policy of the FAA. Acceptance of this report by the FAA does not in any way constitute a commitment on the part of the United States to participate in any development depicted therein nor does it indicate that the proposed development is environmentally acceptable in accordance with appropriate laws.

Prepared by

ARIES CONSULTANTS LTD.
Morgan Hill, California

in association with

TARTAGLIA ENGINEERING
Atascadero, California

May 2007

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EXECUTIVE SUMMARY

1.1 INTRODUCTION

In 2003, the City of Coalinga initiated an Airport Master Plan for the Coalinga Municipal Airport. The purpose of the study is to determine the type and extent of aviation facilities needed at the Airport through the year 2025 and to prepare an Airport Master Plan to accommodate the required development.

The Coalinga Municipal Airport (referred to as the "Airport" throughout this report) is geographically located about 4 miles east-northeast from the center of the City in the southwest portion of the County of Fresno. Access to the Airport is provided via Elm Street (State Route 33/198) and Phelps Avenue.

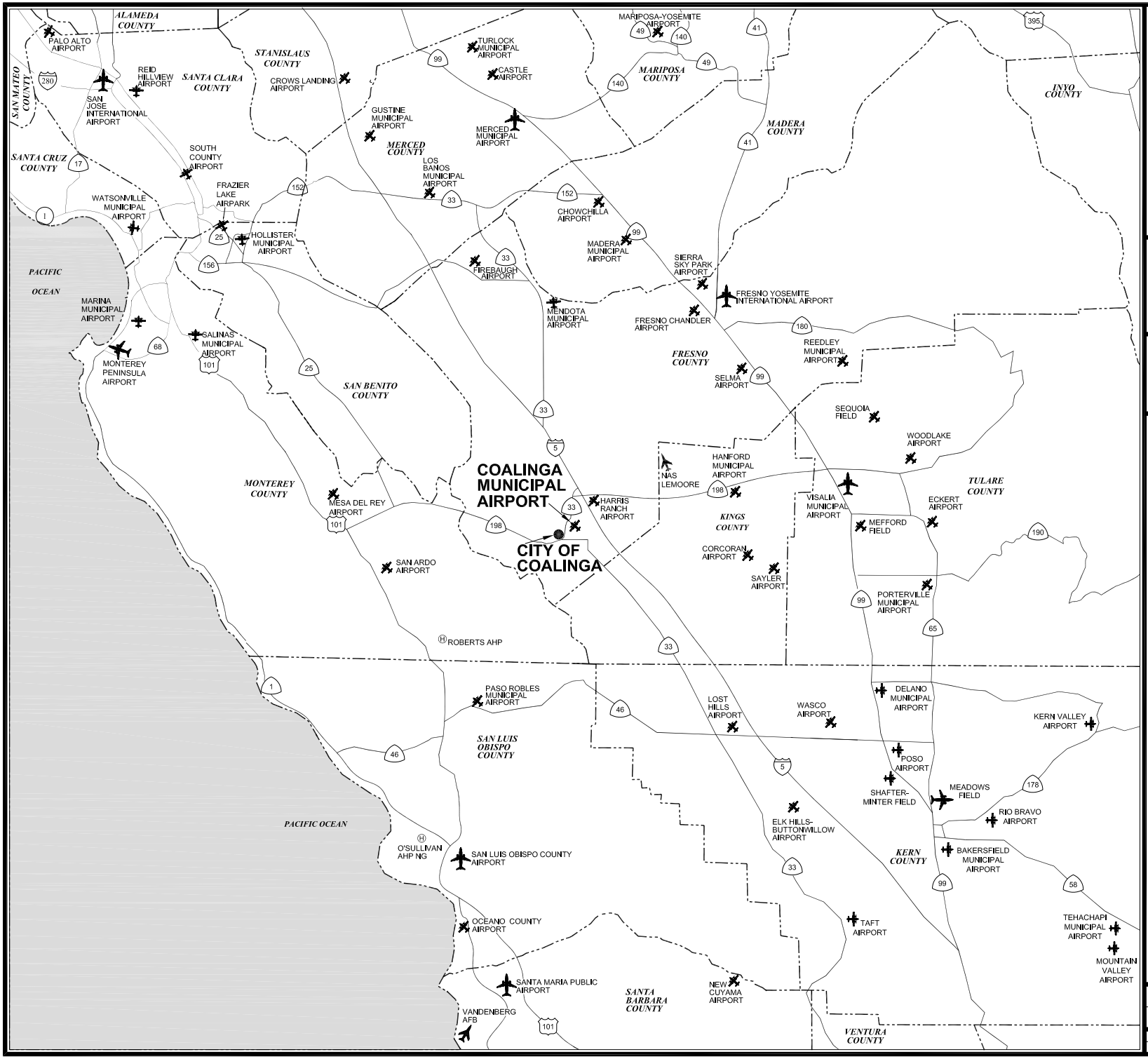
The Airport is located on about 1,002 acres of land at an elevation of 622 feet above mean sea level. The Airport is classified as a General Aviation Airport by the Federal Aviation Administration (FAA) in the *National Plan of Integrated Airport Systems* and as a General Aviation Community Airport by the State of California, Department of Transportation (Caltrans), Division of Aeronautics, in the *California Aviation System Plan.* The location of the Airport with respect to nearby communities and other airports in the area is illustrated on Figure 1-1.

The Airport Master Plan has been prepared by Aries Consultants Ltd. of Morgan Hill, California, in association with Tartaglia Engineering of Atascadero, California. The study was coordinated with the City, FAA, Caltrans, and other State and local organizations.

An Initial Study/Mitigated Negative Declaration has been prepared as a separate document for the Airport Master Plan. The document includes comments and responses and a Mitigation Monitoring Program. The Initial Study/Mitigated Negative Declaration will be certified by the Coalinga City Council.

1.2 HISTORY OF THE AIRPORT

The following sections discuss the historical documentation pertaining to the actions by the City, FAA, Caltrans, and other State and local agencies that led to the development of the new Coalinga Municipal Airport.



COALINGA MUNICIPAL AIRPORT MASTER PLAN

LOCATION MAP

LEGEND	
	AIR CARRIER AIRPORT
	GENERAL AVIATION AIRPORT
	MILITARY AIRPORT
Ⓗ	HELIPORT
5	INTERSTATE HIGHWAY
101	FEDERAL HIGHWAY
46	CALIFORNIA STATE HIGHWAY

TRUE NORTH

MAGNETIC NORTH 13°55'E (2007)

0 5 10 15 20 25

GRAPHIC SCALE IN MILES

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

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COALINGA MUNICIPAL AIRPORT	FIGURE 1-1
FRESNO COUNTY, CALIFORNIA	
NAME: CLG-11-Location Map-A.dwg	NO: 4490-07
DATE: May 1, 2007	PLOT SCALE: 1"=132.000'

1.2.1 January 1990 Airport Master Plan for New Coalinga Airport

The City of Coalinga, under an Airport Improvement Program grant from the FAA, initiated a site selection study, conceptual Airport Master Plan and an Environmental Assessment/Environmental Impact Report (EA/EIR) for a new general aviation airport in 1988. The objective of the study was to locate and master plan a site for a new municipal airport that would eliminate the financial, management, and land use constraints of the (then) existing Coalinga Airport and assure the City of a high-quality public-use aviation facility as part of the infrastructure and economic base of the Community.

The old Coalinga Airport was located on land owned by the Chevron Corporation and leased by the City on a month-to-month basis. Although this lease agreement had existed for approximately 30 years, it precluded the City from making long-term investments in capital improvement projects and other facilities at the Airport. It also disqualified the Airport from obtaining FAA and Caltrans construction grant funding because a minimum of 20 years of City control of the Airport property was required to satisfy Federal and State grant assurances.

Further, the Airport location on the north side of the City posed compatible land use issues, as well as aviation safety and aircraft noise concerns, as the final approach to both runways overflew the City and several public schools. These concerns, combined with the lack of City control of the Airport and the inability to obtain financial assistance, were the issues that provided the impetus to establish a new publicly-owned airport at another location.

The *1990 Airport Master Plan* suggested a minimum of 250 to 500 acres would be required to develop an adequate replacement airport for the City depending on the airfield configuration and aircraft parking area layout. The 250 to 500 acres would include the runway protection zones for the runway(s), as well as land needed for the airfield, aircraft basing, fixed base operations, vehicular parking, and other support facilities at the airport. Additional acreage would be needed for any commercial industrial park development and other considerations, and suggested that the total land requirement could be 1,000 acres or more.

The *1990 Airport Master Plan* discussed the requirement for a crosswind runway based on the airfield configuration at the (old) Coalinga Airport and discussions with local pilots and noted that adequate wind data did not support the need for a crosswind runway. The *1990 Airport Master Plan* was prepared with a single runway configuration, and the recommendation that a wind direction and velocity study be conducted for one to three years at the new site.

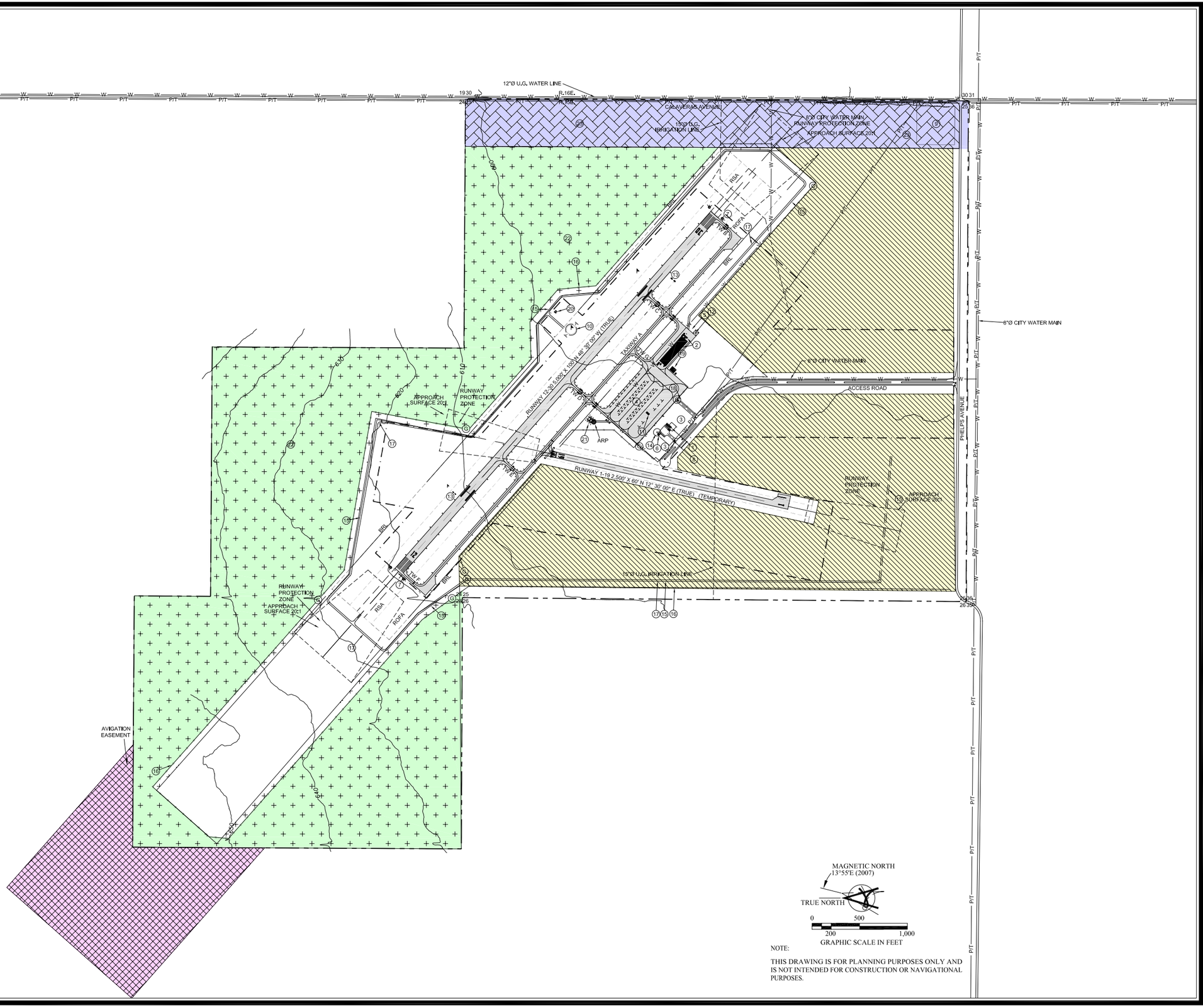
1.2.2 January 1990 Final Environmental Assessment/Final Environmental Impact Report for New City of Coalinga Airport

A *Draft Environmental Assessment/Draft Environmental Impact Report* (DEA/DEIR) was prepared addressed the impacts associated with the development of a new general aviation airport on a site located at the northwest corner of Phelps and Calaveras Avenues. Several alternative airport sites were also evaluated. The DEA/DEIR addressed the initial acquisition of 920 acres of property for the new airport with an ultimate property line encompassing 1,125 acres. The DEA/DEIR addressed the operation of the airport facilities; e.g., runways, taxiways and terminal area on about 120 of the 960 acres and the ultimate development would accommodate airport facilities on about 150 acres of the total 1,125-acre property. The 1990 DEA/DEIR noted that the land along Phelps Avenue and the new Airport access road may be made available for aviation related commercial and industrial development in the future, however, this type of development was not addressed as part of the airport development evaluated in the DEA/DEIR.

The 1990 *Final Environmental Assessment/Final Environmental Impact Report for New City of Coalinga Airport* (EA/EIR) was certified by the City of Coalinga in January 1990. As part of the EA/EIR mitigation program, the land on the airport site would be retained in agricultural use to the maximum extent practicable and the City would continue to pursue the development of a Regional Habitation Conservation Plan.

1.2.3 April 1992 Biological Opinion

The *1992 Biological Opinion* was issued in April 1992 by the U.S. Department of the Interior, Fish & Wildlife Service (USF&WS), based on formal consultation between the USF&WS and FAA pursuant to Section 7(a) of the Endangered Species Act of 1973, in which areas were designated on the new Airport for protection of the federally-listed endangered San Joaquin Kit Fox *(Vulpes Macrotis Mutica)*. The April *1992 Biological Opinion* and an associated *1994 Habitat Management Plan* were intended to cover all the development actions associated with the new airport including a 5,000-foot runway and the development of approximately 150 acres within the Airport site. (At present, only approximately 80 acres of the Airport site have been developed.) The *1992 Biological Opinion* state that the land at the Airport project site that will not be covered by airport facilities addressed in the *1992 Biological Opinion* shall be utilized as follows and as shown on Figure 1-2.



NOTE:

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COALINGA MUNICIPAL AIRPORT MASTER PLAN

PROPERTY MAP

LEGEND	
EXISTING	
	AIRPORT PROPERTY LINE
	AIRFIELD/APRON PAVEMENT
	BUILDING/FACILITIES
BRL	BUILDING RESTRICTION LINE (BRL)
	FENCE
G	GATE
	ROTATING BEACON
	FUEL ISLAND
	AIRPORT REFERENCE POINT (ARP)
	THRESHOLD LIGHTS
	WIND SOCK
	REIL
	PAPI-2
H	HELICOPTER
600	EXISTING GROUND CONTOURS
	HYDRANT
P/T	PACIFIC GAS & ELECTRIC/TELEPHONE
W W	WATER
	RUNWAY SAFETY AREA
	RUNWAY OBJECT FREE AREA
24 | 25 / 23 | 26	SECTION CORNER

EXISTING FACILITY LEGEND	
1	FLIGHT SERVICE FACILITY/CARETAKER RESIDENCE
2	HANGARS
3	FBO SITES
4	TIEDOWNS
5	OWNER MAINTENANCE AREA
6	ELECTRICAL BUILDING
7	REIL
8	TRANSFORMER
9	HOLDING POND
10	SEGMENTED CIRCLE AND LIGHTED WIND SOCK
11	FUEL ISLAND
12	AIRCRAFT POLLUTION ABATEMENT FACILITY
13	PAPI
14	ROTATING BEACON
15	DIKE
16	FENCE
17	PERIMETER ROAD
18	APRON SECURITY LIGHTING
19	MAINTENANCE HANGAR
20	AWOS
21	HELICOPTER
22	HABITAT CONSERVATION AREA
23	CALAVERAS BUFFER AREA

LAND USE LEGEND	
	ANNEXED CITY LIMITS
	HABITAT CONSERVATION AREA
	CALAVERAS BUFFER AREA
	AVIGATION EASEMENT
	FARMING LEASE

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COALINGA MUNICIPAL AIRPORT	FIGURE 1-2
FRESNO COUNTY, CALIFORNIA	

NAME: CLG-12-Property Map-B.dwg	NO: 4490-01
DATE: May 1, 2007	PLOT SCALE:1"=1,000'

- Habitat compensation shall be provided by setting aside a total of 460 acres to be managed as kit fox habitat. The Kit Fox Management Area shall consist of 360 acres on the project (airport) site and 100 acres of off-site land.

- A 500-foot buffer (about 60 acres) shall be located between the Kit Fox Management Area and Calaveras Avenue.

- A 300-foot buffer (about 200 acres) shall be located between the Kit Fox Management Area and the currently planned and potential future airport facilities and landing strip.

- The remainder of the airport property shall be restricted to agricultural use.

In a letter to the FAA on April 21, 1992, the City concurred with the Formal Endangered Species Consultation on the Proposed New Coalinga Airport between the U.S. Fish & Wildlife Service and the FAA and requested an FAA Airport Improvement Program grant award for the construction of the New City of Coalinga Airport.

1.2.4 June 1992 Federal Aviation Administration Finding of No Significant Impact

In June 1992 the FAA issued a Finding of No Significant Impact (FONSI) and Order of the Administrator for the New Coalinga Airport for Land Acquisition and Airport Construction. The FONSI acknowledged the formal consultation between the FAA and the U.S. Fish & Wildlife Service and the issuance of the biological opinion specifying measures that would allow agricultural uses that encourage and preserve wildlife habitat. The FONSI notes that a 300-foot buffer area be provided between the Kit Fox Management Area and the runways as shown on Figure A of the *1992 Biological Opinion*. This buffer area between the Kit Fox Management Area and the runways is shown on Figure 1-2.

1.2.5 1994 Habitat Management Plan

The *1994 Habitat Management Plan* notes that *there will be a 300-foot wide buffer between the Kit Fox Management Area and the currently planned and potential future airport facilities.* Although not discussed in the April *1992 Biological Opinion*, the *1994 Habitat Management Plan* states that *future expansion of the Airport may include an extension of the runway and/or construction of a crosswind runway. The location of these areas has been identified by the City of Coalinga. The land required for this potential expansion, plus 300 feet around it, is treated as a buffer in this plan.*

This buffer area is identified on Figure 1-2 and provides for the extension of Runway 12-30 to the northwest and for a future crosswind runway as illustrated.

1.2.6 Construction of the Coalinga Municipal Airport

The FAA provided an FAA grant award to the City in 1992 totaling $1.8 million for acquisition of property and the engineering design for the new airport. A second FAA grant award in 1992 totaled $5.4 million for development of the airport site including clearing, drainage, surveying and grading; access road; runway and taxiways; aprons, including drainage, markings, tiedowns and lighting; fencing; automated weather observing system (AWOS); beacon; wind cone; precision approach path indicators (PAPIs); electrical and fire fighting water service.

The City acquired 1,002 acres for the new airport facility as illustrated on Figure 1-2. As a result of the findings of the EA/EIR, the City initially annexed 248 acres of the 1,002 acres into the City for construction of the new airport facilities.

The Coalinga Municipal Airport was constructed in 1996 at the corner of Phelps and Calaveras Avenues. Project funding was provided from the FAA and the Coalinga Public Financing Authority. The Coalinga Public Financing Authority loaned money to the Airport Enterprise Fund to close the airport at the old location and provide the local matching funds for the FAA grant for construction of the new airport.

The new Airport was initially constructed with a single Runway 12-30. However, the *1990 Airport Master Plan for New Coalinga Airport* identified the potential requirement for a crosswind runway at the new airport location. At the time, available wind data did not support this requirement based on FAA criteria, and a crosswind runway was not included in the original airport construction grant. However, a crosswind runway is included on the current Airport Layout Plan approved by the FAA in August 1994.

Based on aircraft operating conditions at the old two-runway airport and at the new Airport with only a single Runway 12-30, safety concerns were expressed by pilots over the lack of a crosswind runway oriented in the prevailing wind directions at the new Airport. As a result of these concerns, the City Council determined a crosswind runway was needed and approved construction in 1997. A temporary crosswind runway was constructed by the City in 1997. An Addendum to the *1990 Final Environmental Impact Report for the New City of Coalinga Airport* responded to the requirements of a CEQA environmental review by Caltrans. However, the temporary crosswind runway was not subject to a NEPA environmental review as required by the FAA. Construction of the temporary crosswind Runway 1-19 was funded by a

$150,000 loan from Caltrans to the City that will be paid off in 2010. The temporary crosswind Runway 1-19 was permitted by Caltrans and is included in official FAA publications.

In 1998, the City annexed additional acreage along both sides of the Airport access road and there are now about 300 acres of the Airport property within the City as shown on Figure 1-2.

1.2.7 Environmental Documentation Requirements

Based on recent discussions between the City, FAA, Caltrans, USF&WS and California Department of Fish and Game (CDFG), additional environmental documentation, in accordance with both the National Environmental Policy Act (NEPA) and the California Environmental Quality Act (CEQA), will be required prior to the development of any of the recommended improvements in the Airport Master Plan and additional mitigation measures will need to be identified and implemented. These actions will require amendments or updates to the *1992 Biological Opinion*.

1.3 AIRPORT MASTER PLAN FINDINGS AND RECOMMENDATIONS

The Airport Master Plan (the Plan) integrates long-term airfield and terminal area requirements with current and forecast aviation needs and airport access and parking needs. It represents a guide for airport development through the year 2025 planning period and indicates possible developments beyond the year 2025 for which land should be reserved at this time. The principal findings and recommendations of the Plan are summarized below.

1.3.1 Aviation Activity Forecasts

- The FAA forecasts general aviation and air taxi aircraft to increase by an estimated 18,500 aircraft over the short-term 12-year period (through (2014), an average annual increase of 0.7 percent.

- The California Aviation System Plan predicts that based aircraft within the Central California Region will increase at an annual average growth rate of 1.9 percent through 2020, and annual general aviation aircraft operations will increase at an average annual rate of 1.9 percent.

- The number of based aircraft at the Coalinga Municipal Airport is forecast to increase from 19 aircraft in 2003 to 28 aircraft by 2025, an average annual increase of 1.8 percent.

- The number of annual aircraft operations at the Coalinga Municipal Airport is forecast to increase from an estimated 6,600 annual operations in 2003 to 9,200 annual operations by 2025, an average annual increase of 1.5 percent.

1.3.2 Potential Demand for Air Cargo/Small Package Service

- The concept of establishing an air cargo port in the West San Joaquin Valley has been discussed for over three decades, and several studies prepared during the 1970s identified Coalinga as a possible site for an all-cargo facility.

- The concept of an air cargo port in Coalinga was reevaluated in the Plan and concluded that the City is not located within a geographic area with a high concentration of population and does not have the attendant employment base to attract the attention of all-cargo air carriers. Significant road access and airport improvements would be required in order to attract the attention of all-cargo air carriers.

- Operations by air cargo/small package/mail service could be initiated directly to the Coalinga Municipal Airport when businesses and industries develop in the area along with an attendant increase in population and employment creating the demand for direct service.

1.3.3 Airport Property

- It is recommended that the City acquire an avigation easement over about 39 acres to the southeast of Runway 30 outside the present Airport property line for the future enlarged runway protection zone.

1.3.4 Airfield

Runway 12-30

- It is recommended that the airfield be designed to accommodate large aircraft (over 12,500 pounds gross weight) in airport reference code (ARC) A-II/B-II (e.g., Cessna Citation II and Dassault Falcon 20) with wingspans of less than 79 feet and with occasional use by large ARC C-I and C-II business jet aircraft, (e.g., Cessna Citation III, Learjet 35/36, and Sabreliner 65/80).

- The Plan recommends Runway 12-30 ultimately be extended to the northwest and lengthened to 7,500 feet to handle the aircraft expected to use the Airport during

the planning period and beyond. This is the length shown on the current FAA-approved Airport Layout Plan. The runway width is recommended to be retained at 100 feet.

- The existing parallel taxiway to the southwest of Runway 12-30 should be extended to the northwest in conjunction with the runway extension to provide a full-length parallel taxiway. The existing 300-foot centerline-to-centerline separation is retained.

- A new entry/exit taxiway is planned at the northwest end of the ultimate 7,500-foot runway length. All new taxiways associated with Runway 12-30 should be at least 35 feet in width.

- A new aircraft holding apron is provided at the northwest end of the extended Runway 12.

Runway 1-19

- A permanent crosswind Runway 1-19 to accommodate small aircraft (less than 12,500 pounds gross weight) with wingspans of less than 49 feet in ARC A-I/B-I (e.g., Cessna 172 and Piper 31 Navajo) is also planned to eventually replace the existing temporary crosswind runway.

- The Plan provides for a 3,000-foot long by 60-foot wide permanent crosswind Runway 1-19 to be aligned parallel to, and separated from, the existing temporary Runway 1-19 by at least 150 feet and preferably 240 feet to the southwest centerline-to-centerline.

- The existing temporary Runway 1-19 will become the future parallel taxiway for the permanent Runway 1-19. An extension to the south will be required to provide a full-length parallel taxiway. Three new entry/exit taxiways are provided for and a taxiway connection is also provided between the parallel taxiway and aircraft parking apron. All taxiways associated with the new Runway 1-19 should be at least 25 feet wide.

1.3.5 Airfield Pavement

- Airfield pavement associated with Runway 12-30 should be designed to accommodate single-wheel aircraft with a maximum gross weight of 30,000 pounds and 60,000 pounds for dual-wheel aircraft that are the current pavement strengths.

- Airfield pavement associated with the new Runway 1-19 should be designed to accommodate single wheel aircraft with a maximum gross weight of 12,500 pounds.

- A Pavement Maintenance Plan should be developed to identify the timing and costs for airfield pavement maintenance.

1.3.6 Avigation

Runway 12-30

- The Plan provides for a global positioning system (GPS)/wide area augmentation system (WAAS), lateral precision with vertical guidance (LPV) IFR approach procedure to Runway 30 and a nonprecision GPS approach procedure to Runway 12 with straight-in minimums that would greatly enhance the capabilities and increase the utility of the Airport.

- The Plan provides for larger and flatter approach surface areas for Runway 12-30 with a future 50:1 approach surface slope provided for Runway 30 and a future 34:1 approach surface slope provided for Runway 12.

- The Plan provides for an ultimate runway protection zone for Runway 30 for a precision instrument approach at 2,500 feet long with an inner width of 1,000 feet and an outer width of 1,750 feet.

- The Plan provides for an ultimate runway protection zone for Runway 12 for a nonprecision instrument approach with a visibility minimum not lower than 3/4 statute mile at 1,700 feet long with an inner width of 1,000 feet and an outer width of 1,510 feet. The runway protection zone will be relocated to the northwest along with the runway extension.

- To provide a precision instrument approach will require the building restriction line (BRL) for Runway 12-30 to be increased from 400 feet up to at least 640 feet or 675 feet from the runway centerline for a 20-foot or 25-foot high building, respectively. This may require relocation/removal of the existing box hangars located at less than 600 feet from the runway centerline and/or modification to FAA airport design standards to meet local conditions. This will need to be determined as part of the FAA airspace analysis conducted as part of the Airport Layout Plan review process.

Runway 1-19

- The runway protection zones for Runway 1-19 are the same for both ends of the runway with lengths of 1,000 feet, inner widths of 250 feet and outer widths of 450 feet. These dimensions are smaller than the current runway protection zones because these dimensions meet the current FAA criteria for visual approaches for small (less than 12,500 pounds) aircraft exclusively.

- The Plan provides for the BRL to be located at least 265 feet or 300 feet from the centerline to each side of the new Runway 1-19 for a 20-foot or 25-foot high building, respectively.

1.3.7 Navigational and Landing Aids

- In 2005, the FAA started to process a GPS nonprecision approach to the Airport. The City should request that FAA and Caltrans support installation of GPS approaches to both Runways 12 and 30.

- The Plan retains the capability to provide a precision instrument GPS approach for Runway 30.

- A medium intensity approach lighting system with runway alignment indicator lights (MALSR) would also be installed on Runway 30 with a precision instrument approach.

- The Plan provides for new medium intensity runway lighting along the Runway 12-30 extension and medium intensity taxiway lighting along the extended parallel taxiway and new entry/exit taxiway.

- The existing precision approach path indicator (PAPI-2), runway end identifier lights (REIL), and supplemental wind cone for the Runway 12 end should be relocated along with the runway extension.

- The Plan provides for installation of medium intensity runway and taxiway lighting for the new Runway 1-19 and associated taxiways, respectively. PAPI-2s should be located at both ends of the new Runway 1-19. Supplemental wind cones should also be installed near both ends of the new Runway 1-19.

- The automated weather observing system (AWOS) on the Airport is to be upgraded.

- The existing airfield signage should be upgraded in accordance with FAA design standards and new signage installed for future airfield improvements.

1.3.8 General Aviation

- Approximately 44 acres have been retained in the Plan for general aviation uses such as hangars, tiedowns, fixed base operators and other commercial aviation service operators in these areas.

- An aircraft parking apron area for itinerant aircraft and based aircraft tiedowns is retained in the present general aviation area southwest of Runway 12-30. An area for additional aircraft parking apron is reserved further to the southeast.

- It is recommended that hangars continue to be consolidated on the southwest side of the terminal area. Over 7 acres are provided that can be developed to accommodate over 70 hangar spaces. Space is reserved for development of corporate/executive hangars at the southwest end of the terminal area.

- Space is reserved for future aviation lease lots between the existing Airport access road and the aircraft parking apron. An approximate 8-acre area further to the southeast is reserved for future aviation uses. A future taxiway is proposed to serve future aviation uses in this area and the new taxiway would connect to existing apron taxiways. Access would be off an extension of the Airport access road to the southeast.

- The Plan calls for the existing aircraft maintenance hangar to eventually be relocated to the south side of the aircraft parking apron to allow for future T-hangar development and to meet FAA taxiway object free area criteria.

- The existing heliport, located near the center of the Airport, should be re-painted and re-designated for helicopter parking and re-fueling for emergency, government and other helicopter users. Additional helicopter parking can be provided on the adjacent aircraft parking apron. It is recommended that in the future helicopters land and takeoff on the runways and hover taxi to the helicopter parking areas.

- The aircraft pollution abatement facility (wash rack) is retained south of the existing hangar building.

1.3.9 Airport Access and Parking

- The present access road onto the Airport off Phelps Avenue is adequate to serve the southwest side of the Airport through the planning period. An extension of the Airport access road will be required to the south to serve future aviation related development in this area. A controlled access gate may be needed off an extended Airport access road at the south end of the Airport when the area is developed for aviation uses. A new service road is proposed in this area.

- Vehicular parking spaces should be retained in the general aviation facilities area by the Flight Service Facility for public and employee parking. Additional space for future parking needs in this area could be provided by expanding the vehicular parking spaces towards the Airport access road. Parking for visitors and employees should also be provided within individual lease lot boundaries.

1.3.10 Airport Support

- While there is no current requirement for an aircraft rescue and firefighting (ARFF) facility on the Airport, the City should continue to have a written procedural agreement with the City of Coalinga Fire Department to guarantee response in any emergency.

- A City maintenance baseyard is proposed in the Aviation Reserve area adjacent to the Flight Service Facility on the west side of the Airport.

- An automated 24-hour self-serve, credit-card system was installed when the Airport opened with one above-ground 12,000 gallon double-walled fuel tank for 100 low lead. Space is reserved for an adjacent Jet A fuel tank if required in the future.

- The existing 4-foot high chain link fence in the terminal area and the 4-foot high barbed wire fence around Runway 12-30, and elsewhere, between the Kit Fox Management Area and the runway buffer area installed in accordance with the *1992 Biological Opinion* and associated *1994 Habitat Management Plan* should be replaced with standard 6-foot high chain link fencing with access provided for Kit Fox at appropriate intervals. This could be accomplished by allowing an 8-inch opening to remain at the bottom of the fencing or by installation of 8-inch culverts at regularly spaced intervals. The existing fencing will also need replacing and relocating as the aviation facilities are expanded to meet FAA standards of a 6-foot high chain link fence with barbed wire on top.

- Standard 6-foot high chain link and barbed wire perimeter fencing should also be installed along the unfenced sections on the south and east sides of Runway 1-19 to complete the airfield perimeter fencing to avoid vehicular, pedestrian and animal incursions onto the airfield. Access would be provided for Kit Fox under the fence at appropriate intervals along the fencing.

- There may also be a requirement for new or improved Airport fencing and signage as a result of evolving Airport security requirements.

- Additional security lighting should be installed along the aircraft parking apron as it is expanded. A card reader system of access control should also be considered for existing and future vehicle access control gates.

1.3.11 Utilities

- The water infrastructure should be extended to provide domestic service to all future airport businesses, as well as proposed aviation related industrial and commercial development on the southwest side of the Airport. Installation of additional fire hydrants at strategic locations throughout the Airport in accordance with City Fire Department spacing requirements would be prudent.

- In the future, it will be necessary to extend the City Municipal sewer system approximately 2 miles from the City limits on Phelps Avenue to the Airport. The sewer system improvements should be designed to specifically serve the existing Flight Service Facility/caretaker residence and all future aviation businesses, as well as proposed aviation related industrial and commercial development on the southwest side of the Airport.

- Electrical and telephone extensions will be required to serve the recommended aviation and aviation related commercial and industrial development on the southwest side of the Airport as well as the recommended airfield improvements.

- An emergency generator should be installed for the airfield lighting, airport rotating beacon and other airport facilities.

- Electrical extensions will be required to any future approach lighting system.

- Future development in the area on the southwest side of the Airport will require development of a storm drainage system. Other improvements could include an extension of the dike and perimeter road drainage system serving the northwest corner of the Airport when Runway 12-30 is extended. An additional drainage

element will be required for a new crosswind Runway 1-19. Additional culverts in the expanded airfield (runways and taxiways), aircraft parking apron and other areas will be needed.

1.3.12 Other Areas

- The recommended Airport Master Plan will not impact the 360 acres of the Airport set aside as a Habitat Conservation Area, the 200 acres set aside as a runway buffer area or the 60 acres set aside as a buffer area along Calaveras Avenue.

- The Plan recommends that about 160 acres southwest of the existing aviation facilities on both sides of the Airport access road be reserved for future aviation related commercial and industrial uses. Aviation related commercial and industrial development on the Airport would be subject to evaluation in accordance with the requirements of the National Environmental Policy Act (NEPA) and California Environmental Quality Act (CEQA).

- Some current agricultural use acreage will be needed for construction of the permanent crosswind Runway 1-19 and related taxiways. In addition, about 160 acres out of the 290 acres currently leased for agricultural use are recommended to be reserved for future aviation related industrial and commercial development as noted above.

- Only 300 acres of the 1,002 acres that comprise the Airport are currently within the City of Coalinga. The proposed expansion of the City's Sphere of Influence identified in the General Plan Update will include the entire Airport property.

1.3.13 Off Airport Land Use

- The City of Coalinga is currently updating the City General Plan. The most recent draft indicates future Manufacturing/Business (MB) uses immediately west of the Airport and then Residential Multi-Family (MD) uses along Phelps Avenue. Further to the west and immediately south of the Airport, future Residential Ranchette (5-acre minimum lot size) land uses are shown. Other surrounding areas are retained as Agricultural (A) and Open Space/Conservation (O) with limited development land uses.

- The Airport Master Plan and City General Plan need to be coordinated to maximize compatible land uses in the Airport vicinity. This is particularly important as a permanent and longer crosswind runway is recommended in the

Airport Master Plan and the aircraft traffic patterns are to the west for the crosswind runway. This runway would impact, and be impacted by, potential development to both the west and south of the Airport.

- The compatibility of the proposed surrounding development with the Airport Master Plan recommendations should be reviewed in accordance with the guidelines in the latest *California Airport Land Use Planning Handbook* prepared in 2002 by Caltrans.

- The 1994 *Coalinga Airport Land Use Policy Plan* will require updating by the Fresno County Airport Land Use Commission to reflect the Airport Master Plan recommendations and current Caltrans land use guidelines.

1.4 CAPITAL IMPROVEMENT PROGRAM

A three-phase prioritized Capital Improvement Program has been developed as a guide for future development to meet estimated short-range (Phase I, 2005 through 2009), intermediate-range (Phase II, 2010 through 2014), and long-range (Phase III, 2015 through 2025) Airport requirements.

Phase I projects are considered to be the highest priority items and should be implemented as soon as practicable to meet the Phase I forecast requirements for facilities and to preserve the capability for future Airport expansion. Phase I projects include:

Land Acquisition

-- Acquire avigation easement for approximately 39 acres at south end

Airfield

-- Develop Pavement Maintenance Plan
-- Crackseal, fill, compact, slurry and paint Runway 12-30, taxiways and apron, including drainage
-- Rehabilitate existing crosswind Runway 1-19

Navigational Aids

-- Upgrade AWOS weather data-recording equipment
-- Install wind socks at ends of Runway 1-19

Infrastructure

-- Install approximately 4,500 linear feet of perimeter fence on west side

Phase I of the Capital Improvement Program identifies $707,500 in development projects at the Airport. Of the Phase I projects totaling $707,500, projects totaling $505,500 will be eligible for FAA Airport Improvement Program grants. The FAA Airport Improvement Program funds 95 percent of eligible projects; Caltrans funds 2.5 percent of the Federal 95 percent (2.4 percent of the total project); and the City is responsible for the remaining 2.6 percent of the total project.

The total requirement of City funds to implement the initial five-year Capital Improvement Program is estimated to be $35,269. Of the $35,269 required of the City, $13,269 will be required to match FAA Airport Improvement Program grants; $20,000 will be required to provide a 10 percent local match for a Caltrans acquisition and development grant to rehabilitate the existing crosswind Runway 1-19; and $2,000 will be required to install wind socks on the crosswind Runway 1-19. The cost of acquiring an avigation easement will be subject to appraisals and negotiations with individual property owners.

Beyond Phase I, it is assumed that development of the Airport will proceed according to the priorities proposed in the recommended Capital Improvement Program. It is also assumed that the implementation of the Phase II and Phase III projects will be arranged as the demands for facilities occur, and the City identifies the financial resources to implement the recommended projects through FAA Airport Improvement Program grants, State grants and loans and the financial capability of the City to provide the local matching share of project funding.

1.5 FINANCIAL PLAN

The financial feasibility analysis summarized the annual historical operating results of the Airport Enterprise Fund to provide a basis for assessing the ability of the Enterprise Fund to meet the requirements for funding future capital projects from operating sources.

1.5.1 Historical and Forecast Operating Revenues and Expenses

Historically, the largest source of operating revenues from airport operations has been from the rental of hangar space. Other revenues were from the sale of fuel, the annual Caltrans grant for maintenance and operation of the Airport, and other miscellaneous revenues including aircraft tiedown fees, building lease, vehicular parking, interest earnings, and aircraft property taxes.

It should be noted that of the 1,002 acres of the City-owned Airport property, only 300 acres have so far been annexed into the City where the runways, taxiways, aircraft parking area, terminal area and the Airport access road have been developed. Approximately 360 acres of the Airport property were set aside for the Kit Fox

Management Area, and another 260 acres were reserved for buffer areas under the terms of the *1992 Biological Opinion* issued by the U.S. Department of the Interior, Fish & Wildlife Service. The remainder of the Airport property was restricted to agricultural use. These acreages represent a significant amount of non-revenue producing property. In addition, no revenue is generated to the Airport Enterprise Fund as a result of the agricultural uses on the Airport.

Historically, the major operating expenses for the Airport have been to retire the debt service on loans for acquisition and development of the (new) Coalinga Municipal Airport. Other expenses included maintenance and repair of ground, equipment and buildings, utilities, professional services, and other miscellaneous expenses including taxes, licenses and fees.

Overall, the operating revenues and expenses have resulted in a net operating deficit of about $192,000 annually since fiscal year 2000. Total operating revenues have averaged $39,000 annually while total operating expenses have averaged $231,000 on an annual basis since fiscal year 2000.

Based on the projected operating results of the Airport Enterprise Fund, the City will continue to operate with a deficit of about $130,000 annually until the debt service on outstanding loans is retired beginning well beyond the initial five-year period.

Based on the financial analysis, the Airport Enterprise Fund will not realize sufficient surplus revenues to fund the Phase I projects estimated to total $7,100 on an annual basis. If FAA Airport Improvement Program grants are awarded as presented in the Capital Improvement Program, the City will need to identify sources of funds to provide the local matching share for these grants either from local sources or potentially a Caltrans loan.

1.5.2 Sources and Uses of Funds

Federal Aviation Administration

The Coalinga Municipal Airport is eligible for FAA Airport Improvement Program grants as a general aviation airport at the current level of 95 percent of the total project. The City's current (2007-2011) Airport Capital Improvement Plan submitted to the FAA includes $4.0 million of planning and capital improvement projects for the Airport.

The Airport is eligible for FAA Airport Improvement Program general aviation airport entitlement funds totaling $150,000 on an annual basis. General Aviation airport entitlement funds provide the City the ability to prioritize use of these funds with a greater focus on the needs of the Airport and the Community and eliminate the

need to compete for general aviation discretionary funds for projects that may not have a high priority for FAA Airport Improvement Program funding.

The Airport has received FAA grant awards beginning in 1988 for the (new) Coalinga Municipal Airport with the most recent grant award of $150,000 received in 2005 for the design to rehabilitate Runway 12-30, taxiways and aircraft parking apron; design and install perimeter fencing; and update the AWOS and prepare a wind analysis. FAA Airport Improvement Program grants totaling $7.5 million have been awarded for projects at the Airport since 1988 averaging over $400,000 annually.

Phase I of the recommended Capital Improvement Program will require an estimated $100,000 in FAA grants on an annual basis over the initial five-year program, and this amount of Federal grant requirements appears to be realistic. It should be noted that the Reauthorization of the Airport Improvement Program will require reauthorization beyond September 30, 2007, the end of the Federal fiscal year.

State of California

The State of California provides four financial assistance programs. (1) the State of California, Department of Transportation, Division of Aeronautics annual grant of $10,000; (2) allows the California Transportation Commission (CTC) to allocate funds to match FAA Airport Improvement Program grants for airport and aviation purposes; (3) the acquisition and development grants administered by the State Transportation Improvement Program (STIP); and (4) the Airport Loan Program.

The State provides annual non-matching $10,000 grants to airports that have not been designated as a “reliever” or “commercial service” airport by the FAA that may be used for both capital improvements and maintenance and operations. The annual grant may be accumulated for up to five years, or a maximum of $50,000, and used as matching funds for an FAA Airport Improvement Program grant.

State funds can be allocated by the CTC to match an FAA Airport Improvement Program grant once an airport sponsor has accepted the Airport Improvement Program grant from the FAA. The State match is available to airports that have been designated as a general aviation or reliever airport by the FAA. Only those projects that are included in the State’s Capital Improvement Program are eligible to receive matching grants. The State match will be an amount equal to 2.5 percent of the FAA Airport Improvement Program grant.

Any publicly-owned, public-use airport may apply for a State acquisition and development grant through a structured approval process. Grant projects are evaluated and prioritized by an evaluation matrix and an airport rating form with

runway maintenance projects receiving the highest priority for funding. An Airport's request may range from a minimum of $10,000 to a maximum of $500,000 per fiscal year.

The State Airport Loan Program provides financial assistance in the form of loans, repayable over a period not-to-exceed 17 years. The interest rate is based on the most recent issue of State of California bonds sold prior to the issuance of a loan agreement. Loans can be obtained for matching funds (i.e., a FAA Airport Improvement Program grant) and for revenue-generating facilities (i.e., hangars and fuel facilities).

Caltrans Division of Aeronautics funds were reduced in recent years to help reduce the statewide budget deficit. It is not known at this time when, and to what extent, monies will be available to fund the Caltrans Division of Aeronautics Programs.

City of Coalinga General Fund

Financing airport improvements through loans or direct appropriation from the City's general fund may be the most realistic method of financing development not eligible for FAA Airport Improvement Program grants or for matching the City requirement for grants after recognition of Caltrans grants totaling 2.5 percent of total FAA Airport Improvement Program grants. General fund loans or appropriations can be justified by the City on the basis that the Airport provides certain direct economic and social benefits to the Community and local taxpayers as well as the possessory interest, personal property and other tax increments generated by airport tenants and users, portions of which are returned to municipalities and school districts, and not to the Airport Enterprise Fund.

Private Financing

The importance of the Airport to local economic development is enhanced with active involvement on the part of both public officials and the private business community. The City may require that all exclusive-use facilities such as hangars, fueling facilities, tiedowns, fixed base operations, and other commercial aviation facilities be provided and financed by the tenant. The City would receive ground rental while the leaseholder would receive the gross revenues and be responsible for the operational expenses and debt service obligation. Private financing places the burden of financing on the tenant while increasing the value of the Airport which will, in turn, add to its economic attractiveness.

Other Sources of Funds

There are other potential sources of grants and loans that the City could consider for financing airport development projects, including grants from the Federal Public Works Program of the Economic Development Administration. There are several grant and loan programs under the U.S. Department of Agriculture Rural Development Programs including Community Facilities Direct Loans, Rural Business Enterprise Grants and Rural Business Opportunity Grant Programs. The use of funds from these programs range from infrastructure improvements, e.g., water and sewer systems, to financing a public-use terminal building and/or hangars and equipment needed for public safety.

The State of California, Economic Development Administration provides grants and loans through the Department of Housing and Community Development and the Trade and Commerce Agency. The use of funds from these programs also range from infrastructure improvements to public-use terminal buildings.

1.6 STRATEGIC BUSINESS PLAN

The Strategic Business Plan incorporates the different elements prepared as part of the Airport Master Plan and other planning documents prepared by the City of Coalinga into a single comprehensive development and management plan for the Coalinga Municipal Airport.

1.6.1 Mission, Goals and Performance Measures

The City's overall Mission Statement of the Airport defines the desired future role of the Airport.

> *The Mission Statement of the Coalinga Municipal Airport is to provide an environment that meets the needs of the general aviation community, encourages development by private business, promotes economic development, maintains a viable financial position, and is an attractive Airport for residents of the City and the surrounding areas for which it is the most convenient airport.*

Short-term goals established for the Airport by the City include:

- Airport Master Plan
- Airport Capital Improvement Program
- Rates and Charges Study, including hangar lease rates

- Responding to items cited in the State of California, Department of Transportation (Caltrans) Division of Aeronautics Facilities Inventory and State Permit Compliance Inspection reports (typically annual inspections).
- Responding to complaints by Airport users, including pilots and tenants.
- Enforcing existing Airport hangar lease agreements.
- Review and revise leases and agreements for use of the Airport in coordination with the City Attorney.

Long-term goals that are actively being pursued by the City include:

- Annex into the City approximately 700 acres of City-owned property within the Airport boundary that is currently in the unincorporated area of Fresno County.

- Market the Airport to attract additional pilots and businesses, e.g., flight schools, a fixed base operator, aviation maintenance, transportation companies and other aviation-related commercial and industrial tenants to enhance the viability of the Airport Enterprise Fund to achieve self-sufficiency.

1.6.2 Strategic Position of the Coalinga Municipal Airport

Of the total 1,002 acres acquired by the City for development of the new municipal airport, only about 300 acres have already been annexed into the City. These 300 acres include the area where the runways, taxiways, aircraft parking area, terminal area and the Airport access road have been developed.

The *1992 Biological Opinion* and the *1994 Habitat Management Plan* covered the development actions associated with the new airport including a 5,000-foot runway and the development of approximately 150 acres within the Airport site. (At present, only approximately 80 acres of the 150-acre airport site have been developed.) Approximately 360 acres of the Airport property were set aside for the Kit Fox Management Area, and another 260 acres were reserved for buffer areas under the terms of the *1992 Biological Opinion.* The remainder of the Airport property was restricted to agricultural use.

The Airport Master Plan provides for the future development of the Airport and new and expanded airport facilities can be used as a catalyst for economic development. The Plan reserves about 160 acres for future aviation related commercial and industrial uses. However, there is a requirement for environmental documentation and mitigation in accordance with both the National Environmental Policy Act (NEPA) and the California Environmental Quality Act (CEQA) that could have a significant impact on the future development of the Airport.

The General Plan Update, currently being prepared by the City, will address the annexation of the other 700 acres of City-owned property located within the Airport boundary into the City.

1.6.3 Rates and Charges

An analysis of current rates and charges at those airports considered to be competing or comparable airports was performed to assess the reasonableness of the rates and charges at the Coalinga Municipal Airport.

- Rates and charges for hangar rents, tiedown spaces and fueling at the Airport are considered within an acceptable range when compared to the other airports.

- Methodologies for establishing rates and charges in the future for airfield use, rental of City-owned buildings and real property leases were prepared for the City.

1.6.4 Overall Business Issues

The overall business issues challenging the Coalinga Municipal Airport will be the attraction of additional airport users and new aviation and nonaviation development to the Airport within a changing business environment. Any proposed nonaviation commercial and industrial uses and development on the Airport are subject to FAA review and approval.

The Airport Master Plan demonstrates that the Airport could play a significant role in the continuing development of the City of Coalinga and those parts of the surrounding area for which it is the most convenient airport. Because of the Airport's unique environmental setting with respect to surrounding land use compatibility, the Airport has an outstanding capability to contribute to the area's continued economic growth and stability in the future.

Land uses in the immediate vicinity of the Airport are currently compatible with the recommended Plan, and an update of the 1994 *Coalinga Airport Land Use Policy Plan* by the Fresno County Airport Land Use Commission will provide the necessary tools for the City to preserve future compatible land uses within the Airport environs. This type of resource is of great significance to the future growth and economic development of the Coalinga Municipal Airport and the City of Coalinga. While the direct generation of revenue for the maintenance, operation and development of the Airport is of primary importance, the ability to attract aviation and nonaviation users and tenants to the Airport within an environmentally compatible environment will be of great importance in the future.

The Airport Master Plan and Capital Improvement Program provide for the orderly development of the Airport. Adherence to the Plan is recommended for the development of these uses as it ensures that certain Airport land with airfield access will be reserved strictly for aviation activities and permits land surplus to aviation requirements to be devoted to the development of leaseholds in a manner compatible with both Airport and off-Airport land uses.

The City, FAA, Caltrans and airport users have already made substantial investments in the Coalinga Municipal Airport, and the Airport Master Plan provides the City with the tools to protect these investments.

1.6.5 Marketing and Promotion

Marketing and promotional activities are typically the responsibility of economic development departments within various municipalities and counties. The marketing and promotion of the Coalinga Municipal Airport are carried out through the Economic Development Department, and City staff is fully apprised of Airport property and available site(s) that are evaluated and marketed within the full range of available properties within the City and surrounding areas.

The City could consider developing a web site for the Airport. Alternatively, the Airport could be a specific site under the overall web site for the City of Coalinga. The initial research for the potential location of a company, activity, and/or other uses is frequently through a search of available web sites. It is, therefore, essential that a web site be developed for the Airport so as not to eliminate the Airport, or the City, from further consideration as a potential place of doing business.

1.6.6 Aviation Related Businesses

Over 40 general aviation products and services that are typically located on, or available at, other airports were compared to the products and services available at the Coalinga Municipal Airport. The Airport currently offers only a limited number of these products and services. Specialty services that could be considered in marketing and promotion activities include:

- Aircraft cleaning services; aircraft interior restoration; avionics sales and services; upholstery shop; and propeller services.

- An aircraft painting and refinishing shop on the Airport could attract a number of aircraft owners that currently go long distances to obtain these services that exist at a limited number of airports. An aircraft painting and refinishing shop would certainly be an attraction at the Coalinga Municipal Airport, but it may be difficult

to attract this type of tenant as the environmental considerations of providing for this type of activity and the investment required could be considerable.

1.6.7 Other Recommendations for City Consideration

The Coalinga Municipal Airport is relatively new when compared to other airports and has not experienced tremendous growth in aviation activity. As the Airport continues to develop, there are a number of management documents the City could consider preparing in this early stage of development. By developing and adopting management documents, the City will be prepared to better serve the interests of airport tenants and users.

Lease Policy Guidelines

The City could consider preparing Lease Policy Guidelines for future leases and agreements for use of the Airport. The guidelines are specific in addressing City policies for maintenance provisions and remedies, hazardous materials, relocation of improvements, disposal of tenant improvements, the requirement for performance bonds, and other issues and covenants of a lease or agreement for use of the Airport. The guidelines provide a solid framework of covenants and issues the City can use as the basis for entering into lease negotiations with a prospective tenant.

Minimum Standards

The preparation of minimum standards is highly recommended by the FAA for all airports that must comply with Federal Grant Assurances as a condition of accepting Federal grant assistance in order to ensure fair and equal opportunities for all users of the Airport. Minimum standards should detail the requirements for each type of tenant to ensure that future airport development will be compatible with all other land uses on the Airport by performance, appearance and general operating characteristics.

Airport Rules and Regulations

The City should consider preparing Airport Rules and Regulations for use of the Airport. The rules and regulations are established to ensure that airport tenants and users operate in a safe and orderly fashion and restrict and/or prevent any activity or action that would interfere with the safe and orderly use of the Airport.

1.6.8 Financial Implications

The Airport operates as a proprietary enterprise of the City of Coalinga, and its objective in financial management is to assure full financial self-sufficiency. Revenue sources from the Airport are not adequate to cover the expenses associated with the operation and maintenance of the Airport operation and cover the debt service requirements from the land acquisition and development of the Airport.

Increased revenues to the Airport Enterprise Fund as a result of new development will necessarily be dependent on the type of facilities and development the City decides to pursue. There will be costs to the City associated with future development of the Airport including environmental documentation and mitigation and additional infrastructure.

The merits and potential of further development on the Coalinga Municipal Airport have been discussed previously; however, it should be emphasized that an aggressive and organized promotional program should form the keystone for the future development of the Airport. The benefits that could be realized relate, not only to the Airport, but also to the community as a whole. The intent should be to use the Airport as a tool to attract new development to the area.

Chapter 2

HISTORICAL AND FORECAST AVIATION ACTIVITY

2.1 INTRODUCTION

Aviation activity accommodated at an airport is a function of the population and economic characteristics of the area served by the airport – referred to as the "Airport Service Area." An understanding of the present and likely future population and economy of the airport service area is therefore critical to the development of aviation activity forecasts.

This Chapter defines the airport service area of the Coalinga Municipal Airport (the Airport) and presents the historical and forecast population and economic indicators that will have an effect on forecast aviation activity. Historical aviation activity at the Airport is presented including based aircraft and aircraft operations. The aviation activity forecasts for the Airport through 2025 are also presented.

2.2 POPULATION AND ECONOMY OF THE AIRPORT SERVICE AREA

The geographic area served by any airport is designated as the airport service area. Typically, the airport service area includes a densely-populated urban area (such as a city and its environs) within a larger, less densely-populated area that is usually defined (or limited) by the existence of other airports.

Although the airport service area can seldom be precisely identified in terms of political boundaries, usually a city, county, or political region (such as a Standard Metropolitan Statistical Area) is selected to represent the airport service area because relevant population and economic data are readily available for such areas. Furthermore, trends in aviation demand typically correspond closely with general growth trends in the political subdivision containing the main concentration of population served by a given airport.

The Coalinga Municipal Airport serves the City of Coalinga and those parts of the surrounding areas for which it is the most convenient airport. Since the majority of the people served by the Airport reside in the City, the City was designated as the airport service area.

2.2.1 Population

Historical and forecast population data for the City and the County of Fresno (the County) are presented in Table 2-1. A comparison is made with historical and forecast population data for the State of California and the United States as a whole.

Table 2-1

HISTORICAL AND FORECAST POPULATION TRENDS
City of Coalinga, County of Fresno
State of California and United States
1970-2025

	Historical				Base Year	Forecast			
	1970	1980	1990	2000	2002	2010	2015	2020	2025
City of Coalinga	6,161 [1]	6,593 [1]	8,212 [1]	11,668 [1]	16,450 [2]	16,855 [3]	19,540 [3]	22,652 [3]	26,300 [4]
County of Fresno	413,329 [1]	514,621 [1]	667,490 [1]	799,407 [1]	827,300 [1]	970,900 [1]	1,043,100 [1]	1,134,600 [1]	1,210,143 [1]
State of California	19,953,134 [1]	23,667,902 [1]	29,760,021 [1]	33,871,648 [1]	35,802,238 [1]	40,262,400 [1]	42,711,200 [1]	45,821,900 [1]	47,900,000 [1]
United States	203,211,926 [5]	226,545,805 [5]	248,709,873 [5]	275,306,000 [5]	280,306,000 [5]	299,862,000 [5]	312,268,000 [5]	324,927,000 [5]	337,815,000 [5]

	Average Annual Percentage Change					
	1970-1990	1990-2000	2000-2010	2010-2015	2015-2020	2020-2025
City of Coalinga	1.4	3.6	3.7	3.0	3.0	3.0
County of Fresno	2.4	1.8	2.0	1.5	1.7	1.8
State of California	2.0	1.3	1.7	1.2	1.4	1.4
United States	1.0	1.0	0.9	0.8	0.8	0.8

1. State of California, Department of Finance
2. State of California, Department of Finance (includes population at Pleasant Valley State Prison)
3. City of Coalinga General Plan Update (Draft October 2002)
4. Extrapolated by Aries Consultants Ltd.
5. U. S. Department of Commerce, Bureau of the Census

The population of the City increased from 6,161 in 1970 to 11,668 in 2000, an average annual increase of 2.2 percent. The average annual growth rate of the City increased at a faster rate of 3.6 percent from a population of 8,212 in 1990 to 11,668 in 2000. Based on the State of California, Department of Finance population of 16,450 in 2002, the 41 percent increase was attributed to the population of the Pleasant Valley State Prison located approximately 6 miles east of the City.

The population of the County increased at the same rate as the City from 413,329 from 1970 to 799,407 in 2000, an average annual increase of 2.2 percent. By comparison, the population of the State increased from 19,953,134 in 1970 to 33,871,648 in 2000, an average annual increase of 1.8 percent while the population of the United States as whole increased at an average annual increase of 1.0 percent over the same 30-year period.

Based on the Administrative Draft of the *City of Coalinga General Plan Update 2020*, the population of the City is expected to increase from a population of 11,668 in 2000 to 22,652 by 2020, an average annual increase of 3.0 percent. By extrapolating the average annual 3.0 percent population growth rate, the population in the City is expected to be 26,300 by 2025.

Based on forecasts prepared by the State Department of Finance, the population in the County is forecast to increase at an average annual rate of 1.7 percent from a population of 799,407 in 2000 to a population of 1,210,143 in 2025 while the population in the State is forecast to increase from 34 million in 2000 to a population of 48 million in 2025, an average annual increase of 1.4 percent. Overall population growth on the National basis is projected to increase at less than 1.0 percent annually over the 25-year forecast period.

Since 1970, the City has grown faster than the County and the State and is forecast to continue this trend. The City and the County are expected to continue experiencing faster population growth than the State and the United States as a whole.

2.2.2 Economic Considerations

Historically, the economic base of the City has been almost entirely dependent on the oil industry and its cyclical nature. The existing oil fields have been in production since 1890, and as these resources dissipated, the need for greater diversification of the economic base within the City was recognized. Construction of the California Aqueduct in the early 1970s provided water for irrigation and the development of specialty crops such as lettuce, tomatoes, asparagus and a variety of nut and fruit trees.

The City initiated an aggressive economic development program following the 1983 earthquake to promote diversification of the economic base of the City. The program identifies and capitalizes on emerging opportunities. The City was successful in its effort to locate several State facilities within property annexed by the City including the Pleasant Valley State Prison and the Claremont Custody Center. The new Coalinga State Hospital is scheduled for completion in early 2005. Anticipated growth is located primarily to the east of the City and includes about 480 acres in the Airport Industrial Park reserved for commercial and industrial development.

Based on information provided by the City, the City is exploring the potential for tapping into opportunities resulting from the traffic and access to Interstate 5 by developing a West Side Hub Specific Plan intended to leverage the assets of the location of the Interstate, the new Coalinga Municipal Airport, and the proposed rail service in nearby Huron. The concept of the West Side Hub Specific Plan is to position the western portion of Fresno County, including the City of Coalinga, to be competitive in attracting warehouse/distribution/manufacturing centers by providing multimodal transportation facilities. There are over 500 trucking and warehousing firms operating in the County, and the opportunity exists to attract additional distribution centers exploring location opportunities along the Interstate 5 corridor.

The mission of the City is to provide for the preservation of the community character by delivering quality, responsive City services, in an efficient and cost-effective manner, and to develop, encourage and promote a diversified economic base in order to ensure the future financial stability of the City for its citizens. The ongoing economic development activities by the City contribute to the positive outlook for the City.

2.3 HISTORICAL AIR TRAFFIC ACTIVITY

Historical data on general aviation activity at the Coalinga Municipal Airport are limited, as is the case at most airports without air traffic control towers. Therefore, available data from the Federal Aviation Administration (FAA), State of California, Department of Transportation (Caltrans) Division of Aeronautics, and the City, supplemented by conversations with persons knowledgeable of the Airport, were used to form the basis for preparing the aviation activity forecasts presented later in this Chapter. The historical aviation activity is presented in terms of based aircraft and aircraft operations.

2.3.1 General Aviation

General aviation is defined as all civil aviation not classified as air carrier or commuter/air taxi. It includes a multitude of diverse and growing uses of aircraft, ranging from flying for enjoyment and the transportation of personnel or cargo by business firms and individuals in privately-owned aircraft, to highly specialized uses such

as crop dusting, pipeline patrol and aerial advertising. It includes agricultural, industrial and business/corporate aviation, using an aircraft for flight training, the aviation of Federal, State and local governments and miscellaneous other aviation uses.

2.3.1.1 Based Aircraft

Based aircraft are those aircraft that are hangared or are on tiedowns at the Airport and include those aircraft based on leaseholder sites. The number of aircraft based at an airport is a function of many factors, including the number of active aircraft registered in the Airport's service area, aircraft registered elsewhere but used in the area (e.g., corporate or government aircraft), and the existence and location of other airports in the area. Although transient aircraft are not considered based aircraft, their needs for tiedown and hangar space must be considered at any public airport.

Historical based aircraft at the new Coalinga Municipal Airport, constructed in 1996, were included in the 1998 Inventory Element of the *California Aviation System Plan* (CASP). There were 18 aircraft based at the Airport including 15 single-engine aircraft, two multiengine aircraft and one helicopter.

The number of based aircraft at the Airport increased slightly from the 18 based aircraft in 1998 to 19 based aircraft in 2003, based on information provided by the City of Coalinga. Of the 19 based aircraft at the Airport, 17 are single-engine and two are multiengine aircraft.

2.3.1.2 Distribution of Based Aircraft Owners

An analysis of the geographic distribution of based aircraft owners at the Airport was made based on information obtained from the City. This information is presented in Table 2-2 for 2003. Close to 70 percent of the 19 aircraft based at the Airport are registered to owners in Fresno County with 58 percent within the City of Coalinga.

Another 10 percent are registered to owners in Kings County, and the remaining 20 percent of the aircraft are registered to various owners in Plumas, San Francisco and Santa Clara Counties.

2.3.2 Aircraft Operations

Historical data on aircraft operations at nontowered airports are limited. Annual aircraft operations at the new Coalinga Municipal Airport were estimated based on several sources, including the FAA Form 5010-1, *Airport Master Record*, Caltrans estimated annual aircraft operations based on data collected through the State acoustical counter program, Naval Air Station (NAS) Lemoore personnel and discussions with persons

Table 2-2

DISTRIBUTION OF BASED AIRCRAFT OWNERS
Coalinga Municipal Airport
2003

Location	Aircraft
Fresno County	
Coalinga	11
Fresno	2
Subtotal	13
Kings County	
Avenal	1
Lemoore	1
Subtotal	2
Santa Clara County	
Palo Alto	1
Subtotal	1
Plumas County	
Chester	2
Subtotal	2
San Francisco County	
San Francisco	1
Subtotal	1
TOTAL	**19**

SOURCE: City of Coalinga

knowledgeable of the Airport and its activity. The aircraft operations at the Airport are estimated to total 6,600 operations on an annual basis in 2003.

2.3.2.1 Air Taxi

Of the total estimated 6,600 total aircraft operations, 100 (2 percent) are estimated to be by air taxis. Air taxi operations are the unscheduled operations of "for hire" air taxis carrying passengers and cargo to and from the area. The air taxi operations include the occasional operations by Federal Express and Ameriflight, the United Parcel Service contract carrier, that use the Airport when flights are diverted from the Visalia Municipal or Fresno-Yosemite International Airports because of weather conditions.

2.3.2.2 General Aviation

Of the total estimated 6,600 annual aircraft operations in 2003, 3,900 operatiaons (59 percent) are by general aviation. The general aviation operations are further categorized by local and itinerant operations.

Local Operations. Of the 3,900 general aviation operations, an estimated 1,200 operations (30 percent) are estimated to be local operations. Local operations are performed by aircraft operating in the local traffic pattern and aircraft departing for, or arriving from, local practice areas. These operations include training operations (referred to as touch-and-goes) by both aircraft based at the Airport and aircraft from other airports in nearby areas.

Itinerant Operations. Of the 3,900 general aviation operations, an estimated 2,700 operations (70 percent) are itinerant operations. Itinerant operations are conducted by aircraft that take off at one airport and land at another airport. They include the operations of aircraft based at the Airport and flights of other aircraft to and from the Airport.

2.3.2.3 Military

Military operations are estimated to be 2,600 operations annually and account for 40 percent of total operations. Military operations include those training operations by T-34 aircraft from Naval Air Station Lemoore that use the Airport for routine training activities.

2.4 REVIEW OF AVIATION ACTIVITY TRENDS AND FORECASTS

A review of historical and forecast trends in aviation activity on the National, State and local levels was made. This review included historical data and forecast trends on the National level prepared by the FAA and the *1999 Statewide Forecasts* prepared by the State of California, Aeronautics Program, as part of the State's continuous aviation system planning process, and the 1998 *Central California Aviation System Plan* (CCASP) prepared by the Council of Fresno County Governments. Aviation forecasts prepared for the 1990 *Airport Master Plan for the New Coalinga Airport* were also reviewed.

2.4.1 Federal Aviation Administration

Historical and forecast general aviation trends on a National level are published annually by the FAA to meet the budget and planning needs of the FAA and to provide information that can be used by State and local entities, the aviation industry and the general public. The most recent edition was published in March 2003 and is entitled *FAA Aerospace Forecasts, Fiscal Years 2003-2014*.

The FAA forecasts general aviation and air taxi aircraft to increase by an estimated 18,500 aircraft over the short-term 12-year period (through (2014), as presented in Table 2-3. This increase represents an average increase of 0.7 percent annually. Of the 18,500 total increase in aircraft, 28 percent (5,100) will be single-engine aircraft, 5 percent (1,000) will be multi-engine propeller and turboprop aircraft, 23 percent (4,300) will be turbojet aircraft, 3 percent (500) will be rotorcraft aircraft, 6 percent (1,100) will be experimental aircraft, and 35 percent (6,400) will be all other aircraft types. It should be noted that the increase of 6,400 aircraft in the "other type of aircraft" is attributed to a new category of light sport aircraft expected to enter the active aircraft fleet and will include an estimated 2,000 existing aircraft that are not currently included in the FAA aircraft registered count.

2.4.2 1998 Central California Aviation System Plan

A review of the aviation activity forecasts prepared for the Airport in the 1998 CCASP prepared by the Council of Fresno County Governments was made. Based aircraft at the Airport were forecast to increase from 14 aircraft in base year 1995 to 17 aircraft in 2020. Annual aircraft operations were forecast to increase from 9,666 operations in base year 1995 to 11,737 operations in 2020. The CCASP communicated to Caltrans that difficulty was experienced in developing realistic forecasts for the Airport. The CCASP noted that the City was in the process of developing the new airport facility and, due to the location and physical facilities available at the new airport, it was reasonable to assume that over time the new airport facility would stimulate greater aviation activity in the area.

Table 2-3

ESTIMATED ACTIVE GENERAL AVIATION AND AIR TAXI AIRCRAFT BY TYPE OF AIRCRAFT (thousands) 1997-2014

		Fixed Wing				Rotorcraft			
		Piston		Turbine					
Historical	Total	Single-engine	Multi-engine	Turboprop	Turbojet	Piston	Turbine	Experi-mental	Balloons/ Dirigibles/ Gliders
Historical									
1997	192.4	140.0	16.0	5.6	5.2	2.3	4.5	14.7	4.1
1998	204.7	144.2	18.7	6.2	6.1	2.5	4.9	16.5	5.6
1999	219.5	150.9	21.0	5.7	7.1	2.6	4.9	20.5	6.8
2000	217.5	149.4	21.1	5.8	7.0	2.7	4.5	20.4	6.7
2001	211.4	145.0	18.3	6.6	7.8	2.3	4.5	20.4	6.5
2002E	211.0	144.5	18.2	6.6	8.0	2.5	4.4	20.4	6.5
Forecast									
2003	211.4	144.6	18.2	6.7	8.2	2.5	4.4	20.4	6.5
2004	213.1	144.9	18.2	6.8	8.4	2.5	4.4	20.5	7.5
2005	215.5	145.4	18.1	6.9	8.7	2.5	4.4	20.6	8.8
2006	217.1	146.0	18.1	7.1	9.1	2.6	4.4	20.7	9.2
2007	218.8	146.6	18.1	7.2	9.5	2.6	4.4	20.8	9.7
2008	220.6	147.2	18.0	7.3	9.9	2.6	4.5	20.9	10.2
2009	222.2	147.6	18.0	7.5	10.3	2.7	4.5	21.0	10.7
2010	223.7	148.0	18.0	7.6	10.7	2.7	4.5	21.1	11.2
2011	225.2	148.4	17.9	7.7	11.1	2.7	4.5	21.2	11.7
2012	226.6	148.8	17.9	7.8	11.5	2.7	4.6	21.3	12.1
2013	228.1	149.2	17.9	7.9	11.9	2.8	4.6	21.4	12.5
2014	229.5	149.6	17.8	8.0	12.3	2.8	4.6	21.5	12.9

NOTE: Detail may not add to total because of independent rounding

SOURCE: *FAA Aerospace Forecasts, Fiscal Years 2003-2014*

2.4.3 California Aviation System Plan

The *1999 Statewide Forecasts* were prepared by Caltrans as part of the State's continuous airport system planning process to identify the aviation facilities required to meet the air transportation needs of the State. The aviation forecasts were prepared by using a combination of forecasts from the FAA's Terminal Area Forecasts, the forecasts of the Regional Transportation Planning Agencies in the major metropolitan areas including the Southern California Association of Governments, the Metropolitan Transportation Commission and the San Diego Association of Governments, and included forecasts prepared by local planning agencies areas outside the major metropolitan areas.

The CASP predicted that, following years of stagnant (or negative) growth, general aviation based aircraft and annual aircraft operations would increase slightly over 1.0 percent annually from the base year 1995 through 2020 on a statewide basis and grouped aviation activity forecasts within planning regions within the State. The Coalinga Municipal Airport is within the Central California Region that included counties in central California extending from Kern County in the south to Yuba County in the north. Based aircraft in the Central California Region were forecast to increase from 4,640 based aircraft in the base year 1995 to 7,511 aircraft in 2020, an average annual growth rate of 1.9 percent. Annual general aviation operations in the Central California Region are forecast to increase from 2,117,717 operations in the base year 1995 to 3,431,332 in 2020, an average annual growth rate of 1.9 percent. Aviation activity forecasts prepared for the Coalinga Municipal Airport as part of the CASP forecast that by 2020, the Airport would have 26 based aircraft and accommodate 7,222 annual aircraft operations. These forecasts are graphically illustrated later in this Chapter.

2.4.4 1990 Airport Master Plan for New Coalinga Airport

The 1990 *Airport Master Plan for New Coalinga Airport* was also reviewed. The Airport Master Plan was prepared prior to construction of the new airport in 1996 and forecast that up to 32 aircraft would be based at a new airport by 2005. Aircraft operations were forecast to be up to 16,000 operations annually by 2005. The Airport Master Plan for the new airport also developed "plan for" forecasts that provide an ultimate airport demand of 100 based aircraft and 50,000 annual aircraft operations.

2.5 AVIATION ACTIVITY FORECASTS

To assess existing facilities and to determine future requirements at the Coalinga Municipal Airport, it is necessary to forecast the demand for facilities expected to be generated by future air traffic activity. Such demand is created by air taxi and general aviation air traffic and may be stated in terms of aircraft operations, aircraft basing

demand and related components. In turn, the air traffic generated at the Airport relates directly to the population and economy of the area, to general aviation trends and forecasts on the National, State and local levels, and the aviation demand and airport facilities and services provided at other airports in the surrounding area.

The aviation demand forecasts presented in this section have been developed based on a review of the population and economic trends for the City of Coalinga; an analysis of the available historical air traffic activity at the Airport; and an assessment of aviation trends on the National, State and local levels that have, or may have, a potential effect on aviation activity at the Airport. Discussions with persons knowledgeable of the Airport, including representatives of the City, have provided valuable insight into the preparation of the aviation activity forecasts.

2.5.1 General Assumptions

The following general assumptions are used in the preparation of the forecasts:

- These forecasts are demand-based and are, therefore, unconstrained by facility limitations or policy considerations.

- No policies that would constrain aviation growth will be imposed on the Airport by any governmental entity.

- The population and economic analyses and forecasts presented in Section 2.2 are satisfactory for purposes of aviation demand forecasting.

- The historical aviation activity data presented in Section 2.3 form an adequate basis for the forecasts presented in this Chapter.

These forecasts were prepared on the basis of the information and assumptions set forth above. Although the information and assumptions used constitute a reasonable basis for preparing the forecasts, the achievement of any such forecast may be affected by fluctuating conditions and is dependent upon the occurrence of future events that cannot be assured. Therefore, the actual results achieved may vary from the forecasts, and such variations could be material.

The aviation activity forecasts are presented in Table 2-4 and are discussed below.

2.5.2 Based Aircraft

The number of based aircraft at the Coalinga Municipal Airport is forecast to increase from 19 aircraft in 2003 to 28 aircraft by 2025 as presented in Table 2-4, an average

Table 2-4

AVIATION ACTIVITY FORECASTS
Coalinga Municipal Airport
2003-2025

	Base Year	Forecasts			
	2003	**2010**	**2015**	**2020**	**2025**
GENERAL AVIATION BASED AIRCRAFT[1]					
Single-engine	17	19	20	21	23
Multiengine-propeller	2	2	3	3	3
Turbojet	0	0	0	0	0
Helicopter	0	1	1	2	2
Total	19	22	24	26	28
AIRCRAFT OPERATIONS					
Air Taxi	100	200	300	400	500
General Aviation					
Local	1,200	1,300	1,400	1,500	1,600
Itinerant	2,700	3,400	3,700	4,100	4,500
Subtotal	3,900	4,700	5,100	5,600	6,100
Military	2,600	2,600	2,600	2,600	2,600
Total Aircraft Operations	6,600	7,500	8,000	8,600	9,200
OPERATIONS PER BASED AIRCRAFT	211	222	225	231	236

1. Airport Management Records

SOURCE: Aries Consultants Ltd.

annual increase of 1.8 percent. The growth in forecast based aircraft at the Airport is due in part to the forecast population increases in the City, and the City's continued efforts to diversify its economic base and capitalize on emerging business opportunities in the area.

Single-engine aircraft are forecast to increase from 17 aircraft in 2003 aircraft to 23 by 2025, an average annual increase of 1.4 percent over the 22-year planning period but will decrease as a percent of the total based aircraft from 90 percent in 2003 to 82 percent by 2025. Multiengine aircraft are forecast to be three by 2025, and account for 11 percent of the total based aircraft. This increase is a reflection of increased use of the Airport for corporate and business aviation.

The forecast for helicopters to be based at the Airport by 2025 reflects the increased use of helicopters for business and agricultural uses over recent years. It is estimated that by 2025, up to two helicopters could be based at the Airport and account for 7 percent of the total based aircraft.

2.5.3 Aircraft Operations

The number of annual aircraft operations at the Coalinga Municipal Airport, as presented in Table 2-4, is forecast to increase from an estimated 6,600 annual operations in 2003 to 9,200 annual operations by 2025, an average annual increase of 1.5 percent.

2.5.3.1 Air Taxi

Air taxi operations include the unscheduled operations of "for hire" air taxis carrying passengers and any operations by bank couriers or other small package carriers. The potential exists for air taxi operations at the Airport to serve persons accessing the growing population of the area and the increased use of the Airport by businesses and visitors to the area, including access to the Pleasant Valley State Prison and the new Coalinga State Hospital facilities.

Air taxi operations are forecast to increase from an estimated 100 annual operations in 2003 to 500 annual operations by 2025.

2.5.3.2 General Aviation

General aviation aircraft operations are forecast to continue to account for the largest share of total operations at the Airport. General aviation operations are forecast to increase from an estimated 3,900 annual operations in 2003 to 6,100 annual operations by 2025.

Local Operations. Local operations are forecast to decrease slightly as a percent of total general aviation aircraft operations from 30 percent (1,200 operations) in 2003 to 26 percent (1,600 operations) by 2025.

Itinerant Operations. Itinerant operations are forecast to increase as a percent of total general aviation aircraft operations from 70 percent (2,700 operations) in 2003 to 74 percent (4,500 operations) by 2025 reflecting the increase use of the Airport for business in the area during the forecast period. The itinerant operations include the business jets that occasionally use the Airport. The itinerant operations also include government aviation activity; e.g., the California Highway Patrol and law enforcement and fire protection aircraft and helicopters. It also includes medical evacuation and search and rescue flights in the Coalinga area.

2.5.3.3 Military

Military aircraft operations represent about 40 percent of total aircraft operations (about 2,600 operations in 2003), and the assumption has been made that these operations will continue at present levels and account for a decreasing share of total aircraft operations in the future. Therefore, a constant level of 2,600 military operations per year has been assumed throughout the 22-year planning period.

2.5.3.4 Operations Per Based Aircraft

Operations per based aircraft is a useful guide to estimate the number and types of aircraft operations at a non-towered airport. Operations per based aircraft include the number of operations by visiting itinerant aircraft as well as those based at the facility. The numbers also include training operations. Operations per based aircraft are forecast to increase from an estimated 211 annual operations in 2003 to 236 annual operations by 2025 reflecting a greater utilization of existing aircraft.

2.6 COMPARISON OF AVIATION ACTIVITY FORECASTS

A comparison of the forecasts of aviation activity for the Coalinga Municipal Airport discussed previously in this Chapter are graphically illustrated on Figures 2-1 and 2-2. Forecasts of based aircraft prepared for the *1999 Statewide Forecasts* by Caltrans Division of Aeronautics, and the 1990 Airport Master Plan are graphically illustrated on Figure 2-1. Forecasts of annual aircraft operations are graphically illustrated on Figure 2-2. It should be noted that the forecasts were prepared at different times based on variations in both economic and aviation activity conditions. The latest FAA Terminal Area Forecasts for the Airport are also presented on Figures 2-1 and 2-2 and these show there are no based aircraft at the Airport and no increase in either based aircraft or aircraft operations between 2000 and 2020.

HISTORICAL AND FORECAST BASED AIRCRAFT
Coalinga Municipal Airport
2000-2025

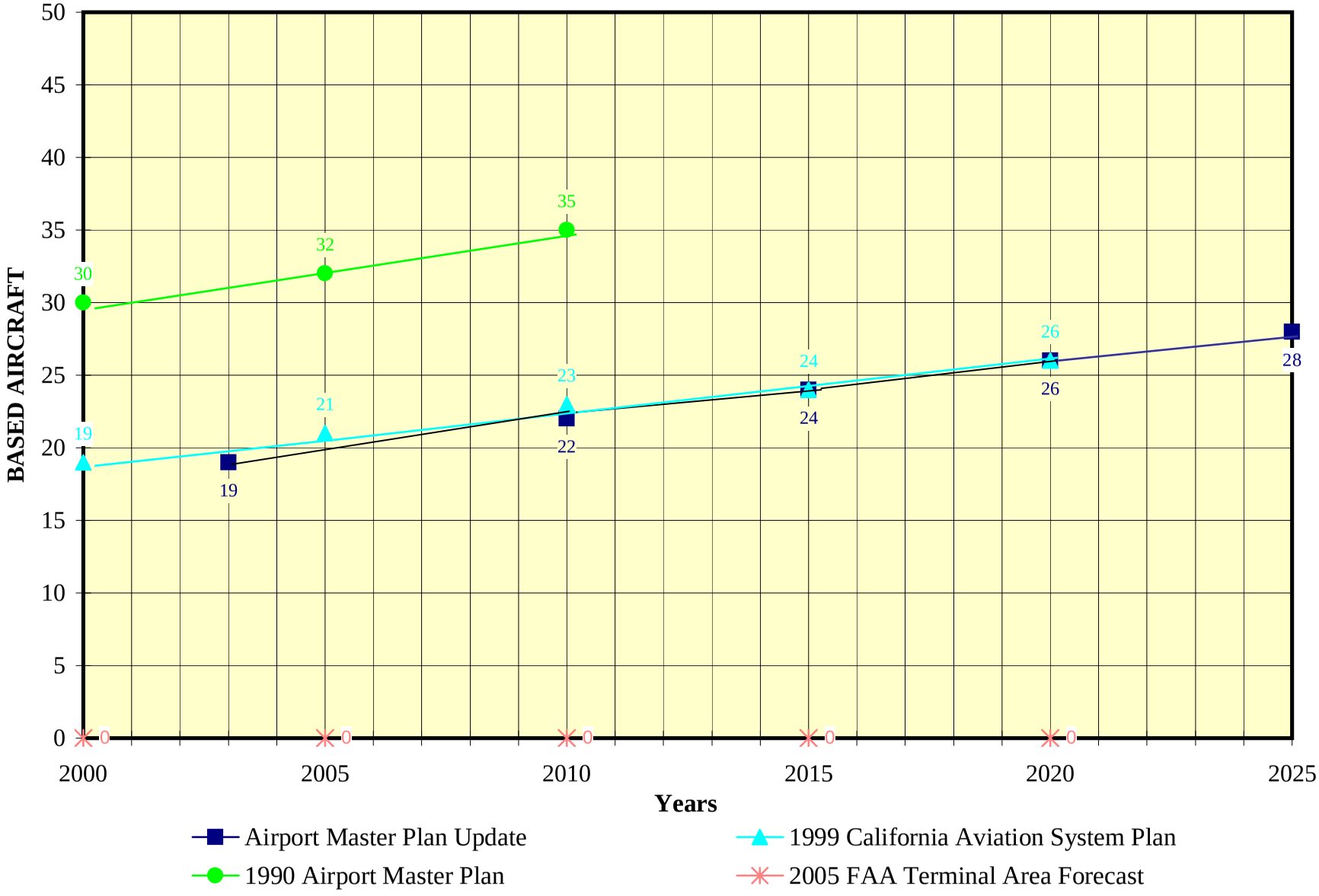


FIGURE 2-1

HISTORICAL AND FORECAST AIRCRAFT OPERATIONS
Coalinga Municipal Airport
2000-2025

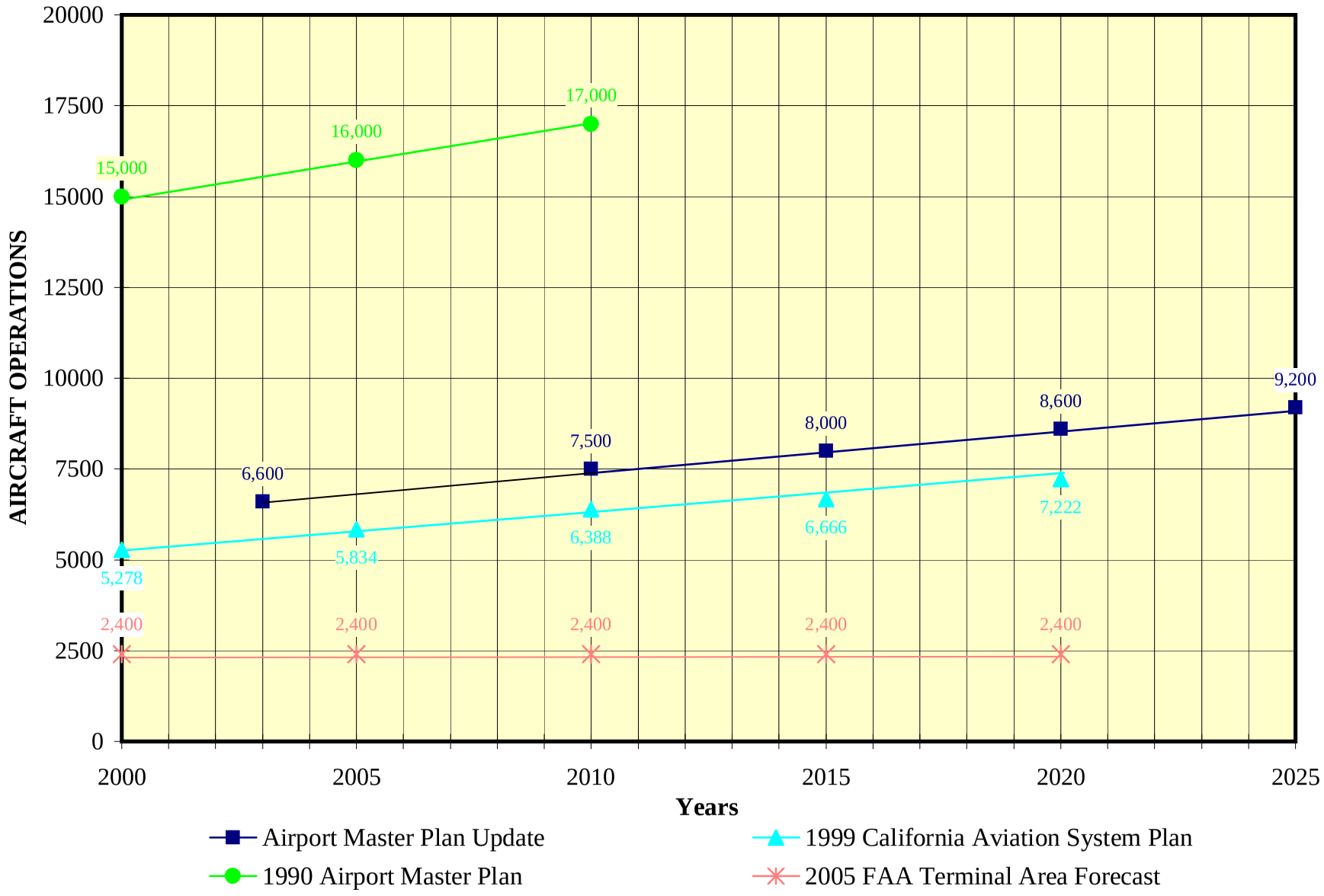


FIGURE 2-2

2.7 POTENTIAL DEMAND FOR AIR CARGO/SMALL PACKAGE SERVICE

The concept of establishing an air cargo port in the West San Joaquin Valley has been discussed for over three decades. The completion of the California Aqueduct in the early 1970s brought new sources of irrigation water to over a million acres of land on the west side of the San Joaquin Valley providing the capability to grow high-value agricultural products. The construction of Interstate Highway 5 in the early 1970s provided transportation access to the San Francisco Bay Area and the Greater Los Angeles Basin for agricultural products. Several studies were initiated by the City of Coalinga to consider the economic and agricultural factors associated with establishing an air cargo port in Coalinga. The concept of an air cargo port envisioned a multimodal distribution facility including a cargo airport, industrial park, agricultural processing and packing, a foreign trade zone and light manufacturing.

The concept of an air cargo port to serve the West San Joaquin Valley continues to surface, and the City periodically receives inquiries regarding the potential for a facility of this type. In 1998, the following was included in the CCASP.

The new (Coalinga Municipal Airport), in conjunction with other developments (sic) in the area, should stimulate over time greater aviation activity in the Coalinga area, both in terms of based aircraft and aviation operations. Furthermore, there is real potential for air cargo activity at Coalinga's new airport, primarily because its location above the fog belt creates an opportunity for it to function as a cargo "reliever" airport to Fresno-Yosemite International Airport. While future projections of air cargo activity at the new Coalinga Airport would be highly speculative at this time, it is nevertheless important to recognize and anticipate this potential.

The following discusses how air cargo activity has evolved over the past three decades as it relates to the City of Coalinga today.

There are basically two types of air cargo air carriers. The all-cargo air carriers, as envisioned in the air cargo port concept, typically handle the air portion of the cargo movement while the express small package carriers typically handle the cargo from door-to-door and provide both the air and ground transportation.

2.7.1 All-Cargo Air Carriers

Since the original air cargo port concept for Coalinga was developed in the 1970s, competition in providing a hub for all-cargo aircraft has become significant as a number of airports in the Western U. S. compete for increased air cargo activities by providing the facilities and services required to accommodate air cargo activities. All-cargo air carriers have also successfully established air cargo hub facilities at several civil airports; e.g., the Metropolitan Oakland International and Ontario International

Airports. Thedecommissioning of several military bases, including Mather Field in Sacramento and George Air Force Base in Victorville, and the conveyance of these airports to civilian use, have provided the facilities and services required to successfully market these aviation facilities to all cargo air carriers. In addition, the Stockton Metropolitan and Fresno-Yosemite International Airports have experienced increases in all-cargo activity. The Fresno-Yosemite International Airport is currently planning an Air Cargo Park.

The likely air traffic generated by an air cargo marketing/distribution center requires an understanding of how and why air cargo moves, its origin and ultimate destination points, and how air carrier route structures accommodate air cargo. An air cargo marketing/distribution center provides the capability for all cargo carriers to bring cargo into, or take cargo out of, a central distribution center. The cargo is ready for immediate dispatch to the recipient or stored in strategically located warehousing for ready access. Air cargo is brought in by truck and loaded onto aircraft or unloaded from aircraft and dispatched by truck. Air cargo is also transshipped to other aircraft. The successful air cargo marketing/distribution center is often served by multiple air cargo carriers. A significant population base is essential to developing an air cargo marketing/distribution center, not only to provide a labor pool for air cargo activities, but also to generate demand for incoming cargo. An efficient roadway system is mandatory for truck access to and from the distribution center.

There are several general conditions that are required for developing air cargo activities, including the airport location, in relation to the largest volume of origin and destination points for air cargo shipments. This includes the location of the air cargo marketing/distribution center close to the goods that need to be shipped by air or located close to the place where the goods will be consumed. Weather conditions must be favorable to minimize weather-related airport closures, delays or restricted operations. A large pool of skilled/semi-skilled labor, living nearby, to work in a cargo distribution center is essential. Major roadways for truck access to and from aircraft transfer points are essential. For international air cargo carriers, the airport location should be on the "edge" of countries or continents that, because of international bilateral agreements, serve as gateways to those countries or points beyond.

Airport specific assets that are preferable and oftentimes required to support and enhance air cargo operations include long (10,000 feet and more in length) and strong runways that allow all-cargo aircraft to take off at maximum gross takeoff weight with maximum payloads. Reliable approach and landing aids (instrument landing system) to ensure high flight completion rates and an airport that is operational 24 hours a day is required so air cargo operators are not forced to schedule flights around nighttime curfews. Airport support facilities; e.g., air traffic control tower, aircraft rescue and firefighting equipment and personnel, weather monitoring and reporting, fuel availability and aircraft maintenance, are also cited as airport specific requirements.

In addition, flight crew facilities; e.g., food, accommodations, ground transportation and entertainment, are also considered by the air carriers in locating an air cargo hub.

The City of Coalinga is not located within a geographic area with a high concentration of population and does not have the attendant employment base to attract the attention of all-cargo air carriers. In addition, significant road access and airport improvements would be required in order to attract the attention of all-cargo air carriers. While development of any type of aviation-related industry could generate sources of revenue to the Airport, these revenues could not offset the costs of access and airport improvements that would be required up front.

The development of an air cargo port based on the original concept would appear to be speculative. However, the City should continue to pursue the attraction of large warehousing facilities to the area through its economic development program. Development and expansion of these types of facilities in the short-term could promote the development of multimodal transportation requirements to serve the area in the long-term.

2.7.2 Air Cargo Small Package Carriers

The air cargo small package carriers have additional requirements that are more stringent than those for an all-cargo marketing/distribution center. These carriers are typically integrated operators in that they pick up the packages at the point of origin and deliver to the final destination point. The airport and aviation-related activities are only part of their total operations.

Express air cargo operations consider the airport location as critical to locating their distribution operations. Small package services are typically delivered overnight with a time guarantee for the following day. Air shipments into an area are transferred to trucks for delivery. The delivery trucks must be able to reach the customer base within the time guarantees for delivery. In more remote areas, incoming small packages are transferred to contract commuter, air taxi, or local fixed base operators that fly cargo and passengers to remote areas. The remote areas often have a two-day delivery guarantee to allow for the intermediate small aircraft travel time and connections. The overwhelming volume of small packages are picked up in, and delivered to, the major metropolitan areas.

Express air cargo operators are particularly sensitive to weather conditions as a delayed flight could mean the loss of revenue for an entire aircraft shipment if express packages are not delivered within the guaranteed time. Express air cargo operators typically require a large group of people to work at night in their sort distribution centers.

The express air cargo operators have designated service areas based on population density wherein a centrally-located airport serves as the primary focal point for pick up and delivery of small packages. Pick up and delivery to and from the central airport is primarily by truck, and access to and from the cargo aircraft and the outlying areas is critical to the successful operation. As the demand for small package service increases in a particular area, larger aircraft are used. When the capacity to handle the demand area is reached, service areas are redefined, and smaller aircraft serve another centrally-located airport. Small packages going to remote rural areas are transferred to contract carriers; e.g., fixed base operators or air taxis, and then to trucks for two-day delivery guarantees.

As the demand for operations by air cargo/small package/mail service increases in the Coalinga area, additional services could be provided by an increase in the frequency of service at the Fresno-Yosemite International Airport, where the carriers have established a distribution network, and the use of larger aircraft at the Visalia Municipal Airport.

There are no historical data available on the small package/air cargo handled at the Coalinga Municipal Airport. There is occasional use of the Airport by Federal Express and Ameriflight (the contract carrier for United Parcel Service). These aircraft use the Airport when they are diverted from the Visalia Municipal and Fresno-Yosemite International Airports because of weather conditions. Operations by air cargo/small package/mail service could be initiated directly to the Coalinga Municipal Airport when businesses and industries develop in the area along with an attendant increase in population and employment creating the demand for direct service.

Chapter 3

EXISTING AIRPORT FACILITIES

3.1 INTRODUCTION

Coalinga Municipal Airport is geographically located 4 statute miles east-northeast of the center of Coalinga in Fresno County. The Airport is located on about 1,002 acres of land at an elevation of 622 feet above mean sea level (MSL). The Airport is classified as a General Aviation Airport by the Federal Aviation Administration (FAA) in the National Plan of Integrated Airport Systems (NPIAS). The Airport is classified as a Community General Aviation Airport by the State of California, Department of Transportation, (Caltrans), Division of Aeronautics, in the California Aviation System Plan (CASP).

The existing facilities and conditions at the Airport that are important in the master planning process are the airfield, avigation, general aviation, airport access and parking, airport support and other areas. Existing facilities at the Airport are shown on Figures 3-1 and 3-2.

3.2 AIRFIELD

The airfield consists of two runways (12-30 and 1-19) and a heliport. A parallel taxiway is located on the southwest side of Runway 12-30 with five entry/exit taxiways. The runways, heliport, taxiways, pavement conditions, drainage conditions and runway markings and lighting on the Airport are described below.

3.2.1 Runways and Taxiways

Runway orientation, physical dimensions, and effective gradient of the runways are as follows:

Runway	Orientation	Physical Dimensions (feet)	Effective Gradient (%)
12-30	Northwest- Southeast	5,000 by 100	0.46
1-19	North-South	2,500 by 60	0.07

The runway orientation for Runway 12-30 is north 48 degrees, 30 minutes, and 00 seconds west, true. The runway orientation for Runway 1-19 is north 10 degrees, 00 minutes, and 00 seconds east, true.

NOTE:

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

COALINGA MUNICIPAL AIRPORT MASTER PLAN

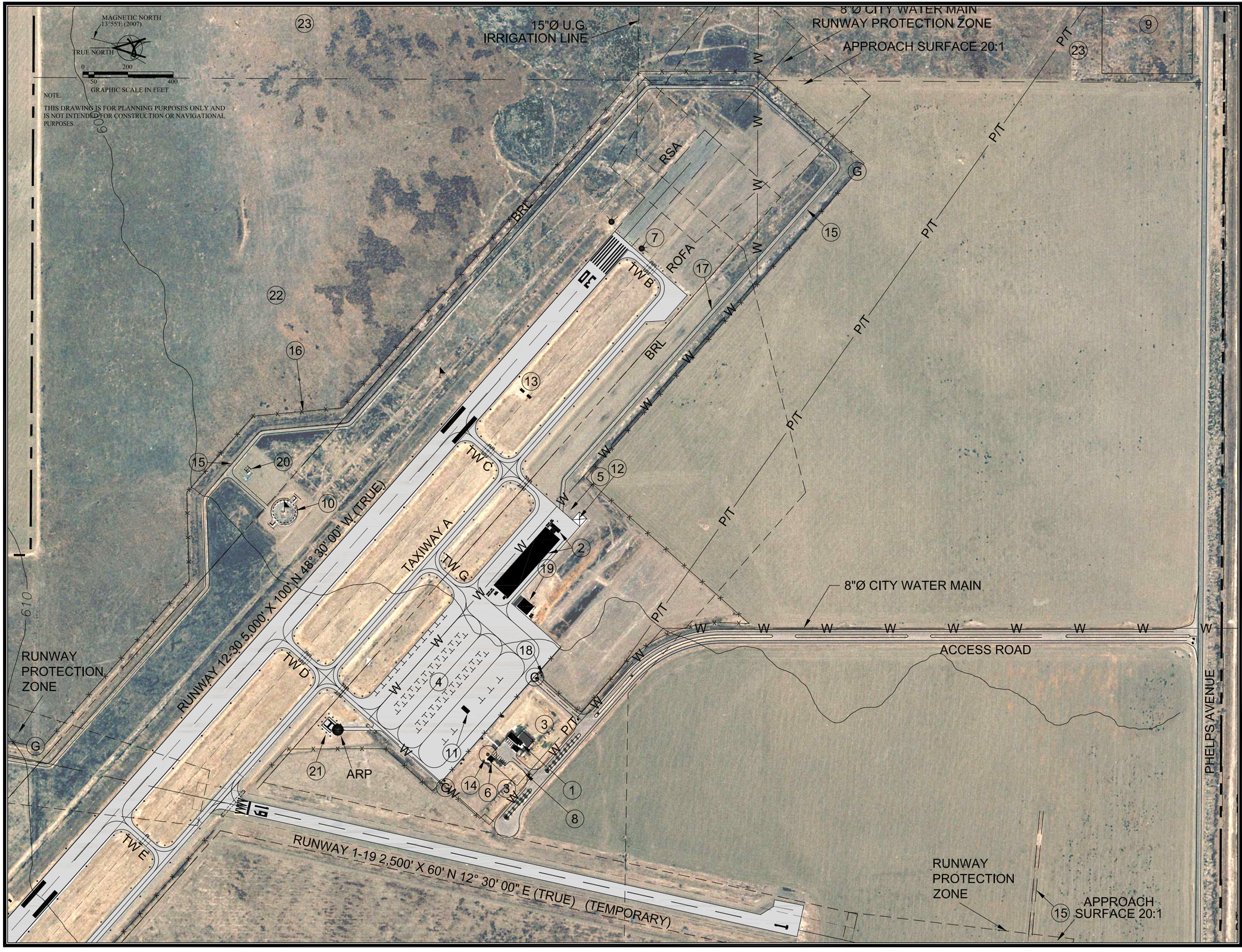
EXISTING AIRPORT FACILITIES

LEGEND	
EXISTING	
	AIRPORT PROPERTY LINE
	AIRFIELD/APRON PAVEMENT
	BUILDING/FACILITIES
BRL	BUILDING RESTRICTION LINE (BRL)
	FENCE
G	GATE
	ROTATING BEACON
	FUEL ISLAND
	AIRPORT REFERENCE POINT (ARP)
	THRESHOLD LIGHTS
	WIND SOCK
	REIL
	PAPI-2
H	HELICOPTER
600	EXISTING GROUND CONTOURS
	HYDRANT
P/T	PACIFIC GAS & ELECTRIC/TELEPHONE
W W	WATER
	RUNWAY SAFETY AREA
	RUNWAY OBJECT FREE AREA
24 25 / 23 26	SECTION CORNER

EXISTING FACILITY LEGEND	
1	FLIGHT SERVICE FACILITY/CARETAKER RESIDENCE
2	HANGARS
3	FBO SITES
4	TIEDOWNS
5	OWNER MAINTENANCE AREA
6	ELECTRICAL BUILDING
7	REIL
8	TRANSFORMER
9	HOLDING POND
10	SEGMENTED CIRCLE AND LIGHTED WIND SOCK
11	FUEL ISLAND
12	AIRCRAFT POLLUTION ABATEMENT FACILITY
13	PAPI
14	ROTATING BEACON
15	DIKE
16	FENCE
17	PERIMETER ROAD
18	APRON SECURITY LIGHTING
19	MAINTENANCE HANGAR
20	AWOS
21	HELICOPTER
22	HABITAT CONSERVATION AREA
23	CALAVERAS BUFFER AREA

ARIES CONSULTANTS LTD.

COALINGA MUNICIPAL AIRPORT	FIGURE 3-1
FRESNO COUNTY, CALIFORNIA	
NAME: CLG-31-Existing Facilities-B.dwg	NO: 4490-01
DATE: May 1, 2007	PLOT SCALE:1"=1,000'



THE CITY OF COALINGA 1906

COALINGA MUNICIPAL AIRPORT MASTER PLAN

EXISTING TERMINAL AREA FACILITIES

LEGEND	
EXISTING	
	AIRPORT PROPERTY LINE
	AIRFIELD/APRON PAVEMENT
	BUILDING/FACILITIES
BRL	BUILDING RESTRICTION LINE (BRL)
	FENCE
G	GATE
	ROTATING BEACON
	FUEL ISLAND
	AIRPORT REFERENCE POINT (ARP)
	THRESHOLD LIGHTS
	WIND SOCK
	REIL
	PAPI-2
H	HELICOPTER
600	EXISTING GROUND CONTOURS
	HYDRANT
P/T	PACIFIC GAS & ELECTRIC/TELEPHONE
W W	WATER
	RUNWAY SAFETY AREA
	RUNWAY OBJECT FREE AREA
24 25 / 23 26	SECTION CORNER

EXISTING FACILITY LEGEND	
1	FLIGHT SERVICE FACILITY/CARETAKER RESIDENCE
2	HANGARS
3	FBO SITES
4	TIEDOWNS
5	OWNER MAINTENANCE AREA
6	ELECTRICAL BUILDING
7	REIL
8	TRANSFORMER
9	HOLDING POND
10	SEGMENTED CIRCLE AND LIGHTED WIND SOCK
11	FUEL ISLAND
12	AIRCRAFT POLLUTION ABATEMENT FACILITY
13	PAPI
14	ROTATING BEACON
15	DIKE
16	FENCE
17	PERIMETER ROAD
18	APRON SECURITY LIGHTING
19	MAINTENANCE HANGAR
20	AWOS
21	HELICOPTER
22	HABITAT CONSERVATION AREA
23	CALAVERAS BUFFER AREA

ARIES CONSULTANTS LTD.

COALINGA MUNICIPAL AIRPORT	FIGURE 3-2
FRESNO COUNTY, CALIFORNIA	
NAME: CLG-31-Existing Facilities-B.dwg	NO: 4490-02
DATE: May 1, 2007	PLOT SCALE: 1"=400'

Runway 12-30 is asphalt paved, in good condition, painted with nonprecision runway markings and equipped with medium intensity runway lights (MIRL). Runway 1-19 is asphalt gravel and available for daytime use only. The heliport is 50 feet by 50 feet, asphalt paved, in good condition, with basic heliport markings and perimeter lighting.

There is a full-length parallel taxiway on the southwest side of Runway 12-30. There are entry/exit taxiways at both ends of the runway and three other exit taxiways from the runway. The parallel taxiway is 300 feet from the runway centerline. The taxiways are 35 feet wide. There are no taxiways serving Runway 1-19.

3.2.2 Pavement Strength

According to the latest FAA Form 5010-1, *Airport Master Record*, last inspected in May 2003, Runway 12-30 is of asphalt construction and is considered to be in good condition. The current estimated maximum gross weight of aircraft (runway pavement strength) by aircraft landing gear configuration is as follows:

	Aircraft Maximum Gross Weight (pounds)	
Runway	**Single-wheel**	**Dual-wheel**
12-30	30,000	--
1-19	12,500	--

Caltrans prepared an Airport Pavement Management System (APMS) study for the Airport in 2005. According to the study the Runway 12-30 taxiways and aircraft parking apron pavement are in good condition. The pavement condition index (PCI) was 95 or greater for all the pavement sections tested. Some longitudinal/transverse cracking was noted in a few of the sections tested. Runway 1-19 was not tested.

Runway 1-19 is restricted by the City to single-wheel aircraft under 6,000 pounds. The runway is in poor condition and the asphalt gravel is oil treated and is cracked in places with small potholes, rocks and loose gravel.

3.2.3 Drainage

The airfield is drained by a series of culverts under the taxiways between Runway 12-30 and the parallel taxiway. There is a dike around the Airport, except for the area to the south, which is used to divert overload surface water flows around the Airport. There is a holding pond in the southeast corner of the Airport.

3.3 AVIGATION

Avigation (air navigation) considerations include airspace and air traffic control, approach areas and obstructions, runway protection zones, navigational and landing aids and meteorological conditions.

3.3.1 Airspace and Air Traffic Control

Figure 3-3 shows the Coalinga Municipal Airport in relation to the major navigational aids, low altitude airways, low altitude military training routes, military operations areas (MOA), restricted areas, instrument flight rules (IFR) approaches and other airports in the area.

The airspace in the general area above the Coalinga Municipal Airport is Class E controlled airspace with a floor of 1,200 feet above ground level (AGL), with Class G uncontrolled airspace below. The airspace from the surface of the Airport up to 1,200 feet is therefore Class G uncontrolled airspace. Some aircraft in Class E airspace are controlled and fly by instrument flight rules (IFR), while other aircraft operate by visual flight rules (VFR), and must maintain prescribed distances from clouds and have at least 3 miles of flight visibility. Conversely, aircraft that operate under VFR in uncontrolled Class G airspace have to remain clear of clouds and have 1 mile of flight visibility.

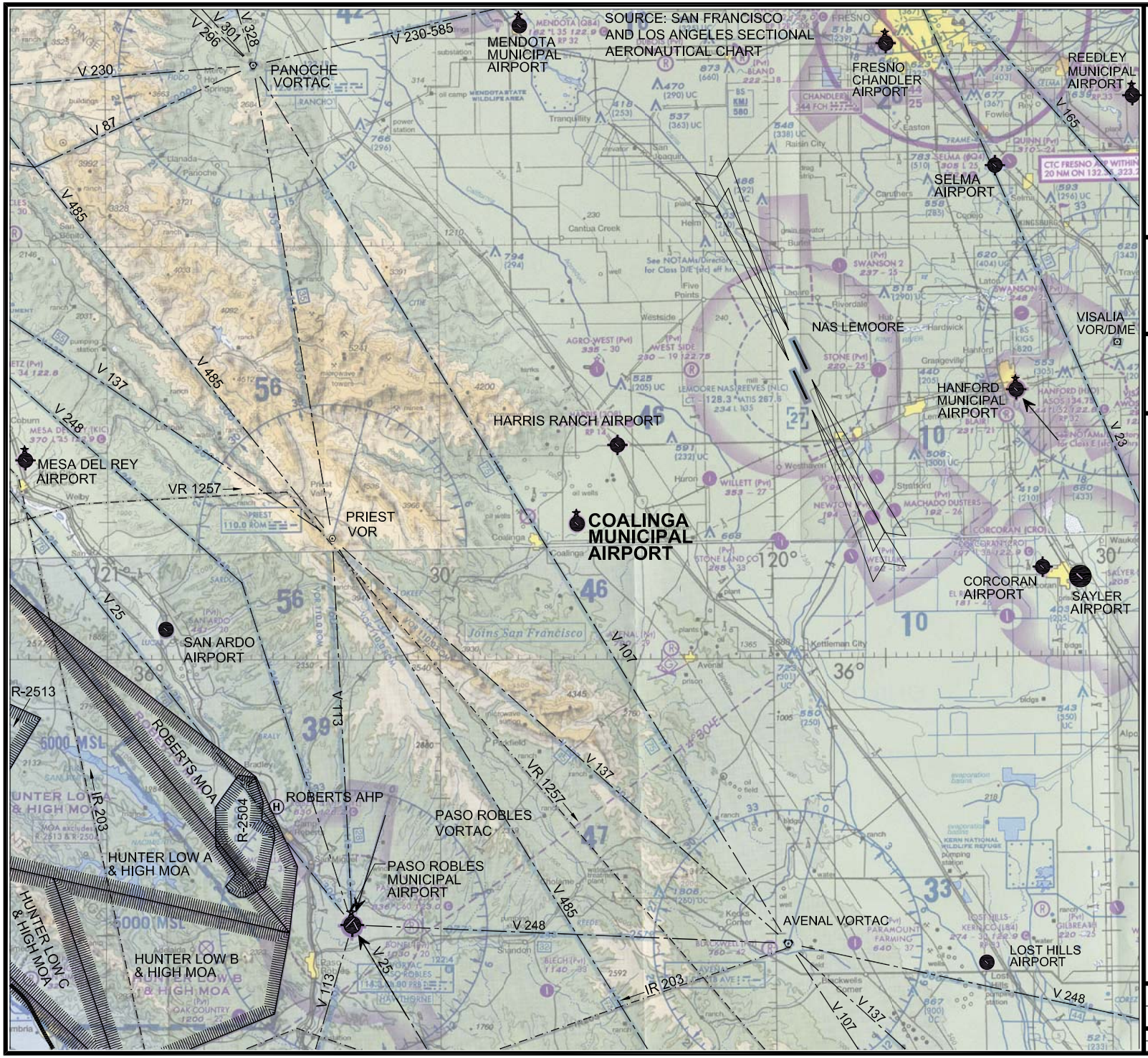
There are several navigational aids that provide the basis of the low-altitude airway structure in the area. The two closest navaids that form the low altitude airways to the west are the Panoche VORTAC and the Avenal VORTAC located 41 nautical miles (NM) and 34 NM to the northwest and southeast, respectively. The Priest VOR at 18 NM to the west forms additional airways to the west of the Airport. A VORTAC is the co-location of a very high frequency omnidirectional radio range (VOR) and military tactical air navigational and distance measuring equipment.

3.3.1.1 Published Instrument Flight Rules Procedures

There are presently no published instrument flight rules (IFR) approaches to the Coalinga Municipal Airport.

3.3.1.2 Air Traffic Control

Coalinga Municipal Airport is within the jurisdictional area of the Oakland Air Route Traffic Control Center (ARTCC), commonly known as “Center.” Oakland Center provides air traffic control (ATC) for en route IFR aircraft passing overhead. Centers may delegate airspace for IFR approach/departure control. Oakland Center has delegated airspace to the Naval Air Station (NAS) Lemoore for approach/departure



COALINGA MUNICIPAL AIRPORT MASTER PLAN

AIRSPACE CONFIGURATION

LEGEND	
V 23	LOW ALTITUDE AIRWAY
	COMBINED VOR AND TACAN (VORTAC)
	VHF OMNI RANGE (VOR)
	VOR/DME
IR 203	MILITARY TRAINING INSTRUMENT ROUTES
VR 1257	MILITARY TRAINING VISUAL ROUTES
	NONPRECISION IFR APPROACH
	PRECISION IFR APPROACH

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

ARIES CONSULTANTS LTD.

COALINGA MUNICIPAL AIRPORT
FRESNO COUNTY, CALIFORNIA

FIGURE 3-3

NAME: CLG-33-Airspace-A.dwg | NO: 4490-06
DATE: May 1, 2007 | PLOT SCALE: 1"= 60,760'

control for NAS Lemoore and other airports that underlie their delegated airspace. Airspace delegated to NAS Lemoore overlies Coalinga Municipal Airport and, therefore, NAS Lemoore provides approach/departure control for IFR aircraft arriving or departing the Coalinga Municipal Airport. There is no air traffic control tower (ATCT) located at the Airport, therefore, the Airport is classified by the FAA as an uncontrolled airport.

3.3.1.3 Airspace Usage

The use of airspace in the Coalinga area is influenced by mountainous terrain. The terrain keeps minimum en route altitudes (MEA) relatively high over the mountainous areas. Mountain peaks rise to over 4,500 feet MSL within approximately 15 NM to the west, over 5,200 feet MSL within 20 NM to the northwest and over 4,300 feet MSL to the south of the Airport. The MEA over Coalinga is 7,000 feet MSL.

The airspace around the Coalinga area serves a wide range of civil and military aircraft operations, both IFR and VFR. The main difference between IFR and VFR is that the pilot maintains spatial orientation of the aircraft by references to instruments for IFR operations and by visual reference to the ground for VFR operations. VFR activity requires good visibility, whereas IFR activity can be accomplished in poor visibility. Meteorological conditions that permit flight under VFR rules are prescribed in the Federal Aviation Regulations (FAR), Part 91, *General Operating and Flight Rules*, Paragraph 155, *Basic VFR Weather Minimums*, in terms of visibility and distance from clouds.

3.3.1.4 Instrument Flight Rules Operations

All IFR flights en route to and from Coalinga pass through airspace controlled by the Oakland ARTCC. As arriving aircraft approach the Coalinga area, the approach controller directs the arriving aircraft so that it descends to the minimum en route altitude. The Coalinga Municipal Airport is a VFR airport, as it does not have a published instrument approach procedure. However, aircraft can be cleared to the minimum en route altitude, and if the pilot makes visual contact with the Airport and has basic VFR conditions, the pilot may cancel IFR and land VFR.

3.3.1.5 Visual Flight Rules Operations

Unlike IFR flights, VFR flights are not controlled by the air traffic control system in the area around the Coalinga Municipal Airport. In the Coalinga area, Class G uncontrolled airspace extends from the surface upward to 1,200 feet above the ground with Class E controlled airspace above that level. The significance of Class E airspace to VFR traffic is that the basic VFR weather minimums are higher in controlled airspace than in the uncontrolled airspace below that surrounds the Airport.

The Coalinga Municipal Airport is near one of the busiest VFR corridors in the world along the San Joaquin Valley with a secondary VFR flyway of considerable air traffic passing just west of the Coalinga area airspace. A significant portion of the air traffic between the Los Angeles and San Francisco Bay areas traverses just west of the Coalinga area. For some of the traffic using this north-south corridor, the Coalinga Municipal Airport is the origin or destination airport.

Right turn rectangular VFR airport traffic patterns have been established for Runways 19 and 30. Left turn traffic patterns apply to Runways 1 and 12. The traffic pattern altitude is 1,622 feet MSL for all aircraft; i.e., 1,000 feet AGL. The common traffic advisory frequency (CTAF) is 122.7. Runway 1-19 is only available for daytime use.

3.3.2 Approach Areas and Obstructions

The FAA Form 5010-1, *Airport Master Record*, and other charts and documents were reviewed to identify obstructions as defined by Federal Aviation Regulations (FAR) Part 77, *Objects Affecting Navigable Airspace.* FAR Part 77 establishes imaginary surfaces related to airports and their runways that are used to identify obstructions.

The following tabular data shows the FAR Part 77 approach slopes compared with existing obstacles/obstructions, controlled approach slopes and other information relative to the controlling obstacles/obstructions.

				Controlling Obstacle/Obstruction Location from Runway Threshold, Related to Extended Runway Centerline		
Runway Number	**Runway Elevation (feet)**	**FAR Part77 Slope**	**Actual Slope**	**Type**	**Height Above Threshold (feet)**	**Location**
1	606	20:1	50:1	N/A	N/A	None
19	605	20:1	50:1	N/A	N/A	None
12	622	20:1	50:1	N/A	N/A	None
30	600	20:1	50:1	N/A	N/A	None
H1					N/A	None

There is a wooden post fence about 112 feet east of the centerline of Runway 1-19 that is within the FAR Part 77 primary surface. There are some trees, as close as 210 feet east of the centerline of Runway 1-19, that penetrate the 7 to 1 FAR Part 77 transitional surface.

3.3.3 Runway Protection Zones

All four existing runway protection zones (RPZs) are entirely within the Airport boundary.

Runway protection zone dimensions are no longer based on FAR Part 77 approach surface dimensions. The dimensions are established in the FAA Advisory Circular 150/5300-13, *Airport Design*, for each individual runway, by approach visibility minimum for, and by category of aircraft that the individual runway will serve. The runway protection zones for a runway are at ground level, and the approach surface slopes are inclined planes above the ground. The following tabular data illustrates the type of existing runway protection zone and dimensions established for each runway approach end. These are based on earlier outdated FAR Part 77 criteria for Runway 12-30 and the outer width would now be 700 feet based on the criteria in FAA Advisory Circular 150/5300-13.

Runway	Protection Zone	Length (feet)	Inner Width (feet)	Outer Width (feet)
1	Visual	1,000	250	450
19	Visual	1,000	250	450
12	Nonprecision	1,000	500	800
30	Nonprecision	1,000	500	800

3.3.4 Navigational and Landing Aids

The Coalinga Municipal Airport underlies the 317 degree radial of the Avenal VORTAC at a distance of 34 NM. However, the Priest VOR is closer at 18 NM and the 072 degree radial of the Priest VOR overlies the Airport also.

Runway 12-30 is equipped with medium intensity runway lights (MIRL). There are precision approach path indicators (PAPI-2) and runway end identifier lights (REIL) at each end of Runway 12-30. The heliport perimeter is also lighted. The runway lights, PAPIs, REILs, and heliport lights are pilot-controlled. There are no lights on Runway 1-19. The parallel taxiway and entry/exit taxiways for Runway 12-30 are equipped with medium intensity taxiway lights (MITL) as are other taxiways. There is apron security lighting installed along the south side of the aircraft parking apron.

An airport rotating beacon is located south of the main aircraft parking apron. There is a segmented circle and lighted wind indicator located on the northeast side of Runway 12-30, but it is only marked for Runway 12-30 and not for Runway 1-19. There are wind socks near the ends of Runways 12 and 30. There is an automated weather observing system (AWOS) located north of the segmented circle.

3.3.5 Meteorological Conditions

FAA criteria for aircraft operations requires a runway orientation resulting in a crosswind component not exceeding the limit of the most critical aircraft more than 5 percent of the time, thereby providing at least 95 percent wind coverage. The most critical aircraft for the Coalinga Municipal Airport are in airport reference codes (ARC) A-I (e.g., Cessna 172 and Beech Bonanza) and B-I (e.g., Cessna 402 and Piper 31-Navajo) with a limited crosswind component of 10.5 knots (12 miles per hour).

Based on wind data collected at the Airport in 2006, the orientation of Runway 12-30 provides 92.7 percent and Runway 1-19 provides 98.6 percent wind coverage for the most critical aircraft expected to use the Airport with 10.5 knots (12 miles per hour) crosswinds. Together, the two runways provide 99.3 percent wind coverage for 10.5 knots (12 miles per hour) crosswinds.

According to the 1990 *New Coalinga Airport Master Plan*, IFR conditions probably occurred less than 10 percent of the time at the old airport site and may occur more often at the new airport site due to valley fog and lower elevations.

According to the Coalinga Chamber of Commerce, the high average temperatures range from 64 degrees Fahrenheit in January to 103 degrees Fahrenheit in July. The low average temperatures range from 29 degrees Fahrenheit in January to 53 degrees Fahrenheit in July. The mean maximum temperature of the hottest month is 100 degrees Fahrenheit.

3.4 GENERAL AVIATION

There is one aircraft parking apron tiedown area (395,000 square feet) on the Airport. The apron is southwest of the Runway 12-30 and provides space for about 40 tiedowns. Transient aircraft can park at any of five tiedowns provided southwest of the fuel island. There is space for 16 aircraft in City-owned hangars on the southeast side of the Airport. There is a port-a-port hangar at the end of the hangar building. There are restrooms at the northwest end of the 16-unit hangar building and in the Flight Service Facility.

There is no fixed base operator (FBO) at the Airport at present. The 3,000 square foot FBO maintenance hangar is currently used for equipment storage.

There is a heliport northwest of the aircraft parking apron and south of Runway 12-30 which is owned and maintained by the City. The heliport is used to provide law enforcement support, medical evacuation and search and rescue services in the Coalinga area. The California Highway Patrol has a 500-gallon Jet A fuel tank used for re-fueling aircraft and helicopters adjacent to the heliport. In cases of emergencies, the California Highway Patrol provides fuel to other law enforcement and fire protection aircraft and helicopters.

There is an area for aircraft owner maintenance southeast of the box-hangars.

The Flight Service Facility building provides a pilots lounge with office, restroom and vending machines.

3.5 AIRPORT ACCESS AND PARKING

Access to the Airport from Coalinga is via Elm Street (State Route 33/198) and Phelps Avenue, a distance of about 5.3 miles. The Airport access road is off Phelps Avenue. The Airport is about 10 miles west of Interstate Highway 5.

Vehicular parking is provided in the vicinity of the Flight Service Facility and caretaker residence building.

There is a dirt service road and dike that encircles the airfield.

Ground transportation is available from Coalinga Transit (Dial-a-Ride) or by taxi service.

3.6 AIRPORT SUPPORT

Airport support facilities for the Coalinga Municipal Airport include the following facilities.

The nearest fire department is the City of Coalinga Fire Department station located at the corner of Sixth Avenue and Elm Street, approximately 5.5 miles from the Airport.

The 100 low-lead fuel is stored in an above-ground 12,000-gallon tank. There is a fueling island in the terminal area and fuel is available 24 hours a day using an automated credit card system. There is a 500-gallon Jet A fuel tank adjacent to the heliport.

There is an aircraft pollution abatement facility (wash rack) located southeast of the box-hangars.

Water is provided by the City of Coalinga through an 8-inch water main along the Airport access road from Phelps Avenue.

Sewage is disposed of by a 1,500-gallon septic tank in the terminal area for the Flight Service Facility and caretaker residence. A 1,500-gallon septic tank serves the maintenance and storage hangar areas, each of which has a bathroom.

Solid waste is collected and conveyed to the Coalinga landfill by the City.

Electrical power is provided by Pacific Gas & Electric.

There is no underground natural gas service to the Airport.

There is liquid propane available.

Telephone service is provided by AT&T.

Security is provided by the City of Coalinga Police Department, if called.

An airport caretaker residence is located in the same building as the Flight Service Facility for someone to provide security and take care of any problems at the Airport.

The 1994 Habitat Management Plan prepared for the 1992 Biological Opinion, requires fencing between the 360 acre Kit Fox Management Area and the 200 acre runway buffer area as shown on Figure 1-2. The fencing consists of 4-foot high, 5-strand barbed wire with the lowest wire a minimum of six, and preferably, 8-inches above the ground around Runway 12-30 and elsewhere between the Kit Fox Management Area and the runway buffer area. There is no fencing around the outer perimeter of the Kit Fox Management Area and along the airport property line. There is an unfenced section on the south and east sides of Runway 1-19. There is 4-foot high chain link fencing in the terminal area.

3.7 OTHER AREAS

The Airport is designated as a Public Facility (PF) in the City General Plan and is zoned for Light Industrial/Planned Development (M-1/PD).

Approximately 360 acres of the Airport are set aside as a Habitat Conservation Area, another 200 acres are set aside as a runway buffer area and 60 acres are set aside as a buffer area along Calaveras Avenue. Another 290 acres are leased for agricultural use by RMA Farms.

There is a holding pond at the southeast corner of the Airport.

There is a 15-inch underground east-west irrigation line that crosses under the runway safety area beyond the south end of Runway 12-30, under the Airport access road and under Runway 1-19.

3.8 OFF-AIRPORT LAND USE

The Airport is located in a rural, agricultural setting. The lands surrounding the Airport boundary are in agricultural use. There are oil fields to the north of the Airport boundary. There are several residences and farm buildings located about one-half mile to the west of the Airport boundary. The Pleasant Valley Cemetery is located at the southeast corner of Phelps and Calaveras Avenues, across from the Airport.

Chapter 4

AIRPORT FACILITY REQUIREMENTS

4.1 INTRODUCTION

The major elements of the Airport, which were described in Chapter 3 must be analyzed individually and balanced in relation to one another as part of the airport master planning process for the Coalinga Municipal Airport. These major elements are:

- Airfield
- Avigation
- General Aviation
- Airport Access and Parking
- Airport Support
- Other Areas

The existing facilities must be evaluated and their ability to satisfy forecast aviation demand throughout the planning period, as set forth in Chapter 2 must be determined. From these evaluations, the requirements for any additional facilities and improvements can be established. These requirements will, in turn, provide the basis for the recommended 2025 Airport Master Plan.

A summary of the major requirements for facilities and improvements at the Airport through the year 2025 is presented in Table 4-1. Existing facilities are also listed for purposes of comparison.

4.2 AIRFIELD

The following analysis of airfield requirements covers runway and taxiway dimensions, airfield pavement and airfield capacity.

4.2.1 Airport Classification

According to Federal Aviation Administration (FAA) planning criteria, Coalinga Municipal Airport is classified as a General Aviation Airport in the *National Plan of Integrated Airport Systems* (NPIAS). General aviation airports serve those communities that do not receive scheduled commercial service. Coalinga Municipal Airport is classified as a Community General Aviation Airport in the *California Aviation System Plan* (CASP) prepared by the State of California, Department of

Table 4-1

EXISTING FACILITIES AND FUTURE REQUIREMENTS
Coalinga Municipal Airport
2005-2025

	Existing	Future			
	2005	**2010**	**2015**	**2020**	**2025**
AIRFIELD					
Runway 12-30					
Length (feet)	5,000	5,000	5,000	6,600	7,500
Width (feet)	100	100	100	100	100
Pavement strength (pounds)					
-- Single-wheel aircraft	30,000	30,000	30,000	30,000	30,000
-- Dual-wheel aircraft	--	60,000	60,000	60,000	60,000
Runway 1-19					
Length (feet)	2,500	3,000	3,000	3,000	3,000
Width (feet)	60	60	60	60	60
Pavement strength (pounds)					
-- Single-wheel aircraft	6,000	12,500	12,500	12,500	12,500
-- Dual-wheel aircraft	--	12,500	12,500	12,500	12,500
Taxiways					
Width (feet)	35	35	35	35	35
GENERAL AVIATION					
Aircraft tiedown positions	40	40	40	40	40
Hangar spaces	16	20	22	26	30
AIRPORT ACCESS AND VEHICULAR PARKING					
Access road lanes (two way)	2	2	2	2	2
Vehicular parking spaces	16	18	20	22	24

SOURCE: Aries Consultants Ltd.

Transportation (Caltrans), Division of Aeronautics. Community airports provide access to other regions and states. They accommodate predominantly single-engine aircraft under 12,500 pounds. They provide basic or limited services for pilots and aircraft. The Coalinga Municipal Airport is listed in the *California Aviation System Plan, 2003 System Requirements Element*, as one of 27 airports in the Central California Region as the Region's highest priority for enhancements and perhaps make them worthy of reclassification. Reclassification in the case of Coalinga Municipal Airport could mean the classification as a Regional General Aviation Airport which would accommodate larger aircraft and provide more services.

4.2.2 Airfield Dimensions

Airfield dimensions are determined by several factors, including airport classification, type, weight, approach speed and wingspan of the most demanding aircraft. Generally speaking, no one aircraft can be expected to be the most demanding in all of these factors. Aircraft that may be the determinant for runway length may not be the most demanding aircraft for considerations of lateral separations of the runways, taxiways and taxilanes. Further, facilities used for small aircraft (12,500 pounds or less maximum gross takeoff weight) will have some different dimensional requirements than those facilities used by large (more than 12,500 pounds maximum gross takeoff weight).

4.2.3 Airport Reference Code

FAA Advisory Circular (AC) 150/5300-13, *Airport Design*, establishes an airport reference code (ARC) to identify specific design criteria appropriate for the types of aircraft expected to be accommodated at a particular airport. The ARC has two components. The first is a letter referring to the "aircraft approach category" in terms of approach speed. The second is a Roman numeral referring to the "airplane design group" in terms of wingspan. Aircraft in a lower ARC would be accommodated by a higher ARC (i.e., A-I fits into B-II).

According to the ARC definitions contained in FAA AC 150/5300-13, the existing airfield dimensions generally meet the criteria for ARC C-II large aircraft (more than 12,500 pounds maximum gross takeoff weight), e.g., Bombardier CL-600 and Sabreliner 80. The parallel taxiway separation is 300 feet, runway centerline to taxiway centerline, which is the required separation for ARC C-II. The existing runway protection zones (RPZs) for Runway 12-30 meet the requirements for large aircraft in approach categories A and B. The Airport is currently used primarily by small aircraft in ARC A-I, such as the Cessna 172 or the Beech Bonanza, up to small aircraft in ARC B-I, such as the Beech Baron 58, Cessna 402 or the Piper 31-Navajo.

Some larger aircraft in ARC B-II (e.g., Cessna Citation Bravo and Beech King Air 200) and ARC C-I (e.g., Learjet 35/36 as well as U. S. Navy T-34 aircraft use the Airport.

4.2.4 Runway Length

FAA AC 150/5325-4A, *Runway Length Requirements for Airport Design*, provides design standards and guidelines for determining recommended runway length. For aircraft of 60,000 pounds or less, runway length curves are provided for families of aircraft. The FAA has derived these curves with data from FAA approved aircraft flight manuals and assumed loading conditions.

The recommended runway length to accommodate 100 percent of small aircraft (12,500 pounds or less maximum gross takeoff weight) at Coalinga Municipal Airport, corrected for a mean maximum daily temperature of 100 degrees Fahrenheit and elevation of 622 feet mean sea level (MSL), is as follows:

Less than ten (10) passenger seats = 4,050 feet
Ten (10) passenger seats or more = 4,550 feet

For aircraft between 12,500 and 60,000 pounds maximum allowable gross takeoff weight, FAA AC 150/5325-4A has recommended runway length curves for 75 and 100 percent of the fleet at 60 and 90 percent useful load. Useful load consists of passengers and baggage, cargo and usable fuel. For Coalinga Municipal Airport, the recommended runway lengths, corrected for elevation (622 feet MSL), temperature (100 degrees Fahrenheit) and runway gradient (0.60 percent), are as follows:

Percent of Fleet	**Percent of Useful Load**	**Runway Length** (feet)
75	60	5,130
75	90	8,050
100	60	6,655
100	90	10,600

The runway gradient corrections for the above recommended runway lengths are for takeoffs, which are generally more demanding than landings. However, for some turbojet aircraft, landings on a wet or slippery runway may be more demanding. A correction, without the runway gradient correction, may be required to accommodate these aircraft.

4.2.5 Runway 12-30

The existing runway length of 5,000 feet with a runway gradient of 0.46 percent is adequate to accommodate 100 percent of the small aircraft of 12,500 pounds or less allowable gross takeoff weight.

The existing 5,000 foot runway accommodates approximately 75 percent of the large aircraft between 12,500 pounds and 60,000 pounds at 60 percent useful load. Additionally, some other large aircraft could operate from this runway under conditions of low temperature and/or dry runway conditions on an occasional basis (less than 500 annual operations). An extension to approximately 6,700 feet would be required to accommodate 100 percent of these large aircraft at 60 percent useful load. The currently approved Airport Layout Plan (ALP) preserves the capability of extending the runway to 7,500 feet.

Some large aircraft (more than 12,500 pounds allowable gross takeoff weight) can be accommodated with the lateral separation standards that exist for this runway. Taxiway separation and other dimensional standards, such as runway protection zones (RPZ), runway safety areas (RSA) and runway object free areas (ROFA) will accommodate aircraft in ARC C-II. When operations reach 500 annual operations by a higher ARC, they should be accommodated. A runway extension would be required to accommodate larger aircraft. These considerations were addressed during the evaluation of the airport development alternatives for the Coalinga Municipal Airport as discussed in Appendix A.

4.2.6 Crosswind Coverage

The crosswind coverage for Runway 12-30 is 92.7 percent for a 12 miles per hour (mph) or 10.5 knots crosswind component based on wind data collected at the Airport in 2006. The crosswind coverage for Runway 1-19 is 98.6 percent for a 12 mph (10.5 knots) crosswind component. The crosswind coverage for Runway 12-30 is 96.5 percent for a crosswind component of 15 miles per hour (13 knots).

According to FAA AC 150/5300-13, a crosswind runway is recommended when the main runway orientation provides less than 95 percent coverage for any aircraft forecast to use the Airport on a regular basis. At the present time, most of the aircraft operating at the Coalinga Municipal Airport are in ARC A-I/B-I requiring coverage for a crosswind component of 12 miles per hour (10.5 knots). The required crosswind component coverage for aircraft in ARC A-II/B-II is 15 miles per hour (13 knots). Therefore, a crosswind runway is required to adequately accommodate aircraft in ARC A-I/B-I.

The FAA conditionally approved the Airport Layout Plan on August 1, 1994 with a crosswind runway. The FAA January 19, 2000 letter noted that FAA had conducted an airspace analysis which "indicated that construction of a crosswind runway will not adversely affect the safe and efficient use of airspace by aircraft." FAA also stated that they have no objections to the establishment of the crosswind runway provided that aircraft operations are conducted during visual flight rule (VFR) conditions only and that the City be responsible for maintaining obstruction free 20:1 approach slope surfaces (which the City does).

A complete wind analysis was supposed to have been prepared as part of the FAA funded design and construction of the new Coalinga Municipal Airport. However, this analysis was not done in time and only limited wind data collected at another site was available for FAA to approve the alignment of Runway 12-30.

Later, FAA funded and approved a wind data collection and analysis program at the new Airport site as part of the design and construction. The resulting wind rose, based on one year of data in 1993, is depicted on the FAA approved 1994 Airport Layout Plan. This shows that if only a single runway airport was to be built the preferred wind orientation would have been north-south (18-36 or 1-19) with 96.9 percent crosswind coverage compared to only 92.5 percent for Runway 12-30 for 13 mph (11.3 knots) based on wind data collected at the new Airport site in 1993.

Based on wind data collected at the Airport in 2006 as part of an FAA funded study, the orientation of Runway 12-30 provides only 92.7 percent and Runway 1-19 provides 98.6 percent wind coverage for the most critical aircraft expected to use the Airport with 10.5 knots (12 miles per hour) crosswinds.

FAA AC 150/5300-13, *Airport Design*, states the following in Paragraph 203(b), "When a runway orientation provides less than 95 percent wind coverage for any aircraft forecasted to use the airport on a regular basis, a crosswind runway is recommended." In addition, FAA Order 5100.3B, *Airport Improvement Program Handbook*, states "if the primary runway is subject to weather conditions that exceed airport design standards in Advisory Circular 150/5300-13, the minimum required crosswind runways to achieve wind coverage are eligible".

The predominant use of the Airport is by ARC A-1/B-1 aircraft whose maximum crosswind component is 10.5 knots (12 mph) for 95 percent crosswind coverage.

FAA AC 150/5300-13, Paragraph 3 of Appendix 1, *Wind Analysis* states "At locations where provision of a crosswind runway is impractical due to severe terrain constraints, consideration may be given to increasing operational tolerance to

crosswinds by upgrading the airport layout to the next higher airport reference code". The Coalinga Municipal Airport is not restricted by severe terrain constraints.

FAA AC 150/5300-13 does not say upgrading to the next higher ARC may alternatively be used where crosswind runways are impractical. FAA AC 150/5300-13 does not say that a wider runway can compensate for, and resolve, the lack of crosswind coverage problem. Therefore, widening Runway 12-30 does not increase the crosswind component that a given pilot and aircraft can handle and is apparently not considered a valid solution by FAA. Therefore, the Coalinga Municipal Airport has not already resolved the crosswind runway issue, according to FAA design standards, due to the existing 100-foot width of Runway 12-30.

FAA AC 150/5300-13 Appendix 1, *Wind Analysis*, Paragraph 1(a) states, "Generally, the smaller the airplane, the more it is affected by wind, particularly crosswind components. Crosswinds are often a contributing factor in small airplane accidents". Pilots will use the most advantageous runway from a wind coverage point of view, for a variety of reasons, including proficiency, liability and general safety. Pilots of small light aircraft would also prefer to operate with minimum crosswinds rather than up to 10.5 knots.

A temporary crosswind Runway 1-19 exists and is used frequently according to local pilots. Therefore, the City wishes to continue to improve and develop the crosswind runway as required by FAA grant assurances to maintain the Airport in a safe and serviceable condition in accordance with FAA minimum design standards and safety considerations.

4.2.7 Runway 1-19

Ideally, a crosswind runway should be 80 percent as long as the required length of the primary runway length for the aircraft to be accommodated according to FAA AC 150/5325-4A. At a minimum the crosswind runway should be at least 80 percent of the runway length requirement identified in FAA AC 150/5325-4A.

Therefore, to accommodate all small aircraft in ARC A-I/B-I, with 10 seats or more, the crosswind runway should be 3,640 feet in length (or 80 percent of 4,550 feet). The minimum length of the crosswind runway to accommodate 100 percent of small aircraft (12,500 pounds or less) in ARC A-I/B-I with less than 10 seats would be 3,240 feet (or 80 percent of 4,050 feet). To accommodate 90 percent of the small aircraft would require a crosswind length of 2,720 feet (or 80 percent of 3,400 feet). To accommodate 75 percent of the small aircraft would require a crosswind runway length of 2,270 feet (or 80 percent of 2,840 feet). It is expected that the aircraft using

the crosswind runway will be small aircraft with less than 10 seats in ARC A-I/B-I and, therefore, a length of 2,720 feet to 3,240 feet would be required. The crosswind runway should be at least 60 feet wide.

4.2.8 Airfield Capacity

The FAA technique for estimating airfield capacity (FAA AC 150/5060-5, *Airport Capacity and Delay*) was used to compute hourly capacity and annual service volumes for both the existing airfield and potential improvements evaluated as part of this study.

A single runway airfield, with a parallel taxiway, has an hourly capacity of about 90 operations during visual flight rule (VFR) conditions. This same runway would have an hourly capacity of about 30 to 40 operations during instrument flight rules (IFR) conditions. The crosswind runway would essentially add little, if any, additional capacity.

The peak hour demand is forecast to be 8 operations per hour during an average day and peak month by the end of the planning period. The hourly capacity is adequate to accommodate forecast hourly demand VFR conditions. For the present, without an IFR approach procedure, the hourly capacity is zero except for occasional IFR departures. Only minor delays during IFR conditions (when operations would normally be reduced) will occur after an IFR approach procedure is published. At the present time, there are no IFR approaches at the Airport. It can be expected that global positioning system (GPS) approaches to both ends of Runway 12-30 and possibly a precision approach to Runway 30 will be published during the planning period.

Annual service volume (ASV) is a reasonable estimate of an airport's annual capacity in terms of aircraft operations that may be used as a reference in airport planning. The ASV is the annual volume of aircraft operations beyond which the average delay to each aircraft increases rapidly with relatively small increases in aircraft operations (and beyond which the levels of service on the airfield deteriorate).

The ASV of single runway airfield with a parallel taxiway and an IFR approach procedure is estimated at about 230,000 operations. By comparison, according to the forecasts presented in Chapter 2, air traffic is expected to reach a level of only 9,200 operations by the year 2025.

Therefore, a single runway airfield would provide adequate capacity to accommodate the forecast demand throughout the 2025 planning period. The crosswind runway is primarily to accommodate small aircraft in strong crosswinds and provides little, if any, additional capacity.

4.2.9 Heliport

The existing heliport, located northwest of the aircraft parking apron, is located too close to the centerlines of the two existing runways for independent simultaneous operations. The heliport is only 450 feet from the centerline of Runway 12-30 and only 400 feet from the centerline of Runway 1-19. The requirement for independent simultaneous operations is 700 feet from the centerline of each runway. Therefore, helicopter touchdowns and lift-offs should be conducted on the runways and the current heliport should be re-designated for only helicopter parking and re-fueling. Additional helicopter parking may be required as helicopter activity increases and could be provided on the adjacent aircraft parking apron. Helicopter pilots should use the common traffic advisory frequency (CTAF) of 122.7 to advise other pilots in the area, and possible service vehicles on the Airport, of their positions and intentions of helicopter movement.

4.2.10 Taxiways

The existing taxiway system is basically adequate for the forecast demand for small and for some large aircraft (12,500 pounds or more) with an occasional (500 operations a year or less) large aircraft up to ARC B-II. Additional entry/exit taxiways and extension to the existing parallel taxiway will be required in conjunction with any runway extension to Runway 12-30. In addition, a complete parallel taxiway with entry/exit taxiways at both runway ends and intermediate locations should be provided for a future permanent crosswind Runway 1-19.

4.2.11 Other Airfield Dimensions

For comparative purposes and for use in evaluating alternatives for potential extensions to Runway 12-30, standards are included in Table 4-2 for aircraft in ARC A-I/B-I, A-II/B-II, C-I and C-II for large airplanes (over 12,500 pounds). Applicable runway and separation standards for ARC A-I/ B-I for small airplanes (12,500 pounds or less) exclusively for the crosswind Runway 1-19 at the Coalinga Municipal Airport are also shown in Table 4-2.

The FAA design criteria require runway safety area (RSA), runway object free area (ROFA) and runway obstacle free zone (ROFZ) to be provided of specified width and

Table 4-2

AIRPORT DIMENSIONAL AND SEPARATION STANDARDS
Coalinga Municipal Airport
(feet)

	AIRPORT REFERENCE CODE				
ITEM	**A-I/B-I[1]**	**A-I/B-I[2]**	**A-II/B-II[2]**	**C-I[2]**	**C-II[2]**
Runway Width	60	60	75	100	100
Runway Shoulder Width	10	10	10	10	10
Runway Blast Pad Width	80	80	95	120	120
Runway Blast Pad Length	60	100	150	100	150
Runway Safety Area Width	120	120	150	500	500
Runway Safety Area and Object Free Area Length Beyond Each Runway End	240	240	300	1,000	1,000
Runway Object Free Area Width	250	400	500	800	800
Obstacle Free Zone Width	250	400	400	400	400
Runway Centerline to Taxiway Centerline	150	225	240	300	300
Runway Centerline to Aircraft Parking Area	125	200	250	400	400
Taxiway Width	25	25	35	25	35
Taxiway Shoulder Width	10	10	10	10	10
Taxiway Safety Area Width	49	49	79	49	79
Taxiway Object Free Area Width	89	89	131	89	131
Taxiway Centerline to Parallel Taxiway Centerline	69	69	105	69	105
Taxiway Centerline to Fixed or Movable Object	44.5	44.5	65.5	44.5	65.5
Taxilane Centerline to Fixed to Movable Object	39.5	39.5	57.5	39.5	57.5
Runway Protection Zone[3,4,5]					
Length	1,000	1,000	1,000	1,700	1,700
Inner Width	250	500	500	500	500
Outer Width	450	700	700	1,010	1,010

1. For small aircraft (12,500 pounds or less) exclusively.
2. ARC A-I/B-I, A-II/B-II, C-I and C-II for large aircraft (over 12,500 pounds).
3. Runway protection zone dimensional standards are for visual runways and runways with not lower than one (1) statute mile approach visibility minimums.
4. For both small and large aircraft, with a nonprecision approach with, or not lower than, 3/4 statue approach visibility minimums, the runway protection zone has a length of 1,700 feet, inner width of 1,000 feet and outer width of 1,510 feet.
5. For both small and large aircraft, with a precision approach with lower than 3/4 statute mile approach visibility minimums, the runway protection zone has a length of 2,500 feet, inner width of 1,000 feet and outer width of 1,750 feet.

SOURCE: FAA AC 150/5300-13*Airport Design*

length, beyond the ends of the runways, based on the existing and expected airplane design groups that will use the runways. The RSA, ROFA and ROFZ are rectangular areas centered about the runway centerline.

For Runway 12-30, assuming large business jet aircraft in ARC C-II are to be accommodated on a regular basis, the required RSA is 500 feet wide and extends 1,000 feet beyond the runway ends. The required ROFA is 800 feet wide and extends 1,000 feet beyond the runway ends. The required ROFZ is 400 feet wide and extends 200 feet beyond the runway end. Where an approach light system exists the inner ROFZ extends from 200 feet beyond the runway end to 200 feet beyond the last light unit in the approach lighting system.

For Runway 12-30, assuming large aircraft in ARC B-II are to be accommodated on a regular basis, the required RSA is 150 feet wide and extends 300 feet beyond the runway ends. The required ROFA is 500 feet wide and extends 300 feet beyond the runway ends. The required ROFZ is 400 feet wide and extends 200 feet beyond the runway end.

For Runway 1-19, assuming small aircraft in ARC A-I/B-I, the required RSA is 120 feet wide and extends 240 feet beyond the runway ends. The required ROFA is 250 feet wide and extends 240 feet beyond the runway ends. The required ROFZ is 250 feet wide and extends 200 feet beyond the runway ends.

All on-airport buildings are located outside of the established building restriction line (BRL), set at 400 feet from the Runway 12-30 centerline and the planned permanent Runway 1-19 centerline. The established BRL would be within the primary surface for any precision approach. To preserve the full capability of a precision approach, a BRL of up to 750 feet from the Runway 12-30 centerline should be considered. This would allow buildings of up to 35 feet in height. At the present time, the box-hangars are only approximately 575 feet from the runway centerline allowing only an 11-foot high building according to Federal Aviation Regulations (FAR) Part 77, *Objects Affecting Navigable Airspace*, for a precision approach. The box-hangars are 14 to 16 feet high.

The FAA also requires a clear line-of-sight, or runway visibility zone, be established for airports with intersecting runways and no 24 hour air traffic control tower. Generally, this requires the area bounded by the lines drawn from the mid-point from the intersection of the runways to each runway end be clear of permanent objects. This requirement applies to the Coalinga Municipal Airport.

Applicable taxiway design and separation standards for ARC A-I/B-I and A-II/B-II at Coalinga Municipal Airport are shown in Table 4-2. The FAA taxiway design criteria for ARC A-I/B-I require taxiway safety areas (TSA) of 49 feet in width and taxiway object free areas (TOFA) of 89 feet in width and for ARC A-II/B-II a TSA of 79 feet in width with a TOFA of 131 feet in width.

4.2.12 Pavement Strength

The estimated existing airfield pavement strength for Runway 12-30 is 30,000 pounds and for Runway 1-19 is 6,000 pounds for single-wheel landing gear configuration as shown in Table 4-1. These strengths are adequate for the aircraft presently using the Airport. However, if heavier aircraft are introduced at the Airport, then runway pavement overlays or reconstruction may be required. A pavement strength of up to 60,000 pounds to accommodate a dual-wheel landing gear configuration on Runway 12-30 should be considered in the future. A pavement strength of up to 12,500 pounds, to accommodate a single-wheel landing gear configuration on Runway 1-19, should be planned for a future, permanent Runway 1-19.

4.2.13 Drainage

Depending upon the airport development concept selected for the Airport Master Plan there may be a need to extend or modify the dike around the Airport and install additional culverts in the airfield, aircraft parking apron and other areas.

4.3 AVIGATION

Avigation (air navigation) considerations include (1) airspace and air traffic control (ATC), (2) approach areas and obstructions, runway protection zones (RPZ), and (3) navigational and landing aids.

4.3.1 Airspace and Air Traffic Control

Existing airspace procedures and ATC facilities for airspace above Coalinga Municipal Airport provide for safe, orderly and expeditious flow of air traffic. Airspace and ATC considerations do not limit the capacity of aviation activity at the Airport, and they are not expected to limit capacity in the future. Forecast demand does not indicate qualification for an air traffic control tower (ATCT) by the year 2025.

In the vicinity of the Airport, existing procedures stated in the *Aeronautical Information Manual* (AIM), published by the FAA, in Paragraphs 4-1-9 b and c, *Communicating on a Common Frequency*, and *Recommended Traffic Advisory*

Practices, are adequate for the present and forecast traffic levels. These paragraphs provide information about the Common Traffic Advisory Frequency (CTAF) program and recommended communications procedures. The CTAF for Coalinga Municipal Airport is 122.7 and is listed in the *Airport/Facility Directory* published by the FAA National Aeronautical Charting Office.

The CTAF of 122.7 will continue to be the individual pilot's means for advising other pilots in the area, and possible service vehicles on the Airport, of his/her position and intentions of aircraft movements. The Oakland Air Route Traffic Control Center (ARTCC), commonly know as Center, will continue to provide en route air traffic control over the area immediately around and to the north, east and west of the Airport. Los Angeles ARTCC will continue to provide en route air traffic control to the south, southeast and southwest from approximately 20 nautical miles (NM) to the south of the Airport. Naval Air Station Lemoore approach/departure control will continue to provide instrument flight rules (IFR) approach/departure control for Coalinga Municipal Airport.

4.3.2 Approach Areas and Obstructions

According to the FAA Form 5010-1, *Airport Master Record*, last inspection date of May 2003, and other charts and documents, there are no penetrations to the Federal Aviation Regulations (FAR) Part 77, *Objects Affecting Navigable Airspace*, approach surfaces to the existing Runways 12-30 and 1-19. FAR Part 77 establishes imaginary surfaces, related to airports and their runways, which are used to identify obstructions.

Based on recent Caltrans inspections there is a wooden post fence that is within the Runway 1-19 FAR Part 77 primary surface and some trees that penetrate the 7 to 1 transitional surface for Runway 1-19. The fence should be relocated and the trees topped or removed.

4.3.3 Runway Protection Zones

The existing RPZs were established when the dimensions were based on the FAR Part 77 approach surface, out to where the surface was 50 feet above the runway threshold. The existing dimensions for Runway 12-30 are 1,000 feet long, with 500 feet inner width and 800 feet outer width. The existing dimensions for Runway 1-19 are 1,000 feet long, with 250 inner width and 450 feet outer width.

The current RPZ dimensional standards established in FAA AC 150/5300-13, *Airport Design*, are shown in Table 4-2. Basically, in order to accommodate large aircraft in approach categories A and B with visibility minimums to visual and not lower than

one mile for Runway 12-30 at the Airport, the dimensions would be 1,000 feet long, with 500 feet inner width and 700 feet outer width. However, to provide for a precision IFR approach would require RPZ dimensions of 2,500 feet long, 1,000 feet inner width and 1,750 feet outer width. To provide for a nonprecision IFR approach, with a visibility minimum not lower than 3/4 statute mile would require RPZ dimensions of 1,700 feet long, 1,000 feet inner width and 1,510 feet outer width.

To provide RPZs for small aircraft exclusively for the crosswind runway, with visibility minimums of visual and not lower than 1 mile, would require RPZ dimensions of 1,000 feet in length, 250 feet inner width and 450 feet outer width.

All of the existing required RPZs are within the Airport boundary. However, future RPZs, to accommodate a runway extension or lower approach visibility minimums for Runway 12-30, may extend beyond the existing Airport boundary. The City already has an avigation easement over approximately 65 acres to the northwest for the runway protection zone for a future extension of Runway 12-30 to the northwest.

4.3.4 Navigational and Landing Aids

Existing navigational aids are basically adequate through 2025. New medium intensity runway lights (MIRL) should be planned for any extension of Runway 12-30 and a permanent crosswind runway. Medium intensity taxiway lights (MITL) should be planned for any taxiway extension in conjunction with a runway extension or new crosswind runway. The existing precision approach path indicators (PAPI-2) and runway end identifier lights (REIL) at the end of Runway 12 will have to be relocated along with any runway extension to the northwest.

In light of progress in the development of the global positioning system (GPS) and wide area augmentation system (WAAS), new IFR procedures using the new technology will be developed at low activity airports within the planning period. In general, WAAS provides greater accuracy to GPS for those aircraft appropriately equipped.

It is probable that GPS procedures for Runways 12 and 30 with straight-in minimums will be available in the near term. A lateral precision with vertical guidance (LPV) GPS approach down to instrument landing system (ILS) minimums of 200 feet AGL and 1/2 statute mile visibility for Runway 30 may be possible in the intermediate term.

With new navigational technology comes new terminology. New GPS IFR approach procedures will be identified as RNAV (GPS), meaning area navigation using airborne GPS equipment. In the minimums section of the published procedure new

terminology will appear. LNAV means lateral navigation without vertical guidance, VNAV means vertical navigation guidance and LNAV/VNAV is like a nonprecision approach with vertical guidance. LPV means lateral precision with vertical guidance. The FAA recently approved WAAS LPV approach minimums down to 200 feet above ground level (AGL) and 1/2 statute mile visibility.

In the paragraph above, each of the procedures may be identified as RNAV (GPS) RWY 30. In the minimums section the first example could have LNAV MDA meaning no vertical guidance (similar to a nonprecision approach down to around 500 feet AGL). The second example could have LNAV/VNAV DA meaning nonprecision approach with vertical guidance (similar to other ground base nonprecision approaches with vertical guidance down to a decision altitude of around 350 feet AGL). The third example could have LPV DA meaning lateral precision approach with vertical guidance (similar to an ILS approach with vertical guidance down to no lower than 200 feet AGL). All three of these minimums could be published in the minimums section of the procedure. These minimums apply according to the equipment capability aboard the individual aircraft making the approach.

On some RNAV (GPS) procedures the term GLS PA DA appears in the minimums section. However, NA (not authorized) is shown instead of minimums. None of these procedures have been approved.

A medium intensity approach lighting system with runway alignment indicator lights (MALSR) should be installed for Runway 30 to accommodate an IFR LPV approach with 1/2 statute mile visibility minimums.

The airfield markings and airfield signage require upgrading to meet FAA design standards and additional airfield signage will be required. The segmented circle requires marking for the crosswind runway.

4.4 GENERAL AVIATION

On the basis of the general aviation activity forecasts presented in Table 2-4, it is estimated that space will be required for about 30 based aircraft by the year 2025.

Based on discussions with airport tenants and users, it is estimated that a higher percentage of aircraft owners and potential users of the Airport would prefer to hangar their aircraft than can currently be accommodated. It is estimated that by the year 2025, at least 95 percent of the based aircraft could be attracted to, and accommodated by, T-hangars and conventional hangars in up to 25 spaces. Providing

space for additional hangar facilities will allow for construction of additional hangars capable of accommodating larger twin-engine aircraft. Because of the important role the Airport serves for the businesses in the City of Coalinga area that will continue to grow in the future, space should also be provided for corporate/executive aviation facilities. Ideally, any new aircraft storage hangars should be consolidated in the same general area.

It is desirable to provide for larger aircraft in a separate tiedown area from small aircraft, and a tiedown area should be provided for itinerant aircraft near the Flight Service Facility building. It is estimated that about 10 tiedown spaces will be needed by the year 2025. About 5 of the tiedowns will accommodate the based aircraft and the other 5 will be for transient aircraft. (Note: There are currently about 40 based and itinerant aircraft tiedown parking positions.) Some tiedown spaces should be located close to, or part of, fixed base operator/commercial aviation facilities.

Space is also required for helicopter activity. This includes a landing and takeoff area that can operate compatibly with fixed-wing aircraft operations and, as noted earlier, it is recommended that the helicopters use the runways for landing and takeoff. The existing heliport should be designated for helicopter parking and refueling as currently occurs. Additional helicopter parking space could be provided on the adjacent aircraft parking apron parking facilities.

Adequate space should be provided for fixed base operator/commercial aviation activity. This could include small package air cargo carriers, aircraft maintenance and support and other general aviation services. The plots should have expansion capability and access to the airfield and provide adequate vehicular parking space for employees and patrons. In addition, sufficient areas should be reserved for other aviation-related activities, including aircraft refueling and vehicular parking areas. An upgraded aircraft pollution abatement facility (wash rack), with appropriate water and drainage systems, is required to serve future needs.

4.5 AIRPORT ACCESS AND PARKING

There is one access road into the Airport on the south side from Phelps Avenue. This should be adequate to serve the Airport through the planning period, depending upon the long-term development concept selected for the Airport. If additional areas are developed for aviation uses on the south side of the Airport, then new service roads off the access road may be required.

Vehicular parking spaces should be provided in the Flight Service Facility area for public and employee parking. Parking for visitors and employees should be provided within individual lease plot boundaries. The number of parking spaces required

would depend upon the City policy with respect to whether or not aircraft owners are allowed to park their vehicles in their hangars or on their tiedown spaces.

4.6 AIRPORT SUPPORT

Airport support facilities include airport administration/terminal facilities, fuel storage, airport maintenance facilities, drainage and utility systems and aircraft rescue and fire fighting (ARFF) equipment.

While there is no current requirement for an ARFF facility on the Airport, the Airport should continue to have written procedural agreements with the City of Coalinga Fire Department to guarantee response in any emergency. A site could be provided on the Airport for a future multi-use fire station.

The current fuel storage system was installed when the Airport opened and consists of one aboveground 12,000-gallon double-wall fuel tank used to store 100 low lead fuel and can accommodate future needs. The fueling system operates with a 24-hour automated self-serve credit card system. Space should be reserved for a future Jet A fuel tank if required in the future.

The Airport will require additional aircraft parking apron area security lighting when new areas of the Airport are developed. This lighting should be photocell-controlled and installed at locations on the apron where the poles themselves do not present a hazard. An emergency generator will also be required for the airfield lighting, airport rotating beacon and other airport facilities.

In the future, some space should be provided on the Airport for City airport maintenance equipment. At present this equipment is stored in the unused FBO maintenance hangar.

The future requirements for utilities and drainage will be refined based on the recommended 2025 Airport Master Plan concept selected by the City.

There is a City of Coalinga water main serving the Airport. There are several hydrants on the south side of the Airport that provide fire protection for the Airport.

The City of Coalinga municipal sewer system does not currently extend to the Airport. The system ends on Phelps Avenue at the City limits near Springbrook Avenue. Existing airport-related businesses and facilities are served by two 1,500-gallon septic tanks. In the future, depending upon the timing and level of development, it may be necessary to extend the municipal sewer system to the Airport.

The existing 4-foot high chain link fence in the terminal area and the 4-foot high barbed wire fence around Runway 12-30 and elsewhere between the Kit Fox Management Area and the runway buffer area, installed in accordance with the 1992 Biological Opinion and associated 1994 Habitat Management Plan, should be replaced with standard 6-foot high chain link fencing with access provided for Kit Fox at appropriate intervals. Standard 6-foot high chain link and barbed wire perimeter fencing should be installed along the unfenced sections on the south and east sides of Runway 1-19 to complete the airfield perimeter fencing to avoid vehicular pedestrian and animal incursions onto the airfield, and also around any future aviation-related development on the south side of the Airport. Access would be provided for Kit Fox at appropriate intervals. This could be accomplished by allowing an 8-inch opening to remain at the bottom of the fencing or by installation of 8-inch culverts at regularly spaced intervals.

There may also be a requirement for new or improved Airport fencing and signage as the result of evolving airport security requirements.

4.7 OTHER AREAS

Approximately 360 acres of the Airport are set aside as a Habitat Conservation Area on the north and east sides of the Airport, another 200 acres are set aside as a runway buffer area and 60 acres are set aside as a buffer area along Calaveras Avenue. Future development of the Airport will be on the south side and will not impact the Habitat Conservation Area and buffer areas.

Another 290 acres, approximately, are currently leased for agricultural use. This area could be reduced in the future on the west side of the Airport with development of a permanent crosswind runway and parallel taxiway and with the potential development of aviation and aviation related industrial and commercial uses on the east side. Over 160 acres of this area could be developed for aviation related industrial and commercial uses in the future if appropriate environmental mitigation measures could be provided.

The agricultural uses on the Airport need to be consistent with FAA AC 150/5200-33A, *Hazardous Wildlife Attractants On or Near Airports* with respect to grazing and FAA AC 150/5300-13, *Airport Design*, Appendix 17, *Minimum Distances between Certain Airport Features and Any On-Airport Agriculture Crops* with respect to agricultural crops in proximity to the runways, taxiways and aircraft parking apron. There should be no agricultural crops within 125 feet of the Runway 1-19 centerline or within 300 feet of the ends of Runway 1-19.

Only 300 acres of the 1,002 acres that comprise the Airport are currently within the City of Coalinga. The proposed expansion of the City's sphere of influence identified in the General Plan Update will include the entire Airport property.

4.8 OFF-AIRPORT LAND USE

The City of Coalinga is currently updating the City General Plan. The most recent draft indicates future Manufacturing/Businesses (MB) uses immediately west of the Airport along Phelps Avenue. Further to the west and immediately south of the Airport, future Residential Ranchette (5 acre minimum lot size) land uses are shown. Other surrounding areas are retained as Agricultural (A) and Open Space/Conservation (O) with limited development land uses.

The Airport Master Plan and City General Plan need to be coordinated to maximize compatible land uses in the Airport vicinity. This is particularly important if a permanent and longer crosswind runway is included in the Airport Master Plan, as the aircraft traffic patterns are to the west for the existing crosswind runway. This new runway would impact, and be impacted by, potential development to both the west and south of the Airport.

The latest Coalinga Airport Land Use Policy Plan was prepared by the Fresno County Airport Land Use Commission in 1994. Recommendations have been prepared as part of the Airport Master Plan study for off-Airport land use planning for the area surrounding the Airport. These recommendations were based on noise, safety and height considerations described in the latest State of California, Department of Transportation (Caltrans), Aeronautics Division, *California Airport Land Use Planning Handbook*; FAR Part 77, *Objects Affecting Navigable Airspace*; FAR Part 150, *Airport Noise Compatibility Planning*; and Fresno County Airport Land Use Commission standards.

The compatibility of the proposed surrounding development with the Airport Master Plan recommendations should be reviewed in accordance with the guidelines in the latest *California Airport Land Use Planning Handbook* prepared in 2002 by Caltrans. The 1994 Coalinga Airport Land Use Policy Plan will require updating by the Fresno County Airport Land Use Commission to reflect the Airport Master Plan recommendations and current Caltrans land use guidelines.

Chapter 5

RECOMMENDED AIRPORT MASTER PLAN

5.1 INTRODUCTION

The recommended year 2025 Airport Master Plan (the Plan) for the Coalinga Municipal Airport is illustrated on Figure 5-1. The Terminal Area and Access Plan is illustrated on Figure 5-2. The Plan integrates long-term airfield and terminal area requirements with current and forecast aviation needs and airport access and parking needs. It represents a guide for airport development through the year 2025 planning period and indicates possible developments beyond the year 2025 for which land should be reserved at this time.

Several Airport development concepts were formulated and evaluated for review prior to the City's selection of the recommended long-range 2025 Airport Master Plan. These alternative development concepts, included in Appendix A, were presented and discussed with the City at a public meeting of the Technical Advisory Committee on January 25, 2005. They were also distributed to other interested parties for their review and comments.

A public meeting of the Technical Advisory Committee was held on March 1, 2005 to review the recommended Airport Master Plan and to discuss the implementation of the Plan. The recommended Airport Master Plan concept has been based on the comments and suggestions received as a result of City of Coalinga; Federal Aviation Administration (FAA); State of California Department of Transportation, (Caltrans), Division of Aeronautics,; Technical Advisory Committee; airport users and public review and comments. The City of Coalinga Planning Commission voted on August 22, 2005 to recommend approval of the Airport Master Plan to the City Council

The primary functional areas of the Plan, as illustrated on Figure 5-1, are:

- Airport Property
- Airfield
- Avigation
- General Aviation
- Airport Access and Parking
- Airport Support
- Other Areas

COALINGA MUNICIPAL AIRPORT MASTER PLAN

AIRPORT MASTER PLAN

FUTURE FACILITY LEGEND	
A	MALSR
B	PAPI-2
C	WINDSOCK
D	REIL
E	THRESHOLD LIGHTS
F	AVIATION RESERVE/PARK
G	GATE
H	AIRCRAFT PARKING APRON
I	FBO/COMMERCIAL AVIATION SITE
J	HANGARS
K	AVIATION RELATED INDUSTRIAL/COMMERCIAL
L	EXECUTIVE HANGARS

LEGEND		
EXISTING	ULTIMATE	
		AIRFIELD/APRON PAVEMENT
		BUILDING/FACILITIES
		AIRPORT PROPERTY LINE
BRL	BRL	BUILDING RESTRICTION LINE (BRL)
		FENCE
G	G	GATE
		ROTATING BEACON
		FUEL ISLAND
		AIRPORT REFERENCE POINT (ARP)
		THRESHOLD LIGHTS
		RUNWAY LIGHTS
		WIND SOCK
		REIL
		PAPI
H		HELICOPTER
600		GROUND CONTOURS
		HYDRANT
P/T		PACIFIC GAS & ELECTRIC/TELEPHONE
W		WATER
		RUNWAY SAFETY AREA
		RUNWAY OBJECT FREE AREA
24 25 / 23 26		SECTION CORNER

EXISTING FACILITY LEGEND	
1	FLIGHT SERVICE FACILITY/CARETAKER RESIDENCE
2	HANGARS
3	FBO SITES
4	TIEDOWNS
5	OWNER MAINTENANCE AREA
6	ELECTRICAL BUILDING
7	REIL
8	TRANSFORMER
9	HOLDING POND
10	SEGMENTED CIRCLE AND LIGHTED WIND SOCK
11	FUEL ISLAND
12	AIRCRAFT POLLUTION ABATEMENT FACILITY
13	PAPI
14	ROTATING BEACON
15	DIKE
16	FENCE
17	PERIMETER ROAD
18	APRON SECURITY LIGHTING
19	MAINTENANCE HANGAR
20	AWOS
21	HELICOPTER
22	HABITAT CONSERVATION AREA
23	CALAVERAS BUFFER AREA

LAND USE LEGEND	
	ANNEXED CITY LIMITS
	HABITAT CONSERVATION AREA
	CALAVERAS BUFFER AREA
	AVIGATION EASEMENT

MAGNETIC NORTH
13°55'E (2007)

TRUE NORTH

0 500
200 1,000
GRAPHIC SCALE IN FEET

NOTE:

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

ARIES CONSULTANTS LTD.

COALINGA MUNICIPAL AIRPORT	FIGURE 5-1
FRESNO COUNTY, CALIFORNIA	
NAME: CLG-51-Master Plan.dwg	NO: 4490-05
DATE: May 1, 2007	PLOT SCALE: 1" = 1,000'

FUTURE FACILITY LEGEND	
A	MALSR
B	PAPI-2
C	WINDSOCK
D	REIL
E	THRESHOLD LIGHTS
F	AVIATION RESERVE/PARK
G	GATE
H	AIRCRAFT PARKING APRON
I	FBO/COMMERCIAL AVIATION SITE
J	HANGARS
K	AVIATION RELATED INDUSTRIAL/COMMERCIAL
L	EXECUTIVE HANGARS

15"Ø U.G. IRRIGATION LINE

8"Ø CITY WATER MAIN

RUNWAY PROTECTION ZONE

APPROACH SURFACE 20:1

PRECISION OBSTACLE FREE ZONE

ROFA

RSA

PDFZ

BRL

P/T

W

TW B

TW C

TW D

TW E

TW G

TAXIWAY A

RUNWAY 12-30 5,000' X 100' N 48° 30' 00" W (TRUE)

RUNWAY 1-19 2,500' X 60' N 12° 30' 00" E (TRUE) (TEMPORARY)

FUTURE RUNWAY 3,000' X 60'

FUTURE BRL

FUTURE BRL (FOR 20' BULIDING)

AVIATION RELATED INDUSTRIAL/COMMERCIAL

HANGARS

EXTEND ACCESS ROAD

SERVICE ROAD

8"Ø CITY WATER MAIN

ACCESS ROAD

RELOCATED HANGAR

MAINTENANCE BUILDING

FBO SITE

ARP

PHELPS AVENUE

MAGNETIC NORTH 13°55'E (2007)

TRUE NORTH

0 200

50 400

GRAPHIC SCALE IN FEET

NOTE:

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

COALINGA MUNICIPAL AIRPORT MASTER PLAN

TERMINAL AREA AND ACCESS PLAN

LEGEND		
EXISTING	ULTIMATE	
		AIRFIELD/APRON PAVEMENT
		BUILDING/FACILITIES
		AIRPORT PROPERTY LINE
BRL	BRL	BUILDING RESTRICTION LINE (BRL)
		FENCE
G	G	GATE
		ROTATING BEACON
		FUEL ISLAND
		AIRPORT REFERENCE POINT (ARP)
		THRESHOLD LIGHTS
		RUNWAY LIGHTS
		WIND SOCK
		REIL
		PAPI
H		HELICOPTER
600		GROUND CONTOURS
		HYDRANT
P/T		PACIFIC GAS & ELECTRIC/TELEPHONE
W		WATER
		RUNWAY SAFETY AREA
		RUNWAY OBJECT FREE AREA
24 25 / 23 26		SECTION CORNER

EXISTING FACILITY LEGEND	
1	FLIGHT SERVICE FACILITY/CARETAKER RESIDENCE
2	HANGARS
3	FBO SITES
4	TIEDOWNS
5	OWNER MAINTENANCE AREA
6	ELECTRICAL BUILDING
7	REIL
8	TRANSFORMER
9	HOLDING POND
10	SEGMENTED CIRCLE AND LIGHTED WIND SOCK
11	FUEL ISLAND
12	AIRCRAFT POLLUTION ABATEMENT FACILITY
13	PAPI
14	ROTATING BEACON
15	DIKE
16	FENCE
17	PERIMETER ROAD
18	APRON SECURITY LIGHTING
19	MAINTENANCE HANGAR
20	AWOS
21	HELICOPTER
22	HABITAT CONSERVATION AREA
23	CALAVERAS BUFFER AREA

LAND USE LEGEND	
	ANNEXED CITY LIMITS
	HABITAT CONSERVATION AREA
	CALAVERAS BUFFER AREA
	AVIGATION EASEMENT

ARIES CONSULTANTS LTD.

COALINGA MUNICIPAL AIRPORT	FIGURE 5-2
FRESNO COUNTY, CALIFORNIA	
NAME: CLG-51-Master Plan.dwg	NO: 4230-06
DATE: May 1, 2007	PLOT SCALE:1" = 400'

A summary of the recommendations for the use of land adjacent to the Airport boundary to ensure long-term compatibility with airport and aircraft operations is also presented in this chapter. General adherence to land use recommendations and circulation patterns, as shown on Figure 5-1, will ensure that continuing development of the Airport may take place in an orderly manner within the framework of long-range potential development.

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

In addition to the Airport development described in this chapter, the master planning process should properly provide for the reservation of sufficient land to accommodate facilities that may be required beyond the year 2025. The purpose is to preserve the long-range development potential of the Airport, thereby guaranteeing the longevity of the Airport beyond the current planning period.

There are several reasons for planning in this manner. If air traffic demand increases more rapidly than is forecast in this report, facilities beyond those recommended herein through the year 2025 may be needed. Conversely, if air traffic demand increases more slowly than is forecast, the construction of facilities may be deferred until the demand develops.

The primary purpose of the Terminal Area and Access Plan is to ensure that the necessary land area will be reserved for future general aviation, and other facility expansion requirements. In addition, the Terminal Area and Access Plan, like the Airport Master Plan, should be sufficiently flexible to permit expansion of individual elements as exact requirements are determined without affecting the overall terminal area concept. Specific tenant and user space requests will be necessary to establish precise dimensions and design requirements for the terminal area and related facilities.

The basic elements of the Plan are described below.

5.2 AIRPORT PROPERTY

The City should acquire through an avigation easement, those portions of the recommended enlarged runway protection zone (RPZ) for Runway 30 that extends

beyond the existing Airport boundary. This involves approximately 39 acres to the southeast of Runway 30.

5.3 AIRFIELD

The recommended year 2025 airfield configuration illustrated on Figure 5-1 provides for the extension of Runway 12-30, with an additional entry/exit taxiway at the new end of the runway, to provide adequate length to handle the future air traffic demand. It is recommended that the airfield be designed to accommodate large aircraft (over 12,500 pounds) in airport reference code (ARC) A-II/B-II (e.g., Cessna Citation II and Dassault Falcon 20) with wingspans of less than 79 feet and with occasional use by large ARC C-I, C-II and C-III business jet aircraft (e.g., Cessna Citation III, Learjet 35/36 and Sabreliner 65/80).

A permanent crosswind Runway 1-19 to accommodate small (less than 12,500 pounds gross weight) aircraft with wingspans of less than 49 feet in ARC A-I/B-I (e.g., Cessna 172, Beech Baron, and Piper 31 Navajo) is also planned for to eventually replace the existing temporary crosswind Runway 1-19.

5.3.1 Runway 12-30

The Plan recommends Runway 12-30 ultimately be extended to the northwest and lengthened to 7,500 feet to handle the aircraft expected to use the Airport during the planning period and beyond. This is the same length as shown on the current FAA approved Airport Layout Plan. The runway width is recommended to be retained at 100 feet.

A 300-foot wide runway safety area (RSA) extending 600 feet beyond both ends of the runway should be provided. An 800-foot wide runway object free area (ROFA) extending 600 feet beyond both ends of the runway should also be provided.

A runway obstacle free zone (ROFZ) 400 feet wide should be provided, with sides extending vertically up to approximately 50 feet and then at a slope of 6:1 up to the horizontal surface. The ROFZ should extend 200 feet beyond both ends of the runway and an inner approach OFZ for the Runway 30 end should extend from there out to 200 feet beyond the last light of the approach lighting system.

5.3.2 Runway 1-19

The Plan provides for a new 3,000 feet long by 60 feet wide permanent crosswind Runway 1-19 to be aligned parallel to, and separated from, the existing temporary Runway 1-19 by at least 150 feet and preferably 240 feet to the west centerline-to-centerline.

A 120-foot wide RSA extending 240 feet beyond both ends of the runway should be provided. The northern end of the new Runway 1-19 should be at least 300 feet south of the centerline of Taxiway A, parallel to Runway 12-30, to allow an adequate area for a properly graded 240 foot runway safety area to the north of the new runway. A 250-foot wide ROFA extending 240 feet beyond both ends of the runway should also be provided.

A ROFZ 250-foot wide with sides extending vertically up to the horizontal surface and extending 200 feet beyond both ends of the runway should be provided.

In the interim, the culvert under the airfield pavement north of the end of the existing Runway 1-19 should be extended by about 10 feet to the west to provide a 120-foot wide runway safety area extending 240 feet north of the end of Runway 1-19.

5.3.3 Taxiways

The FAA runway-to-parallel taxiway separation standard precludes any part of an airplane (tail, wingtip, nose, etc.) on a parallel taxiway centerline from being within the runway safety area (RSA) or penetrating the runway object free zone (ROFZ). The existing runway centerline to taxiway centerline separation for Runway 12-30 is 300 feet allowing 100 feet between the taxiway centerline and the ROFZ. Aircraft in design group III require only 93 feet to each side of the taxiway centerline for the taxiway object free area. Therefore, space is available on both sides of the Runway 12-30 parallel taxiway for the occasional taxiing of aircraft in design group III.

The existing parallel taxiway to the southwest of Runway 12-30 should be extended to the northwest in conjunction with the runway extension to provide a full-length parallel taxiway. The existing 300-foot centerline-to-centerline separation is retained.

A new aircraft holding apron is provided at the northwest end of the extended Runway 12 similar to the existing holding aprons at both ends of the existing runway.

A new entry/exit taxiway is planned at the northwest end of the ultimate 7,500-foot runway length. All new taxiways associated with Runway 12-30 should be at least 35 feet in width.

The existing temporary Runway 1-19 will become the future parallel taxiway for the permanent Runway 1-19. An extension to the south will be required to provide a full length parallel taxiway. Three new entry/exit taxiways are provided for, one at each end of the runway and one at the midpoint of the runway. Additionally, a taxiway connection is also provided between the parallel taxiway and aircraft parking apron. All new taxiways associated with the new Runway 1-19 should be at least 25 feet wide.

5.3.4 Airfield Pavement

All of the new airfield pavement associated with Runway 12-30 should be designed to accommodate single-wheel aircraft with a maximum gross weight of 30,000 pounds and 60,000 pounds for dual-wheel aircraft that are the current pavement strengths. All of the airfield pavement associated with the new Runway 1-19 should be designed to accommodate single-wheel aircraft with a maximum gross weight of 12,500 pounds. A Pavement Maintenance Plan should be developed to identify the timing and costs for airfield pavement maintenance.

5.4 AVIGATION

Avigation (air navigation) considerations in the Plan are airspace and air traffic control, approach areas and obstructions, runway protection zones, and airport navigational and landing aids.

5.4.1 Airspace and Air Traffic Control

Existing airspace and air traffic control (ATC) procedures and facilities provide for safe, orderly and expeditious flow of traffic for the existing and forecast level of aviation traffic demand for the planning period. However, a wide area augmentation system (WAAS) enhanced global positioning system (GPS), lateral precision with vertical guidance (LPV), instrument flight rules (IFR) approach to Runway 30 and a nonprecision GPS IFR approach procedure to Runway 12 with straight-in minimums would greatly enhance the capabilities and increase the utility of the Airport. The Plan provides for these instrument approach procedures. The FAA started to process a GPS nonprecision approach procedure for the Airport in 2005.

5.4.2 Approach Areas and Obstructions

The Plan provides for larger and flatter approach surface areas for Runway 12-30 with a future 50:1 approach surface slope provided for Runway 30 and a future 34:1 approach surface slope provided for Runway 12.

To provide for a precision IFR approach to Runway 30, Federal Aviation Regulations (FAR) Part 77, *Objects Affecting Navigable Airspace*, requires the primary surface to be 1,000 feet wide, centered on the runway and extending 200 feet beyond both ends of the runway. The FAR Part 77 inner width for approaches to both Runways 12 and 30 must be the same width as the primary surface, at 1,000 feet wide (500 feet to each side of the runway centerline). The 7:1 transitional surface starts at the edge of the primary surface.

To provide a precision instrument approach will require the building restriction line (BRL) to be set back farther from the runway. The building restriction line will need to be increased from 400 feet up to at least 640 feet or 675 feet from the runway centerline for a 20-foot or 25-foot high building. This may require relocation/removal of the existing box hangars located at 575 feet from the runway centerline and/or modification to FAA airport design standards to meet local conditions. This will be determined as part of the FAA airspace analysis conducted as part of the Airport Layout Plan review process.

The Plan provides for the BRL to be located at least 265 feet or 300 feet from the centerline to each side of the new Runway 1-19 for a 20-foot or 25-foot high building, respectively.

There are no existing or planned structures within the future runway visibility zone.

5.4.3 Runway Protection Zones

The Plan provides runway protection zones (RPZs) at each runway end. The ultimate RPZ for Runway 30 is for a precision instrument approach and is 2,500 feet long with an inner width of 1,000 feet and an outer width of 1,750 feet. The RPZ for Runway 12 is for a nonprecision instrument approach with a visibility minimum not lower than 3/4 of a mile, and is 1,700 feet long with an inner width of 1,000 feet and an outer width of 1,510 feet.

A portion of the RPZ for the ultimate 7,500-foot Runway 12-30 extends beyond the existing Airport boundary to the southeast of the runway. The City does not currently own or have an avigation easement over this area. It is recommended, as noted earlier, that the City acquire an avigation easement over the RPZ area outside the Airport boundary.

The RPZs for Runway 1-19 are the same for both ends of the runway with lengths of 1,000 feet, inner widths of 250 feet and outer widths of 450 feet. These dimensions are smaller than the current RPZs because these dimensions meet the current FAA criteria for visual approaches for small (less than 12,500 pounds) aircraft exclusively. The RPZs for both ends of the new Runway 1-19 would be completely within the Airport boundary.

5.4.4 Navigational and Landing Aids

In 2005, the FAA started to process a GPS approach to the Airport. The City should request that FAA and Caltrans support installation of GPS approaches to both Runways 12 and 30.

The Plan retains the capability to provide a precision instrument approach procedure for Runway 30 using new GPS/WAAS technology for an LPV approach. A medium intensity approach lighting system with runway alignment indicator lights (MALSR) would also be installed on Runway 30 to accommodate an IFR precision instrument approach for a GPS/WAAS LPV system with visibility minimums of 1/2 statute mile.

The Plan provides for new medium intensity runway lighting (MIRL) along the Runway 12-30 extension. Medium intensity taxiway lighting (MITL) should be installed along the extended parallel taxiway and new entry/exit taxiway. The existing precision approach path indicator (PAPI-2), runway end identifier lights (REIL), and supplemental wind cone for the Runway 12 end should be relocated along with the runway extension.

The plan provides for installation of medium intensity runway and taxiway lighting (MIRL and MITL) for the new Runway 1-19 and associated taxiways respectively. PAPI-2s should be located at both ends of the new Runway 1-19. Supplemental wind cones should also be installed near both ends of the new Runway 1-19.

The automated weather observing system (AWOS) on the Airport is to be upgraded.

The existing airfield signage and marking should be upgraded in accordance with FAA design standards and new signage installed for future airfield improvements.

5.5 GENERAL AVIATION

The general aviation facilities are proposed to remain southwest of Runway 12-30 as illustrated on Figure 5-2. Approximately 50 acres have been retained in the Plan for general aviation uses such as hangars, tiedowns, fixed base operators and other commercial aviation service operators in these areas.

An aircraft parking apron area for itinerant aircraft and based aircraft tiedowns is retained in the present general aviation area southwest of Runway 12-30. An area for additional aircraft parking apron is reserved further to the southeast.

It is recommended that hangars continue to be consolidated on the southwest side of the terminal area as illustrated on Figure 5-2. Over 7 acres are provided that can be developed to accommodate over 70 hangar spaces. Space is reserved for development of corporate/executive hangars at the southeast end of the terminal area.

Space is reserved for future aviation lease lots between the existing Airport access road and the aircraft parking apron. An approximate 15 acre area further to the southeast is reserved for future aviation uses. A future taxiway is proposed to serve

future aviation uses in this area and the new taxiway would connect to existing apron taxiways. Access would be off an extension of the Airport access road to the southeast.

The Plan calls for the existing aircraft maintenance hangar to eventually be relocated to the south side of the aircraft parking apron to allow for future hangar development and to meet FAA taxiway object free area criteria.

The existing landing and takeoff heliport should be converted in its current location, near the center of the Airport, for parking and re-fueling emergency, government and other helicopter users. Additional helicopter parking can be provided on the adjacent aircraft parking apron. Helicopters should land and takeoff on the runways and hover taxi to the helicopter parking area.

The aircraft pollution abatement facility (wash rack) is south of the existing hangar building and will require upgrading to meet current environmental standards.

5.6 AIRPORT ACCESS AND PARKING

The present access road onto the Airport off Phelps Avenue is adequate to serve the southwest side of the Airport through the planning period. An extension of the Airport access road will be required to the south to serve future aviation related development in this area. Another controlled access gate may be needed off an extended Airport access road at the south end of the Airport when the area is developed for aviation uses. A new service road is proposed in this area.

The existing and new extension of the Airport access road will serve both future aviation and any aviation related industrial and commercial development southwest of Runway 12-30 and north of Phelps Avenue.

Vehicular parking spaces should be retained in the general aviation facilities area by the Flight Service Facility for public and employee parking. Additional space for future parking needs in this area could be provided by expanding the vehicular parking spaces towards the Airport access road. Parking for visitors and employees should also be provided within individual lease lot boundaries.

5.7 AIRPORT SUPPORT

The Plan provides space for the following airport support facilities.

5.7.1 Aircraft Rescue and Firefighting

While there is no current requirement for an aircraft rescue and firefighting (ARFF) facility on the Airport, the City should continue to have a written procedural agreement with the City of Coalinga Fire Department to guarantee response in any emergency.

5.7.2 Airport Maintenance Baseyard and Fuel Storage

Airport Maintenance

A City maintenance baseyard is proposed in the Aviation Reserve area adjacent to the Flight Service Facility on the west side of the Airport.

Fuel Storage

An automated 24-hour self-serve, credit-card system was installed when the Airport opened with one above-ground 12,000-gallon double walled fuel tank for 100 low lead. Space is reserved for an adjacent Jet A fuel tank if required in the future.

5.7.3 Fencing and Security

The existing 4-foot high chain link fence in the terminal area and the 4-foot high barbed wire fence around Runway 12-30, and elsewhere, between the Kit Fox Management Area and the runway buffer area, installed in accordance with the 1992 Biological Opinion and associated 1994 Habitat Management Plan should be replaced with standard 6-foot high chain link fencing with access provided for Kit Fox at appropriate intervals. This could be accomplished by allowing an 8-inch opening to remain at the bottom of the fencing or by installation of 8-inch culverts at regularly spaced intervals. The existing fencing will need replacing and relocating as the aviation facilities are expanded to meet FAA standards of a 6-foot high chain link fence with barbed wire on top.

Standard 6-foot high chain link and barbed wire perimeter fencing should be installed along the unfenced sections on the south and east sides of Runway 1-19 to complete the airfield perimeter fencing to avoid vehicular, pedestrian and animal incursions onto the airfield and also around any future aviation related development on the south side of the Airport. Access would be provided for Kit Fox at appropriate intervals under the fence.

There may also be a requirement for new or improved Airport fencing and signage as a result of evolving airport security requirements.

Additional security lighting should be installed along the aircraft parking apron as it is expanded. A card reader system of access control should also be considered for existing and future vehicle access control gates. The security requirements for general aviation airports have not yet been established by the Transportation Security Administration (TSA), and these may result in additional security measures to implement.

5.7.4 Utilities

Improvements will be required to the utility systems as described below.

Water

The water infrastructure should be extended to provide domestic service to all future airport businesses, as well as proposed aviation related industrial and commercial development on the southwest side of the Airport. Additionally, installation of additional fire hydrants at strategic locations throughout the Airport in accordance with City Fire Department spacing requirements would be prudent. Where practical, the distribution system should be looped to provide service redundancy.

Sewage

Depending upon the timing and level of aviation and nonaviation development on the Airport, it will be necessary to extend the City of Coalinga Municipal sewer system to the Airport. This would require a 2 mile extension from the City limits on Phelps Avenue near Springbrook Avenue. At that time, sewer improvements should be designed to specifically serve the existing flight service facility/caretaker residence and all future aviation businesses, as well as proposed aviation related industrial and commercial development on the southwest side of the Airport.

Electric and Telephone

Electrical and telephone extensions will be required to serve the recommended aviation and nonaviation development on the southwest side of the Airport as well as the recommended airfield improvements. An emergency generator should be installed for the airfield lighting, airport rotating beacon and other airport facilities. Electrical extensions will be required to any future approach lighting system.

Drainage

Future development in the area on the southwest side of the Airport will require development of a storm drainage system. Other improvements could include an

extension of the dike and perimeter road drainage system serving the northwest corner of the Airport when Runway 12-30 is extended. An additional drainage element will be required for a new crosswind Runway 1-19. Additional culverts in the expanded airfield (runways and taxiways), aircraft parking apron and other areas will be needed.

5.8 OTHER AREAS

The recommended Airport Master Plan will not impact the 360 acres of the Airport set aside as a Habitat Conservation Area the, the 200 acres set aside as a runway buffer area and the 60 acres set aside as a buffer area along Calaveras Avenue.

Additional agricultural use acreage will be needed for construction of the permanent crosswind runway and related taxiways. In addition, the Plan recommends that about 160 acres southwest of the existing aviation facilities be reserved for potential future aviation related industrial and commercial uses. About 160 acres out of the 290 acres currently leased for agricultural use, on both sides of the Airport access road, are recommended to be reserved for future aviation related industrial and commercial development.

Only about 300 acres of the 1,002 acres that comprise the Airport are currently within the City of Coalinga. The proposed expansion of the City's Sphere of Influence identified in the General Plan Update will include the entire Airport property.

5.9 AIRPORT LAYOUT PLAN

The recommended Airport Master Plan serves as the basis for the Airport Layout Plan. The Airport Layout Plan drawings including the Airport Layout Plan, Terminal Area and Access Plan, Airspace Plan, Inner Portion of the Approach Surfaces Plan, and Airport Property Map (Exhibit A) for the Coalinga Municipal Airport, derived from all the foregoing plans and analyses, are included in Appendix B.

5.10 OFF AIRPORT LAND USE

The City of Coalinga is currently updating the City General Plan. The most recent draft indicates future Manufacturing/Business (MB) uses immediately west of the Airport along Phelps Avenue. Further to the west and immediately south of the Airport, future Residential Ranchette (5 acre minimum lot size) land uses are shown. Other surrounding areas are retained as Agricultural (A) and Open Space/Conservation (O) with limited development land uses.

The Airport Master Plan and City General Plan need to be coordinated to maximize compatible land uses in the Airport vicinity. This is particularly important as a permanent and longer crosswind runway is recommended in the Airport Master Plan

and the aircraft traffic patterns are to the west for the crosswind runway. This runway would impact, and be impacted by, potential development to both the west and south of the Airport.

The compatibility of the proposed surrounding development with the Airport Master Plan recommendations should be reviewed in accordance with the guidelines in the latest *California Airport Land Use Planning Handbook* prepared in 2002 by Caltrans. The 1994 Coalinga Airport Land Use Policy Plan will require updating by the Fresno County Airport Land Use Commission to reflect the Airport Master Plan recommendations and current Caltrans land use guidelines.

Chapter 6

CAPITAL IMPROVEMENT PROGRAM

6.1 INTRODUCTION

The phased Capital Improvement Program for the Coalinga Municipal Airport and the estimated costs of the Airport improvements recommended as part of the Airport Master Plan are presented in this chapter.

6.2 CAPITAL IMPROVEMENT PROGRAM

A three-phase prioritized Capital Improvement Program has been developed as a guide for future development to meet estimated short-range (Phase I, 2005 through 2009), intermediate-range (Phase II, 2010 through 2014), and long-range (Phase III, 2015 through 2025) Airport requirements. Phasing of the program reflects an assessment of the (1) relative priorities of various proposed projects, and (2) the approximate timing of the anticipated requirements.

Phase I projects are considered to be the highest priority items and should be implemented as soon as practicable to meet the Phase I forecast requirements for facilities and to preserve the capability for future Airport expansion. Phase II and III projects should be implemented only as the actual needs are demonstrated by the demand for Airport facilities and services and as financing arrangements are made.

The phasing of the Capital Improvement Program is presented on Figure 6-1, Airport Phasing Plan. An approximate planning cost estimate for each improvement for the recommended three-phase Capital Improvement Program is presented in Table 6-1. A summary of the total Capital Improvement Program is presented in Table 6-2.

Total costs for all projects included in the three-phase Program are estimated in 2005 dollars. These costs would be incurred as follows:

Phase I	$ 707,500
Phase II	785,000
Phase III	7,165,500
TOTAL	$ 8,658,000

The estimated net project costs to the City (sponsor) for the three-phase Program are $598,291 after recognition of the receipt of Federal Aviation Administration (FAA) Airport Improvement Program grants and State of California, Department of Transportation (Caltrans), Division of Aeronautics grants.

COALINGA MUNICIPAL AIRPORT MASTER PLAN

AIRPORT PHASING PLAN

FUTURE FACILITY LEGEND	
A	MALSR
B	PAPI-2
C	WINDSOCK
D	REIL
E	THRESHOLD LIGHTS
F	AVIATION RESERVE/PARK
G	GATE
H	AIRCRAFT PARKING APRON
I	FBO/COMMERCIAL AVIATION SITE
J	HANGARS
K	AVIATION RELATED INDUSTRIAL/COMMERCIAL
L	EXECUTIVE HANGARS

LEGEND	
	PHASE 1 2005-2009
	PHASE 2 2010-2014
	PHASE 3 2015-2025

MAGNETIC NORTH
13°55'E (2007)

TRUE NORTH

0 500

200 1,000

GRAPHIC SCALE IN FEET

NOTE:

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LEGEND		
EXISTING	*ULTIMATE*	
		AIRFIELD/APRON PAVEMENT
		BUILDING/FACILITIES
		AIRPORT PROPERTY LINE
BRL	*BRL*	BUILDING RESTRICTION LINE (BRL)
		FENCE
G	G	GATE
		ROTATING BEACON
		FUEL ISLAND
		AIRPORT REFERENCE POINT (ARP)
		THRESHOLD LIGHTS
		RUNWAY LIGHTS
		WIND SOCK
		REIL
		PAPI
H		HELICOPTER
600		GROUND CONTOURS
		HYDRANT
P/T		PACIFIC GAS & ELECTRIC/TELEPHONE
W		WATER
		RUNWAY SAFETY AREA
		RUNWAY OBJECT FREE AREA
24 25 / 23 26		SECTION CORNER

EXISTING FACILITY LEGEND	
1	FLIGHT SERVICE FACILITY/CARETAKER RESIDENCE
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8	TRANSFORMER
9	HOLDING POND
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13	PAPI
14	ROTATING BEACON
15	DIKE
16	FENCE
17	PERIMETER ROAD
18	APRON SECURITY LIGHTING
19	MAINTENANCE HANGAR
20	AWOS
21	HELICOPTER
22	HABITAT CONSERVATION AREA
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LAND USE LEGEND	
	ANNEXED CITY LIMITS
	HABITAT CONSERVATION AREA
	CALAVERAS BUFFER AREA
	AVIGATION EASEMENT

ARIES CONSULTANTS LTD.

COALINGA MUNICIPAL AIRPORT	FIGURE 6-1
FRESNO COUNTY, CALIFORNIA	
NAME: CLG-61-Phasing Plan-B.dwg	NO: 4490-01
DATE: May 1, 2007	PLOT SCALE: 1"= 1,000'

Table 6-1

CAPITAL IMPROVEMENT PROGRAM
Coalinga Municipal Airport
2005-2025

	Total	City	FAA[1]	State[2]	Other
PHASE I IMPROVEMENTS (2005-2009)					
Land Acquisition					
-- Acquire avigation easement for approximately 39 acres at south end	Footnote 3				
Airfield					
-- Develop Pavement Maintenance Plan	5,000	131	4,750	119	0
-- Crackseal, fill, compact, slurry and paint Runway 12-30, taxiways and apron, including drainage	335,000	8,794	318,250	7,956	0
-- Rehabilitate existing crosswind Runway 1-19	200,000	20,000	0	180,000	0
Navigational Aids					
-- Upgrade AWOS weather data-recording equipment	40,000	1,050	38,000	950	0
-- Install wind socks at ends of Runway 1-19	2,000	2,000	0	0	0
Infrastructure					
-- Install approximately 4,500 linear feet of perimeter fence on west side	125,500	3,294	119,225	2,981	0
Total Phase I Improvements	707,500	35,269	480,225	192,006	0
PHASE II IMPROVEMENTS (2010-2014)					
Airfield					
-- Construct taxiways for new hangar area	350,000	9,188	332,500	8,313	0
Terminal Area					
-- Construct 10 T-hangars	315,000	0	0	0	315,000

Table 6-1

CAPITAL IMPROVEMENT PROGRAM, Coalinga Municipal Airport (2005-2025) -- continued

	Total	City	FAA[1]	State[2]	Other
PHASE II IMPROVEMENTS (2010-2014) continued					
Terminal Area -- continued					
-- Develop three executive hangars	120,000	0	0	0	120,000
Total Phase II Improvements	785,000	9,188	332,500	8,313	435,000
PHASE III IMPROVEMENTS (2015-2025)					
Airfield					
-- Construct new crosswind Runway 1-19 and parallel taxiway	2,325,000	61,031	2,208,750	55,219	0
-- Extend Runway 12-30 and taxiways by 1,500 feet to north	2,200,000	57,750	2,090,000	52,250	0
-- Construct taxiways for new hangar area	350,000	9,188	332,500	8,313	0
Navigational Aids					
-- Install MIRL on Runway 12-30 extension and install signs	90,000	2,363	85,500	2,138	0
-- Install MITL on Taxiway A extension and install signs	120,000	3,150	114,000	2,850	0
-- Install MIRL on new crosswind Runway 1-19	180,000	4,725	171,000	4,275	0
-- Install MITL on crossway Runway 1-19 taxiways	240,000	6,300	228,000	5,700	0
-- Install MALSR on Runway 30[4]	600,000	0	600,000	0	0
-- Relocate PAPI-2 on Runway 12	28,000	735	26,600	665	0
-- Relocate REIL on Runway 12	28,000	735	26,600	665	0
-- Relocate wind sock on Runway 12	1,000	26	950	24	0
-- Install PAPI-2 on both ends of new crosswind Runway 1-19	80,000	2,100	76,000	1,900	0
-- Install wind socks on new crosswind Runway 1-19	1,500	1,500	0	0	0
Terminal Area					
-- Construct 10 T-hangars	315,000	0	0	0	315,000
-- Develop three executive hangars	120,000	0	0	0	120,000
-- Relocate maintenance hangar	30,000	30,000	0	0	0

Table 6-1

CAPITAL IMPROVEMENT PROGRAM, Coalinga Municipal Airport (2005-2025) -- continued

	Total	City	FAA[1]	State[2]	Other
PHASE III IMPROVEMENTS (2015-2025) -continued					
Infrastructure					
-- Extend dike and perimeter road to north	50,000	1,313	47,500	1,188	0
-- Install new access control gate	15,000	394	14,250	356	0
-- Improve storm drainage	20,000	525	19,000	475	0
-- Expand vehicular parking	100,000	100,000	0	0	0
-- Extend access road to south	150,000	150,000	0	0	0
-- Construct new service road	50,000	50,000	0	0	0
-- Construct City maintenance building	72,000	72,000	0	0	0
Total Phase III Improvements	7,165,500	553,834	6,040,650	136,016	435,000
TOTAL CAPITAL IMPROVEMENT PROGRAM	8,658,000	598,291	6,853,375	336,334	870,000

1. Assumes Federal Aviation Administration Airport Improvement Program grants for 95 percent of project costs.
2. Assumes Caltrans grants will be available for 2.5 percent funding of Federal grants.
3. Avigation easement will be based on actual appraisals and negotiations.
4. Federal Aviation Administration Facilities and Equipment budget.

SOURCE: Aries Consultants Ltd. and Tartaglia Engineering

Table 6-2

SUMMARY OF CAPITAL IMPROVEMENT PROGRAM
Coalinga Municipal Airport
2005-2025

	Total	City	FAA	State	Other
PHASE I IMPROVEMENTS (2005-2009)					
-- Land Acquisition	Footnote 3				
-- Airfield	540,000	28,925	323,000	188,075	0
-- Navigational Aids	42,000	3,050	38,000	950	0
-- Infrastructure	125,500	3,294	119,225	2,981	0
Total Phase I Improvements	707,500	35,269	480,225	192,006	0
PHASE II IMPROVEMENTS (2010-2014)					
-- Airfield	350,000	9,188	332,500	8,313	0
-- Terminal Area	435,000	0	0	0	435,000
Total Phase II Improvements	785,000	9,188	332,500	8,313	435,000
PHASE III IMPROVEMENTS (2015-2025)					
-- Airfield	4,875,000	127,969	4,631,250	115,781	0
-- Navigational Aids	1,368,500	21,634	1,328,650	18,216	0
-- Terminal Area	465,000	30,000	0	0	435,000
-- Infrastructure	457,000	374,231	80,750	2,019	0
Total Phase III Improvements	7,165,500	553,834	6,040,650	136,016	435,000
TOTAL CAPITAL IMPROVEMENT PROGRAM	8,658,000	598,291	6,853,375	336,334	870,000

SOURCE: Aries Consultants Ltd. and Tartaglia Engineering from Table 6-1

The $8.7 million does not include the cost of an avigation easement of about 39 acres to the south of the Airport to protect the runway protection zone for Runway 30 from incompatible development. The cost of acquiring an avigation easement will be subject to appraisals and negotiations with individual property owners.

The FAA Airport Improvement Program funds 95 percent of eligible projects; Caltrans funds 2.5 percent of the Federal 95 percent (2.4 percent of the total project); and the City is responsible for the remaining 2.6 percent of the total project. Projects eligible for FAA Airport Improvement Program grants for Phase I total $505,500. Of the total $505,000, the City local match for these grant funds are estimated to total $13,269 after recognition of the State's contribution of 2.5 percent of FAA Airport Improvement Program grants. An additional $20,000 will be required of the City to provide a 10 percent local match for a Caltrans acquisition and development grant to rehabilitate the existing crosswind Runway 1-19. The $2,000 estimated to install wind socks on the crosswind Runway 1-19 will be funded entirely by the City. The total requirement of City funds to implement the initial five-year Capital Improvement Program is estimated to be $35,269.

In addition, it should be noted that the President signed into law the Aviation and Transportation Security Act on November 19, 2001 establishing the Transportation Security Administration (TSA) within the U. S. Department of Transportation. While TSA activities have been concentrated on the larger commercial service airports since its inception, the TSA is required to develop security requirements for general aviation airports. The TSA published *Security Guidelines for General Aviation Airports* in May 2004 and notes that the guidelines are not regulatory and the recommendations should not be considered mandatory. The guidelines provide options, ideas, and suggestions for the airport sponsor, tenants, and users in an attempt to provide consistency across the Nation with regard to security at general aviation facilities. The intent of the guidelines is to provide a living document that will continue to be refined with input from the various stakeholders Nationwide. Security recommendations for the Coalinga Municipal Airport could include additional fencing, lighting, access control systems, signs, law enforcement actions, and security procedures that could have a cost impact on the development of the Airport as the TSA continues to update and refine the recommendations for general aviation airports.

Chapter 7

FINANCIAL PLAN

7.1 INTRODUCTION

The financial analysis for implementation of the recommendations of the Airport Master Master Plan is presented in this chapter. The analysis summarizes the annual historical operating results of the Airport Enterprise Fund to provide a basis for assessing the ability of the Fund to meet the requirements for funding future capital improvement projects from operating sources under existing tenant and user rates and charges. The Airport Enterprise Fund is operated to account for Airport operations that are financed and operated in a manner similar to private business enterprises.

7.2 HISTORICAL AND FORECAST REVENUES AND EXPENSES

The historical and forecast revenues and expenses from fiscal year 2000 through 2009 are presented in Table 7-1. The financial analysis is intended to indicate the order-of-magnitude for financing capital improvement projects based on a set of assumptions under which there would be no major changes or improvements in tenant/user rates and charges except as noted.

7.2.1 Historical Operating Revenues and Expenses

Historically, the largest source of operating revenues from airport operations has been from the rental of hangar space that accounted for an average of 32 percent of total operating revenues from fiscal year 2000 to 2004. Revenues from sale of fuel accounted for an average of 25 percent of total operating revenues, and the annual State of California, Department of Transportation, (Caltrans), Division of Aeronautics grant for maintenance and operation of the Airport accounted for an average of 25 percent of total operating revenues. Other operating revenues from airport operations include aircraft tiedown fees, building lease, vehicular parking, interest earnings, aircraft property taxes and miscellaneous revenues that accounted for the remaining 18 percent of total operating revenues.

It should be noted that of the 1,002 acres of the City-owned Airport property, only 300 acres have so far been annexed into the City where the runways, taxiways, aircraft parking area, terminal area and the Airport access road have been developed. Approximately 360 acres of the Airport property were set aside for the Kit Fox Management Area, and another 260 acres were reserved for buffer areas under the terms of the *1992 Biological Opinion* issued by the U.S. Department of the Interior, Fish & Wildlife Service. The remainder of the Airport property was restricted to agricultural use. These acreages represent a significant amount of non-revenue

Table 7-1

HISTORICAL AND FORECAST REVENUES AND EXPENSES
Coalinga Municipal Airport
2000-2009

	Historical					Budget	Forecast			
	2000	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**
REVENUES										
Airport Tiedown Fee	0	1,191	487	748	528	700	700	700	800	800
Airport Hangar Tiedown Space Rental	225	275	350	275	300	400	400	400	400	400
Hangar Lease	4,200	16,600	15,844	13,336	13,949	9,384	12,000	15,000	17,600	19,300
Fuel Sales	23,314	5,468	54,532	36,636	43,495	37,773	41,500	45,700	50,000	55,000
Less cost of sales	-44	-7,126	-42,936	-30,719	-33,019	-36,015	-31,500	-35,100	-39,000	-43,400
Ground Lease	3,000	0	0	0	0	0	0	0	0	0
Airport Building Lease	0	0	0	4,278	3,710	3,300	5,000	5,000	5,000	5,000
Airport Auto Parking Fee	0	10	15	265	1,189	100	100	100	100	100
State Airport Grant	0	5,005	21,654	10,000	10,000	10,000	10,000	10,000	10,000	10,000
Interest Earnings	106	0	0	0	1,454	1,454	1,500	1,500	1,500	1,500
Property Taxes -- Aircraft	0	0	0	0	9,386	1,600	1,700	1,800	1,900	2,000
Miscellaneous Revenue (other)	0	8,954	175	25	25	25	0	0	0	0
Total Revenue	30,801	30,377	50,121	34,844	51,017	28,721	41,400	45,100	48,300	50,700

Table 7-1

HISTORICAL AND FORECAST REVENUES AND EXPENSES, Coalinga Municipal Airport (2000-2009) -- continued

	Historical					Budget	Forecast			
	2000	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**
EXPENSES										
Salaries and Wages	0	0	23,787	9,055	0	0	0	0	0	0
Supplies and Services	7	1,058	1,722	44	0	0	0	0	0	0
Dues and Subscriptions	0	389	450	260	0	500	0	0	0	0
Travel/Training	0	669	2,037	492	0	0	0	0	0	0
Utilities	9,438	12,587	10,569	13,771	7,890	7,700	8,100	8,600	9,100	9,600
Small Tools and Equipment	1,441	0	349	94	10	120	100	100	100	100
Ground Repair/Maintenance	14,843	11,349	7,988	10,535	2,269	5,198	6,000	6,000	6,000	6,000
Equipment Rental	0	0	495	320	113	500	500	500	500	500
Vehicle Repair/Maintenance	0	0	41	0	0	0	0	0	0	0
Major Equipment Repair	6,824	1,780	5,035	2,591	1,500	2,800	3,000	3,000	3,000	3,000
Major Machinery/Equipment	0	0	10,039	0	0	0	0	0	0	0
Building Repair	5,058	2,573	2,400	1,345	929	4,162	5,000	5,000	5,000	5,000
Landfill Disposal Fees	0	1,899	0	0	0	0	0	0	0	0
Professional Services	13,000	15,150	17,780	3,975	5,440	5,490	5,500	5,500	5,500	5,500
Insurance	5,523	10,370	5,634	1,358	5,500	5,500	5,800	6,100	6,500	6,900
Debt Service[1]	83,461	99,768	175,495	203,809	129,058					
Debt Service-Airport Development[2]	0	0	0	0	0	61,385	64,285	61,835	64,368	61,548
Debt Service-Crosswind Runway[2]	0	0	0	0	0	18,539	18,805	19,015	19,166	18,244
Debt Service-Hangars[2]	0	0	0	0	0	49,888	50,287	50,572	50,781	50,883
Claim and Judgment	0	0	0	21,000	0	0	0	0	0	0
Allocated Overhead	18,147	19,102	20,000	0	0	0	0	0	0	0
Property Taxes	20,000	19,996	19,992	0	0	0	0	0	0	0
Taxes, Licenses and Fees	10,916	3,003	231	8,698	8,813	8,713	8,800	8,800	8,800	8,800
Miscellaneous	20,496	3,065	434	121	130	250	0	0	0	0
Subtotal	209,154	202,758	304,478	277,468	161,652	170,745	176,177	175,022	178,815	176,075
OPERATING SURPLUS (DEFICIT)	**-178,353 0**	**-172,381 0**	**-254,357 0**	**-242,624 0**	**-110,635 0**	**-142,024 0**	**-134,777 #**	**-129,922**	**-130,515**	**-125,375**
Depreciation Expense	467,373	480,842	481,050	481,050	481,050	481,050	481,050	481,050	481,050	481,050
Total Expense	676,527 0	683,600	785,528	758,518	642,702	651,795	657,227	656,072	659,865	657,125

1. Debt Service from fiscal year 2000 through 2004 based on City's Financial Statements.
2. Debt Service from fiscal year 2005 through 2009 based on Amoritization Schedules.

SOURCE: City of Coalinga and Aries Consultants Ltd.

producing property. In addition, no revenue is generated to the Airport Enterprise Fund as a result of the agricultural uses on the Airport.

Historically, the major operating expenses for the Airport have been to retire the debt service on loans for acquisition and development of the (new) Coalinga Municipal Airport that accounted for an average of 60 percent of total operating expenses. Maintenance and repair of ground, equipment and buildings accounted for an average of 7 percent of total operating expenses. Utilities and professional services each accounted for an average of 5 percent of total operating expenses. Taxes, licenses and fees accounted for 3 percent of total operating expenses. Miscellaneous other expenses accounted for an average of 20 percent of total operating expenses.

Overall, the operating revenues and expenses have resulted in a net operating deficit of about $192,000 annually since fiscal year 2000. Total operating revenues have averaged $39,000 annually while total operating expenses have averaged $231,000 on an annual basis since fiscal year 2000.

The City no longer allocates overhead charges, salaries and benefits to the Airport Enterprise Fund as the City General Fund must cover any expenses not covered by Airport Enterprise Fund revenues. The Airport Enterprise Fund does not have sufficient revenues to cover its financial obligations, and annual transfers of money from the General Fund to the Airport Enterprise Fund are necessary to cover expenses. As presented earlier, the Airport Enterprise Fund operates with an average net deficit of about $192,000 on an annual basis.

Depreciation expenses applied to the Airport Enterprise Fund have averaged $478,000 annually for fiscal years 2000 through 2004. As the depreciation expenses are nonfunded expenses of the Airport Enterprise Fund, they have not been included in the operating expenses. It should be noted that Federal Aviation Regulations specifically exclude the computation of depreciation or use allowance on facilities and equipment funded either directly or indirectly by the Federal government including the cost of land.

7.2.2 Forecast Operating Revenues and Expenses

The financial projections presented in Table 7-1 and discussed in this section have been prepared on the basis of information and assumptions set forth in the text. These rely on information and assumptions from the sources indicated without verification of such data. Although the information and assumptions used constitute reasonable bases for preparation of the forecasts, the achievement of any financial projection may be affected by fluctuating conditions and is dependent on the occurrence of future events that cannot be assured. Therefore, the actual results achieved may vary from the projections, and such variation could be material.

The projected revenues and expenses of the Airport Fund for fiscal years beginning with the City's fiscal year 2005 budget to 2009 presented in Table 7-1 reflect a set of assumptions under which there would be no major changes or improvements in tenant/user rates and charges except as noted. The financial forecasts for the Coalinga Municipal Airport have been prepared based on the following data and assumptions:

- The financial information is based on the City's fiscal year July 1 through June 30 and includes the City's 2004-2005 estimated budget.

- All sources of income derived from airport uses will be credited to the Airport Enterprise Fund and will be used only for maintaining, operating and improving the Airport as required by Federal Grant Assurances.

- The Aviation Activity Forecasts presented in Chapter 2 form a reasonable basis for this financial analysis.

- No major capital improvement projects will be implemented during the forecast period other than those presented in the Capital Improvement Program.

- The projected dollars are based on 2005 dollar values.

- All present leases and agreements will continue in-force with no major changes in their financial provisions other than existing rental adjustments already provided for.

- Federal Aviation Administration (FAA) Airport Improvement Program grants have not been considered as part of this financial analysis.

7.2.2.1 Operating Revenues

Based on the City of Coalinga Annual Budget Fiscal Year 2004-2005, there will not be any increase in operating revenues in the Airport Enterprise Fund during fiscal year 2005. It is expected that revenues will increase for fiscal years 2005-2009 based on the following assumptions:

- Revenues from aircraft parking fees are projected to remain about the same as in 2005 and increase slightly by the end of the four-year forecast period.

- Fuel sales are projected to increase commensurate with an increase in based aircraft and aircraft operations. The cost of fuel is projected to increase slightly on an annual basis.

- Interest income will continue to be applied to the Airport Enterprise Fund.

- Caltrans will continue to provide the $10,000 annual maintenance and operations grant to the Airport.

7.2.2.2 Operating Expenses

- The City will continue not allocating overhead and salaries and wages to the Airport Enterprise Fund.

- Utility expenses will increase an estimated 6 percent annually through 2009 as new facilities are developed on the Airport.

- Professional services expenses for the AWOS maintenance are expected to continue.

- Insurance will increase at about 6 percent annually through 2009**.**

- The City will continue to pay property taxes to the County of Fresno until the City-owned property on the Airport is annexed into the City.

- Fees for professional services will continue for maintenance of the automated weather observing system (AWOS) on the Airport.

The City has three outstanding financial obligations for the development of the new Airport and its facilities that are being retired on a fully-amortized annual basis. The initial financial obligation was incurred through a Municipal Bond Issue in 1994 for purposes of funding the 10 percent matching funds for an FAA Airport Improvement Program grant to develop the new Airport. Information provided by the City indicates an average of $63,000 is being paid annually by the City to retire this financial obligation. As of fiscal year 2005, there is an outstanding balance due of $318,847. The obligation will be fully retired in fiscal year ending 2014.

A Caltrans loan for $150,000 for 12 years at an interest rate of 5.4804 percent was received in fiscal year 1999 for construction of the temporary crosswind Runway 1-19. Information provided by Caltrans indicates an average of $17,000 is being paid annually by the City to retire this loan. As of fiscal year 2005, there is an outstanding balance due of $65,988. This loan will be retired in fiscal year ending 2010.

A Caltrans loan for $546,521 for 17 years at an interest rate of 5.033 percent was received in fiscal year 1999 for construction of the Airport hangars. Information provided by Caltrans indicates an average of $49,000 is being paid annually by the City to retire this loan. As of fiscal year 2005, there is an outstanding balance due of $404,348. This loan will be retired in fiscal year ending 2017.

Based on the projected operating results of the Airport Enterprise Fund, the City will continue to operate with a deficit of about $130,000 annually until the debt service on outstanding loans is retired beginning well beyond the initial five-year period.

Based on the Phase I of the Capital Improvement Program, an estimated $7,100 will be required on an annual basis from the Airport Enterprise Fund to implement the recommended projects over the initial five-year period. The $7,100 annual requirement will be to fund the City's share of FAA Airport Improvement Program grants assuming Caltrans grants are available to fund 2.5 percent share of the Federal grants. The City will be required to fund a 10 percent share of a Caltrans grant to rehabilitate the existing crosswind Runway 1-19. (If Caltrans funds are not available, the City would be responsible for the entire 5 percent share of FAA Airport Improvement Program grants and 100 percent of the funds necessary to rehabilitate the existing crosswind Runway 1-19.)

Based on the financial analysis, the Airport Enterprise Fund will not realize sufficient surplus revenues to fund the Phase I projects. If FAA Airport Improvement Program grants are awarded as presented in the Capital Improvement Program, the City will need to identify sources of funds to provide the local matching share for these grants either from local sources or potentially a Caltrans loan.

7.3 SOURCES AND USES OF FUNDS

The following identifies potential sources of funds that could be used for improvement projects at the Coalinga Municipal Airport.

7.3.1 Federal Aviation Administration Airport Improvement Program Grants

The FAA Airport Improvement Program was established by the Airport and Airway Improvement Act of 1982 and provides funding for airport planning and development. The Airport and Airway Trust Fund, which was established by the Airport and Airway Revenue Act of 1970, provides the revenues used to fund Airport Improvement Program projects. Taxes or user fees are collected from the various segments of the aviation community and placed in the Trust Fund. The 1982 Act, as amended, authorizes the use of monies from the Airport and Airway Trust Fund to make grants under the Airport Improvement Program. The Airport Improvement Program assists the development of a nationwide system of airports by providing funding for airport planning and development projects at airports included in the *National Plan of Integrated Airport Systems.*

The Wendell H. Ford Aviation Investment and Reform Act for the 21st Century (AIR-21), signed into law in 2000, provided a multi-year program for funding under the

Airport Improvement Program through September 30, 2003, and many of the provisions of AIR-21 were brought forward in the 2003 Reauthorization of the Program. The Reauthorization of the Airport Improvement Program entitled Vision 100—The Century of Aviation Reauthorization Act (Vision 100) was presented to the President and signed into law in December 2003. Vision 100 provides a multi-year program for funding under the Airport Improvement Program with increases in funding through fiscal year 2007 and provides Federal funding for 95 percent of an eligible project with a requirement for a 5 percent local match. It should be noted that the Reauthorization of the Airport Improvement Program will require reauthorization beyond September 30, 2007, the end of the Federal fiscal year.

The Coalinga Municipal Airport is eligible for FAA Airport Improvement Program grants as a general aviation airport. Projects eligible for Airport Improvement Program grant funding at the current level of 95 percent are identified in Table 6-1. The latest Airport Capital Improvement Plan submitted to the FAA in February 2007 includes $4.0 million of planning and capital improvement projects for the Airport, of which $3.8 million (95 percent of the total) is eligible for FAA Airport Improvement Program grants.

The Vision 100 legislation also provides for general aviation airport entitlement grants with a maximum of $150,000 annually for fiscal years in which the total amount of FAA Airport Improvement Program funding is $3.2 billion or more. Based on the Vision 100 legislation, $3.4 billion, $3.5 billion, $3.6 billion, and $3.7 billion have been authorized for Fiscal Years 2004, 2005, 2006, and 2007, respectively. The Coalinga Municipal Airport is eligible for these annual entitlement funds. General aviation airport entitlement funds provide the City the ability to prioritize use of these funds with a greater focus on the needs of the Airport and the Community and eliminate the need to compete for general aviation airport discretionary funds for projects that may not have a high priority for FAA Airport Improvement Program funding.

The Airport has received FAA grant awards beginning in 1988 for the (new) Coalinga Municipal Airport. Grants totaling $7.4 million have been awarded for projects at the Airport including land acquisition and development grants for the new Airport. Based on information provided by the City, FAA Airport Improvement Program grants totaling $7.5 million that have been awarded for planning and development of the Airport are as follows:

1988	Airport Improvement Program Project No. 3-06-0046-01 Site Selection and Airport Master Plan Study	$58,500
1992	Airport Improvement Program Project No. 3-06-0046-02 Property Acquisition (approximately 928 acres); Engineering Design for (new) Coalinga Municipal Airport	$1,788,750

1992	Airport Improvement Program Project No. 3-06-0046-03 Site development including clearing, drainage, surveying and grading; access road; runway and taxiways; aprons; including drainage, markings, tiedowns and lighting, fencing, automated weather observing system (AWOS), beacon, wind cone, precision approach path indicators (PAPIs), electrical and fire fighting water service.	$5,375,029
2001	Airport Improvement Program Project No. 3-06-0046-04 Update Airport Master Plan Study	$150,000
2005	Rehabilitate Runway 12-30, taxiways and apron (design); install perimeter fencing (design); and update AWOS and wind analysis.	$150,000

It should be noted that, of the total $7.2 million in FAA Airport Improvement Program grant awards in 1992 for acquisition of property and development of the new Coalinga Municipal Airport, only $5.9 million was actually used by the City. About $1.3 million in grant funds were not expended for eligible projects and were returned to the FAA at FAA's request.

Phase I of the recommended Capital Improvement Program will require an estimated $100,000 in FAA grants on an annual basis over the initial five-year program, and this amount of Federal grant requirements appears to be realistic.

7.3.2 State of California

The State of California provides four financial assistance programs. (1) the State of California, Department of Transportation, Division of Aeronautics annual grant of $10,000; (2) allows the California Transportation Commission (CTC) to allocate funds to match FAA Airport Improvement Program grants for airport and aviation purposes; (3) the acquisition and development grants administered by the State Transportation Improvement Program (STIP); and (4) the Airport Loan Program.

The State provides annual non-matching $10,000 grants to airports that have not been designated as a "reliever" or "commercial service" airport by the FAA that may be used for both capital improvements and maintenance and operations. The annual grant may be accumulated for up to five years, or a maximum of $50,000, and used as matching funds for an FAA Airport Improvement Program grant.

State funds can be allocated by the CTC to match an FAA Airport Improvement Program grant once an airport sponsor has accepted the Airport Improvement

Program grant from the FAA. The State match is available to airports that have been designated as a general aviation or reliever airport by the FAA. Only those projects that are included in the State's Capital Improvement Program are eligible to receive matching grants. The State match will be an amount equal to 2.5 percent of the FAA Airport Improvement Program grant.

Any publicly-owned, public-use airport may apply for a State acquisition and development grant through a structured approval process. Grant projects are evaluated and prioritized by an evaluation matrix and an airport rating form with runway maintenance projects receiving the highest priority for funding. An Airport's request may range from a minimum of $10,000 to a maximum of $500,000 per fiscal year.

The State Airport Loan Program provides financial assistance in the form of loans, repayable over a period not-to-exceed 17 years. The interest rate is based on the most recent issue of State of California bonds sold prior to the issuance of a loan agreement. Loans can be obtained for matching funds (i.e., a FAA Airport Improvement Program grant) and for revenue-generating facilities (i.e., hangars and fuel facilities).

The City receives the $10,000 annual grant from Caltrans and the 2.5 percent matching share of FAA Airport Improvement Program grants.

The funds available to the Caltrans Division of Aeronautics for their financial assistance programs have been reduced in recent years to help reduce the statewide budget deficit. It is not known at this time when, and to what extent, monies will be available to fund the Caltrans Division of Aeronautics Programs.

7.3.3 City of Coalinga General Fund

The Airport Enterprise Fund should be self-supporting through rates and charges for use of the facility. Financing airport improvements through loans or direct appropriation from the City's general fund may be the most realistic method of financing development not eligible for FAA Airport Improvement Program grants or for matching the City requirement for grants after recognition of Caltrans grants totaling 2.5 percent of total FAA Airport Improvement Program grants. General fund loans or appropriations can be justified by the City on the basis that the Airport provides certain direct economic and social benefits to the Community and local taxpayers as well as the possessory interest, personal property and other tax increments generated by airport tenants and users, portions of which are returned to municipalities and school districts, and not to the Airport Enterprise Fund.

7.3.4 Private Financing

The importance of the Airport to local economic development is enhanced with active involvement on the part of both public officials and the private business community. The City may require that all exclusive-use facilities such as hangars, fueling facilities, tiedowns, fixed base operations, and other commercial aviation facilities be provided and financed by the tenant. The City would receive ground rental while the leaseholder would receive the gross revenues and be responsible for the operational expenses and debt service obligation. Private financing places the burden of financing on the tenant while increasing the value of the Airport which will, in turn, add to its economic attractiveness.

7.3.5 Other Sources of Funds

There are other potential sources of grants and loans that the City could consider for financing airport development projects, including grants from the Federal Public Works Program of the Economic Development Administration. There are several grant and loan programs under the U.S. Department of Agriculture Rural Development Programs including Community Facilities Direct Loans, Rural Business Enterprise Grants and Rural Business Opportunity Grant Programs. The use of funds from these programs range from infrastructure improvements, e.g., water and sewer systems, to financing a public-use terminal building and/or hangars and equipment needed for public safety.

The State of California, Economic Development Administration provides grants and loans through the Department of Housing and Community Development and the Trade and Commerce Agency. The use of funds from these programs also range from infrastructure improvements to public-use terminal buildings.

The eligibility criteria to receive grants and loans under these various programs differ, and the application processes are also different. The requirement for the City's local matching share for certain grants could be as high as 75 percent of the total project costs. In addition, there are special conditions attached to certain grants and loans that the City will be obligated to meet, e.g., the creation of jobs and environmental compliance. As the availability of funds to support these programs on both the Federal and State level constantly change, the City should coordinate with the various program managers prior to considering an application for assistance.

7.4 FINANCIAL CONSIDERATIONS OF THE PHASE II AND PHASE III CAPITAL IMPROVEMENT PROGRAM

Beyond Phase I of the Capital Improvement Program, it is assumed that development of the Airport will proceed according to the priorities proposed in the recommended

phased development plan. It is also assumed that the implementation of the Phase II and Phase III projects will be arranged to be compatible with the financing sources and requirements of the Airport as identified at the time of implementation.

It should be recognized that the financial feasibility of projects in the later phases will be linked to the overall management of the Airport in the short-term, the provisions of existing leases and agreements in effect, funding levels and participation rates of Federal grant programs and periodic review by the City of its lease policies and rates and charges policies.

Chapter 8

STRATEGIC BUSINESS PLAN

8.1 INTRODUCTION

The Strategic Business Plan incorporates the different elements prepared as part of the Airport Master Plan and other planning documents prepared by the City of Coalinga into a single comprehensive development and management plan for the Coalinga Municipal Airport. The Strategic Business Plan is intended to serve as guidance to provide a sound, consistent basis on which the City can attract financially responsible tenants to the Airport and develop and manage the Airport consistent with its long-range public service goals and financial objectives.

8.2 MISSION, GOALS AND PERFORMANCE MEASURES

The City has set a mission statement for the Coalinga Municipal Airport Enterprise Fund to account for all of the activities, revenues, expenditures, assets, liabilities in providing a general aviation airport to the residents of the City and the surrounding area. The overall Mission Statement of the Airport has been stated to define the desired future role of the Airport.

> *The Mission Statement of the Coalinga Municipal Airport is to provide an environment that meets the needs of the general aviation community, encourages development by private business, promotes economic development, maintains a viable financial position, and is an attractive Airport for residents of the City and the surrounding areas for which it is the most convenient airport.*

Goals and performance measures are established for the Airport on an annual basis as part of the budget processing for the City. The goals to be completed by June 30, 2005, according to the City of Coalinga Annual Budget Fiscal Year 2004-2005, are discussed below.

The City's goals for fiscal year 2004-2005 for the Coalinga Municipal Airport that will be completed as part of the Airport Master Plan include:

- Airport Master Plan
- Airport Capital Improvement Program
- Rates and Charges Study, including hangar lease rates

City goals for the continuing operation and maintenance of the Airport include:

- Responding to items cited in the State of California, Department of Transportation (Caltrans), Division of Aeronautics, Facilities Inventory and State Permit Compliance Inspection reports (typically annual inspections).

- Responding to complaints by Airport users, including pilots and tenants.

- Enforcing existing Airport hangar lease agreements.

- Review and revise leases and agreements for use of the Airport in coordination with the City Attorney.

Goals that are actively being pursued by the City but may not be completed by the end of fiscal year 2005 are presented below.

- Annex into the City approximately 700 acres of City-owned property within the Airport boundary that is currently in the unincorporated area of Fresno County. A total of about 1,002 acres were acquired by the City primarily through a Federal Aviation Administration (FAA) Airport Improvement Program grant. Only about 300 acres have been annexed into the City for development of the runways, taxiways, aircraft parking apron and the access road. The City pays property taxes to Fresno County for the City-owned property, and annexation will eliminate these property taxes and enhance the revenue-generating capability of the Airport Enterprise Fund.

  The Airport Master Plan identifies the need for revenue-generating development on the Airport, and the City's General Plan Update will address the annexation.

- Market the Airport to attract additional pilots and businesses, e.g., flight schools, a fixed base operator, aviation maintenance, transportation companies and other aviation-related commercial and industrial tenants to enhance the viability of the Airport Enterprise Fund to achieve self-sufficiency.

  The Airport Master Plan identifies marketing and promotional activities in addition to those already being implemented by the City.

8.3 STRATEGIC POSITION OF THE COALINGA MUNICIPAL AIRPORT

The Coalinga Municipal Airport is geographically located 4 statute miles east-northeast of the center of the City. The Airport is located on about 1,002 acres of

land at an elevation of 622 feet above mean sea level. The Airport is classified as a General Aviation Airport in the FAA's *National Plan of Integrated Airport Systems* (NPIAS), and as a Community General Aviation Airport in the *California Aviation System Plan* (CASP).

Of the total 1,002 acres acquired by the City for development of the new municipal airport, only about 300 acres have already been annexed into the City. These 300 acres include the area where the runways, taxiways, aircraft parking area, terminal area and the Airport access road have been developed.

The *1992 Biological Opinion* and the *1994 Habitat Management Plan* covered the development actions associated with the new airport including a 5,000-foot runway and the development of approximately 150 acres within the Airport site. (At present, only approximately 80 acres of the 150-acre airport site have been developed.) Approximately 360 acres of the Airport property were set aside for the Kit Fox Management Area, and another 260 acres were reserved for buffer areas under the terms of the *1992 Biological Opinion.* The remainder of the Airport property was restricted to agricultural use.

The Airport Master Plan provides for the future development of the Airport and new and expanded airport facilities can be used as a catalyst for economic development. The Plan reserves about 160 acres for future aviation related commercial and industrial uses. However, there is a requirement for environmental documentation and mitigation in accordance with both the National Environmental Policy Act (NEPA) and the California Environmental Quality Act (CEQA) that could have a significant impact on the future development of the Airport.

The General Plan Update, currently being prepared by the City, will address the annexation of the other 700 acres of City-owned property located within the Airport boundary into the City.

There are currently no long-term leases and agreements for use of Airport property.

8.4 RATES AND CHARGES

A variable of particular importance in a future development program of this type is the level of user rates and charges upon which projections of operating revenues are based. Future user rates and charges based on existing leases and agreements are assumed in the financial analysis presented in Chapter 7, Financial Plan. However, it is appropriate to consider the estimated impact of future adjustments in the user rates and charges and new development.

The financial analysis reflects a set of assumptions under which there would be no major changes or improvements in tenant/user rates and charges except as noted. An analysis of current rates and charges at those airports considered to be competing or comparable airports was considered to assess the reasonableness of the existing rates and charges at the Coalinga Municipal Airport.

Airports were identified as potentially competing with the Airport based on location and/or airports of similar size in terms of based aircraft and annual aircraft operations. It should be noted that no two airports are identical in terms of what can be considered reasonable rates and charges. There are a number of variables that apply to rates and charges at individual airports including services available, runway and taxiway system, land area available and size of leasehold, the economic characteristics of the area in which an airport is located, market demand and numerous other considerations. Rates and charges for use of an airport are established based on all of these considerations, including the fair market value of the airport and its facilities and, therefore, are not directly comparable to rates and charges for use of the Coalinga Municipal Airport.

Rates and charges available for hangar leases, tiedowns fees and fuel flowage fees for Delano Municipal, Hanford Municipal, Paso Robles Municipal, Porterville Municipal, Reedley Municipal, Turlock Municipal, King City Municipal-Mesa Del Rey, Lompoc Municipal, Mariposa-Yosemite, Santa Ynez, and Tulare Municipal Airport—Mefford Field were considered competitive or comparable airports to the Coalinga Municipal Airport and are presented in Table 8-1 and discussed below.

8.4.1 Hangar Lease Rents

Hangar lease rents range from $100 per month ($15 is added for trash removal) at the Coalinga Municipal Airport up to $168 a month at the Mariposa-Yosemite Airport as presented in Table 8-1. Theoretically, hangar rental rates should be based on the fully-amortized cost of the hangars over a period of time, e.g., a loan for construction of the hangars and include the cost for maintenance. The appropriate rental rate for City-owned hangars can be evaluated based on a number of factors, however, hangar rental rates typically are based on the type of hangars and the market demand within the local geographic area. Hangar rental rates are typically lower at the airports in rural areas, e.g., $100 per month at the Coalinga Municipal Airport to hangar rental rates at an airport in an urban area. A recent San Francisco Bay Area Hangar Rent Survey indicates that the average hangar in the San Francisco Bay Area rents for $309 per month.

The $100 per month charged for hangar lease rents at the Coalinga Municipal Airport is considered low when compared with the hangar rents charged by other airports as

Table 8-1

RATES AND FEES ANALYSIS
Coalinga Municipal Airport
2005

Airport	Hangar Lease	Tiedowns	Fuel Flowage Fee (per gallon)	Fuel Sales	
				Avgas	Jet
Coalinga Municipal	**$115/month**	**$22/month**	**City**	**$2.79**	**n.a.**
Delano Municipal	n.a.	$60/month	City	$2.90	n.a.
Hanford Municipal	n.a.	$30/month	$0.02	$2.99	$3.09
King City Municipal-Mesa Del Rey	$121/month	$39/month	n.a.	$2.79	$2.71
Lompoc Municipal	n.a.	$34-$43/month	City	$2.78	n.a.
Mariposa-Yosemite	$168/month	n.a.	n.a.	$2.10	n.a.
Paso Robles Municipal	n.a.	$35-$50/month	n.a.	$2.91/$3.11	$2.94/$3.14
Porterville Municipal	n.a.	$20-$25/month	City	$2.73	$2.87
Reedley Municipal	$150/month	$35/month	n.a.	$2.85	$2.56
Santa Ynez	n.a.	$33-$49/month	City	$3.09	$3.12
Tulare Municipal-Mefford Field	n.a.	$30/month	$0.04	$2.75	$2.25
Turlock Municipal	n.a.	$25/month	$0.05	$2.92	n.a.

n.a. = not applicable

SOURCE: Aries Consultants Ltd. based on discussions with individual airport representatives.

presented in Table 8-1. The City is to review the hangar leases with the City Attorney as presented earlier in the goals and performance measures. Any new hangar leases should provide the opportunity to increase the hangar lease rents at reasonable intervals, e.g., on an annual basis, to keep the rents commensurate with the market value.

It should be noted that at some airports, hangar lease rates are not available as the airport sponsors provide a ground rental rate for a parcel on which an individual can build their own hangars. The airports receive the revenue for the property, and others incur the cost of constructing and maintaining their own hangars.

8.4.2 Tiedowns

Tiedown rates ranged from $20 to $25 per month at the Porterville Municipal Airport to $60 per month at the Delano Municipal Airport. Tiedown rates for twin-engine aircraft were typically $10 to $15 more per month. Tiedown rates at the Coalinga Municipal Airport at $22 per month should be considered comparable to those at other airports.

8.4.3 Real Property

Real property leases are ground leases for aviation and nonaviation uses on an airport. Although real property leases for airport properties are not presented in Table 8-1, a recent ground rental rate survey conducted by the Association of California Airports indicated ground rental rates at California airports ranged from $0.01 per square foot at the Mariposa-Yosemite Airport to a high of $0.29 per square foot at the Chino Airport in Southern California.

It should be noted that a rates and charges analysis of this type should be considered as an overall review of what other airports charge for use of airport and facilities and services. The analysis should not be considered as a direct comparison as the circumstances at the individual airports vary considerably as do the lease terms under which various leases were negotiated.

The current ground rental rates for airport property should be determined through an appraisal of the fair market value of aviation and nonaviation properties on the Airport, as shown on the Airport Master Plan and Airport Layout Plan, by an appraiser who is familiar with appraising airport properties. The appraiser will take into consideration the current demand for airport properties in the Coalinga area, the availability of competitive properties, and in particular trends in the aviation industry.

In addition, appraisers who are familiar with appraising airport properties recognize there are restrictions on the use of airport property to comply with FAA requirements and other development standards as established by the City.

Based on an appraised fair market value of the Airport properties for 2005, annual ground rental rates can be established based on a percentage of the appraised fair market value, and future rental rate adjustments can be based on subsequent future appraisals adjusted after airport improvements are made and additional facilities and services become available. In the future, the existing (2005) rental rates can then be adjusted in proportion to the increase in the appraised value for airport property and applied consistently to all tenants.

8.4.4 Fueling

Fuel flowage fees ranged from $0.02 per gallon at the Tulare Municipal-Mefford Field and Hanford Municipal Airports to $0.05 per gallon at the Turlock Municipal Airport. As with other rates and charges, there is a wide range of fuel flowage fees in place at other airports in the State – the majority of the airports reported fuel flowage fees in the $0.05 per gallon to $0.08 per gallon range with $0.05 per gallon considered the industry standard. There is automated fueling at the Coalinga Municipal Airport, and the City receives a markup on the fuel sold. This is also applicable at other airports in the area.

The sale of fuel ranged from a low of $2.73 to $3.11 per gallon at the airports in the area compared to $2.79 per gallon at the Coalinga Municipal Airport that is considered comparable. It should be noted that fuel prices are very competitive and change constantly.

8.5 METHODOLOGY FOR ESTABLISHING RATES AND CHARGES

The principle underlying the establishment of rates and charges is that each tenant on the airport and each user of the airfield should pay an appropriate rate or fee for such tenancy or use. At a minimum, Airport use fees and facility rentals should be based on actual, fully-allocated costs of providing, operating, and maintaining the facilities occupied and used, including reasonable interest charges.

An Airport Fee Schedule should be prepared for various uses of the Airport. The Airport Fee Schedule is typically changed from time-to-time by City Ordinance so any changes are applied consistently to all tenants at the same time. With regard to the various users of the Airport, the following policies should apply:

8.5.1 Airfield Use

All users of the airfield should pay a field use fee regardless of any other space or ground rentals that they may be paying on the Airport. For general aviation aircraft users, a use charge can most easily be obtained through a fuel flowage fee. Fuel flowage fees should be included in the Airport Fee Schedule and applied consistently

to any future fixed base operator(s) and/or other potential fuel providers on the Airport. Fuel flowage fees should be paid by the supplier based on the gallons delivered to the Airport.

Aviation fuel sales are very competitive and oftentimes attract pilots making technical stops for fuel en route to other locations. In the future, the City could consider including the requirement for any fuel provider to maintain competitive fuel prices in comparison with other airports in the area.

8.5.2 Rental of City-Owned Buildings

In leasing City-owned buildings that have been fully depreciated, the current ground rental rate should be charged, with the building rental established in accordance with the current market demand. If there is only one prospective tenant for occupancy of a given building, the rental rate can be negotiated. If there is more than one tenant desiring to lease a given building, a lease not exceeding five years should be awarded on a bid or proposal basis. Building rental rates received for essentially identical facilities can vary to a great degree. However, as previously stated, ground rental should be charged at the fair market value for the area in which the building is located. All leases should identify ground rentals and building rentals separately, as well as any other use fees or charges.

8.6 OVERALL BUSINESS ISSUES

The overall business issues challenging the Coalinga Municipal Airport will be the attraction of additional airport users and new aviation and nonaviation development to the Airport within a changing business environment.

8.6.1 Available Resources

The Airport Master Plan (the Plan) demonstrates that the Airport could play a significant role in the continuing development of the City of Coalinga and those parts of the surrounding area for which it is the most convenient airport. Because of the Airport's unique environmental setting with respect to surrounding land use compatibility, the Airport has an outstanding capability to contribute to the area's continued economic growth and stability in the future. Many of California's aviation facilities are currently constrained and will be even more constrained in the future. These constraints vary from airport to airport but include environmental considerations, traffic congestion, real estate economics, airspace conflicts, and the pressures of increased urbanization and surrounding incompatible development. The Coalinga Municipal Airport, almost uniquely, has the opportunity to prevent these constraining factors.

Land uses in the immediate vicinity of the Airport are currently compatible with the recommended Plan, and an update of the 1994 *Coalinga Airport Land Use Policy Plan* will provide the necessary tools for the City to preserve future compatible land uses within the Airport environs. (It should be noted that based on the Airport Master Plan adopted by the City, recommendations for any changes or modifications to the *Coalinga Airport Land Use Policy Plan* have been prepared for use by the Fresno County Airport Land Use Commission.) This type of resource is of great significance to the future growth and economic development of the Coalinga Municipal Airport and the City of Coalinga. While the direct generation of revenue for the maintenance, operation and development of the Airport is of primary importance, the ability to attract aviation and nonaviation users and tenants to the Airport within an environmentally compatible environment will be of great importance in the future.

8.6.2 Future Land Development Program

The Airport Master Plan presented in Chapter 5 designates land areas to be reserved for various types of aviation-related uses. The Capital Improvement Program presented in Chapter 6 provides for the orderly development of the Airport. Adherence to the Plan is recommended for the development of these uses as it ensures that certain Airport land with airfield access will be reserved strictly for aviation activities and permits land surplus to aviation requirements to be devoted to the development of leaseholds in a manner compatible with both Airport and off-Airport land uses. Any proposed nonaviation commercial/industrial uses and development on the Airport are subject to FAA review and approval.

The City, FAA, Caltrans and airport users have already made substantial investments in the Coalinga Municipal Airport, and the Airport Master Plan provides the City with the tools to protect these investments.

8.7 MARKETING AND PROMOTION

Marketing and promotional activities are typically the responsibility of economic development departments within various municipalities and counties. The marketing and promotion of the Coalinga Municipal Airport are carried out through the Economic Development Department, and City staff is fully apprised of Airport property and available site(s) that are evaluated and marketed within the full range of available properties within the City and surrounding areas.

8.7.1 Web Site

The City could consider developing a web site for the Airport. Alternatively, the Airport could be a specific site under the overall web site for the City of Coalinga. A number of airports within the State have developed web sites providing information

about the individual airports including business and development opportunities, fee schedules for use of the airport, and information about the local community.

In addition, airport promotional materials, a description of short-term capital improvement programs, and other pertinent information could be made available; e.g., the Airport Master Plan for the future development of the Airport. The initial research for the potential location of a company, activity, and/or other uses is frequently through a search of available web sites. It is, therefore, essential that a web site be developed for the Airport so as not to eliminate the Airport, or the City, from further consideration as a potential place of doing business.

8.7.2 Aviation Related Businesses

There are a number of products and services directly related to general aviation that typically require location on an airport. A review of aviation directories provided a listing of over 40 general aviation products and services that are located on or available at other airports comparable to the Coalinga Municipal Airport. These products and services are presented in Table 8-2 and discussed below.

Based on the information presented in Table 8-2, there are very few general aviation products and services located on the Coalinga Municipal Airport. The attraction of a full service fixed-base operator to the Airport in the future would provide the Airport with competing facilities and services when compared to other airports in the area. However, this type of tenant is difficult to attract within today's overall general aviation environment.

Specialty services that could be considered in marketing and promotion activities presented later in this chapter include aircraft cleaning services; aircraft interior restoration; avionics sales and services; upholstery shop; and propeller services. In addition, an aircraft painting and refinishing shop on the Airport could attract a number of aircraft owners that currently go long distances to obtain these services that exist at a limited number of airports. An aircraft painting and refinishing shop would certainly be an attraction at the Coalinga Municipal Airport, but it may be difficult to attract this type of tenant as the environmental considerations of providing for this type of activity and the investment required could be considerable.

The use of general aviation aircraft for business/corporate aviation has increased significantly following the events of September 11, 2001 due to the enhanced feeling of security of using business/corporate aircraft as well as the diminished airline schedules and rigorous security precautions at the commercial air carrier airports. This segment of general aviation includes aircraft owned by corporations, private individuals and those aircraft that are fractionally owned and managed by fractional and/or management ownership companies.

Table 8-2

GENERAL AVIATION PRODUCTS AND SERVICES
Coalinga Municipal Airport
2005

General Aviation Activity	On Airport	Not On Airport
Air Ambulance		X
Air Cargo		X
Air Charters		X
Air Courier		X
Air Taxi		X
Aircraft Brokers		X
Aircraft Cleaning Service		X
Aircraft Components and Parts		X
Aircraft Interiors		X
Aircraft Maintenance		X
Aircraft Painting and Refinishing		X
Aircraft Rental		X
Airframe Repair and Overhaul		X
Automobile Rental		X
Aviation Attraction		X
Aviation Training Center		X
Avionics Sales and Service		X
Conference Rooms and Amenities	X	
Courtesy Transportation		X
Electrical Repair		X
Fixed Wing Pilot Training		X
Flight Planning Services	X	
Flight Service Station		X
Flight Simulators		X
Flying Club		X
Freight Forwarder		X
Fueling Services	X	
General Aviation Passenger Terminal		X
Gift/Retail Shop		X
Ground Equipment Manufacturer		X
Ground Equipment Repair		X
Helicopter Charter		X
Helicopter Maintenance and Repair		X
Helicopter Pilot Training		X
Hotel		X
Pilots' Lounge	X	

GENERAL AVIATION PRODUCTS AND SERVICES
Coalinga Municipal Airport

General Aviation Activity	On Airport	Not On Airport
Pilot Supplies and Services		X
Powerplant Repair and Overhaul		X
Propeller Services		X
Restaurant		X
Safety and Emergency Equipment		X
Transient Aircraft Parking	X	
Upholstery Shop		X
Weather Services	X	
Window, Windshield, Shade Repair		X

SOURCE: *Pilots Guide to California Airports*

The impact of accommodating increases in corporate / business aircraft has been felt at airports in the major metropolitan areas in Northern and Southern California, particularly at the commercial air carrier airports. For example, several corporate/business aviation users from the San Francisco Bay Area have relocated aircraft and crews to other airport locations in California; e.g., Sacramento International, Fresno-Yosemite International and Modesto City-County Airports. The attraction of corporate/business aircraft to the Airport could be considered in the longer-term. The attraction of these types of aircraft to the Airport would provide the City with real property leases, fuel flowage fees and employment opportunities.

8.8 OTHER RECOMMENDATIONS FOR CITY CONSIDERATION

The Coalinga Municipal Airport is relatively new when compared to other airports and has not experienced tremendous growth in aviation activity. As the Airport continues to develop, there are a number of management documents the City could consider preparing in this early stage of development. By developing and adopting management documents, the City will be prepared to better serve the interests of airport tenants and users.

8.8.1 Lease Policy Guidelines

The City could consider preparing Lease Policy Guidelines for future leases and agreements for use of the Airport. Lease Policy Guidelines state the policies of the City in negotiating new or renegotiating existing leases and agreements for the use of the Airport. The guidelines are specific in addressing City policies for maintenance provisions and remedies, hazardous materials, relocation of improvements, disposal of tenant improvements, the requirement for performance bonds, and other issues and covenants of a lease or agreement for use of the Airport. The guidelines provide a solid framework of covenants and issues the City can use as the basis for entering into lease negotiations with a prospective tenant.

While there are no requirements by the FAA that are passed directly to any airport tenant or lessee, the City is required to pass on to concessionaires, tenants, and lessees on the Airport the provisions of Title VI of the Civil Rights Act of 1964. The City is obligated to include in all leases and agreements specific requirements when entering into a new lease or agreement after receiving FAA grant assistance obligating the Airport to Title 49 of the Code of Federal Regulations Part 21. In addition, any leases and agreements for future use of Airport property should subject the tenant to the City obligation to comply with Federal Grant Assurances as a condition of accepting Federal grants for development of the Airport.

8.8.2 Minimum Standards

The preparation of minimum standards is highly recommended by the FAA for all airports that must comply with Federal Grant Assurances as a condition of accepting Federal grant assistance in order to ensure fair and equal opportunities for all users of the Airport. Minimum standards are defined as the qualifications the City establishes as the minimum requirements to be met as a condition for the right to conduct an aeronautical activity on the airport. The City should consider preparing minimum standards and periodically updating the standards as the Airport is further developed and new facilities and services become available.

Minimum standards should be kept current for all of the properties on the Airport to establish standards to be followed by lessees in the development of leased Airport property. Minimum standards should detail the requirements for each type of tenant to ensure that future airport development will be compatible with all other land uses on the Airport by performance, appearance and general operating characteristics. Minimum standards should be enforced uniformly among all tenants.

The importance of minimum standards cannot be overemphasized. Experience at other airports has shown that potential aviation and nonaviation tenants and users want to be assured of stability and compatibility of all facilities on an airport in view of the substantial capital investment involved in the location and construction of new facilities.

8.8.3 Airport Rules and Regulations

The City should consider preparing Airport Rules and Regulations for use of the Airport. The rules and regulations are established to ensure that airport tenants and users operate in a safe and orderly fashion and restrict and/or prevent any activity or action that would interfere with the safe and orderly use of the Airport.

8.9 FINANCIAL IMPLICATIONS

The Airport operates as a proprietary enterprise of the City of Coalinga, and its objective in financial management is to assure full financial self-sufficiency. Revenue sources from the Airport are not adequate to cover the expenses associated with the operation and maintenance of the Airport operation and cover the debt service requirements from the land acquisition and development of the Airport.

Increased revenues to the Airport Enterprise Fund as a result of new development will necessarily be dependent on the type of facilities and development the City decides to pursue. There will be costs to the City associated with future development of the Airport including environmental documentation and mitigation and additional infrastructure.

The merits and potential of further development on the Coalinga Municipal Airport have been discussed previously; however, it should be emphasized that an aggressive and organized promotional program should form the keystone for the future development of the Airport. The benefits that could be realized relate, not only to the Airport, but also to the community as a whole. The intent should be to use the Airport as a tool to attract new development to the area.

APPENDIX A

ALTERNATIVE AIRPORT DEVELOPMENT CONCEPTS

Appendix A

ALTERNATIVE AIPORT DEVELOPMENT CONCEPTS

INTRODUCTION

This appendix describes the alternative airport development concepts considered for the long-range development of the Coalinga Municipal Airport. Three alternative concepts were prepared and were reviewed at a public meeting of the Technical Advisory Committee on January 26, 2005.

The inclusion of individual projects in the alternatives does not necessarily imply that the projects are recommended or that they should be implemented in the near future. The primary purpose is to facilitate the selection of a long-term development concept for the Airport.

The airport master planning process is essentially a decision-making process, and each alternative involves tradeoffs among the various factors. The selected airport master plan concept may well involve features from different alternative development concepts described in this appendix. The alternatives are also intended to illustrate the range of requirements needed to meet current Federal Aviation Administration (FAA) airport design standards for different aircraft design groups.

This appendix presents three alternatives for the possible future development of the Airport. The alternatives represent a broad range of development concepts. Alternative 1 is the existing Airport Master Plan/Airport Layout Plan (ALP) and could accommodate large aircraft in airport reference code (ARC) B-II and 100 percent of the business jet fleet at more than 60 percent useful, or 75 percent of the business jet fleet in ARC C-II or higher at 90 percent useful load on a 7,500 foot Runway 12-30. Additionally 100 percent of the small aircraft (12,500 pounds or less) with less than 10 seats could be accommodated on the crosswind runway. Alternative 2 could essentially accommodate 100 percent of the business jet aircraft fleet in ARC C-II with 60 percent useful load on Runway 12-30 and 95 percent of the small (12,500 pounds or less) general aviation fleet with less than 10 seats on the crosswind runway. Alternative 3 could essentially accommodate 75 percent of the business jet aircraft fleet with 60 percent of useful load on Runway 12-30 and 75 percent of the small (12,500 pounds or less) general aviation fleet with less than 10 seats on the crosswind runway. Alternative 3 is an open V airfield providing some increase in hourly capacity. A fourth alternative is a “do nothing” alternative or retaining the existing airport facilities as illustrated on Figure 3-1.

The recommended Airport Master Plan Update concept was finalized based on the comments received from the Technical Advisory Committee, the City, the FAA, State of California

Department of Transportation, (Caltrans), Division of Aeronautics airport users and public review of the alternatives.

ALTERNATIVE AIRPORT DEVELOPMENT CONCEPT 1

This alternative is designed to accommodate large (more than 12,500 pounds) aircraft including business jets and is illustrated on Figure A-1. This alternative requires some additional land acquisition or avigation easements to the northwest and southeast of Runway 12-30 to provide for the precision approach runway protection zones (RPZs) that will extend beyond the existing airport boundary. This alternative:

- Accommodates large aircraft in ARC B-II with wingspans up to 79 feet (e.g., Beech King Air and Cessna Citation) on Runway 12-30.
- Accommodates small aircraft with less than 10 seats in ARC A-II/B-II with wingspans up to 79 feet (e.g., Beech King Air E90) on the crosswind Runway18-36 when the crosswind component is more than 13 knots on the main runway.
- Provides ultimate precision approach runway protection zones (RPZs) at both ends of Runway 12-30.
- Provides RPZs for visual and nonprecision approaches with not lower than 1 mile visibility for Runway 18-36.

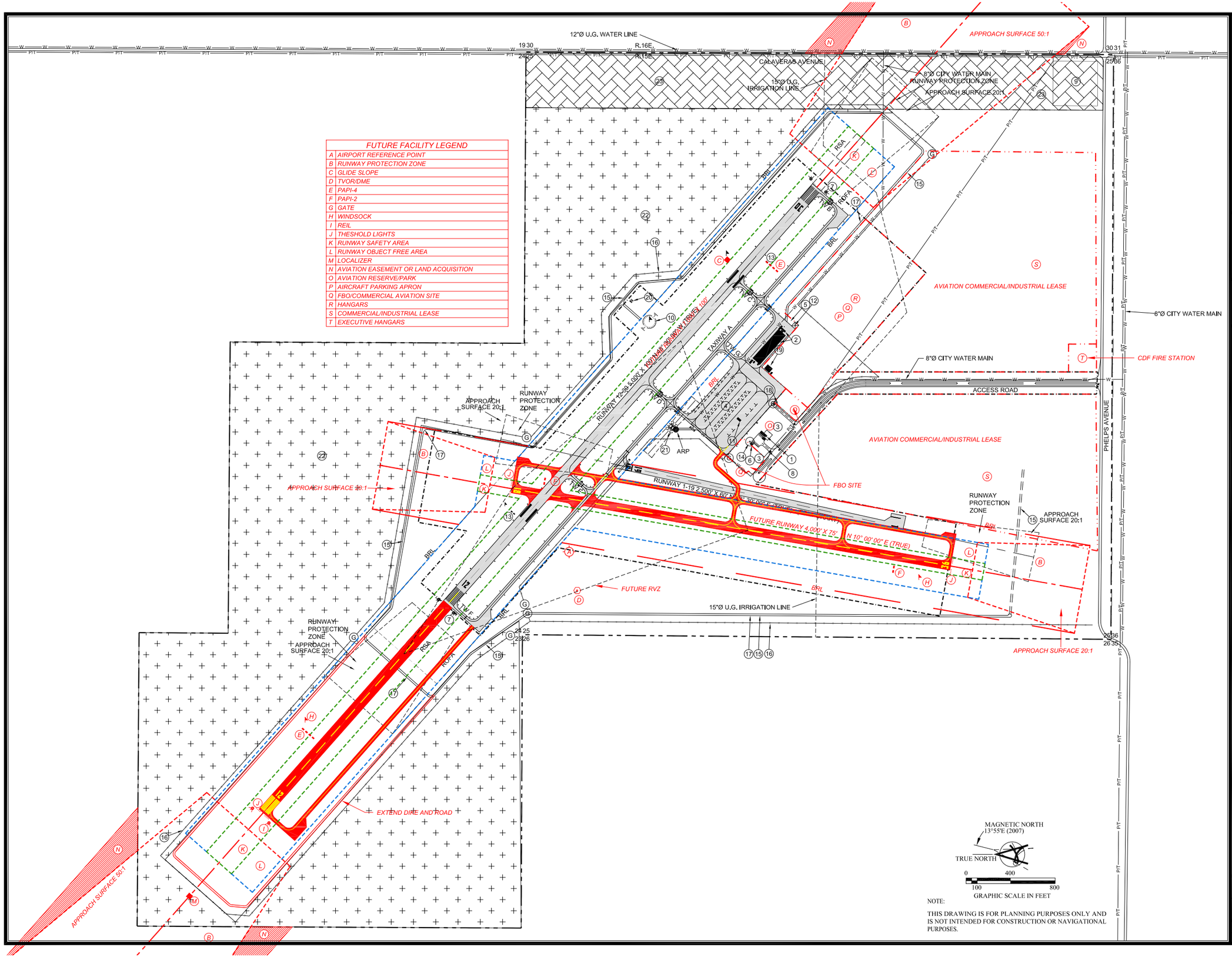
Airfield

Runway 12-30

- Extends Runway 12-30 by 2,500 feet to the northwest for a total length of 7,500 feet and retains the runway width at 100 feet.
- Provides a runway obstacle free zone (ROFZ) 400 feet wide, centered on the runway, with vertical sides extending up to approximately 50 feet and then at a slope of 6:1 to the horizontal surface. There are no penetrations to the ROFZ.
- Provides a runway safety area (RSA) 300 feet wide, centered on the runway, and extending 600 feet beyond the runway ends.
- Provides a runway object free area (ROFA) 800 feet wide, centered on the runway, and extending 600 feet beyond the runway ends.
- Retains runway centerline to taxiway centerline separation of 300 feet.

Runway 18-36

- Provides a 4,000 feet long by 75 feet wide crosswind Runway 18-36, aligned at N10º 00' 00" E True, approximately 240 feet west of the centerline of the existing temporary Runway 1-19.



FUTURE FACILITY LEGEND	
A	AIRPORT REFERENCE POINT
B	RUNWAY PROTECTION ZONE
C	GLIDE SLOPE
D	TVOR/DME
E	PAPI-4
F	PAPI-2
G	GATE
H	WINDSOCK
I	REIL
J	THESHOLD LIGHTS
K	RUNWAY SAFETY AREA
L	RUNWAY OBJECT FREE AREA
M	LOCALIZER
N	AVIATION EASEMENT OR LAND ACQUISITION
O	AVIATION RESERVE/PARK
P	AIRCRAFT PARKING APRON
Q	FBO/COMMERCIAL AVIATION SITE
R	HANGARS
S	COMMERCIAL/INDUSTRIAL LEASE
T	EXECUTIVE HANGARS

MAGNETIC NORTH
13°55'E (2007)
TRUE NORTH
0 400
100 800
GRAPHIC SCALE IN FEET

NOTE:

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

COALINGA MUNICIPAL AIRPORT MASTER PLAN

ALTERNATIVE AIRPORT DEVELOPMENT CONCEPT 1

LEGEND		
EXISTING	ULTIMATE	
		AIRFIELD/APRON PAVEMENT
		BUILDING/FACILITIES
		AIRPORT PROPERTY LINE
BRL	BRL	BUILDING RESTRICTION LINE (BRL)
		FENCE
G	G	GATE
		ROTATING BEACON
		FUEL ISLAND
		AIRPORT REFERENCE POINT (ARP)
		THRESHOLD LIGHTS
		RUNWAY LIGHTS
		WIND SOCK
		REIL
		PAPI
H		HELIPAD
600		GROUND CONTOURS
		HYDRANT
P/T		PACIFIC GAS & ELECTRIC/TELEPHONE
W		WATER
		RUNWAY SAFETY AREA
		RUNWAY OBJECT FREE AREA
24 25 / 23 26		SECTION CORNER

EXISTING FACILITY LEGEND	
1	FLIGHT SERVICE FACILITY/CARETAKER RESIDENCE
2	HANGARS
3	FBO SITES
4	TIEDOWNS
5	OWNER MAINTENANCE AREA
6	ELECTRICAL BUILDING
7	REIL
8	TRANSFORMER
9	HOLDING POND
10	SEGMENTED CIRCLE AND LIGHTED WIND SOCK
11	FUEL ISLAND
12	POLLUTION ABATEMENT FACILITY
13	PAPI
14	ROTATING BEACON
15	DIKE
16	FENCE
17	PERIMETER ROAD
18	APRON SECURITY LIGHTING
19	MAINTENANCE HANGAR
20	AWOS
21	HELIPAD
22	HABITAT CONSERVATION AREA
23	CALAVERAS BUFFER AREA

LAND USE LEGEND	
	ANNEXED CITY LIMITS
	HABITAT CONSERVATION AREA
	CALAVERAS BUFFER AREA

ARIES CONSULTANTS LTD.

COALINGA MUNICIPAL AIRPORT	FIGURE A-1
FRESNO COUNTY, CALIFORNIA	
NAME: CLG-A1-Alternative 1-B.dwg	NO: 4490-04
DATE: May 1, 2007	PLOT SCALE: 1"= 800'

- Provides a ROFZ 250 feet wide, centered on the runway, with vertical sides extending up to the horizontal surface. There are no penetrations to the ROFZ.
- Provides a RSA 150 feet wide, centered on the runway, and extending 300 feet beyond the runway ends.
- Provides a ROFA 500 feet wide, centered on the runway, and extending 300 feet beyond the runway ends.
- Provides a runway centerline to taxiway centerline separation of 240 feet.

Avigation

Runway 12-30

- Provides for precision instrument approach with an instrument landing system (glide slope and localizer) to Runway 30 and nonprecision instrument approach to Runway 12.
- Provides a building restriction line (BRL) at only 400 feet from the runway centerline (A BRL of 750 feet is required for buildings 35 feet high).
- Enlarges the RPZs for each runway end from 1,000 feet long by 500 feet inner width and 800 feet outer width to ultimately 2,500 feet long by 1,000 feet inner width and 1,750 feet outer width for precision approaches.
- Lowers the existing 20:1 approach surfaces to each runway end to ultimately 50:1 for precision approaches to each runway end.
- Relocates the precision approach path indicator (PAPI) and runway end identifier lights (REIL) at the Runway 12 end to relate to the new extended runway end.
- Provides medium intensity runway lights (MIRL) for Runway 12-30 extension.
- Installs medium intensity taxiway lights (MITL) on new parallel and entry/exit taxiways.
- Provides space for a TVOR/ DME facility.

Runway 18-36

- Provides for nonprecision instrument approach to both runway ends.
- Provides a BRL at only 400 feet from the runway centerline (A BRL of 495 feet is required for buildings 35 feet high).
- Provides RPZs 1,000 long by 500 feet inner width and 800 feet outer width as previously established based on Federal Aviation Regulations (FAR) Part 77, *Objects Affecting Navigable Airspace*, for nonprecision instrument approaches for only small aircraft.
- Provides for 20:1 approach surfaces to each runway end.
- Provides MIRL for Runway 18-36.
- Installs MITL on the parallel and entry/exit taxiways related to Runway 18-36.

General Aviation

- Reserves space for two fixed base operator (FBO) sites south of the aircraft parking apron.
- Reserves space southeast of aircraft parking apron for future aircraft parking apron, FBO sites and hangars.
- Provides space for aviation reserve/park adjacent to Flight Service Facility/Caretaker Residence.

Airport Access and Parking

- Retains existing Airport Access Road and vehicular parking facilities.

Other Areas

- Reserves space for aviation commercial/industrial development on either side of Airport Access Road.
- Reserves space for California Division of Forestry Fire Station.
- Retains space for environmental mitigation area.
- Extends dike, fence and road to north for Runway 12-30 extension.

ALTERNATIVE AIRPORT DEVELOPMENT CONCEPT 2

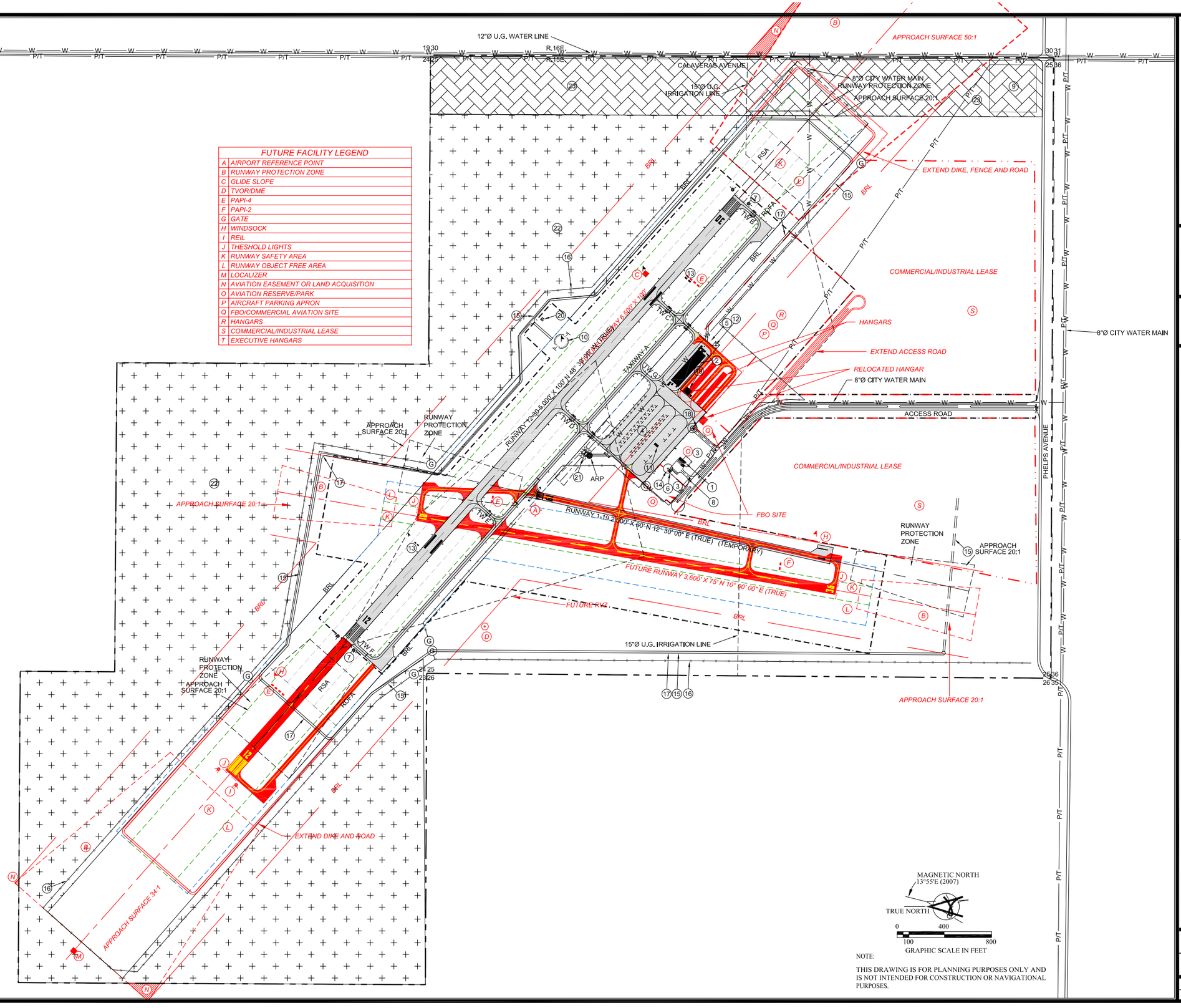
This alternative is designed to accommodate large aircraft (more than 12,500 pounds) including 100 percent of the fleet (between 12,500 and 60,000 pounds) with 60 percent useful load on Runway 12-30 and is illustrated on Figure A-2. Additionally, 100 percent of the small aircraft (12,500 pounds or less) with 10 seats or less can be accommodated on the crosswind runway when the crosswind component is greater than 10.5 knots. This alternative will require some additional land acquisition or avigation easements to the southeast to provide for a precision RPZ for Runway 30 to accommodate aircraft in approach category C. This alternative:

- Accommodates large aircraft in ARC C-II (e.g., Lockheed 1329 Jetstar, Grumman Gulfstream III, Canadair CL-600 and Rockwell Sabre 80) with wingspans of 79 feet or less on Runway 12-30.
- Accommodates small aircraft with less than 10 seats in ARC A-II/B-II with wingspans of 79 feet or less (e.g., Beech King Air E90) on the crosswind Runway 18-36 when the crosswind component is more than 10.5 knots on the main runway.
- Provides precision RPZ for end of Runway 30 and nonprecision RPZ with not lower than 3/4-mile visibility for end of Runway 12 to accommodate large aircraft in approach category C.
- Provides RPZs for visual and nonprecision approaches with not lower than one-mile visibility to accommodate small aircraft for Runway 18-36.
- Adds airfield signage.

Airfield

Runway 12-30

- Extends Runway 12-30 by 1,500 feet to the northwest for a total runway length of 6,500 feet and retains the runway width at 100 feet.
- Provides a ROFZ 400 feet wide, centered on the runway, with vertical sides extending up to approximately 50 feet and then at a slope of 6 to 1 to the horizontal surface. There are no penetrations to the OFZ.
- Provides a RSA 500 feet wide, centered on the runway, and extending 1,000 feet beyond the runway ends.
- Provides a ROFA 800 feet wide, centered on the runway, and extending 1,000 feet beyond the runway ends.
- Retains runway centerline to taxiway centerline separation of 300 feet.



FUTURE FACILITY LEGEND	
A	AIRPORT REFERENCE POINT
B	RUNWAY PROTECTION ZONE
C	GLIDE SLOPE
D	TVOR/DME
E	PAPI-4
F	PAPI-2
G	GATE
H	WINDSOCK
I	REIL
J	THESHOLD LIGHTS
K	RUNWAY SAFETY AREA
L	RUNWAY OBJECT FREE AREA
M	LOCALIZER
N	AVIATION EASEMENT OR LAND ACQUISITION
O	AVIATION RESERVE/PARK
P	AIRCRAFT PARKING APRON
Q	FBO/COMMERCIAL AVIATION SITE
R	HANGARS
S	COMMERCIAL/INDUSTRIAL LEASE
T	EXECUTIVE HANGARS

MAGNETIC NORTH
13°55'E (2007)
TRUE NORTH

0 400
100 800
GRAPHIC SCALE IN FEET

NOTE:

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

COALINGA MUNICIPAL AIRPORT MASTER PLAN

ALTERNATIVE AIRPORT DEVELOPMENT CONCEPT 2

LEGEND		
EXISTING	ULTIMATE	
		AIRFIELD/APRON PAVEMENT
		BUILDING/FACILITIES
		AIRPORT PROPERTY LINE
BRL	BRL	BUILDING RESTRICTION LINE (BRL)
		FENCE
G	G	GATE
		ROTATING BEACON
		FUEL ISLAND
		AIRPORT REFERENCE POINT (ARP)
		THRESHOLD LIGHTS
		RUNWAY LIGHTS
		WIND SOCK
		REIL
		PAPI
H		HELIPAD
600		GROUND CONTOURS
		HYDRANT
P/T		PACIFIC GAS & ELECTRIC/TELEPHONE
W		WATER
		RUNWAY SAFETY AREA
		RUNWAY OBJECT FREE AREA
24 25 / 23 26		SECTION CORNER

EXISTING FACILITY LEGEND	
1	FLIGHT SERVICE FACILITY/CARETAKER RESIDENCE
2	HANGARS
3	FBO SITES
4	TIEDOWNS
5	OWNER MAINTENANCE AREA
6	ELECTRICAL BUILDING
7	REIL
8	TRANSFORMER
9	HOLDING POND
10	SEGMENTED CIRCLE AND LIGHTED WIND SOCK
11	FUEL ISLAND
12	POLLUTION ABATEMENT FACILITY
13	PAPI
14	ROTATING BEACON
15	DIKE
16	FENCE
17	PERIMETER ROAD
18	APRON SECURITY LIGHTING
19	MAINTENANCE HANGAR
20	AWOS
21	HELIPAD
22	HABITAT CONSERVATION AREA
23	CALAVERAS BUFFER AREA

LAND USE LEGEND	
	ANNEXED CITY LIMITS
	HABITAT CONSERVATION AREA
	CALAVERAS BUFFER AREA

ARIES CONSULTANTS LTD.

COALINGA MUNICIPAL AIRPORT	FIGURE A-2
FRESNO COUNTY, CALIFORNIA	
NAME: CLG-A2-Alternative 2-B.dwg	NO: 4490-06
DATE: May 1, 2007	PLOT SCALE: 1"= 800'

Runway 18-36

- Provides a 3,600 feet long by 75 feet wide crosswind Runway18-36, aligned at N 10° 00' 00" E True, approximately 240 feet west of the existing temporary Runway 1-19.
- Provides a ROFZ 250 feet wide, centered on the runway, with vertical sides extending up to the horizontal surface. There are no penetrations to the ROFZ.
- Provides a RSA 150 feet wide, centered on the runway, and extending 300 feet beyond the runway ends.
- Provides a ROFA 500 feet wide, centered on the runway, and extending 300 feet beyond the runway ends.
- Provides a runway centerline to taxiway centerline separation of 240 feet.

Avigation

Runway 12-30

- Provides for precision global positioning system (GPS) approach to Runway 30 and nonprecision GPS approach to Runway 12.
- Replaces the existing 20:1 approach surfaces to each runway end with 50:1 approach surface to Runway 30 and 34:1 approach surface to Runway 12.
- Provides a BRL at 750 feet from the runway centerline for 35 feet high buildings.
- Provides precision RPZ 2,500 feet long by 1,000 feet inner width and 1,750 feet outer width for Runway 30.
- Provides nonprecision RPZ 1,700 feet long by 1,000 feet inner width and 1,510 feet outer width for Runway 12 to accommodate aircraft in approach category C with not lower than 3/4-mile visibility.
- Relocates the PAPI-2 and REIL at the Runway 12 end to relate to the new extended runway end.
- Provides MIRL for Runway 12-30 extension.
- Installs MITL on new parallel and entry/exit taxiways.
- Provides space for a TVOR/DME facility.

Runway18-36

- Provides a BRL at 370 feet from the runway centerline for 35 feet high buildings.
- Provides RPZs 1,000 feet long by 250 feet inner width and 450 feet outer width for small aircraft in approach categories A and B with visual and not lower than 1-mile visibility.
- Provides for 20:1 approach surfaces to each runway end.
- Provides MIRL for Runway 18-36.
- Installs MITL on the parallel and entry/exit taxiways related to Runway 18-36.

General Aviation

- Provides space for additional hangars west of existing hangar building.
- Reserves space for two FBO sites south of the aircraft parking apron.
- Reserves space southeast of aircraft parking apron for future aircraft parking apron, FBO/Commercial Aviation sites and hangars.
- Provides space for aviation reserve/park adjacent to Flight Service Facility/Caretaker Residence.
- Relocates maintenance hangar to west side of aircraft parking apron.

Airport Access and Parking

- Retains existing Airport Access Road and vehicular parking facilities.
- Extends Airport Access Road to southeast to serve future aviation development.

Other Areas

- Reserves space for commercial/industrial development on both sides of Airport Access Road.
- Retains space for environmental mitigation area.
- Extends dike, fence and road to north for Runway 12-30 extension.
- Relocates dike, fence and road to south for ARC C-II design standards.

ALTERNATIVE AIRPORT DEVELOPMENT CONCEPT 3

This alternative is designed to accommodate 75 percent of the fleet (between 12,500 and 60,000 pounds) with 60 percent useful load on Runway 12-30 and approximately 75 percent of the small (less than 12,500 pounds) aircraft on the crosswind runway and is illustrated on Figure A-3. This alternative will require a small additional land acquisition or avigation easement to the southeast to provide for an RPZ for Runway 30 that will accommodate aircraft in approach category B with visual and not lower than 3/4-mile visibility. This alternative:

- Accommodates large aircraft in ARC A-II/B-II (e.g., Cessna Citation III, Casa 212, Beech 1900, Dassault Falcon 20 and Rockwell Sabre 65) and all small aircraft (less than 12,500 pounds) in ARC A-II/B-II (e.g., DeHavilland DHC-6 and Beech Super King Air 200) on Runway 12-30.
- Accommodates small aircraft in A-I/B-I (e.g., Beech Baron 55 and Swearingen Merlin 3B) with wing spans up to 49 feet on the crosswind Runway 18-36 when the crosswind component is more than 10.5 knots on the main runway.
- Provides nonprecision runway protection zones (RPZs) for Runway 12-30, for visual and nonprecision approaches with not lower than one-mile visibility to accommodate large aircraft in approach category B.
- Provides RPZs for visual and nonprecision approaches with not lower than one-mile visibility to accommodate small aircraft for Runway 18-36.
- Adds airfield signage.

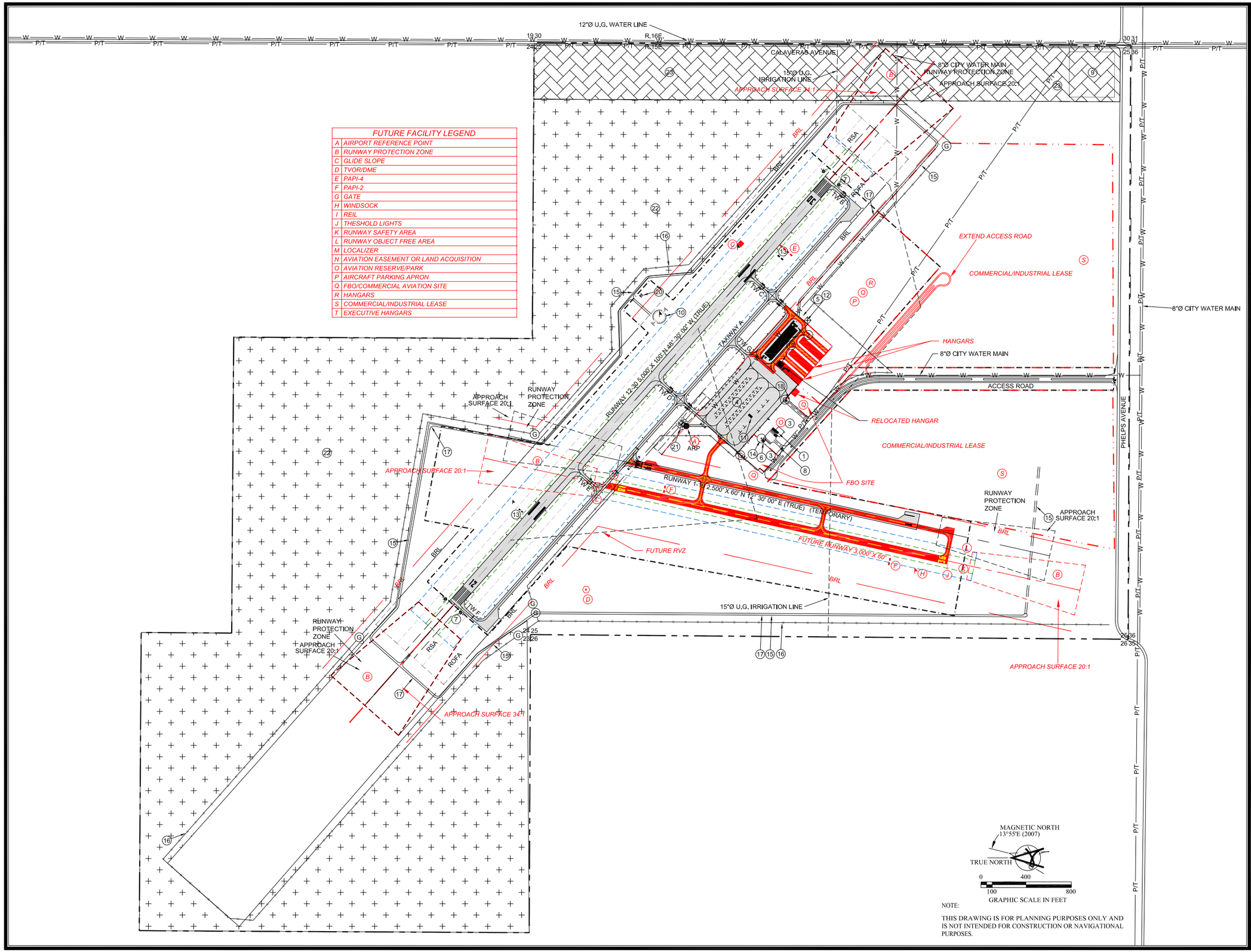
Airfield

Runway 12-30

- Retains the current length of 5,000 feet and width of 100 feet for Runway 12-30.
- Provides a ROFZ 400 feet wide, centered on the runway, with vertical sides extending up to the horizontal surface. There are no penetrations to the ROFZ.
- Provides a RSA 150 feet wide, centered on the runway, and extending 300 feet beyond the runway ends.
- Provides a ROFA 500 feet wide, centered on the runway, and extending 300 feet beyond the runway ends.
- Retains runway centerline to taxiway centerline separation of 300 feet.

Runway18-36

- Provides a 3,000 feet long by 60 feet wide crosswind Runway 18-36 aligned at N10° 00' 00"E True, approximately 240 feet west of the existing temporary Runway 1-19.



FUTURE FACILITY LEGEND

A	AIRPORT REFERENCE POINT
B	RUNWAY PROTECTION ZONE
C	GLIDE SLOPE
D	TVOR/DME
E	PAPI-4
F	PAPI-2
G	GATE
H	WINDSOCK
I	REIL
J	THESHOLD LIGHTS
K	RUNWAY SAFETY AREA
L	RUNWAY OBJECT FREE AREA
M	LOCALIZER
N	AVIATION EASEMENT OR LAND ACQUISITION
O	AVIATION RESERVE/PARK
P	AIRCRAFT PARKING APRON
Q	FBO/COMMERCIAL AVIATION SITE
R	HANGARS
S	COMMERCIAL/INDUSTRIAL LEASE
T	EXECUTIVE HANGARS

MAGNETIC NORTH
13°55'E (2007)
TRUE NORTH

0 400
100 800
GRAPHIC SCALE IN FEET

NOTE:

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

COALINGA MUNICIPAL AIRPORT MASTER PLAN

ALTERNATIVE AIRPORT DEVELOPMENT CONCEPT 3

LEGEND

EXISTING	ULTIMATE	
		AIRFIELD/APRON PAVEMENT
		BUILDING/FACILITIES
		AIRPORT PROPERTY LINE
BRL	BRL	BUILDING RESTRICTION LINE (BRL)
		FENCE
G	G	GATE
		ROTATING BEACON
		FUEL ISLAND
		AIRPORT REFERENCE POINT (ARP)
		THRESHOLD LIGHTS
		RUNWAY LIGHTS
		WIND SOCK
		REIL
		PAPI
H		HELIPAD
600		GROUND CONTOURS
		HYDRANT
P/T		PACIFIC GAS & ELECTRIC/TELEPHONE
W		WATER
		RUNWAY SAFETY AREA
		RUNWAY OBJECT FREE AREA
24 25 / 23 26		SECTION CORNER

EXISTING FACILITY LEGEND

1	FLIGHT SERVICE FACILITY/CARETAKER RESIDENCE
2	HANGARS
3	FBO SITES
4	TIEDOWNS
5	OWNER MAINTENANCE AREA
6	ELECTRICAL BUILDING
7	REIL
8	TRANSFORMER
9	HOLDING POND
10	SEGMENTED CIRCLE AND LIGHTED WIND SOCK
11	FUEL ISLAND
12	POLLUTION ABATEMENT FACILITY
13	PAPI
14	ROTATING BEACON
15	DIKE
16	FENCE
17	PERIMETER ROAD
18	APRON SECURITY LIGHTING
19	MAINTENANCE HANGAR
20	AWOS
21	HELIPAD
22	HABITAT CONSERVATION AREA
23	CALAVERAS BUFFER AREA

LAND USE LEGEND

	ANNEXED CITY LIMITS
	HABITAT CONSERVATION AREA
	CALAVERAS BUFFER AREA

ARIES CONSULTANTS LTD.

COALINGA MUNICIPAL AIRPORT	FIGURE A-3
FRESNO COUNTY, CALIFORNIA	
NAME: CLG-A3-Alternative 3-B.dwg	NO: 4490-06
DATE: May 1, 2007	PLOT SCALE: 1"= 800'

- Provides a ROFZ 250 feet wide, centered on the runway, with vertical sides extending up to the horizontal surface. There are no penetrations to the ROFZ.
- Provides a RSA 120 feet wide, centered on the runway, and extending 240 feet beyond the runway ends.
- Provides a ROFA 250 feet wide, centered on the runway, and extending 240 feet beyond the runway ends.
- Provides a runway centerline to taxiway centerline separation of 240 feet.

Avigation

Runway 12-30

- Provides for nonprecision GPS approaches to each runway end.
- Replaces the existing 20:1 approach surfaces to each end of the runway with 34:1 approach surfaces.
- Provides a BRL at 495 feet from the runway centerline for 35 feet high buildings.
- Provides nonprecision RPZs 1,000 feet long by 500 feet inner width and 700 feet outer width for both ends of the runway to accommodate large aircraft in approach category B with visual and not lower than one-mile visibility.
- Retains the PAPI-2 and runway end identifier lights (REIL) at both ends of the runway.
- Provides space for a TVOR/DME facility.

Runway 18-36

- Provides a BRL at 370 feet from the runway centerline for 35 feet high buildings.
- Provides RPZs 1,000 feet long by 250 feet inner width and 450 feet outer width for small aircraft in approach categories A and B with visual and not lower than 1-mile visibility.
- Provides for 20:1 approach surfaces at each runway end.
- Provides MIRL for Runway 18-36.
- Installs MITL on the parallel and entry/exit taxiways related to Runway 18-36.

General Aviation

- Provides space for additional hangars west of existing hangar building.
- Reserves space for two FBO sites south of the aircraft parking apron.
- Reserves space southeast of aircraft parking apron for future aircraft parking apron, FBO/Commercial Aviation sites and hangars.
- Provides space for aviation reserve/park adjacent to Flight Service Facility/Caretaker Residence.
- Relocates maintenance hangar to west side of aircraft parking apron.

Airport Access and Parking

- Retains existing Airport Access Road and vehicular parking facilities.
- Extends Airport Access Road to southeast to serve future aviation development.

Other Areas

- Reserves space for commercial/industrial development on both sides of Airport Access Road.
- Retains space for environmental mitigation area.

APPENDIX B

AIRPORT LAYOUT PLAN

LEGEND					
EXISTING	ULTIMATE		EXISTING	ULTIMATE	
		STRUCTURE	25 | 30		SECTION CORNERS
		AIRFIELD/APRON PAVEMENT	36 | 31		
		AIRPORT PROPERTY LINE			RUNWAY PROTECTION ZONE
BRL	BRL	BUILDING RESTRICTION LINE			
X	XX	FENCING	600		GROUND CONTOURS
		(ARP) AIRPORT REFERENCE POINT	·		HYDRANT
		DRAINAGE CHANNEL			PACIFIC GAS & ELECTRIC/TELEPHONE
		LEASE LOTS	W		WATER
B		FUEL ISLAND			ROTATING BEACON
		THRESHOLD LIGHTS			AVIGATION EASEMENTS
		WIND SOCK			PAPI
RSA	RSA	RUNWAY SAFETY AREA			REIL
ROFA	ROFA	RUNWAY OBJECT FREE AREA	H		HELICOPTER
	POFZ	PRECISION OSTACLE FREE ZONE			
G	G	GATE			

NOTE:

THE PROPOSED RUNWAY EXTENSION PROJECT IDENTIFIED HEREIN IS FOR LONG-TERM PLANNING PURPOSES ONLY. THE PROPOSED PROJECT WILL NOT BE IMPLEMENTED WITHOUT PRIOR NEPA ENVIRONMENTAL PROCESSING AND WRITTEN FAA APPROVAL. PRECONDITIONS WILL INCLUDE FAA FORECASTS APPROVAL AND FAA APPROVAL OF THE AIRFIELD DESIGN STANDARD.

NOTE:

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

THE PREPARATION OF THIS DOCUMENT WAS FINANCED IN PART THROUGH AN AIRPORT IMPROVEMENT PROGRAM GRANT FROM THE FEDERAL AVIATION ADMINISTRATION UNDER THE PROVISIONS OF SECTION 505 OF THE AIRPORT AND AIRWAY IMPROVEMENT ACT OF 1982, AS AMENDED. THE CONTENTS DO NOT NECESSARILY REFLECT THE OFFICIAL VIEWS OR POLICY OF THE FAA. ACCEPTANCE OF THIS DOCUMENT BY THE FAA DOES NOT IN ANY WAY CONSTITUTE A COMMITMENT ON THE PART OF THE UNITED STATES TO PARTICIPATE IN ANY DEVELOPMENT DEPICTED THEREIN NOR DOES IT INDICATE THAT THE PROPOSED DEVELOPMENT IS ENVIRONMENTALLY ACCEPTABLE IN ACCORDANCE WITH APPROPRIATE PUBLIC LAWS.

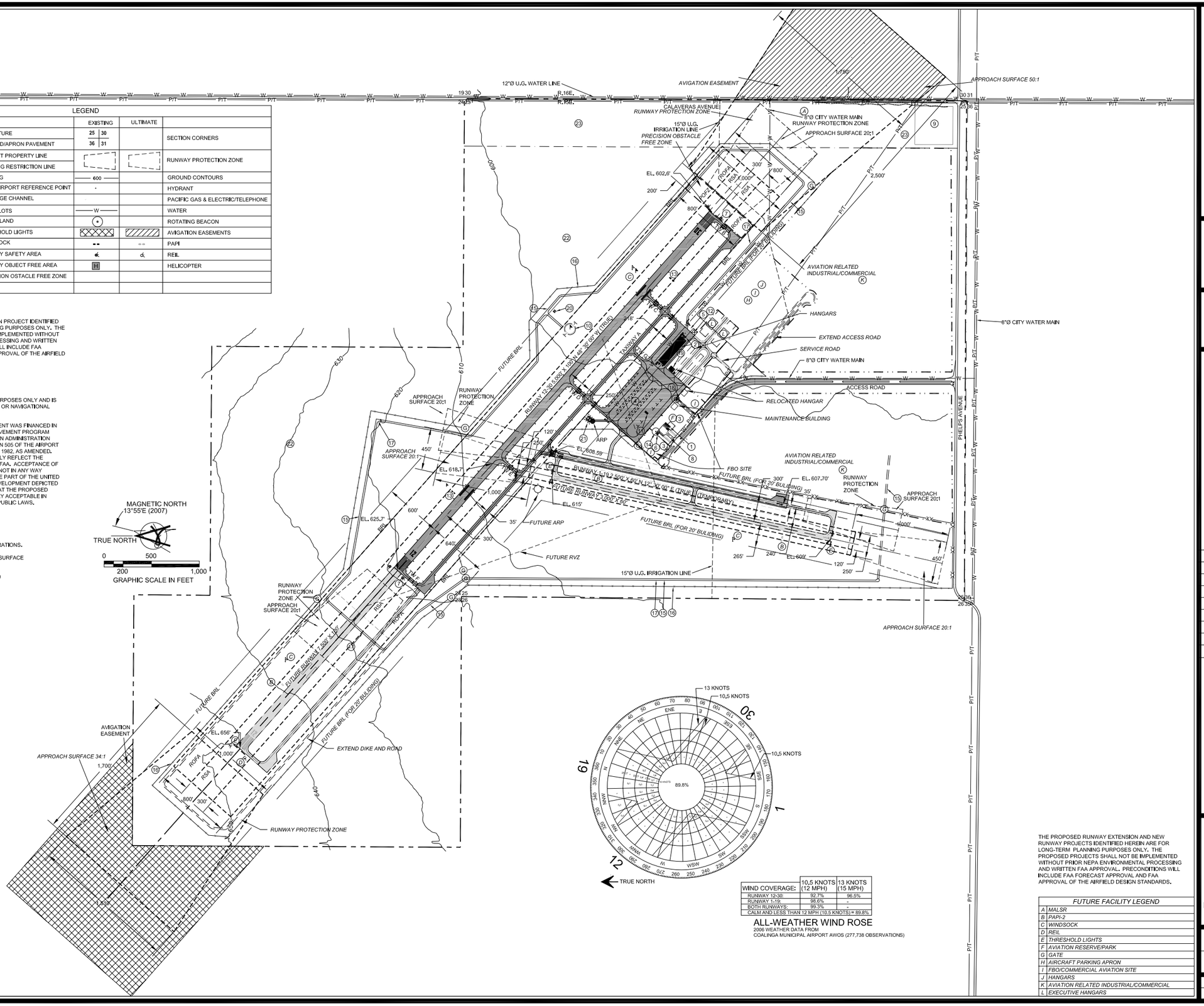
NOTE:

THERE ARE NO OFZ OBJECT PENETRATIONS.

THERE ARE NO THRESHOLD SITING SURFACE OBJECT PENETRATIONS.

GROUND CONTOURS ARE IN NGVD29

MAGNETIC NORTH
13°55'E (2007)
TRUE NORTH
0 500
200 1,000
GRAPHIC SCALE IN FEET



WIND COVERAGE:	10,5 KNOTS (12 MPH)	13 KNOTS (15 MPH)
RUNWAY 12-30:	92.7%	96.5%
RUNWAY 1-19:	98.6%	-
BOTH RUNWAYS:	99.3%	-
CALM AND LESS THAN 12 MPH (10,5 KNOTS) = 89.8%		

ALL-WEATHER WIND ROSE
2006 WEATHER DATA FROM
COALINGA MUNICIPAL AIRPORT AWOS (277,738 OBSERVATIONS)

THE PROPOSED RUNWAY EXTENSION AND NEW RUNWAY PROJECTS IDENTIFIED HEREIN ARE FOR LONG-TERM PLANNING PURPOSES ONLY. THE PROPOSED PROJECTS SHALL NOT BE IMPLEMENTED WITHOUT PRIOR NEPA ENVIRONMENTAL PROCESSING AND WRITTEN FAA APPROVAL. PRECONDITIONS WILL INCLUDE FAA FORECAST APPROVAL AND FAA APPROVAL OF THE AIRFIELD DESIGN STANDARDS.

FUTURE FACILITY LEGEND	
A	MALSR
B	PAPI-2
C	WINDSOCK
D	REIL
E	THRESHOLD LIGHTS
F	AVIATION RESERVE/PARK
G	GATE
H	AIRCRAFT PARKING APRON
I	FBO/COMMERCIAL AVIATION SITE
J	HANGARS
K	AVIATION RELATED INDUSTRIAL/COMMERCIAL
L	EXECUTIVE HANGARS

COALINGA MUNICIPAL AIRPORT

AIRPORT LAYOUT PLAN

EXISTING FACILITY LEGEND	
1	FLIGHT SERVICE FACILITY/CARETAKER RESIDENCE
2	HANGARS
3	FBO SITES
4	TIEDOWNS
5	OWNER MAINTENANCE AREA
6	ELECTRICAL BUILDING
7	REIL
8	TRANSFORMER
9	HOLDING POND
10	SEGMENTED CIRCLE AND LIGHTED WIND SOCK
11	FUEL ISLAND
12	AIRCRAFT POLLUTION ABATEMENT FACILITY
13	PAPI
14	ROTATING BEACON
15	DIKE
16	FENCE
17	PERIMETER ROAD
18	APRON SECURITY LIGHTING
19	MAINTENANCE HANGAR
20	AWOS
21	HELICOPTER
22	HABITAT CONSERVATION AREA
23	CALAVERAS BUFFER AREA

NO.	REVISIONS	DATE
1	ALP APPROVED	08/01/94

FAA APPROVAL

BY _____

CITY OF COALINGA DATE

ARIES CONSULTANTS LTD.

COALINGA MUNICIPAL AIRPORT
FRESNO COUNTY, CALIFORNIA

SHEET 1 OF 6

NAME: CLG-01 05-ALP-B.dwg | NO: 4490-01
DATE: May 1, 2007 | PLOT SCALE: 1"= 1,000'

RUNWAY DATA

		RUNWAY 12-30		RUNWAY 1-19	
		EXISTING	ULTIMATE	EXISTING	ULTIMATE
EFFECTIVE GRADIENT (%)		0.46	0.71	0.20	SAME
WIND COVERAGE(13MPH) ALL WEATHER(%)		92.5	SAME	96.9	SAME
APPROACH VISIBILITY MINIMUMS (STATUTE MILE)	12	V	3/4 SM	1 V	SAME
	30	V	1/2 SM	19 V	SAME
AIRPORT REFERENCE CODE/CRITICAL AIRCRAFT		B-II	SAME	A-I	B-I
RUNWAY MARKING	12	V	NP	1 V	SAME
	30	V	P	19 V	SAME
APPROACH SURFACES (FAR PART 77)	12	V 20:1	NP 34:1	1 V 20:1	SAME
	30	V 20:1	P 50:1	19 V 20:1	SAME
SEPARATION - RUNWAY CENTERLINE TO PARALLEL TAXIWAY CENTERLINE		300'	SAME	N/A	240'
TAXIWAY OBJECT FREE AREA WIDTH		131'	SAME	N/A	89'
TAXIWAY SAFETY AREA WIDTH		79'	SAME	N/A	49'
ELEVATIONS (NAVD 88) OF RUNWAY ENDS	12	625.7'	656'	1 607.70'	609'
	30	602.6'	SAME	19 608.59'	615'
ELEVATION (NAVD 88) OF RUNWAY HIGH POINT		625.7'	656'	608.59'	615'
ELEVATION (NAVD 88) OF RUNWAY LOW POINT		602.6'	SAME	607.70'	609'
LINE OF SIGHT REQUIREMENT MET		YES	SAME	YES	SAME
RUNWAY DIMENSIONS (FEET)		5,000' X 100'	7,500' X 100'	2,500' X 60'	3,000' X 60'
RUNWAY SURFACE TYPE		ASPHALT	SAME	ASPHALT GRAVEL	ASPHALT
TAXIWAY SURFACE TYPE		ASPHALT	SAME	N/A	ASPHALT
APPROACH SLOPES	12	20:1	34:1	1 20:1	SAME
	30	20:1	50:1	19 20:1	SAME
PAVEMENT STRENGTH (LBS) SINGLE		30,000	SAME	UNK	12,500
PAVEMENT STRENGTH (LBS) DUAL		N/A	60,000	N/A	SAME
PAVEMENT STRENGTH (LBS) DUAL TANDEM		N/A	SAME	N/A	SAME
RUNWAY LIGHTING		MIRL	SAME	N/A	MIRL
IFR NAVIGATIONAL AIDS	12	NONE	GPS	1 NONE	SAME
	30	NONE	GPS, MALSR	19 NONE	SAME
VISUAL AIDS	12	PAPI-2, REIL	SAME	1 N/A	PAPI-2, REIL
	30	PAPI-2, REIL	SAME	19 N/A	PAPI-2, REIL
RUNWAY PROTECTION ZONE DIMENSIONS	12	1,000' X 500' X 800'	1,700' X 1,000' X 1,510'	1 1,000' X 250' X 450'	SAME
	30	1,000' X 500' X 800'	2,500' X 1,000' X 1,750'	19 1,000' X 250' X 450'	SAME
RUNWAY SAFETY AREA DIMENSIONS		5,600' X 150'	8,700' X 300'	2,980' X 120'	3,480' X 120'
RUNWAY OBJECT FREE AREA DIMENSIONS		5,600' X 500'	8,700' X 800'	2,980' X 250'	3,480' X 250'
PRECISION OBSTACLE FREE ZONE	12	NONE	SAME	1 NONE	SAME
	30	NONE	800' X 200'	19 NONE	SAME
OBSTACLE FREE ZONE LENGTH BEYOND STOP END OF RUNWAY	12	200'	SAME	1 200'	SAME
	30	200'	2,600'	19 200'	SAME
OBSTACLE FREE ZONE WIDTH	12	400'	SAME	1 250'	SAME
	30	400'	SAME	19 250'	SAME
DISTANCE FROM RUNWAY CENTERLINE TO HOLD POSITION MARKING AND SIGNS		200'	250'	125'	SAME

AIRPORT DATA

		EXISTING	ULTIMATE
AIRPORT ELEVATION (MSL) FEET (NAVD 88)		625.7'	656'
AIRPORT REFERENCE POINT (ARP) COORDINATES (NAD 83)	LATITUDE	36°09'47.30"N	36°09'49"N
	LONGITUDE	120°17'37.73"W	120°17'47"W
NORMAL MAX. TEMP. HOTTEST MONTH		100°F	SAME
AIRPORT AND TERMINAL NAVAIDS		AWOS	SAME
AIRPORT SERVICE LEVEL		GA	SAME
ROTATING BEACON		YES	SAME
TAXIWAY LIGHTING		YES	SAME
TAXIWAY SIGN SYSTEM		YES	SAME
AIR TRAFFIC CONTROL TOWER		NO	SAME
RADAR APPROACH/DEPARTURE CONTROL		NAS LEMOORE	SAME
LIGHTED TETRAHEDRON		NO	SAME
SEGMENTED CIRCLE AND LIGHTED WIND CONE		YES	SAME
AIRPORT REFERENCE CODE		B-II	SAME
GPS AT AIRPORT		NO	YES
AIRPORT ACREAGE		1,002	SAME

RUNWAY END COORDINATES (NAD 83)

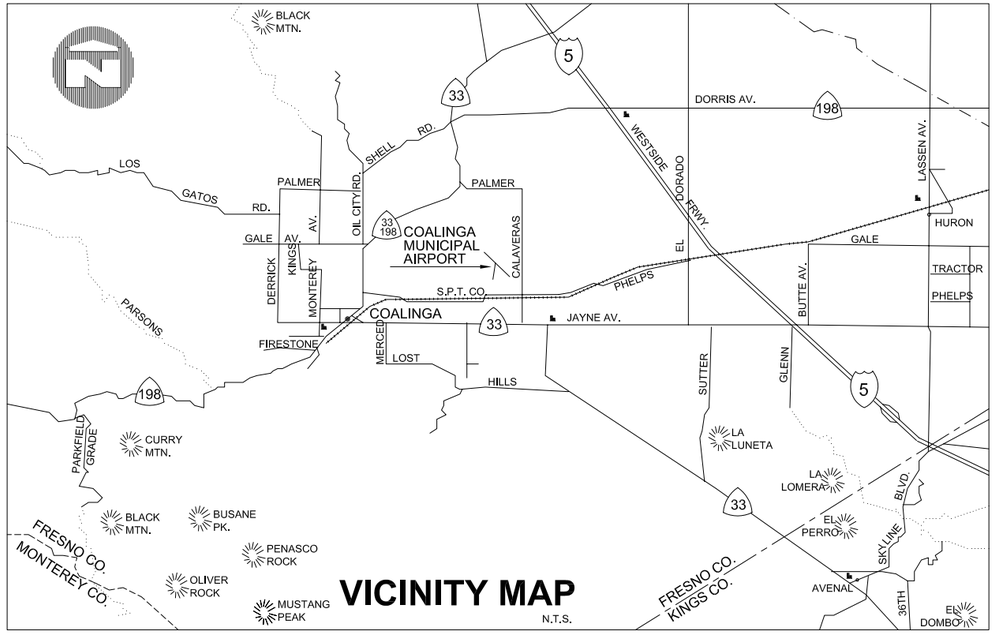
	EXISTING	ULTIMATE
RUNWAY 12	36°10'02.68"N 120°17'57.52"W	36°10'18.57"N 120°18'20.88"W
RUNWAY 30	36°09'30.90"N 120°17'10.81"W	SAME
RUNWAY 1	36°08'53.91"N 120°17'51.75"W	36°09'18.02"N 120°17'53.14"W
RUNWAY 19	36°09'18.01"N 120°17'45.13"W	36°09'46.94"N 120°17'45.20"W

NOTE: THERE ARE NO OFZ OBJECT PENETRATIONS. THERE ARE NO THRESHOLD SITING SURFACE OBJECT PENETRATIONS.

THE TEN FOOT CONTOURS SHOWN ON THIS DRAWING WERE LOCATED FROM A SURVEY OF A PORTION OF THE AIRPORT. WHERE SURVEY INFORMATION WAS NOT AVAILABLE THE CONTOUR INFORMATION FROM THE USGS MAP WAS USED.

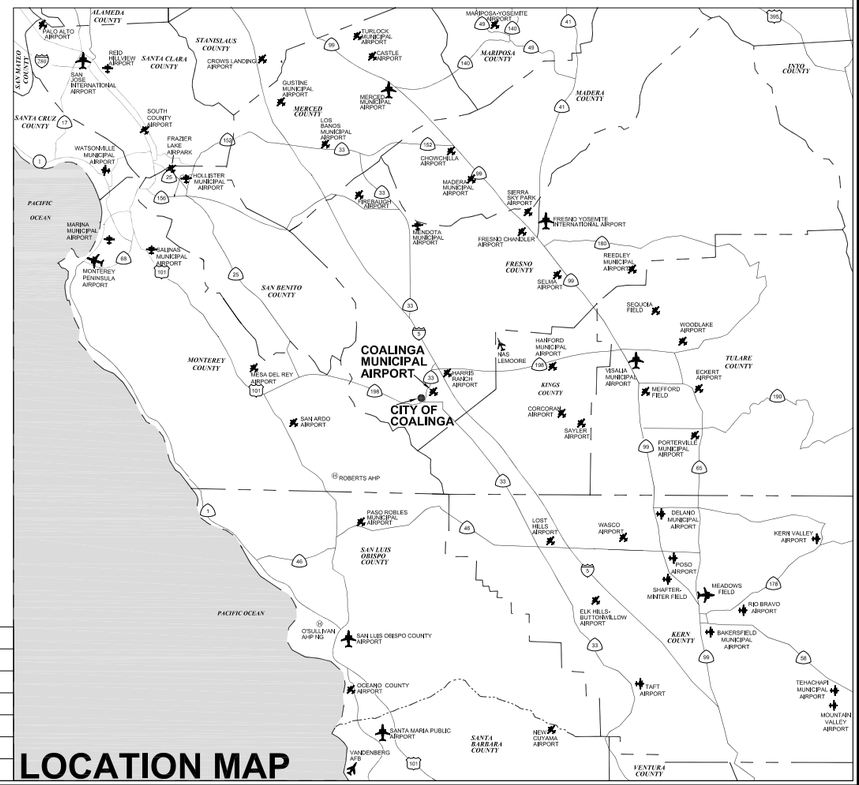
NON STANDARD CONDITIONS

DESCRIPTION	STANDARD	ACTUAL	DISPOSITION
RSA WIDTH NORTH OF RUNWAY 19 END, INTERRUPTED BY DRAINAGE STRUCTURE	120'	110'	EXTEND DRAINAGE STRUCTURE BEYOND RSA AND REGRADE
HANGAR LOCATED 575' FROM RUNWAY 12-30 CENTER LINE	ALLOWS 11' HEIGHT	14'	RELOCATE, IF EVER REQUIRED



VICINITY MAP

N.T.S.



LOCATION MAP

COALINGA MUNICIPAL AIRPORT

DATA TABLES

TRUE NORTH

MAGNETIC NORTH
13°55'E (2007)

0 300
100 600
GRAPHIC SCALE IN FEET

NOTE:

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NO.	REVISIONS	DATE
1	ALP APPROVED	08/01/94

FAA APPROVAL

BY _____

CITY OF COALINGA DATE

ARIES CONSULTANTS LTD.

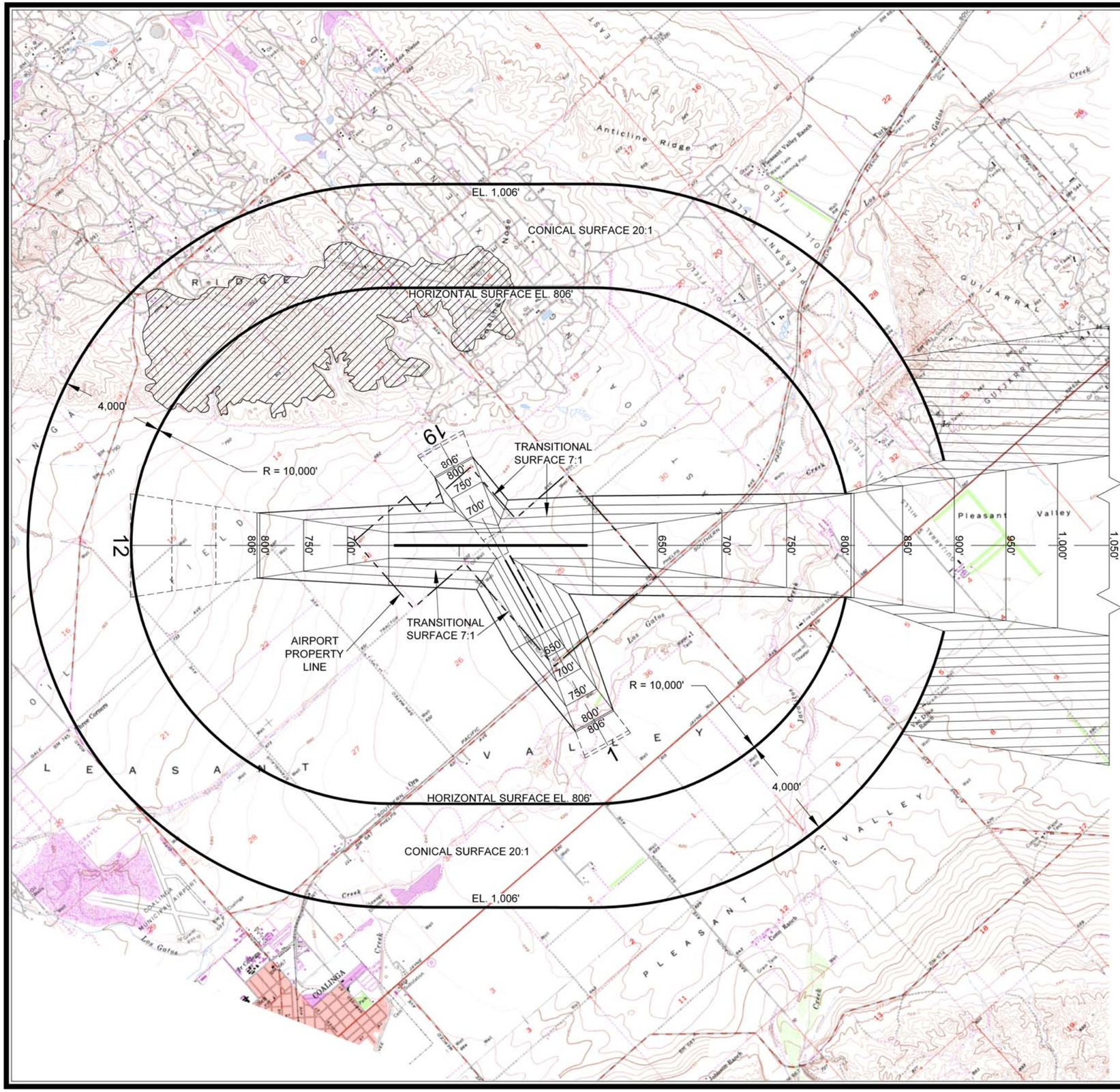
COALINGA MUNICIPAL AIRPORT

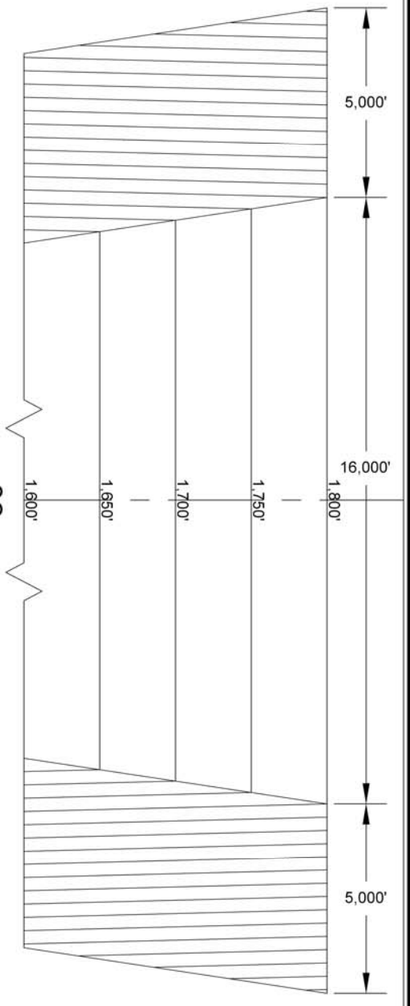
FRESNO COUNTY, CALIFORNIA

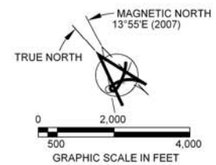
SHEET 2 OF 6

NAME: CLG-02-Data Table-B.dwg | NO: 4490-01

DATE: May 1, 2007 | PLOT SCALE: 1"= 300'







NOTE: VERTICAL DATUM IS NGVD29

COALINGA MUNICIPAL AIRPORT

AIRSPACE PLAN

NOTE:

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NO.	REVISIONS	DATE
1	ALP APPROVED	08/01/94

FAA APPROVAL

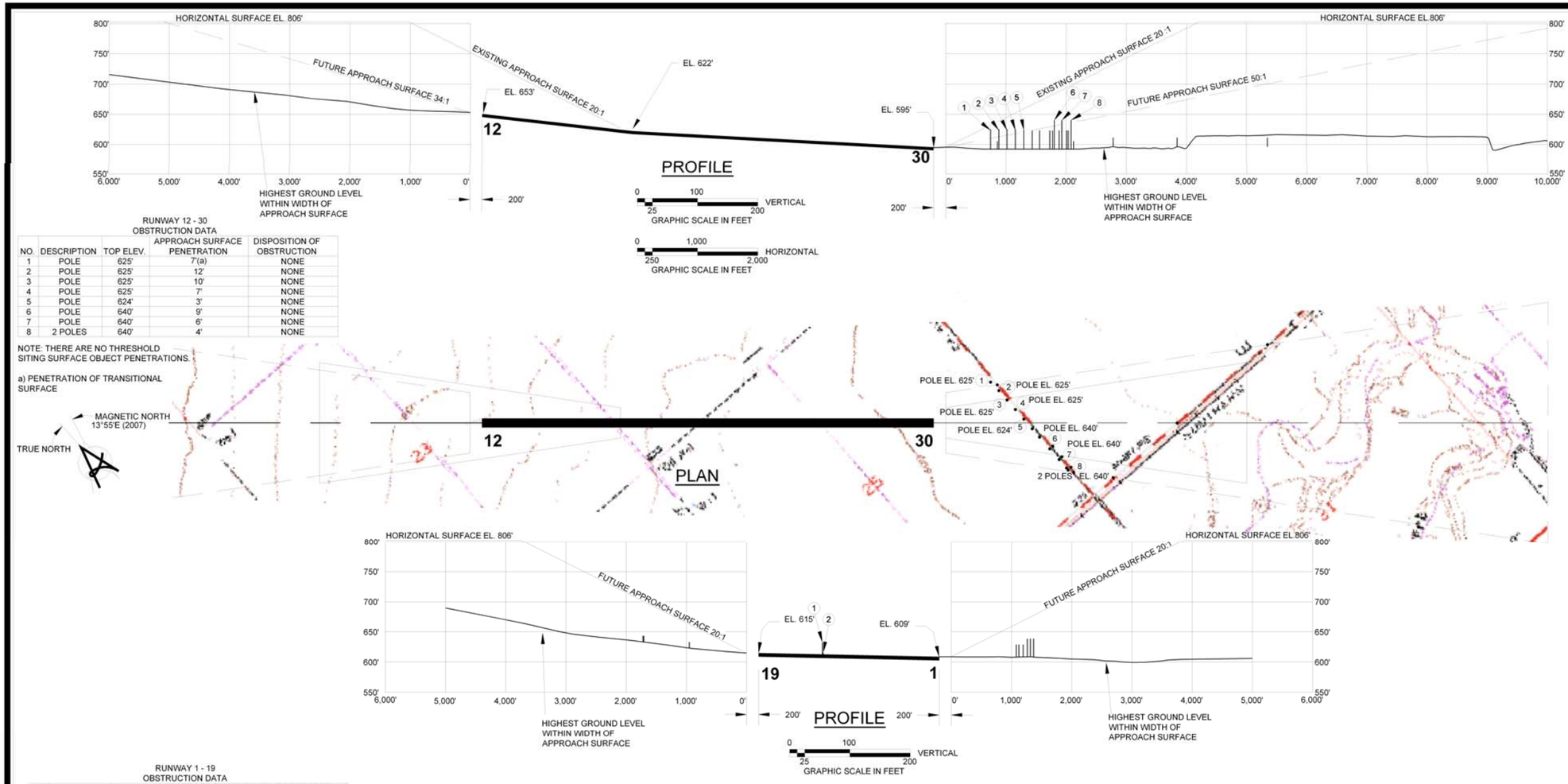
BY _____
CITY MANAGER — MAY 1, 2007
CITY OF COALINGA — DATE

ARIES CONSULTANTS LTD.

COALINGA MUNICIPAL AIRPORT
FRESNO COUNTY, CALIFORNIA

SHEET 3 OF 6

NAME: CLG-03 04-Airspace Plan-B.dwg | NO: 4490-09
DATE: May 1, 2007 | PLOT SCALE: 1"= 4,000'



RUNWAY 12 - 30
OBSTRUCTION DATA

NO.	DESCRIPTION	TOP ELEV.	APPROACH SURFACE PENETRATION	DISPOSITION OF OBSTRUCTION
1	POLE	625'	7'(a)	NONE
2	POLE	625'	12'	NONE
3	POLE	625'	10'	NONE
4	POLE	625'	7'	NONE
5	POLE	624'	3'	NONE
6	POLE	640'	9'	NONE
7	POLE	640'	6'	NONE
8	2 POLES	640'	4'	NONE

NOTE: THERE ARE NO THRESHOLD SITING SURFACE OBJECT PENETRATIONS.

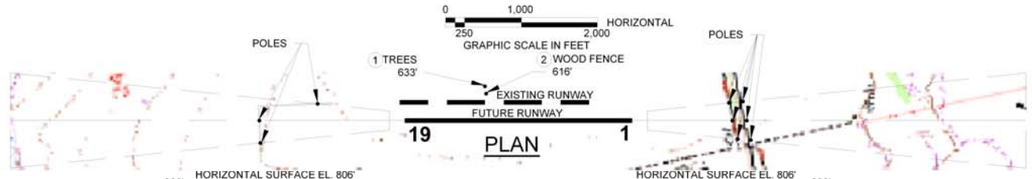
a) PENETRATION OF TRANSITIONAL SURFACE

RUNWAY 1 - 19
OBSTRUCTION DATA

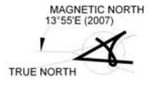
NO.	DESCRIPTION	TOP ELEV.	APPROACH SURFACE PENETRATION	DISPOSITION OF OBSTRUCTION (a)
1	TREES	633'	8'	TOP OR REMOVE
2	WOOD FENCE	616'	3'	RELOCATE
3				
4				

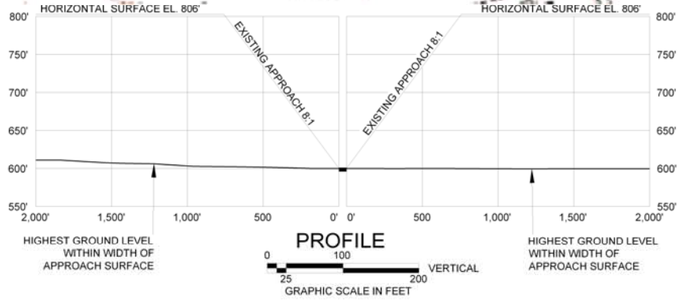
NOTE: THERE ARE NO THRESHOLD SITING SURFACE OBJECT PENETRATIONS.

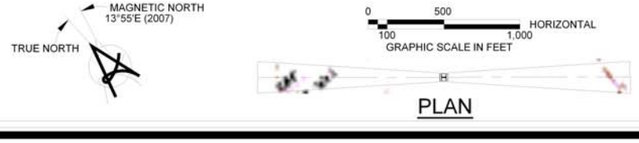
a) THESE ARE OBSTRUCTIONS TO THE EXISTING RUNWAY 1-19 AND NOT FUTURE RUNWAY 1-19



NOTE: VERTICAL DATUM IS NGVD29







COALINGA MUNICIPAL AIRPORT

INNER PORTION OF THE APPROACH SURFACES PLAN

NOTE:

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NO.	REVISIONS	DATE
1	ALP APPROVED	08/01/94

FAA APPROVAL

BY _____

CITY OF COALINGA DATE

ARIES CONSULTANTS LTD.

COALINGA MUNICIPAL AIRPORT
FRESNO COUNTY, CALIFORNIA

SHEET 4 OF 6

NAME: CLG-03 04-Airspace Plan-B.dwg NO: 4490-09
DATE: May 1, 2007 PLOT SCALE: 1"= 1,000'

LEGEND					
EXISTING	ULTIMATE		EXISTING	ULTIMATE	
		STRUCTURE	25 | 30 / 36 | 31		SECTION CORNERS
		AIRFIELD/APRON PAVEMENT			
		AIRPORT PROPERTY LINE			RUNWAY PROTECTION ZONE
BRL	BRL	BUILDING RESTRICTION LINE			
X	XX	FENCING	600		GROUND CONTOURS
		(ARP) AIRPORT REFERENCE POINT			HYDRANT
		DRAINAGE CHANNEL			PACIFIC GAS & ELECTRIC/TELEPHONE
		LEASE LOTS	W		WATER
		FUEL ISLAND			ROTATING BEACON
		THRESHOLD LIGHTS			AVIGATION EASEMENTS
		WIND SOCK			PAPI
RSA	RSA	RUNWAY SAFETY AREA			REIL
ROFA	ROFA	RUNWAY OBJECT FREE AREA	H		HELICOPTER
	POFZ	PRECISION OSTACLE FREE ZONE			
G	G	GATE			

NOTE: GROUND CONTOURS ARE IN NGVD29

FUTURE FACILITY LEGEND	
A	MALSR
B	PAPI-2
C	WINDSOCK
D	REIL
E	THRESHOLD LIGHTS
F	AVIATION RESERVE/PARK
G	GATE
H	AIRCRAFT PARKING APRON
I	FBO/COMMERCIAL AVIATION SITE
J	HANGARS
K	AVIATION RELATED INDUSTRIAL/COMMERCIAL
L	EXECUTIVE HANGARS

15"Ø U.G. IRRIGATION LINE
PRECISION OBSTACLE FREE ZONE
8"Ø CITY WATER MAIN
RUNWAY PROTECTION ZONE
APPROACH SURFACE 20:1
EL. 602.6'
200'
800'
300'
1,000'
2,500'
ROFA
RSA
POFZ
BRL
P/T
W
TW B
TW C
TW D
TW E
TW G
TAXIWAY A
FUTURE BRL (FOR 20' BUILDING)
AVIATION RELATED INDUSTRIAL/COMMERCIAL
HANGARS
EXTEND ACCESS ROAD
SERVICE ROAD
8"Ø CITY WATER MAIN
ACCESS ROAD
RELOCATED HANGAR
MAINTENANCE BUILDING
FBO SITE
RUNWAY 12-30 5,000' X 100' N 48° 30' 00" W (TRUE)
RUNWAY 1-19 2,500' X 60' N 12° 30' 00" E (TRUE) (TEMPORARY)
FUTURE RUNWAY 3,000' X 60'
FUTURE BRL
RUNWAY PROTECTION ZONE
PHELPS AVENUE
ARP
EL. 608.59'
EL. 607.70'
EL. 615'
218'
250'
120'
35'
18.7'
610
MAGNETIC NORTH 13°55'E (2007)
TRUE NORTH
0 200
50 400
GRAPHIC SCALE IN FEET

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EXISTING FACILITY LEGEND	
1	FLIGHT SERVICE FACILITY/CARETAKER RESIDENCE
2	HANGARS
3	FBO SITES
4	TIEDOWNS
5	OWNER MAINTENANCE AREA
6	ELECTRICAL BUILDING
7	REIL
8	TRANSFORMER
9	HOLDING POND
10	SEGMENTED CIRCLE AND LIGHTED WIND SOCK
11	FUEL ISLAND
12	AIRCRAFT POLLUTION ABATEMENT FACILITY
13	PAPI
14	ROTATING BEACON
15	DIKE
16	FENCE
17	PERIMETER ROAD
18	APRON SECURITY LIGHTING
19	MAINTENANCE HANGAR
20	AWOS
21	HELICOPTER
22	HABITAT CONSERVATION AREA
23	CALAVERAS BUFFER AREA

NO.	REVISIONS	DATE
1	ALP APPROVED	08/01/94

FAA APPROVAL

BY _____
CITY OF COALINGA DATE

COALINGA MUNICIPAL AIRPORT

TERMINAL AREA AND ACCESS PLAN

ARIES CONSULTANTS LTD.

COALINGA MUNICIPAL AIRPORT
FRESNO COUNTY, CALIFORNIA

SHEET 5 OF 6

NAME: CLG-01 05-ALP-B.dwg | NO: 4490-09
DATE: May 1, 2007 | PLOT SCALE: 1"= 400'

LEGEND					
EXISTING	ULTIMATE		EXISTING	ULTIMATE	
		STRUCTURE	25 | 30 / 36 | 31		SECTION CORNERS
		AIRFIELD/APRON PAVEMENT			
		AIRPORT PROPERTY LINE			RUNWAY PROTECTION ZONE
BRL	BRL	BUILDING RESTRICTION LINE			
X	XX	FENCING	600		GROUND CONTOURS
		(ARP) AIRPORT REFERENCE POINT			HYDRANT
		DRAINAGE CHANNEL			PACIFIC GAS & ELECTRIC/TELEPHONE
		LEASE LOTS	W		WATER
		FUEL ISLAND			ROTATING BEACON
		THRESHOLD LIGHTS			AVIGATION EASEMENTS
		WIND SOCK			PAPI
RSA	RSA	RUNWAY SAFETY AREA			REIL
ROFA	ROFA	RUNWAY OBJECT FREE AREA	H		HELICOPTER
	POFZ	PRECISION OSTACLE FREE ZONE			
G	G	GATE			

NOTE:

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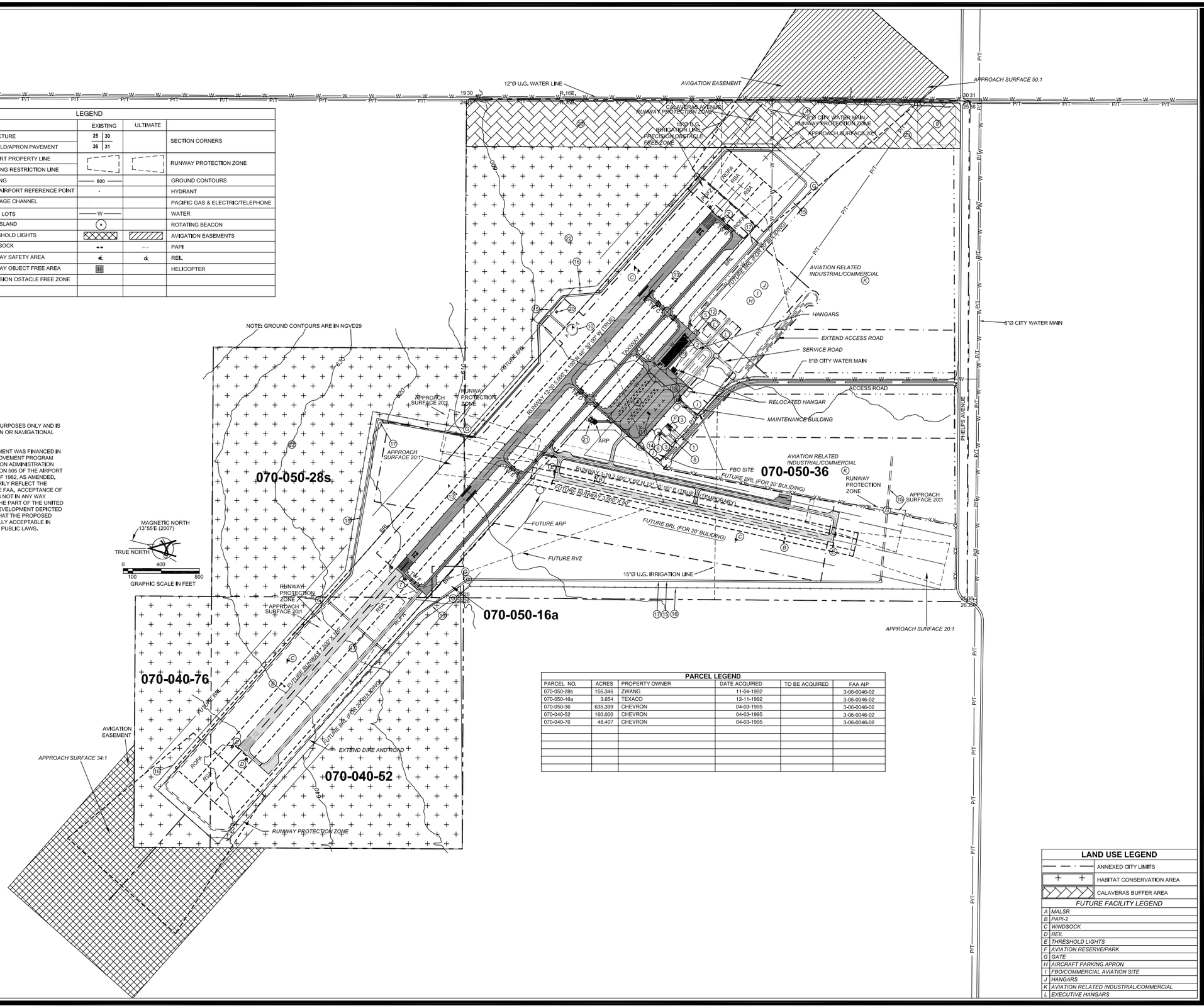

PARCEL LEGEND					
PARCEL NO.	ACRES	PROPERTY OWNER	DATE ACQUIRED	TO BE ACQUIRED	FAA AIP
070-050-28s	156.346	ZWANG	11-04-1992		3-06-0046-02
070-050-16a	3.654	TEXACO	12-11-1992		3-06-0046-02
070-050-36	635.399	CHEVRON	04-03-1995		3-06-0046-02
070-040-52	160.000	CHEVRON	04-03-1995		3-06-0046-02
070-040-76	48.407	CHEVRON	04-03-1995		3-06-0046-02

LAND USE LEGEND	
	ANNEXED CITY LIMITS
	HABITAT CONSERVATION AREA
	CALAVERAS BUFFER AREA

FUTURE FACILITY LEGEND	
A	MALSR
B	PAPI-2
C	WINDSOCK
D	REIL
E	THRESHOLD LIGHTS
F	AVIATION RESERVE/PARK
G	GATE
H	AIRCRAFT PARKING APRON
I	FBO/COMMERCIAL AVIATION SITE
J	HANGARS
K	AVIATION RELATED INDUSTRIAL/COMMERCIAL
L	EXECUTIVE HANGARS

COALINGA MUNICIPAL AIRPORT

AIRPORT PROPERTY MAP (EXHIBIT A)

EXISTING FACILITY LEGEND	
1	FLIGHT SERVICE FACILITY/CARETAKER RESIDENCE
2	HANGARS
3	FBO SITES
4	TIEDOWNS
5	OWNER MAINTENANCE AREA
6	ELECTRICAL BUILDING
7	REIL
8	TRANSFORMER
9	HOLDING POND
10	SEGMENTED CIRCLE AND LIGHTED WIND SOCK
11	FUEL ISLAND
12	AIRCRAFT POLLUTION ABATEMENT FACILITY
13	PAPI
14	ROTATING BEACON
15	DIKE
16	FENCE
17	PERIMETER ROAD
18	APRON SECURITY LIGHTING
19	MAINTENANCE HANGAR
20	AWOS
21	HELICOPTER
22	HABITAT CONSERVATION AREA
23	CALAVERAS BUFFER AREA

NO.	REVISIONS	DATE
1	ALP APPROVED	08/01/94

FAA APPROVAL

BY _____

CITY OF COALINGA DATE

ARIES CONSULTANTS LTD.

COALINGA MUNICIPAL AIRPORT

FRESNO COUNTY, CALIFORNIA

SHEET 6 OF 6

NAME: CLG-06-Property Map-B.dwg | NO: 4490-01

DATE: May 1, 2007 | PLOT SCALE: 1"= 1,000'

155 W. Durian Ave.
Coalinga, CA 93210
Phone (559) 935-1533
Fax (559) 935-5912
www.coalinga.com

FAX COVER PAGE

Date: 1-18-2008 Time: 2:45 pm

To: Freddy

From: Vincent - Coalinga

Number of Pages (including cover page): 5

Comments: Resolution

Airport

If there are any problems with this transmission, please call _____ at (559) 935-1533.

RESOLUTION 3231

A RESOLUTION OF THE CITY OF COALINGA CITY COUNCIL CERTIFYING THE INITIAL STUDY AND ADOPTING A MITIGATED NEGATIVE DECLARATION FOR THE COALINGA MUNCIPAL AIRPORT MASTER PLAN UPDATE

WHEREAS, the proposed Coalinga Municipal Airport Master Plan Update will provide guidance for the future development of the Coalinga Municipal Airport, and;

WHEREAS, an Initial Study/Proposed Mitigated Negative Declaration was prepared in accordance with the California Environmental Quality Act (CEQA) Guidelines that evaluated the potential environmental effects of the implementation of the proposed City of Coalinga Municipal Airport Master Plan Update , and;

WHEREAS, a Public Notice of Availability of an Initial Study and Notice of Intent to Adopt a Negative Declaration was posted with the Fresno County Clerk for the required thirty (30) day period, pursuant to Sections 15072 and 15073 of CEQA, and;

WHEREAS, the Initial Study/Proposed Mitigated Negative Declaration was distributed on July 11, 2005 for the required thirty (30) day State comment period, and;

WHEREAS, the thirty (30) day review period ended on August 11, 2005, and;

WHEREAS, the Planning Commission held the noticed Public Hearing on August 23, 2005 to take testimony with regard to the proposed Negative Declaration, and;

WHEREAS, the Planning Commission completed its review of the proposed Negative Declaration, evaluated information contained in the Staff Report and has considered the testimony received during the public hearing process, and;

WHEREAS, staff determined on the basis of the Initial Study and comments received that adoption of a Mitigated Negative Declaration is appropriate.

NOW THEREFORE BE IT RESOLVED, that the City of Coalinga City Council certifies the Initial Study and adopts the Mitigated Negative Declaration and directs the Community Development Director for file the Notice of Determination with the County Clerk and the State Office of Planning and Research.

PASSED AND ADOPTED, by the City of Coalinga City Council at a regularly scheduled meeting held on the 17th day of January 2008.

AYES: Oxborrow, Garcia, Lander, Ramsey, Hill

NOES: None

ABSTAIN: None

ABSENT: None

Trish Hill
Her Honor the Mayor, Trish Hill

ATTEST:

Donna Furtado
City Clerk

RESOLUTION 3232

A RESOLUTION OF THE CITY OF COALINGA CITY COUNCIL ADOPTING THE COALINGA MUNICIPAL AIRPORT MASTER PLAN

WHEREAS, in 2003 the City of Coalinga initiated an Airport Master Plan study for the City of Coalinga Municipal Airport, and;

WHEREAS, the purposed of the study is to determine the type and extent of aviation facilities needed at the Airport through the year 2025 and to prepare an Airport Master Plan to accommodate the required development, and;

WHEREAS, the study was coordinated with the City, Coalinga Municipal Airport Technical Advisory Committee, Federal Aviation Administration (FAA), California Department of Transportation (Caltrans) Division of Aeronautics and other State and local organizations, and;

WHEREAS, based on the study, the proposed 2007 Coalinga Municipal Airport Master Plan has been prepared and presented to the City Council and will provide for the future development of the Coalinga Municipal Airport, and;

WHEREAS, prior to acting on the proposed Airport Master Plan, the City Council certified the Initial Study and adopted the Mitigated Negative Declaration for the Airport Master Plan in compliance with the California Environmental Quality Act (CEQA) and the CEQA Guidelines, and;

WHEREAS, the City Council has determined that the Coalinga Municipal Airport Master Plan has been prepared in accordance with the applicable FAA Guidelines.

NOW THEREFORE BE IT RESOLVED, by the City Council of the City of Coalinga that the Coalinga Municipal Airport Master Plan, in the form presented to the City Council at this meeting is hereby adopted.

PASSED AND ADOPTED, by the City Council of the City of Coalinga at a regularly scheduled meeting held on the 17th day of January, 2008.

AYES: Oxborrow, Garcia, Lander, Ramsey, Hill

NOES: None

ABSTAIN: None

ABSENT: None

Trish Hill

Her Honor the Mayor, Trish Hill

ATTEST:

Dana D. Carlson

City Clerk