

FEDERAL AVIATION ADMINISTRATION  
FLIGHT STANDARDS SERVICE  
RNAV (RNP) 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> KHLN	<u>PROCEDURE NAME</u> RNAV (RNP) Z RWY 9	<u>ORIGINAL/AMENDMENT</u> 2	<u>CITY</u> HELENA	<u>STATE</u> MT		
<u>AIRPORT ELEVATION</u> 3877	<u>TDZE</u> 3864	<u>SUPERSEDED</u> RNAV (RNP) Z RWY 9	<u>ORIGINAL/AMENDMENT</u> 1	<u>DATED</u> 02/23/2023	<u>MAG VAR</u> 12E	<u>EPOCH YEAR</u> 2025
<u>FACILITY</u> RNAV	<u>COORDINATES OF FACILITIES</u>	<u>ACTUAL EFFECTIVE DATE</u> 25 JANUARY 2024	<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>
HLN VORTAC	IAF	HADOG		TF	FB	1.00	243.15	7.50	9900
HADOG	IF	IBOLY		TF	FB	0.40	243.07	5.32	8900
IBOLY		JALUX		RF	FB	0.40	(3.00 NM RADIUS CW (CFDSD))	5.47	8300
JALUX		LISTY		RF	FB	0.40	(3.00 NM RADIUS CW (CFCFG))	5.47	7600
GLUES	IAF	RICHD		TF	FB	1.00	029.04	19.43	9800
PIXXI	IAF	RICHD		TF	FB	1.00	089.85	12.41	9800
RICHD	IF	KFIVE		TF	FB	0.40	091.68	3.99	8500
KFIVE		LISTY		TF	FB	0.40	091.75	3.00	7600
LISTY		JEBSI	PFAF	TF	FB	0.40	091.80	1.80	7100
JEBSI	PFAF	RW09	MAP	TF	FO	0.30	090.53	9.08	
RW09	MAP	ATCOO		TF	FB	1.00	090.69	9.40	
ATCOO		BOSCA		TF	FB	1.00	090.84	5.08	
BOSCA		URELE		TF	FO	1.00	004.83	25.34	12000

QUALITY  
10  
CHECKED

MISSED APPROACH

MAP:  
RNP: DA

MISSED APPROACH INSTRUCTIONS:  
CLIMB TO 12000 ON TRACK 090.69 TO ATCOO AND ON TRACK 090.84 TO BOSCA AND ON TRACK 004.83 TO URELE AND HOLD.

ALTERNATE MISSED APPROACH INSTRUCTIONS:

PROFILE:

1. PT	SIDE OF COURSE	OUTBOUND	FT WITHIN	MILES OF	(IAF)
2. PROFILE STARTS AT LISTY					
3. FAC: 090.53	PFAF: JEBSI	DIST PFAF TO MAP:		DIST PFAF TO THLD:	
4. MIN ALT: LISTY 7600, JEBSI 7100					
5. DIST TO THLD FROM PFAF: 9.08	MM:	IM:	150 HAT:	360 HAT: 0.87	GS ANT:
6. MIN GP INCPT: 7100	GP ALT AT PFAF : JEBSI 7100		OM:	MM:	IM:
7. GP ANGLE: 3.30	34:1: IS CLEAR	20:1: IS CLEAR	TCH: 55.0		
8. MSA FROM: RW09 10600					

PBN REQUIREMENTS NOTE:

RNP AR APCH - GPS.

NOTES:

CHART NOTE: FOR UNCOMPENSATED BARO-VNAV SYSTEMS, PROCEDURE NA BELOW -28°C OR ABOVE 54°C.  
CHART PLANVIEW NOTE AT GLUES: (RNP 0.40).  
CHART PROFILE NOTE: SEE PLANVIEW FOR MULTIPLE IF LOCATIONS.  
CHART PLANVIEW NOTE AT HLN VORTAC: (RNP 0.40).  
CHART PLANVIEW NOTE AT PIXXI: (RNP 0.40).  
CHART PLANVIEW NOTE AT IBOLY: DO NOT EXCEED 210 KIAS UNTIL LISTY.  
CHART PLANVIEW NOTE: NOPT FOR ARRIVAL ON HLN VORTAC AIRWAY RADIALS R-340, R-012, R-062, R-077, AND R-107.  
CHART SPEED ICON IN PLANVIEW AT HADOG: MAX 210 KIAS.  
CHART SPEED ICON IN PLANVIEW AT IBOLY: MAX 210 KIAS.  
CHART SPEED ICON IN PLANVIEW AT RICHD: MAX 210 KIAS.

ADDITIONAL FLIGHT DATA:

CHART ARRIVAL HOLDING AT HLN VORTAC: HOLD N, RT, 160.00 INBOUND, 12000.  
CHART AT OR ABOVE 13000 AT PIXXI.  
CHART AT OR ABOVE 14000 AT GLUES.  
CHART AT OR ABOVE 12000 AT HLN VORTAC.  
HOLD N, RT, 173.24 INBOUND.



**MINIMUMS:**

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

ALTERNATE: NA ☐ STANDARD

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
AUTHORIZATION REQUIRED															
RNP 0.11 DA	4224	1	360	4224	1	360	4224	1	360	4224	1	360			
RNP 0.17 DA	4296	1 1/4	432	4296	1 1/4	432	4296	1 1/4	432	4296	1 1/4	432			
RNP 0.30 DA	4489	1 3/4	625	4489	1 3/4	625	4489	1 3/4	625	4489	1 3/4	625			

**CHANGES - REASONS**

1. TERMINAL ROUTES TO RWY 9 HAVE BEEN COMPLETELY REDESIGNED WITH ALL NEW FIXES AND ROUTING. IAFS OF HLN VORTAC, PIXXI, GLUES AND PFAF OF JEB SI REMAINED THE SAME.. - ATC/FPT REQUEST TO STREAMLINE/SHORTEN THE LENGTH OF THE TERMINAL ROUTING
2. MISSED APPROACH CHANGED FROM CLIMB TO 12000 ON TRACK 090.68 TO BOSCA AND ON TRACK 004.83 TO URELE AND HOLD TO CLIMB TO 12000 ON TRACK 090.69 TO ATCOO AND ON TRACK 090.84 TO BOSCA AND ON TRACK 004.83 TO URELE AND HOLD. - FPT/ATC REQUEST.
3. PROFILE LINE TWO CHANGED FROM PROFILE STARTS AT KELTY WITH PROFILE STARTS AT LISTY. - PER 8260.19I COMPLIANCE (NEW COMMON FIX),FPT/ATC, NEW APPROACH DESIGN.
4. PROFILE LINE FOUR CHANGED FROM MIN ALT FROM KELTY 9000, HIRSH 8100, JEB SI 7100 TO LISTY 7600, JEB SI 7100. - PER FPT/ATC, NEW APPROACH DESIGN.
5. UPDATED NOTE FROM FOR UNCOMPENSATED BARO-VNAV SYSTEMS, PROCEDURE NA BELOW -26°C OR ABOVE 54°C TO FOR UNCOMPENSATED BARO-VNAV SYSTEMS, PROCEDURE NA BELOW -28°C OR ABOVE 54°C. - NEW CLIMATE STUDY.
6. UPDATED PLANVIEW NOTES HLN (RNP 0.30), PIXXI (RNP 0.30) AND GLUES (RNP 0.30) TO HLN (RNP 0.40), PIXXI (RNP 0.40) AND GLUES (RNP 0.40). - FPT/ATC DESIGN.
7. ADDED ARRIVAL HOLDING AT HLN VORTAC. - FPT/ATC REQUEST.
8. ADDED NOTE CHART SPEED ICON IN PLANVIEW AT HADOG: MAX 210 KIAS. - FPT/ATC REQUEST.
9. ADDED NOTE CHART SPEED ICON IN PLANVIEW AT RICH D: MAX 210 KIAS. - FPT/ATC REQUEST.
10. ADDED CHART PLANVIEW NOTE AT IBOLY: DO NOT EXCEED 210 KIAS UNTIL LISTY. - 8260.19I COMPLIANCE.
11. ADDED CHART PROFILE NOTE: SEE PLANVIEW FOR MULTIPLE IF LOCATIONS. \_ 8260.19I COMPLIANCE.
12. ADDED CHART ARRIVAL HOLDING AT HLN VORTAC: HOLD N, RT, 160.00 INBOUND, 12000 TO ADDITIONAL FLIGHT DATA. FPT/ATC REQUEST.
13. ADDED CHART AT OR ABOVE 14000 AT GLUES TO ADDITIONAL FLIGHT DATA. - FPT/ATC REQUEST HIGH TERRAIN.
14. ADDED CHART AT OR ABOVE 13000 AT PIXXI TO ADDITIONAL FLIGHT DATA. - FPT/ATC REQUEST HIGH TERRAIN.
15. ADDED CHART AT OR ABOVE 12000 AT HLN VORTAC TO ADDITIONAL FLIGHT DATA. - FPT/ATC REQUEST HIGHT TERRAIN.
16. MINIMA LINE RNP 0.11 DA/HAT CHANGED FROM 4222/358 TO 4224/360. - NEW MISSED ADJUSTMENT OBSTACLE.
17. MINIMA LINE RNP 0.17 DA/HAT CHANGED FROM 4294/430 TO 4296/432. - NEW MISSED ADJUSTMENT OBSTACLE.
18. MINIMA LINE RNP 0.30 DA/HAT CHANGED FROM 4485/621 TO 4489/625. - NEW MISSED ADJUSTMENT OBSTACLE.
19. ADDED CHART PLANVIEW NOTE: NOPT FOR ARRIVAL ON HLN VORTAC AIRWAY RADIALS R-340, R-012, R-062, R-077, AND R-107. - 8260.19I ARRIVAL HOLDING COMPLIANCE AND REPLACES PLANVIEW NOTE PROCEDURE NA FOR ARRIVAL ON HLN VORTAC AIRWAY RADIALS 179 CW 270.

QUALITY  
10  
CHECKED

COORDINATED WITH:

A4A ☒ ALPA ☒ AOPA ☒ APA ☐ HAI ☐ NBAA ☒ OTHER: ZLC, HLN APP CON, HLN ATCT, AMGR

FLIGHT CHECKED BY

JEFFREY A FINDLEY

*Digitally signed by*  
**CASIMIR L TABAKA**  
Nov 06, 2023

OFFICE

FPO

DATE

11/02/2023

DEVELOPED BY

JOHN KEEFER

*Digitally signed by*  
**JOHN A KEEFER**

OFFICE

AJV-A432

DATE

07/03/2023

APPROVED BY

CASIMIR TABAKA

Sep 06, 2023

OFFICE

AJV-A430

DATE

TITLE  
MANAGER

*Digitally signed by*  
**ERIC N SUSKI**  
Sep 18, 2023

