Airport Background Data and Assumptions Report – Santa Maria Public Airport

Santa Barbara County
Airport Land Use Compatibility Plan Update

1.0 Introduction

The following document describes Santa Maria Public Airport (SMX or the Airport) and the surrounding area. This summary is derived from the following documents:

- 2015 Airport Layout Plan,
- FAA approved forecasts for use in the 2017 Draft Santa Maria Public Airport Master Plan update,
- the 2017 Draft Santa Maria Public Airport Master Plan,
- the current Santa Maria Public Airport Master Plan (Master Plan), prepared in 2004,
- information provided in the April 2010 Environmental Assessment (EA) and Draft Environmental Impact Report (EIR) prepared for the 2004 Master Plan projects,
- airport records maintained by the Federal Aviation Administration (FAA),
- information provided on the SMX website (http://www.santamariaairport.com).

The information derived from these sources, including the Airport location, surrounding land use, Airport facilities, and existing and projected operational activity at the Airport were used as the basis for development of the draft compatibility factors for the Airport Land Use Compatibility Plan (ALUCP) update for the Airport.

2.0 Airport Background

SMX is located in northwestern Santa Barbara County, approximately three miles south of downtown Santa Maria and 70 miles north of the City of Santa Barbara. The unincorporated community of Orcutt is located immediately south and east of the Airport. An aerial photo showing the Airport and surrounding areas is provided in **Exhibit A-1**.

The Airport, originally known as the Santa Maria Army Airfield, was established in early 1942 as a pilot training facility for the Army Air Corps. The Airport location was selected due to the presence of the nearby Allan Hancock Airfield and the Hancock Foundation College of Aeronautics, which was contracted by the Army to provide flight instruction to military pilots. The Airport was named for Captain G. Allan Hancock, a Santa Maria area businessman and the founder of the airfield and aeronautical college. The original Allan Hancock Field is now the site of Allan Hancock College, a multi-campus facility with locations throughout Santa Barbara County. In 1946, following the end of World War II, the Airport was turned over to Santa Barbara County under a permit issued by the War Assets Administration. The City of Santa Maria acquired an undivided one-half interest in the Airport in 1949, and managed the facility jointly with the County. In 1962, the Santa Maria Public Airport District (SMPAD) was formed to take over management and operation of the Airport. The SMPAD controls a total area of 400 square miles; however, the Airport only occupies 2,516 acres. Only 1,500 acres of this area is in active aviation use. The remaining lands under SMPAD control are generally leased for livestock grazing and agricultural purposes.

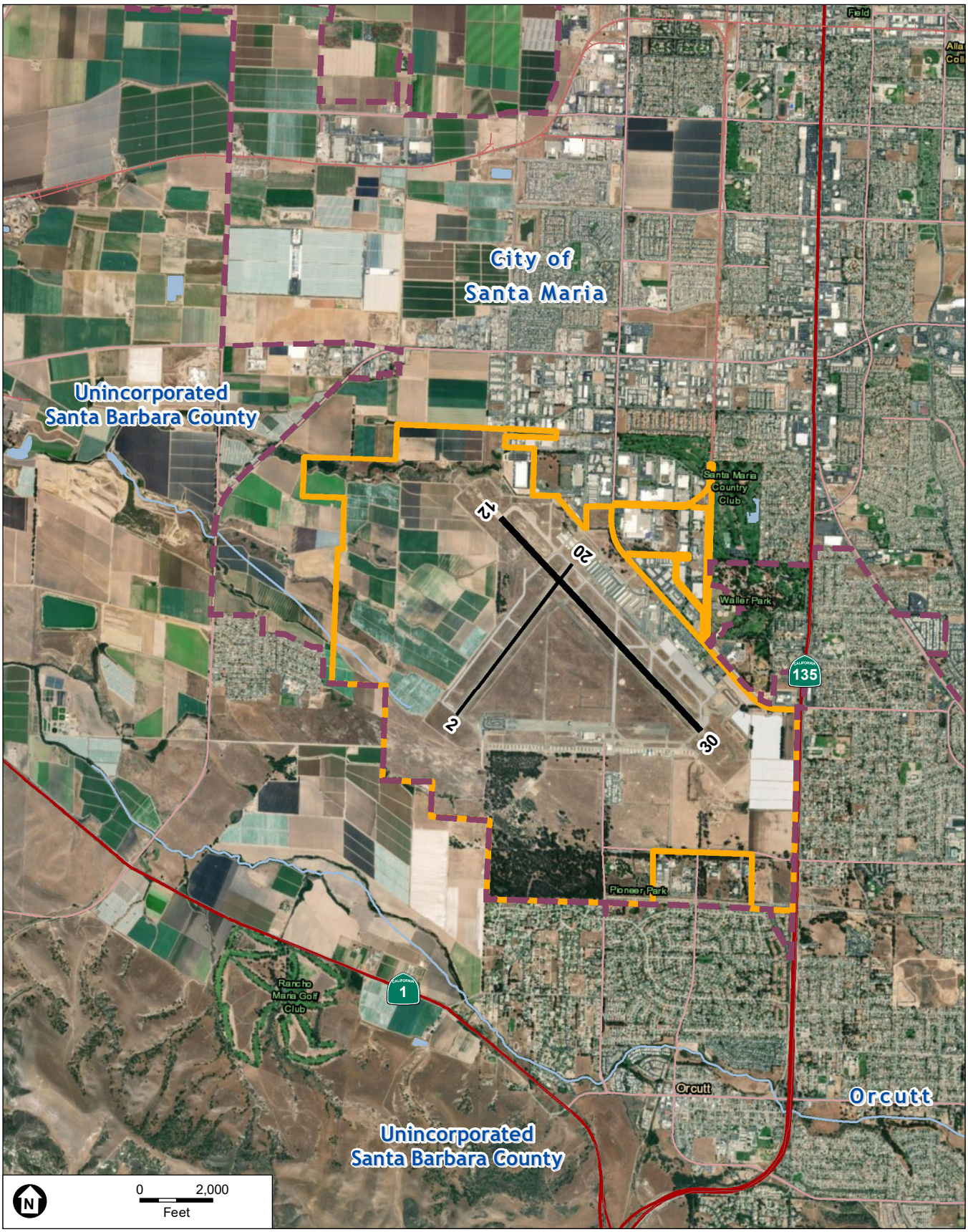
Existing land use around the Airport is varied. Agricultural uses predominate to the northwest, west, and southwest of the Airport. The residential neighborhood of Tanglewood in unincorporated Santa Barbara County lies approximately three-quarters of a mile west of the Runway 2 end. Light industrial and commercial uses within the City of Santa Maria predominate to the immediate northeast and east of the Airport. The community of Orcutt, in unincorporated Santa Barbara County, is located immediately adjacent to the southwest boundary of the Airport. The predominant land use in Orcutt is single-family residential. Existing land use is depicted in **Exhibit A-2**. Planned land use is depicted in **Exhibit A-3**.

As of May 2017, the Santa Maria Public Airport Master Plan is in the process of being updated; however, aviation forecasts being used in the update have been prepared and approved by the FAA. The current Santa Maria Public Airport Master Plan was updated in September 2004 and provides a forecast of Airport activity through 2021. An Environmental Assessment (EA) and an Environmental Impact Report (EIR) were completed in April 2010 for Phase 1 (2008-2012) and Phase 2 (2013-2017) of the Master Plan improvements. The primary Phase 1 improvements included extending Runway 12-30 and Taxiway A by 1,700 feet, construction of a new Airport Rescue and Firefighting Facility (ARFF), and development of a new rental car washing, fueling, and parking facility. The Runway 12-30 and Taxiway A extension projects were completed in 2012 and the ARFF was completed in 2014. The Phase 2 (2013-2017) improvements include installation of a lighting system on Runway 2-20, extension of Taxiway N, and construction of a crossfield taxiway. As of April 2017, these projects had not yet been completed.

The Airport Layout Plan (ALP) was last updated in March 2015. The ALP is provided in **Exhibit A-4**. The updated ALP includes plans for relocation of the Airport's flight museum, development of more than 60 private aircraft hangars, development of six large and seven small aircraft hangars midfield with associated taxi lanes, development of three Fixed Base Operator (FBO) hangars, relocation of the ARFF, removal of the existing Boy Scouts building, expansion of the existing cargo complex, relocation of the SMPAD power vault, eight additional taxiways, and taxiway lighting.

Other planning documents prepared for the Airport include a FAR Part 150 noise compatibility study, completed in the late 1980's. The Noise Compatibility Program (NCP) was approved by the FAA in 1990.

Table A-1 provides a summary of Airport background information.



SOURCE: ESRI, Inc., 2019.

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santa barbara county association of governments

Exhibit A-1
Santa Maria Public Airport
Airport and Surrounding Areas

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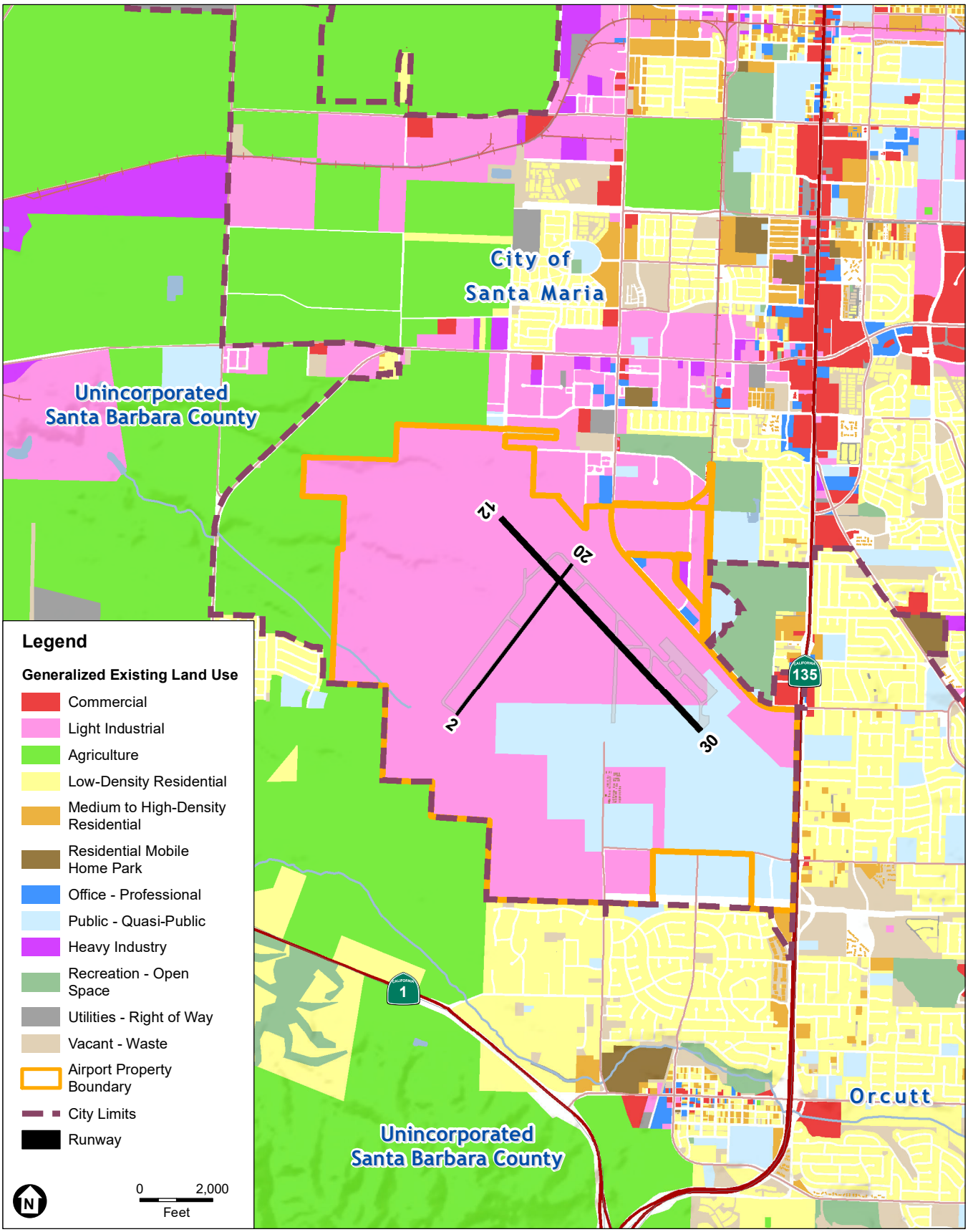

SOURCE: Santa Barbara County Tax Assessor, 2017.

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Exhibit A-2
Santa Maria Public Airport
Generalized Existing Land Uses

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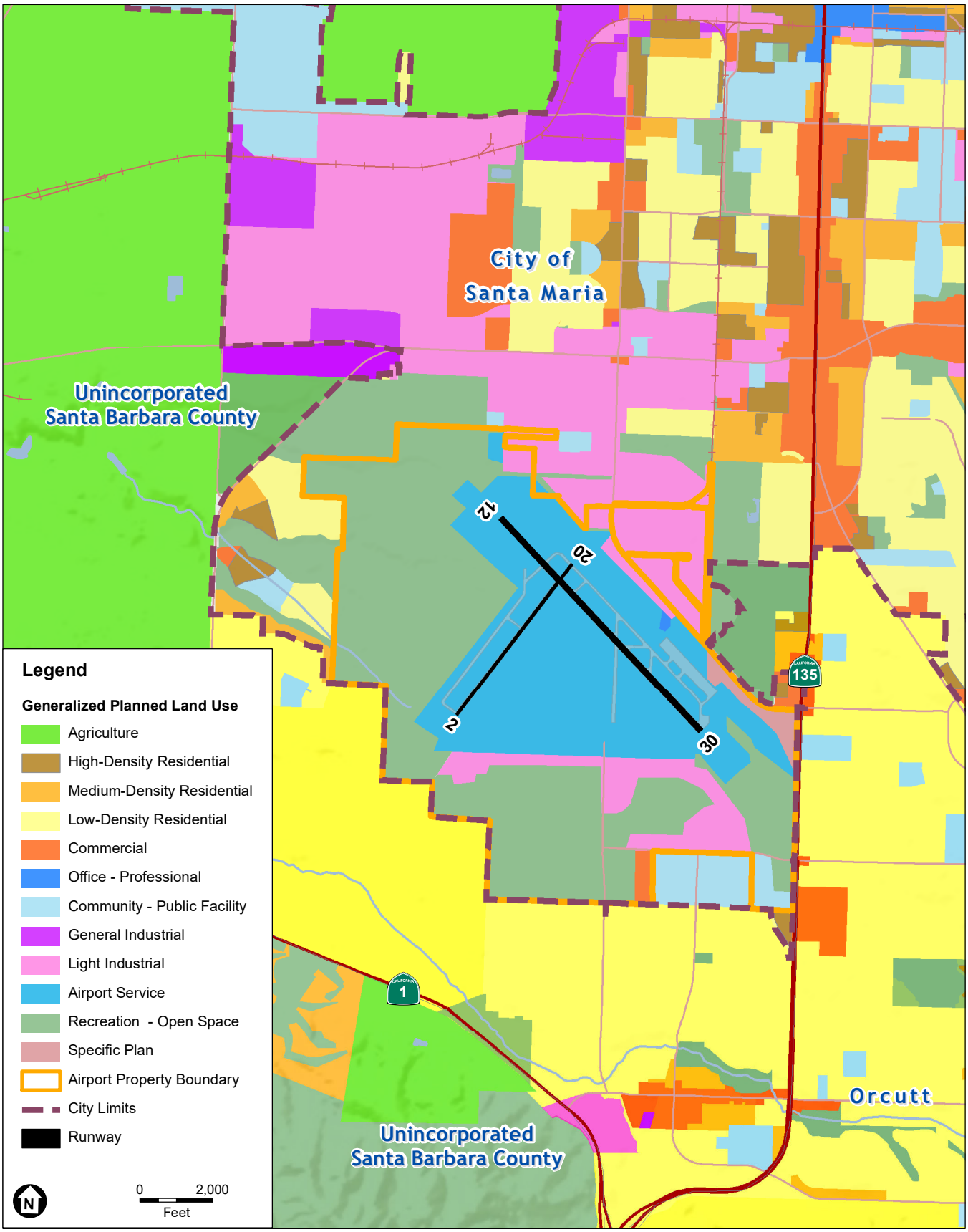

SOURCE: City of Santa Maria General Plan, 2019; Santa Barbara County Comprehensive Plan, 2019.

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Exhibit A-3
Santa Maria Public Airport
Generalized Planned Land Uses

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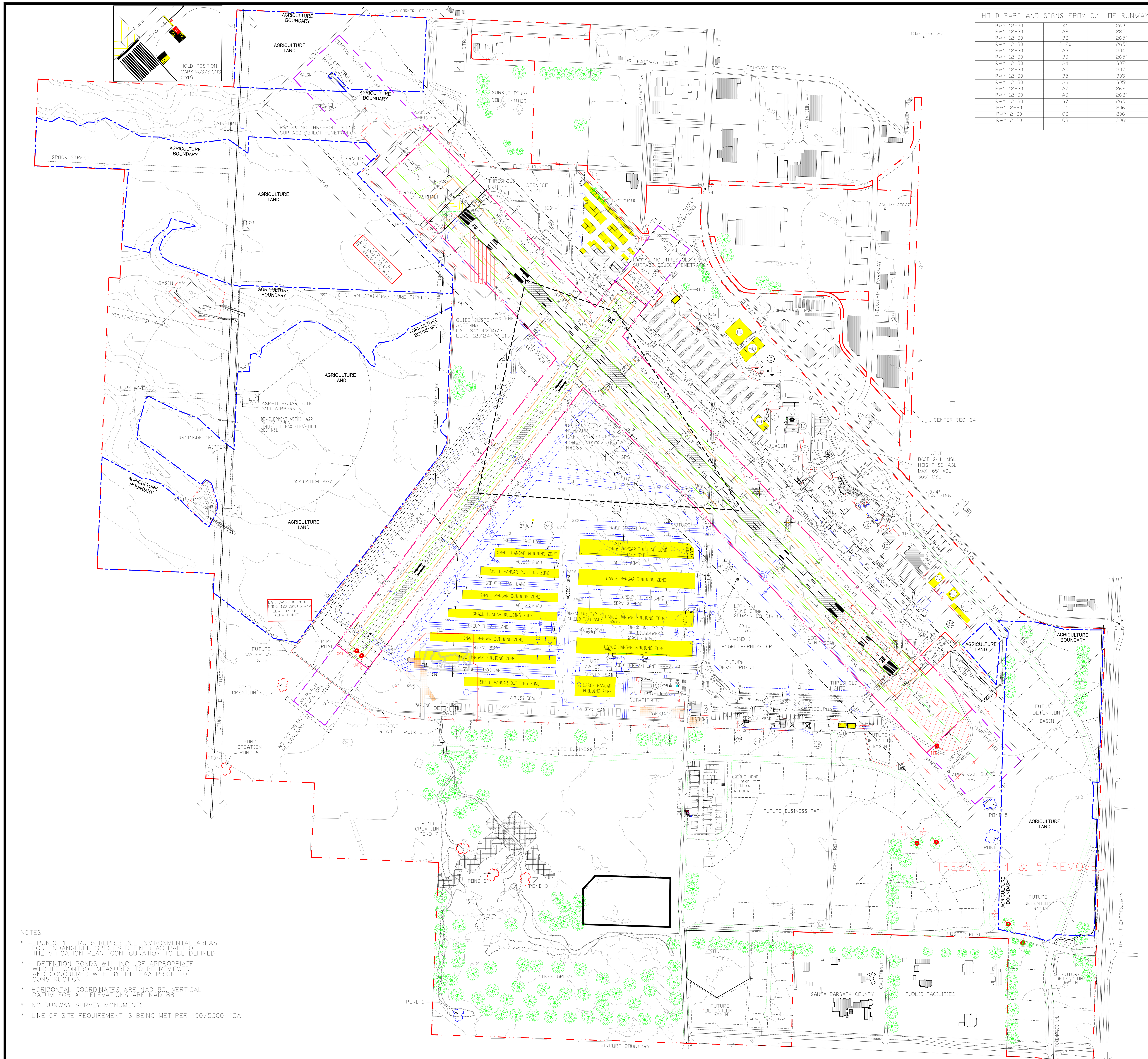
SANTA MARIA
PUBLIC AIRPORT DISTRICT

3217 TERMINAL DRIVE
SANTA MARIA, CA 93455
(805) 922-1726

AIRPORT LAYOUT PLAN DRAWING



NOTES:

* – PONDS 1 THRU 5 REPRESENT ENVIRONMENTAL AREAS FOR ENDANGERED SPECIES DEFINED AS PART OF THE MITIGATION PLAN. CONFIGURATION TO BE DEFINED.
* – DETENTION PONDS WILL INCLUDE APPROPRIATE WILDLIFE CONTROL MEASURES TO BE REVIEWED AND CONCURRED WITH BY THE FAA PRIOR TO CONSTRUCTION.
* HORIZONTAL COORDINATES ARE NAD 83, VERTICAL DATUM FOR ALL ELEVATIONS ARE NAD 88.
* NO RUNWAY SURVEY MONUMENTS.
* LINE OF SITE REQUIREMENT IS BEING MET PER 150/5300–13A

HOLD BARS AND SIGNS FROM C/L OF RUNWAY		
RWY 12-30	A1	263'
RWY 12-30	A2	285'
RWY 12-30	B2	265'
RWY 12-30	2-20	265'
RWY 12-30	A3	304'
RWY 12-30	B3	265'
RWY 12-30	A4	307'
RWY 12-30	A5	307'
RWY 12-30	B5	305'
RWY 12-30	A6	305'
RWY 12-30	A7	266'
RWY 12-30	A8	262'
RWY 12-30	B7	265'
RWY 2-20	C1	206'
RWY 2-20	C2	206'
RWY 2-20	C3	206'

LEGEND

EXISTING	ULTIMATE	ITEM
		BUILDING
		TO BE REMOVED / RELOCATED
		VEHICLE PAVEMENT
		AIRFIELD PAVEMENT
		RUNWAY PROTECTION ZONE
BRL	BRL	BUILDING RESTRICTION LINE (BRL)
		AIRPORT BOUNDARY
		FENCE
250'	SAME	GROUND CONTOURS
		RUNWAY & TAXIWAY EDGE LIGHTS
		FUTURE FACILITY
	SAME	AIRPORT REFERENCE POINT (ARP)
	SAME	WIND CONE
	SAME	RUNWAY SAFETY AREA
	SAME	DISTANCE REMAINING MARKERS
	SAME	WIND CONE & SEGMENTED CIRCLE
	SAME	DRAINAGE
28 27 / 33 34	SAME	SECTION CORNER
	SAME	TREES
	SAME	BIOLOGICAL PRESERVE
OFZ	SAME	RUNWAY OBSTACLE FREE ZONE (OFZ)
OFA	SAME	RUNWAY OBSTACLE FREE AREA (OFA)
		CENTER LINE
CLL	CLL	CLEARANCE LIMIT LINE
	SAME	LIGHTNING DETECTOR (LD)
	SAME	PRECISION OBSTACLE FREE ZONE
1107	SAME	GLOBAL POSITIONING POINT
6 S	SAME	CITY WATER WELL & NO.
1	SAME	REVISIONS TO ALP (SEE REVISION BLOCK)
	SAME	AIRPORT BEACON
	SAME	SURFACE OBJECT PENETRATION
	SAME	HOLD BAR POSITION MARKINGS
		POND
	SAME	MALSR 5-LIGHTS
	SAME	THRESHOLD LIGHTS
RVZ	SAME	RUNWAY VISIBILITY ZONE
	SAME	TAXIWAY SHOULDER
		FUTURE BUSINESS PARK
	SAME	CURRENT AGRICULTURE LAND
	SAME	CENTRAL PORTION OF RPZ

BUILDING/FACILITIES

EXISTING	ULTIMATE	DESCRIPTION/USER
1	1U	MUSEUM OF FLIGHT
2	SAME	DISTRICT OWNED AIRCRAFT STORAGE HANGARS
3	SAME	SMPAD MAINTENANCE FACILITIES
4	4U	PRIVET AIRCRAFT STORAGE HANGARS
5	SAME	FUEL STORAGE
6	6U	FBO HANGAR
7	SAME	AIRPORT ADMINISTRATION BLDG.
8	SAME	AIR TRAFFIC CONTROL TOWER
9	SAME	PASSENGER TERMINAL BLDG.
10	SAME	CENTRAL JET COAST CENTER
11	11U	ARFF STATION
12	SAME	FBO HANGAR
13	SAME	RADISSON HOTEL
14	REMOVED	BOY SCOUTS BUILDING (REMOVED)
15	SAME	FBO HANGAR (MOUNTAIN AIR AVIATION)
16	SAME	FBO HANGAR (ART-CRAFT PAINT)
17	SAME	SELF FUELING
18	SAME	CENTRAL COAST JET CENTER
19	SAME	ARCTIC AIR SERVICES
	21U	FUTURE LARGE AIRCRAFT HANGARS
	22U	FUTURE SMALL AIRCRAFT HANGARS
	23U	FUTURE RENTAL CAR FACILITY
24	SAME	UNITED STATE FOREST SERVICE
25	25U	CARGO COMPLEX
26	SAME	CALSTAR
27	27U	SMPAD POWER VAULT
28	SAME	KARTING TRACK
29	SAME	ROTOCRAFT
6S,7S,5AS	SAME	CITY WATER WELLS

FAA SIGNATURE BLOCK

NO.	REVISION	DATE	BY	APP'D
8	ALP UPDATE RUNWAY 12 1,704' EXTENSION	3/6/15	RH	
7	REVALIDATE AIRPORT LAYOUT PLAN	9/14/09	RH	

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 IN 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."

SPONSOR SIGNATURE

APPROVED BY: Chris Hastert

TITLE: General Manager

APPROVED DATE: MARCH 6, 2015

AIRPORT LAYOUT PLAN UPDATES			
REVISION NO.	DATE SUBMITTED	DATE APPROVED	NOTES
8	3/6/15	3/24/12	Update
7	5/6/09	9/14/2009	Revalidated
6	8/23/2007	10/15/2007	Revalidated
5	5/24/2006	6/19/2006	Approved

Date: 3/6/15 Checked By: JS

Drawn By: RH Approved By: CH

DRAWING NUMBER

SMX ALP - 2

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Table A-1 - Airport Background Summary – Santa Maria Public Airport

General Information	Description
Airport Ownership	Santa Maria Public Airport District (SMPAD)
Year Opened	1942
Airport Property Size	2,516 acres
Airport Classification	Commercial Service (Primary)
Airport Elevation	261 feet MSL
Airport Planning Documents	**Description**
Airport Master Plan	Santa Maria Public Airport Master Plan Update and Addendum Supplemental Analyses, September 2004
Airport Layout Plan	Santa Maria Public Airport ALP, last revised March 2015
14 CFR Part 150 Noise Study	NCP approved October 1990
Planned Facility Improvements	**Description**
Airside	• Private aircraft hangars • Six large and seven small aircraft hangars midfield with associated taxi lanes • Three FBO hangars • Relocation of the SMPAD power vault • Eight additional taxiways, including a Crossfield taxiway, and associated lighting
Landside	• Relocation of the Airport's flight museum • Relocation of the ARFF • Removal of the existing Boy Scouts building • Construction of rental car washing, fueling, and parking facilities

Notes: 1\All Phase 1 projects completed as of 2014.
MSL = Mean Sea Level
NCP=Noise Compatibility Plan
RSA=Runway Safety Area
OFA=Object Free Area
MALSR= Medium Intensity Approach Lighting System with Runway Alignment Indicator Lights
ARFF=Airport Rescue and Firefighting Facility
Source: Santa Maria Public Airport Master Plan Update, 2004; Santa Maria Public Airport ALP, 2015.

3.0 Airport Characteristics

The following section provides a brief description of the Airport characteristics. Airside facilities described include runways, taxiways, and aprons. Landside facilities include the terminal building, administrative offices, air traffic control tower, and general aviation (GA) and Airport support facilities.

The Airport has two runways, Runway 12-30 and the crosswind runway, Runway 2-20. The runways are oriented in a "T" formation and the Runway 20 end intersects Runway 12-30 approximately 1,700 feet southeast of the Runway 12 end. Runway 12-30 is 8,004 feet long and 150 feet wide and is designated an ARC C-IV runway.[1] The runway has a Pavement

[1] The Airport Reference Code (ARC) is a coding system used to relate airport design criteria to the operational and physical characteristics of the airplanes intended to operate at the airport. The airport reference code has two components relating to the airport design aircraft. The first component, depicted by a letter, is the aircraft approach category and relates to aircraft approach speed (operational characteristic). The second component, depicted by a Roman numeral, is the airplane design group and relates to airplane wingspan or tail height (physical characteristics), whichever is the most restrictive. Generally, runways standards are

Classification Number of 56/F/B/X/U.[2] The runway has a pavement strength of 75,000 pounds single wheel loading (SWL), 181,000 pounds dual wheel loading (DWL); and 400,000 pounds dual tandem wheel loading (DTWL). SWL, DWL, and DTWL describe different types of aircraft landing gear.

The predominant operational runway at SMX, Runway 12-30 is equipped with high-intensity runway lights (HIRL). Runway 12 is equipped with a 1,400-foot medium-intensity approach light system with runway alignment indicator lights (MALSR). A 4-light precision approach path indicator (PAPI) is located on the right side of Runway 12.

Runway 2-20 is 5,189 feet long and 75 feet wide and is designated an ARC B-II runway. The runway has a Pavement Classification Number of 6/F/B/Y/U.[3] The current runway pavement strength rating is 70,000 pounds SWL, 90,000 pounds DWL, and 150,000 pounds DTWL. The runway is generally used for GA operations and has no lighting, visual, or navigational aids.

Landing minimums for Runway 30 are relatively high due to obstructions to the south of the Airport, including a line of trees located approximately 4,700 feet from the runway and 800 feet left of the runway centerline and hills located approximately three miles south of the Runway 30 end. Similarly, landing minimums for Runway 20 are high due to obstructions to the north, including a line of trees located approximately 3,640 feet from the runway and 350 feet right of the runway centerline.

There are currently five published instrument approaches to the Airport, all serving Runway 12-30: ILS or LOC RWY 12, RNAV (GPS) RWY 12, RNAV (GPS) RWY 30, LOC/DME BC-A, and VOR RWY 12. These instrument approaches are described in greater detail in **Table A-2**. TheAirport is also served by one Standard Instrument Departure (SID) or Departure Procedure, the BUELT FOUR.

The runways at SMX are served by an extensive taxiway system. Taxiway A runs parallel to the east side of Runway 12-30 and connects to the runway via connector taxiways A1–A8. Taxiway B runs parallel to Runway 12-30 on the west side of the runway and connects to the runway via connector taxiways B3 and B5. Taxiway C runs parallel to Runway 2-20 and connects to the runway via connector taxiways C1-C3. Taxiway H runs east to west in the southern end of the airfield, parallel to a service road. Taxiway E connects Taxiways B and H. Taxiways J through W connect private aircraft hangars, the Airport terminal, the FBOs, and cargo facilities with the airfield.

There are four hold aprons on the airfield, one at each runway end. The Runway 30 end hold apron provides sufficient room to allow Taxiway A7 by-pass access to the Runway. The Runway 20 end hold pad is located at the intersection of Taxiways A and A3 and is designed to accommodate the small aircraft that predominantly use Runway 20.

There is a helipad located in the middle of the airfield. Landside facilities include a full-service passenger terminal, public parking lots, an Air Traffic Contract Tower (ATCT), GA facilities

related to aircraft approach speed, airplane wingspan, and designated or planned approach visibility minimums. (FAA AC 150/5300-13 CHG 10).

[2] 56/F/B/X/U represents the Pavement Classification Number (PCN) for the runway. The PCN is comprised of a code representing numerical PCN value, pavement type, subgrade category, allowable tire pressure, and method used to determine the PCN. For 56/F/B/X/U, “56” represents the PCN numerical value, “F” - flexible pavement, “B” - medium strength subgrade, “X” - high allowable tire pressure, and “U” - a PCN value obtained by a technical evaluation. (FAA AC 150/5335-5C).

[3] 6/F/B/Y/U = “6” represents the PCN numerical value, “F” - flexible pavement, “B” - medium strength subgrade, “Y” - medium allowable tire pressure, and “U” - a PCN value obtained by a technical evaluation.

(hangars, FBOs), airport maintenance and administration buildings, a hotel, a museum, a business park, and an ARFF. The ATCT operates between 6:00 a.m. and 8:00 p.m. daily.

Table A-2 presents a summary of the Airport's airside and landside facilities.

Table A-2 - Airport Facilities Summary – Santa Maria Public Airport

Airside Facilities	
Runways	**Description**
Runway Designation	Runway 12-30
Airport Reference Code (ARC)	C-IV
Critical Design Aircraft	B727
Runway Dimensions	8,004' x 150'
Pavement Strength	75,000 pounds SWL, 181,000 pounds DWL; and 400,000 pounds DTWL
Runway Lighting/Visual Approach Aids	HIRL, REIL, MALSR, PAPI right side of Runway 12, VASI left side of Runway 30
Taxiways	Taxiways A, B
Runway Designation	Runway 2-20
Airport Reference Code (ARC)	B-II
Critical Design Aircraft	BE99
Runway Dimensions	5,189' x 75'
Pavement Strength	70,000 pounds SWL, 181,000 pounds DWL, and 400,000 pounds DTWL
Runway Lighting	None
Taxiways	Taxiways C
Heliport/Helipad	Center of the Airfield
Approach Protection	**Description**
Runway Protection Zones (RPZs)	
Runway 12	1,000' x 1,750' x 2,500'
Runway 30	1,000' x 1,750' x 2,500'
Runway 2	200' x 450' x 1,000'
Runway 20	200' x 450' x 1,000'
Approach Obstacles	Runway 30: 225' trees, 4,700' from runway, 800' left of centerline, 20:1 slope to clear Runway 20: 121' trees, 3,700' from runway, 350' right of centerline, 28:1 slope to clear
Traffic Patterns and Approach Procedures	**Description**
Aircraft Traffic Patterns	
Runway 12	Right
Runway 30	Left
Runway 2	Right
Runway 20	Left
Pattern Altitude	Turboprop Aircraft 1,000'; Turbojet and Jet 1,500.

Table A-2 - Airport Facilities Summary – Santa Maria Public Airport (continued)

Instrument Approach Procedures	Type	NAVAIDS	Aircraft Category	Minimums	
				Ceiling	Visibility
ILS or LOC RWY 12	Straight in	ILS	A,B,C,D	200'	½ mile
	Straight in	LOC	A,B	680'	2,400'
	Straight in	LOC	C, D	680'	5,000'
	Circling	LOC	A, B	860'	1 mile
	Circling	LOC	C	860'	1½ miles
	Circling	LOC	D	1,320'	3 miles
RNAV (GPS) RWY 12	LPV	GPS	A,B,C,D	430'	2,400'
	LNAV/VNAV	GPS	A,B,C,D	563'	3,200'
	LNAV	GPS	A, B	680'	2,400'
	LNAV	GPS	C,D	680'	5,000'
	Circling	GPS	A B	860'	1 mile
	Circling	GPS	C	860'	1½ miles
	Circling	GPS	D	1,320'	3 miles
RNAV (GPS) RWY 30	LNAV	GPS	A	1,600'	1¼ miles
	LNAV	GPS	B	1,600'	1½ miles
	LNAV	GPS	C	1,600'	3 miles
	Circling	GPS	A	1,600'	1¼ miles
	Circling	GPS	B	1,600'	1½ miles
	Circling	GPS	C	1,600'	3 miles
LOC/DME BC-A	Circling	LOC	A	1,100'	1 mile
	Circling	LOC	B	1,100'	1¼ miles
	Circling	LOC	C	1,100'	2½ miles
	Circling	LOC	D	1,100'	3 miles
VOR RWY 12	Straight in	VOR	A,B	740'	2,400'
	Straight in	VOR	C,D	740'	5,500'
	Circling	VOR	A,B	860'	1 mile
	Circling	VOR	C	860'	1½ miles
	Circling	VOR	D	1,320'	3 miles

Table A-2 - Airport Facilities Summary – Santa Maria Public Airport (continued)

Landside Facilities	
Building Area	**Description**
Aircraft Parking Location	East of Runway 30
Aircraft Parking Capacity	3.04 acres
Aircraft Parking Gates	4 at main passenger terminal
Aircraft Hangars	20 conventional hangars, 52 Box Hangars, 150 T-hangars/single aircraft hangars (222 hangar spaces)
Other Facilities	Full service passenger terminal
Services	
Fuel	100LL, Jet A
Other	One FBO, parking tie-down, major airframe and power plant repairs

Notes:
MSL = Mean Sea Level
NCP=Noise Compatibility Plan
RSA=Runway Safety Area
OFA=Object Free Area
MALSR= Medium Intensity Approach Lighting System with Runway Alignment Indicator Lights
ARFF=Airport Rescue and Firefighting Facility
SWL= Single Wheel Loading
DWL= Dual Wheel Loading
DTWL= Dual Tandem Wheel Loading

Source: Santa Maria Public Airport Layout Plan, 2015; Federal Aviation Administration National Flight Data Center <https://nfdc.faa.gov/nfdcApps/services/airportLookup/airportDisplay.jsp?airportId=ksmx>, accessed April 2017.

4.0 Airport Activity

The following sections describe existing activity at the Airport as well as forecasted airport activity included in the Airport Master Plan.

4.1 Existing Airport Activity

For the purpose of this Airport Land Use Compatibility Plan (ALUCP) update, existing activity at the Airport is based on the 2015 baseline included in the FAA approved forecasts developed for the 2017 Master Plan update. **Table A-3** provides a summary of airport activity data for 2015. In 2015, there were approximately 235 aircraft based at the Airport and 38,389 annual aircraft operations. These aircraft operations represented approximately 28 percent local and 72percent itinerant operations. Itinerant operations are generally conducted by aircraft withdestinations other than SMX, whereas local operations tend to remain within the local trafficpattern.

While SMX is a commercial service airport, approximately 72 percent of operations in 2015 were GA operations; 46 percent were itinerant operations and 26 percent were local operations. Commercial service at the Airport represented approximately 10 percent of operations. Other air taxi (i.e., air charter) operations represented approximately 15 percent of operations at the Airport. The remaining 3 percent of operations in 2001 was conducted by the military.

Prevailing winds at SMX are from the northwest from the Pacific Ocean. The majority of operations are arrivals and departures to Runway 30. In 2010, Runway 30 was utilized for approximately 75 percent of arrivals and departures at the Airport. Historically, there have also been a substantial number of helicopter operations at the Airport. Helicopters typically depart to the west towards the Runway 2 end.

4.2 Forecast Airport Activity

California state law requires that the ALUCPs must be based on a long-range Airport Master Plan or an ALP that forecasts anticipated growth at an airport for the next 20 years. For purposes of this ALUCP update, the FAA approved forecasts developed for use in the 2017 Airport Master Plan Update currently underway are used to characterize future airport activity. The 2036 forecast represents a 30 percent increase in aircraft operations over the 2015 baseline.

Table A-3 – Airport Activity Data – Santa Maria Public Airport

Based Aircraft	**Existing Conditions (2015)**		**Future Conditions (2036)**	
Single Engine Piston	191		256	
Multi-Engine Piston	13		5	
Turboprop	2		18	
Business Jet	6		31	
Helicopter	21		30	
Other	2		6	
Total	235		346	
Air Carrier Activity	**Existing Conditions (2015)**		**Future Conditions (2036)**	
Enplanements	44,340		64,500	
Aircraft Operations	**Existing Conditions (2015)**		**Future Conditions (2036)**	
Annual Total	38,389		49,750	
Average Annual Day Total	105		136	
Operations by Aircraft Type				
Itinerant Operations	**Number of Operations (2015)**	**Percentage by Aircraft Type**	**Number of Operations (2036)**	**Percentage by Aircraft Type**
Air Carrier	324	1%	1,064	2%
Air Taxi/Commuter Airline	1,429	4%	3,056	6%
Air Cargo	1,972	5%	2,830	6%
Air Carrier Charter	41	0%	50	0%
Total Commercial	***3,766***	***10%***	***7,000***	***14%***
Other Air Taxi	5,838	15%	8,600	17%
General Aviation	17,718	46%	22,200	45%
Military	445	1%	450	1%
Itinerant Subtotal	**27,767**	**72%**	**38,250**	**77%**
Local Operations				
General Aviation	26,389	69%	10,800	22%
Military	648	2%	700	1%
Local Subtotal	***10,622***	***28%***	***11,500***	***23%***
Total	**38,389**	**100%**	**49,750**	**100%**

Source: Santa Maria Public Airport Master Plan Draft Update, Aviation Demand Forecasts, 2017.

The noise contours used in this ALUCP update are derived from the Final EIR prepared in 2010 for the current 2004 Santa Maria Public Airport Master Plan and reflect forecasted conditions for 2017. **Table A-4** summarizes the data used to produce the noise contours. Inputs used to modelnoise are further discussed in Section 5.1.

Table A-4 – Noise Model Inputs

Aircraft Operations			
	2006 (Baseline)	**2012**	**2017**
Annual Average Day	174	227	235
Flight Track Usage			
Runway	**Operations**	**Flight Track Name**	**Percentage**
2	Departure	02D1P	5.00%
20	Departure	20DBUELT	0.85%
20	Departure	20D1P	4.15%
12	Departure	12DBUELT	13.50%
12	Departure	12D1P	1.50%
30	Departure	30D1P	11.25%
30	Departure	30D2P	22.50%
30	Departure	30D3P	11.25%
30	Departure	30DBUELT	30.00%
Total Departures			**100.00%**
2	Arrival	02A1P	5.00%
20	Arrival	20A19	5.00%
12	Arrival	12AVORP	10.50%
12	Arrival	12RNAVP	4.50%
30	Arrival	30AIP	11.25%
30	Arrival	30A2P	56.25%
30	Arrival	30A3P	7.50%
Total Arrivals			**100.00%**
12	Helicopter Arrival	H1AP	17.00%
30	Helicopter Arrival	H2AP	83.00%
Total Helicopter Arrivals			**100.00%**
12	Helicopter Departure	H1DP	17.00%
30	Helicopter Departure	H2DP	83.00%
Flight Track Usage			
Runway	**Operations**	**Flight Track Name**	**Percentage**
Total Helicopter Departures			**100.00%**
2	Touch and Go	02TGO1	5.00%
20	Touch and Go	20TGO1	5.00%
20	Touch and Go	20TGO2	40.50%
12	Touch and Go	12TGO1	4.50%
30	Touch and Go	30TGO1	42.75%
30	Touch and Go	30TGO2	2.25%
Total Touch and Go			**100.00%**

Table A-4 – Noise Model Inputs (continued)

Time of Day Distribution	Arrivals			Departures		
	Day[1]	Evening[1]	Night [1]	Day[1]	Evening[1]	Night [1]
Air Carrier	34%	64%	2%	32%	64%	2%
Air Taxi/General Aviation	80%	10%	10%	80%	10%	10%
Military	90%	10%	0	90%	10%	0
Helicopter	80%	10%	10%	80%	10%	10%
Local General Aviation	90%	10%	0	90%	10%	0
Local Military	90%	10%	0	90%	10%	0

Notes: 1 – Day = 7:00 a.m. – 6:59 p.m.
Evening = 7:00 p.m. – 9:59 p.m.
Night = 10:00 p.m. – 6:59 a.m.
Source: 2) Santa Maria Master Plan Update Final EIR, 2010.

5.0 Draft Compatibility Factors

The four draft compatibility factors depicted on the following exhibits were developed following guidance provided in the California Department of Transportation's (Caltrans) Airport Land Use Compatibility Handbook (Handbook) and represent operating conditions specific to Santa Maria Airport. Each compatibility factor is further discussed below.

5.1 Draft Noise Compatibility Data

Exhibit A-5 shows noise contours that reflect operating conditions at the Airport under forecasted year 2017 conditions (See SMX Master Plan Update Final EIR, 2010). While the number of annual average daily operations used to produce the noise contour reflect forecasted operational numbers that are higher than those presented in the forecast being used for the 2017 Master Plan update, model inputs including runway length, runway use percentage, flight track usage, time of day distribution, and weather conditions should remain relatively similar. Because the 2017 noise contour represents a higher number of operations, the contour is likely larger than a noise contour based on the forecasts for the 2017 Master Plan update and thus more conservative. Flight tracks that represent aircraft activity at the Airport that were used in producing the noise contours are also depicted on **Exhibit A-5**.

5.2 Draft Safety Compatibility Data

Exhibit A-6 shows the proposed safety zones for the Airport. The safety zones were developed based on guidance provided in the Handbook, which includes dimensions for "generic" safety zones. These generic safety zones are geometric shapes representing areas of progressive degree of risk of aircraft accident based on statistical analysis of accident locations. Typically, the closer to the runway end, the higher the risk for an accident. While the number of safety zones at an airport may vary based on the airport's unique operating conditions, the Handbook provides guidance for six safety zones. **Table A-5** describes these safety zones in detail.

Table A-5 – Airport Safety Zones

Landside Facilities	
Safety Zone	**Description**
Safety Zone 1	• Runway Protection Zone • Reflects areas where aircraft are on very close approach or departure; • Altitude: Typically less than 200 feet above the runway.
Safety Zone 2	• Inner Approach/Departure Zone • Aircraft overflying at low altitudes on final approach and straight-out departure; • Altitude: Between 200 and 400 feet above the runway.
Safety Zone 3	• Inner Turning Zone • Aircraft, (especially smaller, piston-powered aircraft) turning base to final on landing approach or initiating turn to enroute direction on departure; • Altitude: Less than 500 feet above runway, particularly on landing.
Safety Zone 4	• Outer Approach/Departure Zone • Approaching aircraft usually at less than traffic pattern altitude. Particularly applicable for busy general aviation runways (because of elongated traffic pattern), runways with straight-in instrument approach procedures, and other runways where straight-in or straight-out flight paths are common; • Altitude: Less than 1,000 feet above the runway.
Safety Zone 5	• Sideline Zone • Area not normally overflown; primary risk is with aircraft (especially twins) losing directional control on takeoff; excessive crosswind gusts or engine torque; • Altitude: Runway elevation.
Safety Zone 6	• Traffic Pattern Zone • Aircraft within a regular traffic pattern and pattern entry routes; • Altitude: Ranging from 500 to 1,500 feet above the runway.

Source: Caltrans Airport Land Use Compatibility Handbook, 2011.

Safety zones for SMX were developed by selecting the appropriate set of generic safety zones from the examples provided in the Handbook and then overlaying them on each of the runways. Where necessary, adjustments were made to the safety zones to reflect the unique operating conditions at SMX. For purposes of developing the safety zones, the flight tracks used to model the noise contours depicted in **Exhibit A-5** were used to show the general aircraft operating patterns at the Airport. The safety zones were then adjusted to reflect the operations associated with the flight tracks, taking into account the number/percentage of aircraft operating along the tracks (See Table 1-4).

Safety zones for Runway 2-20 are based on *Example 2 – Medium General Aviation Runway* included in the Handbook. *Example 2* assumes a runway length between 4,000 and 5,900 feet, approach visibility minimums greater than or equal to ¾ a mile and less than one mile, and RPZs of 1,000 feet by 1,510 feet by 1,700 feet. Runway 2-20 is 5,194 feet long, consistent with Example 2. On both the Runway 2 and 20 ends, Safety Zone 1 was adjusted to be consistent with the dimensions of the current RPZs. Safety Zone 2 was adjusted on both runway ends to maintain contiguity with Safety Zones 1. The boundaries of Safety Zones 2, 3, 4, and 5 are consistent with the dimensions provided for in *Example 2.* These safety zones remain unchanged, as arrivals to Runway 2 and Runway 20 are straight-in and -out and few in number. Similarly, departures from Runway 2 are straight-in and –out. Departures from Runway 20 do not begin to turn until they have reached a sufficient distance from the runway. The dimensions for Safety Zone 6 are consistent with those provided for in *Example 2*; however, the outer boundaries beyond both runway ends have been extended to account for touch-and-go activity as illustrated by the flight tracks.

Safety Zones for Runway 12-30 were based on *Example 3: Long General Aviation Runway*, included in the Handbook. *Example 3* assumes a runway length greater than 6,000 feet, approach visibility minimums less than ¾ mile, and RPZs of 1,000 feet by 1,750 feet by 2,500 feet. Runway 12-30 is 8,004 feet long. The RPZ off the Runway 12 end is 1,000 feet by 1,750 feet by 2,500 feet and approach visibility minimums are less than ¾ mile, consistent with *Example 3*. The RPZ off the Runway 30 end is 1,000 feet by 1,510 feet by 1,700 feet and approach visibility minimums are greater than ¾ mile. Safety Zone 1 off the Runway 30 end was adjusted to reflect the dimensions of the RPZ. Safety Zone 4 was adjusted off the Runway 12 end and extended from the edge of Safety Zone 3 on the right side of the runway to account for the high volume of departures from Runway 30 (under forecasted 2017 conditions, approximately 75 percent of departures, or approximately 110 departures a day). The majority of departures off Runway 30 are aircraft operating on the BUELT FOUR departure procedure. The BUELT FOUR directs aircraft to turn to the right off the runway on a 190-degree heading to avoid restricted airspace associated with Vandenberg Air Force Base. Similarly, Safety Zone 4 has been widened to the southwest to cover departures from Runway 12 and the majority of arrivals to Runway 30.

5.3 Draft FAR Part 77 Airspace Compatibility Data

Exhibit A-7 shows the Part 77 airspace surfaces for SMX as included in the current ALP. The exhibit includes the conical, horizontal, and inner approach surfaces. The outer approach surface extends to the northwest and is shown as part of the Airport Influence Area (AIA) on **Exhibit A-9**. The Part 77 airspace surfaces reflected are three-dimensional areas around airports determined by FAA regulations that should be protected from obstructions that may interfere with safe operation of aircraft.

5.4 Draft Overflight Compatibility Data

Exhibit A-8 shows the overflight notification area for SMX. The overflight notification area includes all areas covered by the Airport's Safety Zones as well as flight corridors based on the flight tracks used to model the noise contours shown in **Exhibit A-5**. Adjustments were made based on recent changes to departure procedures at the Airport. Generally, flight tracks used to model noise contours are dispersed to account for normal variation in aircraft flight paths. However, as no dispersal tracks were available, general corridors centered on the flight tracks are depicted. These corridors extend to the outer boundary of the Airport's conical surface as defined by Part 77.

5.5 Draft Airport Influence Area

Exhibit A-9 shows the AIA for SMX. The AIA is "the area in which current or future airport-related noise, overflight, safety, or airspace protection factors may significantly affect land uses or necessitate restrictions on those uses." (Business and Professions Code 11010(b)(13)(b).) The AIA is divided into two areas. Review Area 1 and Review Area 2. Review Area 1 consists of a combination of the noise contours and six safety zones for the Airport, and represents areas where noise and/or safety concerns may require limitations on the type of allowable land uses. Review Area 2, consists of areas beyond Review Area 1, but within the area covered by the combined airspace surfaces and overflight notification area. Restrictions on the height of objects within Review Area 2 may apply.

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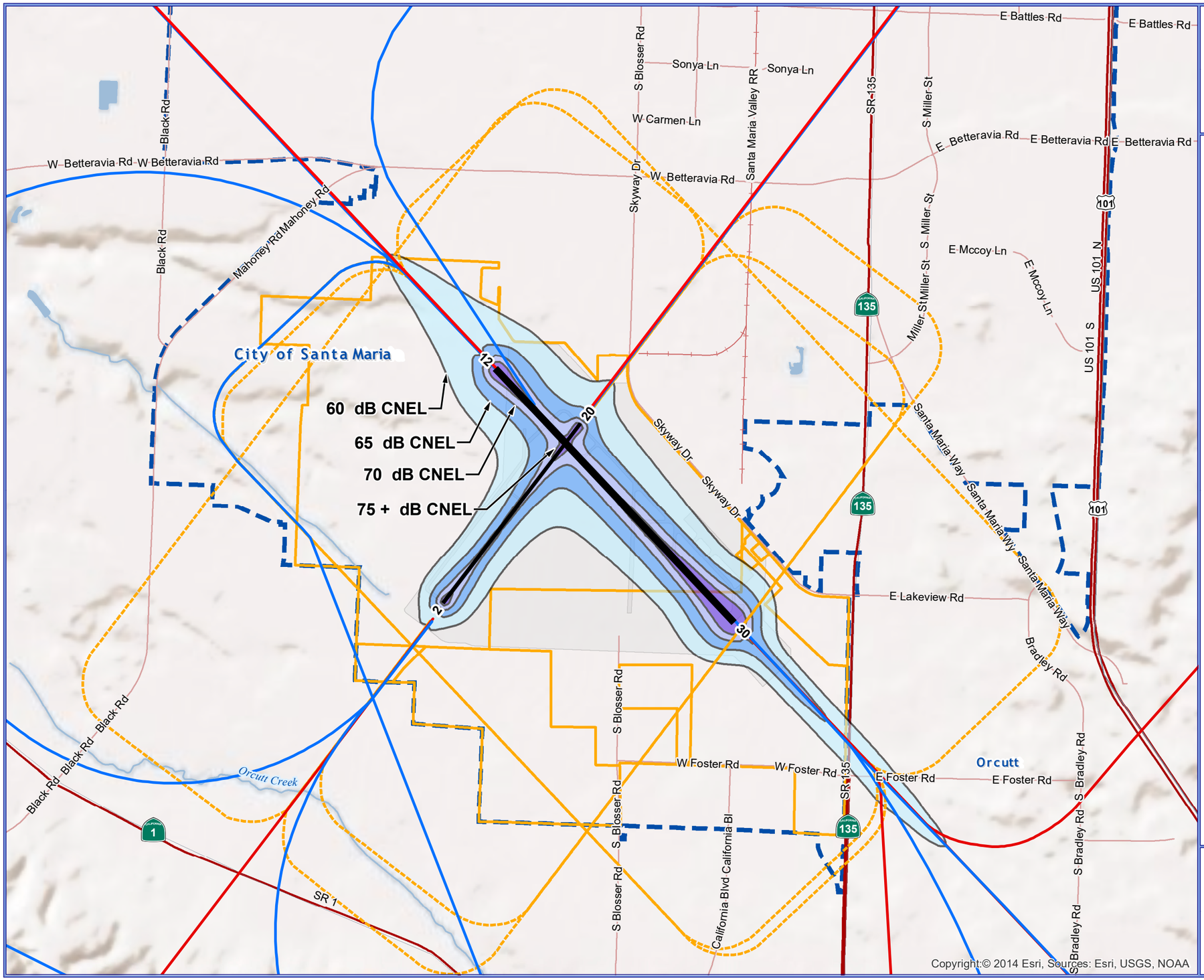

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Legend

Noise Exposure Range
- 60 - 65 dB CNEL
- 65 - 70 dB CNEL
- 70 - 75 dB CNEL
- 75 + db CNEL

Flight Tracks
- Arrivals
- Departures
- TouchAndGo
- Runways
- City Limits
- Parcel Lines
- Freeways/Highways
- Primary or Secondary Street

Prepared by: ATAC Corporation

Source: URS Corporation; CPH Jones Consulting; Parcels - County of Santa Barbara Clerk-Recorder-Assessor's Mapping Division, November 2016; Roadway Centerlines - Santa Barbara County Mapping and GIS, December 2010; ESRI Layer Package: North American Airports - ESRI, November 2010; World Shaded Relief - ESRI Online (Sources ESRI, USGS, NOAA), 2014 (Updated February 2017), http://goto.arcgisonline.com/maps/World_Shaded_Relief.

0 1 Miles

0 1,000 2,000 3,000 4,000 5,000 Feet

NAD 1983 StatePlane California V FIPS 0405 (US Feet)

N

Exhibit A-5

Noise Compatibility Data Map: Santa Maria Public Airport

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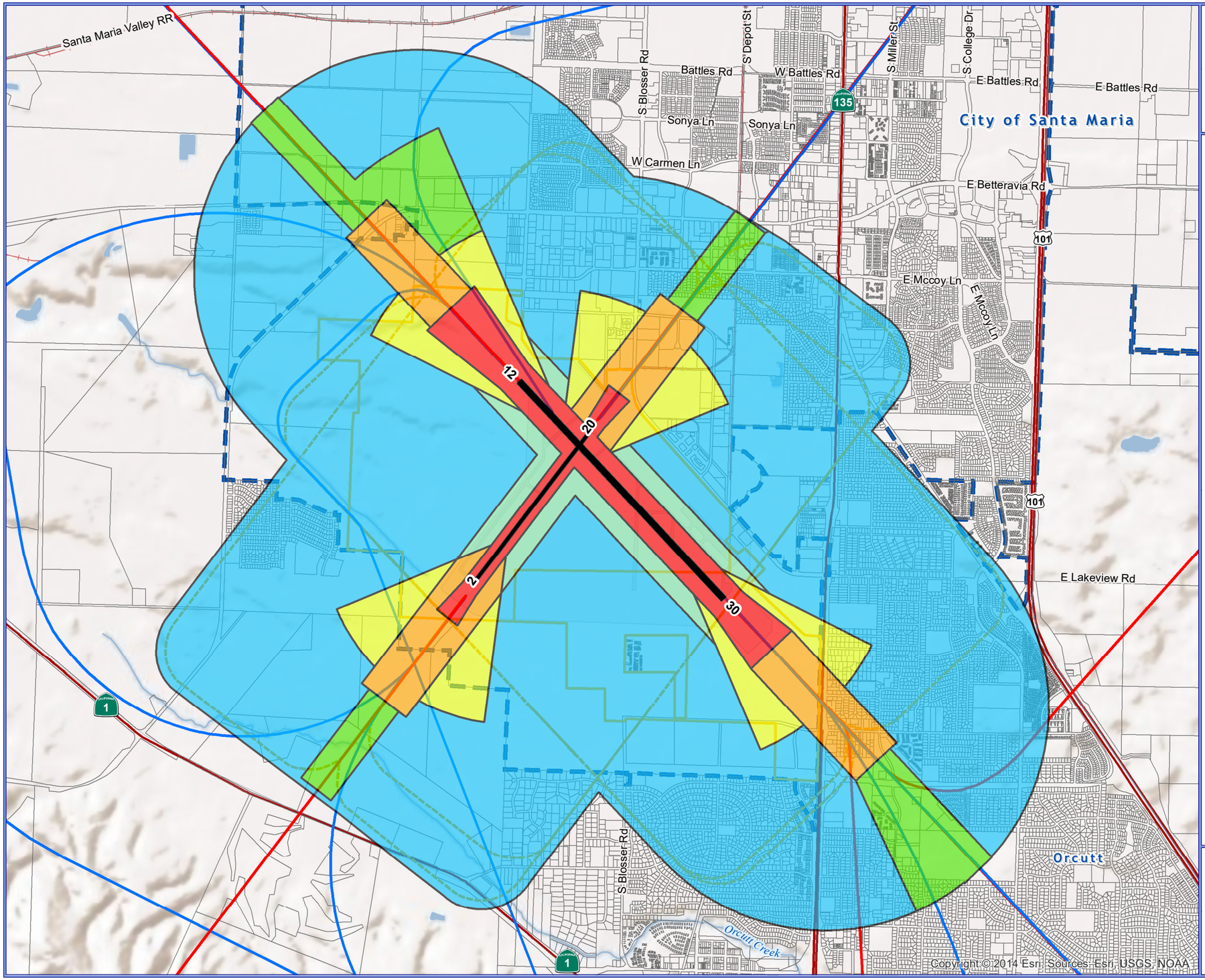

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Legend

- Zone 1 - Runway Protection Zone
- Zone 2 - Inner Approach/Departure Zone
- Zone 3 - Inner Turning Zone
- Zone 4 - Outer Approach/Departure Zone
- Zone 5 - Sideline Zone
- Zone 6 - Traffic Pattern Zone
- Runways
- Arrivals
- Departures
- Touch-and-Go Tracks
- Airport Property Boundary
- City Limits
- Freeways/Highways
- Parcel Lines

Prepared by: ATAC Corporation

Source: URS Corporation; CPH Jones Consulting; Parcels - County of Santa Barbara Clerk-Recorder-Assessor's Mapping Division, November 2016; Roadway Centerlines - Santa Barbara County Mapping and GIS, December 2010; ESRI Layer Package: North American Airports - ESRI, November 2010; World Shaded Relief - ESRI Online (Sources ESRI, USGS, NOAA), 2014 (Updated February 2017), http://goto.arcgisonline.com/maps/World_Shaded_Relief.

0 0.25 0.5 0.75 1 Miles

0 1,000 2,000 3,000 4,000 5,000 Feet

NAD 1983 StatePlane California V FIPS 0405 (US Feet)

N

Exhibit A-6

Safety Compatibility Data Map: Santa Maria Public Airport

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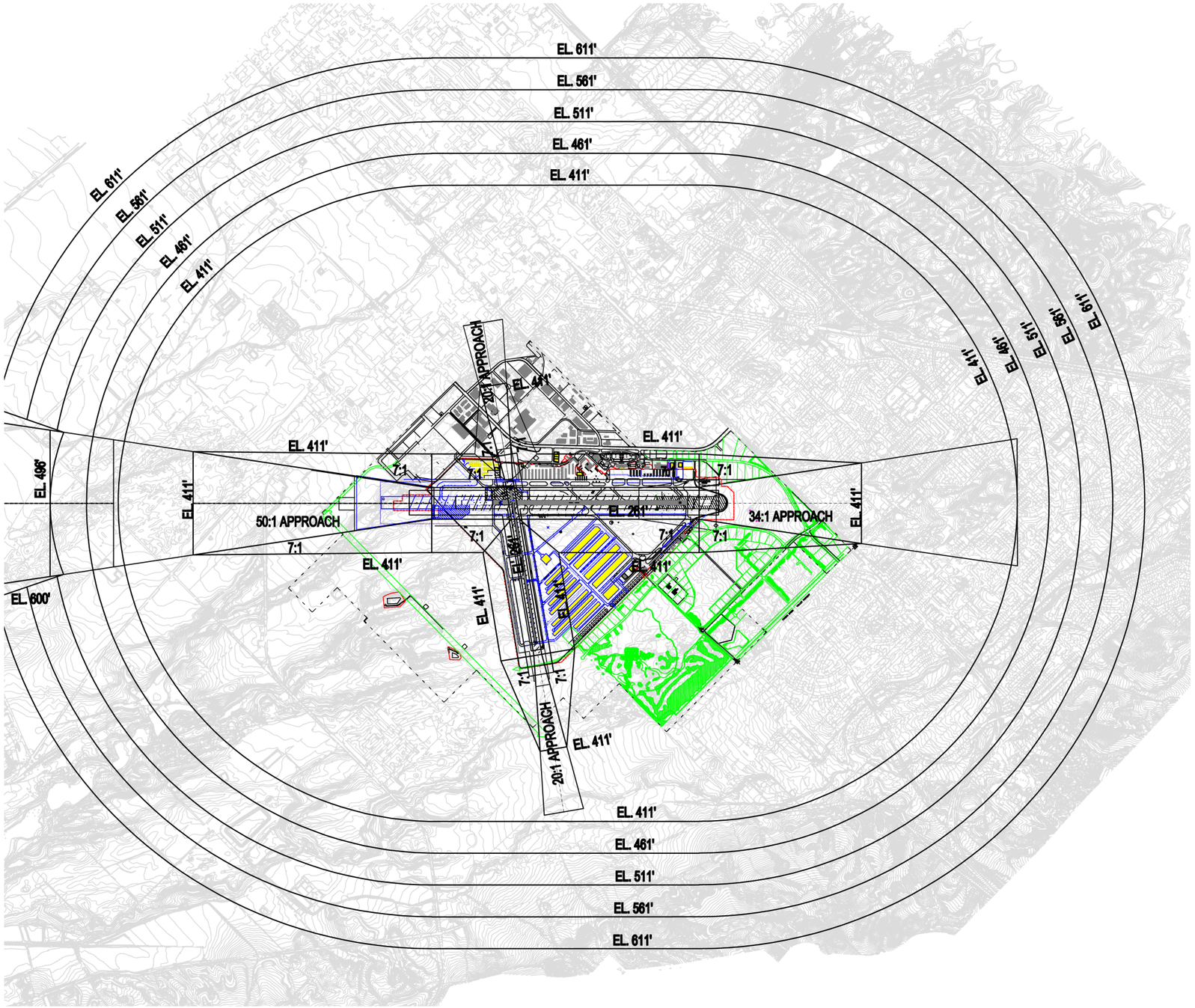

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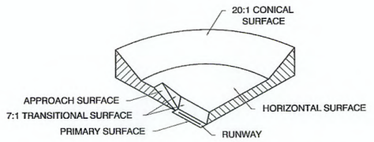
Legend

- Runways
- Topographical Contour Lines



TYPICAL FAR PART 77 SURFACES

Notes:
1. Outer approach surface for Runway 12 not depicted.

Source: CPH Jones Consulting; ATAC Corporation
Prepared by: Santa Maria Public Airport Master Plan, 2006

NOT TO SCALE

Exhibit A-7

FAR Part 77 Airspace Protection Compatibility Data Map: Santa Maria Public Airport

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Legend

- Overflight Notification Area
- Disclosure in Real Estate Transaction
- AIA Review Area 2
- AIA Review Area 1
- Runways
- City Limits
- Parcel Lines
- Freeways/Highways
- Primary or Secondary Street

Notes:
1. The outer approach surface for Runway 12 is not depicted.

Prepared by: ATAC Corporation

Source: URS Corporation; CPH Jones Consulting; Parcels - County of Santa Barbara Clerk-Recorder-Assessor's Mapping Division, November 2016; Roadway Centerlines - Santa Barbara County Mapping and GIS, December 2010; ESRI Layer Package: North American Airports - ESRI, November 2010; World Shaded Relief - ESRI Online (Sources ESRI, USGS, NOAA), 2014 (Updated February 2017), http://goto.arcgisonline.com/maps/World_Shaded_Relief.

0 0.5 1 1.5 Miles

0 1,500 3,000 4,500 6,000 7,500 Feet

NAD 1983 StatePlane California V FIPS 0405 (US Feet)

N

Exhibit A-8

Overflight Compatibility Data Map: Santa Maria Public Airport

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Legend

- AIA-Review Area 1
- AIA-Review Area 2
- Runways
- Airport Property Boundary
- City Limits
- Parcel Lines
- Freeways/Highways
- Primary or Secondary Street

Prepared by: ATAC Corporation

Source: URS Corporation; CPH Jones Consulting; Parcels - County of Santa Barbara Clerk-Recorder-Assessor's Mapping Division, November 2016; Roadway Centerlines - Santa Barbara County Mapping and GIS, December 2010; ESRI Layer Package: North American Airports - ESRI, November 2010; World Shaded Relief - ESRI Online (Sources ESRI, USGS, NOAA), 2014 (Updated February 2017), http://goto.arcgisonline.com/maps/World_Shaded_Relief.

0 1 2 3 Miles

0 5,000 10,000 15,000 Feet

NAD 1983 StatePlane California V FIPS 0405 (US Feet)

Exhibit A-9

Airport Influence Area: Santa Maria Public Airport

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