

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> HOUGHTON COUNTY MEMORIAL	<u>AIRPORT ID</u> KCMX	<u>PROCEDURE NAME</u> RNAV (GPS) RWY 31	<u>ORIGINAL/AMENDMENT</u> ORIG-A	<u>CITY</u> HANCOCK	<u>STATE</u> MI
<u>AIRPORT ELEVATION</u> 1095	<u>TDZE</u> 1070	<u>SUPERSEDED</u> RNAV (GPS) RWY 31	<u>ORIGINAL/AMENDMENT</u> ORIG	<u>DATED</u> 09/25/2008	<u>MAG VAR</u> 2W
<u>FACILITY</u> RNAV	<u>COORDINATES OF FACILITIES</u>	<u>ACTUAL EFFECTIVE DATE</u> 15 AUGUST 2019	<u>REQUIRED EFFECTIVE DATE</u> ROUTINE	<u>CANCEL/SUSPEND</u>	<u>EPOCH YEAR</u> 1985

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>
CMX VOR/DME		MUMBY		TF	FO	1.00	133.40	14.00	3000
PEVXI	IAF	MUMBY	NOPT	TF	FB	1.00	342.93	3.35	3000
CIBPA	IAF	MUMBY	NOPT	TF	FB	1.00	062.29	9.04	3000
MUMBY	IF/IAF	COPKA		TF	FB	1.00	313.05	9.23	2500
COPKA	FAF	RW31	MAP	TF	FO	0.30	312.92	4.32	
RW31	MAP	1320 MSL		CA			312.92		
1320 MSL		BAPYA		DF	FO	1.00			3700

MISSED APPROACH

MAP:

LPV: DA
LNAV/VNAV: DA
LNAV: RW31

MISSED APPROACH INSTRUCTIONS:

CLIMB TO 3700 DIRECT BAPYA AND HOLD.

ALTERNATE MISSED APPROACH INSTRUCTIONS:



PROFILE:

1. PT

SIDE OF COURSE

OUTBOUND

FT WITHIN

MILES OF (IAF)

2. HOLD SE MUMBY, RT, 313.05 INBOUND, 3000 FT. IN LIEU OF PT (IAF), MAX 6000.

3. FAC: 312.92 FAF: COPKA DIST FAF TO MAP: 4.32 DIST FAF TO THLD: 4.32

4. MIN ALT: MUMBY 3000, COPKA 2500

5. DIST TO THLD FROM OM: MM: IM: 150 HAT: 250 HAT: 0.67 GS ANT: MM: IM:

6. MIN GP INCPT: 2500 GP ALT AT FAF : COPKA OM: MM: IM:

7. GP ANGLE: 3.00 34:1: IS CLEAR 20:1: IS CLEAR TCH: 46.9

8. MSA FROM: RW31 3300

PBN REQUIREMENTS NOTE:

RNP APCH.

NOTES:

CHART NOTE: INOPERATIVE TABLE DOES NOT APPLY TO LNAV CAT D.
CHART NOTE: FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW -17°C OR ABOVE 46°C.
CHART NOTE: FOR INOPERATIVE ALS, INCREASE LPV VISIBILITY ALL CATS TO 1 SM, INCREASE LNAV/VNAV CAT D VISIBILITY TO 1 SM.

ADDITIONAL FLIGHT DATA:

CHART CIRCLING ICON.
CHART VDP AT 0.86 NM TO RW31*
*LNAV ONLY
WAAS CHANNEL #45809
REFERENCE PATH ID: W31A
HOLD NW, RT, 132.69 INBOUND
LTP HAE: 289.1 M

MINIMUMS:

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

ALTERNATE: NA ☐ STANDARD

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	1320	1/2	250	1320	1/2	250	1320	1/2	250	1320	1/2	250			
LNAV/VNAV DA	1367	1/2	297	1367	1/2	297	1367	1/2	297	1367	3/4	297			
LNAV MDA	1420	1/2	350	1420	1/2	350	1420	1/2	350	1420	1	350			
CIRCLING	1560	1	465	1600	1	505	1680	1 1/2	585	1820	2 1/4	725			



CHANGES - REASONS

1. REPLACED DME/DME RNP-0.3 NA WITH PBN REQUIREMENTS NOTE: RNP APCH - IAW 8260-19H, 8-6-8, A6 B (1).
2. CHANGED MSA FROM 3100FT TO 3300FT. - INCORPORATED !FDC 8/9484
3. ADDED CIRCLING ICON TO AFD BLOCK. - INCLUDED NEW CIRCLING AREA DATA BASED ON ILS OR LOC RWY 31 EVALUATION.
4. CHANGED CIRCLING MDA'S/HAA'S FROM: CAT A 1620/525, CAT B 1640/545, CAT C 1640/545, CAT D 1780/685 TO CAT A 1560/465, CAT B 1600/505, CAT C 1680/585, CAT D 1820/725. - NEW CIRCLING AREA EVALUATED ON ILS OR LOC RWY 31 APPROACH, DATA TRANSFERRED TO THIS AMENDMENT.
5. CHANGED INOP NOTE FROM: FOR INOPERATIVE MALSR, INCREASE LPV VISIBIUTY ALL CATS TO 1 MILE, INCREASE LNAV/NAV CAT D VISIBILTY TO 1 MILE. TO FOR INOPERATIVE ALS, INCREASE LPV VISIBILITY ALL CATS TO 1 SM, INCREASE LNAV/VNAV CAT D VISIBILITY TO 1 SM. - UPDATED NOTE TO CURRENT CRITERIA.
6. UPDATED BARO-VNAV NOTE FROM FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW -17C (2F) OR ABOVE 46C (114F). TO FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW -17°C OR ABOVE 46°C. - UPDATE NOTE TO CURRENT CRITERIA.
7. UPDATED LTP/FTP LATITUDE AND LONGITUDE IN FAS DATA FROM "470949.1600N/0882844.7800W" TO "470949.1646N/0882844.8015W". - LTP/FTP COORDINATES WERE UPDATED.
8. CRC REMAINDER CHANGED FROM "B2EAF3BE" TO "ACC672B3". - LTP/FTP COORDINATES WERE UPDATED.

COORDINATED WITH:

A4A ☒ ALPA ☒ AOPA ☒ APA ☒ HAI ☐ NBAA ☒ OTHER: ZMP, AMGR

FLIGHT CHECKED BY

THOMAS CONKLIN

Digitally signed by

DONALD H LANIER

May 15, 2019

OFFICE

FICO

DATE

5/11/19

DEVELOPED BY

DONALD H. LANIER (CHRISTOPHER SCHONES)

Digitally signed by

DONALD H LANIER

May 15, 2019

OFFICE

AJV-A431

DATE

02/21/2019

APPROVED BY

LONNIE EVERHART

Digitally signed by

DONALD H LANIER

May 15, 2019

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	KCMX
RUNWAY	RW31
APPROACH PERFORMANCE DESIGNATOR	0
ROUTE INDICATOR	
REFERENCE PATH DATA SELECTOR	0
REFERENCE PATH IDENTIFIER (APPROACH ID)	W31A
LTP/FTP LATITUDE	470949.1645N
LTP/FTP LONGITUDE	0882844.8015W
LTP/FTP ELLIPSOIDAL HEIGHT	+02891
FPAP LATITUDE	471031.2200N
FPAP LONGITUDE	0882956.1000W
THRESHOLD CROSSING HEIGHT (TCH)	00046.9
TCH UNITS SELECTOR (METERS OR FEET USED)	F
GLIDEPATH ANGLE (GPA)	03.00
COURSE WIDTH AT THRESHOLD	106.75
LENGTH OFFSET	0008
HORIZONTAL ALERT LIMIT (HAL)	40.0
VERTICAL ALERT LIMIT (VAL)	50.0
CRC REMAINDER	ACC672B3

ADDITIONAL PATH POINT RECORD INFORMATION

ICAO CODE	K5
LTP ORTHOMETRIC HEIGHT	+03233
FPAP ORTHOMETRIC HEIGHT	+03233

