

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> KSBX	<u>PROCEDURE NAME</u> RNAV (GPS) RWY 23	<u>ORIGINAL/AMENDMENT</u> 2C	<u>CITY</u> SHELBY	<u>STATE</u> MT		
<u>AIRPORT ELEVATION</u> 3443	<u>TDZE</u> 3443	<u>SUPERSEDED</u> RNAV (GPS) RWY 23	<u>ORIGINAL/AMENDMENT</u> 2B	<u>DATED</u> 03/02/2017	<u>MAG VAR</u> 15E	<u>EPOCH YEAR</u> 2005
<u>FACILITY</u> RNAV	<u>COORDINATES OF FACILITIES</u>	<u>ACTUAL EFFECTIVE DATE</u> 7 SEPTEMBER 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>
BRADZ		YENUP		TF	FO	1.00	015.56	33.05	9000
CTB VOR/DME		YENUP		TF	FO	1.00	067.17	30.79	9000
WEBVO		YENUP		TF	FO	1.00	295.62	6.40	9000
YENUP	IF/IAF	JKBO		TF	FB	1.00	230.19	7.50	5100
JKBO	FAF	ZIRTA/1.80 NM TO RW23		TF	FB	0.30	230.07	3.26	
ZIRTA/1.80 NM TO RW23		RW23	MAP	TF	FO	0.30	230.07	1.80	
RW23	MAP	4300 MSL		CA			230.07		4300
4300 MSL		YENUP		DF	FO	1.00			9000

MISSED APPROACH

MAP:

LPV: DA
LNAV/VNAV: DA
LNAV: RW23

MISSED APPROACH INSTRUCTIONS:

CLIMB TO 4300 THEN CLIMBING RIGHT TURN TO 9000 DIRECT YENUP AND HOLD, CONTINUE CLIMB-IN-HOLD TO 9000.

ALTERNATE MISSED APPROACH INSTRUCTIONS:



PROFILE:

1. PT

SIDE OF COURSE

OUTBOUND

FT WITHIN

MILES OF

(IAF)
2. HOLD NE YENUP, RT, 230.19 INBOUND, 7000 FT. IN LIEU OF PT (IAF), MAX 14000.
3. FAC: 230.07FAF: JIKBODIST FAF TO MAP: 5.06DIST FAF TO THLD: 5.06
4. MIN ALT: YENUP 7000, JIKBO 5100, ZIRTA/1.80 NM TO RW23 4060
5. DIST TO THLD FROM OM:MM:IM:150 HAT:356 HAT: 0.98GS ANT:
6. MIN GP INCPT: 5100GP ALT AT PFAF : JIKBO 5100OM:MM:IM:
7. GP ANGLE: 3.0034:1: IS NOT CLEAR20:1: IS CLEARTCH: 45.0
8. MSA FROM: RW23 8200

PBN REQUIREMENTS NOTE:

RNP APCH - GPS.

NOTES:

CHART NOTE: RWY 23 HELICOPTER VISIBILITY REDUCTION BELOW 3/4 SM NOT AUTHORIZED.
CHART NOTE: BARO-VNAV NA WHEN USING CUT BANK ALTIMETER SETTING.
CHART NOTE: FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW -21°C OR ABOVE 54°C.
CHART PROFILE NOTE: VGSI AND RNAV GLIDEPATH NOT COINCIDENT (VGSI ANGLE {ANGLE}/TCH {FEET}).
CHART NOTE: WHEN LOCAL ALTIMETER SETTING NOT RECEIVED, USE CUT BANK ALTIMETER SETTING.

ADDITIONAL FLIGHT DATA:

CHART CIRCLING ICON
CHART FAS OBST: 3546 POLE (30-056502) 483308N/1115110W.
WAAS CHANNEL # 78026
REFERENCE PATH ID: W23A
CHART CIRCLING ICON.
LTP HAE: 1034.7 M

MINIMUMS:

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

ALTERNATE: NA ☐ STANDARD - CAT D 800-2 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	3799	1	356	3799	1	356	3799	1	356	3799	1	356		QUALITY 10 CHECKED	
LNAV/VNAV DA	3813	1	370	3813	1	370	3813	1	370	3813	1	370			
LNAV MDA	3920	1	477	3920	1	477	3920	1 3/8	477	3920	1 3/8	477			
CIRCLING	4020	1	577	4080	1	637	4100	1 3/4	657	4220	2 1/2	777			

CHANGES - REASONS

- 1: UPDATED FEEDER ROUTES RNP VALUE FROM: 2.0 TO: 1.0 - 8260.58B 3-1-2 TABLE 1-2-1.
- 2: PROFILE LINE 4: REMOVED "" - NO LONGER REQUIRED.
- 3: PROFILE LINE 5: ADDED 356 HAT: 0.98 - 8260.19I 8-6-7 E(3).
- 4: PROFILE LINE 7: ADDED 20:1: IS CLEAR - NO 20:1 PENETRATIONS.
- 5: ADDED RNP APCH - GPS TO PBN REQUIREMENT NOTES; REMOVED DME/DME RNP-0.3 NA - 8260.19I 8-6-8 B(2).
- 6: CHANGED CHART NOTE: FROM: BARO-VNAV NA TO: BARO-VNAV NA WHEN USING CUT BANK ALTIMETER SETTING - PRIMARY ALTIMETER ESTABLISHED; 8260.19I 8-6-9 E(8)&(9).
- 7: UPDATED CHART PROFILE NOTE: FROM: VGSI AND RNAV GLIDEPATH NOT COINCIDENT TO: VGSI AND RNAV GLIDEPATH NOT COINCIDENT (VGSI ANGLE {ANGLE}/TCH {FEET}) - 8260.19I 8-6-9 M (1).
- 8: ADDED CHART NOTE: FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW -21°C OR ABOVE 54°C - 8260.19I 8-6-9 R.
- 9: DELETED *LNAV ONLY - NO LONGER REQUIRED.
- 10: CHANGED BACK UP ALTIMETER NOTE FROM: USE CUT BANK ALTIMETER SETTING, IF NOT RECEIVED USE GREAT FALLS ALTIMETER SETTING AND INCREASE ALL DA 81 FEET AND ALL MDA 100 FT; INCREASE LPV ALL CATS VISIBILITY 1/4 MILE, LNAV/VNAV ALL CATS VISIBILITY 5/8 MILE, LNAV CATS C/D, AND CIRC CAT C/D VISIBILITIES 1/4 MILE TO: WHEN LOCAL ALTIMETER SETTING NOT RECEIVED, USE CUT BANK ALTIMETER SETTING - PRIMARY ALTIMETER ESTABLISHED; MAINTAINED CURRENT MINIMA.
- 11: DELETED CHART NOTE: STRAIGHT-IN RWY 23 NA AT NIGHT, CIRCLING RWY 23 NA AT NIGHT - NO 20:1 PENETRATIONS.
- 12: ADDITIONAL FLIGHT DATA: DELETED CHART CUT BANK ASOS - PRIMARY ALTIMETER ESTABLISHED.
- 13: ADDED ALTERNATE MINS: STANDARD - CAT D 800-2 1/2, NA WHEN LOCAL WEATHER NOT AVAILABLE - PRIMARY ALTIMETER ESTABLISHED; 8260.19I 8-6-11 B(4).
- 14: CHANGED LPV VISIBILITY ALL CATS FROM: 1 1/8 SM TO: 1 SM - 8260.3E VISIBILITY TABLE 3-3-1.
- 15: CHANGED LNAV/VNAV VISIBILITY ALL CATS FROM: 1 1/4 SM TO: 1 SM - 8260.3E VISIBILITY TABLE 3-3-1.
- 16: CHANGED CHART NOTE FROM: RWY 23 HELICOPTER VISIBILITY REDUCTION BELOW 1 SM TO: RWY 23 HELICOPTER VISIBLTY REDUCTION BELOW 3/4 SM - 34:1 PENETRATIONS EXSISTS.

COORDINATED WITH:

A4A ☐

ALPA ☒

AOPA ☐

APA ☐

HAI ☐

NBAA ☒

OTHER: ZCL, GTF FSS, AMGR

<div>FLIGHT CHECKED BY</div> <div>GARY J VEER</div>	<div>Digitally signed by</div> <div>JASON KRETSCHMER</div> <div>Jun 27, 2023</div>	<div>OFFICE</div> <div>FPO</div>	<div>DATE</div> <div>06/21/2023</div>	
<div>DEVELOPED BY</div> <div>JASON KRETSCHMER (MICAH HILLEY)</div>	<div>Digitally signed by</div> <div>JASON KRETSCHMER</div> <div>Jun 27, 2023</div>	<div>OFFICE</div> <div>AJV-A421</div>	<div>DATE</div> <div>04/24/2023</div>	
<div>APPROVED BY</div> <div>JASON KRETSCHMER</div>	<div>Digitally signed by</div> <div>JASON KRETSCHMER</div> <div>Jun 27, 2023</div>	<div>OFFICE</div> <div>AJV-A420</div>	<div>DATE</div> <div></div>	<div>TITLE</div> <div>MANAGER</div>



FAS DATA BLOCK INFORMATION

<u>DATA FIELD</u>	<u>DATA</u>
OPERATION TYPE	0
SBAS SERVICE PROVIDER IDENTIFIER	0
AIRPORT IDENTIFIER	KSBX
RUNWAY	RW23
APPROACH PERFORMANCE DESIGNATOR	0
ROUTE INDICATOR	
REFERENCE PATH DATA SELECTOR	0
REFERENCE PATH IDENTIFIER (APPROACH ID)	W23A
LTP/FTP LATITUDE	483238.9580N
LTP/FTP LONGITUDE	1115145.7655W
LTP/FTP ELLIPSOIDAL HEIGHT	+10347
FPAP LATITUDE	483201.2800N
FPAP LONGITUDE	1115347.2500W
THRESHOLD CROSSING HEIGHT (TCH)	00045.0
TCH UNITS SELECTOR (METERS OR FEET USED)	F
GLIDEPATH ANGLE (GPA)	03.00
COURSE WIDTH AT THRESHOLD	106.75
LENGTH OFFSET	1224
HORIZONTAL ALERT LIMIT (HAL)	40.0
VERTICAL ALERT LIMIT (VAL)	50.0
CRC REMAINDER	362320F2

ADDITIONAL PATH POINT RECORD INFORMATION

ICAO CODE	K1
LTP ORTHOMETRIC HEIGHT	+10494
FPAP ORTHOMETRIC HEIGHT	+10494

QUALITY
10
CHECKED