

**FEDERAL AVIATION ADMINISTRATION
FLIGHT STANDARDS SERVICE
RNAV (GPS) STANDARD INSTRUMENT APPROACH PROCEDURE
TITLE 14 CFR PART 97.33**

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> SACRAMENTO MATHER	<u>AIRPORT ID</u> KMHR	<u>PROCEDURE NAME</u> RNAV (GPS) RWY 22L	<u>ORIGINAL/AMENDMENT</u> 3A	<u>CITY</u> SACRAMENTO	<u>STATE</u> CA	
<u>AIRPORT ELEVATION</u> 98	<u>TDZE</u> 98	<u>SUPERSEDED</u> RNAV (GPS) RWY 22L	<u>ORIGINAL/AMENDMENT</u> 3	<u>DATED</u> 09/13/2018	<u>MAG VAR</u> 13E	<u>EPOCH YEAR</u> 2020
<u>FACILITY</u> RNAV	<u>COORDINATES OF FACILITIES</u>	<u>ACTUAL EFFECTIVE DATE</u> 30 JANUARY 2020	<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>
HNW VOR/DME		STNGR		TF	FO	1.00	248.59	14.98	5200
HAGAN		STNGR		TF	FO	1.00	157.69	12.17	4300
STNGR	IF/IAF	JASOD		TF	FB	1.00	220.86	3.40	2600
JASOD		GADBE		TF	FB	1.00	220.83	4.08	1800
GADBE	FAF	JEKAX/2.10 NM TO RW22L		TF	FB	0.30	220.77	3.07	
JEKAX/2.10 NM TO RW22L		RW22L	MAP	TF	FO	0.30	220.77	2.10	
RW22L	MAP	298 MSL		CA			220.77		
298 MSL		XAKBE		DF	FB	1.00			
XAKBE		SAC VORTAC		TF	FO	1.00	233.12	8.24	3000

MISSED APPROACH

MAP:

LPV: DA
LNAV/VNAV: DA
LNAV: RW22L

MISSED APPROACH INSTRUCTIONS:

CLIMB TO 3000 DIRECT XAKBE AND ON TRACK 233.12 TO SAC VORTAC AND HOLD.

ALTERNATE MISSED APPROACH INSTRUCTIONS:



PROFILE:

1. PT SIDE OF COURSE OUTBOUND FT WITHIN MILES OF (IAF)

2. HOLD NE STNGR, RT, 220.86 INBOUND, 3500 FT. IN LIEU OF PT (IAF), MAX 6000.

3. FAC: 220.77 FAF: GADBE DIST FAF TO MAP: 5.17 DIST FAF TO THLD: 5.17

4. MIN ALT: STNGR 3500, JASOD 2600, GADBE 1800, JEKAX/2.10 NM TO RW22L 800*

5. DIST TO THLD FROM OM: MM: IM: 150 HAT: 200 HAT: 0.45 GS ANT: MM: IM:

6. MIN GP INCPT: 1800 GP ALT AT FAF : GADBE 1800 OM: MM: IM:

7. GP ANGLE: 3.00 34:1: IS CLEAR 20:1: IS CLEAR TCH: 55.7

8. MSA FROM: RW22L 4200

PBN REQUIREMENTS NOTE:

RNP APCH.

NOTES:

CHART NOTE: CIRCLING NA NW OF RWY 4R-22L.
CHART NOTE: FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW -15°C OR ABOVE 54°C.
CHART PROFILE NOTE: VGSI AND RNAV GLIDEPATH NOT COINCIDENT (VGSI ANGLE {ANGLE}/TCH {FEET}).
CHART PLANVIEW NOTE: PROCEDURE NA FOR ARRIVALS ON HNW VOR/DME AIRWAY RADIALS 180 CW 303 AND ARRIVALS AT HAGAN ON V392-494 NORTHBOUND.
CHART NOTE: FOR INOPERATIVE ALS, INCREASE LNAV/VNAV ALL CATS VISIBILITY TO 1 1/8 SM AND LNAV CAT C/D TO 1 3/8 SM.

ADDITIONAL FLIGHT DATA:

CHART CIRCLING ICON.
CHART VDP AT 1.35 NM TO RW22L*
*LNAV ONLY
WAAS CHANNEL #40225
REFERENCE PATH ID: W22A
CHART FAS OBST: 295 TREE 383428N/1211517W.
HOLD SW, RT, 048.99 INBOUND
LTP HAE: -0.4 M

MINIMUMS:

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

ALTERNATE: NA ☐ STANDARD - CAT D 800-2 1/4, NA WHEN LOCAL WEATHER NOT AVAILABLE.

CATEGORY:	A			B			C			D			E		
FINAL TYPE	DA/MDA	VIS	HAT/HAA	DA/MDA	VIS	HAT/HAA	DA/MDA	VIS	HAT/HAA	DA/MDA	VIS	HAT/HAA	DA/MDA	VIS	HAT/HAA
LPV DA	298	1/2	200	298	1/2	200	298	1/2	200	298	1/2	200			
LNAV/VNAV DA	517	3/4	419	517	3/4	419	517	3/4	419	517	3/4	419			
LNAV MDA	580	1/2	482	580	1/2	482	580	1	482	580	1	482			
CIRCLING	580	1	482	580	1	482	600	1 1/2	502	800	2 1/4	702			



CHANGES - REASONS

1. CHANGED LNAV/VNAV CATS A, B, C, AND D DA FROM 487 TO 517, AND HAT FROM 389 TO 419. - NEW OBSTACLE; ANTENNA (06-214363)
2. CHANGED NOTE FROM: "FOR INOPERATIVE ALS, INCREASE LNAV CAT C AND D VISIBILITY TO 1 3/8 SM" TO "FOR INOPERATIVE ALS, INCREASE LNAV/VNAV ALL CATS VISIBILITY TO 1 1/8 SM AND LNAV CAT C/D TO 1 3/8 SM." - ADDED INOPERATIVE ALS VISIBILITY FOR LNAV/VNAV DUE TO INCREASED MINIMUMS.
3. INCREASED LNAV/VNAV VISIBILITY ALL CATS FROM 5/8 SM TO 3/4 SM. - NEW VIS CHECK DUE TO INCREASED MINIMUMS.
4. FAS DATA BLOCK: LTP/FTP LAT LONG CHANGED FROM "383347.0920N/1211653.9915W" TO "383347.0940N/1211653.9950W" - NEW SURVEY DATA.
5. FAS DATA BLOCK: LTP FTP ELLIPSOIDAL HEIGHT CHANGED FROM -00003 TO -00004. - NEW SURVEY DATA.
6. FAS DATA BLOCK: CRC REMAINDER CHANGED FROM B7421518 TO C00B5E1B - NEW LTP/FTP LOCATION DUE TO NEW SURVEY DATA.
7. CHANGED TERMINAL ROUTES "HNW VOR/DME TO STNGR" AND "HAGAN TO STNGR" RNP VALUE FROM 2.00 TO 1.00 - REVISED CRITERIA.
8. CHANGED TERMINAL ROUTES "JASOD TO GADBE" COURSE FROM 220.82 TO 220.83, "GADBE TO JEKAX/2.10 NM TO RW22L", "JEKAX/2.10 NM TO RW22L TO RW22L", "RW22L TO 298 MSL" COURSE FROM 220.78 TO 220.77 - ILS OR LOC RWY 22L PUB 12/5/19 (PFAF) GADBE RELOCATED 5.14' NW.
9. CHANGED FAC FROM 220.78 TO 220.77 - PFAF RELOCATED.
10. CHANGED LINE 7 TCH FROM 55.6 TO 55.7 - MATCHES ILS OR LOC RWY 22L PUB 12/5/19.
11. CHANGED PLANVIEW NOTE FROM "PROCEDURE NA FOR ARRIVALS ON HNW VOR/DME AIRWAY RADIALS 180 CW 330 AND ARRIVALS AT HAGAN ON V392-494 NORTHEAST BOUND" TO "PROCEDURE NA FOR ARRIVALS ON HNW VOR/DME AIRWAY RADIALS 180 CW 303 AND ARRIVALS AT HAGAN ON V392-494 NORTHBOUND" - REVISED CRITERIA.
12. CHANGED ALTERNATE MINIMUMS FROM "STANDARD - CAT D 800-2 1/4" TO STANDARD - CAT D 800-2 1/4, NA WHEN LOCAL WEATHER NOT AVAILABLE" - REVISED CRITERIA.
13. CHANGED FAS DATA BLOCK FPAP LAT/LONG FROM 383240.9700N/1211848.6600W TO 383240.9620N/1211848.6465W - REVISED THLD.
14. CHANGED FAS DATA BLOCK TCH FROM 55.6 TO 55.7 - MATCHES ILS OR LOC RWY 22L PUB 12/5/19.
15. CHANGED STNGR HOLD IN LIEU MIN ALTITUDE FROM 3300 TO 3500. - CORRECTED PROCEDURE TO KEEP 1500' POINT IN INTERMEDIATE SEGMENT.

COORDINATED WITH:

A4A ☐

ALPA ☒

AOPA ☒

APA ☐

HAI ☐

NBAA ☒

OTHER: ZOA, NORCAL APP CON, AMGR

FLIGHT CHECKED BY	<i>Digitally signed by</i>	OFFICE	DATE	
SCOTT A THOMPSON	DONALD H LANIER	FICO	10/25/19	
	Oct 29, 2019			
DEVELOPED BY	<i>Digitally signed by</i>	OFFICE	DATE	
DONALD H. LANIER (MATTHEW FULKS)	DONALD H LANIER	AJV-A431	08/21/2019	
	Oct 29, 2019			
APPROVED BY	<i>Digitally signed by</i>	OFFICE	DATE	TITLE
GEORGE DAVIS	DONALD H LANIER	AJV-A430		MANAGER
	Oct 29, 2019			



FAS DATA BLOCK INFORMATION

<u>DATA FIELD</u>	<u>DATA</u>
OPERATION TYPE	0
SBAS SERVICE PROVIDER IDENTIFIER	0
AIRPORT IDENTIFIER	KMHR
RUNWAY	RW22L
APPROACH PERFORMANCE DESIGNATOR	0
ROUTE INDICATOR	
REFERENCE PATH DATA SELECTOR	0
REFERENCE PATH IDENTIFIER (APPROACH ID)	W22A
LTP/FTP LATITUDE	383347.0940N
LTP/FTP LONGITUDE	1211653.9950W
LTP/FTP ELLIPSOIDAL HEIGHT	-00004
FPAP LATITUDE	383240.9620N
FPAP LONGITUDE	1211848.6465W
THRESHOLD CROSSING HEIGHT (TCH)	00055.7
TCH UNITS SELECTOR (METERS OR FEET USED)	F
GLIDEPATH ANGLE (GPA)	03.00
COURSE WIDTH AT THRESHOLD	106.75
LENGTH OFFSET	0000
HORIZONTAL ALERT LIMIT (HAL)	40.0
VERTICAL ALERT LIMIT (VAL)	35.0
CRC REMAINDER	C00B5E1B

ADDITIONAL PATH POINT RECORD INFORMATION

ICAO CODE	K2
LTP ORTHOMETRIC HEIGHT	+00300
FPAP ORTHOMETRIC HEIGHT	+00300

