

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> JIM HAMILTON L B OWENS	<u>AIRPORT ID</u> KCUB	<u>PROCEDURE NAME</u> RNAV (GPS) RWY 31	<u>ORIGINAL/AMENDMENT</u> 1	<u>CITY</u> COLUMBIA	<u>STATE</u> SC	
<u>AIRPORT ELEVATION</u> 193	<u>TDZE</u> 186	<u>SUPERSEDED</u> RNAV (GPS) RWY 31	<u>ORIGINAL/AMENDMENT</u> ORIG	<u>DATED</u> 09/13/2018	<u>MAG VAR</u> 6W	<u>EPOCH YEAR</u> 1995
<u>FACILITY</u> RNAV	<u>COORDINATES OF FACILITIES</u>	<u>ACTUAL EFFECTIVE DATE</u> 3 JANUARY 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. 222/30 CW 042/30	NOPT	SKITR	IF/IAF	2700
2. 042/30 CW 132/30		TTROY	IAF	2700
3. 132/30 CW 222/30		DDATA	IAF	3100

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>
DDATA	IAF	SKITR	NOPT	TF	FB	1.00	221.59	8.00	2700
TTROY	IAF	SKITR	NOPT	TF	FB	1.00	041.49	8.00	2700
SKITR	IF/IAF	HIDEE		TF	FB	1.00	311.54	8.00	1800
HIDEE	FAF	ZIXIG/2.00 NM TO RW31		TF	FB	0.30	311.47	2.94	
ZIXIG/2.00 NM TO RW31		RW31	MAP	TF	FO	0.30	311.47	2.00	
RW31	MAP	436 MSL		CA			311.47		
436 MSL		JSSTN		DF	FO	1.00			2700

MISSED APPROACH

MAP:

LPV: DA
 LNAV/VNAV: DA
 LNAV: RW31

MISSED APPROACH INSTRUCTIONS:

CLIMB TO 2700 DIRECT JSSTN AND HOLD.

ALTERNATE MISSED APPROACH INSTRUCTIONS:



PROFILE:

1. PT

SIDE OF COURSE

OUTBOUND

FT WITHIN

MILES OF (IAF)

2. HOLD SE SKITR, RT, 311.54 INBOUND, 2700 FT. IN LIEU OF PT (IAF), MAX 6000.

3. FAC: 311.47FAF: HIDEEDIST FAF TO MAP: 4.94DIST FAF TO THLD: 4.94

4. MIN ALT: SKITR 2700, HIDEED 1800, ZIXIG/2.00 NM TO RW31 860*

5. DIST TO THLD FROM OM:MM:IM:150 HAT:250 HAT: 0.66GS ANT:

6. MIN GP INCPT: 1800GP ALT AT FAF : HIDEED 1800OM: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: RWY 31 HELICOPTER VISIBILITY REDUCTION BELOW 3/4 SM NOT AUTHORIZED.
CHART NOTE: FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW -6C OR ABOVE 54C.
CHART PROFILE NOTE: VGSI AND RNAV GLIDEPATH NOT COINCIDENT (VGSI ANGLE {ANGLE}/TCH {FEET}).

ADDITIONAL FLIGHT DATA:

CHART: MCENTIRE JNGB, SC
CHART VDP AT 1.23 NM TO RW31*
*LNAV ONLY
WAAS CHANNEL #42742
REFERENCE PATH ID: W31A
CHART FAS OBST: 337 TOWER 335709N/0805745W.
HOLD NW, RT, 131.31 INBOUND
LTP HAE: 25.4 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	436	3/4	250	436	3/4	250	436	3/4	250	436	3/4	250			
LNAV/VNAV DA	494	7/8	308	494	7/8	308	494	7/8	308	494	7/8	308			
LNAV MDA	600	1	414	600	1	414	600	1 1/8	414	600	1 1/8	414			

CHANGES - REASONS

1. CORRECTED SKITR TO HIDEED ALTITUDE FROM 2700 TO 1800; LINE 4 MIN ALT FOR HIDEED FROM 2700 TO 1800 AND LINE 6 GP ALT AT FAF FROM 2700 TO 1800 - 2700 WAS ENTERED IN ERROR WHEN THE ORIGINAL PROCEDURE WAS DEVELOPED.
2. RAISED LPV DA/HAT FROM 411/225 TO 436/250, UPDATED LINE 6 DIST TO THLD FROM "225 HAT: 0.58" TO "250 HAT: 0.66" AND UPDATED CA ALTITUDE FROM 411 MSL TO 436 MSL IN TERMINAL ROUTES - PENETRATION IN THE LPV FINAL.
3. CHANGED VAL FROM 35 TO 50 CRC REMAINDER FROM "57D3A81E" TO "A82C8533" - LPV HAT OF 250 OR GREATER REQUIRES A VAL OF 50



AIRPORT

JIM HAMILTON L B OWENS

AIRPORT ID

KCUB

PROCEDURE NAME

RNAV (GPS) RWY 31

ORIGINAL/AMENDMENT

1

CITY

COLUMBIA

STATE

SC

COORDINATED WITH:

A4A ☐ **ALPA** ☒ **AOPA** ☒ **APA** ☒ **HAI** ☐ **NBAA** ☒ **OTHER:** ZJX, CAE APCH CON, ARPT MNGR

FLIGHT CHECKED BY

JAMES HAWLEY

DEVELOPED BY

DONALD H. LANIER (JACOB MAXFIELD)

APPROVED BY

PATRICK MULQUEEN

Digitally signed by

DONALD H LANIER

Nov 26, 2018

Digitally signed by

DONALD H LANIER

Nov 26, 2018

Digitally signed by

DONALD H LANIER

Nov 26, 2018

OFFICE

FICO

OFFICE

AJV-5431

OFFICE

AJV-5430

DATE

11/20/2018

DATE

08/23/2018

DATE

TITLE

MANAGER



FAS DATA BLOCK INFORMATION

<u>DATA FIELD</u>	<u>DATA</u>
OPERATION TYPE	0
SBAS SERVICE PROVIDER IDENTIFIER	0
AIRPORT IDENTIFIER	KCUB
RUNWAY	RW31
APPROACH PERFORMANCE DESIGNATOR	0
ROUTE INDICATOR	
REFERENCE PATH DATA SELECTOR	0
REFERENCE PATH IDENTIFIER (APPROACH ID)	W31A
LTP/FTP LATITUDE	335801.5490N
LTP/FTP LONGITUDE	0805922.4620W
LTP/FTP ELLIPSOIDAL HEIGHT	+00254
FPAP LATITUDE	335853.2770N
FPAP LONGITUDE	0810049.7730W
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	1344
HORIZONTAL ALERT LIMIT (HAL)	40.0
VERTICAL ALERT LIMIT (VAL)	50.0
CRC REMAINDER	A82C8533
<u>ADDITIONAL PATH POINT RECORD INFORMATION</u>	
ICAO CODE	K7
LTP ORTHOMETRIC HEIGHT	+00566
FPAP ORTHOMETRIC HEIGHT	+00566

