

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> N98	<u>PROCEDURE NAME</u> RNAV (GPS) RWY 9	<u>ORIGINAL/AMENDMENT</u> ORIG-C	<u>CITY</u> BOYNE CITY	<u>STATE</u> MI
<u>AIRPORT ELEVATION</u> 660	<u>TDZE</u> 659	<u>SUPERSEDED</u> RNAV (GPS) RWY 9	<u>DATED</u> 07/23/2015	<u>MAG VAR</u> 5W
<u>FACILITY</u> RNAV	<u>COORDINATES OF FACILITIES</u>	<u>ORIGINAL/AMENDMENT</u> ORIG-B	<u>REQUIRED EFFECTIVE DATE</u> ROUTINE	<u>EPOCH YEAR</u> 1985
		<u>ACTUAL EFFECTIVE DATE</u> 26 DECEMBER 2024	<u>CANCEL/SUSPEND</u>	

TERMINAL ROUTES

FROM	FIX TYPE	TO	FIX TYPE	LEG TYPE	FO/FB	RNP	COURSE	DISTANCE	ALTITUDE
PLN VORTAC		ZANUG		TF	FO	1.00	228.59	34.24	2800
ADENO		ZANUG		TF	FO	1.00	004.94	11.13	2600
ZANUG	IF/IAF	AKRIF		TF	FB	1.00	097.48	3.90	2500
AKRIF	FAF	OZKIW/2.10 NM TO RW09		TF	FB	0.30	097.55	3.57	
OZKIW/2.10 NM TO RW09		RW09	MAP	TF	FO	0.30	097.55	2.10	
RW09	MAP	1060 MSL		CA			097.55		
1060 MSL		VEBHA		DF	FB	1.00			
VEBHA		WOMOP		TF	FO	1.00	081.94	10.87	3200

MISSED APPROACH

MAP:

LP: RW09
LNAV: RW09

MISSED APPROACH INSTRUCTIONS:

CLIMB TO 3200 DIRECT VEBHA AND ON TRACK 081.94 TO WOMOP AND HOLD.

ALTERNATE MISSED APPROACH INSTRUCTIONS:

PROFILE:

1. PT
- SIDE OF COURSE
- OUTBOUND
- FT WITHIN
- MILES OF (IAF)
2. HOLD W ZANUG, RT, 097.48 INBOUND, 2500 FT. IN LIEU OF PT (IAF), MAX 6000.
3. FAC: 097.55
- FAF: AKRIF
- DIST FAF TO MAP: 5.67
- DIST FAF TO THLD: 5.67
4. MIN ALT: ZANUG 2500, AKRIF 2500, OZKIW/2.10 NM TO RW09 1360
5. DIST TO THLD FROM OM: MM: IM: 150 HAT: GS ANT: OM: MM: IM:
6. MIN GP INCPT: GP ALT AT FAF:
7. GP ANGLE: 34:1: IS NOT CLEAR 20:1: IS NOT CLEAR TCH:
8. MSA FROM: RW09 3500



PBN REQUIREMENTS NOTE:

RNP APCH - GPS.

NOTES:

CHART PROFILE NOTE: VGSI AND DESCENT ANGLES NOT COINCIDENT (VGSI ANGLE {ANGLE}/TCH {FEET}).
CHART NOTE: PROCEDURE NA AT NIGHT.
CHART NOTE: RWY 9 HELICOPTER VISIBILITY REDUCTION BELOW 1 SM NOT AUTHORIZED.
CHART PLANVIEW NOTE: PROCEDURE NA FOR ARRIVAL ON PLN VORTAC AIRWAY RADIALS 170 CW 295.
CHART NOTE: USE CVX ALTIMETER SETTING; WHEN NOT RECEIVED, USE MGN ALTIMETER SETTING.

ADDITIONAL FLIGHT DATA:

AKRIF TO RW09: 3.00/40
CHART CHARLEVOIX AWOS-3

HOLD E, RT, 253.93 INBOUND.
CHART FAS OBST: 1013 TREE (26-045345) 451155N/0850040W, 743 TREE (26-037582) 451238N/0850001W.
CHART 838 TREE 451218N/0850244W.
WAAS CHANNEL # 97526
REFERENCE PATH ID: W09A
LTP HAE: 164.7 M

MINIMUMS:

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

ALTERNATE: NA ☒

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
LP MDA	1060	1	401	1060	1	401		NA			NA				
LNAV MDA	1260	1	601	1260	1	601		NA			NA				
CIRCLING	1480	1 1/4	820	1500	1 1/4	840		NA			NA				

CHANGES - REASONS

- INCORPORATED CHANGES FROM P-NOTAM FOR AMDT ORIG-A AND ORIG-B INTO FORMS – IAW 8260.19J, 8-3-4.C(3).
- TERMINAL ROUTES: DELETED FEEDER LEG “GLR VOR/DME TO ZANUG” – GLR VOR MON.
- TERMINAL ROUTES: UPDATED LEGS “OZKIW/2.10 NM TO RW09 TO RW09” AND “CA LEG” COURSE FROM “097.60” TO “097.55” – PREVIOUSLY DOCUMENTED INCORRECTLY.
- PROFILE LINE 2: ADDED “MAX 6000” – IAW 8260.19J, 8-6-7.B(2).
- PROFILE LINE 7: ADDED “20:1: IS NOT CLEAR” – IAW 8260.19J, 8-6-7.G(3).
- DELETED “CHART NOTE: DME/DME RNP-0.3 NA” AND ADDED “RNP APCH – GPS” TO PBN REQUIREMENTS NOTE - IAW 8260.19J 8-6-8.B(2).
- NOTES: UPDATED CHART PROFILE NOTE FROM “CHART PROFILE NOTE: VGSI AND DESCENT ANGLES NOT COINCIDENT (VGSI ANGLE {ANGLE}/TCH {FEET}).” – IAW 8260.19J, 8-6-10.M(2).
- NOTES: UPDATED CHART NOTE FROM “HELICOPTER VISIBILITY REDUCTION BELOW 1 SM NOT AUTHORIZED” TO “RWY 9 HELICOPTER VISIBILITY REDUCTION BELOW 1 SM NOT AUTHORIZED.” – IAW 8260.19J, 8-6-12.K(2).
- NOTES: UPDATED CHART PLANVIEW NOTE FROM “PROCEDURE NA FOR ARRIVAL ON PLN VORTAC AIRWAY RADIALS 170 CW 295 AND ON GLR VOR/DME AIRWAY RADIALS 213 CW 247” TO “PROCEDURE NA FOR ARRIVAL ON PLN VORTAC AIRWAY RADIALS 170 CW 295. – GLR VOR MON.
- NOTES: UPDATED CHART NOTE FROM “USE CHARLEVOIX ALTIMETER SETTING; WHEN NOT RECEIVED, USE HARBOR SPRINGS ALTIMETER.” TO “USE CVX ALTIMETER SETTING; WHEN NOT RECEIVED, USE MGN ALTIMETER SETTING.” – IAW 8260.19J, 8-6-10.F(4).
- ADDITIONAL FLIGHT DATA: UPDATED CHART FAS OBST FROM “743 TREE 451238M/08500001W, 1013 TREE 451155N/0850040W” TO “1013 TREE (26-045345) 451155N/0850040W, 743 TREE (26-037582) 451238N/0850001W) – ADDED OBSTACLE ID'S IAW 8260.19J, 8-6-11.C.



COORDINATED WITH:

A4A

ALPA

X

AOPA

X

APA

HAI

NBAA

X

OTHER:

ZMP, AIRPORT MANAGER

FLIGHT CHECKED BY

PROCESSED IAW TECHNICAL SUPPORT GROUP (AJF-17) MEMO DATED 07/07/2021 GUIDANCE FOR PROCEDURAL CHANGES REQUIRING FLIGHT INSPECTION/VALIDATION

OFFICE

DATE

Digitally signed by

ROBERT G HAMILTON

Aug 07, 2024

DEVELOPED BY

ROBERT G HAMILTON (TODD A. RUSSELL)

Digitally signed by

ROBERT G HAMILTON

Aug 07, 2024

OFFICE

DATE

AJV-A433

05/31/2024

APPROVED BY

ROBERT G HAMILTON

Digitally signed by

ROBERT G HAMILTON

Aug 07, 2024

OFFICE

DATE

TITLE

AJV-A433

MANAGER

FAS DATA BLOCK INFORMATION

DATA FIELD	DATA
OPERATION TYPE	0
SBAS SERVICE PROVIDER IDENTIFIER	0
AIRPORT IDENTIFIER	N98
RUNWAY	RW09
APPROACH PERFORMANCE DESIGNATOR	0
ROUTE INDICATOR	
REFERENCE PATH DATA SELECTOR	0
REFERENCE PATH IDENTIFIER (APPROACH ID)	W09A
LTP/FTP LATITUDE	451232.3675N
LTP/FTP LONGITUDE	0845943.1510W
LTP/FTP ELLIPSOIDAL HEIGHT	+01647
FPAP LATITUDE	451228.2500N
FPAP LONGITUDE	0845737.2600W
THRESHOLD CROSSING HEIGHT (TCH)	00040.0
TCH UNITS SELECTOR (METERS OR FEET USED)	F
GLIDEPATH ANGLE (GPA)	03.00
COURSE WIDTH AT THRESHOLD	106.75
LENGTH OFFSET	1712
HORIZONTAL ALERT LIMIT (HAL)	40.0
VERTICAL ALERT LIMIT (VAL)	00.0
CRC REMAINDER	ED67600A

ADDITIONAL PATH POINT RECORD INFORMATION

ICAO CODE	K5
LTP ORTHOMETRIC HEIGHT	+01997
FPAP ORTHOMETRIC HEIGHT	+01997

