

**FEDERAL AVIATION ADMINISTRATION
FLIGHT STANDARDS SERVICE
ILS STANDARD INSTRUMENT APPROACH PROCEDURE
TITLE 14 CFR PART 97.29**

Bearings, headings, courses, tracks 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 feet RVR.

<u>AIRPORT</u> CASTLE	<u>AIRPORT ID</u> KMER	<u>PROCEDURE NAME</u> ILS OR LOC RWY 31	<u>ORIGINAL/AMENDMENT</u> 3	<u>CITY</u> ATWATER	<u>STATE</u> CA	
<u>AIRPORT ELEVATION</u> 190	<u>TDZE</u> 181	<u>SUPERSEDED</u> ILS OR LOC/DME RWY 31	<u>ORIGINAL/AMENDMENT</u> 2E	<u>DATED</u> 08/21/2014	<u>MAG VAR</u> 15E	<u>EPOCH YEAR</u> 2000
<u>FACILITY</u> I-MER	<u>COORDINATES OF FACILITIES</u>	<u>ACTUAL EFFECTIVE DATE</u> 5 DECEMBER 2019	<u>REQUIRED EFFECTIVE DATE</u> ROUTINE	<u>CANCEL/SUSPEND</u>		

TERMINAL ROUTES

<u>FROM</u>	<u>FIX TYPE</u>	<u>TO</u>	<u>FIX TYPE</u>	<u>LEG TYPE</u>	<u>FO/FB</u>	<u>RNP</u>	<u>COURSE</u>	<u>DISTANCE</u>	<u>ALTITUDE</u>
FRA VORTAC		FEXUM INT/FRA 29.28 DME					263.37	29.28	5500
PXN VORTAC		POYID/PXN 12.85 DME					014.96	12.85	4600
FEXUM INT/FRA 29.28 DME	IAF	HYP VOR/DME	NOPT				264.88	9.93 (HYP R-085)	3000
POYID/PXN 12.85 DME	IAF	HYP VOR/DME	NOPT				016.19	22.41 (HYP R-196)	3000
HYP VOR/DME	IF/IAF	SARNE/HYP 6.67 DME					306.04	6.67 (I-MER)	1800

MISSED APPROACH

MAP:

ILS: DA
LOC: HYP 11.59 DME

MISSED APPROACH INSTRUCTIONS:

CLIMB TO 1000 THEN CLIMBING RIGHT TURN TO 3000 DIRECT HYP VOR/DME AND HOLD.

ALTERNATE MISSED APPROACH INSTRUCTIONS (DO NOT CHART):

CLIMB TO 800 THEN CLIMBING LEFT TURN TO 3000 DIRECT MOD VOR/DME AND HOLD.

PROFILE:

1. PT **SIDE OF COURSE** **OUTBOUND** **FT WITHIN** **MILES OF (IAF)**
2. HOLD SE HYP VOR/DME, RT, 306.04 INBOUND, 3000 FT. IN LIEU OF PT (IAF), MAX 6000.
3. **FAC:** 306.04 **FAF:** SARNE/HYP 6.67 DME **DIST FAF TO MAP:** **DIST FAF TO THLD:** 4.92
4. **MIN ALT:** HYP VOR/DME 3000, SARNE/HYP 6.67 DME 1800
5. **DIST TO THLD FROM OM:** **MM:** **IM:** **150 HAT:** **GS ANT:** 1049
6. **MIN GS INCPT:** 1800 **GS ALT AT FAF :** SARNE/HYP 6.67 DME 1800 **OM:** **MM:** **IM:**
7. **GP ANGLE:** 3.00 **34:1:** **20:1:** **TCH:** 55.3
8. **MSA FROM:** HYP VOR/DME 5600



EQUIPMENT REQUIREMENTS NOTES:

DME REQUIRED FOR LOC ONLY.

NOTES:

CHART NOTE: CIRCLING NA SW OF RWY 13-31.

CHART PROFILE NOTE: VGSI AND ILS GLIDEPATH NOT COINCIDENT (VGSI ANGLE {ANGLE}/TCH {FEET}).

CHART PLANVIEW NOTE: PROCEDURE NA FOR ARRIVAL ON FRA VORTAC AIRWAY RADIALS 302 CW 314.

CHART PLANVIEW NOTE: PROCEDURE NA FOR ARRIVAL ON PXN VORTAC AIRWAY RADIALS 318 CW 061.

CHART NOTE: DME FROM HYP VOR/DME. SIMULTANEOUS RECEPTION OF I-MER AND HYP DME REQUIRED.

ADDITIONAL FLIGHT DATA:

CHART KMCE IN PLAN AND PROFILE VIEWS.

CHART CIRCLING ICON.

CHART IN PLANVIEW: MOD VOR/DME

CHART VDP AT 10.43 DME*

DISTANCE VDP TO THLD 1.16 NM

* LOC ONLY

FAS OBST: 370 AAO 371943N/1203015W.

CHART IN PLANVIEW: ALTERNATE MA HOLDING, HOLD E MOD VOR/DME, LT, 284.59 INBOUND.

MINIMUMS:

TAKEOFF: SEE FAA FORM 8260-15A FOR THIS AIRPORT

ALTERNATE: NA☐

ILS: STANDARD - NA WHEN LOCAL WEATHER NOT AVAILABLE., NA WHEN CONTROL TOWER CLOSED.; LOC: STANDARD - NA WHEN LOCAL WEATHER NOT AVAILABLE., NA WHEN CONTROL TOWER CLOSED.

<u>CATEGORY:</u>	<u>A</u>			<u>B</u>			<u>C</u>			<u>D</u>			<u>E</u>		
<u>FINAL TYPE</u>	<u>DA/MDA</u>	<u>VIS</u>	<u>HAT/HAA</u>	<u>DA/MDA</u>	<u>VIS</u>	<u>HAT/HAA</u>	<u>DA/MDA</u>	<u>VIS</u>	<u>HAT/HAA</u>	<u>DA/MDA</u>	<u>VIS</u>	<u>HAT/HAA</u>	<u>DA/MDA</u>	<u>VIS</u>	<u>HAT/HAA</u>
S-ILS 31	381	1/2	200	381	1/2	200	381	1/2	200	381	1/2	200			
S-LOC 31	620	1/2	439	620	1/2	439	620	3/4	439	620	3/4	439			
CIRCLING	660	1	470	660	1	470	720	1 1/2	530	800	2	610			

CHANGES - REASONS

1. PROCEDURE NAME: CHANGED ILS OR LOC/DME RWY 31 TO READ ILS OR LOC RWY 31 - FPT REQUEST VIA IFPR.
2. AIRPORT ELEVATION: CHANGED 191 TO READ 190 - NEW AIRPORT SURVEY.
3. TERMINAL ROUTES SECTION: REMOVED CZQ VORTAC TO HYP VOR/DME SEGMENT - FPT REQUEST VIA IFPR.
4. TERMINAL ROUTES SECTION: ADDED FRA VORTAC TO FEXUM INT, FEXUM INT TO HYP VOR/DME, PXN VORTAC TO POYID, AND POYID TO HYP VOR/DME SEGMENTS - FPT REQUEST VIA IFPR.
5. TERMINAL ROUTES SECTION: CHANGED SARNE/6.74 DME TO READ SARNE/6.67 - RNAV AND ILS FAF CO-LOCATED/CREATED 3.0 DEGREE GLIDESLOPE ANGLE WITH 55.3 FT TCH.
6. MISSED APPROACH SECTION: CHANGED PRIMARY MISSED APPROACH CLIMB TO ALTITUDE FROM 800 TO READ 1000 - INCREASES AIRCRAFT ALTITUDE AT CLEARANCE LIMIT TO PREVENT CIH REQUIREMENT.
7. PROFILE SECTION LINE 2: CHANGED HIL MAX ALTITUDE FROM 17500 TO READ 6000 - 200 KIAS PATTERN ADEQUATE FOR AIRPORT/HIGHER AIRSPEED PATTERNS NO LONGER REQUIRED.
8. PROFILE SECTION LINE 3: CHANGED FAF FROM SARNE/6.74 DME TO READ SARNE/6.67 DME AND DIST FROM FAF TO THLD FROM 4.86 TO READ 4.92 - RNAV AND ILS PROCEDURES FAF CO-LOCATED/CREATED 3.0 DEGREE GLIDESLOPE ANGLE WITH 55.3 FT TCH.
9. PROFILE SECTION LINE 4: CHANGED SARNE/6.74 DME 1800 TO READ SARNE/6.67 DME 1800 ON LINE 4 - RNAV AND ILS PROCEDURES FAF CO-LOCATED/CREATED 3.0 DEGREE GLIDESLOPE ANGLE WITH 55.3 FT TCH.
10. PROFILE SECTION LINE 6: CHANGED GS ALT AT FAF FROM SARNE/6.74 DME 1800 TO READ SARNE/6.67 DME 1800 ON LINE 6 - RNAV AND ILS PROCEDURES FAF CO-LOCATED/CREATED 3.0 DEGREE GLIDESLOPE ANGLE WITH 55.3 FT TCH.
11. PROFILE SECTION LINE 7: CHANGED TCH FROM 55.2 TO READ 55.4 - SURVEY ON 3/18/2018 INCREASED TCH FROM 55.17 TO 55.364 (ROUNDED UP TO NEAREST .1 FOOT PER 8260-19H CRITERIA).
12. EQUIPMENT REQUIREMENTS NOTE SECTION: ADDED DME REQUIRED FOR LOC ONLY - REQUIRED DOCUMENTATION BY CRITERIA.
13. NOTES SECTION: MOVED ALSTG NOTE TO BACK OF -9 - BOTH ALTIMETER SOURCES TRANSMIT ON WMSCR/CALCULATED FOR CONTINGENCY PURPOSES.
14. NOTES SECTION: REMOVED CHART PLAINVIEW NOTE: PROCEDURE NA FOR ARRIVALS ON CZQ VORTAC AIRWAY RADIALS 243 CW 348 - FPT REQUEST VIA IFPR.
15. NOTES SECTION: ADDED CHART PLANVIEW NOTE: PROCEDURE NA FOR ARRIVAL ON FRA VORTAC AIRWAY RADIALS 302 CW 314 AND CHART PLANVIEW NOTE: PROCEDURE NA FOR ARRIVAL ON PXN VORTAC AIRWAY RADIALS 318 CW 061 - FPT REQUEST VIA IFPR/TURN FROM AIRWAY TO FEEDER SEGMENT EXCEEDS 120 DEGREES.
16. ADDITIONAL FLIGHT DATA SECTION: CHANGED CHART MERCED RGNL/MACREADY FIELD AIRPORT TO READ CHART KMCE IN PLAN AND PROFILE VIEWS - REQUIRED DOCUMENTATION BY CRITERIA.
17. ADDITIONAL FLIGHT DATA SECTION: ADDED CHART CIRCLING ICON - REQUIRED DOCUMENTATION BY CRITERIA.
18. ADDITIONAL FLIGHT DATA SECTION: ADDED VDP - REQUIRED BY CRITERIA.
19. MINIMUMS SECTION: CHANGED S-LOC 31 CAT C/D VISIBILITY FROM 7/8 TO READ 3/4 - VISCHECK CALCULATION.
20. MINIMUMS SECTION: CHANGED CIRCLING CAT A CMDA/HAA FROM 640/449 TO READ 660/470 - NEW CIRCLING CRITERIA APPLIED/NEW CIRCLING CAT A CONTROLLING OBSTACLE/NEW AIRPORT SURVEY/AIRPORT ELEVATION CHANGED FROM 191 TO READ 190.
21. MINIMUMS SECTION: CHANGED CIRCLING CAT B HAA FROM 469 TO READ 470 - NEW AIRPORT SURVEY/AIRPORT ELEVATION CHANGED FROM 191 TO READ 190.
22. MINIMUMS SECTION: CHANGED CIRCLING CAT C CMDA/HAA FROM 660/469 TO READ 720/530 - NEW CIRCLING CRITERIA APPLIED/NEW CIRCLING CAT C CONTROLLING OBSTACLE/NEW AIRPORT SURVEY/AIRPORT ELEVATION CHANGED FROM 191 TO READ 190.
23. MINIMUMS SECTION: CHANGED CIRCLING CAT D CMDA/VIS/HAA FROM 760 / 2 / 569 TO READ 800 / 2 / 610 - NEW CIRCLING CRITERIA APPLIED/NEW CIRCLING CAT D CONTROLLING OBSTACLE/NEW AIRPORT SURVEY/AIRPORT ELEVATION CHANGED FROM 191 TO READ 190.

COORDINATED WITH:

A4A ☐ **ALPA** ☒ **AOPA** ☒ **APA** ☒ **HAI** ☐ **NBAA** ☒ **OTHER:** ZOA, SCK ATCT, CA AERO, AMGR, ATA

FLIGHT CHECKED BY

JAMES KRENEK

OFFICE

FICO

DATE

10/09/19

*Digitally signed by***ALLAN WILL**

Oct 11, 2019

DEVELOPED BY*Digitally signed by*MICHAEL R. GARRITY JR. **MICHAEL GARRITY****OFFICE**

AJV-A423

DATE

07/12/2019

APPROVED BY

Jul 24, 2019

MARLON ROBINSON

OFFICE

AJV-A420

DATE*Digitally signed by***ALLAN WILL**

Oct 11, 2019

TITLE
MANAGER