

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 ID</u> KBDN	<u>PROCEDURE NAME</u> RNAV (GPS) Z RWY 16	<u>ORIGINAL/AMENDMENT</u> 1	<u>CITY</u> BEND	<u>STATE</u> OR		
<u>AIRPORT ELEVATION</u> 3459	<u>TDZE</u> 3432	<u>SUPERSEDED</u> RNAV (GPS) Z RWY 16	<u>ORIGINAL/AMENDMENT</u> ORIG-A	<u>DATED</u> 06/20/2019	<u>MAG VAR</u> 14E	<u>EPOCH YEAR</u> 2025
<u>FACILITY</u> RNAV	<u>COORDINATES OF FACILITIES</u>	<u>ACTUAL EFFECTIVE DATE</u> 10 AUGUST 2023	<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>
DSD VORTAC		FOMBO		TF	FO	1.00	034.43	5.96	7000
HERBS	IAF	FOMBO	NOPT	TF	FB	1.00	135.81	6.94	7000
FOMBO	IF/IAF	HEKIL		TF	FB	1.00	166.04	6.90	5400
HEKIL	FAF	RW16	MAP	TF	FO	0.30	166.04	6.11	
RW16	MAP	3682 MSL		CA			166.04		
3682 MSL		JOGON		DF	FB	1.00			
JOGON		MIKKO		TF	FB	1.00	087.33		
MIKKO		REMTE		TF	FO	1.00	037.59		7400

MISSED APPROACH

MAP:

LPV: DA
 LNAV/VNAV: DA
 LNAV: RW16

MISSED APPROACH INSTRUCTIONS:

CLIMB TO 7400 DIRECT JOGON AND ON TRACK 087.33 TO MIKKO AND ON TRACK 037.59 TO REMTE AND HOLD, CONTINUE CLIMB-IN-HOLD TO 7400.

ALTERNATE MISSED APPROACH INSTRUCTIONS:



PROFILE:

1. PT	SIDE OF COURSE	OUTBOUND	FT WITHIN	MILES OF	(IAF)
2. HOLD N FOMBO, RT, 166.04 INBOUND, 7000 FT. IN LIEU OF PT (IAF), MAX 17500.					
3. FAC:	166.04	FAF: HEKIL	DIST FAF TO MAP: 6.11	DIST FAF TO THLD: 6.11	
4. MIN ALT:	FOMBO 7000, HEKIL 5400				
5. DIST TO THLD FROM OM:	MM:	IM:	150 HAT:	250 HAT: 0.72	GS ANT:
6. MIN GP INCPT:	5400	GP ALT AT PFAF :	HEKIL 5400	OM:	MM:
7. GP ANGLE:	3.00	34:1: IS NOT CLEAR	20:1: IS CLEAR	TCH: 50.0	IM:
8. MSA FROM:	RW16 11600				

PBN REQUIREMENTS NOTE:

RNP APCH - GPS.

NOTES:

CHART NOTE: BARO-VNAV AND VDP NA WHEN USING REDMOND ALTIMETER SETTING.
CHART NOTE: RWY 16 HELICOPTER VISIBILITY REDUCTION BELOW 3/4 SM NOT AUTHORIZED.
CHART NOTE: FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW -21°C OR ABOVE 54°C.
CHART PLANVIEW NOTE: PROCEDURE NA FOR ARRIVAL ON DSD VORTAC AIRWAY RADIALS 348 CW 092.
CHART PROFILE NOTE: VGSI AND RNAV GLIDEPATH NOT COINCIDENT (VGSI ANGLE {ANGLE}/TCH {FEET}).
CHART NOTE: WHEN LOCAL ALTIMETER SETTING NOT RECEIVED, USE REDMOND ALTIMETER SETTING: INCREASE LPV DA TO 3763 FEET AND ALL VISIBILITIES 1/4 SM; INCREASE LNAV/VNAV DA TO 3821 FEET AND ALL VISIBILITIES 1/4 SM; INCREASE ALL MDAS 100 FEET AND LNAV VISIBILITY CATS C AND D 1/4 SM, AND CIRCLING VISIBILITY CAT C 1/2 SM.

ADDITIONAL FLIGHT DATA:

HOLD N, RT, 200.00 INBOUND.
CHART FAS OBST: 3559 TREE 440556N/1211250W.
CHART VDP AT 1.19 NM TO RW16.
WAAS CHANNEL # 81906
REFERENCE PATH ID: W16A
CHART CIRCLING ICON.
LTP HAE: 1016.3 M



MINIMUMS:

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

ALTERNATE: NA ☐ STANDARD - CAT D 1200-3, 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	3682	3/4	250	3682	3/4	250	3682	3/4	250	3682	3/4	250			
LNAV/VNAV DA	3740	7/8	308	3740	7/8	308	3740	7/8	308	3740	7/8	308			
LNAV MDA	3820	1	388	3820	1	388	3820	1 1/8	388	3820	1 1/8	388			
CIRCLING	3960	1	501	3980	1	521	4120	1 3/4	661	4640	3	1181			

CHANGES - REASONS

- AIRPORT ELEVATION UPDATED FROM 3460 TO 3459 AND MAGVAR UPDATED FROM 19E/1980 TO 14E/2025 - UPDATED AIRPORT DATA.
- TERMINAL ROUTES: UNLESS NOTED OTHERWISE, ALL CRS DATA INCREASED 5 DEGREES - MAGVAR UPDATED.
- TERMINAL ROUTES: FOMBO TO HEKIL DISTANCE UPDATED FROM 7.00 TO 6.90 - HEKIL MOVED TO MAINTAIN 3.00 GPA.
- TERMINAL ROUTES: HEKIL TO RW16 DISTANCE UPDATED FROM 6.01 TO 6.11 - HEKIL MOVED TO MAINTAIN 3.00 GPA.
- TERMINAL ROUTES: MISSED SEGMENT UPDATED FROM "JOGON TO SAKKO 050.79" TO "JOGON TO MIKKO 087.33 AND MIKKO TO REMTE 037.59" - NEW MA DESIGN PER FPT/ATC.
- MISSED APPROACH INSTRUCTIONS: UPDATED FROM "CLIMB TO 9500 DIRECT JOGON AND LEFT TURN ON TRACK 050.79 TO SAKKO AND HOLD, CONTINUE CLIMB-IN-HOLD TO 9500" TO "CLIMB TO 7400 DIRECT JOGON AND ON TRACK 087.33 TO MIKKO AND ON TRACK 037.59 TO REMTE AND HOLD, CONTINUE CLIMB-IN-HOLD TO 7400" - NEW MA DESIGN PER FPT/ATC.
- PROFILE LINE 2: CRS INBOUND UPDATED FROM 161.04 TO 166.04 - UPDATED MAGVAR.
- PROFILE LINE 3: FAC UPDATED FROM 161.04 TO 166.04 - UPDATED MAGVAR.
- PROFILE LINE 3: DISTANCE FAF TO MAP AND FAF TO THLD UPDATED FROM 6.01 TO 6.11
- PBN REQUIREMENTS NOTES: UPDATED FROM RNP APCH TO RNP APCH-GPS - IAW 8260.19I, 8-6-8 B (2).
- NOTES: UPDATED CHART NOTE FROM "WHEN LOCAL ALTIMETER SETTING NOT RECEIVED, USE REDMOND ALTIMETER SETTING AND INCREASE ALL DA/MDA'S BY 80 FEET, LPV VISIBILITIES 1/4 SM ALL CATS, LNAV/VNAV VISIBILITIES 1/4 SM ALL CATS, LNAV CAT D VISIBILITY 1/4 SM, AND CIRCLING CAT C VISIBILITY 1/4 SM" TO "WHEN LOCAL ALTIMETER SETTING NOT RECEIVED, USE REDMOND ALTIMETER SETTING: INCREASE LPV DA TO 3763 FEET AND ALL VISIBILITIES 1/4 SM; INCREASE LNAV/VNAV DA TO 3821 FEET AND ALL VISIBILITIES 1/4 SM; INCREASE ALL MDAS 100 FEET AND LNAV VISIBILITY CATS C AND D 1/4 SM, AND CIRCLING VISIBILITY CAT C 1/2 SM" - UPDATED EVALUATION.
- NOTES: UPDATED CHART NOTE FROM "FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW -21°C OR ABOVE 42°C." TO "FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW -21°C OR ABOVE 54°C" - IAW 8260-58B, 3-3-1.
- NOTES: UPDATED PLANVIEW NOTE FROM "PROCEDURE NA FOR ARRIVALS AT DSD VORTAC ON AIRWAY RADIALS 348 CW 052, AND V269-536 EASTBOUND" TO "PROCEDURE NA FOR ARRIVAL ON DSD VORTAC AIRWAY RADIALS 348 CW 092" - EVALUATION OF AIRWAY RADIALS IAW 8260-58B 1-2-5.
- ADDITIONAL FLIGHT DATA: UPDATED NOTE FROM "HOLD E, RT, 271.42 INBOUND" TO "HOLD N, RT, 200.00 INBOUND" - HOLDING FOR NEW MA DESIGN; ALIGNMENT DETERMINED TO AVOID RESTRICTED AREAS AND HIGH TERRAIN.
- ADDITIONAL FLIGHT DATA: UPDATED CHART FAS OBS FROM "3549 TREE 440602N/1211240W" TO "3559 TREE 440556N/1211250W" - UPDATED EVALUATION/MAP STUDY.
- ADDITIONAL FLIGHT DATA: UPDATE NOTE FROM "CHART VDP AT 1.21 NM TO RW16*" TO "CHART VDP AT 1.19 NM TO RW16" - UPDATED LOWEST MDA FROM 3840 TO 3820..
- ADDITIONAL FLIGHT DATA: DELETED "**LNAV ONLY" - NO LONGER REQUIRED.
- MINIMUMS: UPDATED LPV VIS ALL CATS FROM 1 TO 3/4 - 8260.3E VIS TABLE 3-3-1 APPLIED.
- MINIMUMS: UPDATED LNAV/VNAV DA, VIS, HAT ALL CATS FROM "3809, 1 1/2, 377" TO "3740, 7/8, 308" - UPDATED EVALUATION/MAP STUDY; 8260.3E VIS TABLE 3-3-1 APPLIED.
- MINIMUMS: UPDATED LNAV MDA/HAT ALL CATS FROM 3840/408 TO 3820/388; UPDATED VIS CATS C/D FROM 1 1/4 TO 1 1/8 - UPDATED EVALUATION/MAP STUDY; 8260.19I VIS TABLES 3-3-1, 3-3-3, 3-3-4 APPLIED.
- MINIMUMS: CIRCLING UPDATES: CAT A HAA FROM 480 TO 501; CAT B MDA/HAA FROM 4000/540 TO 3980/521; CAT C HAA FROM 660 TO 661; CAT D HAA FROM 1180 TO 1181 - UPDATED AIRPORT ELEVATION AND MAP STUDY.
- MINIMUMS: ADDED ALTERNATE MINIMUMS: STANDARD - CAT D 1200-3, NA WHEN LOCAL WEATHER NOT AVAILABLE - PER FPT AND IAW 8260.3E 3-4, 8260.19I, 8-6-11.
- FAS DATA: UPDATED LTP FROM "440606.0885N/1211200.7730W" TO "440606.0915N/1211200.7720W" - UPDATED AIRNAV DATA DUE TO NEW SURVEY.
- FAS DATA: UPDATED FPAP FROM "440436.9900N/1211200.8600W" TO "440436.9870N/1211200.8535W" - UPDATED AIRNAV DATA DUE TO NEW SURVEY.
- CRC REMAINDER: UPDATED FROM "7AD4922D" TO "C7471930" - FAS DATA CHANGES.



AIRPORT ID
KBDN

PROCEDURE NAME
RNAV (GPS) Z RWY 16

ORIGINAL/AMENDMENT
1

CITY
BEND

STATE
OR

COORDINATED WITH:

A4A ☐ ALPA ☒ AOPA ☒ APA ☐ HAI ☐ NBAA ☒ OTHER: ZSE, ARPT MGR, OR AERO DIV

FLIGHT CHECKED BY

TROY E DEVINE

Digitally signed by

ALLAN WILL

Jun 06, 2023

OFFICE

FPO

DATE

06/01/2023

DEVELOPED BY

PATRICK COMBS

Digitally signed by

PATRICK W COMBS

Apr 11, 2023

OFFICE

AJV-A423

DATE

04/11/2023

APPROVED BY

MARLON ROBINSON

Digitally signed by

ALLAN WILL

Jun 06, 2023

OFFICE

AJV-A420

DATE

TITLE
MANAGER

QUALITY
8
CHECKED

FAS DATA BLOCK INFORMATION

<u>DATA FIELD</u>	<u>DATA</u>
OPERATION TYPE	0
SBAS SERVICE PROVIDER IDENTIFIER	0
AIRPORT IDENTIFIER	KBDN
RUNWAY	RW16
APPROACH PERFORMANCE DESIGNATOR	0
ROUTE INDICATOR	Z
REFERENCE PATH DATA SELECTOR	0
REFERENCE PATH IDENTIFIER (APPROACH ID)	W16A
LTP/FTP LATITUDE	440606.0915N
LTP/FTP LONGITUDE	1211200.7720W
LTP/FTP ELLIPSOIDAL HEIGHT	+10163
FPAP LATITUDE	440436.9870N
FPAP LONGITUDE	1211200.8535W
THRESHOLD CROSSING HEIGHT (TCH)	00050.0
TCH UNITS SELECTOR (METERS OR FEET USED)	F
GLIDEPATH ANGLE (GPA)	03.00
COURSE WIDTH AT THRESHOLD	106.75
LENGTH OFFSET	1168
HORIZONTAL ALERT LIMIT (HAL)	40.0
VERTICAL ALERT LIMIT (VAL)	50.0
CRC REMAINDER	C7471930

ADDITIONAL PATH POINT RECORD INFORMATION

ICAO CODE	K1
LTP ORTHOMETRIC HEIGHT	+10372
FPAP ORTHOMETRIC HEIGHT	+10372

