

**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> KYIP	<u>PROCEDURE NAME</u> RNAV (GPS) RWY 23	<u>ORIGINAL/AMENDMENT</u> ORIG	<u>CITY</u> DETROIT	<u>STATE</u> MI		
<u>AIRPORT ELEVATION</u> 716	<u>TDZE</u> 710	<u>SUPERSEDED</u>	<u>ORIGINAL/AMENDMENT</u> NONE	<u>DATED</u>	<u>MAG VAR</u> 6W	<u>EPOCH YEAR</u> 1995
<u>FACILITY</u> RNAV	<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>
KUPNE	IAF	PLYMT	NOPT	TF	FB	1.00	153.94	4.65	2400
PLYMT	IF	FELUS		TF	FB	1.00	217.82	6.00	2000
FELUS	FAF	GAFFY		TF	FB	0.30	232.76	1.57	
GAFFY		RW23	MAP	TF	FO	0.30	232.76	2.33	
RW23	MAP	910 MSL		CA			232.76		
910 MSL		ZAVEX		DF	FO	1.00			3000

MISSED APPROACH

MAP:

LPV: DA
LNAV/VNAV: DA
LNAV: RW23

MISSED APPROACH INSTRUCTIONS:

CLIMB TO 3000 DIRECT ZAVEX AND HOLD, CONTINUE CLIMB-IN-HOLD TO 3000.

ALTERNATE MISSED APPROACH INSTRUCTIONS:



PROFILE:

1. PT

SIDE OF COURSE

OUTBOUND

FT WITHIN

MILES OF

(IAF)

2. PROFILE STARTS AT PLYMT

3. FAC:

232.76

FAF: FELUS

DIST FAF TO MAP: 3.90

DIST FAF TO THLD: 3.90

4. MIN ALT: PLYMT 2400, FELUS 2000, GAFFY 1500

5. DIST TO THLD FROM OM:

MM:

IM:

150 HAT:

200 HAT: 0.47

GS ANT:

6. MIN GP INCPT:

2000

GP ALT AT PFAF :

FELUS 2000

OM:

MM:

IM:

7. GP ANGLE:

3.00

34:1:

IS CLEAR

20:1:

IS CLEAR

TCH:

57.2

8. MSA FROM: RW23 3000

PBN REQUIREMENTS NOTE:

RNP APCH - GPS.

NOTES:

CHART NOTE: FOR UNCOMPENSATED BARO-VNAV SYSTEMS, PROCEDURE NA BELOW -19°C OR ABOVE 54°C.
CHART NOTE: FOR INOPERATIVE ALS, INCREASE LNAV/VNAV ALL CATS VISIBILITY TO 7/8 SM, LNAV CATS C/D VISIBILITY TO 1 SM.
CHART SPEED ICON IN PLANVIEW AT KUPNE: MAX 210 KIAS.

ADDITIONAL FLIGHT DATA:

CHART VDP AT 1.01 NM TO RWY 23.
CHART CIRCLING ICON
HOLD NW, RT, 120.53 INBOUND.
CHART FAS OBST: 822 TOWER (26-026700) 421605N/0832940W.
CHART VDP AT 1.01 NM TO RW23.
WAAS CHANNEL # 65744
REFERENCE PATH ID: W23A
LTP HAE: 179.6 M

MINIMUMS:

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

ALTERNATE: NA ☐ STANDARD - CAT D 800-2 1/4

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	910	1/2	200	910	1/2	200	910	1/2	200	910	1/2	200			
LNAV/VNAV DA	982	1/2	272	982	1/2	272	982	1/2	272	982	1/2	272			
LNAV MDA	1080	1/2	370	1080	1/2	370	1080	5/8	370	1080	5/8	370			
CIRCLING	1220	1	504	1220	1	504	1220	1 1/2	504	1400	2 1/4	684			



CHANGES - REASONS

02/15/22: THIS IS AN UPDATED COPY OF THE FORM DEVELOPED ON 11/12/21.

1. ADDED CHART CIRCLING ICON TO ADDITIONAL FLIGHT DATA.

2. REMOVED DOUBLE ENTRY CHART PLANVIEW NOTE AT KUPNE: MAX 210 KIAS IN ADDITIONAL FLIGHT DATA.

COORDINATED WITH:

A4A ☒ **ALPA** ☒ **AOPA** ☒ **APA** ☐ **HAI** ☐ **NBAA** ☒ **OTHER:** AMGR, DTW APP CON, YIP ATCT

FLIGHT CHECKED BY
GREGORY SCOTT WIEBE

Digitally signed by

DAVID TEFFETELLER

OFFICE
FIOG

DATE
02/08/2022

Digitally signed by

Feb 17, 2022

DEVELOPED BY
JOHN KEEFER

DAVID TEFFETELLER

Feb 17, 2022

OFFICE
AJV-A432

DATE
11/12/2021

APPROVED BY
LONNIE EVERHART

Digitally signed by

DAVID TEFFETELLER

Feb 17, 2022

OFFICE
AJV-A430

DATE

TITLE
MANAGER

FAS DATA BLOCK INFORMATION

<u>DATA FIELD</u>	<u>DATA</u>
OPERATION TYPE	0
SBAS SERVICE PROVIDER IDENTIFIER	0
AIRPORT IDENTIFIER	KYIP
RUNWAY	RW23
APPROACH PERFORMANCE DESIGNATOR	0
ROUTE INDICATOR	
REFERENCE PATH DATA SELECTOR	0
REFERENCE PATH IDENTIFIER (APPROACH ID)	W23A
LTP/FTP LATITUDE	421441.3390N
LTP/FTP LONGITUDE	0833110.4745W
LTP/FTP ELLIPSOIDAL HEIGHT	+01796
FPAP LATITUDE	421340.2205N
FPAP LONGITUDE	0833237.7815W
THRESHOLD CROSSING HEIGHT (TCH)	00057.2
TCH UNITS SELECTOR (METERS OR FEET USED)	F
GLIDEPATH ANGLE (GPA)	03.00
COURSE WIDTH AT THRESHOLD	106.75
LENGTH OFFSET	0448
HORIZONTAL ALERT LIMIT (HAL)	40.0
VERTICAL ALERT LIMIT (VAL)	35.0
CRC REMAINDER	BE4C24F5

ADDITIONAL PATH POINT RECORD INFORMATION

ICAO CODE	K5
LTP ORTHOMETRIC HEIGHT	+02138
FPAP ORTHOMETRIC HEIGHT	+02138



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

<u>AIRPORT ID</u> KYIP	<u>PROCEDURE NAME</u> RNAV (GPS) RWY 23	<u>AMDT NO.</u> ORIG	<u>CITY</u> DETROIT	<u>STATE</u> MI	<u>AIRPORT ELEVATION</u> 716	<u>FACILITY</u> RNAV
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PART A: OBSTRUCTION DATA SEGMENTS

INITIAL

FROM
KUPNE

TO
PLYMT

<u>RNP</u>	<u>DISTANCE</u> 4.65	<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>
TOWER (26-000724)	422522.00N/0832739.00W		1250	500	50	5D	1000				AT150	2400
TERRAIN	422539.00N/0832651.00W		872 (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
PLYMT

TO
FELUS

<u>RNP</u>	<u>DISTANCE</u> 6.00	<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>
TOWER (26-026988)	422308.46N/0832616.82W		1014	50	20	2C	500				AT400	2000
TERRAIN	422121.00N/0832509.00W		738 (700)								AS1000	1700

COMPUTATIONS

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

SEGMENT REMARKS:



FINAL: LPV

FROM

FELUS

TO

RW23

RNP	DISTANCE	PAT	MAP	HAT	HMAS							
	3.90		DA	200								
OBSTRUCTION	COORDINATES		ELEV MSL	HORZ	VERT	AC	ROC	OCS	CG	CGTA	ADJUSTMENTS	MIN ALT
								ASC				910

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

FINAL: LNAV/VNAV

FROM

FELUS

TO

RW23

RNP	DISTANCE	PAT	MAP	HAT	HMAS							
	3.90		DA	272								
OBSTRUCTION	COORDINATES		ELEV MSL	HORZ	VERT	AC	ROC	OCS	CG	CGTA	ADJUSTMENTS	MIN ALT
TREE (26-085643)	421502.15N/0833132.75W		821	20	3	1A	161					982

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

OSC SLOPE 23.73:1



FINAL: LNAV

FROM
FELUS

TO
GAFFY

<u>RNP</u>	<u>DISTANCE</u> 1.57	<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>
AAO	421618.47N/0832716.32W		1095	50	20	2C	250				DG155	1500

COMPUTATIONS

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

FINAL: LNAV

FROM
GAFFY

TO
RW23

<u>RNP</u>	<u>DISTANCE</u> 2.33	<u>PAT</u>	<u>MAP</u> RW23	<u>HAT</u> 370			<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 (26-026700)	421604.68N/0832939.88W		822	20	3	1A	250					1080

COMPUTATIONS

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



MISSED APPROACH : LPV

FROM

DA

TO

ZAVEX

RNP	DISTANCE	PAT	MAP	HAT			HMAS					
737												
OBSTRUCTION	COORDINATES		ELEV MSL	HORZ	VERT	AC	ROC	OCS	CG	CGTA	ADJUSTMENTS	MIN ALT
								ASC				3000
TOWER (26-020161)	421009.54N/0834109.77W		1107	20	3	1A	1000				AT800	3000
TERRAIN	420951.00N/0834018.00W		846 (800)								AS1500	2300

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

MISSED APPROACH : LNAV/VNAV

FROM

DA

TO

ZAVEX

RNP	DISTANCE	PAT	MAP	HAT			HMAS 821					
OBSTRUCTION	COORDINATES		ELEV MSL	HORZ	VERT	AC	ROC	OCS	CG	CGTA	ADJUSTMENTS	MIN ALT
								ASC				3000
TOWER (26-020161)	421009.54N/0834109.77W		1107	20	3	1A	1000				AT800	3000
TERRAIN	420951.00N/0834018.00W		846 (800)								AS1500	2300

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



MISSED APPROACH : LNAV

FROM

RW23

TO

ZAVEX

RNP	DISTANCE	PAT	MAP	HAT			HMAS 980					
OBSTRUCTION	COORDINATES		ELEV MSL	HORZ	VERT	AC	ROC	OCS	CG	CGTA	ADJUSTMENTS	MIN ALT
								ASC				3000
TOWER (26-020161)	421009.54N/0834109.77W		1107	20	3	1A	1000				AT800	3000
TERRAIN	420951.00N/0834018.00W		846 (800)								AS1500	2300

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											
TOWER (26-002998)	421431.78N/0833411.47W	1.30	504	903	20	3	1A	300			1220
CATEGORY B											
TOWER (26-002998)	421431.78N/0833411.47W	1.83	504	903	20	3	1A	300			1220
CATEGORY C											
TOWER (26-002998)	421431.78N/0833411.47W	2.88	504	903	20	3	1A	300			1220
CATEGORY D											
AAO	421618.47N/0832716.32W	3.76	684	1095	50	20	2C	300			1400

CIRCLING REMARKS:



MSA

CENTER

RW23

RADIUS

25

SECTOR	OBSTRUCTION	COORDINATES	BEARING	DISTANCE	ELEV MSL	HORZ	VERT	AC	ROC	OCS	ADJUSTMENTS	MIN ALT
360-360	TOWER (26-000991)	422225.60N/0840410.22W	294	25.7	1987	20	3	1A	1000			3000

MSA REMARKS:

NOTES/EXPLANATIONS FROM PROCEDURE SEGMENTS:



PART B: SUPPLEMENTAL DATA

COMMUNICATIONS WITH
DTW APP CON, ZOB ARTCC, YIP TOWER

<u>WX SERVICE</u> ASOS	<u>LOCATION</u> KYIP	<u>HRS OPERATION</u> 24	<u>ALTIMETER SOURCE</u> KYIP	<u>DISTANCE</u> 0	<u>SERVICE-A</u> Y	<u>ADJUSTMENTS</u> 0
<u>BACK-UP WX SERVICE</u>	<u>LOCATION</u>	<u>HRS OPERATION</u>	<u>ALTIMETER SOURCE</u>	<u>DISTANCE</u>	<u>SERVICE-A</u>	<u>ADJUSTMENTS</u>

WX REMARKS:
NO BACKUP ALTIMETER. AIRPORT ALTIMETER IS REDUNDANT.

<u>PRIMARY NAVAID</u>	<u>MONITOR POINT</u>	<u>HRS OPERATION</u>	<u>CAT</u>
<u>APPROACH AND RUNWAY LIGHTING SYSTEM</u>		<u>RUNWAY MARKINGS</u>	<u>RUNWAY VISUAL RANGE</u>
RW9 - MIRL, PAPI-4L		NPI-G	
RW27 - MIRL		NPI-G	
RW5 - TDZ, MALSR, HIRL, C/LINE, PAPI-4L		PIR-G	APPROACH
RW23 - MALSR, HIRL, C/LINE, PAPI-4L		PIR-G	ROLL OUT

<u>GLIDESLOPE ANGLE</u> 3.00	<u>ELEV RWY THRESHOLD</u> 701.5	<u>TCH</u> 57.2	<u>ELEV GS ANTENNA</u>	<u>DISTANCE FROM RWY</u>	<u>VGSI ANGLE</u> 3.00	<u>TCH</u> 55.9
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FINAL APPROACH COURSE AIMING

RUNWAY THRESHOLD	<input checked="" type="checkbox"/>	FT FROM THRESHOLD	DISPLACED THRESHOLD DISTANCE
ON CENTERLINE	<input checked="" type="checkbox"/>	FT FROM CENTERLINE	

CRITICAL TEMPERATURES

<u>CRITICAL LOW</u> -19C	<u>CRITICAL HIGH</u> +54C	<u>ACT</u> -19C	<u>APT ISA</u> +13.58C
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CRITICAL TEMPERATURE REMARKS:
AVERAGE COLD TEMPERATURE DERIVED FROM 5-YEAR HISTORY (2016-2020).
CRITICAL LOW TEMPERATURE BASED ON ACT.
DESCENT RATE (FPM): STANDARD TEMP 965 HIGH TEMP 1272.



"VISUAL PORTION OF FINAL" PENETRATIONS

Final Type	RWY 9		
20:1			
718 SIGN (26-026598) 421439.67N/0833231.19W (2.41)		717 SIGN (26-026599) 421437.05N/0833231.11W (1.37)	

PENETRATIONS REMARKS:

THESE OBSTACLES WERE REMOVED FORM EVALUATION. THEY WERE DISCOVERED IN 2015 AND THE FPT WAS NOTIFIED. THEY ARE LESS THAN 3 FEET OF PENETRATION AND CONSIDERED LOW RISK BY 8260.3E. 20:1 TRACKER INDICATES THEY ARE FIXED BY FUNCTION.

HELICOPTER 'VISUAL PORTION OF FINAL' PENETRATIONS

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

PENETRATIONS REMARKS:

PART C: GENERAL REMARKS:

100 FT VEGETATION USED PER FPT.
PRECIPITOUS TERRAIN EVALUATION COMPLETE.

CLIMATE DATA DETERMINED FROM HISTORICAL TEMPS.
2016 10 F
2017 -7 F
2018 -7 F
2019 -15 F
2020 -2 F

ORDER 8260.3, CHAPTER 2, NEW CIRCLING CRITERIA APPLIED.

QUALITY
18
CHECKED

PART E: PREPARED BY

<u>NAME</u> JOHN KEEFER	<u>OFFICE</u> AJV-A432	<u>DATE</u> 11/12/2021	<u>TITLE</u> AERONAUTICAL INFORMATION SPECIALIST
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