

**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.

<b>AIRPORT ID</b> ACB	<b>PROCEDURE NAME</b> RNAV (GPS) RWY 2	<b>ORIGINAL/AMENDMENT</b> 1	<b>CITY</b> BELLAIRE	<b>STATE</b> MI
<b>AIRPORT ELEVATION</b> 623	<b>TDZE</b> 623	<b>SUPERSEDED</b> RNAV (GPS) RWY 2	<b>DATED</b> 12/30/2021	<b>MAG VAR</b> 5W
<b>FACILITY</b> RNAV	<b>COORDINATES OF FACILITIES</b>	<b>ACTUAL EFFECTIVE DATE</b>	<b>REQUIRED EFFECTIVE DATE</b> ROUTINE	<b>EPOCH YEAR</b> 1990
				<b>CANCEL/SUSPEND</b>

**TERMINAL ROUTES**

FROM	FIX TYPE	TO	FIX TYPE	LEG TYPE	FO/FB	RNP	COURSE	DISTANCE	ALTITUDE
TUGGS	IAF	KEENO	NOPT	TF	FB	1.00	292.45	5.00	2700
SKIPR	IAF	KEENO	NOPT	TF	FB	1.00	112.29	5.47	2700
KEENO	IF/IAF	FOVUP		TF	FB	1.00	022.37	4.10	2600
FOVUP		HATTR		TF	FB	1.00	022.42	1.93	2300
HATTR	FAF	MADZA/2.18 NM TO RW02		TF	FB	0.30	022.40	2.95	
MADZA/2.18 NM TO RW02		RW02	MAP	TF	FO	0.30	022.40	2.18	
RW02	MAP	902 MSL		CA			022.40		
902 MSL		POXOE		DF	FB	1.00			
POXOE		IROTO		TF	FO	1.00	029.65	11.04	3000

**MISSED APPROACH**

**MAP:**

LPV: DA  
LNAV/VNAV: DA  
LNAV: RW02

**MISSED APPROACH INSTRUCTIONS:**

CLIMB TO 3000 DIRECT POXOE AND ON TRACK 029.65 TO IROTO AND HOLD.

**ALTERNATE MISSED APPROACH INSTRUCTIONS:**

**PROFILE:**

- PT SIDE OF COURSE OUTBOUND FT WITHIN MILES OF (IAF)
- HOLD S KEENO, RT, 022.37 INBOUND, 2700 FT. IN LIEU OF PT (IAF), MAX 6000.
- FAC: 022.40 FAF: HATTR DIST FAF TO MAP: 5.13 DIST FAF TO THLD: 5.13
- MIN ALT: KEENO 2700, FOVUP 2600, HATTR 2300, MADZA/2.18 NM TO RW02 1360
- DIST TO THLD FROM OM: MM: IM: 150 HAT: 279 HAT: 0.74 GS ANT: IM:
- MIN GP INCPT: 2300 GP ALT AT PFAF: HATTR 2300
- GP ANGLE: 3.00 34:1: IS NOT CLEAR 20:1: IS CLEAR TCH: 45.0
- MSA FROM: RW02 3500



**PBN REQUIREMENTS NOTE:**

RNP APCH - GPS.

**NOTES:**

CHART NOTE: RWY 02 HELICOPTER VISIBILITY REDUCTION BELOW 3/4 SM NOT AUTHORIZED.  
 CHART PLANVIEW NOTE: PROCEDURE NA FOR ARRIVALS AT SKIPR ON V193-320 SOUTHWEST BOUND.  
 CHART NOTE: FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW -16°C OR ABOVE 54°C.  
 CHART NOTE: BARO-VNAV AND VDP NA WHEN USING TVC ALTIMETER SETTING.  
 CHART NOTE: WHEN LOCAL ALTIMETER SETTING NOT RECEIVED, USE TVC ALTIMETER SETTING: INCREASE LPV DA TO 954 FEET AND ALL VISIBILITIES 1/8 SM; INCREASE LNAV/VNAV DA TO 1187 FEET AND ALL VISIBILITIES 1/4 SM; INCREASE ALL MDAS 60 FEET AND LNAV VISIBILITY CATS C AND D 1/4 SM, AND CIRCLING VISIBILITY CATS B AND C 1/4 SM.  
 CHART SPEED ICON IN PLANVIEW AT TUGGS: MAX 220 KIAS.  
 CHART SPEED ICON IN PLANVIEW AT SKIPR: MAX 230 KIAS.

**ADDITIONAL FLIGHT DATA:**

HOLD NE, RT, 218.39 INBOUND.  
 CHART FAS OBST: 889 TREE (26-126380) 445839N/0851305W.  
 CHART VDP AT 1.48 NM TO RW02.  
 WAAS CHANNEL # 56301  
 REFERENCE PATH ID: W02A  
 LTP HAE: 155.1 M

**MINIMUMS:**

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

**ALTERNATE:** NA  STANDARD - CAT C 1000-2 3/4, CAT D 1100-3, NA WHEN LOCAL WEATHER NOT AVAILABLE.

<b><u>CATEGORY:</u></b>	<b><u>A</u></b>			<b><u>B</u></b>			<b><u>C</u></b>			<b><u>D</u></b>			<b><u>E</u></b>		
<b><u>FINAL TYPE</u></b>	<b><u>DA/MDA</u></b>	<b><u>VIS</u></b>	<b><u>HAT/HAA</u></b>	<b><u>DA/MDA</u></b>	<b><u>VIS</u></b>	<b><u>HAT/HAA</u></b>	<b><u>DA/MDA</u></b>	<b><u>VIS</u></b>	<b><u>HAT/HAA</u></b>	<b><u>DA/MDA</u></b>	<b><u>VIS</u></b>	<b><u>HAT/HAA</u></b>	<b><u>DA/MDA</u></b>	<b><u>VIS</u></b>	<b><u>HAT/HAA</u></b>
LPV DA	902	1	279	902	1	279	902	1	279	902	1	279			
LNAV/VNAV DA	1135	1 3/8	512	1135	1 3/8	512	1135	1 3/8	512	1135	1 3/8	512			
LNAV MDA	1140	1	517	1140	1	517	1140	1 3/8	517	1140	1 3/8	517			
CIRCLING	1360	1	737	1380	1	757	1560	2 3/4	937	1640	3	1017			



**CHANGES - REASONS**

1. TERMINAL ROUTES: REMOVED GLR VOR/DME FEEDER – GLR VOR/DME REMOVED DUE TO VOR MON PROGRAM.
2. TERMINAL ROUTES: CHANGED FOVUP TO HATTR COURSE/DISTANCE FROM “22.37/2.00” TO “22.42/1.93” – MOVED PFAF HATTR 418 FEET SW TO ESTABLISH 3.00 GP/TCH 45.
3. TERMINAL ROUTES: ADDED “HATTR TO MADZA/2.18 NM TO RW02”, AND “MADZA/2.18 NM TO RW02 TO RW02” AND ALL ASSOCIATED DATA – ADDED SDF PER FPT TO REDUCE LNAV MINIMUMS.
4. MISSED APPROACH INSTRUCTIONS: CHANGED FROM “CLIMB TO 3000 DIRECT POXOE AND VIA 029.68 TRACK TO IROTO AND HOLD” TO “CLIMB TO 3000 DIRECT POXOE AND ON TRACK 029.65 TO IROTO AND HOLD.” – IAW 8260.19J, 8-6-6D(11).
5. PROFILE LINE 2: ADDED “MAX 6000” – IAW 8260.19J, 8-6-7B(2).
6. PROFILE LINE 3: UPDATED FAC/DIST FAF TO MAP/DIST FAF TO THLD FROM “022.41/5.06/5.06” TO “22.40/5.13/5.13” – PFAF POSITION REALIGNED 418 FEET SW BASED ON ANGLE AND TCH.
7. PROFILE LINE 4: ADDED MIN ALT “MADZA/2.18 NM TO RW02 1300” – NEW SDF ESTABLISHED FOR LOWER MINIMUMS.
8. PROFILE LINE 5: UPDATED DISTANCE TO THLD FROM “285 HAT: 0.76NM” TO “279 HAT 0.74”, MOVED FROM ADDITIONAL FLIGHT DATA – UPDATED LPV CONTROLLING OBSTACLE IAW 8260.19J, 8-6-7E.
9. PROFILE LINE 6: ADDED “GP ALT AT PFAF: HATTR 2300” - IAW 8260.19J, 8-6-7F(1).
10. PROFILE LINE 7: CHANGED TCH FROM “42.9” TO “45” AND ADDED “20:1: IS CLEAR”. – NO 20:1 PENETRATIONS EXIST IAW 8260-19J, 8-6-7 G(1)-(3)A.
11. NOTES: ADDED “CHART NOTE: RWY 02 HELICOPTER VISIBILITY REDUCTION BELOW 3/4 SM NOT AUTHORIZED” – 34:1 PENETRATIONS EXIST IAW 8260.19J, 8-6-12K(2).
12. NOTES: CHANGED “CHART NOTE: VDP NA WHEN USING CHERRY CAPITAL ALTIMETER SETTING.” TO “CHART NOTE: BARO-VNAV AND VDP NA WHEN USING TVC ALTIMETER SETTING.” - IAW 8260.19J 8-6-10.A(3) AND E(8-9).
13. NOTES: ADDED CHART NOTE: FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW -16°C OR ABOVE 54°C. - IAW 8260.19J 8-6-10.R.
14. NOTES: CHANGED “PROCEDURE NA FOR ARRIVALS AT SKIPR VIA V193-320 SOUTHWEST BOUND TO V193-320 SOUTHWEST BOUND.” TO “PROCEDURE NA FOR ARRIVALS AT SKIPR ON V193-320 SOUTHWEST BOUND.” – IAW 8260.19J, 8-2-5.G(2).
15. NOTES: CHANGED “CHART NOTE: WHEN LOCAL ALTIMETER SETTING NOT RECEIVED, USE CHERRY CAPITAL ALTIMETER SETTING AND INCREASE ALL DAS/MDAS 60 FEET AND CIRCLING VISIBILITIES CAT B AND C ¼ SM.” TO “CHART NOTE: WHEN LOCAL ALTIMETER SETTING NOT RECEIVED, USE TVC ALTIMETER SETTING: INCREASE LPV DA TO 954 FEET AND ALL VISIBILITIES 1/8 SM; INCREASE LNAV/VNAV DA TO 1187 FEET AND ALL VISIBILITIES 1/4 SM; INCREASE ALL MDAS 60 FEET AND LNAV VISIBILITY CATS C AND D 1/4 SM, AND CIRCLING VISIBILITY CATS B AND C 1/4 SM.” – NEW EVALUATION COMPLETED, IAW 8260.19J 8-6-10 F(4) AND IAW 8260.3E TABLE 3-3-1, AND TABLE 3-3-7.
16. NOTES: REMOVED “CHART PLANVIEW NOTE: PROCEDURE NA FOR ARRIVALS AT GLR VOR/DME VIA V215-233 AND V420 NORTHEAST BOUND.” – GLR VOR/DME REMOVED PER VOR MON.
17. NOTES: ADDED “CHART SPEED ICON IN PLANVIEW AT TUGGS: MAX 220 KIAS.” AND “CHART SPEED ICON IN PLANVIEW AT SKIPR: MAX 230 KIAS.” – SPEED RESTRICTIONS ADDED TO IAFS IN ORDER TO MEET SEGMENT LEG LENGTH, IAW 8260.19J, 4-6-10G.
18. ADDITIONAL FLIGHT DATA: CHANGED CHART FAS OBSTACLE, FROM “1116 ANT 445701N/0851109W” TO “889 TREE (26-126380) 445839N/0851305W.”- UPDATED CONTROLLING OBSTACLE.
19. ADDITIONAL FLIGHT DATA: REMOVED “ROUTE TYPE: A, R”, “ROUTE TYPE QUALIFIER 1: J”, “ROUTE TYPE QUALIFIER 2: S, AND REMOVED “\* LNAV ONLY” – NO LONGER REQUIRED.
20. ADDITIONAL FLIGHT DATA: CHANGED VDP FROM “CHART VDP AT 1.74 MILES TO RW02” TO “CHART VDP AT 1.48 NM TO RW02.” – MOVED FAF HATTR 418 FT SW PER FPT, NEW VDP CALCULATED IAW 8260.19J, 8-6-11.M(2).
21. MINIMUMS: LPV DA/HAT ALL CATS CHANGED FROM “908/285” TO “902/279” –UPDATED LPV CONTROLLING OBSTACLE.
22. MINIMUMS: ADDED LNAV/VNAV MINIMUMS - PER FPT DIRECTION.
23. MINIMUMS: LNAV MDA/HAT ALL CATS CHANGED FROM “1220/597” TO “1140/517” - UPDATED OBSTACLE EVALUATION.
24. MINIMUMS: LNAV CAT C VIS FROM “1 1/2” TO “1 3/8” – UPDATED OBSTACLE EVALUATION AND IAW 8260.3E CH-1 VIS TABLE 3-3-1 APPLIED.
25. MINIMUMS: LNAV CAT D VIS FROM “1 3/4” TO “1 3/8” – UPDATED OBSTACLE EVALUATION AND IAW 8260.3E CH-1 VIS TABLE 3-3-1 APPLIED.
26. FAS DATA BLOCK: UPDATED CRC REMAINDER FROM “C04CA65F” TO “B3FB7388” - LTP/FTP LAT/LONG CHANGED FROM “445855.3200N/0851204.5000W” TO 445855.3155N/0851204.4685W”, FPAP LAT/LONG CHANGED FROM “450020.3200N/0851126.8800W” TO “450020.3165N/0851126.8640W”, AND TCH CHANGED FROM “42.9” TO “45.0”.

**COORDINATED WITH:**

A4A  
  ALPA  
  AOPA  
  APA  
  HAI  
  NBAA  
 OTHER: ZMP, AMGR

**FLIGHT CHECKED BY**

DAVID DANNER

**OFFICE**

**DATE**

SCOTT WIEBE

Sep 30, 2024

FPO

09/25/2024

**DEVELOPED BY**

*Digitally signed by*

**OFFICE**

**DATE**

DAVID DANNER (WALKER R. MILLIGAN)

DAVID DANNER

AJV-A421

06/13/2024

Sep 30, 2024

**APPROVED BY**

*Digitally signed by*

**OFFICE**

**DATE**

**TITLE**

DAVID DANNER

DAVID DANNER

AJV-A421

12/26/2024

MANAGER

Sep 30, 2024



FAS DATA BLOCK INFORMATION

<u>DATA FIELD</u>	<u>DATA</u>
OPERATION TYPE	0
SBAS SERVICE PROVIDER IDENTIFIER	0
AIRPORT IDENTIFIER	KACB
RUNWAY	RW02
APPROACH PERFORMANCE DESIGNATOR	0
ROUTE INDICATOR	
REFERENCE PATH DATA SELECTOR	0
REFERENCE PATH IDENTIFIER (APPROACH ID)	W02A
LTP/FTP LATITUDE	445855.3155N
LTP/FTP LONGITUDE	0851204.4685W
LTP/FTP ELLIPSOIDAL HEIGHT	+01551
FPAP LATITUDE	450020.3165N
FPAP LONGITUDE	0851126.8640W
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 B3FB7388

ADDITIONAL PATH POINT RECORD INFORMATION

ICAO CODE	K5
LTP ORTHOMETRIC HEIGHT	+01895
FPAP ORTHOMETRIC HEIGHT	+01895



**FEDERAL AVIATION ADMINISTRATION  
FLIGHT STANDARDS SERVICE  
STANDARD INSTRUMENT APPROACH PROCEDURE DATA RECORD**

<u>AIRPORT ID</u> ACB	<u>PROCEDURE NAME</u> RNAV (GPS) RWY 2	<u>AMDT NO.</u> 1	<u>CITY</u> BELLAIRE	<u>STATE</u> MI	<u>AIRPORT ELEVATION</u> 623	<u>FACILITY</u> RNAV
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**PART A: OBSTRUCTION DATA SEGMENTS**

**INITIAL**  
**FROM**  
TUGGS

**TO**  
KEENO

<u>RNP</u> 1.00	<u>DISTANCE</u> 5.00	<u>PAT</u>	<u>MAP</u>	<u>HAT</u>	<u>HMAS</u>
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OBSTRUCTION	COORDINATES	ELEV MSL	HORZ	VERT	AC	ROC	OCS	CG	CGTA	ADJUSTMENTS	MIN ALT
TOWER (26-001188)	444728.47N/0851420.85W	1546	250	50	4D	1000				AT154	2700
TERRAIN	444936.00N/0851154.00W	1095 (1100)								AS1500	2600

**COMPUTATIONS**

<u>ALT</u>	<u>KIAS</u>	<u>KTAS</u>	<u>HAA</u>	<u>VKTW</u>	<u>TR</u>	<u>BA</u>	<u>DTA</u>	<u>COURSE CHANGE</u>	<u>DVEB</u>	<u>VEB OCS</u>	<u>RF CENTER FIX/DISTANCE</u>
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**SEGMENT REMARKS:**

**INITIAL**  
**FROM**  
SKIPR

**TO**  
KEENO

<u>RNP</u> 1.00	<u>DISTANCE</u> 5.47	<u>PAT</u>	<u>MAP</u>	<u>HAT</u>	<u>HMAS</u>
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OBSTRUCTION	COORDINATES	ELEV MSL	HORZ	VERT	AC	ROC	OCS	CG	CGTA	ADJUSTMENTS	MIN ALT
AAO	444715.00N/0851506.00W	1257	215	8	4B	1000				AT443	2700
TERRAIN	444636.00N/0851542.00W	1043 (1000)								AS1500	2500

**COMPUTATIONS**

<u>ALT</u>	<u>KIAS</u>	<u>KTAS</u>	<u>HAA</u>	<u>VKTW</u>	<u>TR</u>	<u>BA</u>	<u>DTA</u>	<u>COURSE CHANGE</u>	<u>DVEB</u>	<u>VEB OCS</u>	<u>RF CENTER FIX/DISTANCE</u>
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**SEGMENT REMARKS:**



**AIRPORT ID**  
ACB

**PROCEDURE NAME**  
RNAV (GPS) RWY 2

**AMDT NO.**  
1

**CITY**  
BELLAIRE

**STATE**  
MI

**AIRPORT ELEVATION**  
623

**FACILITY**  
RNAV

**INTERMEDIATE**

**FROM**  
KEENO (IF/IAF)

**TO**  
FOVUP

**RNP**  
1.00

**DISTANCE**  
4.10

**PAT**

**MAP**

**HAT**

**HMAS**

<b>OBSTRUCTION</b>	<b>COORDINATES</b>	<b>ELEV MSL</b>	<b>HORZ</b>	<b>VERT</b>	<b>AC</b>	<b>ROC</b>	<b>OCS</b>	<b>CG</b>	<b>CGTA</b>	<b>ADJUSTMENTS</b>	<b>MIN ALT</b>
TOWER (26-001188)	444728.47N/0851420.85W	1546	250	50	4D	500					2100
TERRAIN	445021.00N/0851136.00W	1099 (1100)								AS1500	2600

**COMPUTATIONS**

**ALT    KIAS    KTAS    HAA    VKTW    TR    BA    DTA    COURSE CHANGE    DVEB    VEB OCS    RF CENTER FIX/DISTANCE**

**SEGMENT REMARKS:**

**INTERMEDIATE: STEPDOWN**

**FROM**  
FOVUP

**TO**  
HATTR

**RNP**  
1.00

**DISTANCE**  
1.93

**PAT**

**MAP**

**HAT**

**HMAS**

<b>OBSTRUCTION</b>	<b>COORDINATES</b>	<b>ELEV MSL</b>	<b>HORZ</b>	<b>VERT</b>	<b>AC</b>	<b>ROC</b>	<b>OCS</b>	<b>CG</b>	<b>CGTA</b>	<b>ADJUSTMENTS</b>	<b>MIN ALT</b>
AAO	445109.00N/0851315.00W	1227	215	8	4B	500				AT573	2300
TERRAIN	445245.00N/0851318.00W	958 (1000)								AS1000	2000

**COMPUTATIONS**

**ALT    KIAS    KTAS    HAA    VKTW    TR    BA    DTA    COURSE CHANGE    DVEB    VEB OCS    RF CENTER FIX/DISTANCE**

**SEGMENT REMARKS:**



**AIRPORT ID**  
ACB

**PROCEDURE NAME**  
RNAV (GPS) RWY 2

**AMDT NO.**  
1

**CITY**  
BELLAIRE

**STATE**  
MI

**AIRPORT ELEVATION**  
623

**FACILITY**  
RNAV

**FINAL: LPV**

**FROM**  
HATTR

**TO**  
RW02

**RNP**  
0.30

**DISTANCE**  
5.13

**PAT**

**MAP**  
DA

**HAT**  
279

**HMAS**

<b>OBSTRUCTION</b>	<b>COORDINATES</b>	<b>ELEV MSL</b>	<b>HORZ</b>	<b>VERT</b>	<b>AC</b>	<b>ROC</b>	<b>OCS</b>	<b>CG</b>	<b>CGTA</b>	<b>ADJUSTMENTS</b>	<b>MIN ALT</b>
TREE (26-123408)	445827.00N/0851215.07W	704	20	3	1A		34.00:1			MA29	902

**COMPUTATIONS**

**ALT    KIAS    KTAS    HAA    VKTW    TR    BA    DTA    COURSE CHANGE    DVEB    VEB OCS    RF CENTER FIX/DISTANCE**

**SEGMENT REMARKS:**

**FINAL: LNAV/VNAV**

**FROM**  
HATTR

**TO**  
RW02

**RNP**  
0.30

**DISTANCE**  
5.13

**PAT**

**MAP**  
DA

**HAT**  
512

**HMAS**

<b>OBSTRUCTION</b>	<b>COORDINATES</b>	<b>ELEV MSL</b>	<b>HORZ</b>	<b>VERT</b>	<b>AC</b>	<b>ROC</b>	<b>OCS</b>	<b>CG</b>	<b>CGTA</b>	<b>ADJUSTMENTS</b>	<b>MIN ALT</b>
TREE (26-124291)	445741.25N/0851142.88W	846	20	3	1A		23.42:1			SA-11	1135

**COMPUTATIONS**

**ALT    KIAS    KTAS    HAA    VKTW    TR    BA    DTA    COURSE CHANGE    DVEB    VEB OCS    RF CENTER FIX/DISTANCE**

**SEGMENT REMARKS:**

**FINAL: LNAV**

**FROM**  
HATTR

**TO**  
MADZA/2.18 NM TO RW02

**RNP**  
0.30

**DISTANCE**  
2.95

**PAT**

**MAP**

**HAT**

**HMAS**

<b>OBSTRUCTION</b>	<b>COORDINATES</b>	<b>ELEV MSL</b>	<b>HORZ</b>	<b>VERT</b>	<b>AC</b>	<b>ROC</b>	<b>OCS</b>	<b>CG</b>	<b>CGTA</b>	<b>ADJUSTMENTS</b>	<b>MIN ALT</b>
AAO	445533.00N/0851339.00W	1037	215	8	4B	250				RA60	1360

**COMPUTATIONS**

**ALT    KIAS    KTAS    HAA    VKTW    TR    BA    DTA    COURSE CHANGE    DVEB    VEB OCS    RF CENTER FIX/DISTANCE**

**SEGMENT REMARKS:**



**AIRPORT ID**  
ACB

**PROCEDURE NAME**  
RNAV (GPS) RWY 2

**AMDT NO.**  
1

**CITY**  
BELLAIRE

**STATE**  
MI

**AIRPORT ELEVATION**  
623

**FACILITY**  
RNAV

**FINAL: LNAV STEPDOWN**

**FROM**  
MADZA/2.18 NM TO RW02

**TO**  
RW02

**RNP**  
0.30

**DISTANCE**  
2.18

**PAT**

**MAP**  
RW02

**HAT**  
517

**HMAS**

<b>OBSTRUCTION</b>	<b>COORDINATES</b>	<b>ELEV MSL</b>	<b>HORZ</b>	<b>VERT</b>	<b>AC</b>	<b>ROC</b>	<b>OCS</b>	<b>CG</b>	<b>CGTA</b>	<b>ADJUSTMENTS</b>	<b>MIN ALT</b>
TREE (26-126380)	445839.26N/0851304.55W	889	20	3	1A	250					1140

**COMPUTATIONS**

**ALT      KIAS      KTAS      HAA      VKTW      TR      BA      DTA      COURSE CHANGE      DVEB      VEB OCS      RF CENTER FIX/DISTANCE**

**SEGMENT REMARKS:**

**HOLD-IN-LIEU OF PT**

**FROM**  
KEENO

**TO**  
P-5

**RNP**

**DISTANCE**

**PAT**  
P-5

**MAP**

**HAT**

**HMAS**

<b>OBSTRUCTION</b>	<b>COORDINATES</b>	<b>ELEV MSL</b>	<b>HORZ</b>	<b>VERT</b>	<b>AC</b>	<b>ROC</b>	<b>OCS</b>	<b>CG</b>	<b>CGTA</b>	<b>ADJUSTMENTS</b>	<b>MIN ALT</b>
TOWER (26-001188)	444728.47N/0851420.85W	1546	250	50	4D	1000					2600
TERRAIN	443757.00N/0851833.00W	1158 (1200)								AS1500	2700

**COMPUTATIONS**

**ALT      KIAS      KTAS      HAA      VKTW      TR      BA      DTA      COURSE CHANGE      DVEB      VEB OCS      RF CENTER FIX/DISTANCE**

**SEGMENT REMARKS:**





**AIRPORT ID**  
ACB

**PROCEDURE NAME**  
RNAV (GPS) RWY 2

**AMDT NO.**  
1

**CITY**  
BELLAIRE

**STATE**  
MI

**AIRPORT ELEVATION**  
623

**FACILITY**  
RNAV

**MISSED APPROACH: LPV**

**FROM**  
DA **TO**  
IROTO

**RNP** **DISTANCE** **PAT** **MAP** **HAT** **HMAS**  
0.30-1.00      701

<u>OBSTRUCTION</u>	<u>COORDINATES</u>	<u>ELEV MSL</u>	<u>HORZ</u>	<u>VERT</u>	<u>AC</u>	<u>ROC</u>	<u>OCS</u>	<u>CG</u>	<u>CGTA</u>	<u>ADJUSTMENTS</u>	<u>MIN ALT</u>
TREE (26-123408)	445827.00N/0851215.07W	704	20	3	1A		ASC				3000
TOWER (26-001068)	451049.00N/0850550.20W	1676	50	20	2C	1000					2700
TERRAIN	450957.00N/0850521.00W	1089 (1100)								AS1500	2600

**COMPUTATIONS**

ALT KIAS KTAS HAA VKTW TR BA DTA COURSE CHANGE DVEB VEB OCS RF CENTER FIX/DISTANCE

**SEGMENT REMARKS:**

**MISSED APPROACH: LNAV/VNAV**

**FROM**  
DA **TO**  
IROTO

**RNP** **DISTANCE** **PAT** **MAP** **HAT** **HMAS**  
0.30-1.00     974

<u>OBSTRUCTION</u>	<u>COORDINATES</u>	<u>ELEV MSL</u>	<u>HORZ</u>	<u>VERT</u>	<u>AC</u>	<u>ROC</u>	<u>OCS</u>	<u>CG</u>	<u>CGTA</u>	<u>ADJUSTMENTS</u>	<u>MIN ALT</u>
							ASC				3000
TOWER (26-001068)	451049.00N/0850550.20W	1676	50	20	2C	1000					2700
TERRAIN	450957.00N/0850521.00W	1089 (1100)								AS1500	2600

**COMPUTATIONS**

ALT KIAS KTAS HAA VKTW TR BA DTA COURSE CHANGE DVEB VEB OCS RF CENTER FIX/DISTANCE

**SEGMENT REMARKS:**





**AIRPORT ID**  
ACB

**PROCEDURE NAME**  
RNAV (GPS) RWY 2

**AMDT NO.**  
1

**CITY**  
BELLAIRE

**STATE**  
MI

**AIRPORT ELEVATION**  
623

**FACILITY**  
RNAV

**NOTES/EXPLANATIONS FROM PROCEDURE SEGMENTS:**

**PART B: SUPPLEMENTAL DATA**

**COMMUNICATIONS WITH**

ZMP ARTCC, LAN FSS

<u>WX SERVICE</u>	<u>LOCATION</u>	<u>HRS OPERATION</u>	<u>ALTIMETER SOURCE</u>	<u>DISTANCE</u>	<u>SERVICE-A</u>	<u>ADJUSTMENTS</u>
AWOS-3P	ACB	24	ACB	0.20	Y	0

<u>BACK-UP WX SERVICE</u>	<u>LOCATION</u>	<u>HRS OPERATION</u>	<u>ALTIMETER SOURCE</u>	<u>DISTANCE</u>	<u>SERVICE-A</u>	<u>ADJUSTMENTS</u>
ASOS	TVC	24	TVC	21.79	Y	52

**WX REMARKS:**

RASS PRESSURE PATTERNS THE SAME  
ACB 623, TVC 610  
RA = 52.0.

<u>PRIMARY NAVAID</u>	<u>MONITOR POINT</u>	<u>HRS OPERATION</u>	<u>CAT</u>
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<u>APPROACH AND RUNWAY LIGHTING SYSTEM</u>	<u>RUNWAY MARKINGS</u>	<u>RUNWAY VISUAL RANGE</u>
RW02 - REIL (PCL), MIRL (PCL), PAPI-4L (PCL)	NPI-G	
RW20 - MIRL (PCL), REIL (PCL), PAPI-2L (PCL)	NPI-G	

<u>GLIDESLOPE ANGLE</u>	<u>ELEV RWY THRESHOLD</u>	<u>TCH</u>	<u>ELEV GS ANTENNA</u>	<u>DISTANCE FROM RWY</u>	<u>VGSI ANGLE</u>	<u>TCH</u>
3.00	621.6	45.0			3.00	45.0

**FINAL APPROACH COURSE AIMING**

RUNWAY THRESHOLD	<input checked="" type="checkbox"/>	FT FROM THRESHOLD	DISPLACED THRESHOLD DISTANCE
ON CENTERLINE	<input checked="" type="checkbox"/>	FT FROM CENTERLINE	

**CRITICAL TEMPERATURES**

<u>CRITICAL LOW</u>	<u>CRITICAL HIGH</u>	<u>ACT</u>	<u>APT ISA</u>
-16C	+54C	-16C	+13.77C

**CRITICAL TEMPERATURE REMARKS:**

AVERAGE COLD TEMPERATURE DERIVED FROM STANDARD -30C ISA DEVIATION.  
CRITICAL LOW TEMPERATURE BASED ON ACT.  
DESCENT RATE (FPM): STANDARD TEMP 963 HIGH TEMP 1270.

**"VISUAL PORTION OF FINAL" PENETRATIONS**

FINAL TYPE	LPV, LNAV/VNAV, AND LNAV
34:1	
681 TREE (26-163640) 445838.5200N/0851208.2500W (15.15)	681 TREE (26-123044) 445838.3600N/0851207.9900W (14.86)
669 TREE (26-163783) 445843.7000N/0851213.5600W (14.51)	679 TREE (26-164138) 445839.7300N/0851213.0400W (13.56)
678 TREE (26-120612) 445839.7900N/0851212.1500W (13.29)	679 TREE (26-125576) 445838.7800N/0851209.2600W (13.25)



**AIRPORT ID**  
ACB

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685 TREE (26-100352) 445837.6100N/0851214.7300W (12.46)	682 TREE (26-164207) 445837.2200N/0851209.1100W (11.91)
678 TREE (26-122166) 445840.1000N/0851217.5000W (10.79)	680 TREE (26-124714) 445837.1400N/0851208.7200W (9.93)
686 TREE (26-064745) 445836.8000N/0851217.1100W (9.66)	691 TREE (26-099569) 445833.1800N/0851209.6100W (9.12)
692 TREE (26-057760) 445834.7700N/0851218.4700W (9.03)	691 TREE (26-066781) 445834.5300N/0851216.2000W (8.78)
674 TREE (26-057038) 445839.9600N/0851214.2900W (8.42)	674 TREE (26-163907) 445839.9700N/0851214.9400W (8.04)
670 TREE (26-121604) 445840.3200N/0851210.4800W (7.86)	683 TREE (26-121564) 445836.7800N/0851215.2600W (7.77)
678 TREE (26-122909) 445837.3300N/0851210.4200W (7.40)	697 TREE (26-098136) 445831.9600N/0851219.5600W (5.35)
660 TREE (26-122317) 445843.5100N/0851213.0600W (5.29)	680 TREE (26-065652) 445837.2200N/0851218.6500W (3.87)
675 TREE (26-057044) 445837.3000N/0851211.8400W (3.41)	671 TREE (26-128113) 445838.6700N/0851211.8700W (3.29)
684 TREE (26-068593) 445835.8200N/0851219.9300W (3.09)	643 TREE (26-122085) 445846.9900N/0851205.3500W (3.06)
677 TREE (26-124735) 445837.0800N/0851214.7300W (2.96)	673 TREE (26-100353) 445838.4500N/0851214.9400W (2.72)
676 TREE (26-067764) 445836.4000N/0851210.5100W (2.70)	676 TREE (26-126954) 445835.9900N/0851208.6900W (2.68)
676 TREE (26-126845) 445836.1600N/0851209.8200W (2.45)	671 TREE (26-127254) 445838.1100N/0851210.9400W (2.28)
684 TREE (26-057759) 445832.7200N/0851207.3000W (2.27)	685 TREE (26-163513) 445834.2700N/0851216.2100W (2.03)
675 TREE (26-122439) 445836.2000N/0851209.4200W (1.82)	691 TREE (26-057764) 445832.0500N/0851216.4900W (1.55)
676 TREE (26-028555) 445835.7700N/0851209.9300W (1.27)	704 TREE (26-123408) 445827.0000N/0851215.0700W (1.09)
690 TREE (26-121977) 445832.8000N/0851219.1200W (1.01)	689 TREE (26-125256) 445832.4800N/0851216.3000W (0.89)

**PENETRATIONS REMARKS:**

(26-128110) LIGHTING ACCEPTABLE PER 8260.3E TABLE 10-6-1. ACCEPTABLE OBSTACLES.

**HELICOPTER 'VISUAL PORTION OF FINAL' PENETRATIONS**

and/or

**5280-FT "PROCEED VFR" SEGMENT LEVEL SURFACE AREA PENETRATIONS**

**PENETRATIONS REMARKS:**

**PART C: GENERAL REMARKS:**

100 FT. VEGETATION ASSUMED PER FPT.

PRECIPITOUS TERRAIN EVALUATION COMPLETED.

VISIBILITY BELOW 1SM NOT ALLOWED PER FPT - OBJECT IN RUNWAY PROTECTED ZONE.

BACKUP ALTIMETER NOTE TO REMAIN CHARTED PER FPT REQUEST.

ORDER 8260.3, CHAPTER 2, NEW CIRCLING CRITERIA APPLIED.



AIRPORT ID  
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RNAV

**PART D: AIRSPACE**

**DOCKET #**

**ALL DISTANCES TO 1/100NM; ELEVATION TO NEAREST 100 FEET; COORDINATES TO 1/100 SECOND; DEG TO 1/100 DEGREE**

<b>DISTANCE FROM</b>	<b>THLD</b>	<b>TO 1000FT POINT</b>	3.56
<b>WIDTH OF</b>	<b>FINAL</b>	<b>SEGMENT AT 1000FT POINT</b>	1.20
<b>TRUE COURSE OF</b>	<b>FINAL</b>	<b>SEGMENT CONTAINING 1000FT POINT</b>	017.40
<b>HIGH TERRAIN IN</b>	<b>FINAL</b>	<b>SEGMENT CONTAINING 1000FT POINT</b>	800
<b>DISTANCE FROM</b>	<b>THLD</b>	<b>TO 1500FT POINT</b>	6.86
<b>WIDTH OF</b>	<b>INTERMEDIATE</b>	<b>SEGMENT AT 1500FT POINT</b>	3.81
<b>TRUE COURSE OF</b>	<b>INTERMEDIATE</b>	<b>SEGMENT CONTAINING 1500FT POINT</b>	017.42
<b>HIGH TERRAIN IN</b>	<b>INTERMEDIATE</b>	<b>SEGMENT CONTAINING 1500FT POINT</b>	1000

**THRESHOLD COORDINATES (IF STR-IN)** 445855.32N/0851204.47W  
**ARP COORDINATES** 445918.88N/0851154.05W  
**RUNWAY APCH END AND DIST FURTHEST FROM ARP** RUNWAY 2 DISTANCE 0.41 NM  
**FAF COORDINATES** 445401.70N/0851414.11W  
**FIX NAME COORDINATES** IF KEENO 444816.42N/0851646.21W

**REMARKS**

**PART E: PREPARED BY**

<u><b>NAME</b></u>	<u><b>OFFICE</b></u>	<u><b>DATE</b></u>	<u><b>TITLE</b></u>
DAVID DANNER (WALKER R. MILLIGAN)	AJV-A421	06/13/2024	AERONAUTICAL INFORMATION SPECIALIST

