

**FEDERAL AVIATION ADMINISTRATION**  
**FLIGHT STANDARDS SERVICE**  
**RNAV (RNP) 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>	<u>AIRPORT ID</u>	<u>PROCEDURE NAME</u>	<u>ORIGINAL/AMENDMENT</u>	<u>CITY</u>	<u>STATE</u>	
LOUISVILLE MUHAMMAD ALI INTL	KSDF	RNAV (RNP) Z RWY 17L	ORIG-F	LOUISVILLE	KY	
<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SUPERSEDED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>
501	499	RNAV (RNP) Z RWY 17L	ORIG-E	01/03/2019	5W	2020
<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**

<b><u>FROM</u></b>	<b><u>FIX TYPE</u></b>	<b><u>TO</u></b>	<b><u>FIX TYPE</u></b>	<b><u>LEG TYPE</u></b>	<b><u>FO/FB</u></b>	<b><u>RNP</u></b>	<b><u>COURSE</u></b>	<b><u>DISTANCE</u></b>	<b><u>ALTITUDE</u></b>
THUND	IF	RACRR		TF	FB	0.50	169.86	3.53	4000
RACRR		SLGRR	PFAF	TF	FB	0.50	169.87	5.77	2500
KAEDN	IF	STYKR		TF	FB	1.00	349.34	3.01	5000
STYKR		JUMIP		RF	FB	1.00	(2.80 NM RADIUS CCW (CFBFD))	4.32	3600
CHUWE	IF	JUMIP		TF	FB	1.00	261.06	6.00	3600
JUMIP		SLGRR	PFAF	RF	FB	1.00	(2.25 NM RADIUS CCW (CFBFF))	3.57	2500
ALANB	IF	CIKCA		TF	FB	1.00	080.34	4.00	3600
COBLR	IF	YUNDV		TF	FB	1.00	350.52	3.01	4000
YUNDV		CIKCA		RF	FB	1.00	(2.78 NM RADIUS CW (CFBCB))	4.36	3600
CIKCA		WOTED		TF	FB	1.00	080.39	0.56	3500
WOTED		SLGRR	PFAF	RF	FB	1.00	(2.44 NM RADIUS CW (CFBCJ))	3.80	2500
SLGRR	PFAF	RW17L	MAP	TF	FO	0.30	169.89	6.11	
RW17L	MAP	1000 MSL		CA			169.89		1000
1000 MSL		IIU VORTAC		DF	FO	1.00			3000



MISSED APPROACH

MAP:

RNP: DA

MISSED APPROACH INSTRUCTIONS:

CLIMB TO 1000 THEN CLIMBING LEFT TURN TO 3000 DIRECT IIU VORTAC 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 SLGRR								
3. FAC:	169.89	PFAF: SLGRR	DIST PFAF TO MAP:		DIST PFAF TO THLD:				
4. MIN ALT:	SLGRR 2500								
5. DIST TO THLD FROM OM:	6.11	MM:	IM:	150 HAT:	437 HAT:	1.20	GS ANT:		
6. MIN GP INCPT:	2500	GP ALT AT PFAF : SLGRR 2500			OM:		MM:		IM:
7. GP ANGLE:	3.00	34:1:	IS CLEAR	20:1:	IS CLEAR	TCH:	55.2		
8. MSA FROM:	RW17L 3600								

PBN REQUIREMENTS NOTE:

RNP AR APCH.

NOTES:

CHART NOTE: FOR UNCOMPENSATED BARO-VNAV SYSTEMS, PROCEDURE NA BELOW -14°C OR ABOVE 54°C.  
CHART PROFILE NOTE: VGSI AND RNAV GLIDEPATH NOT COINCIDENT (VGSI ANGLE {ANGLE}/TCH {FEET}).  
CHART PLANVIEW NOTE ADJACENT TO KAEDN: RF REQUIRED.  
CHART PLANVIEW NOTE ADJACENT TO CHUWE: RF REQUIRED.  
CHART PLANVIEW NOTE ADJACENT TO ALANB: RF REQUIRED.  
CHART PLANVIEW NOTE ADJACENT TO COBLR: RF REQUIRED.  
CHART PLANVIEW NOTE AT THUND: (RNP 0.50).  
CHART NOTE: FOR INOPERATIVE ALS, INCREASE RNP 0.30 ALL CATS VISIBILITY TO 1 3/8 SM.  
CHART PLANVIEW NOTE AT YUNDV: MAX 220 KIAS.  
CHART PLANVIEW NOTE AT STYKR: MAX 220 KIAS.  
CHART PLANVIEW NOTE AT WOTED: MAX 210 KIAS  
CHART PLANVIEW NOTE AT JUMIP: MAX 200 KIAS.  
CHART PROFILE NOTE: SEE PLANVIEW FOR MULTIPLE IF LOCATIONS.  
CHART NOTE: SIMULTANEOUS APPROACH AUTHORIZED, EXCEPT FOR ARRIVALS AT CHUWE, KAEDN, ALANB, AND COBLR.

ADDITIONAL FLIGHT DATA:

CHART MINIMUM 5000 AT THUND.  
CHART MANDATORY 5000 AT STYKR.  
CHART MINIMUM 5000 AT KAEDN.  
CHART MANDATORY 5000 AT CHUWE.  
CHART MINIMUM 4000 AT ALANB.  
CHART MINIMUM 4000 AT COBLR.  
CHART FAS OBST: 610 VERTICAL\_STRUCTURE 381141N/0854440W.  
HOLD SE, RT, 300.00 INBOUND



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
AUTHORIZATION REQUIRED															
RNP 0.30 DA	936	5000	437	936	5000	437	936	5000	437	936	5000	437			

- CHANGES - REASONS
1. UPDATED PROCEDURE NAME FROM LOUISVILLE INTL-STANDIFORD FIELD TO LOUISVILLE MUHAMMAD ALI INTL - UPDATED DATA BASE WITH AIRPORT NAME CHANGE.
2. UPDATED DISTANCE FROM A 435 HAT: 1.19 TO 437 HAT: 1.20 - NEW AND OR UPDATED AIRNAV DATA.
3. DELETED CHART PLANVIEW NOTES: ADJACENT TO ALANB AND CHUWE: RADAR REQUIRED AND USE OF FD OR AP REQUIRED DURING SIMULTANEOUS OPERATIONS - REFERENCE REVISED CRITERIA.
4. ADDITIONAL FLIGHT DATA: REMOVED #TCH 554.2 MSL (DO NOT CHART); ROUTE TYPE: A, H; ROUTE TYPE QUALIFIER 1: F; ROUTE TYPE QUALIFIER 2: S - NO LONGER REQUIRED PER 8260.19H.

COORDINATED WITH:

A4A ☒ ALPA ☒ AOPA ☒ APA ☒ HAI ☐ NBAA ☒ OTHER: ZID, SDF APP CON, SDF ATCT, AMGR.

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

DEVELOPED BY  
SYLVAN DRAKES

Digitally signed by  
SYLVAN DRAKES  
Jun 03, 2019

APPROVED BY  
LONNIE EVERHART

Digitally signed by  
WARDELL HENNING  
Jul 02, 2019

OFFICE  
WARDELL HENNING

Digitally signed by  
Jul 02, 2019

OFFICE  
AJV-A433

DATE  
03/21/2019

OFFICE  
AJV-A430

DATE

TITLE  
MANAGER



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

AIRPORT	AIRPORT ID	PROCEDURE NAME	AMDT NO.	CITY	STATE	AIRPORT ELEVATION	FACILITY
LOUISVILLE MUHAMMAD ALI INTL	KSDF	RNAV (RNP) Z RWY 17L	ORIG-F	LOUISVILLE	KY	501	RNAV

PART A: OBSTRUCTION DATA SEGMENTS

INTERMEDIATE

FROM THUND TO RACRR

RNP 0.50 DISTANCE 3.53 PAT MAP HAT HMAS

OBSTRUCTION	COORDINATES	ELEV MSL	HORZ	VERT	AC	ROC	OCS	CG	CGTA	ADJUSTMENTS	MIN ALT
1.TOWER (18-001107)	382518.00N/0854942.00W	1292	20	3	5D	500				AC50 AT2158	4000
2.TERRAIN	382524.00N/0854930.00W	1008 (1000)								AS1500	2500

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

SEGMENT REMARKS:

INTERMEDIATE: STEPDOWN

FROM RACRR TO SLGRR

RNP 0.50 DISTANCE 5.77 PAT MAP HAT HMAS

OBSTRUCTION	COORDINATES	ELEV MSL	HORZ	VERT	AC	ROC	OCS	CG	CGTA	ADJUSTMENTS	MIN ALT
3.AAO	382239.00N/0854900.00W	1155	164	98	4E	500				AC98 VEB174 DG573	2500
4.TERRAIN	382227.00N/0854854.00W	670 (700)								AS1500	2200

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

SEGMENT REMARKS:



INTERMEDIATE

FROM

KAEDN

TO

STYKR

<u>RNP</u>	<u>DISTANCE</u>	<u>PAT</u>	<u>MAP</u>	<u>HAT</u>			<u>HMAS</u>					
1.00	3.01											
<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>
5.AAO	381718.00N/0853706.00W		821	164	98	4E	500				AT3581 AC98	5000
6.TERRAIN	381733.00N/0853712.00W		621 (600)								AS1500	2100

<u>COMPUTATIONS</u>	<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:

INTERMEDIATE: STEPDOWN

FROM

STYKR

TO

JUMIP

<u>RNP</u>	<u>DISTANCE</u>	<u>PAT</u>	<u>MAP</u>	<u>HAT</u>				<u>HMAS</u>				
1.00	4.32											
<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>
5.AAO	381718.00N/0853706.00W		821	164	98	4E	500				AC98 AT2181	3600
7.TERRAIN	381830.00N/0853718.00W		614 (600)								AS1500	2100

<u>COMPUTATIONS</u>	<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:



INTERMEDIATE

FROM  
CHUWE

TO  
JUMIP

<u>RNP</u>	<u>DISTANCE</u>	<u>PAT</u>	<u>MAP</u>	<u>HAT</u>			<u>HMAS</u>					
1.00	6.00											
<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>
8.AAO		381936.00N/0853439.00W	857	164	98	4E	500				AC98 AT2145	3600
9.TERRAIN		381927.00N/0853703.00W	621 (600)								AS1500	2100

<u>COMPUTATIONS</u>												
<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>	

SEGMENT REMARKS:

INTERMEDIATE: STEPDOWN

FROM  
JUMIP

TO  
SLGRR

<u>RNP</u>	<u>DISTANCE</u>	<u>PAT</u>	<u>MAP</u>	<u>HAT</u>			<u>HMAS</u>					
1.00	3.57											
<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>
10.AAO		382042.00N/0854227.00W	732	164	98	4E	500				AC98 DG1170	2500
11.TERRAIN		381921.00N/0854339.00W	525 (500)								AS1500	2000

<u>COMPUTATIONS</u>												
<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>	

SEGMENT REMARKS:



**FACILITY**  
RNAV

TO  
CIKCA

HMAS

[illegible]

## COMPUTATIONS

RF CENTER FIX/DISTANCE

**INTERMEDIATE**

TO  
YUNDRV

**HMAS**

[illegible]

## COMPUTATIONS

RF CENTER FIX/DISTANCE

QUALITY  
10  
CHECKED

**FACILITY**  
RNAV



INTERMEDIATE: STEPDOWN

FROM

WOTED

TO

SLGRR

<u>RNP</u>	<u>DISTANCE</u>	<u>PAT</u>	<u>MAP</u>	<u>HAT</u>			<u>HMAS</u>					
1.00	3.80											
<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>
12.TOWER (18-000597)		382010.00N/0855140.00W	1289	100	50	3D	500				DG661 AC50	2500
16.TERRAIN		382048.00N/0855003.00W	634 (600)								AS1500	2100

<u>COMPUTATIONS</u>												
<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>	

SEGMENT REMARKS:

FINAL

FROM

SLGRR

TO

RW17L

<u>RNP</u>	<u>DISTANCE</u>	<u>PAT</u>	<u>MAP</u>	<u>HAT</u>			<u>HMAS</u>					
0.30	6.11		RW17L	437								
<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>
17.VERTICAL_STRUCTURE (21-056061)		381141.02N/0854439.84W	610	250	50	4D		21.49:1			AC50	936

<u>COMPUTATIONS</u>												
<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>	

SEGMENT REMARKS:



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AIRPORT	AIRPORT ID	PROCEDURE NAME	AMDT NO.	CITY	STATE	AIRPORT ELEVATION	FACILITY
LOUISVILLE MUHAMMAD ALI INTL	KSDF	RNAV (RNP) Z RWY 17L	ORIG-F	LOUISVILLE	KY	501	RNAV
& ACTUAL RADIUS USED 16873.00 FT % ACTUAL RADIUS USED 14806.70 FT  DEGREES TURN: STYKR - JUMIP: 88.34 JUMIP - SLGGR: 91.102 YUNDV - CIKCA: 89.88 WOTED - SLGGR: 89.49  SPEED RESTRICTIONS: AT YUNDV: MAX 220 KIAS AT STYKR: MAX 220 KIAS AT JUMIP: MAX 200 KIAS AT WOTED: MAX 210 KIAS  THUND AND RACRR INTERMEDIATES USING 0.50 RNP TO ALLEVIATE VEB ROC CAUSING A 2700 FT PFAF ALTITUDE WITH RNP 1.00  RADAR VECTORS TO ALANB AND CHUWE LIMITED TO 30 DEGREES EITHER SIDE OF COURSE.  SIMULTANEOUS OPERATIONS DIRECTED BY ATO, AJW-372, IAW 8260.19E.  TARGETS USED TO EVALUATE MINOR AMDT USING THE FOLLOWING PARAMETERS: RNP 0.30 FINAL SEGMENT TERRAIN OFF, GQS TERRAIN OFF, MISSED APPROACH SECTION 1 A/B TERRAIN OFF.							







<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>
LOUISVILLE MUHAMMAD ALI INTL	KSDF	RNAV (RNP) Z RWY 17L	ORIG-F	LOUISVILLE	KY	501	RNAV

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	2.98
WIDTH OF	FINAL	SEGMENT AT 1000FT POINT	1.20
TRUE COURSE OF	FINAL	SEGMENT CONTAINING 1000FT POINT	164.89
HIGH TERRAIN IN	FINAL	SEGMENT CONTAINING 1000FT POINT	519
DISTANCE FROM	THLD	TO 1500FT POINT	4.55
WIDTH OF	FINAL	SEGMENT AT 1500FT POINT	1.20
TRUE COURSE OF	FINAL	SEGMENT CONTAINING 1500FT POINT	164.89
HIGH TERRAIN IN	FINAL	SEGMENT CONTAINING 1500FT POINT	519

THRESHOLD  
COORDINATES  
(IF STR-IN)

381111.14N/0854351.76W

ARP COORDINATES

381026.71N/0854411.40W

RUNWAY APCH END  
AND DIST FURTHEST  
FROM ARP

RUNWAY 35L DISTANCE 1.12 NM

FAF  
COORDINATES

381705.39N/0854552.95W

FIX NAME  
COORDINATES

REMARKS

NO ADDITIONAL AIRSPACE REQUIRED.  
THLD DISPLACED 328FT, ACTUAL COORDINATES: 381114.28N/0854352.83W.

QUALITY  
10  
CHECKED

FAA Form 8260-9 / (11/16) Supersedes Previous Edition

Electronic Version

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**FACILITY**  
RNAV

<u>NAME</u>	<u>OFFICE</u>	<u>DATE</u>	<u>TITLE</u>
SYLVAN DRAKES	AJV-A433	03/21/2019	AERONAUTICAL INFORMATION SPECIALIST