US DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

ILS - STANDARD
INSTRUMENT APPROACH PROCEDURE
TITLE 14 CFR PART 97.29

Bearings, headings, courses, and radials are magnetic. Elevations and altitudes are in feet, MSL, except HAT, HAA, TCH, and RA. Altitudes are minimum altitudes unless otherwise indicated. Ceilings are in feet above airport elevation. Distances are in nautical miles unless otherwise indicated, except visibilities which are in statute miles or in feet RVR.

TERMINAL ROUTES

FROM	TO	COURSE AND DISTANCE	ALTITUDE
SUNOL INT (IAF)	JENFR INT/I-INB 16.53 DME	229.00 / 9.01 (ECA R-229) (OAK LR-109)	4100
MISON INT (IAF)	JENFR INT/I-INB 16.53 DME	265.00 / 1.10 (HDG) & 296.00 / 4.47 (I-INB)	4100
JENFR INT/I-INB 16.53 DME (IF)	WUVON/I-INB 11.46 DME/RADAR	296.00 / 5.07 (I-INB)	3000
WUVON/I-INB 11.46 DME/RADAR	YICPU/I-INB 9.88 DME/RADAR	296.00 / 1.58 (I-INB)	2500

MISSED APPROACH

ILS: DA
LOC: 7.65 MILES AFTER YICPU/I-INB 9.88 DME/RADAR OR AT I-INB 2.23 DME FIX

CLIMB TO 600 THEN CLIMBING LEFT TURN TO 4000 ON HEADING 260 AND SAU VORTAC R-110 TO SAU VORTAC AND HOLD, CONTINUE CLIMB-IN-HOLD TO 4000, OR AS DIRECTED BY ATC.

ALTERNATE MA: CLIMB TO 4000 THEN RIGHT TURN DIRECT OAK VORTAC AND HOLD.

ADDITIONAL FLIGHT DATA:
HOLD NE, RT, 215.21 INBOUND.
CHART IN PLANVIEW: ALTERNATE MA HOLDING, HOLD NW OAK VORTAC, RT, 120.00 INBOUND.
FAS OBST: 254 AAO 373836N/1220606W
CHART VDP AT 3.87 DME*;
DISTANCE VDP TO THLD 1.63 MILES.
*LOC ONLY.
CHART (MAKMY) AT INTERSECTION OF DR LEG AND INTERMEDIATE COURSE.
CHART IN PLANVIEW: OAK VORTAC.

1. PT NA SIDE OF COURSE ____ OUTBOUND ____ FT WITHIN ____ MILES OF ____ (IAF)
2. PROFILE STARTS AT JENFR
3. FAC: 296.00 FAF: YICPU/I-INB 9.88 DME/RADAR DIST FAF TO MAP: 7.65 THLD: 7.65
4. MIN. ALT: JENFR 4100, WUVON 3000, YICPU 2500
5. DIST TO THLD FROM OM: - MM: - IM: 860 150 HAT: 1813 100 HAT: 860 GS ANT: 1055
6. MIN GS INCPT: 2500 GS ALT AT: YICPU 2500 OM: - MM: - IM: 109
7. GS ANGLE: 3.00 TCH: 55.3
8. MSA FROM: OAK VORTAC 170-350 3800, 350-170 5100

MAG VAR: 14E EPOCH YEAR: 2010

MINIMUMS

TAKEOFF: SEE FAA FORM 8260-15A FOR THIS AIRPORT ALTERNATE: N A ILS: STANDARD LOC: STANDARD

CATEGORY =====>	A			B			C			D			E		
	DH/MDA	VIS	HAT/HAA	DH/MDA	VIS	HAT/HAA	DH/MDA	VIS	HAT/HAA	DH/MDA	VIS	HAT/HAA	DH/MDA	VIS	HAT/HAA
S-ILS 29	209	1800	200	209	1800	200	209	1800	200	209	1800	200			
S-LOC 29	600	2400	591	600	2400	591	600	1 1/4	591	600	1 1/4	591			
CIRCLING	600	1	591	600	1	591	600	1 3/4	591	600	2	591			

NOTES:
CATEGORY II ILS SPECIAL AIRCREW AND AIRCRAFT CERTIFICATION REQUIRED S-ILS-29: CAT A, B, C, D, RA 109, RVR 1200, HATh 100, DA 109 MSL.
CATEGORY III ILS SPECIAL AIRCREW AND AIRCRAFT CERTIFICATION REQUIRED. S-ILS-29: CAT IIIa CAT A,B,C,D, RVR 700. CAT IIIb CAT A,B,C,D, RVR 600. CAT IIIc NA.
(SEE FORM 8260-10)

CITY AND STATE	ELEVATION: 9 THRE: 9	FACILITY IDENTIFIER:	PROCEDURE NO./AMDT NO./EFFECTIVE DATE:	SUP:
OAKLAND, CA	AIRPORT NAME: METROPOLITAN OAKLAND INTL	I-INB	ILS OR LOC RWY 29, AMDT 25 11/15/2012 ILS RWY 29 (SA CAT I), ILS RWY 29 (CAT II), ILS RWY 29 (CAT III)	AMDT: 24A DATED 06/04/2009

NOTES, (CONT.):

SA CATEGORY I ILS SPECIAL AIRCREW AND AIRCRAFT CERTIFICATION REQUIRED S-ILS 29: CAT A, B, C, D, RA 159, RVR 1400, HATh 150, DA 159 MSL.

CAT II RVR 1000 CHART NOTE: RVR 1000 AUTHORIZED WITH SPECIFIC OPSPEC, MSPEC, OR LOA APPROVAL AND USE OF AUTOLAND OR HUD TO TOUCHDOWN.

S-ILS 29 CATEGORY II/III CHART NOTE: MISSED APPROACH REQUIRES MINIMUM CLIMB OF 230 FEET PER NM TO 2700.

SA CAT I CHART NOTE: REQUIRES SPECIFIC OPSPEC, MSPEC, OR LOA APPROVAL AND USE OF HUD TO DH.

CHART PLANVIEW NOTE: PROCEDURE NA FOR ARRIVALS AT SUNOL ON V195-301 EASTBOUND AND V334 NORTHBOUND, AND ARRIVALS AT MISON ON V107 SOUTHEAST BOUND.

CHART NOTE: DME OR RADAR REQUIRED.

CHART PROFILE NOTE: VGSI AND ILS GLIDEPATH NOT COINCIDENT.

U.S. DEPARTMENT OF TRANSPORTATION - FEDERAL AVIATION ADMINISTRATION

ILS STANDARD INSTRUMENT APPROACH PROCEDURE

FLIGHT STANDARDS SERVICES - **FAR PART 97.29**

Bearings, headings, courses, and radials are magnetic. Elevations and altitudes are in feet, MSL, except HAT, HAA, TCH, and RA. Altitudes are minimum altitudes unless otherwise indicated. Ceilings are in feet above airport elevation. Distances are in nautical miles unless otherwise indicated, except visibilities which are in statute miles or in feet RVR.

ARINC PACKET - 424-18 - ILS

```
                 1         2         3         4         5         6         7         8         9         0         1         2         3
NAVAID  123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
        ------------------------------------------------------------------------------------------------------------------------------------
        SUSAD        ECA   K2011600VTHW N37500097W121101695    N37500097W121101695E0170000482     NARMANTECA
        SUSAD        OAK   K2011680VTHA N37433331W122132492    N37433331W122132492E0170000102     NAROAKLAND
        SUSAD        SAU   K2011620VTLW N37511924W122312191    N37511924W122312191E0170010401     NARSAUSALITO
        SUSAD KOAKK2 IINB  K2010870 IT                     IINBN37433314W122145902     000100     NARMETROPOLITAN OAKLAND INTL

                 1         2         3         4         5         6         7         8         9         0         1         2         3
WP      123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
        ------------------------------------------------------------------------------------------------------------------------------------
        SUSAEAENRT   JENFR K20    C     N37325242W121590486                      E0141     NAR           JENFR
        SUSAEAENRT   MAKMY K20    W     N37295883W121544659                      E0141     NAR           CNF(MAKMY)
        SUSAEAENRT   MISON K20    C   L N37294854W121532506                      E0141     NAR           MISON
        SUSAEAENRT   SUNOL K20    C   L N37361991W121483701                      E0141     NAR           SUNOL
        SUSAEAENRT   WUVON K20    R     N37360869W122035743                      E0141     NAR           WUVON
        SUSAEAENRT   YICPU K20    R     N37370978W122052879                      E0141     NAR           YICPU

                 1         2         3         4         5         6         7         8         9         0         1         2         3
AIRPORT 123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
        ------------------------------------------------------------------------------------------------------------------------------------
        SUSAP KOAKK2AOAK     0     100YHN37431660W122131460E016000009         1800018000C    MNAR    METROPOLITAN OAKLAND INTL

                 1         2         3         4         5         6         7         8         9         0         1         2         3
SEGMENT 123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
        ------------------------------------------------------------------------------------------------------------------------------------
        SUSAP KOAKK2FI29   AMISON 010MISONK2EA0E  A    IF                                          18000                 0 NS
        SUSAP KOAKK2FI29   AMISON 020MAKMYK2EA0E       TF                                  + 04100                       0 NS
        SUSAP KOAKK2FI29   AMISON 030JENFRK2EA0EE B    CF IINBK2      1160016529600045PI  + 04100                       0 NS
        SUSAP KOAKK2FI29   ASUNOL 010SUNOLK2EA0E  A    FC ECA K2      2290033322900070D   + 04100     18000             0 NS
        SUSAP KOAKK2FI29   ASUNOL 020JENFRK2EA0EE B    CF IINBK2      1160016522900020PI  + 04100                       0 NS
        SUSAP KOAKK2FI29   I      010JENFRK2EA0E  I    IF IINBK2      11600165        PI  J 041000250018000             0 NS
        SUSAP KOAKK2FI29   I      011WUVONK2EA0E S     CF IINBK2      1160011429600051PI  + 03000                       0 NS
        SUSAP KOAKK2FI29   I      020YICPUK2EA0E  F    CF IINBK2      1160009829600016PI  H 0250002500        -300OAK   K2D 0 NS
        SUSAP KOAKK2FI29   I      030RW29 K2PG0GY M    CF IINBK2      1160002229600077PI    00064             -300          0 NS
        SUSAP KOAKK2FI29   I      040         0  M     CA                     2960        + 00600                       0 NS
        SUSAP KOAKK2FI29   I      050         0        VI                     2600                                      0 NS
        SUSAP KOAKK2FI29   I      060SAU  K2D 0VY       CF SAU K2      0000000029000140D   + 04000                       0 NS
        SUSAP KOAKK2FI29   I      070SAU  K2D 0VE  R    HM                     2152T010    + 04000                       0 NS

                 1         2         3         4         5         6         7         8         9         0         1         2         3
RUNWAY  123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
        ------------------------------------------------------------------------------------------------------------------------------------
        SUSAP KOAKK2GRW29    0100002940 N37420537W122125132+0000    -0029900009000055150IIINB3
```

CITY AND STATE	ELEVATION: 9 THRE: 9	FACILITY IDENTIFIER:	PROCEDURE NO. / AMDT NO. / EFFECTIVE DATE:	SUP:
OAKLAND, CA	AIRPORT NAME: **METROPOLITAN OAKLAND INTL**	**I-INB**	**ILS OR LOC RWY 29, AMDT 25** 11/15/2012 **ILS RWY 29 (SA CAT I), ILS RWY 29 (CAT II)** **ILS RWY 29 (CAT III)**	AMDT: **24A** DATED: **06/04/2009**

Bearings, headings, courses, and radials are magnetic. Elevations and altitudes are in feet, MSL, except HAT, HAA, TCH, and RA. Altitudes are minimum altitudes unless otherwise indicated. Ceilings are in feet above airport elevation. Distances are in nautical miles unless otherwise indicated, except visibilities which are in statute miles or in feet RVR.

```
                 1         2         3         4         5         6         7         8         9         0         1         2         3
ILS     123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
        ------------------------------------------------------------------------------------------------------------------------------------
        SUSAP KOAKK2IIINB3   010870RW29 N37432986W1221458102960N37420904W1221304573299 10550303300E01405500005
                 1         2         3         4         5         6         7         8         9         0         1         2         3
MSA     123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
        ------------------------------------------------------------------------------------------------------------------------------------
        SUSAP KOAKK2SOAK  K2D                0   1703500512535017003825                                                                M
```

CITY AND STATE	ELEVATION: 9 THRE: 9	FACILITY IDENTIFIER:	PROCEDURE NO. / AMDT NO. / EFFECTIVE DATE:	SUP:
OAKLAND, CA	AIRPORT NAME: METROPOLITAN OAKLAND INTL	I-INB	ILS OR LOC RWY 29, AMDT 25 11/15/2012 ILS RWY 29 (SA CAT I), ILS RWY 29 (CAT II) ILS RWY 29 (CAT III)	AMDT: 24A DATED: 06/04/2009

Bearings, headings, courses, and radials are magnetic. Elevations and altitudes are in feet, MSL, except HAT, HAA, TCH, and RA. Altitudes are minimum altitudes unless otherwise indicated. Ceilings are in feet above airport elevation. Distances are in nautical miles unless otherwise indicated, except visibilities which are in statute miles or in feet RVR.

ARINC SUMMARY - 424-18 - ILS

ROUTES	TRANSITION	FIX	SEQ	USE	PATH	TURN	FO/FB	RNP	MAG(TRUE)	DISTANCE	ALTITUDE	SPEED
	MISON	MISON	010	IAF	IF		FB					
	MISON	MAKMY	020		TF		FB				AA 04100	
	MISON	JENFR	030		CF		FB		296.0()	004.5	AA 04100	
	SUNOL	SUNOL	010	IAF	FC		FB		229.0()	007.0	AA 04100	
	SUNOL	JENFR	020		CF		FB		229.0()	002.0	AA 04100	
		JENFR	010	FACF	IF		FB				AA 04100 GI 02500	
		WUVON	011	SDF	CF		FB		296.0()	005.1	AA 03000	
		YICPU	020	FAF	CF		FB		296.0()	001.6	GI 02500 GS 02500	
		RW29	030	MAP	CF		FO		296.0()	007.7	AT 00064	

MISSED APPROACH	FIX	SEQ	USE	PATH	TURN	FO/FB	RNP	MAG(TRUE)	DISTANCE	ALTITUDE	SPEED
		040		CA		FB		296.0()		AA 00600	
		050		VI		FB		260.0()			
	SAU	060		CF		FO		290.0()	014.0	AA 04000	
	SAU	070		HM	R	FO		215.2()	T01.0	AA 04000	

POINT DATA	WAYPOINT	LAT IN SECS	LONG IN SECS	LAT IN MINS	LONG IN MINS
	ECA	N375000.97	W1211016.95	N3750.016	W12110.283
	OAK	N374333.31	W1221324.92	N3743.555	W12213.415
	SAU	N375119.24	W1223121.91	N3751.321	W12231.365
	IINB (DME)	N374333.14	W1221459.02	N3743.552	W12214.984
	JENFR	N373252.42	W1215904.86	N3732.874	W12159.081
	MAKMY	N372958.83	W1215446.59	N3729.981	W12154.777
	MISON	N372948.54	W1215325.06	N3729.809	W12153.418
	SUNOL	N373619.91	W1214837.01	N3736.332	W12148.617
	WUVON	N373608.69	W1220357.43	N3736.145	W12203.957
	YICPU	N373709.78	W1220528.79	N3737.163	W12205.480
	RW29	N374205.37	W1221251.32	N3742.090	W12212.855
	IINB (LOC)	N374329.86	W1221458.10	N3743.498	W12214.968

RUNWAY DATA	RWY	THRESHOLD ELEVATION	TCH
	RW29	00009	55

CITY AND STATE	ELEVATION: 9 THRE: 9	FACILITY IDENTIFIER:	PROCEDURE NO. / AMDT NO. / EFFECTIVE DATE:	SUP:
OAKLAND, CA	AIRPORT NAME: METROPOLITAN OAKLAND INTL	I-INB	ILS OR LOC RWY 29, AMDT 25 11/15/2012 ILS RWY 29 (SA CAT I), ILS RWY 29 (CAT II) ILS RWY 29 (CAT III)	AMDT: 24A DATED: 06/04/2009