

Background Data: Flabob Airport and Environs

INTRODUCTION

Situated along the edge of the Santa Ana River just west of downtown Riverside, Flabob Airport's long history goes back to the early days of aviation. The present airport has existed since at least 1925—some accounts say a dirt landing strip was located on the site as early as 1907. Flavio Madariaga and Bob Bogen became the airport's owners in 1943 and gave their names to the facility. The now-nationwide Experimental Aviation Association was founded there in 1953. After languishing for many years and almost closing in the late 1990s, the airport was acquired by the Thomas W. Walthen Foundation in 2000. The new owners have removed some of the old buildings, constructed several new hangars, and repaved much of the airfield.

Today, the airport is home to some 200 aircraft, many of them vintage or experimental airplanes. Providing educational programs for local school children is another role played by the airport. Facility improvement plans call for construction of additional hangars with space for perhaps another 80 aircraft. A corresponding increase in aircraft operations can be anticipated. However, the limited land area prevents expansion of the single 3,190-foot runway (a shorter turf runway was closed in the early 1980s).

Parts of the surrounding unincorporated community of Rubidoux have existed even longer than the airport, but much of the area remained agricultural until the 1990s. The residential neighborhood to the north and a mobile home park to the east have been there for many years; the subdivision along the river's edge just south of the airport is a recent development. Lands around the west end of the runway remain generally low-density in character and potentially could be further developed in the future.

Exhibits FL-1 through FL-3 on the following pages provides tabular and diagrammatic summaries of information about Flabob Airport and its activity levels. Current and projected noise contours are depicted in Exhibits FL-4 and FL-5, respectively. Factors contributing to the compatibility zone boundaries delineated in the Flabob Compatibility Map are shown in Exhibit FL-6. Information about the land uses in the Flabob Airport environs is summarized in the table and map presented in Exhibits FL-7 and FL-8. Exhibit FL-9 presents a preliminary assessment of Riverside County and City of Riverside general plans relative to *Compatibility Plan* policies.

GENERAL INFORMATION

- ▶ *Airport Ownership:* Private
(Thomas W. Wathen Foundation)
- ▶ *Year Opened:* 1925
- ▶ *Property Size*
 - ▶ Fee title: 82 acres
 - ▶ Avigation easements: None
- ▶ *Airport Classification:* General Aviation
- ▶ *Airport Elevation:* 764 feet MSL

AIRPORT PLANNING DOCUMENTS

- ▶ *Airport Master Plan*
 - ▶ None
- ▶ *Airport Layout Plan Drawing*
 - ▶ Last update May 2003

RUNWAY/TAXIWAY DESIGN

Runway 6-24

- ▶ *Critical Aircraft:* Single-engine, piston
- ▶ *Airport Reference Code:* B-I (small airplanes)
- ▶ *Dimensions:* 3,190 ft. long, 50 ft. wide
 - ▶ Runway 28 threshold displaced 330 ft.
- ▶ *Pavement Strength (main landing gear configuration)*
 - ▶ 8,000 lbs. (single-wheel)
- ▶ *Average Gradient:* 0.5% (rising to east)
- ▶ *Runway Lighting*
 - ▶ Medium-intensity edge lights (MIRL); non-standard; 330 ft. at approach end of Rwy 24 unlighted
- ▶ *Primary Taxiways:* Full-length parallel on north

TRAFFIC PATTERNS AND APPROACH PROCEDURES

- ▶ *Airplane Traffic Patterns*
 - ▶ Runways 6 & 24: Left traffic
 - ▶ Pattern altitude: 700 ft. AGL (1,464 ft. MSL)
 - ▶ Nighttime pattern altitude: 1,000 ft. AGL, around mountain
- ▶ *Instrument Approach and Departure Procedures*
 - ▶ None
- ▶ *Visual Approach Aids*
 - ▶ None
- ▶ *Operational Restrictions / Noise Abatement Procedures*
 - ▶ Runway 6 departures: Avoid overflight of trailer park, 1,000 ft. east of runway
 - ▶ Mt. Rubidoux (elev. 1,340 ft. MSL plus 20 ft. cross on top) ¼ mile southeast of airport
 - ▶ Flights to/from south controlled by Riverside Municipal Airport airspace

APPROACH PROTECTION

- ▶ *Runway Protection Zones (RPZ)*
 - ▶ Runway 6: 1,000 ft. long (25±% on airport property)
 - ▶ Runway 24: 1,000 ft. long (25±% on airport property)
- ▶ *Approach Obstacles*
 - ▶ Runway 6: 5 ft. fence, 215 ft. from threshold
 - ▶ Runway 24: 4 ft. fence, 200 ft. from threshold

BUILDING AREA

- ▶ *Location:* North side of runway
- ▶ *Aircraft Parking Capacity*
 - ▶ Hangar spaces: 174
 - ▶ Tiedowns: 125
- ▶ *Other Major Facilities*
 - ▶ Experimental Aircraft Association quarters
- ▶ *Services*
 - ▶ Fuel: 100LL/80 (available during regular business hours)
 - ▶ Other: Avionics, charter flights, flight instruction, aircraft rental and sales

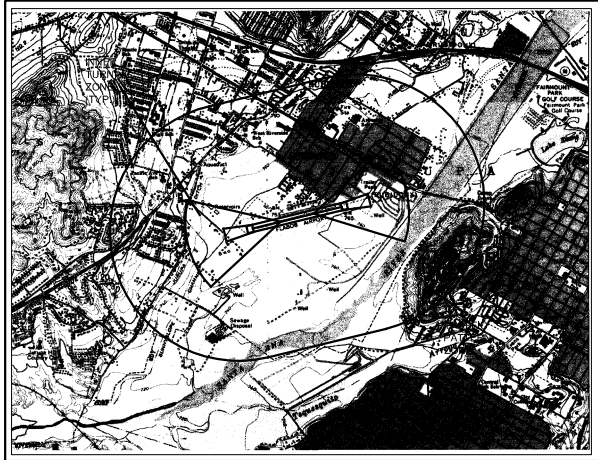
PLANNED FACILITY IMPROVEMENTS

- ▶ *Airfield*
 - ▶ None
- ▶ *Building Area*
 - ▶ Increase aircraft hangar spaces to 100
- ▶ *Property*
 - ▶ None

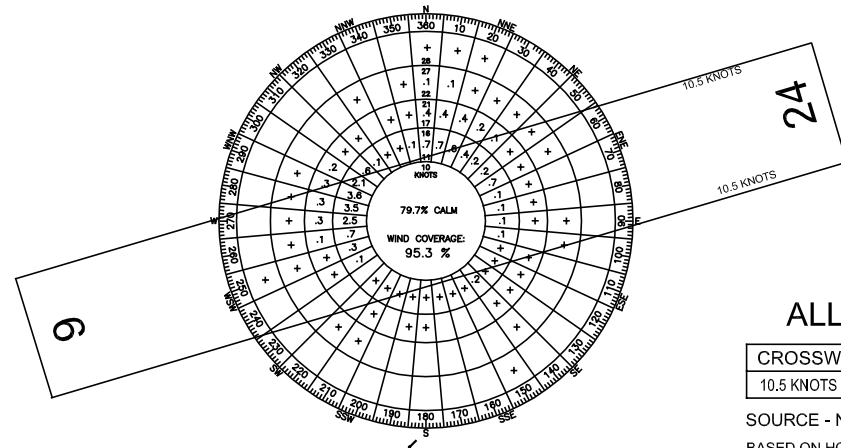
Exhibit FL-1

Airport Features Summary

Flabob Airport



THOUSANDS OF FEET
SCALE - 1" = 3000'
VICINITY MAP



TRUE N
MAGNETIC
Magnetic Variation
13.5 Degrees East
(July 2000)

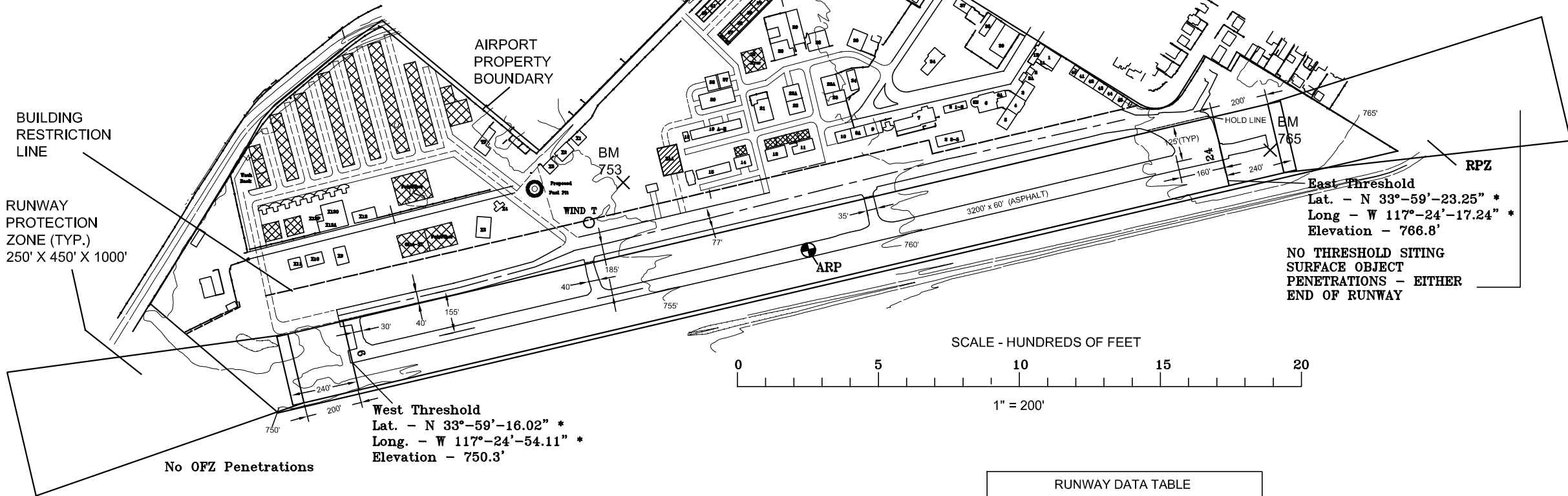
ALL WEATHER WINDROSE

CROSSWIND COMPONENT	6-24
10.5 KNOTS (12 MPH)	95.3%

SOURCE - National Climatic Center, Ashville, NC.
BASED ON HOURLY OBSERVATIONS AT RIVERSIDE (KRAL) AIRPORT FROM JANUARY 1989 THRU DECEMBER 1998



MILES
SCALE - 1" = 3.0 MILES
LOCATION MAP



BUILDING TABLE					
NUMBER	USAGE	ELEVATION	NUMBER	USAGE	ELEVATION
1	HANGAR	—	37	STORE	—
2	OFFICE	—	39	INDUST.	—
3*	HANGAR	—	40	HANGAR	—
4**	INDUST.	—	41	HANGAR	—
5*	HANGAR	780'	42	HANGAR	—
6	HANGAR	—	43	HANGAR	—
7	CAFE	791'	44	HANGAR	—
8	EDUCAT.	—	45	HANGAR	—
9	HANGAR	—	57	HANGAR	—
9A	HANGAR	776'	58	HANGAR	—
10	HANGAR	—	59	HANGAR	—
11	HANGAR	—	60	HANGAR	—
12	HANGAR	—	X1	HANGAR	—
14	HANGAR	—	X2	HANGAR	—
15	HANGAR	—	X3	HANGAR	—
16*	HANGAR	776'	X4	HANGAR	—
17	HANGAR	—	X5	STORE	—
18	HANGAR	—	X8	HANGAR	—
19	HANGAR	—	X9	HANGAR	—
20	HANGAR	—	X10	HANGAR	—
21	HANGAR	—	X11	INDUST.	—
22	HANGAR	—	X12*	HANGAR	—
23	HANGAR	—	X12O	INDUST.	—
24	HANGAR	—	X12P	EDUCAT.	—
25	MISC.	—	X14	HANGAR	—
26	ADMIN.	—	X15	HANGAR	—
28	HANGAR	—	X16	MISC.	—
29	INDUST.	—	S 1-2	MISC.	—
30	HANGAR	—	S 3-5	FUEL PIT	777'
31	INDUST.	—	T 1-17	T HANG.	—
32	INDUST.	—			

* Hangar / Office
** Industrial / Office

AIRPORT DATA TABLE		
ITEM	EXISTING	FUTURE
AIRPORT ELEVATION	767'	
AIRPORT REFERENCE POINT (ARP)	N 33°-59'-19.6" * W 117°-24'-35.7" **	THERE ARE NO CHANGES PLANNED IN ANY OF THESE CATEGORIES
TAXIWAY MARKINGS	CENTERLINES	
NAVIGATIONAL AIDS	NONE	
AIRPORT CATEGORY	A1 - B1 (SMALL A/C)	
AIRPORT ACREAGE - FEE SIMPLE	82 ACRES	
APPROACH SLOPE	20 : 1	

LEGEND	
BUILDINGS EXISTING	
BUILDINGS UNDER CONST.	
FUTURE BUILDINGS	
RUNWAY HOLD LINES	
BUILDING RESTRICTION LINE	
PROPERTY BOUNDARY LINE	

RUNWAY DATA TABLE	
ITEM	RUNWAY 6-24
AVERAGE RUNWAY GRADIENT (%)	0.53 %
WIND COVERAGE (%) - 10.5 KTS.	95.3 %
RUNWAY CATEGORY	VFR
PAVEMENT TYPE	ASPHALT
APPROACH SLOPE AND CLEAR ZONES	1 : 20
MARKING	VISUAL (V)
RUNWAY DIMENSIONS	60' X 3200'
RUNWAY TRUE BEARING	76.90 / 256.90 DEG
RUNWAY SAFETY AREA DIMENSIONS	120' X 3680'
RUNWAY LIGHTING	MIRL
PAVEMENT DESIGN STRENGTH	8,000 Lbs.
OBJECT FREE AREA DIMENSIONS	3680' X 250'

CHANGE RECORD

CHANGE	DESCRIPTION	DATE	FLABOB AIRPORT, LLC.	
A	Hold Lines, Notes, Add 160' Dimension, Minor Appearance Items	10-2-03	Airport Layout Plan	
			MADE BY	R. W. Forker
			APPROVED BY	J. D. Lyon
			DATE	9-24-2003
			PROJECT NUMBER	ALP-7

* Lat. / Long. locations are based on the NAD 83 (State Claim, Zone 6) datum.

Approved by the Thomas W. Wathen Foundation DATE

BASED AIRCRAFT			TIME OF DAY DISTRIBUTION^d		
<i>Aircraft Type</i>	Current^a <i>2002 data</i>	Future^b <i>Ultimate</i>	<i>All Aircraft</i>	Current	Future
Single-Engine	190	262	Day	85%	no change
Twin-Engine Piston & Turboprop	8	17	Evening	10%	
Business Jet	0	0	Night	5%	
Helicopter	0	0			
Sailplanes	1	1			
<i>Total</i>	<i>199</i>	<i>280</i>			

AIRCRAFT OPERATIONS			RUNWAY USE DISTRIBUTION^d		
	Current <i>2002 data</i>	Future <i>Ultimate</i>	<i>All Aircraft – Day/Evening/Night</i>	Current	Future
<i>Total</i>			Takeoffs & Landings		
Annual	27,000 ^c	43,400 ^b	Runway 6	10%	no change
Average Day	75	121	Runway 24	90%	
<i>Distribution by Aircraft Type^d</i>					
Single-Engine	96%	94%			
Twin-Engine Piston & Turboprop	4%	6%			
Business Jet	0%	0%			
Helicopter	0%	0%			
Sailplanes	<1%	<1%			
<i>Distribution by Type of Operation^d</i>					
Local (incl. touch-and-goes)	50%	50%			
Itinerant	50%	50%			

FLIGHT TRACK USAGE^c		
Current and Future		
▶ Approaches, Runway 6	› Primarily straight-in traffic	
▶ Departures, Runway 6	› Aircraft mostly follow Santa Ana River to northeast	
▶ Approaches, Runway 24	› Most aircraft enter left-traffic pattern from north	
	› Pattern stays inside Mt. Rubidoux during daylight hours; circles around east side of mountain at night	
▶ Departures, Runway 24	› Unless cleared through Riverside Municipal Airport airspace to southwest, aircraft make 230°-270° left turn to depart along river or overhead the airport	

Notes

^a Source: Airport records

^b Source: Coffman Associates; projected for compatibility planning purposes; time frame is 20+ years

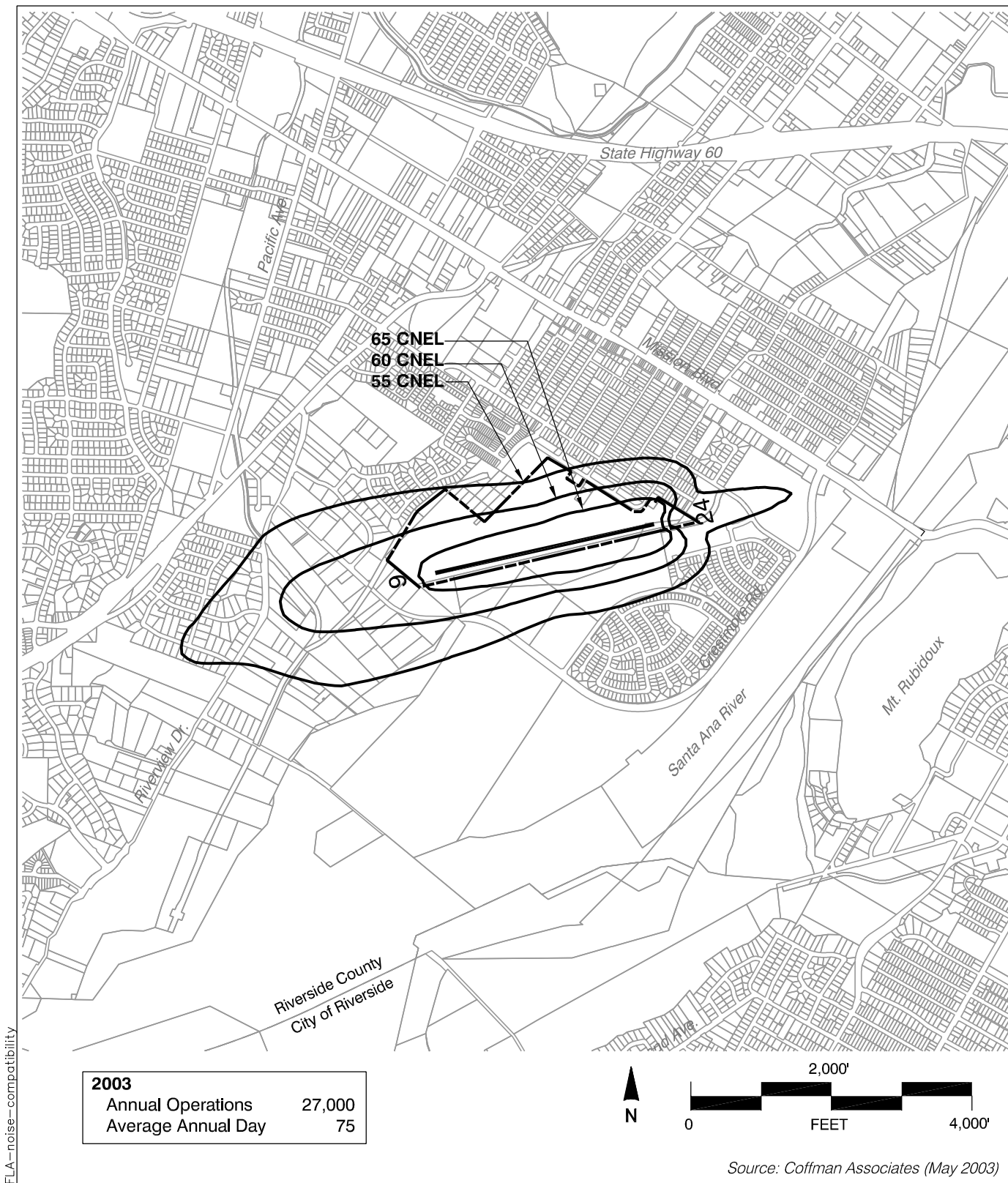
^c Source: California Division of Aeronautics aircraft operations counter program

^d Source: Estimated by Coffman Associates from data provided by airport staff

Exhibit FL-3

Airport Activity Data Summary

Flabob Airport

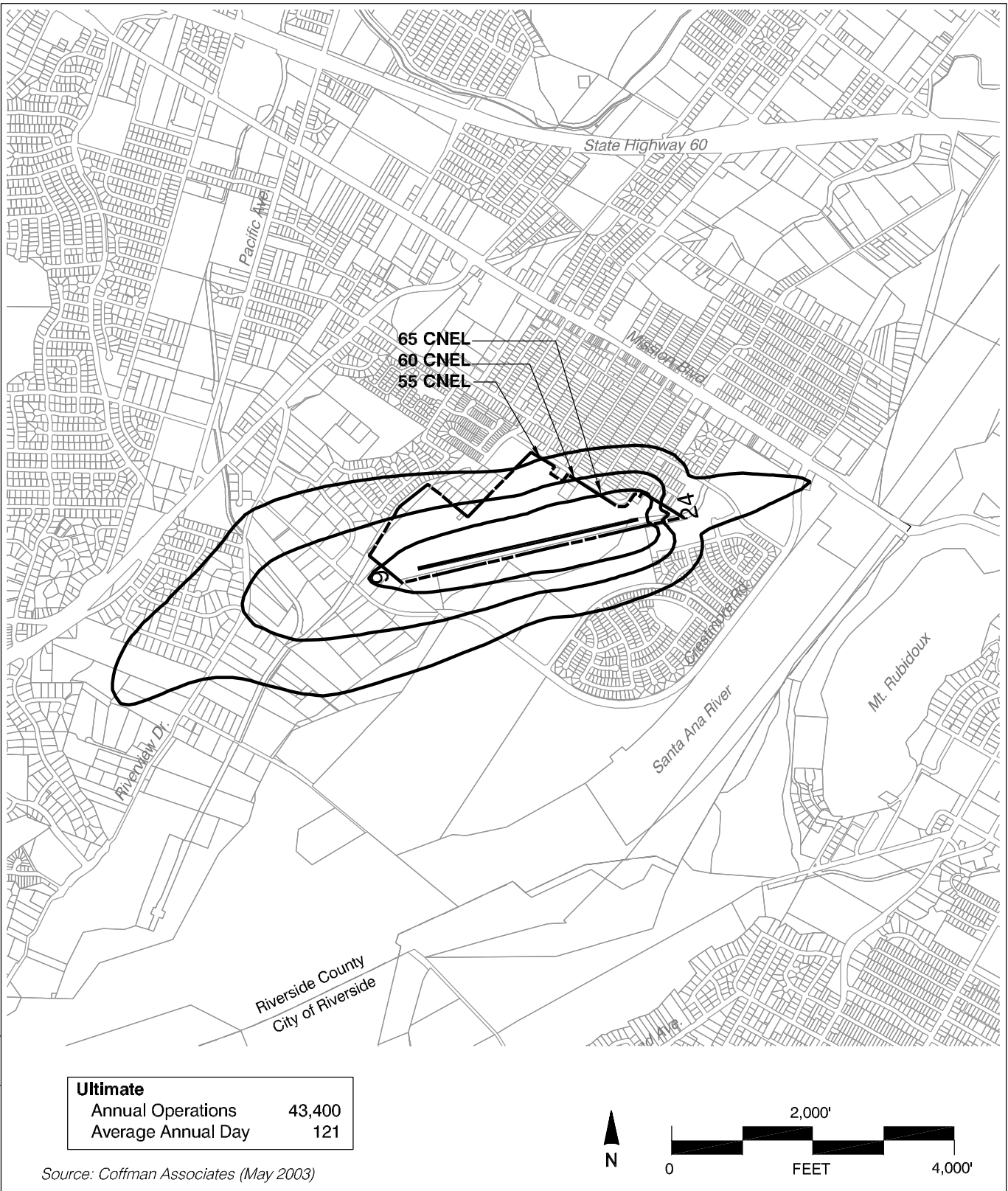


FLA—noise—compatibility

Exhibit FL-4

Existing Noise Impacts

Flabob Airport

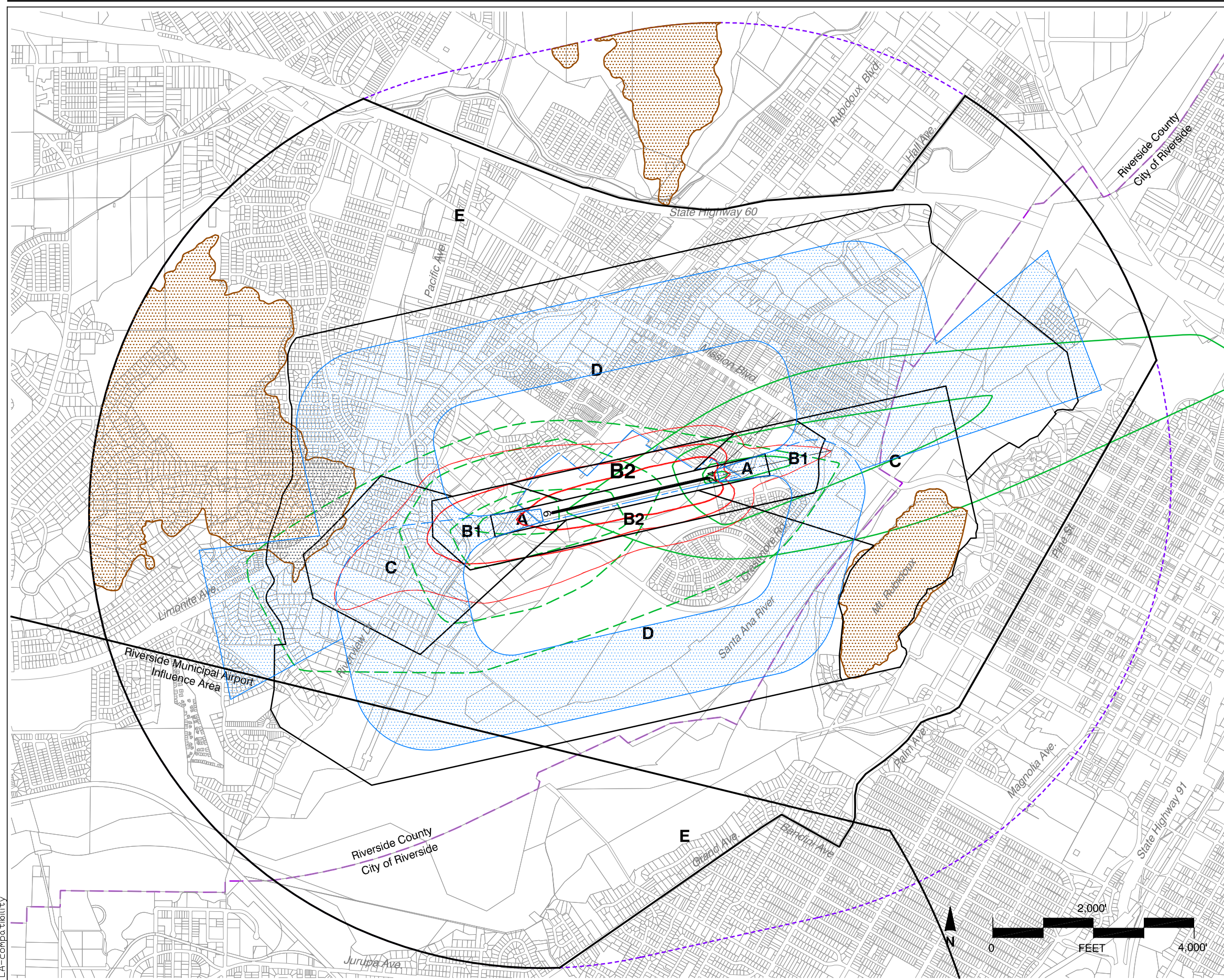


FLA-noise-compatibility

Exhibit FL-5

Future Noise Impacts
Flabob Airport

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Legend

Compatibility Zones

- Airport Influence Area Boundary
- Zone A
- Zone B1
- Zone B2
- Zone C
- Zone D
- Zone E

Noise and Overflight Compatibility Factors

- 65 dB CNEL } Future Average
- 60 dB CNEL } Annual Day
- 55 dB CNEL }
- General Traffic Pattern Envelope (approximately 80% of aircraft overflights estimated to occur within these limits)

Safety and Airspace Compatibility Factors

- Aircraft Departure Accident Risk Intensity Contours* (Shown only for Takeoffs to the West)
- Aircraft Approach Accident Risk Intensity Contours* (Shown only for Landings from the East)
- FAR Part 77 Conical Surface Limits
- Terrain Penetration on FAR Part 77 Surfaces

Boundary Lines

- Airport Property Line
- City Limits

* Aircraft accident risk intensity contours are derived from nationwide accident location data in California Division of Aeronautics database. The contours show relative intensities (highest concentrations) of near-airport accidents in 20% increments. The contour shapes represent a wide range of general aviation airports and have not been modified to reflect the flight tracks for this airport.

Riverside County
Airport Land Use Commission
Riverside County
Airport Land Use Compatibility Plan
West County Airports Background Data
(December 2004)

Exhibit FL-6

Compatibility Factors Map
Flabob Airport

FLA-compatibility



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AIRPORT SITE

- ▶ *Location*
 - ▶ Western Riverside County
 - ▶ In unincorporated community of Rubidoux
 - ▶ 2 miles northwest of Riverside Central Business District
- ▶ *Nearby Terrain*
 - ▶ Airport site generally level
 - ▶ Santa Ana River within 1 mile south and east of runway
 - ▶ Nearby high points: Mt. Rubidoux (elevation 2,655 ft.) 1 mile southeast; Pedley Hills (elevation 1,000-1,200 ft.) 1-2 miles west; hill (elevation 1,735 ft.) 1¼ miles north

AIRPORT ENVIRONS LAND USE JURISDICTIONS

- ▶ *County of Riverside*
 - ▶ Airport entirely within unincorporated Riverside County
- ▶ *City of Riverside*
 - ▶ Riverside city limits within 1 mile south and east of runway

STATUS OF COMMUNITY PLANS

- ▶ *Riverside County*
 - ▶ General Plan, a portion of Riverside County Integrated Project, adopted by Board of Supervisors Oct. 2003
- ▶ *City of Riverside*
 - ▶ General Plan adopted September 1993

EXISTING AIRPORT AREA LAND USES

- ▶ *General Character*
 - ▶ Primarily urban residential, low- to moderate-density except along Santa Ana River
- ▶ *Runway Approaches*
 - ▶ East (Runway 24): Mobile home parks (¼ and ½ mile from runway end); commercial along Mission Blvd. (½ mile); Santa Ana River (¾ mile)
 - ▶ West (Runway 6): Low-density residential (near runway end); urban residential (beyond ½ mile)
- ▶ *Traffic Patterns*
 - ▶ South: Parks (Santa Ana River Regional Park; Rancho Jurupa Park); Santa Ana River; Mt. Rubidoux; urban residential east of Mt. Rubidoux
 - ▶ North: Mostly urban residential; Hwy 60 (1 mile north)

PLANNED AIRPORT AREA LAND USES

- ▶ *Riverside County*
 - ▶ Mostly continuation of existing development pattern
 - ▶ Park and open space lands along river
 - ▶ Additional residential south and west; infill elsewhere
 - ▶ Potential additional commercial uses along Mission Blvd.
- ▶ *City of Riverside*
 - ▶ Open space along river and on Mt. Rubidoux
 - ▶ Existing residential areas farther south and east

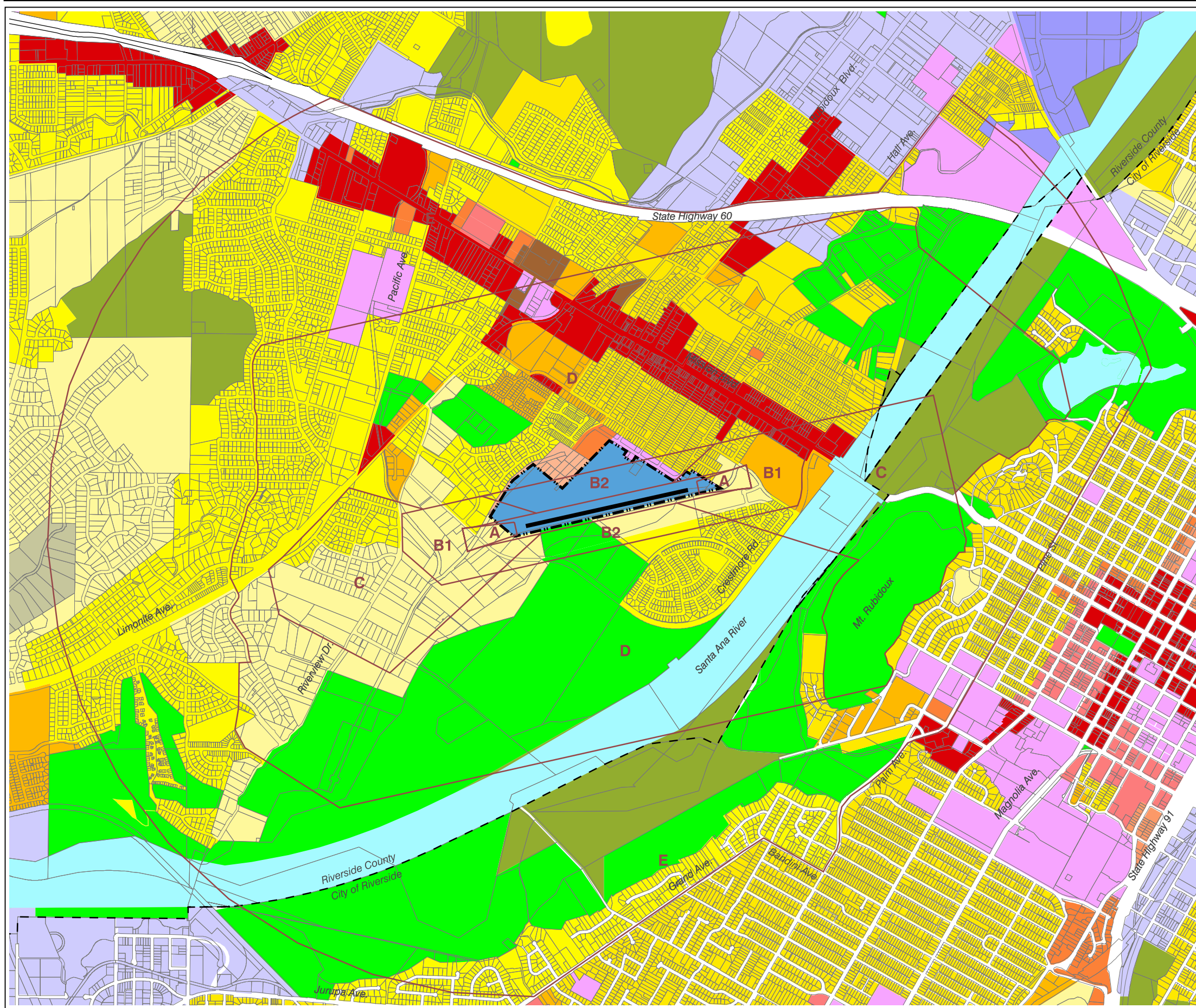
ESTABLISHED AIRPORT COMPATIBILITY MEASURES

- ▶ *Riverside County General Plan*
 - ▶ Prohibit new residential uses, except single-family dwellings on legal residential lots of record, within airports' 60 dB CNEL contour as defined by ALUC (Policy N 7.4)
 - ▶ Safety compatibility zones and criteria from previous compatibility plan incorporated into General Plan
 - ▶ Review all proposed projects and require consistency with any applicable compatibility plan (LU 14.2)
 - ▶ Submit proposed actions and projects to ALUC as required by state law (Policy LU 1.9); other actions may be submitted on voluntary and advisory basis (LU 14.8)
- ▶ *City of Riverside General Plan*
 - ▶ Residential development considered conditionally acceptable in the 60-70 CNEL range; normally unacceptable at 70-75 CNEL; clearly unacceptable above 75 CNEL
 - ▶ Although intended for Riverside Municipal Airport, Transportation Element Policy T 3.8 could also apply to Flabob; policy states that "City should limit building heights and land use intensities beneath airport approach and departure paths to protect public safety"
- ▶ *City of Riverside Zoning Codes*
 - ▶ No FAR Part 77 height limit zoning

Exhibit FL-7

Airport Environs Information

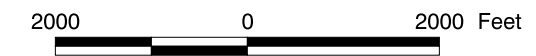
Flabob Airport



Legend

- City Limits
- Runway
- Airport Property Line
- Compatibility Zones
- Very-High-Density Residential (>20 du/ac)
- High-Density Residential (14.1-20 du/ac)
- Medium-High-Density Residential (8.1-14.0 du/ac)
- Medium-Density Residential (5.1-8.0 du/ac)
- Low-Density Residential (2.1-5.0 du/ac)
- Very-Low-Density Residential (0.4-2.0 du/ac)
- Mobile Home Park
- High-Intensity Commercial/Office
- Low-Intensity Commercial /Office
- Office/Business Park
- Heavy Industrial
- Light Industrial/Warehousing
- Mixed Use
- Airport
- School
- Other Public/Institutional
- Parks & Recreation
- Rural Residential
- Agriculture
- Open Space/Conservation
- Federal Lands
- State Lands
- Indian Lands
- Unclassified

Note: This map is combined and simplified from the following map sources:
 Riverside County General Plan (October 2003)
 City of Riverside General Plan (September 1993)



Riverside County
Airport Land Use Commission
Riverside County
Airport Land Use Compatibility Plan
West County Airports Background Data
(December 2004)

Exhibit FL-8

General Plan Land Use Designations
Flabob Airport Environs

**COUNTY OF RIVERSIDE:
GENERAL PLAN (2003) AND JURUPA AREA PLAN**

Residential Land Use

- ▶ *Compatibility Zone A*
 - › Estate-Density, Very-Low Density, and Low-Density Residential (0.4 to 2.0 dwelling units/acre) designations east and west of airport [R1] conflict with *Zone A* compatibility criteria; no structures are allowed in *Zone A*
- ▶ *Compatibility Zone B1*
 - › Estate-Density, Very-Low Density, and Low-Density Residential (0.4 to 2.0 dwelling units/acre) designations and High-Density Residential (8.1 to 14.0 dwelling units/acre) designation west and east of airport [R2], respectively, conflict with *Zone 1* compatibility criteria
- ▶ *Compatibility Zone B2*
 - › Estate-Density, Very-Low Density, and Low-Density Residential (0.4 to 2.0 dwelling units/acre) designations and Medium-Density Residential (2.1 to 5.0 dwelling units/acre) designation south of airport [R3] conflict with *Zone B2* compatibility criteria
- ▶ *Compatibility Zone C*
 - › Estate-Density, Very-Low Density, and Low-Density Residential (0.4 to 2.0 dwelling units/acre) designations west of the airport and High-Density Residential (8.1 to 14.0 dwelling units/acre) designation east of the airport [R4] conflict with *Zone C* compatibility criteria
- ▶ *Compatibility Zone D*
 - › Estate-Density, Very-Low Density, and Low-Density Residential (0.4 to 2.0 dwelling units/acre) designations and Medium-Density Residential (2.1 to 5.0 dwelling units/acre) designation north and south of airport [R5] potentially conflict with the high-and-low options for *Zone D*
- ▶ *Compatibility Zone E*
 - › No inconsistencies noted

Non-Residential Land Use

- ▶ *Compatibility Zone D*
 - › Potential Conflict: *Zone D* intensity limits (100 people/acre) apply to areas designated as Other Public/Institutional northwest of airport [R6]

Other Policies

- ▶ *General Plan*
 - › Acknowledgement of ALUC policies—no conflict
 - › Established ALUC 60 dB CNEL noise contour policy for new residential development—no conflict
- ▶ *Zoning Codes*
 - › Height limit zoning not established

Note: This is an initial land use consistency review prepared for the purpose of identifying areas where a conflict exists or potentially exists with ALUC compatibility zone criteria. This review is based upon available general plan documents and does not take into account existing land use. When a conflict between the general plan and compatibility criteria exists, it is not deemed inconsistent when the general plan is merely representing existing development. A more comprehensive analysis is necessary at the time a general plan land modification is presented to the ALUC for review.

Exhibit FL-9

General Plan Consistency Review (Preliminary)

Flabob Airport Environs

**CITY OF RIVERSIDE:
GENERAL PLAN (1993), AND ZONING CODES**

Residential Land Use

- ▶ *Compatibility Zone C*
 - › No inconsistencies noted
- ▶ *Compatibility Zone D*
 - › Residential designations with densities ranging from 2.1 to 5.0 dwelling units/acre southeast of airport [CIR1] potentially conflict with the high-and-low options for *Zone D*
- ▶ *Compatibility Zone E*
 - › No inconsistencies noted

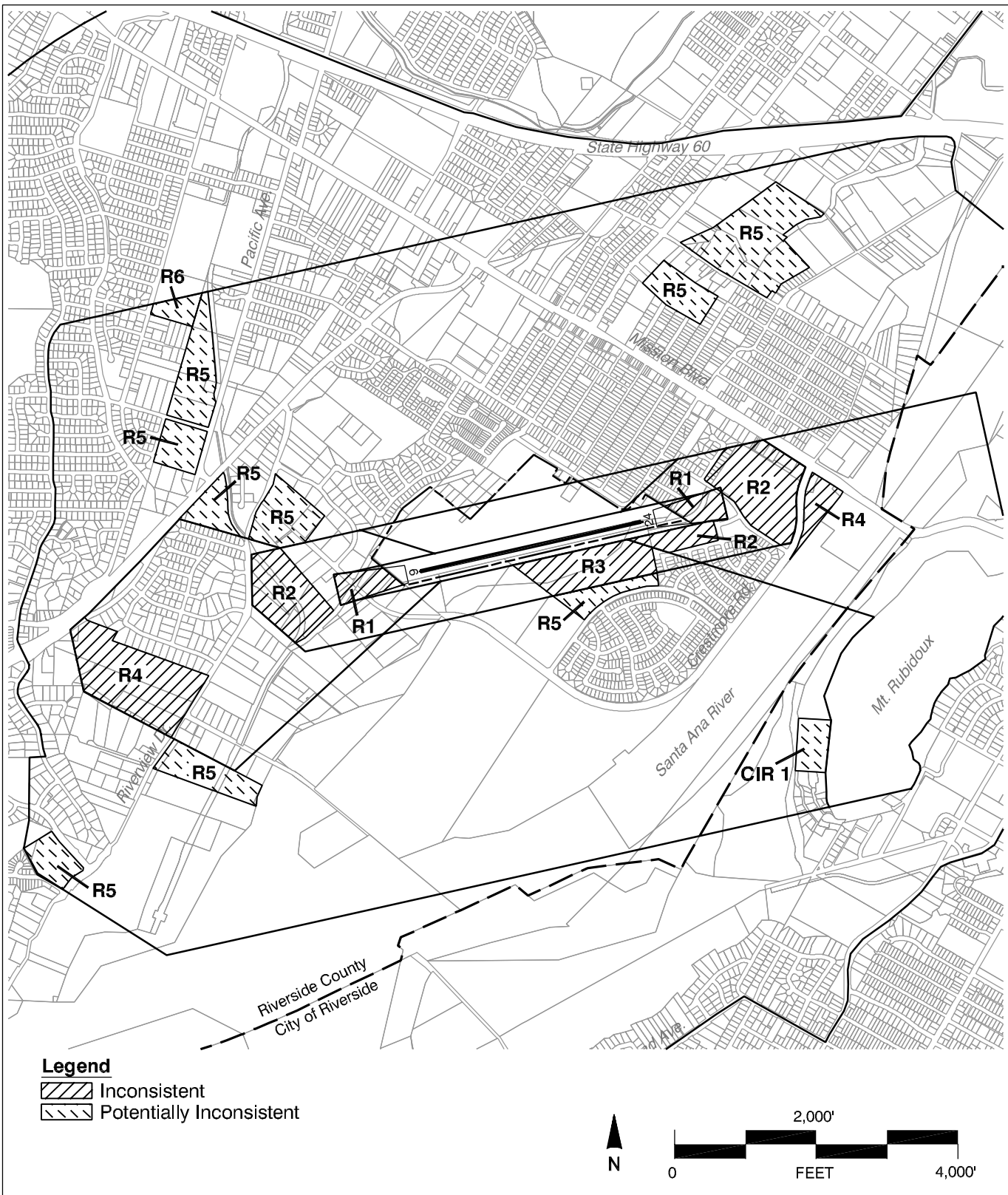
Other Policies

- ▶ *General Plan*
 - › No acknowledgment of ALUC coordination
 - › Noise policy conditionally allows residential development up to 70 dB CNEL conflicts with Compatibility Plan limit of 60 dB CNEL
- ▶ *Zoning Codes*
 - › Height limit zoning not established



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Exhibit FL-9, continued

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Legend

-  Inconsistent
-  Potentially Inconsistent

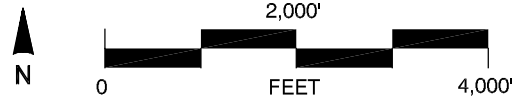


Exhibit FL-9, continued