

**FEDERAL AVIATION ADMINISTRATION  
FLIGHT STANDARDS SERVICE  
RNAV (RNP) 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> KRNO	<u>PROCEDURE NAME</u> RNAV (RNP) Z RWY 17R	<u>ORIGINAL/AMENDMENT</u> 2	<u>CITY</u> RENO	<u>STATE</u> NV		
<u>AIRPORT ELEVATION</u> 4415	<u>TDZE</u> 4415	<u>SUPERSEDED</u> RNAV (RNP) Z RWY 16R	<u>ORIGINAL/AMENDMENT</u> 1B	<u>DATED</u> 02/01/2018	<u>MAG VAR</u> 13E	<u>EPOCH YEAR</u> 2020
<u>FACILITY</u> RNAV	<u>COORDINATES OF FACILITIES</u>	<u>ACTUAL EFFECTIVE DATE</u> 3 NOVEMBER 2022	<u>REQUIRED EFFECTIVE DATE</u> 11/03/2022	<u>CANCEL/SUSPEND</u>		

**TERMINAL ROUTES**      [THIS IS A CORRECTED COPY OF A PROCEDURE ORIGINALLY PUBLISHED IN TL 21-22.](#)

FROM	FIX TYPE	TO	FIX TYPE	LEG TYPE	FO/FB	RNP	COURSE	DISTANCE	ALTITUDE
HOBOA		SNDIT		TF	FB	1.00	036.81	9.89	11100
SNDIT		JUDPU		TF	FB	1.00	036.91	8.14	10500
TRUCK		JUDPU		TF	FB	1.00	023.57	11.98	10500
AVVYY	IAF	FREEL		TF	FB	0.50	347.09	6.50	11200
FREEL		ROWWS		TF	FB	0.50	347.09	4.37	11000
LIBGE	IAF	OBIVE		TF	FB	1.00	167.09	7.01	9300
OBIVE		DIDBE		TF	FB	1.00	167.12	7.09	7900
WINRZ	IAF	DIDBE		TF	FB	0.70	203.50	12.34	7900
JUDPU	IAF	GNAAR		TF	FB	1.00	037.01	3.95	10000
ROWWS	IF	TLLAK		TF	FB	0.50	347.09	4.35	9100
GNAAR	IF	HMWUD		TF	FB	0.80	037.03	3.80	9100
TLLAK		HMWUD		RF	FB	0.80	(3.00 NM RADIUS CW (CFTWZ))	2.62	9100
HMWUD		LUCEK		RF	FB	0.80	(3.00 NM RADIUS CW (CFTWZ))	4.49	7800
LUCEK		BETYA	PFAF	RF	FB	0.50	(3.76 NM RADIUS CW (CFVFR))	2.89	6900
DIDBE	IF	BETYA	PFAF	TF	FB	0.80	167.12	4.09	6900
BETYA	PFAF	RW17R	MAP	TF	FO	0.30	167.12	7.36	
RW17R	MAP	ZAKBI		TF	FB	1.00	167.12	8.61	
ZAKBI		USINE		TF	FB	1.00	182.59	6.69	

QUALITY  
18  
CHECKED

FROM	FIX TYPE	TO	FIX TYPE	LEG TYPE	FO/FB	RNP	COURSE	DISTANCE	ALTITUDE
USINE		YARKU		TF	FO	1.00	127.37	9.36	13000

**MISSED APPROACH**

**MAP:**  
RNP: DA

**MISSED APPROACH INSTRUCTIONS:**

CLIMB TO 13000 ON TRACK 167.12 TO ZAKBI AND ON TRACK 182.59 TO USINE AND ON TRACK 127.37 TO YARKU AND HOLD, CONTINUE CLIMB-IN-HOLD TO 13000.  
\*MISSED APPROACH REQUIRES MINIMUM CLIMB OF 266 FEET PER NM TO 7240.

**ALTERNATE MISSED APPROACH INSTRUCTIONS:**

**PROFILE:**

1. PT      SIDE OF COURSE      OUTBOUND      FT WITHIN      MILES OF      (IAF)

2. PROFILE STARTS AT BETYA

3. FAC: 167.12      PFAF: BETYA      DIST PFAF TO MAP:      DIST PFAF TO THLD:

4. MIN ALT: BETYA 6900

5. DIST TO THLD FROM PFAF: 7.36      MM:      IM:      150 HAT:      339 HAT: 0.89      GS ANT:

6. MIN GP INCPT: 6900      GP ALT AT PFAF: BETYA 6900      OM:      MM:      IM:

7. GP ANGLE: 3.10      34:1: IS NOT CLEAR      20:1: IS CLEAR      TCH: 60.0

8. MSA FROM: RW17R 12000

**PBN REQUIREMENTS NOTE:**

RNP AR APCH - GPS.

**NOTES:**

CHART NOTE: FOR UNCOMPENSATED BARO-VNAV SYSTEMS, PROCEDURE NA BELOW -9°C OR ABOVE 54°C.  
CHART PROFILE NOTE: SEE PLANVIEW FOR MULTIPLE IF LOCATIONS.  
CHART PROFILE NOTE: VGSI AND RNAV GLIDEPATH NOT COINCIDENT (VGSI ANGLE {ANGLE}/TCH {FEET}).  
CHART PLANVIEW NOTE: PROCEDURE NA FOR ARRIVALS AT TRUCK ON V200-392 AND T331 SOUTHWEST BOUND.  
CHART PLANVIEW NOTE: PROCEDURE NA FOR ARRIVALS AT LIBGE ON V165 AND T274 NORTHWEST BOUND.  
CHART NOTE: FOR INOPERATIVE ALS, INCREASE RNP 0.30 DA VISIBILITY ALL CATS TO 1 7/8 SM.  
CHART SPEED ICON IN PLANVIEW AT SNDIT: MAX 210 KIAS.  
CHART SPEED ICON IN PLANVIEW AT TRUCK: MAX 210 KIAS.  
CHART SPEED ICON IN PLANVIEW AT FREEL: MAX 210 KIAS.  
CHART SPEED ICON IN PLANVIEW AT OBIVE: MAX 210 KIAS.  
CHART SPEED ICON IN PLANVIEW AT WINRZ: MAX 210 KIAS.  
CHART SPEED ICON IN PLANVIEW AT JUDPU: MAX 210 KIAS.

**ADDITIONAL FLIGHT DATA:**

HOLD S, RT, 349.76 INBOUND.  
CHART MANDATORY 12000 AT LIBGE.  
CHART MANDATORY 11000 AT WINRZ.



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

**ALTERNATE:** NA  STANDARD

<u>CATEGORY:</u>	<u>A</u>			<u>B</u>			<u>C</u>			<u>D</u>			<u>E</u>		
<u>FINAL TYPE</u>	<u>DA/MDA</u>	<u>VIS</u>	<u>HAT/HAA</u>	<u>DA/MDA</u>	<u>VIS</u>	<u>HAT/HAA</u>	<u>DA/MDA</u>	<u>VIS</u>	<u>HAT/HAA</u>	<u>DA/MDA</u>	<u>VIS</u>	<u>HAT/HAA</u>	<u>DA/MDA</u>	<u>VIS</u>	<u>HAT/HAA</u>
AUTHORIZATION REQUIRED															
RNP 0.10 DA*	4754	2600	339	4754	2600	339	4754	2600	339	4754	2600	339			
RNP 0.30 DA	5092	1 1/2	677	5092	1 1/2	677	5092	1 1/2	677	5092	1 1/2	677			



**CHANGES - REASONS**

- THIS AMENDMENT INCORPORATES P-NOTAM AMDT 1A AND 1B IAW 8260.19I.

1. AIRPORT MAGVAR UPDATED FROM EPOCH YEAR 1985/16E TO 2020/13E. - ATC REQUEST.
2. PROCEDURE NAME CHANGED FROM RNAV (RNP) Z RWY 16R TO RNAV (RNP) Z RWY 17R. - AIRPORT MAGVAR UPDATED AND RUNWAY RENUMBERED.
3. TERMINAL ROUTE FROM HOB OA TO SNDIT ADDED. - HOB OA CHANGED TO A FEEDER AND ADDED NEW WP SNDIT.
4. TERMINAL ROUTE FROM SNDIT TO JUDPU ADDED. - ATC REQUEST.
5. TERMINAL ROUTE FROM TRUCK TO JUDPU CHANGED COURSE/DISTANCE FROM 022.26/13.69 TO 023.57/11.98. - WP JUDPU MOVED PER ATC REQUEST.
6. TERMINAL ROUTE FROM AVVYY TO FREEL ADDED. - ATC REQUEST.
7. TERMINAL ROUTE FROM FREEL TO ROWWS ADDED. - ATC REQUEST.
8. TERMINAL ROUTE FROM LIBGE TO OBIVE CHANGED COURSE FROM 164.09 TO 167.09. - AIRPORT MAGVAR UPDATED.
9. TERMINAL ROUTE FROM OBIVE TO DIDBE CHANGED COURSE FROM 164.12 TO 167.12. - AIRPORT MAGVAR UPDATED.
10. TERMINAL ROUTE FROM WINRZ TO DIDBE CHANGED COURSE FROM 200.50 TO 203.50. - AIRPORT MAGVAR UPDATED.
11. TERMINAL ROUTE FROM JUDPU TO GNAAR ADDED. - ATC REQUEST.
12. TERMINAL ROUTE GNAAR TO HMWUD ADDED. - ATC REQUEST.
13. TERMINAL ROUTE ROWWS TO TLLAK ADDED. - ATC REQUEST.
14. TERMINAL ROUTE TLLAK TO HMWUD ADDED. - ATC REQUEST.
15. TERMINAL ROUTE FROM DIDBE TO BETYA CHANGED COURSE FROM 164.12 TO 167.12. - AIRPORT MAGVAR UPDATED.
16. TERMINAL ROUTE FROM LIBTYA TO RW17R CHANGED COURSE FROM 164.12 TO 167.12 AND RW16R CHANGED TO RW17R. - AIRPORT MAGVAR UPDATED, RUNWAY RENUMBERED.
17. TERMINAL ROUTE FROM RW17R TO ZAKBI CHANGED COURSE FROM 164.12 TO 167.12 AND RW16R CHANGED TO RW17R. - AIRPORT MAGVAR UPDATED, RUNWAY RENUMBERED.
18. TERMINAL ROUTE FROM ZAKBI TO USINE CHANGED COURSE FROM 179.59 TO 182.59. - AIRPORT MAGVAR UPDATED.
19. TERMINAL ROUTE FROM USINE TO YARKU CHANGED COURSE FROM 124.37 TO 127.37. - AIRPORT MAGVAR UPDATED.
20. MISSED APPROACH INSTRUCTIONS CHANGED TO INCREASE ALL COURSES BY +3 DEGREES, AND \* NOTE CHANGED FROM MINIMUM CLIMB GRADIENT OF 260 FEET PER NM TO 7000 TO 266 FEET PER NM TO 7240. - AIRPORT MAGVAR UPDATED, NEW MISSED PENETRATION IDENTIFIED.
21. PROFILE LINE 5 ADDED DIST TO THLD FROM 339 HAT: 0.89. - NOTE MOVED FROM ADDITIONAL FLIGHT DATA AND UPDATED IAW 8260.19I AND DUE TO NEW DA VALUE.
22. PROFILE LINE 7 ADDED 20:1 IS CLEAR AND CHANGED TCH FROM 63 TO 60. - 20:1 VISUAL AREA IS CLEAR, TCH LOWERED PER ATC REQUEST.
23. PROFILE LINE 8 CHANGED FROM RW16R 12000 TO RW17R 12000. - RUNWAY RENUMBERED.
24. ADDED PBN REQUIREMENTS NOTE: RNP AR APCH - GPS. - NOTE IAW 8260.19I
25. NOTE CHANGED FROM FOR UNCOMPENSATED BARO-VNAV SYSTEMS, PROCEDURE NA BELOW -16C (4F) OR ABOVE 54C (130F) TO FOR UNCOMPENSATED BARO-VNAV SYSTEMS, PROCEDURE NA BELOW 9°C OR ABOVE 54°C. - NEW TEMPERATURE DATA, NOTE UPDATED IAW 8260.19I.
26. REMOVED NOTE FOR INOPERATIVE MALSR, INCREASE RNP 0.17 ALL CATS VISIBILITY TO 11/4 AND RNP 0.30 ALL CATS VISIBILITY TO 2 1/2. - INOP TABLE APPLIES.
27. REMOVED NOTE GPS REQUIRED. - INCORPORATED INTO THE PBN REQUIREMENTS NOTE.
28. REMOVED CHART PLANVIEW NOTE AT OQIKO: MAX 180 KIAS. - SPEED RESTRICTION NO LONGER REQUIRED.
29. REMOVED CHART PLANVIEW NOTE ADJACENT TO TRUCK IAF, HOB OA IAF: RF REQUIRED. - NOW DOCUMENTED IN TERMINAL ROUTES.
30. REMOVED CHART PLANVIEW NOTE AT TRUCK, HOB OA, LIBGE, WINRZ (RNP VALUES) - NOW DOCUMENTED IN TERMINAL ROUTES.
31. CHANGE CHART PROFILE NOTE FROM VGSI AND RNAV GLIDEPATH NOT COINCIDENT TO VGSI AND RNAV GLIDEPATH NOT COINCIDENT (VGSI ANGLE {ANGLE}/TCH {FEET}). - UPDATED NOTE IAW 8260.19I.
32. ADDED CHART SPEED ICON IN PLANVIEW AT SNDIT, TRUCK, FREEL, OBIVE, WINRZ, JUDPU:MAX 210 KIAS. - SPEED RESTRICTIONS IAW ATC REQUEST.
33. REMOVED ADDITIONAL FLIGHT DATA CHART FAS OBST: 4501 TOWER 393127N/1194557W, CHART FAS OBST: 4780 BLDG 393200N/1194538W. - NO FAS OBSTACLES REQUIRED.
34. REMOVED ROUTE TYPE QUALIFIER 1: P AND 2: S AND ROUTE TYPE: A,R. - NO LONGER REQUIRED.
35. RNP 0.17 DA CHANGED TO RNP 0.10 DA\* AND MINS CHANGED DA/HAT AND VIS FROM 4823/408 AND RVR 4500 TO 4754/339 AND RVR 2600. - RNP VALUE REDUCED PER ATC REQUEST, NEW FINAL OBSTACLE.
36. RNP 0.30 DA MINS CHANGED DA/HAT AND VIS FROM 5142/727 AND 1 7/8 SM TO 5092/677 AND 1 1/2 SM. - FINAL CONTROLLING OBSTACLE UPDATED.
37. ADDED CAT D MINIMUMS - FPT REQUEST.
38. ADDITIONAL FLIGHT DATA CHANGED FROM HOLD S, RT, 346.76 INBOUND TO 349.76 INBOUND. - AIRPORT MAGVAR UPDATED.
39. CHART NOTE CHANGED FROM FOR INOPERATIVE MALSR, INCREASE RNP 0.17 ALL CATS VISIBILITY TO 11/4 AND RNP 0.30 ALL CATS VISIBILITY TO 2 1/2 TO FOR INOPERATIVE ALS, INCREASE RNP 0.30 DA VISIBILITY ALL CATS TO 1 7/8 SM. - MINIMUMS UPDATED, NEW VALUE PER 8260.3E.

9/1/2022: THIS IS AN CORRECTED COPY OF THE FORM APPROVED ON 9/6/2022.

1. TERMINAL ROUTE FROM HMWUD TO LUCEK ALTITUDE CHANGED FROM 9100 TO 7800.

**COORDINATED WITH:**

**A4A**  **ALPA**  **AOPA**  **APA**  **HAI**  **NBAA**  **OTHER:** ZOA, RNO APP CON, RNO ATCT, AMGR

**FLIGHT CHECKED BY**  
PENDING

**OFFICE**  
FIOG

**DATE**  
08/31/2022

*Digitally signed by*  
**CASIMIR L TABAKA**  
Sep 09, 2022

**DEVELOPED BY**  
TYLER MITCHELL

*Digitally signed by*  
**TYLER D MITCHELL**  
Sep 01, 2022

**OFFICE**  
AJV-A432

**DATE**  
07/05/2022

**APPROVED BY**  
JOHNNIE BAKER

*Digitally signed by*  
**CASIMIR L TABAKA**  
Sep 06, 2022

**OFFICE**  
AJV-A430

**DATE**

**TITLE**  
MANAGER

