

**FEDERAL AVIATION ADMINISTRATION  
FLIGHT STANDARDS SERVICE  
NDB STANDARD INSTRUMENT APPROACH PROCEDURE  
TITLE 14 CFR PART 97.27**

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</u> BARROW COUNTY	<u>AIRPORT ID</u> KWDR	<u>PROCEDURE NAME</u> NDB RWY 31	<u>ORIGINAL/AMENDMENT</u> 9D	<u>CITY</u> WINDER	<u>STATE</u> GA	
<u>AIRPORT ELEVATION</u> 934	<u>TDZE</u> 922	<u>SUPERSEDED</u> NDB RWY 31	<u>ORIGINAL/AMENDMENT</u> 9C	<u>DATED</u> 09/15/2016	<u>MAG VAR</u> 5W	<u>EPOCH YEAR</u> 2010
<u>FACILITY</u> BMW	<u>COORDINATES OF FACILITIES</u>	<u>ACTUAL EFFECTIVE DATE</u>	<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>
AHN VOR/DME		BMW NDB					266.90	13.23	2500
DACHA INT	IF/IAF	BMW NDB	NOPT				314.25	13.77	2400

**MISSED APPROACH**

**MAP:**

4.47 NM AFTER BMW NDB

**MISSED APPROACH INSTRUCTIONS:**

CLIMBING RIGHT TURN TO 2500 DIRECT BMW NDB AND HOLD.

**ALTERNATE MISSED APPROACH INSTRUCTIONS:**

**PROFILE:**

1. PT R    **SIDE OF COURSE** 132.02    **OUTBOUND** 2500    **FT WITHIN** 10    **MILES OF** BMW NDB (IAF)  
2.  
3. **FAF:** 312.02    **FAF:** BMW NDB    **DIST FAF TO MAP:** 4.47    **DIST FAF TO THLD:** 4.47  
4. **MIN ALT:** BMW NDB 2400  
8. **MSA FROM:** BMW NDB 3700

**EQUIPMENT REQUIREMENTS NOTES:**

**NOTES:**

CHART PROFILE NOTE: VGSI AND DESCENT ANGLES NOT COINCIDENT (VGSI ANGLE {ANGLE}/TCH {FEET}).  
CHART NOTE: FOR INOPERATIVE ALS, INCREASE S-31 CAT A/B VISIBILITY TO 1 SM.  
CHART NOTE: CIRCLING RWY 13, 23 NA AT NIGHT.  
CHART NOTE: RWY 31 HELICOPTER VISIBILITY REDUCTION BELOW 3/4 SM NOT AUTHORIZED.



**ADDITIONAL FLIGHT DATA:**  
BMW NDB TO RW31: 3.08/30.  
CHART FAS OBST: 1119 TOWER 335556N/0833711W.  
HOLD SE, LT, 312.02 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
S-31	1480	3/4	558	1480	3/4	558	1480	1 1/8	558	1480	1 1/8	558			
CIRCLING	1480	1	546	1500	1	566	1500	1 5/8	566	1500	2	566			

- CHANGES - REASONS**
1. REMOVED CHART NOTE FROM "WHEN LOCAL ALTIMETER SETTING NOT RECEIVED, USE ATHENS ALTIMETER SETTING AND INCREASE ALL MDA 60 FEET, AND INCREASE S-31 CATS C/D VISIBILITY 1/4 MILE AND CIRCLING CAT C VISIBILITY 1/8 MILE" - KWDR IS ON WMSCR.
  2. CHANGED CHART NOTE FROM "FOR INOPERATIVE MALSR INCREASE S-31 CATS A/B VISIBILITY 1 MILE" TO "FOR INOPERATIVE ALS, INCREASE CAT A/B VISIBILITY TO 1 SM" - PER 8260.19H PARA 8-6-11 O.(3)(D) AND 8260.3D TABLES 3-3-3 AND 3-3-4.
  3. REMOVED CHART NOTE FROM "FOR INOPERATIVE MALSR WHEN USING ATHENS ALTIMETER SETTING, INCREASE S-31 CAT C/D VISIBILITY TO 1 3/4 MILE" - KWDR IS ON WMSCR.
  4. LOWERED S-31 HAT ALL CATS FROM 560 TO 558 - TDZE RAISED FROM 920 TO 922 PER NEW AIRPORT SURVEY DATA.
  5. RAISED CIRCLING CAT A HAA FROM 537 TO 546, CATS B/C/D FROM 557 TO 566 - NEW SURVEY DATA LOWERED AIRPORT ELEVATION FROM 943 TO 934.
  6. CHANGED CHART NOTE FROM "HELICOPTER VISIBILITY REDUCTION BELOW 3/4 SM NOT AUTHORIZED" TO "RWY 31 HELICOPTER VISIBILITY REDUCTION BELOW 3/4 SM NOT AUTHORIZED" - PER 8260.19H PARA 8-6-11 K. (3).
  7. UPDATED CHART NOTE FROM "NIGHT LANDING: RWY 13, 23 NA" TO "CHART NOTE: CIRCLING RWY 13, 23 NA AT NIGHT"- 8260.19H PARA 8-6-11 O.(2)(G).
  8. ADDED CHART PROFILE NOTE "VGSI AND DESCENT ANGLES NOT COINCIDENT (VGSI ANGLE {ANGLE}/TCH {FEET})" - PER 8260.19H PARA 8-6-9 M: ANGLES NOT WITHIN 0.20 DEGREES AND TCH VALUES WITHIN 3 FEET.

**COORDINATED WITH:**  
A4A ☐ ALPA ☒ AOPA ☒ APA ☐ HAI ☐ NBAA ☒ OTHER: ZTL, ATL APP CON, ARPT MGR

**FLIGHT CHECKED BY**  
PROCESSED IAW AIRCRAFT OPERATIONS GROUP (AJW-33) MEMO, OCTOBER 3, 2018, SUBJECT:  
FLIGHT INSPECTION REVIEW NOT REQUIRED

**DEVELOPED BY** *Digitally signed by*  
VICTOR BOONE **VICTOR C BOONE**  
Feb 07, 2019

**APPROVED BY** *Digitally signed by*  
LONNIE EVERHART **MARK D ADAMS**  
Mar 15, 2019

**OFFICE**  
**DATE** *Digitally signed by*  
**MARK D ADAMS**  
Mar 15, 2019

**OFFICE**  
AJV-5412  
**DATE**  
11/19/2018

**OFFICE**  
AJV-5410  
**DATE**  
**TITLE**  
MANAGER



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

<u>AIRPORT</u> BARROW COUNTY	<u>AIRPORT ID</u> KWDR	<u>PROCEDURE NAME</u> NDB RWY 31	<u>AMDT NO.</u> 9D	<u>CITY</u> WINDER	<u>STATE</u> GA	<u>AIRPORT ELEVATION</u> 934	<u>FACILITY</u> BMW
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PART A: OBSTRUCTION DATA SEGMENTS

FEEDER

FROM  
AHN VOR/DME

TO  
BMW NDB

<u>RNP</u>	<u>DISTANCE</u> 13.23	<u>PAT</u>	<u>MAP</u>	<u>HAT</u>			<u>HMAS</u>				
<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>
1.TOWER (13-003745)	335935.91N/0832455.93W	1154	20	3	1A	1000				AT346	2500
2.TERRAIN	340006.00N/0832951.00W	913 (900)								AS1500	2400

COMPUTATIONS

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

SEGMENT REMARKS:

INTERMEDIATE

FROM  
DACHA INT (IF/IAF)

TO  
BMW NDB

<u>RNP</u>	<u>DISTANCE</u> 13.77	<u>PAT</u>	<u>MAP</u>	<u>HAT</u>			<u>HMAS</u>				
<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>
3.TOWER (13-001528)	335226.96N/0833330.87W	1130	250	125	5E	500				AC125	1800
4.TERRAIN	335706.00N/0833427.00W	896 (900)								AS1500	2400

COMPUTATIONS

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

SEGMENT REMARKS:



INTERMEDIATE: PT

FROM

10 NM

TO

BMW NDB

RNP	DISTANCE	PAT	MAP	HAT	HMAS							
	10.00											
OBSTRUCTION	COORDINATES	ELEV MSL	HORZ	VERT	AC	ROC	OCS	CG	CGTA	ADJUSTMENTS	MIN ALT	
5.TOWER (13-001802)	335339.00N/0832558.00W	1143	500	125	5E	500				AC125 SA-41	1800	
4.TERRAIN	335706.00N/0833427.00W	896 (900)								AS1500	2400	

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT REMARKS:

FINAL

FROM

BMW NDB

TO

4.47 NM AFTER BMW NDB

RNP	DISTANCE	PAT	MAP	HAT	HMAS							
	4.47		4.47 NM AFTER BMW NDB	558								
OBSTRUCTION	COORDINATES	ELEV MSL	HORZ	VERT	AC	ROC	OCS	CG	CGTA	ADJUSTMENTS	MIN ALT	
6.TOWER (13-000238)	335556.00N/0833711.00W	1119	250	50	4D	300				AC50	1480	

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT REMARKS:



PROCEDURE TURN

FROM

BMW NDB

TO

10 NM

RNP	DISTANCE	PAT	MAP	HAT	HMAS							
OBSTRUCTION	COORDINATES	ELEV MSL	HORZ	VERT	AC	ROC	OCS	CG	CGTA	ADJUSTMENTS	MIN ALT	
7.TOWER (13-000230)	334922.00N/0833748.00W	1472	250	50	4D	1000					2500	
8.TERRAIN	334922.00N/0833748.00W	1007 (1000)								AS1000	2000	

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT REMARKS:

MISSED APPROACH

FROM

4.47 NM AFTER BMW NDB

TO

BMW NDB

RNP	DISTANCE	PAT	MAP	HAT	HMAS							
					1180							
OBSTRUCTION	COORDINATES	ELEV MSL	HORZ	VERT	AC	ROC	OCS	CG	CGTA	ADJUSTMENTS	MIN ALT	
							ASC				2500	
9.TREE	340043.23N/0834228.80W	1179	50	20	2C	1000					2200	
10.TERRAIN	340043.23N/0834228.80W	1079 (1100)								AS1000	2100	

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT REMARKS:



CIRCLING

☐ ALL CATS

☒ CAT A

☒ CAT B

☒ CAT C

☒ CAT D

☐ CAT E

☐ NOT AUTHORIZED

OBSTRUCTION	COORDINATES	RADIUS	HAA	ELEV MSL	HORZ	VERT	AC	ROC	OCS	ADJUSTMENTS	MIN ALT
CATEGORY A											
11.TWR (KWDRT273)	335841.88N/0834004.51W	1.30	546	1081	50	20	2C	300		SI	1480
CATEGORY B											
12.TOWER (13-003599)	335836.44N/0834209.02W	1.50	566	1137	500	125	4D	300		AC50	1500
CATEGORY C											
12.TOWER (13-003599)	335836.44N/0834209.02W	1.70	566	1137	500	125	4D	300		AC50	1500
CATEGORY D											
9.TREE	340043.23N/0834228.80W	2.30	566	1179	50	20	2C	300		HAA	1500

CIRCLING REMARKS:

MSA

CENTER  
BMW NDB

RADIUS  
25

SECTOR	OBSTRUCTION	COORDINATES	BEARING	DISTANCE	ELEV MSL	HORZ	VERT	AC	ROC	OCS	ADJUSTMENTS	MIN ALT
360-360	TWR (13-001170)	340732.00N/0835132.00W	315	17.6	2654	50	20	2C	1000			3700

MSA REMARKS:

NOTES/EXPLANATIONS FROM PROCEDURE SEGMENTS:

100' VEGETATION USED PER FPT.

FLT CHK VERIFIED OBST #12 (13-003599) TO 4D ACCURACY ON 02/08/10.



QUALITY  
41  
CHECKED

"VISUAL PORTION OF FINAL" PENETRATIONS

Final Type	CIRCLING RWY 13		
20:1			
975 TREE (13-024273) 335920.02N/0834031.57W (12.41)		963 POLE (13-022311) 335924.09N/0834026.92W (2.85)	
Final Type	CIRCLING RWY 23		
20:1			
952 TREE (13-108935) 335906.58N/0833947.48W (25.09)		953 TREE (13-109444) 335907.31N/0833946.76W (21.35)	
960 TREE (13-109292) 335911.23N/0833948.37W (19.37)		949 TREE (13-109262) 335908.80N/0833948.73W (18.03)	
955 TREE (13-024743) 335907.54N/0833944.96W (17.11)		958 TREE (13-109488) 335909.32N/0833945.97W (16.87)	
965 TREE (13-109258) 335912.91N/0833947.22W (14.97)		945 TREE (13-093586) 335910.34N/0833949.83W (11.91)	
956 TREE (13-109309) 335912.13N/0833947.81W (10.5)		946 TREE (13-024336) 335910.07N/0833948.53W (9.94)	
956 TREE (13-109487) 335910.52N/0833945.25W (8.47)		952 TREE (13-109073) 335910.64N/0833946.56W (7.99)	
936 TREE (13-109302) 335907.92N/0833948.45W (7.29)		951 TREE (13-024338) 335912.49N/0833947.48W (3.24)	
Final Type	S-31		
34:1			
937 TREE (13-093007) 335841.66N/0833932.05W (4.62)		948 POLE (13-022314) 335839.75N/0833926.18W (0.71)	
935 TREE (13-109034) 335841.61N/0833931.00W (0.49)			

HELICOPTER 'VISUAL PORTION OF FINAL' PENETRATIONS

and/or  
5280-FT "PROCEED VFR" SEGMENT LEVEL SURFACE AREA PENETRATIONS

PART C: GENERAL REMARKS:

VDP NOT ESTABLISHED - FINAL FACILITY DOES NOT HAVE DME.  
PRECIPITOUS TERRAIN EVALUATION COMPLETED.

CHART NOTE: WHEN LOCAL ALTIMETER SETTING NOT RECEIVED, USE ATHENS ALTIMETER SETTING AND INCREASE ALL MDA 60 FEET, AND INCREASE S-31 CATS C/D VISIBILITY 1/4 SM AND CIRCLING CAT C VISIBILITY 1/8 SM.  
CHART NOTE: FOR INOPERATIVE ALS WHEN USING ATHENS ALTIMETER SETTING, INCREASE S-31 CAT A/B VISIBILITY TO 1 SM AND CAT C/D VISIBILITY TO 1 3/4 SM.





<u>AIRPORT</u> BARROW COUNTY	<u>AIRPORT ID</u> KWDR	<u>PROCEDURE NAME</u> NDB RWY 31	<u>AMDT NO.</u> 9D	<u>CITY</u> WINDER	<u>STATE</u> GA	<u>AIRPORT ELEVATION</u> 934	<u>FACILITY</u> BMW
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PART D: AIRSPACE

DOCKET #

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

DISTANCE FROM	THLD	TO 1000FT POINT	2.80
WIDTH OF	FINAL	SEGMENT AT 1000FT POINT	2.78
TRUE COURSE OF	FINAL	SEGMENT CONTAINING 1000FT POINT	307.02
HIGH TERRAIN IN	FINAL	SEGMENT CONTAINING 1000FT POINT	932
DISTANCE FROM	THLD	TO 1500FT POINT	4.47
WIDTH OF	FINAL	SEGMENT AT 1500FT POINT	2.50
TRUE COURSE OF	FINAL	SEGMENT CONTAINING 1500FT POINT	307.02
HIGH TERRAIN IN	FINAL	SEGMENT CONTAINING 1500FT POINT	932

THRESHOLD COORDINATES (IF STR-IN)

335848.90N/0833939.41W

ARP COORDINATES

335857.68N/0834001.98W

RUNWAY APCH END AND DIST FURTHEST FROM ARP

RUNWAY 13 DISTANCE 0.46 NM

FAF COORDINATES

335607.31N/0833522.10W

FIX NAME COORDINATES

REMARKS

THRESHOLD DISPLACED 600 FT.  
THLD DISPLACED 602FT, ACTUAL COORDINATES: 335845.18N/0833933.82W.



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PART E: PREPARED BY							
<u>NAME</u> VICTOR BOONE	<u>OFFICE</u> AJV-5412			<u>DATE</u> 11/19/2018	<u>TITLE</u> AERONAUTICAL INFORMATION SPECIALIST		

QUALITY  
41  
CHECKED

FAA Form 8260-9 / (11/16) Supersedes Previous Edition

Electronic Version

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