

<b>RNAV - STANDARD</b> <b>US DEPARTMENT OF TRANSPORTATION</b> <b>FEDERAL AVIATION ADMINISTRATION</b>							<b>INSTRUMENT APPROACH PROCEDURE</b> <b>TITLE 14 CFR PART 97.33</b>										Bearings, headings, courses, 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 in feet RVR.									
TERMINAL ROUTES																	MISSED APPROACH									
FROM				TO				COURSE AND DISTANCE				ALTITUDE		LPV: DA LNAV/VNAV: DA LNAV: RW34  CLIMB TO 2500 DIRECT IFFIG AND HOLD.  ADDITIONAL FLIGHT DATA: HOLD NW, LT, 157.37 INBOUND. CHART FAS OBST: 270 TOWER 372842N/0771817W. DISTANCE TO THLD FROM 200 HAT: 0.46 NM. WAAS CHANNEL # 97520 REFERENCE PATH ID: W34A CHART CIRCLING ICON. LTP HAE: 15.6 M												
FAK VORTAC				IGANE (TF) (FB) (RNP 2.00)				133.69 / 31.07				3000														
HPW VORTAC (IAF)				HAGLI (TF) (FB) (RNP 1.00)				296.48 / 3.54				2500														
IGANE (IAF)				HAGLI (TF) (FB) (RNP 1.00)				047.48 / 8.00				2500														
HAGLI (IF)				JOMUS (TF) (FB) (RNP 1.00)				337.54 / 6.01				1700														
JOMUS (FAF)				YUTUP/1.40 NM TO RW34 (TF) (FB) (RNP 0.30)				337.50 / 3.26																		
(SEE FORM 8260-10)																										
1. PT _____ SIDE OF COURSE _____ OUTBOUND _____ FT WITHIN _____ MILES OF _____ (IAF) 2. PROFILE STARTS AT HAGLI 3. FAC: 337.50 FAF: JOMUS DIST FAF TO MAP: 4.66 THLD: 4.66 4. MIN. ALT: HAGLI 2500, JOMUS 1700, YUTUP/1.40 NM TO RW34 660* 5. DIST TO THLD FROM OM: _____ MM: _____ IM: _____ 150 HAT: _____ 100 HAT: _____ GS ANT: _____ 6. MIN GS INCPT: 1700 GS ALT AT: JOMUS 1700 OM: _____ MM: _____ IM: _____ 7. GS ANGLE: 3.00 TCH: 54.4 20:1 IS CLEAR 34:1 IS CLEAR 8. MSA FROM: RW34 2600																	MAG VAR: 10W EPOCH YEAR: 2020									
MINIMUMS																										
TAKEOFF: SEE FAA FORM 8260-15A FOR THIS AIRPORT							ALTERNATE: N A			STANDARD																
CATEGORY ==>		A			B			C			D			E												
	DH/MDA	VIS	HAT/HAA	DH/MDA	VIS	HAT/HAA	DH/MDA	VIS	HAT/HAA	DH/MDA	VIS	HAT/HAA	DH/MDA	VIS	HAT/HAA											
LPV DA	361	1800	200	361	1800	200	361	1800	200	361	1800	200														
LNAV/VNAV DA	530	3700	369	530	3700	369	530	3700	369	530	3700	369														
LNAV MDA	520	2400	359	520	2400	359	520	3000	359	520	3000	359														
CIRCLING	660	1	492	660	1	492	700	1 1/2	532	720	2	552														
NOTES: CHART NOTE: FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW -11C (13F) OR ABOVE 54C (130F). PBN REQUIREMENTS NOTE: RNP APCH *LNAV ONLY CHART NOTE: FOR INOPERATIVE ALS, INCREASE LNAV/VNAV ALL CATS VISIBILITY TO 1 1/4 SM AND LNAV CATS C (CONTINUED ON PAGE 2)																										
CITY AND STATE				ELEVATION: 168 TDZE: 161				FACILITY IDENTIFIER:				PROCEDURE NO./AMDT NO./EFFECTIVE DATE:				SUP:										
RICHMOND, VA				AIRPORT NAME:				RNAV				RNAV (GPS) Z RWY 34, AMDT 1D				AMDT: 1C										
				RICHMOND INTL												DATED 08/17/2017										

ALL AFFECTED PROCEDURES REVIEWED? <div><input type="checkbox"/> YES</div> <div><input type="checkbox"/> NO</div>		COORDINATES OF FACILITIES		REQUIRED EFFECTIVE DATE	
ROUTINE					
COORDINATED WITH:					
ATA <div><input checked="" type="checkbox"/></div>		AAT <div><input type="checkbox"/></div>		ALPA <div><input checked="" type="checkbox"/></div>	
APA <div><input checked="" type="checkbox"/></div>		AOPA <div><input checked="" type="checkbox"/></div>		NBAA <div><input checked="" type="checkbox"/></div>	
OTHER (specify)		<div><input checked="" type="checkbox"/> ZDC, RIC APP CON, RIC ATCT, AMGR</div>			
FLIGHT CHECKED BY					
NAME:				FIFO	DATE:
Digitally signed by DEVELOPED BY					
NAME: MIKE MELSSEN MIKE MELSSEN Nov 15, 2017				FIFO AJV-5412	DATE: 11/09/2017
APPROVED BY					
NAME: GEORGE E. DAVIS MANAGER				FIFO AJV-5410	DATE:
CHANGES:					
<div>1. ADDED 1 DEGREE TO ALL MAGNETIC COURSES.</div> <div>2. ADDED 20:1 IS CLEAR TO LINE 7.</div> <div>3. CHANGED FROM: "CHART NOTE: FOR INOPERATIVE ALSF, INCREASE LNAV/VNAV ALL CATS VISIBILITY TO 1 1/4 MILE AND LNAV CATS C AND D VISIBILITY TO RVR 5500" TO: "CHART NOTE: FOR INOPERATIVE ALS, INCREASE LNAV/VNAV ALL CATS VISIBILITY TO 1 1/4 SM AND LNAV CATS C AND D VISIBILITY TO RVR 5500".</div> <div>4. CIRCLING CAT A/B HAA CHANGED FROM 493 TO 492.</div> <div>5. CRC REMAINDER CHANGED FROM D7747877 TO 185C74F9.</div> <div>6. CHANGED FROM "DISTANCE TO THLD FROM 200 HATH: 0.46 NM" TO "DISTANCE TO THLD FROM 200 HAT: 0.46 NM".</div>					
PDF EDIT:					
<div>1. LNAV/VNAV VISIBILITY RVR CHANGE FROM 4000 TO 3700.</div>					
REASONS:					
<div>1. KRIC MAG VAR CHANGED FROM 9W/1985 TO 10W/2020.</div> <div>2. IAW 8260.19H PARA 8-6-7G(3) WHICH SAYS TO STATE WHETHER OR NOT THE 20:1 OBSTACLE ASSESSMENT SURFACES ARE CLEAR.</div> <div>3. IAW 8260.19H PARA 8-6-11O(3), USE OF "ALS" VICE "ALSF"; USE OF "SM" VICE "MILES".</div> <div>4. AIRPORT ELEVATION CHANGED FROM 167 TO 168.</div> <div>5. LTP LAT/LONGITUDE CHANGE FROM 372944.8560N/0771824.7870W TO 372944.8530N/0771824.7845W.</div> <div>6. PROCEDURE PREVIOUSLY UPDATED FROM THRE TO THLD; USE OF HAT VICE HATH.</div>					



US DEPARTMENT OF TRANSPORTATION - FEDERAL AVIATION ADMINISTRATION  
**RNAV - STANDARD**  
**INSTRUMENT APPROACH PROCEDURE - TITLE 14 CFR PART 97.33**

Bearings, headings, courses, 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 in feet RVR.

TERMINAL ROUTES, (CONT.):

FROM	TO	COURSE AND DISTANCE	ALTITUDE
YUTUP/1.40 NM TO RW34	RW34 (MAP) (TF) (FO) (RNP 0.30)	337.50 / 1.40	
RW34 (MAP)	361 MSL (CA)	337.50	
361 MSL	IFPIG (DF) (FO) (RNP 1.00)		2500

NOTES, (CONT.):

AND D VISIBILITY TO RVR 5500.

CHART PLANVIEW NOTE: PROCEDURE NA FOR ARRIVAL ON FAK VORTAC AIRWAY RADIALS 100 CW 220.

CHART PLANVIEW NOTE: PROCEDURE NA FOR ARRIVAL ON HPW VORTAC AIRWAY RADIALS 205 CW 323.

QUALITY  
25  
CHECKED

CITY AND STATE

RICHMOND, VA

ELEVATION: 168

TDZE: 161

AIRPORT NAME:

RICHMOND INTL

FACILITY  
IDENTIFIER:  
**RNAV**

PROCEDURE NO./AMDT NO./EFFECTIVE DATE:

**RNAV (GPS) Z RWY 34, AMDT 1D**

SUP:

AMDT: **1C**

DATED: **08/17/2017**

ALL AFFECTED PROCEDURES REVIEWED? <div><input type="checkbox"/> YES</div> <div><input type="checkbox"/> NO</div>		COORDINATES OF FACILITIES		REQUIRED EFFECTIVE DATE	
COORDINATED WITH:					
ATA <div><input type="checkbox"/></div>		AAT <div><input type="checkbox"/></div>	ALPA <div><input type="checkbox"/></div>	APA <div><input type="checkbox"/></div>	AOPA <div><input type="checkbox"/></div>
NBAA <div><input type="checkbox"/></div>		OTHER (specify) <div><input type="checkbox"/></div>			
FLIGHT CHECKED BY					
NAME:				FIFO	DATE:
DEVELOPED BY					
NAME:				FIFO	DATE:
APPROVED BY					
NAME:				FIFO	DATE:
CHANGES:					
REASONS:					

**RNAV STANDARD INSTRUMENT APPROACH PROCEDURE  
FLIGHT STANDARDS SERVICE - FAR PART 97.33**

Bearings, headings, courses, 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 in feet RVR.

**FAS DATA BLOCK INFORMATION**

<u>DATA FIELD</u>	<u>DATA</u>
OPERATION TYPE	0
SBAS SERVICE PROVIDER IDENTIFIER	0
AIRPORT IDENTIFIER	KRIC
RUNWAY	RW34
APPROACH PERFORMANCE DESIGNATOR	0
ROUTE INDICATOR	Z
REFERENCE PATH DATA SELECTOR	0
REFERENCE PATH IDENTIFIER (APPROACH ID)	W34A
LTP/FTP LATITUDE	372944.8530N
LTP/FTP LONGITUDE	0771824.7845W
LTP/FTP ELLIPSOIDAL HEIGHT	+00156
FPAP LATITUDE	373100.0630N
FPAP LONGITUDE	0771925.0095W
THRESHOLD CROSSING HEIGHT (TCH)	00054.4
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)	35.0
 <u>CRC REMAINDER</u>	 185C74F9

**ADDITIONAL PATH POINT RECORD INFORMATION**

ICAO CODE	K6
LTP ORTHOMETRIC HEIGHT	+00489
FPAP ORTHOMETRIC HEIGHT	+00489

QUALITY  
25  
CHECKED

CITY AND STATE  RICHMOND, VA	ELEVATION: 168 AIRPORT NAME:  RICHMOND INTL	TDZE: 161  RICHMOND INTL	FACILITY IDENTIFIER:  RNAV	PROCEDURE NO./AMDT NO./EFFECTIVE DATE:  RNAV (GPS) Z RWY 34, AMDT 1D	SUP:
					AMDT: 1C
					DATED: 08/17/2017

ALL AFFECTED PROCEDURES REVIEWED?		COORDINATES OF FACILITIES		REQUIRED EFFECTIVE DATE	
<input type="checkbox"/> YES <input type="checkbox"/> NO					
COORDINATED WITH:					
ATA	AAT	ALPA	APA	AOPA	NBAA      OTHER (specify)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> _____
FLIGHT CHECKED BY					
NAME:				FIFO	DATE:
DEVELOPED BY					
NAME:				FIFO	DATE:
APPROVED BY					
NAME:				FIFO	DATE:
CHANGES:					
REASONS:					

## STANDARD INSTRUMENT APPROACH PROCEDURE DATA RECORD

## PART - A OBSTRUCTION DATA

1. APP SEGMENT	FROM	TO	OBSTRUCTION	COORDINATES	ELEV. MSL	ROC	ALT. ADJUSTMENTS	MIN. ALT.			
FEEDER	FAK VORTAC	IGANE	1. TOWER (51-000705)	373023.00N/0774202.00W	1539 (3D)	1000	AT461	3000			
			2. TERRAIN	373130.00N/0774816.00W	460 (500)		AS1500	2000			
INITIAL	HPW VORTAC	HAGLI	3. AAO	372251.00N/0770933.00W	325 (4E)	1000	AT1175	2500			
			4. TERRAIN	372142.00N/0770645.00W	118 (100)		AS1500	1600			
INITIAL	IGANE	HAGLI	5. TOWER (51-001500)	371502.70N/0771822.30W	412 (2C)	1000	AT1088	2500			
			6. TERRAIN	371357.00N/0771645.00W	164 (200)		AS1500	1700			
INTERMEDIATE	HAGLI	JOMUS	7. TOWER (51-001514)	372544.43N/0771255.91W	632 (4D)	500		1200			
			8. TERRAIN	372533.00N/0771239.00W	151 (200)		AS1500	1700			
FINAL: LPV	JOMUS	RW34				ASC		361/200			
FINAL: LNAV/VNAV	JOMUS	RW34	9. TREE	372837.92N/0771820.55W	259 (2C)	22.98:1	AC20	530/369			
FINAL: LNAV	JOMUS	YUTUP/1.40 NM TO RW34	10. AAO	372658.30N/0771544.76W	350 (2C)	250	DG60	660			
FINAL: LNAV STEPDOWN	YUTUP/1.40 NM TO RW34	RW34	11. TOWER (51-020106)	372841.68N/0771817.37W	270 (2C)	250		520			
2. PROCEDURE TURN											
3. MISSED APPROACH	MAP: DA / DA / RW34	IFPIG				ASC		2500			
	ELEV: 194/369/420		12. TOWER (51-020256)	374140.49N/0772900.89W	597 (1A)	1000		1600			
			13. TERRAIN	374124.00N/0773051.00W	250 (300)		AS1500	1800			
4. CIRCLING AREA	DISTANCE	HT. ABV. ARPT.									
CATEGORY A	1.3 NM	REQUIRED	ACTUAL	350	492	14. ATCT (51-020221)	373048.22N/0771957.22W	349 (1A)	300		660
CATEGORY B	1.5 NM			450	492	14. ATCT (51-020221)	373048.22N/0771957.22W	349 (1A)	300		660
CATEGORY C	1.7 NM			450	532	15. ANT (51-058521)	373140/65N/0772247.77W	385 (1B)	300		700
CATEGORY D	2.3 NM			550	552	16. AAO	373356.48N/0772142.34W	400 (2C)	300	HAA	720
CATEGORY E	4.5 NM			550							
5. MINIMUM SAFE ALTITUDES	PRIMARY NAVAID: RW34										
SECTOR	OBSTRUCTION	BRG/DIST	ELEVATION (MSL)	M S A	SECTOR	OBSTRUCTION	BRG/DIST	ELEVATION (MSL)	M S A		
360-360	TWR (51-002454)	283/14.1	1587 (1A)	2600							
CITY AND STATE	ELEVATION: 168		FACILITY		PROCEDURE AND AMENDMENT NO:			REGION			
RICHMOND, VA	AIRPORT NAME: RICHMOND INTL		RNAV		RNAV (GPS) Z RWY 34, AMDT 1D			AEA			

QUALITY  
25

CHECKED

PART B - SUPPLEMENTAL DATA										
1. COMMUNICATIONS WITH:				2. WEATHER SERVICE			3. ALTIMETER SETTING			
POTOMAC TRACON RIC TOWER						N W S OTHER: ASOS	SOURCE:KRIC			
							DISTANCE:			
							HOURS REMOTE OPERATION: 0/YES			
SATISFACTORY ON:										
X	V	H	F	X	U	H	F	LOCATION: KRIC		ADJUSTMENT: 0
4. MONITOR STATUS		PRIMARY NAVAID:								
		MONITOR POINT:								
		HRS OPTN:		CAT 1						
				CAT 3						
5. APPROACH & RUNWAY LIGHTING		X		ALSF-2 34						
				(S) SALS						
		X		MALSR 02, 16						
		X		HIRL 02, 07, 16, 20, 25, 34						
				MIRL						
		X		REIL 20						
		X		TDZ 34						
		X		C/L 16, 34						
		X		OTHER (SPECIFY) PAPI-4L 02, 16, 20, 34						
6. RUNWAY MARKINGS		BASIC								
		ALL WEATHER     PIR-G 02, 16, 20, 34								
		INSTRUMENT     NPI-G 07, 25								
7. RUNWAY VISUAL RANGE		APPROACH     25, 34								
		MIDFIELD     34								
		ROLL OUT     07, 34								
8. GLIDE PATH		GP ANGLE: 3.00					ELEV RWY THRESHOLD:160.5			
		DISTANCE FROM RWY:					ELEV GP ANTENNA:			
							THRESHOLD CROSSING HEIGHT:54.4			
9. FINAL APPROACH COURSE AIMING			X		RUNWAY THRESHOLD					FT. FROM THRESHOLD
			X		ON CENTERLINE					FT. FROM CENTERLINE
10. WAIVERS: NONE										
PART D - PREPARED BY: MIKE MELSSEN							DATE: 11/09/2017			
TITLE: AERONAUTICAL INFORMATION SPECIALIST							OFFICE: AJV-5412			

PART C - REMARKS:			
VDP NOT ESTABLISHED - VDP IS LESS THAN 0.5 NM AFTER STEPDOWN.			
PRECIPITOUS TERRAIN EVALUATION COMPLETED.			
KRIC ASOS IS ON WMSCR.			
CRITICAL TEMPERATURES: CRITICAL LOW :-11C (+13F) CRITICAL HIGH :+54C (+130F) ACT :-11C APT ISA :+14.67C			
CRITICAL TEMPERATURE REMARKS AVERAGE COLD TEMPERATURE DERIVED FROM 5-YEAR HISTORY (2008-2012). CRITICAL LOW TEMPERATURE BASED ON ACT. DESCENT RATE (FPM): STANDARD TEMP 956 HIGH TEMP 1116.			
ORDER 8260.3, CHAPTER 2, NEW CIRCLING CRITERIA APPLIED. CAT A: 1.30NM CAT B: 1.81NM CAT C: 2.84NM CAT D: 3.71NM			
NO ADDITIONAL AIRSPACE REQUIRED.			
LPV SLOPE: 34:1 LNAV/VNAV LNAV SLOPE: 22.98:1			
BACK UP ALTIMETER NOT PUBLISHED, REDUNDANT WEATHER SOURCES AVAILABLE.			
VEGETATION ASSUMED TO BE 100 FEET PER FPT.			
OBSTACLE # 13 1C ACCURACY CODE AS VERIFIED BY FPT THROUGH NGS.			
<div>QUALITY 25 CHECKED</div>			