

**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> RUSH CITY RGNL	<u>AIRPORT ID</u> KROS	<u>PROCEDURE NAME</u> RNAV (GPS) RWY 34	<u>ORIGINAL/AMENDMENT</u> 1	<u>CITY</u> RUSH CITY	<u>STATE</u> MN	
<u>AIRPORT ELEVATION</u> 926	<u>TDZE</u> 926	<u>SUPERSEDED</u> RNAV (GPS) RWY 34	<u>ORIGINAL/AMENDMENT</u> ORIG-A	<u>DATED</u> 02/05/2015	<u>MAG VAR</u> 2E	<u>EPOCH YEAR</u> 2000
<u>FACILITY</u> RNAV	<u>COORDINATES OF FACILITIES</u>	<u>ACTUAL EFFECTIVE DATE</u> 10 SEPTEMBER 2020	<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>
JALEP	IAF	LENCK	NOPT	TF	FB	1.00	068.98	7.40	3000
CELSI	IAF	LENCK	NOPT	TF	FB	1.00	249.21	7.40	3000
LENCK	IF/IAF	INNAA		TF	FB	1.00	339.09	6.97	2700
INNAA	FAF	ZONRI/1.50 NM TO RW34		TF	FB	0.30	339.04	3.75	
ZONRI/1.50 NM TO RW34		RW34	MAP	TF	FO	0.30	339.04	1.50	
RW34	MAP	1210 MSL		CA			339.04		
1210 MSL		WENIB		DF	FO	1.00			3000

MISSED APPROACH

MAP:

LPV: DA
LNAV/VNAV: DA
LNAV: RW34

MISSED APPROACH INSTRUCTIONS:

CLIMB TO 3000 DIRECT WENIB AND HOLD.

ALTERNATE MISSED APPROACH INSTRUCTIONS:



PROFILE:

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

2. HOLD S LENCK, RT, 339.09 INBOUND, 3000 FT. IN LIEU OF PT (IAF), MAX 14000.

3. FAC: 339.04 FAF: INNAA DIST FAF TO MAP: 5.26 DIST FAF TO THLD: 5.26

4. MIN ALT: INNAA 2700, ZONRI/1.50 NM TO RW34 1440*

5. DIST TO THLD FROM OM: MM: IM: 150 HAT: 284 HAT: 0.76 GS ANT: MM: IM:

6. MIN GP INCPT: 2700 GP ALT AT FAF : INNAA 2700 OM:

7. GP ANGLE: 3.12 34:1: IS NOT CLEAR 20:1: IS CLEAR TCH: 40.0

8. MSA FROM: RW34 3100

PBN REQUIREMENTS NOTE:

RNP APCH.

NOTES:

CHART NOTE: CIRCLING RWY 16 NA AT NIGHT.
CHART NOTE: RWY 34 HELICOPTER VISIBILITY REDUCTION BELOW 3/4 SM NOT AUTHORIZED.
CHART NOTE: FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW -16°C OR ABOVE 54°C.
CHART PROFILE NOTE: VGSI AND RNAV GLIDEPATH NOT COINCIDENT (VGSI ANGLE {ANGLE}/TCH {FEET}).
*LNAV ONLY

ADDITIONAL FLIGHT DATA:

CHART CIRCLING ICON.
WAAS CHANNEL #49020
REFERENCE PATH ID: W34A
CHART FAS OBST: 1070 BUILDING 454113N/0925745W.
HOLD NW, RT, 116.07 INBOUND
LTP HAE: 252.4 M

MINIMUMS:

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

ALTERNATE: NA ☐ STANDARD - 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	1210	7/8	284	1210	7/8	284	1210	7/8	284		NA				
LNAV/VNAV DA	1233	7/8	307	1233	7/8	307	1233	7/8	307		NA				
LNAV MDA	1320	1	394	1320	1	394	1320	1 1/8	394		NA				
CIRCLING	1440	1	514	1460	1	534	1460	1 1/2	534		NA				



CHANGES - REASONS

1. REMOVED IAF ROUTE FROM GEP VORTAC AND FEEDER ROUTE FROM RZN VOR/DME - VOR MON FOR RZN VOR/DME AND PROCEDURE REDESIGN TO T INITIALS FOR GEP VORTAC
2. ADDED IAF ROUTES FROM CELSI AND JALEP - REDESIGNED FOR T INITIALS PER FPT
3. DISTANCE IN LENCK-INNAA SEGMENT CHANGED FROM 6.76 TO 6.79 - TARGETS CALCULATED PFAF LOCATION
4. CHANGED INNAA-ZONRI COURSE/DISTANCE FROM 339.05/3.97 TO 339.04/3.75 - TARGETS CALCULATED PFAF LOCATION
5. CHANGED ZONRI-RW34 COURSE FROM 339.03 TO 339.04 - MOVE TO FINAL APPROACH COURSE CENTERLINE
6. CHANGED LNAV/VNAV DA/HAT FROM 1240/314 TO 1233/307 - SECONDARY AREA REDUCTION APPLIED BASED ON CURRENT RNAV CRITERIA PER 8260.58A
7. CHANGED LPV DA/HAT FROM 1190/264 TO 1210/284 - NEW MISSED APPROACH PENETRATION
8. FAC CHANGED ON LINE 3 FROM 339.05 TO 339.04 - TARGETS CALCULATED FAC BASED ON CURRENT AIRNAV RUNWAY DATA
9. GPA CHANGED ON LINE 7 FROM 3.00 TO 3.12 - MITIGATE VGS PENETRATIONS
10. CHANGED DIST FAF TO MAP AND DIST FAF TO THLD ON LINE 3 FROM 5.47 TO 5.25 - PFAF MOVED FOWARD DUE TO HIGHER GPA
11. REMOVED "CHART NOTE: DME/DME RNP-0.3 NA" - NO LONGER REQUIRED PER 8260.19H
12. ADDED "RNP APCH" TO PBN EQUIPMENT REQUIREMENT NOTES - 8260.19H CHAPTER 8
13. REMOVED DEGREES F FROM BARO-VNAV NA NOTE - 8260.19H CHAPTER 8
14. REMOVED ALL SECONDARY ALTIMETER NOTES - MOVED TO 8260-9 PER IFP POLICY; LOCAL ALTIMETER ON AWOS
15. ADDED "20:1 IS CLEAR" TO LINE 7 - 8260.19H CHAPTER 8
16. REMOVED "CHART NOTE: VISIBILITY REDUCTION BY HELICOPTERS NA" - STRAIGHT IN 20:1 PENETRATIONS NO LONGER EXIST
17. ADDED "CHART NOTE: RWY 34 HELICOPTER VISIBILITY REDUCTION BELOW 3/4 SM NOT AUTHORIZED" - 34:1 PENETRATIONS TO STRAIGHT-IN VISUAL AREA
18. ADDED "CHART NOTE: CIRCLING RWY 16 NA AT NIGHT" - 20:1 PENETRATIONS IN THE CIRCLING VISUAL AREA RWY 16
19. ADDED "MAX 14000" TO LINE 2 - 8260-2 CHAPTER 8
20. CHANGED ZONRI/1.50 TO RW 34 ALTITUDE ON LINE 4 FROM 1420 TO 1440 - VAA AT ZONRI IS 1456
21. CRC REMAINDER CHANGED FROM B8BFAA45 TO DFB4A4C7 - LTP LAT/LONG CHANGED FROM 454129.2115N/0925857.7525W TO 454129.2145N/0925657.7455W, LTP ELLIPSOIDAL HEIGHT CHANGED FROM +02525 TO +02524, FPAF LAT/LONG CHANGED FROM 454253.4400N/0925739.1100W, GPA CHANGE DROM 3.00 TO 3.12
22. CHANGED LPV VIS ALL CATS FROM 1 SM TO 7/8 SM - 8260.3D TABLE 3-3-1
23. CHANGED LNAV/VNAV VIS ALL CATS FROM 1 SM TO 7/8 SM - 8260.3D TABLE 3-3-1
24. ADDED "CHART CIRCLING ICON" TO ADDITIONAL FLIGHT DATA - APPLICATION ON EXPANED CIRCLING CRITERIA
25. LPV DA/HAT CHANGED FROM 1190/364 TO 1210/284 - NEW MISSED APPROACH PENETRATION
26. LNAV/VNAV DA/HAT CHANGED FROM 1240/314 TO 1233/307 - 7 FOOT SECONDARY AREA REDUCTION PER CURRENT LNAV/VNAV CRITERIA
27. CIRCLING CAT B/C CMDA/HAA CHANGED FROM 1440/514 TO 1460/534 - NEW CONTROLLING OBSTACLE IDENTIFIED AFTER APPLYING EXPANDED CIRCLING CRITERIA

COORDINATED WITH:

A4A☐ALPA☒AOPA☒APA☐HAI☐NBAA☒OTHER: ZMP

FLIGHT CHECKED BY

KENNETH E JACK

OFFICE

FICO

DATE

5/28/2020

Digitally signed by

ALLAN WILL

Jun 02, 2020

DEVELOPED BY

KELLIE R. BARNES

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APPROVED BY

MARLON ROBINSON

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Jun 02, 2020

TITLE

MANAGER



FAS DATA BLOCK INFORMATION

<u>DATA FIELD</u>	<u>DATA</u>
OPERATION TYPE	0
SBAS SERVICE PROVIDER IDENTIFIER	0
AIRPORT IDENTIFIER	KROS
RUNWAY	RW34
APPROACH PERFORMANCE DESIGNATOR	0
ROUTE INDICATOR	
REFERENCE PATH DATA SELECTOR	0
REFERENCE PATH IDENTIFIER (APPROACH ID)	W34A
LTP/FTP LATITUDE	454129.2145N
LTP/FTP LONGITUDE	0925657.7455W
LTP/FTP ELLIPSOIDAL HEIGHT	+02524
FPAP LATITUDE	454253.4440N
FPAP LONGITUDE	0925739.1215W
THRESHOLD CROSSING HEIGHT (TCH)	00040.0
TCH UNITS SELECTOR (METERS OR FEET USED)	F
GLIDEPATH ANGLE (GPA)	03.12
COURSE WIDTH AT THRESHOLD	106.75
LENGTH OFFSET	1408
HORIZONTAL ALERT LIMIT (HAL)	40.0
VERTICAL ALERT LIMIT (VAL)	50.0
 CRC REMAINDER	 DFB4A4C7

ADDITIONAL PATH POINT RECORD INFORMATION

ICAO CODE	K3
LTP ORTHOMETRIC HEIGHT	+02802
FPAP ORTHOMETRIC HEIGHT	+02802

