

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> KDSM	<u>PROCEDURE NAME</u> RNAV (GPS) RWY 23	<u>ORIGINAL/AMENDMENT</u> 3	<u>CITY</u> DES MOINES	<u>STATE</u> IA		
<u>AIRPORT ELEVATION</u> 958	<u>TDZE</u> 940	<u>SUPERSEDED</u> RNAV (GPS) RWY 23	<u>ORIGINAL/AMENDMENT</u> 2	<u>DATED</u> 08/10/2023	<u>MAG VAR</u> 1E	<u>EPOCH YEAR</u> 2020
<u>FACILITY</u> RNAV	<u>COORDINATES OF FACILITIES</u>	<u>ACTUAL EFFECTIVE DATE</u> 30 NOVEMBER 2023	<u>REQUIRED EFFECTIVE DATE</u> 11/30/2023	<u>CANCEL/SUSPEND</u>		

**TAA**

<u>FROM</u>	<u>FIX TYPE</u>	<u>TO</u>	<u>FIX TYPE</u>	<u>ALTITUDE</u>
1. 143/30 CW 323/30	NOPT	143/5 CW 323/5		4000
2. 143/5 CW 323/5		IOWAA	IF/IAF	3100
3. 323/30 CW 143/30		323/5 CW 143/5		4000
4. 323/5 CW 143/5		IOWAA	IF/IAF	3100

**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>
IOWAA	IF/IAF	HERKY		TF	FB	1.00	232.97	5.96	2600
HERKY	FAF	TUPNE/2.47 NM TO RW23		TF	FB	0.30	232.90	2.58	
TUPNE/2.47 NM TO RW23		RW23	MAP	TF	FO	0.30	232.90	2.47	
RW23	MAP	1220 MSL		CA			232.90		
1220 MSL		DELAY		DF	FO	1.00			3000

**MISSED APPROACH**

**MAP:**

LPV: DA  
LNAV/VNAV: DA  
LNAV: RW23

**MISSED APPROACH INSTRUCTIONS:**

CLIMB TO 3000 DIRECT DELAY AND HOLD.

**ALTERNATE MISSED APPROACH INSTRUCTIONS:**



PROFILE:

1. PT

SIDE OF COURSE

OUTBOUND

FT WITHIN

MILES OF

(IAF)

2. HOLD NE IOWAA, LT, 232.97 INBOUND, 3100 FT. IN LIEU OF PT (IAF), MAX 14000.

3. FAF: 232.90FAF: HERKYDIST FAF TO MAP: 5.06DIST FAF TO THLD: 5.06

4. MIN ALT: IOWAA 3100, HERKY 2600, TUPNE/2.47 NM TO RW23 1780

5. DIST TO THLD FROM OM:MM:IM:150 HAT:280 HAT: 0.71GS ANT:

6. MIN GP INCPT: 2600GP ALT AT PFAF : HERKY 2600OM:MM:IM:

7. GP ANGLE: 3.0034:1: IS NOT CLEAR20:1: IS CLEARTCH: 55.6

8. MSA FROM:

PBN REQUIREMENTS NOTE:

RNP APCH - GPS.

NOTES:

CHART NOTE: RWY 23 HELICOPTER VISIBILITY REDUCTION BELOW 3/4 SM NOT AUTHORIZED.  
CHART NOTE: FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW -20°C OR ABOVE 54°C.  
CHART PROFILE NOTE: VGSI AND RNAV GLIDEPATH NOT COINCIDENT (VGSI ANGLE {ANGLE}/TCH {FEET}).

ADDITIONAL FLIGHT DATA:

HOLD SW, RT, 052.68 INBOUND.  
CHART FAS OBST: 1061 TREE (19-031208) 413314N/0933753W.  
CHART 1132 TOWER 413321N/0933605W.  
CHART VDP AT 1.01 NM TO RW23.  
WAAS CHANNEL # 97541  
REFERENCE PATH ID: W23A  
CHART CIRCLING ICON.  
LTP HAE: 254.3 M

MINIMUMS:

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

ALTERNATE: NA ☐ STANDARD - CAT D 900-2 1/2, 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	1263	1	323	1263	1	323	1263	1	323	1263	1	323			
LNAV/VNAV DA	1220	7/8	280	1220	7/8	280	1220	7/8	280	1220	7/8	280			
LNAV MDA	1320	1	380	1320	1	380	1320	1	380	1320	1	380			
CIRCLING	1420	1	462	1420	1	462	1600	1 3/4	642	1760	2 1/2	802			



**CHANGES - REASONS**

1. INCREASED TDZE FROM 933 TO 940 - THRESHOLD MOVEMENT
2. MOVED LOCATION OF HERKY 3662.49 FT NE - RETURN FIX TO PRE-CONSTRUCTION LOCATION
3. MOVED LOCATION OF TUPNE 111.86 FT SW - FPT REQUESTED ALTITUDE ON 3 DEGREE DESCENT GRADIENT
4. DECREASED INTERMEDIATE SEGMENT LENGTH FROM 6.57 NM TO 5.96 NM - MOVEMENT OF HERKY FIX.
5. INCREASED LNAV FINAL SEGMENT (HERKY TO TUPNE) LENGTH FROM 1.96 NM TO 2.58 NM - MOVEMENT OF HERKY AND TUPNE FIXES.
6. DECREASED LNAV STEPDOWN SEGMENT (TUPNE TO RWY23) LENGTH FROM 3.10 NM TO 2.47 NM - MOVEMENT OF TUPNE FIX.
7. INCREASED CA LEG ALTITUDE FROM 1183 MSL TO 1220 MSL - LOWEST DA IAW 8260.58B 3-5-2
8. INCREASED DISTANCE FROM THLD TO LOWEST DA FROM 0.62 NM TO 0.71 NM - LNAV/VNAV NOW LOWEST HAT BASED ON CONTROLLING OBSTACLE
9. INCREASED TCH FROM 51.3 FT TO 55.6 FT - PER FPT REQUEST
10. ADDED CHART NOTE: VGSI AND RNAV GLIDEPATCH NOT COINCIDENT (VGSI ANGLE {ANGLE}/TCH {FEET}) - TCH CHANGE
11. CHANGED CRITICAL LOW TEMP IN UNCOMPENSATED BARO VNAV CHART NOTE FROM -16 C TO -20 C - NEW HISTORICAL TEMPERATURE DATA
12. CHANGED CHARTED VDP LOCATION FROM 1.04 NM TO RWY 23 TO 1.01 NM TO RWY23 - TCH CHANGE
13. INCREASED LPV DA FROM 1183 MSL TO 1263 MSL - CONTROLLING OBSTACLE CHANGE
14. INCREASED LPV VISIBILITY FROM 3/4 SM TO 1 SM - 8260.3E 3-3-2
15. DECREASED LNAV/VNAV DA FROM 1334 MSL TO 1220 MSL - CONTROLLING OBSTACLE CHANGE
16. DECREASED LNAV/VNAV VISIBILITY FROM 1 1/8 SM TO 7/8 SM - 8260.3E 3-3-2
17. DECREASED VNAV VISIBILITY CATS C AND D FROM 1 1/8 SM TO 1 SM - 8260.3E 3-3-2
18. FAS DATA BLOCK CHANGES: LTP/FTP COORDINATES FROM 413155.0295N 0933941.3520W TO 413216.6170N 0933902.0415W LTP/FTP ELLIPSOIDAL HEIGHT FROM +02531 TO +02543 FPAP COORDINATES FROM 413102.4130N 0934117.1075W TO 413124.0095N 0934037.8145W TCH FROM 00051.3 TO 00055.6 LENGTH OFFSET FROM 0864 TO 0008 CRC REMAINDER FROM 05EB875F TO CB69CF9C LTP ORTHOMETRIC HEIGHT FROM +02844 TO +02856 AND FPAP ORTHOMETRIC HEIGHT FROM +02844 TO +02856 - FAF/SDF/DA CHANGES

**COORDINATED WITH:**

**A4A** ☒ **ALPA** ☒ **AOPA** ☒ **APA** ☒ **HAI** ☐ **NBAA** ☒ **OTHER:** ZMP, ZAU, DSM APP CON, DSM ATCT, IA AERO, AMGR

*Digitally signed by*

**FLIGHT CHECKED BY**

PENDING

**JOHN BORDY**

**OFFICE**

**DATE**

Aug 07, 2023

*Digitally signed by*

**DEVELOPED BY**

CASIMIR L. TABAKA (JON NEIDIGH)

**JOHN BORDY**

**OFFICE**

**DATE**

AJV-A432

11/30/2023

Aug 07, 2023

*Digitally signed by*

**APPROVED BY**

JOHN BORDY

**JOHN BORDY**

**OFFICE**

**DATE**

AJV-A33

08/07/2023

**TITLE**  
MANAGER

FAS DATA BLOCK INFORMATION

<u>DATA FIELD</u>	<u>DATA</u>
OPERATION TYPE	0
SBAS SERVICE PROVIDER IDENTIFIER	0
AIRPORT IDENTIFIER	KDSM
RUNWAY	RW23
APPROACH PERFORMANCE DESIGNATOR	0
ROUTE INDICATOR	
REFERENCE PATH DATA SELECTOR	0
REFERENCE PATH IDENTIFIER (APPROACH ID)	W23A
LTP/FTP LATITUDE	413216.6170N
LTP/FTP LONGITUDE	0933902.0415W
LTP/FTP ELLIPSOIDAL HEIGHT	+02543
FPAP LATITUDE	413124.0095N
FPAP LONGITUDE	0934037.8145W
THRESHOLD CROSSING HEIGHT (TCH)	00055.6
TCH UNITS SELECTOR (METERS OR FEET USED)	F
GLIDEPATH ANGLE (GPA)	03.00
COURSE WIDTH AT THRESHOLD	106.75
LENGTH OFFSET	0008
HORIZONTAL ALERT LIMIT (HAL)	40.0
VERTICAL ALERT LIMIT (VAL)	50.0
CRC REMAINDER	CB69CF9C

ADDITIONAL PATH POINT RECORD INFORMATION

ICAO CODE	K3
LTP ORTHOMETRIC HEIGHT	+02856
FPAP ORTHOMETRIC HEIGHT	+02856

