

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> BILL PUGH FIELD	<u>AIRPORT ID</u> M22	<u>PROCEDURE NAME</u> RNAV (GPS) RWY 2	<u>ORIGINAL/AMENDMENT</u> ORIG-C	<u>CITY</u> RUSSELLVILLE	<u>STATE</u> AL
<u>AIRPORT ELEVATION</u> 718	<u>TDZE</u> 696	<u>SUPERSEDED</u> RNAV (GPS) RWY 2	<u>ORIGINAL/AMENDMENT</u> ORIG-B	<u>DATED</u> 05/28/2015	<u>MAG VAR</u> 2W
<u>FACILITY</u> RNAV	<u>COORDINATES OF FACILITIES</u>	<u>ACTUAL EFFECTIVE DATE</u>	<u>REQUIRED EFFECTIVE DATE</u> ROUTINE	<u>CANCEL/SUSPEND</u>	<u>EPOCH YEAR</u> 2010

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>
LANER		DALEC		TF	FO	1.00	234.28	22.54	2700
FOGUM	IAF	DALEC	NOPT	TF	FB	1.00	032.05	10.12	2700
DALEC	IF/IAF	BACAL		TF	FB	1.00	003.21	6.12	2300
BACAL	FAF	KENCE	MAP	TF	FO	0.30	003.22	4.46	
KENCE	MAP	1118 MSL		CA			003.22		
1118 MSL		DALEC		DF	FO	1.00			2700

MISSED APPROACH

MAP:

LNAV: KENCE

MISSED APPROACH INSTRUCTIONS:

CLIMBING LEFT TURN TO 2700 DIRECT DALEC AND HOLD.

ALTERNATE MISSED APPROACH INSTRUCTIONS:



PROFILE:

1. PT

SIDE OF COURSE

OUTBOUND

FT WITHIN

MILES OF (IAF)

2. HOLD S DALEC, RT, 003.21 INBOUND, 2700 FT. IN LIEU OF PT (IAF), MAX 6000.

3. FAC: 003.22

FAF: BACAL

DIST FAF TO MAP: 4.46

DIST FAF TO THLD: 4.94

4. MIN ALT: DALEC 2700, BACAL 2300

5. DIST TO THLD FROM OM:

MM:

IM:

150 HAT:

GS ANT:

6. MIN GP INCPT:

GP ALT AT FAF :

OM:

MM:

IM:

7. GP ANGLE:

34:1: IS NOT CLEAR

20:1: IS NOT CLEAR

TCH:

8. MSA FROM: KENCE 2700

PBN REQUIREMENTS NOTE:

RNP APCH.

NOTES:

CHART NOTE: PROCEDURE NA AT NIGHT.
CHART NOTE: RWY 2 HELICOPTER VISIBILITY REDUCTION BELOW 1 SM NOT AUTHORIZED.
CHART NOTE: USE MUSCLE SHOALS ALTIMETER SETTING; WHEN NOT RECEIVED, USE DECATUR ALTIMETER SETTING AND INCREASE ALL MDA 60 FEET.

ADDITIONAL FLIGHT DATA:

CHART MUSCLE SHOALS ASOS.
CHART PROFILE NOTE: VISUAL SEGMENT - OBSTACLES.
CHART COLUMBUS 2 MOA
CHART FAS OBST: 1340 TOWER 342351N/0874416W.
FAC CROSSES RWY C/L EXTENDED 2977 FT FROM THLD.

MINIMUMS:

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

ALTERNATE: NA ☒

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	1660	1 1/4	964	1660	1 1/2	964	1660	3	964	1660	3	964			
CIRCLING	1660	1 1/4	942	1660	1 1/2	942	1660	3	942	1660	3	942			

CHANGES - REASONS

1. REMOVED DME/DME RNP-0.3 NA. - NOTE IS NO LONGER APPLICABLE.
2. ADDED PROFILE NOTE: VISUAL SEGMENT-OBSTACLE - OBSTACLES EXIST IN VISUAL AREA PER FLIGHT CHECK.
3. REMOVED DESCENT ANGLE/TCH NOTE FROM PROFILE VIEW - PER FLIGHT CHECK REQUEST.
4. ADDED RNP APCH TO PBN REQUIREMENTS SECTION - UPDATED TO CURRENT CRITERIA.
5. CIRCLING HAA CHANGED FROM 937 TO 942 ALL CATS - APT ELEV CHANGED FROM 723 TO 718.
6. REMOVED VDA FROM ADDITIONAL FLIGHT DATA IAW VDA REMOVAL WORKSHEET - VISUAL SEGMENT OBSTACLES EXIST.



COORDINATED WITH:

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

FLIGHT CHECKED BY

PROCESSED IAW AIRCRAFT OPERATIONS GROUP (AJW-33) MEMO, OCTOBER 3, 2018, SUBJECT:
FLIGHT INSPECTION REVIEW NOT REQUIRED

OFFICE

DATE

Digitally signed by

ROBERT G HAMILTON

Dec 13, 2018

DEVELOPED BY

ROBERT G HAMILTON (KEITH CTR JONES)

OFFICE

AJV-5420

DATE

10/31/2019

Digitally signed by

ROBERT G HAMILTON

Dec 13, 2018

APPROVED BY

ROBERT HAMILTON

OFFICE

AJV-5420

DATE

TITLE

MANAGER

Digitally signed by

ROBERT G HAMILTON

Dec 13, 2018



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

<u>AIRPORT</u> BILL PUGH FIELD	<u>AIRPORT ID</u> M22	<u>PROCEDURE NAME</u> RNAV (GPS) RWY 2	<u>AMDT NO.</u> ORIG-C	<u>CITY</u> RUSSELLVILLE	<u>STATE</u> AL	<u>AIRPORT ELEVATION</u> 718	<u>FACILITY</u> RNAV
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PART A: OBSTRUCTION DATA SEGMENTS

FEEDER

<u>FROM</u> LANER	<u>TO</u> DALEC
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<u>RNP</u>	<u>DISTANCE</u> 22.54	<u>PAT</u>	<u>MAP</u>	<u>HAT</u>	<u>HMAS</u>
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<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>
1.AAO	342701.00N/0873238.40W	1360	1000	3	6A	1000					2400
2.TERRAIN	342701.00N/0873238.40W	1160 (1200)								AS1500	2700

COMPUTATIONS

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

INITIAL

<u>FROM</u> FOGUM	<u>TO</u> DALEC
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<u>RNP</u>	<u>DISTANCE</u> 10.12	<u>PAT</u>	<u>MAP</u>	<u>HAT</u>	<u>HMAS</u>
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<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>
3.AAO	341442.00N/0874327.00W	1165	164	98	4E	1000				AT535	2700
4.TERRAIN	341442.00N/0874327.00W	965 (1000)								AS1500	2500

COMPUTATIONS

<u>ALT</u>	<u>KIAS</u>	<u>KTAS</u>	<u>HAA</u>	<u>VKTW</u>	<u>TR</u>	<u>BA</u>	<u>DTA</u>	<u>COURSE CHANGE</u>	<u>DVEB</u>	<u>VEB OCS</u>	<u>RF CENTER FIX/DISTANCE</u>
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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											
11.TREE	342721.41N/0874100.00W	1.30	942	1139	50	20	2C	300		SI	1660
CATEGORY B											
12.TREE	342448.64N/0874233.32W	1.50	942	1159	50	10	2B	300		SI	1660
CATEGORY C											
12.TREE	342448.64N/0874233.32W	1.70	942	1159	50	20	2C	300		SI	1660
CATEGORY D											
12.TREE	342448.64N/0874233.32W	2.30	942	1159	50	20	2C	300		SI	1660

CIRCLING REMARKS:

MSA

CENTER	RADIUS
KENCE	25

SECTOR	OBSTRUCTION	COORDINATES	BEARING	DISTANCE	ELEV MSL	HORZ	VERT	AC	ROC	OCS	ADJUSTMENTS	MIN ALT
360-360	TWR (01-002840)	343741.23N/0874432.41W	356	11.9	1696	500	50	5D	1000			2700

MSA REMARKS:

NOTES/EXPLANATIONS FROM PROCEDURE SEGMENTS:

FINAL OBSTACLE (01-1663) IS 3,439.59 INTO THE SECONDARY.



PART B: SUPPLEMENTAL DATA

COMMUNICATIONS WITH
ZME ARTCC

<u>WX SERVICE</u> ASOS	<u>LOCATION</u> KMSL	<u>HRS OPERATION</u> 24	<u>ALTIMETER SOURCE</u> KMSL	<u>DISTANCE</u> 18.71	<u>SERVICE-A</u> Y	<u>ADJUSTMENTS</u> 68
<u>BACK-UP WX SERVICE</u> ASOS	<u>LOCATION</u> KDCU	<u>HRS OPERATION</u> 24	<u>ALTIMETER SOURCE</u> KDCU	<u>DISTANCE</u> 39.986	<u>SERVICE-A</u> Y	<u>ADJUSTMENTS</u> 111

WX REMARKS:
RASS PRESSURE PATTERNS THE SAME
KM77 723, KMSL 550
RA = 67.12

<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>
RW02 - MIRL (PCL), REIL (PCL), PAPI-4L (PCL)		NPI-G	
RW20 - MIRL (PCL), REIL (PCL), PAPI-4L (PCL)		NPI-G	

<u>GLIDESLOPE ANGLE</u>	<u>ELEV RWY THRESHOLD</u>	<u>TCH</u>	<u>ELEV GS ANTENNA</u>	<u>DISTANCE FROM RWY</u>	<u>VGSI ANGLE</u>	<u>TCH</u>
					3.00	39.8

<u>FINAL APPROACH COURSE AIMING</u>			
RUNWAY THRESHOLD	<input type="checkbox"/>	2977 FT FROM THRESHOLD	DISPLACED THRESHOLD DISTANCE
ON CENTERLINE	<input checked="" type="checkbox"/>	FT FROM CENTERLINE	

CRITICAL TEMPERATURES

<u>CRITICAL LOW</u>	<u>CRITICAL HIGH</u>	<u>ACT</u>	<u>APT ISA</u>
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CRITICAL TEMPERATURE REMARKS:

"VISUAL PORTION OF FINAL" PENETRATIONS

Final Type	CIRCLING RWY 20		
20:1			
749 TREE (01-036243) 342714.94N/0874226.27W (22.64)		796 TREE (01-034831) 342718.62N/0874226.59W (7.15)	
Final Type	LNAV		
34:1			

QUALITY

30

Q



<u>AIRPORT</u>		<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>
BILL PUGH FIELD		M22	RNAV (GPS) RWY 2	ORIG-C	RUSSELLVILLE	AL	718	RNAV
1350 TOWER (01-001663) 342351.42N/0874411.66W (199.84)					1106 TREE (01-034771) 342438.82N/0874238.95W (154.91)			
1039 TREE (01-034884) 342503.08N/0874303.77W (140.12)					1107 TREE (01-034886) 342437.85N/0874258.93W (139.41)			
1102 TREE (01-035415) 342435.38N/0874257.95W (128.03)					1110 TREE (01-034890) 342429.04N/0874253.82W (120.76)			
1102 TREE (01-036258) 342431.62N/0874255.28W (119.13)					1097 TREE (01-035416) 342434.02N/0874302.48W (116.03)			
1097 TREE (01-036946) 342433.09N/0874259.91W (115.14)					1109 TREE (01-045501) 342430.05N/0874305.94W (114.32)			
1113 TREE (01-037614) 342427.21N/0874304.64W (111.1)					1111 TREE (01-036088) 342424.04N/0874249.15W (110.7)			
1114 TREE (01-036089) 342427.46N/0874308.98W (109.83)					1086 TREE (01-036256) 342437.20N/0874310.02W (108.93)			
1045 TREE (01-036101) 342451.53N/0874313.21W (106.65)					1097 TREE (01-045401) 342425.89N/0874246.20W (104.01)			
1094 TREE (01-034891) 342425.86N/0874244.92W (101.8)					1092 TREE (01-036949) 342425.93N/0874244.29W (100.44)			
1071 POLE (01-045496) 342436.12N/0874258.01W (99.1)					1064 POLE (01-034887) 342437.51N/0874259.19W (95.26)			
1098 TREE (01-035685) 342421.69N/0874244.75W (94.01)					1065 POLE (01-037570) 342436.15N/0874259.45W (92.19)			
1045 TREE (01-035707) 342448.52N/0874323.36W (91.08)					1047 VEHICLES ON ROAD (01-035417) 342443.75N/0874307.36W (90.46)			
1059 TREE (01-036102) 342441.35N/0874318.11W (88.22)					1066 POLE (01-036257) 342434.02N/0874259.84W (86.84)			
1076 POLE (01-045497) 342430.07N/0874258.26W (86.65)					1095 TREE (01-036940) 342418.07N/0874245.15W (80.4)			
1053 TREE (01-037202) 342440.84N/0874319.92W (79.52)					1052 POLE (01-037620) 342437.78N/0874307.23W (78.5)			
967 POLE (01-036944) 342504.74N/0874302.59W (73.67)					1042 POLE (01-036099) 342437.20N/0874303.30W (69.55)			
1142 TREE (01-035706) 342358.74N/0874249.30W (69.36)					1069 POLE (01-037775) 342426.11N/0874257.47W (68.89)			
1050 VEHICLES ON ROAD (01-036570) 342433.13N/0874259.69W (68.41)					1099 TREE (01-045498) 342415.06N/0874301.05W (64.88)			
1117 TREE (01-034783) 342405.35N/0874247.86W (64.22)					946 POLE (01-037345) 342508.88N/0874303.51W (63.86)			
1116 TREE (01-037516) 342411.82N/0874313.94W (63.76)					1114 TREE (01-035705) 342411.61N/0874310.74W (63.36)			
1072 POLE (01-036568) 342422.19N/0874256.69W (61.23)					913 TREE (01-034811) 342519.93N/0874305.90W (60.77)			
1102 TREE (01-034781) 342413.29N/0874304.57W (60.4)					1132 TREE (01-037788) 342358.79N/0874258.60W (53.1)			
1131 TREE (01-037517) 342400.59N/0874305.59W (52.44)					909 TREE (01-034812) 342518.91N/0874309.35W (51.49)			
1077 POLE (01-036941) 342414.83N/0874255.33W (46.15)					917 POLE (01-037326) 342513.03N/0874305.11W (45.61)			
1065 POLE (01-037615) 342418.69N/0874256.05W (44.68)					793 TREE (01-037779) 342550.77N/0874249.68W (39.98)			
895 TREE (01-045595) 342518.92N/0874311.35W (36.14)					1142 TREE (01-035397) 342345.93N/0874249.32W (32.77)			
896 POLE (01-036075) 342516.27N/0874307.24W (32.4)					874 TREE (01-034808) 342524.52N/0874309.85W (32.16)			
1091 POLE (01-037191) 342403.01N/0874252.83W (28.12)					1085 POLE (01-034785) 342404.39N/0874249.94W (28.05)			
1075 POLE (01-035704) 342408.35N/0874253.35W (27.01)					1066 POLE (01-037515) 342411.34N/0874254.23W (25.94)			
1081 POLE (01-034784) 342405.65N/0874252.57W (25.84)					1092 POLE (01-045402) 342359.64N/0874250.18W (21.32)			



1072 POLE (01-036250) 342405.98N/0874247.84W (21.03)	872 POLE (01-037325) 342519.46N/0874308.82W (16.42)
1089 POLE (01-037787) 342359.69N/0874253.20W (16.39)	1086 ANTENNA (01-045597) 342405.06N/0874314.25W (14.25)
1140 TREE (01-037782) 342344.84N/0874309.58W (13.72)	865 BUILDING (01-036259) 342519.24N/0874309.55W (8.29)
1090 POLE (01-037192) 342357.62N/0874258.44W (7.87)	

HELICOPTER 'VISUAL PORTION OF FINAL' PENETRATIONS

and/or

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

PART C: GENERAL REMARKS:

VDP NOT ESTABLISHED - ALTIMETER ADJUSTMENT/UNLIT 20:1 PENETRATORS.

PRECIPITOUS TERRAIN EVALUATION COMPLETED.

FLIGHT INSPECTION RESULTS DO NOT WARRANT A VDA COMPUTED PROCEDURE VDA/TCH 3.00/40, REMOVED PER FLIGHT INSPECTION.

LNAV/VNAV AND LPV NOT DEVELOPED BECAUSE OF PREVIOUS AMENDMENT HAD NO SURVEY.

PROCEDURE NA AT NIGHT BECAUSE PREVIOUS AMENDMENT HAD NO SURVEY.

100' TREE HEIGHTS USED PER EASTERN FPT.

PFAF NOT ESTABLISHED FINAL COURSE OFFSET 15 DEGREES.

PDF EDITS:

REMOVED "ORDER 8260.3, VOLUME 1, CHAPTER 2, NEW CIRCLING CRITERIA APPLIED." FROM PART C: GENERAL REMARKS.

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	4.27
WIDTH OF	FINAL	SEGMENT AT 1000FT POINT	1.93
TRUE COURSE OF	FINAL	SEGMENT CONTAINING 1000FT POINT	001.21
HIGH TERRAIN IN	FINAL	SEGMENT CONTAINING 1000FT POINT	1059
DISTANCE FROM	THLD	TO 1500FT POINT	10.86
WIDTH OF	INTERMEDIATE	SEGMENT AT 1500FT POINT	11.06
TRUE COURSE OF	INTERMEDIATE	SEGMENT CONTAINING 1500FT POINT	001.21
HIGH TERRAIN IN	INTERMEDIATE	SEGMENT CONTAINING 1500FT POINT	1047

THRESHOLD
COORDINATES
(IF STR-IN)

342616.14N/0874251.03W

ARP COORDINATES

342642.30N/0874241.90W

RUNWAY APCH END
AND DIST FURTHEST
FROM ARP

RUNWAY 2 DISTANCE 0.47 NM

FAF
COORDINATES

342119.65N/0874307.84W

FIX NAME
COORDINATES

REMARKS

NO ADDITIONAL AIRSPACE REQUIRED.



