

**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 ID</u>	<u>PROCEDURE NAME</u>	<u>ORIGINAL/AMENDMENT</u>	<u>CITY</u>	<u>STATE</u>		
MIC	RNAV (GPS) RWY 14	ORIG-A	MINNEAPOLIS	MN		
<u>AIRPORT ELEVATION</u>	<u>TDZE</u>	<u>SUPERSEDED</u>	<u>ORIGINAL/AMENDMENT</u>	<u>DATED</u>	<u>MAG VAR</u>	<u>EPOCH YEAR</u>
869	869	RNAV (GPS) RWY 14	ORIG	12/31/2020	2E	2000
<u>FACILITY</u>	<u>COORDINATES OF FACILITIES</u>	<u>ACTUAL EFFECTIVE DATE</u>	<u>REQUIRED EFFECTIVE DATE</u>	<u>CANCEL/SUSPEND</u>		
RNAV			ROUTINE			

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>
JEMEF	IAF	OYNOP	NOPT	TF	FB	1.00	049.19	7.10	3000
ZAPIN	IAF	OYNOP	NOPT	TF	FB	1.00	181.85	10.76	3000
OYNOP	IF/IAF	ZUNBE		TF	FB	1.00	139.28	7.26	2500
ZUNBE	FAF	RW14	MAP	TF	FO	0.30	139.39	3.75	
RW14	MAP	1269 MSL		CA			139.39		
1269 MSL		GEP VORTAC		DF	FO	1.00			3100

MISSED APPROACH

MAP:

LNAV: RW14

MISSED APPROACH INSTRUCTIONS:

CLIMBING LEFT TURN TO 3100 DIRECT GEP VORTAC AND HOLD, CONTINUE CLIMB-IN-HOLD TO 3100.

ALTERNATE MISSED APPROACH INSTRUCTIONS:

PROFILE:

- PT
- SIDE OF COURSE
- OUTBOUND
- FT WITHIN
- MILES OF (IAF)
- HOLD NW OYNOP, RT, 139.28 INBOUND, 3000 FT. IN LIEU OF PT (IAF), MAX 6000.
- FAC: 139.39 FAF: ZUNBE DIST FAF TO MAP: 3.75 DIST FAF TO THLD: 3.75
- MIN ALT: OYNOP 3000, ZUNBE 2500
- DIST TO THLD FROM OM: MM: IM: 150 HAT: GS ANT: MM: IM:
- MIN GP INCPT: GP ALT AT FAF: 34:1: IS NOT CLEAR 20:1: IS CLEAR TCH: OM: MM: IM:
- GP ANGLE:
- MSA FROM: RW14 3500

QUALITY
6
CHECKED

PBN REQUIREMENTS NOTE:

RNP APCH - GPS.

NOTES:

CHART NOTE: RWY 14 HELICOPTER VISIBILITY REDUCTION BELOW 3/4 SM NOT AUTHORIZED.
CHART PLANVIEW NOTE: PROCEDURE NA FOR ARRIVALS AT ZAPIN ON T383 NORTHBOUND.
CHART NOTE: CIRCLING NA TO RWYS 6R AND 24L.

ADDITIONAL FLIGHT DATA:

ZUNBE TO RW14: 4.00/37.1
HOLD N, LT, 166.00 INBOUND.
CHART FAS OBST: 1065 ANTENNA (27-055126) 450616N/0932355W.
CHART VDP AT 0.97 NM TO RW14.
CHART CIRCLING ICON.

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
LNAV MDA	1320	1	451	1320	1	451		NA			NA				
CIRCLING	1340	1	471	1380	1	511		NA			NA				

CHANGES - REASONS

1. CIRCLING: CAT B CIRCLING MINIMA RAISED FROM CMDA 1360/HAA 491 TO CMDA 1380/HAA 511. - NEW OBSTACLE EVALUATION.

COORDINATED WITH:

A4A ☐ ALPA ☒ AOPA ☒ APA ☐ HAI ☐ NBAA ☒ OTHER: MIC ATCT, MSP APP CON, ARPT MGR, ZME

FLIGHT CHECKED BY

SHAWN D MAXWELL

Digitally signed by
ROBERT G HAMILTON
Jun 23, 2025

OFFICE

AJF

DATE

06/19/2025

DEVELOPED BY

NICHOLAS HEIDERSTADT

Digitally signed by
NICHOLAS HEIDERSTADT
Apr 15, 2025

OFFICE

AJV-A421

DATE

02/12/2025

APPROVED BY

DAVID DANNER

Digitally signed by
ROBERT G HAMILTON
Jun 23, 2025

OFFICE

AJV-A421

DATE

TITLE
MANAGER



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

<u>AIRPORT ID</u>	<u>PROCEDURE NAME</u>	<u>AMDT NO.</u>	<u>CITY</u>	<u>STATE</u>	<u>AIRPORT ELEVATION</u>	<u>FACILITY</u>
MIC	RNAV (GPS) RWY 14	ORIG-A	MINNEAPOLIS	MN	869	RNAV

PART A: OBSTRUCTION DATA SEGMENTS

INITIAL

FROM
JEMEF

TO
OYNOP

RNP
1.00

DISTANCE
7.10

PAT

MAP

HAT

HMAS

<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>
AAO	450742.00N/0933830.00W	1267	164	98	4E	1000				AT733	3000
TERRAIN	450742.00N/0933830.00W	1067 (1100)								AS1500	2600

COMPUTATIONS

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

SEGMENT REMARKS:

INITIAL

FROM
ZAPIN

TO
OYNOP

RNP
1.00

DISTANCE
10.76

PAT

MAP

HAT

HMAS

<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>
AAO	452406.00N/0933218.00W	1270	164	98	4E	1000				AT730	3000
TERRAIN	451930.00N/0933300.00W	1033 (1000)								AS1500	2500

COMPUTATIONS

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

SEGMENT REMARKS:

QUALITY
6
CHECKED

INTERMEDIATE

FROM

OYNOP (IF/IAF)

TO

ZUNBE

<u>RNP</u>	<u>DISTANCE</u>	<u>PAT</u>	<u>MAP</u>				<u>HAT</u>	<u>HMAS</u>			
1.00	7.26										
<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>
TOWER (27-001028)	451113.00N/0933301.00W	1226	250	50	4D	500					1800
TERRAIN	451027.00N/0933224.00W	997 (1000)								AS1500	2500

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT REMARKS:

FINAL: LNAV

FROM

ZUNBE

TO

RW14

<u>RNP</u>	<u>DISTANCE</u>	<u>PAT</u>	<u>MAP</u>				<u>HAT</u>	<u>HMAS</u>			
0.30	3.75		RW14				451				
<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>
ANTENNA (27-055126)	450615.50N/0932355.26W	1065	20	3	1A	250					1320

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

OYNOP

TO

P-5

<u>RNP</u>	<u>DISTANCE</u>	<u>PAT</u> P-5	<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>
TOWER (27-001958)	451420.00N/0934114.00W	1500	250	50	4D	1000				AT500	3000
TERRAIN	452012.00N/0933433.00W	1112 (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

FROM

RW14

TO

GEP VORTAC

<u>RNP</u>	<u>DISTANCE</u>	<u>PAT</u>	<u>MAP</u>				<u>HAT</u>	<u>HMAS</u>			
0.30-1.00										1240	
<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				3100
TOWER (27-000032)	451043.00N/0932100.00W	1530	250	50	4D	1000				SA-41	2500
TERRAIN	450800.00N/0932348.00W	921 (900)								AS1500	2400

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT REMARKS:



AIRPORT ID

MIC

PROCEDURE NAME

RNAV (GPS) RWY 14

AMDT NO.

ORIG-A

CITY

MINNEAPOLIS

STATE

MN

AIRPORT ELEVATION

869

FACILITY

RNAV

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											
TREE	450400.00N/0932303.00W	1.30	471	1039	215	8	4B	300			1340
CATEGORY B											
TANK (27-092878)	450205.54N/0932033.79W	1.84	511	1062	20	3	1A	300			1380

CIRCLING REMARKS:

MSA

CENTER

RW14

RADIUS

25

SECTOR	OBSTRUCTION	COORDINATES	BEARING	DISTANCE	ELEV MSL	HORZ	VERT	AC	ROC	OCS	ADJUSTMENTS	MIN ALT
360-360	TOWER (27-000857)	452259.60N/0934230.90W	320	24.2	2454	20	3	1A	1000			3500

MSA REMARKS:

NOTES/EXPLANATIONS FROM PROCEDURE SEGMENTS:

PART B: SUPPLEMENTAL DATA

COMMUNICATIONS WITH

MSP DEP CON, MIC TOWER

WX SERVICE	LOCATION	HRS OPERATION	ALTIMETER SOURCE	DISTANCE	WMSCR	ADJUSTMENTS
ASOS	MIC	24	MIC	0	Y	0
BACK-UP WX SERVICE	LOCATION	HRS OPERATION	ALTIMETER SOURCE	DISTANCE	WMSCR	ADJUSTMENTS
AWOS-3	ANE	24	ANE	7.86	Y	25

WX REMARKS:

RASS PRESSURE PATTERNS THE SAME
KMIC 869, KANE 912
RA = 24.1.

PRIMARY NAVAID	MONITOR POINT	HRS OPERATION	CAT
APPROACH AND RUNWAY LIGHTING SYSTEM		RUNWAY MARKINGS	RUNWAY VISUAL RANGE
RW24L			
RW06R			
RW06L - MIRL (PCL), VASI-4L		BSC-G	
RW24R - MIRL (PCL), VASI-4L		BSC-G	
RW14 - REIL (PCL), MIRL (PCL), PAPI-4L		NPI-G	
RW32 - REIL (PCL), MIRL (PCL), PAPI-4L		NPI-G	

GLIDESLOPE ANGLE	ELEV RWY THRESHOLD	TCH	ELEV GS ANTENNA	DISTANCE FROM RWY	VGSI ANGLE	TCH
					4.00	37.1

FINAL APPROACH COURSE AIMING

RUNWAY THRESHOLD	☒	FT FROM THRESHOLD	DISPLACED THRESHOLD DISTANCE	241
ON CENTERLINE	☒	FT FROM CENTERLINE		

CRITICAL TEMPERATURES

CRITICAL LOW	CRITICAL HIGH	ACT	APT ISA
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CRITICAL TEMPERATURE REMARKS:

"VISUAL PORTION OF FINAL" PENETRATIONS

FINAL TYPE	LNAV
34:1	
956 TREE (27-055069) 450410.2300N/0932143.6000W (34.32)	960 TREE (27-055291) 450412.2700N/0932143.2300W (34.05)



<u>AIRPORT ID</u> MIC	<u>PROCEDURE NAME</u> RNAV (GPS) RWY 14	<u>AMDT NO.</u> ORIG-A	<u>CITY</u> MINNEAPOLIS	<u>STATE</u> MN	<u>AIRPORT ELEVATION</u> 869	<u>FACILITY</u> RNAV
936 TREE (27-055033) 450406.2700N/0932140.8600W (27.15)			954 TREE (27-055411) 450411.9400N/0932145.7400W (25.52)			
956 TREE (27-055425) 450414.0500N/0932143.7500W (25.22)			931 TREE (27-055011) 450404.9700N/0932140.9900W (25)			
952 TREE (27-055300) 450409.8200N/0932148.4600W (24.88)			928 TREE (27-055016) 450406.3900N/0932139.0300W (21.28)			
923 TREE (27-055081) 450405.2900N/0932137.7500W (20.52)			921 TREE (27-055072) 450403.8500N/0932139.1600W (20.02)			
924 TREE (27-060476) 450405.0700N/0932139.6800W (19.49)			929 TREE (27-055224) 450408.3700N/0932138.9800W (17.73)			
943 TREE (27-055289) 450410.4600N/0932146.1400W (17.44)			925 TREE (27-055215) 450405.3600N/0932143.0700W (15.36)			
916 TREE (27-055077) 450403.4100N/0932140.1900W (14.69)			950 TREE (27-055393) 450413.3400N/0932149.4600W (13.36)			
919 TREE (27-055008) 450406.7200N/0932137.6600W (13.31)			930 TREE (27-055187) 450410.0000N/0932141.5800W (11.51)			
928 TREE (27-055180) 450407.4500N/0932145.2200W (10.66)			916 TREE (27-055012) 450404.5500N/0932141.7700W (9.95)			
923 TREE (27-055249) 450406.6100N/0932143.6900W (9.63)			948 TREE (27-055401) 450414.5100N/0932149.0700W (9.15)			
927 TREE (27-055186) 450408.7800N/0932143.6600W (8.62)			930 TREE (27-055089) 450411.9300N/0932140.4300W (8.53)			
925 TREE (27-055178) 450410.1600N/0932139.7900W (8.5)			930 TREE (27-060620) 450408.4000N/0932146.9600W (8.16)			
938 TREE (27-055431) 450411.7200N/0932149.2900W (5.36)			919 TREE (27-055253) 450407.5300N/0932142.5000W (5.05)			
949 TREE (27-060893) 450414.2900N/0932153.9600W (4.23)			927 TREE (27-055301) 450413.7800N/0932141.2900W (0.09)			
<u>PENETRATIONS REMARKS:</u>						
NO AIRPORT SURVEY INDICATED IN AIRNAV AT THIS TIME. AIRPORT CONFIRMS RWY 14/32 20:1 SURFACES WILL BE CLEAR PRIOR TO RE-OPENING AND WILL REMAIN CLEAR.						

HELICOPTER 'VISUAL PORTION OF FINAL' PENETRATIONS

and/or

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

<u>PENETRATIONS REMARKS:</u>

PART C: GENERAL REMARKS:

PRECIPITOUS TERRAIN EVALUATION COMPLETED.

BACKUP ALTIMETER SETTING CONTINGENCY NOTES:
WHEN LOCAL ALTIMETER SETTING NOT RECEIVED, USE ANE ALTIMETER SETTING AND INCREASE ALL MDA 40 FEET.

ORDER 8260.3 CHAPTER 2 APPLIED TO 1227 AAO 450612.00N/0932457.00W.

STEPDOWN IN FINAL NOT APPLIED, RESULTS IN LESS THAN 60 FT MDA IMPROVEMENT.

VEGETATION ASSUMED TO BE 100 FT PER FPT CHECKLIST.

ORDER 8260.3, CHAPTER 2, NEW CIRCLING CRITERIA APPLIED.



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	2.08
WIDTH OF	FINAL	SEGMENT AT 1000FT POINT	1.20
TRUE COURSE OF	FINAL	SEGMENT CONTAINING 1000FT POINT	141.39
HIGH TERRAIN IN	FINAL	SEGMENT CONTAINING 1000FT POINT	1000
DISTANCE FROM	THLD	TO 1500FT POINT	3.75
WIDTH OF	FINAL	SEGMENT AT 1500FT POINT	2.13
TRUE COURSE OF	FINAL	SEGMENT CONTAINING 1500FT POINT	141.39
HIGH TERRAIN IN	FINAL	SEGMENT CONTAINING 1500FT POINT	1000

THRESHOLD COORDINATES (IF STR-IN)	450354.90N/0932125.85W
ARP COORDINATES	450344.89N/0932114.28W
RUNWAY APCH END AND DIST FURTHEST FROM ARP	RUNWAY 32 DISTANCE 0.36 NM
FAF COORDINATES	450650.85N/0932444.07W
FIX NAME COORDINATES	

REMARKS

THLD DISPLACED 241FT, ACTUAL COORDINATES: 450356.76N/0932127.95W

PART E: PREPARED BY

NAME	OFFICE	DATE	TITLE
NICHOLAS HEIDERSTADT	AJV-A421	02/12/2025	AERONAUTICAL INFORMATION SPECIALIST