5

Airport Plans

OVERVIEW

In Chapters 3 and 4, recommendations were made for future development at Jacqueline Cochran Regional Airport. As set forth in these previous chapters, airfield improvements and new building area facilities will be necessary to maintain safety and operational efficiency, and to accommodate projected aviation demand. This chapter describes the plan documents associated with this recommended airport development program.

The proposed airport development program is depicted graphically on the Airport Layout Plan (ALP). The ALP is a graphic presentation of existing and ultimate airport facilities and is a key document that serves as a reference to aviation requirements, as well as land use and financial planning. In order to be eligible for federal financial assistance, proposed capital projects must be consistent with the ALP, and the ALP itself must be periodically updated. In addition to the Airport Layout Plan, other plan drawings are included in the set of plans prepared for this airport master plan. These include the Terminal Area Plan East, the Terminal Area Plan West, Building Area drawing, Airport Airspace Plan, and Airport Property Map. These plans are discussed separately in the preceding chapter and in the following sections.

AIRPORT LAYOUT PLAN

The Airport Layout Plan (Figure 5-1) delineates the overall development concept for Jacqueline Cochran Regional Airport as recommended in this Master Plan. Typically, the improvements recommended in the Master Plan would be phased over a twenty-year period. However, in the interests of safety and given the relative need for the improvements, this plan proposes that their development be accomplished within the next nine years (2005-2013). The recommended improvements are depicted on the ALP where appropriate and are summarized as follows:

FY 2005

FEDERAL FISCAL YEAR (FY)

The fiscal year for the FAA runs from October 1 through September 30. Consequently, FY 2005 begins on October 1, 2004.

Taxiway Overlay. Design and construct a 2-inch AC overlay of Taxiway "F" between Taxiways "A" and "D". The purpose of the overlay is to bring this section of the taxiway into conformity with other, newer sections that were designed and constructed to support the Boeing Business Jet.

Heliport and Helicopter Parking Apron. The airport currently has no designated helicopter operations area, nor facilities for basing local or transient helicopters. This project includes the design and construction of a designated helicopter landing and takeoff area, four transient helicopter parking positions, and an apron for the parking and storage of based helicopters, along with maneuvering areas, lighting and signage, and a lighted wind cone.

Sealcoat Higgins Drive and Public Parking Lot. The existing airport entrance road (Higgins Drive) is showing signs of deterioration, as is the public parking lot at the end of the road. This project will provide a protective sealant to prolong the life of the roadway and parking lot. The project also includes any necessary restriping and marking.

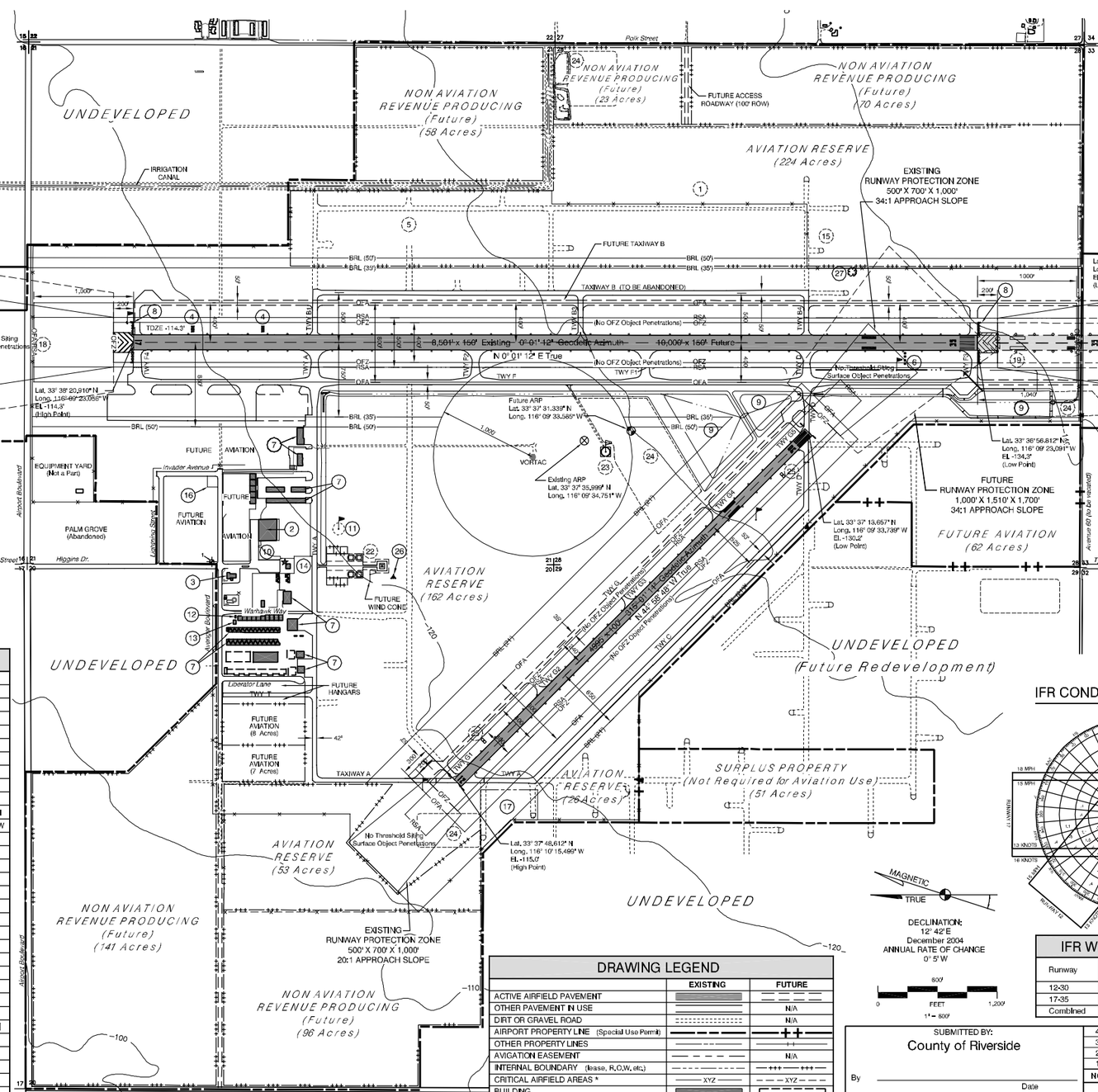
FY 2006

New Taxiway "G". This project consists of the design and construction of a new parallel taxiway and connectors on the northeast side of Runway 12-30. The project also includes related lighting, marking, signing, and drainage improvements.

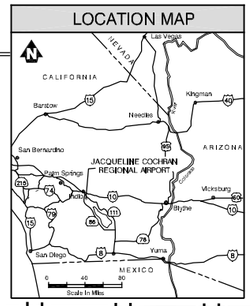
PAPI-2 Installation. This project consists of the design and installation of two 2-light precision approach path indicators (PAPI-2) on Runways 12 and 30.

BUILDING AND FACILITY LEGEND

	ELEV.		ELEV.
1 Future Passenger Terminal Site	-	15 Future ARFF Facility	-
2 FBO	-	16 Sewer Lift Station	-
3 Riverside County - Fire Station 39	-	17 Sailplane Staging Area (Temp.)	-
4 VASI	-	18 Future Localizer Location	-
5 Future Air Cargo Site	-	19 Future Glide Slope Antenna	-
6 PAPI	-	20 Future Hangars	-
7 Hangar(s)	-	21 Future FBO/Specialty Aviation	-
8 REILS	-	22 Future Helicopter Operations Area	-
9 Detention Basin	-	23 Relocated Segmented Circle & Wind Cone	-
10 Fuel Facilities	-	24 Future Detention Basin	-
11 Segmented Circle & Wind Cone (to be relocated)	-	25 Future PAPI	-
12 Electric Vault	-	26 Automated Surface Observing Station (ASOS)	-
13 Maintenance Building	-	27 Palm Tree Cluster	-
14 GA Tiedown Apron	-		



LOCATION MAP



VICINITY MAP

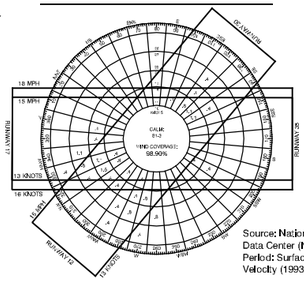
AIRPORT DATA

		EXISTING	FUTURE
AIRPORT SERVICE LEVEL (NPIAS)		Transport	No Change
AIRPORT REFERENCE CODE		D-III	No Change
CRITICAL AIRCRAFT		Boeing BusJet 2	No Change
AIRPORT REFERENCE POINT (a)	Latitude	33° 37' 35.999" N	33° 37' 31.339" N
	Longitude	116° 09' 34.751" W	116° 09' 33.585" W
AIRPORT ELEVATION (Above Mean Sea Level)		-114'	-115'
MEAN MAX. TEMP. (Hottest Month)		108° F (July)	No Change
AIRPORT AND TERMINAL NAVIGATIONAL AIDS		GPS/VORTAC	No Change
GPS APPROACH ESTABLISHED		Yes	No Change
AIRPORT ACREAGE	Fee Simple	1,752	1,890
	Easement	0	No Change
AIRCRAFT PARKING SPACES	Tiedowns	43	No Change
	Hangars	50	143
	Box Hangars	6	42
	Helicopter Spaces	0	4

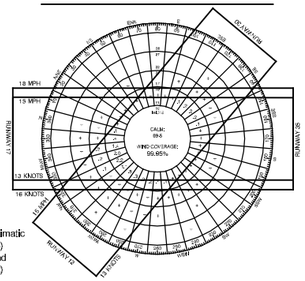
RUNWAY DATA

			RUNWAY 12-30 EXISTING	RUNWAY 12-30 FUTURE	RUNWAY 17-35 EXISTING	RUNWAY 17-35 FUTURE
CRITICAL AIRCRAFT	AIRCRAFT		Super Kingair	No Change	Boeing BusJet 2	No Change
	WINGSPAN (ft.)		54.5	No Change	117.5	No Change
	APPROACH SPEED (kts.)		103	No Change	132	No Change
	MAX. TAKEOFF WT. (lbs.)		12,500	No Change	174,200	No Change
PHYSICAL LENGTH AND WIDTH			5,000' x 100'	No Change	8,501' x 150'	10,000' x 150'
VERTICAL LINE OF SIGHT PROVIDED			Yes	No Change	Yes	No Change
RUNWAY END COORDINATES (NAD83)	Approach End of Runway 12/17	Latitude	33° 37' 48.612" N	No Change	33° 38' 20.910" N	No Change
		Longitude	116° 10' 15.499" W	No Change	116° 09' 23.056" W	No Change
	Approach End of Runway 30/35	Latitude	33° 37' 13.657" N	No Change	33° 36' 56.812" N	33° 36' 41.977" N
		Longitude	116° 09' 33.739" W	No Change	116° 09' 23.091" W	116° 09' 23.097" W
RUNWAY END ELEVATIONS		12/17	-115.0' (High Point)	No Change	-114.3' (High Point)	No Change
		30/35	-130.2' (Low Point)	No Change	-134.3' (Low Point)	-137.5' (est.)
TOUCHDOWN ZONE ELEVATIONS		12/17	N/A	No Change	-114.3'	No Change
		30/35	N/A	No Change	N/A	No Change
EFFECTIVE GRADIENT (%)			0.22%	No Change	0.24%	0.20% (est.)
MAXIMUM GRADIENT (%)			0.22%	No Change	0.24%	0.20% (est.)
RUNWAY/TAXIWAY SURFACE TYPE			Asphalt	No Change	Asphalt	No Change
PAVEMENT STRENGTH (1,000#) - S/D/DT			20/-/-	No Change	30/174/-	No Change
RUNWAY MARKING			Nonprecision	No Change	Nonprecision	Precision
RUNWAY LIGHTING			Med. Intensity	No Change	Med. Intensity	High Intensity
NAVIGATION AIDS	Approach End of Runway	12/17	VOR-A	No Change	VOR-A	No Change
		30/35	GPS/VOR-A	No Change	GPS/VOR-A	ILS
VISUAL AIDS	Approach End of Runway	12/17	None	PAPI	VASI/REILS	No Change
		30/35	None	PAPI	PAPI/REILS	No Change
APPROACH TYPE (FAR Part 77 Category)	Approach End of Runway	12/17	Visual [B(V)]	No Change	Visual [B(V)]	Nonprecision [A]
		30/35	Nonprecision [C(NP)]	No Change	Nonprecision [C(NP)]	Precision [A]
APPROACH VISIBILITY (Minimums)	Approach End of Runway	12/17	1 1/2 Mile	No Change	1 Mile	3/4 Mile
		30/35	1 Mile	3/4 Mile	1 Mile	1/2 Mile
APPROACH SLOPE (Required/Clear)	Approach End of Runway	12/17	20:1	No Change	20:1	34:1
		30/35	34:1	No Change	34:1	50:1
RUNWAY SAFETY AREA (Width)			150'	No Change	500'	No Change
RUNWAY SAFETY AREA (Length Beyond Runway End)		12/17	300'	No Change	1,000'	No Change
		30/35	300'	600'	1,000'	No Change
OBSTACLE FREE ZONE (Width)			400'	No Change	400'	No Change
OBSTACLE FREE ZONE (Length Beyond Runway End)		12/17	200'	No Change	200'	No Change
		30/35	200'	No Change	200'	No Change
OBJECT FREE AREA (Width)			800'	No Change	800'	No Change
OBJECT FREE AREA (Length Beyond Runway End)		12/17	300'	No Change	1,000'	No Change
		30/35	300'	No Change	1,000'	500'
DISTANCE FROM RWY ℄ TO HOLD BARS			200'	No Change	250'	No Change
RUNWAY TO TAXIWAY ℄ SEPARATION	Parallel Taxiway	C/B	N/A	240'	500'	400'
		C/F	525'	No Change	400'	No Change

IFR CONDITIONS WIND ROSE



VFR CONDITIONS WIND ROSE



Source: National Climatic Data Center (NCDC)
Period: Surface Wind Velocity (1993-2002)

IFR WIND COVERAGE

Runway	15 M.P.H. (13 Knots)	18 M.P.H. (16 Knots)
12-30	99.74	N/A
17-35	99.25	99.76
Combined	99.94	99.76

VFR WIND COVERAGE

Runway	15 M.P.H. (13 Knots)	18 M.P.H. (16 Knots)
12-30	95.86	N/A
17-35	94.10	95.73
Combined	98.88	99.73

DRAWING LEGEND

	EXISTING	FUTURE
ACTIVE AIRFIELD PAVEMENT		
OTHER PAVEMENT IN USE		N/A
DIRT OR GRAVEL ROAD		N/A
AIRPORT PROPERTY LINE (Special Use Permit)		
OTHER PROPERTY LINES		
AVIGATION EASEMENT		N/A
INTERNAL BOUNDARY (lease, R.O.W. etc.)		
CRITICAL AIRFIELD AREAS *	XYZ	XYZ
BUILDING		
FENCE		
AIRFIELD LIGHTS: SINGLE/GROUP/REILS	/ /	/ /
VEHICLE GATE		
WIND CONE		
UTILITY POLE / POWER LINE		
TOPOGRAPHIC CONTOURS	XXX	N/A
WATERWAY / CULVERT		N/A
AIRPORT REFERENCE POINT		
SECTION CORNER	20 29 / 19 30	N/A

* APL - Aircraft Parking Limits
BRL - Building Restriction Line
OFA - Object Free Area
OFZ - Obstacle Free Zone
RPZ - Runway Protection Zone
RSA - Runway Safety Area

ALP NOTES

(a) Airport coordinates data source:
Runway 17-35: Airport Data(AD) Form (December 2001).
Runway 12-30: NOAA Airport Obstruction Chart (OC 529) 1998.
All coordinates are NAD83 and NAVD88.

MONUMENTS

NO.	DESCRIPTION	ELEVATION
1	BRASS DISC S-753	-114.51

SUBMITTED BY:
County of Riverside

By _____ Date

FAA Approval Space

NO.	REVISION	SPONSOR	DATE
4	Update (add new construction / revise data blocks)	Mead & Hunt Inc.	5/05
3	AMP Update Study	Mead & Hunt Inc.	5/04
2	Property Release: Runway 17-35 Phase 1 Extension	Coffman Associates	1/99
1	Recent Construction: Proposed Property Release	Coffman Associates	4/98

JACQUELINE COCHRAN REGIONAL AIRPORT
THERMAL, CALIFORNIA

AIRPORT LAYOUT PLAN

MEAD & HUNT
ENGINEERS ARCHITECTS SCIENTISTS PLANNERS
707 Aviation Blvd. Santa Rosa, California 95403 • (707) 526-9010

DESIGN: MM/CB	DRAWN: TE	DATE: May 2005	SHEET 1 OF 1

The preparation of these documents 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 views or policy of the FAA. Acceptance of these documents by the FAA does not in any way constitute a commitment on the part of the United States to participate in any development depicted herein nor does it indicate that the proposed development is environmentally acceptable in accordance with appropriate public laws.

FIGURE 5-1

Overlay Runway 12-30 and West End Taxiway "A". This project consists of the design for and rehabilitation of Runway 12-30, including an asphaltic concrete (AC) overlay and replacement runway lighting, marking and signage. Included also in the project is a segment of Taxiway "A" between the new Taxiway "G" and the runway.

FY 2007

Rehabilitate/Repair Concrete Transient Apron. This project consists of the design and repair of the transient aircraft parking apron adjacent to Million Air. This area is showing signs of deterioration and cracking. The patching, crack sealing, and other preventive measures will prolong the useful life of the area.

New Taxiway "B" and Drainage Improvements. Design and construct a new 8,500-feet long parallel taxiway adjacent to Runway 17-35 to replace existing Taxiway "B". The existing taxiway will be abandoned after construction of the new taxiway. The project also includes connecting taxiways, lighting and signage, and related drainage improvements.

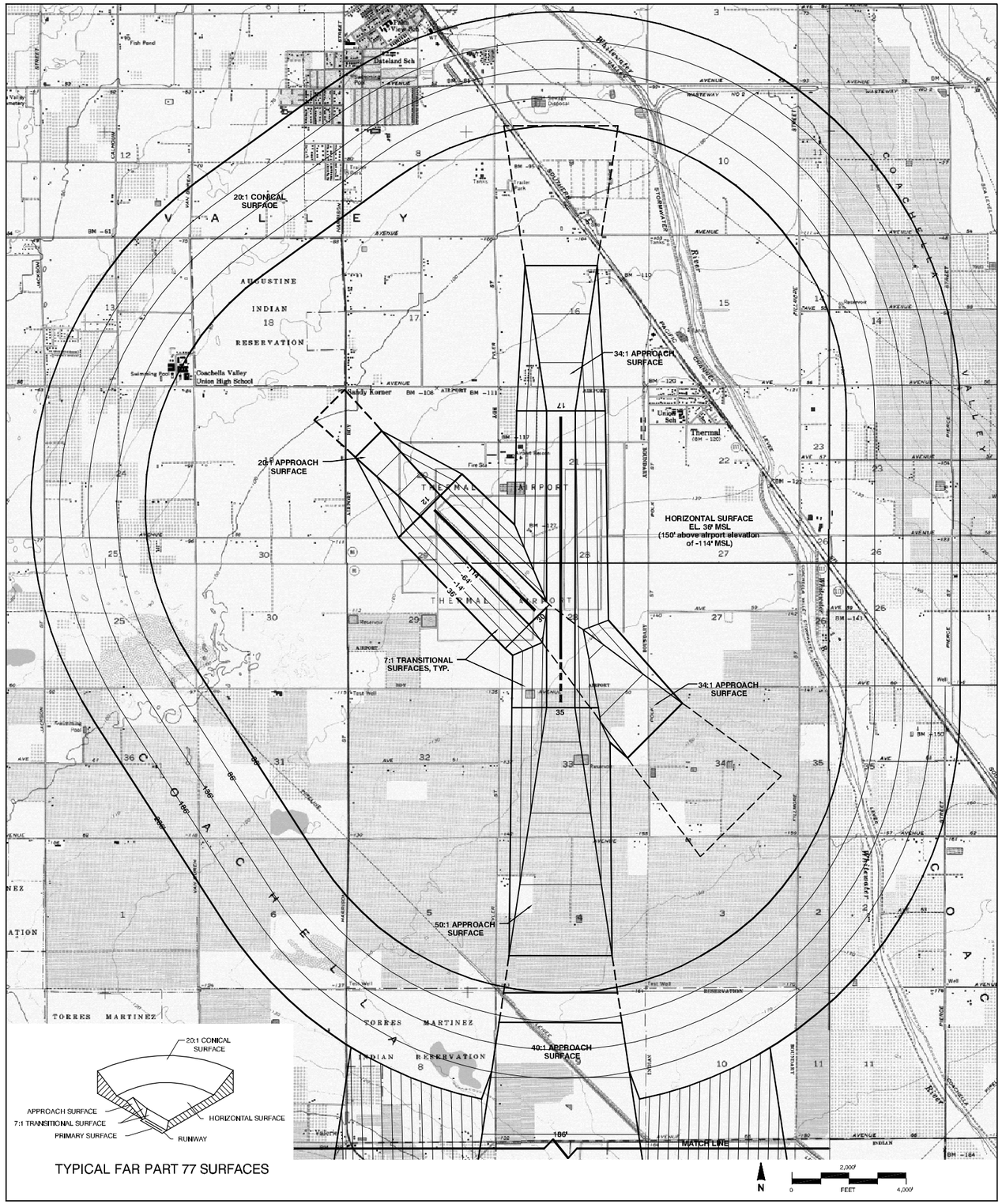
FY 2008

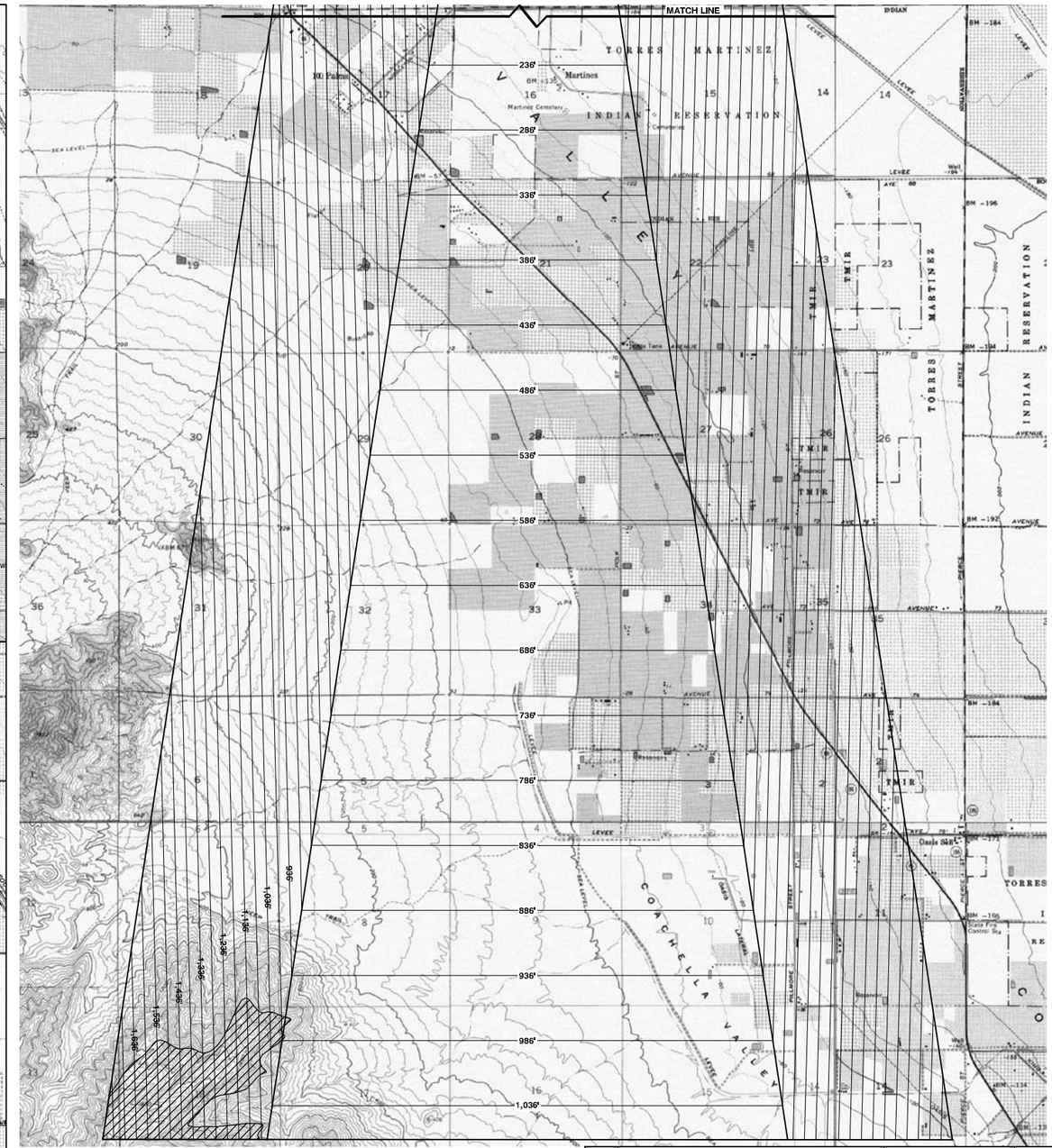
Land Acquisition for Runway Extension, RPZ and Approach Protection. This project entails the appraisal, title search, negotiation for, and acquisition of approximately 128.5 acres south of Avenue 60 for the extension of Runway 17-35, a runway protection zone (RPZ), and approach protection. Also included is the acquisition of an additional 8-acres north of Airport Boulevard for a future RPZ for Runway 17.

FY 2009

Phase 3 Heavy Aircraft Parking Apron. This project is the last of three separate development phases for a heavy aircraft (BBJ-2) parking apron at the northwest end or Runway 17-35. The project entails the design and construction of approximately 3.6 acres of new concrete apron and a connecting taxiway. Also included in the project are associated lighting, marking, signing and drainage improvements.

Avenue 60 Realignment. This project is associated with the southerly extension of Runway 17-35. To accommodate the runway extension a portion of Avenue 60 must be vacated and the roadway realigned to connect with a new street system





LEGEND

= Terrain Penetrates Indicated Surface

NOTES:

All elevations in feet above mean sea level (MSL)

SOURCES:

USGS Topographic Maps

-

NO.	REVISION	SPONSOR	DATE

JACQUELINE COCHRAN REGIONAL AIRPORT

THERMAL, CALIFORNIA

AIRSPACE PLAN

MEAD & HUNT

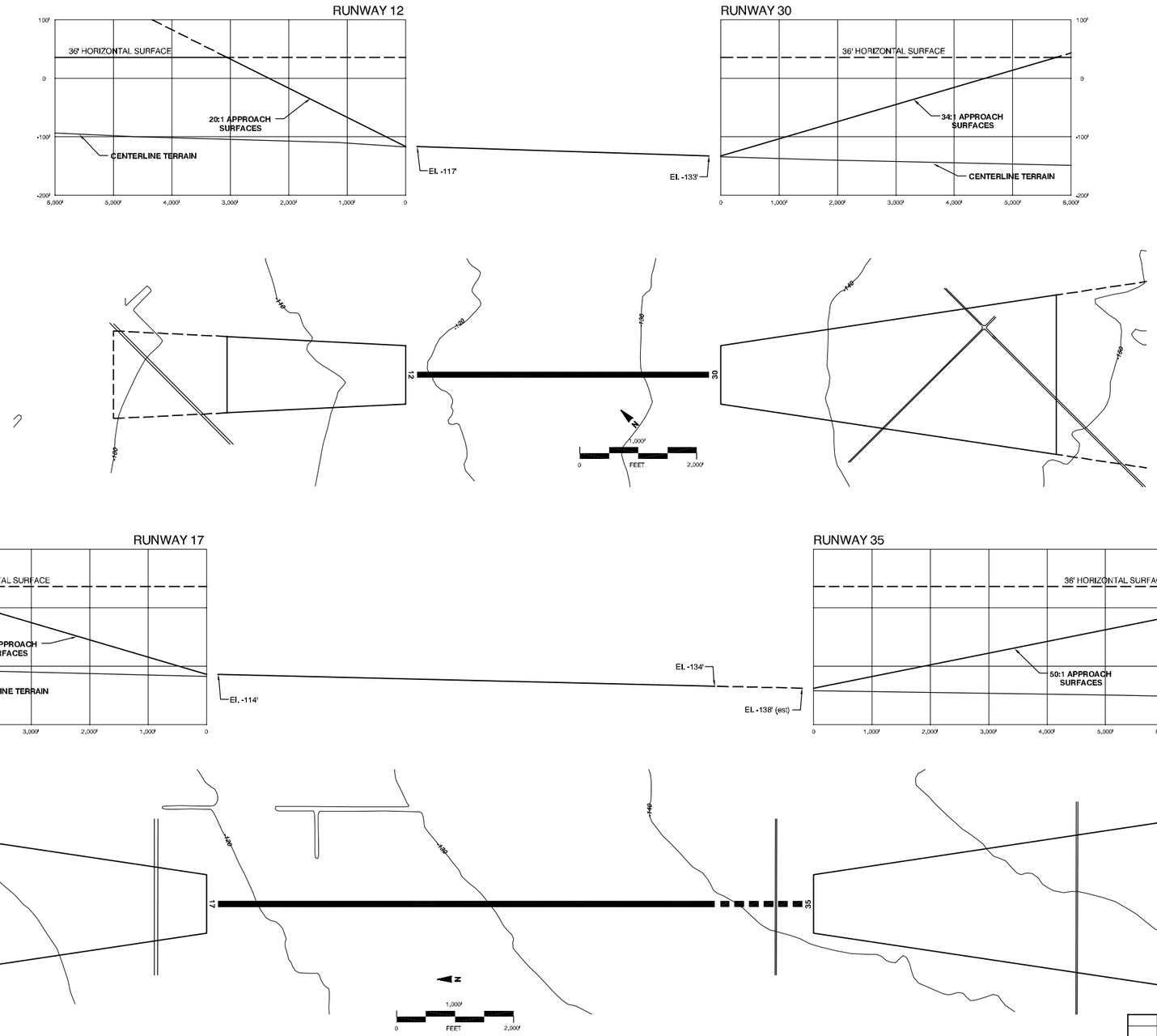
ENGINEERS ARCHITECTS SCIENTISTS PLANNERS

707 Aviation Blvd., Santa Rosa, California 95403 • (707) 526-5010

DESIGN:	DRAWN:	DATE:	SHEET 1 OF 2
-	-	May 2005	

TRMap03 051204

FIGURE 5-2



NOTES:

All elevations in feet above mean sea level (MSL)

SOURCES:

USGS Topographic Maps

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NO.	REVISION	SPONSOR	DATE

JACQUELINE COCHRAN REGIONAL AIRPORT

THERMAL, CALIFORNIA

APPROACH PROFILE DETAIL

MEAD & HUNT — ENGINEERS ARCHITECTS SCIENTISTS PLANNERS

707 Aviation Blvd., Santa Rosa, California 95403 • (707) 526-5010

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-	-	May 2005	

TRMasp03 051204

FIGURE 5-2 cont'd

proposed as part of the Kohl Ranch Development. The project includes design and construction, as well as any related right-of-way acquisition and drainage.

FY 2010

Runway 17-35 and Taxiways "B" and "F" Extensions. This project entails the design and construction of 1,500-feet extensions of Runway 17-35 and Taxiways "B" and "F" to the south. Included also in the project are related connecting taxiways, runway/taxiway lighting and marking, signing, drainage improvements, security fencing, and the relocation of the Runway 35 PAPI and runway end identifier lights (REIL).

Reconstruct Taxiway "C" and Install MITL. This project involves the design and reconstruction of Taxiway "C" and the installation of medium intensity taxiway lights (MITL). The project also includes related marking, signage and drainage improvements.

FY 2011

Runway 35 ILS and Approach Light System. This project is the design and installation of a precision instrument landing system (ILS) and approach light system (ALS) for the extended Runway 35.

FY 2012

Avenger Boulevard Extension. This project entails the design and construction of an extension of Avenger Boulevard and related infrastructure and utilities from where it currently ends to the west into the area designated for future aviation on the Airport Layout Plan (ALP).

FY 2013

New Air Traffic Control Tower. This project would entail a site selection study for a new air traffic control tower (ATCT) to be located on the airport. With the approval of the FAA, a new ATCT facility would be designed and constructed.

Airport Airspace Plan

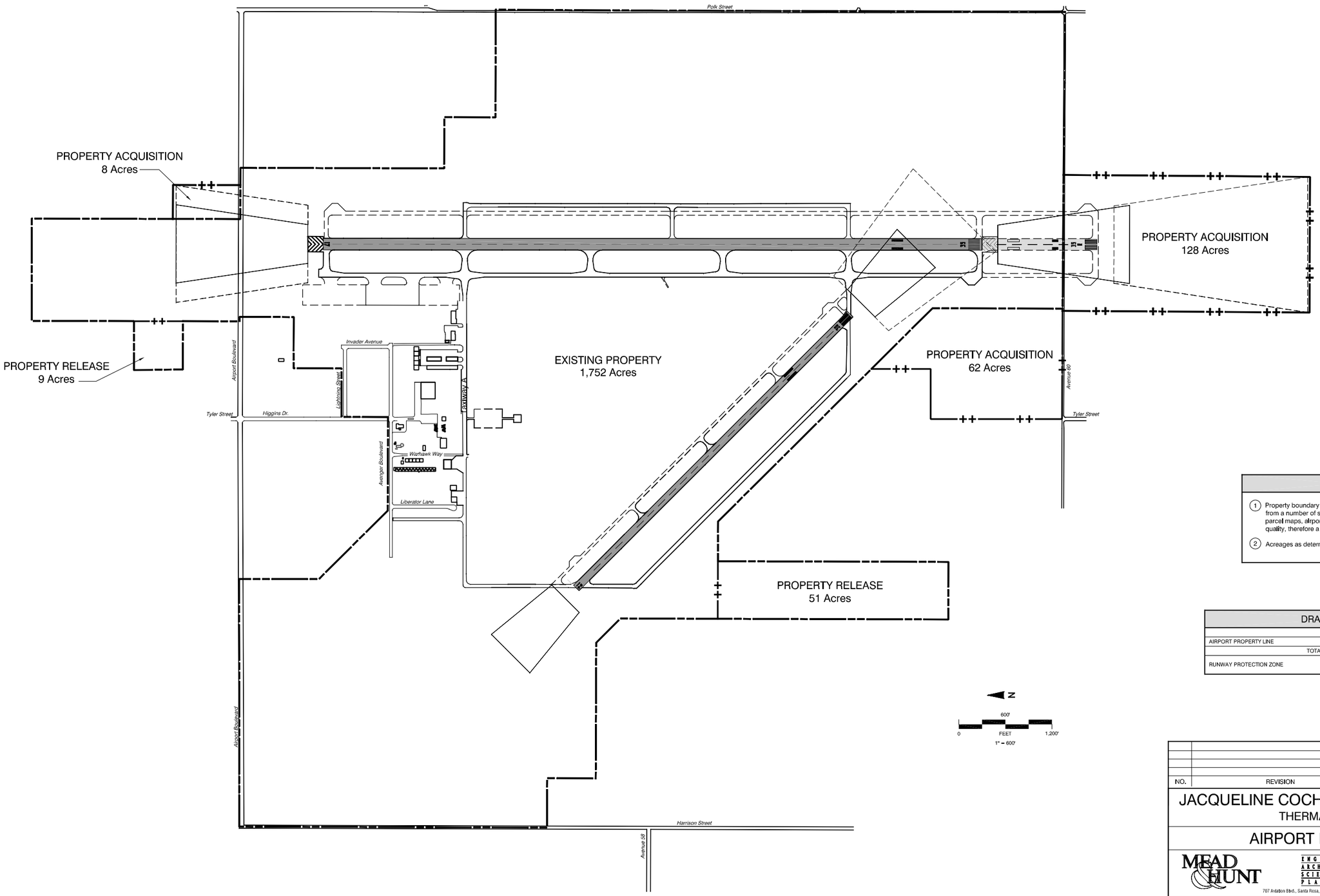
The Airport Airspace Plan (Figure 5-2) depicts the imaginary surfaces on and around Jacqueline Cochran Regional Airport

designed to protect the airport's airspace. The plan is based on Part 77 of the Federal Aviation Regulations (FARs), "Objects Affecting Navigable Airspace." The intent of this regulation is to protect the airspace and approaches to each runway end from objects, which if penetrating the FAR Part 77 imaginary surfaces, could affect the safe and efficient operation of the airport.

The Airport Airspace Plan is a graphical depiction of the various FAR Part 77 surfaces described for the runway system at Jacqueline Cochran Regional Airport. Design criteria for the surfaces depicted on this plan are determined by the airport design category and runway approach classifications.

Airport Property Map

The Airport Property Map (Figure 5-3) depicts the existing airport property plus any proposed or potential land or easement acquisitions contemplated during the 20-year master planning period.



NOTES

1. Property boundary lines depicted on this drawing are from a number of sources: previous ALP, assessors parcel maps, airport staff. Most sources are not survey quality, therefore a boundary survey is recommended.
2. Acreages as determined by boundaries on this drawing.

DRAWING LEGEND

	EXISTING	FUTURE
AIRPORT PROPERTY LINE		
TOTAL ACRES	1,752	1,890
RUNWAY PROTECTION ZONE		

NO.	REVISION	SPONSOR	DATE

JACQUELINE COCHRAN REGIONAL AIRPORT
THERMAL, CALIFORNIA

AIRPORT PROPERTY MAP

MEAD & HUNT
ENGINEERS ARCHITECTS SCIENTISTS PLANNERS
707 Aviation Blvd., Santa Rosa, California 95403 – (707) 526-5010

DESIGN: MM	DRAWN: TE	DATE: MAY 2004	SHEET 1 OF 1

TRMALP03 051104

FIGURE 5-3