

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</u> EL RENO RGNL	<u>AIRPORT ID</u> KRQO	<u>PROCEDURE NAME</u> RNAV (GPS) RWY 17	<u>ORIGINAL/AMENDMENT</u> 1	<u>CITY</u> EL RENO	<u>STATE</u> OK
<u>AIRPORT ELEVATION</u> 1420	<u>TDZE</u> 1420	<u>SUPERSEDED</u> RNAV (GPS) RWY 17	<u>ORIGINAL/AMENDMENT</u> ORIG-A	<u>DATED</u> 10/21/2010	<u>MAG VAR</u> 4E
<u>EPOCH YEAR</u> 2020					
<u>FACILITY</u> RNAV	<u>COORDINATES OF FACILITIES</u>	<u>ACTUAL EFFECTIVE DATE</u> 5 DECEMBER 2019	<u>REQUIRED EFFECTIVE DATE</u> ROUTINE	<u>CANCEL/SUSPEND</u>	

TAA

<u>FROM</u>	<u>FIX TYPE</u>	<u>TO</u>	<u>FIX TYPE</u>	<u>ALTITUDE</u>
1. 086/30 CW 266/30	NOPT	WOPEG	IF/IAF	3800
2. 266/30 CW 086/30		WOPEG	IF/IAF	3800

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>
WOPEG	IF/IAF	ZALRO		TF	FB	1.00	175.93	6.04	3000
ZALRO	FAF	RW17	MAP	TF	FO	0.30	175.93	4.83	
RW17	MAP	1670 MSL		CA			175.93		
1670 MSL		WUSEN		DF	FO	1.00			3800

MISSED APPROACH

MAP:

LPV: DA
 LNAV/VNAV: DA
 LNAV: RW17

MISSED APPROACH INSTRUCTIONS:

CLIMB TO 3800 DIRECT WUSEN AND HOLD.

ALTERNATE MISSED APPROACH INSTRUCTIONS:



PROFILE:

1. PT

SIDE OF COURSE

OUTBOUND

FT WITHIN

MILES OF (IAF)
2. HOLD N WOPEG, RT, 175.93 INBOUND, 3800 FT. IN LIEU OF PT (IAF), MAX 6000.
3. FAC: 175.93FAF: ZALRODIST FAF TO MAP: 4.83DIST FAF TO THLD: 4.83
4. MIN ALT: WOPEG 3800, ZALRO 3000
5. DIST TO THLD FROM OM:MM:IM:150 HAT:250 HAT: 0.66GS ANT:MM:IM:
6. MIN GP INCPT: 3000GP ALT AT FAF : ZALRO 3000OM:MM:IM:
7. GP ANGLE: 3.0034:1: IS NOT CLEAR20:1: IS CLEARTCH: 40.0
8. MSA FROM:

PBN REQUIREMENTS NOTE:

RNP APCH.

NOTES:

CHART NOTE: CIRCLING NA TO RWYS 18 AND 36.
CHART NOTE: CIRCLING RWY 35 NA AT NIGHT.
CHART NOTE: RWY 17 HELICOPTER VISIBILITY REDUCTION BELOW 3/4 SM NOT AUTHORIZED.
CHART NOTE: FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW -17°C OR ABOVE 54°C.
CHART PROFILE NOTE: VGSI AND RNAV GLIDEPATH NOT COINCIDENT (VGSI ANGLE {ANGLE}/TCH {FEET}).

ADDITIONAL FLIGHT DATA:

CHART CIRCLING ICON.
CHART VDP AT 1.90 NM TO RW17*
*LNAV ONLY
WAAS CHANNEL #45643
REFERENCE PATH ID: W17A
FAS OBST: 1610 AAO 353211N/0980015W.
HOLD S, RT, 355.93 INBOUND
LTP HAE: 405.9 M

MINIMUMS:

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

ALTERNATE: NA ☐ STANDARD - CAT D 800-2 1/4, 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	1670	3/4	250	1670	3/4	250	1670	3/4	250	1670	3/4	250			
LNAV/VNAV DA	1754	1	334	1754	1	334	1754	1	334	1754	1	334			
LNAV MDA	1860	1	440	1860	1	440	1860	1 1/4	440	1860	1 1/4	440			
CIRCLING	1900	1	480	1900	1	480	2140	2	720	2140	2 1/4	720			

CHANGES - REASONS

- 1. REMOVED MSA AND ADDED TAA - AIR TRAFFIC REQUEST FOR SIMPLIFICATION OF AIRSPACE.
- 2. REMOVED FEEDER FROM IRW VORTAC AND ODINS - NO LONGER REQUIRED DUE TO TAA.
- 3. REMOVED INITIAL FROM IFI VORTAC, FODAB AND CEKOG - NO LONGER REQUIRED DUE TO TAA.
- 4. ADDED LPV AND LNAV/VNAV LINES OF MINIMUM - AIRPORT IS WAAS COMPATIBLE AND HAS A VG SURVEY.
- 5. MISSED APPROACH INSTRUCTIONS CHANGED FROM "CLIMB TO 3100 DIRECT WUSEN AND HOLD" TO "CLIMB TO 3800 DIRECT WUSEN AND HOLD." - TAA, INTERMEDIATE AND HOLDING ALTITUDES ARE NOW 3800.
- 6. COURSE FOR WOPEG TO ZALRO AND ZALRO TO RWY 17 CHANGED FROM 172.98 TO 175.93 - AIRPORT MAGVAR UPDATED FROM NOAA 1995: 7E TO NOAA 2020: 4E.
- 7. LINE 2 CHANGED FROM 172.98 INBOUND, 300 FT TO 175.93 INBOUND, 3800 FT AND ADDED MAX 6000 - AIRPORT MAGVAR CHANGE AND 8260.19H 8-6-7.
- 8. LINE 3 CHANGED FROM FAC: 172.98 TO FAC: 175.93 AND DIST FAF TO MAP AND DIST FAF TO THLD FROM 4.79 TO 4.83 - 8260.19H 8-6-7
- 9. LINE 5 ADDED 250 HAT: 0.66 - 8260.19H 8-6-7
- 10. LINE 7 CHANGED FROM GP ANGLE: 3.03 TO GP ANGLE: 3.00 AND ADDED 20:1 IS CLEAR - 8260.19H 8-6-7
- 11. REMOVED CHART NOTE: DME/DME RNP-0.3 NA AND ADDED PBN REQUIREMENTS NOTE: RNP APCH - 8260.19H 8-6-8
- 12. REMOVED CHART NOTE: VISIBILITY REDUCTION BY HELICOPTERS NA AND ADDED CHART NOTE: RWY 17 HELICOPTER VISIBILITY REDUCTION BELOW 3/4 SM NOT AUTHORIZED. - 8260.19H 8-6-8
- 13. ADDED CHART NOTE: CIRCLING TO RWY 35 NA AT NIGHT - RWY 35 HAS 20:1 CIRCLING PENETRATIONS.
- 14. ADDED CHART NOTE: FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW -17C OR ABOVE 54C. - LNAV/VNAV LINE OF MINIMA ADDED
- 15. MOVED ALTERNATE WEATHER MINIMUMS NOTE TO BACK OF -9 - 8260.19H 8-6-9
- 16. ADDED ADDITIONAL FLIGHT DATA: CHART VDP AT 1.90 NM TO RW17* AND *LNAV ONLY - 20:1 IS CLEAR, VDP NOW PUBLISHED.
- 17. ADDED WAAS CHANNEL #45643 AND REFERENCE PATH ID: W17A - APPROACH IS NOW A WAAS APPROACH.
- 18. FAS OBSTRUCTION CHANGED FROM FAS OBST: 1619 AAO 353212N/01110012W TO FAS OBST: 1610 AAO 353211N/0980015W. - NEW LNAV CONTROLLING OBSTACLE.
- 19. CHANGED ADDITIONAL FLIGHT DATA FROM HOLD S, RT, 352.98 INBOUND TO HOLD S, RT, 355.93 INBOUND - NEW MISSED HOLDING DEVELOPED.
- 20. ADDED ADDITIONAL FLIGHT DATA LTP HAE: 405.9 M - APPROACH IS NOW A WAAS APPROACH
- 21. REMOVED ADDITIONAL FLIGHT DATA: ZALRO TO RWY17: 3.03/40, CHART APT ELEV 1420 AND CHART TDZE 1420 - NO LONGER REQUIRED.
- 22. ADDED CAT D TO THE PROCEDURE - ATC REQUEST
- 23. CAT C CIRCLING VIS CHANGED FROM 1 1/2 SM TO 2 SM- AJV VALIDATED VISCHECK CALCULATOR.
- 24. CAT A AND B CIRC CMDA CHANGED FROM 1940 TO 1900 AND CAT C CHANGED FROM 1940 TO 2140 - NEW CIRCLING CRITERIA APPLIED.
- 26. ALTERNATE MINS CHANGED FROM STANDARD TO STANDARD - CAT D 800-2 1/4, NA WHEN LOCAL WEATHER NOT AVAILABLE. - 8260.19H 8-6-11
- 27. ADDED CHART NOTE: CIRCLING TO RWY 18 AND 36 NA - IFP GROUP UNPAVED RUNWAY SOP

COORDINATED WITH:

A4A ☐ **ALPA** ☒ **AOPA** ☒ **APA** ☐ **HAI** ☐ **NBAA** ☒ **OTHER:** ZFW, OKC APP CON, AMGR

FLIGHT CHECKED BY

BRYAN VEIT

Digitally signed by

CASIMIR L TABAKA

Jul 25, 2019

OFFICE

FICO

DATE

7/24/19

DEVELOPED BY

CASIMIR L. TABAKA (TYLER MITCHELL)

Digitally signed by

CASIMIR L TABAKA

Jul 25, 2019

OFFICE

AJV-A422

DATE

04/16/2019

APPROVED BY

MARLON ROBINSON

Digitally signed by

CASIMIR L TABAKA

Jul 25, 2019

OFFICE

AJV-A420

DATE

TITLE

MANAGER



FAS DATA BLOCK INFORMATION

<u>DATA FIELD</u>	<u>DATA</u>
OPERATION TYPE	0
SBAS SERVICE PROVIDER IDENTIFIER	0
AIRPORT IDENTIFIER	KRQO
RUNWAY	RW17
APPROACH PERFORMANCE DESIGNATOR	0
ROUTE INDICATOR	
REFERENCE PATH DATA SELECTOR	0
REFERENCE PATH IDENTIFIER (APPROACH ID)	W17A
LTP/FTP LATITUDE	352852.3455N
LTP/FTP LONGITUDE	0980015.6095W
LTP/FTP ELLIPSOIDAL HEIGHT	+04059
FPAP LATITUDE	352723.1090N
FPAP LONGITUDE	0980015.4840W
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	1040
HORIZONTAL ALERT LIMIT (HAL)	40.0
VERTICAL ALERT LIMIT (VAL)	50.0
CRC REMAINDER	9CEA4B04

ADDITIONAL PATH POINT RECORD INFORMATION

ICAO CODE	K4
LTP ORTHOMETRIC HEIGHT	+04329
FPAP ORTHOMETRIC HEIGHT	+04329

