

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										MISSED APPROACH					
FROM		TO		COURSE AND DISTANCE				ALTITUDE		LPV: DA LNAV/VNAV: DA LNAV: RW20R CLIMB TO 3000 DIRECT RONLE AND HOLD. ADDITIONAL FLIGHT DATA: HOLD S, LT, 020.61 INBOUND. CHART FAS OBST: 899 TREE 361030N/0864008W DISTANCE TO THLD FROM 200 HAT: 0.51 NM. CHART VDP AT 1.64 NM TO RW20R* *LNAV ONLY. WAAS CHANNEL # 78411 REFERENCE PATH ID: W20A CHART CIRCLING ICON. LTP HAE: 140 M					
BNA VORTAC		HIKRY (TF) (FO) (RNP 2.00)		022.08 / 10.85				4000							
TANDS (IAF)		HIKRY (NOPT) (TF) (FB) (RNP 1.00)		192.66 / 13.91				4000							
HIKRY (IF/IAF)		OPERY (TF) (FB) (RNP 1.00)		200.69 / 6.35				2000							
OPERY (FAF)		RW20R (MAP) (TF) (FO) (RNP 0.30)		200.67 / 4.35				2000							
RW20R (MAP)		778 MSL		200.67				3000							
778 MSL		RONLE (DF) (FO) (RNP 1.00)													
1. PT _____ SIDE OF COURSE _____ OUTBOUND _____ FT WITHIN _____ MILES OF _____ (IAF) 2. HOLD N HIKRY, RT, 200.69 INBOUND, 4000 FT. IN LIEU OF PT (IAF) 3. FAC: 200.67 FAF: OPERY DIST FAF TO MAP: 4.35 THLD: 4.35 4. MIN. ALT: HIKRY 4000, OPERY 2000 5. DIST TO THLD FROM OM: _____ MM: _____ IM: _____ 150 HAT: _____ 100 HAT: _____ GS ANT: _____ 6. MIN GS INCPT: 2000 GS ALT AT: OPERY 2000 OM: _____ MM: _____ IM: _____ 7. GS ANGLE: 3.00 TCH: 60.4 34:1 IS CLEAR 8. MSA FROM: RW20R 3100															
										MAG VAR: 3W			EPOCH YEAR: 2010		
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	778	4000	200	778	4000	200	778	4000	200	778	4000	200			
LNAV/VNAV DA	1038	1 3/8	460	1038	1 3/8	460	1038	1 3/8	460	1038	1 3/8	460			
LNAV MDA	1160	4000	582	1160	4000	582	1160	1 3/8	582	1160	1 3/8	582			
CIRCLING	1160	1	561	1160	1	561	1200	1 3/4	601	1380	2 1/2	781			
NOTES: CHART NOTE: FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW -11C (13F) OR ABOVE 54C @ CAT D 800-2 1/2 (130F). CHART NOTE: USE OF FD OR AP PROVIDING RNAV TRACK GUIDANCE REQUIRED DURING SIMULTANEOUS OPERATIONS. CHART NOTE: SIMULTANEOUS APPROACH AUTHORIZED WITH RWY 20L. (CONTINUED ON PAGE 2)															
CITY AND STATE NASHVILLE, TN		ELEVATION: 599 TDZE: 578 AIRPORT NAME: NASHVILLE INTL				FACILITY IDENTIFIER: RNAV		PROCEDURE NO./AMDT NO./EFFECTIVE DATE: RNAV (GPS) Y RWY 20R, AMDT 3				SUP: AMDT: 2C DATED 12/11/2014			

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"/></div>		ZME, BNA APP CON, BNA ATCT, AMGR			
FLIGHT CHECKED BY					
NAME:				FIFO	DATE:
DEVELOPED BY					
NAME: <div>SEAN BARBEE</div>				FIFO AJV-5431	DATE: 07/29/2016
APPROVED BY					
NAME: <div>PATRICK MULQUEEN</div>				FIFO AJV-5430	DATE:
MANAGER					
CHANGES:					
<div>1. MOVED FINAL APPROACH FIX OPERY 282.17 FT NORTH; CHANGED DISTANCE FROM HIKRY TO OPERA FROM 6.40 NM TO 6.35 NM; CHANGED DISTANCE FROM FAF TO MAP AND FROM FAF TO THLD FROM 4.30 TO 4.35</div> <div>2. UPDATED TCH FROM 58.9 TO 60.4.</div> <div>3. CHANGED VDP FROM 1.65 MILES TO RW20R TO 1.64 NM TO RW20R.</div> <div>4. CHANGED LNAV/VNAV VISIBILITY FROM RVR 6000 TO 1 3/8 SM; CHANGED LNAV CATS C AND D VISIBILITY FROM 1 1/2 SM TO 1 3/8 SM; CHANGED INOP ALS NOTE FROM "FOR INOPERATIVE MALSF, INCREASE LNAV/VNAV ALL CATS VISIBILITY TO 1 1/2 AND LNAV CATS A/B VISIBILITY TO RVR 5000" TO "FOR INOPERATIVE ALS, INCREASE LNAV/VNAV CAT D VISIBILITY TO 1 5/8 SM AND LNAV CATS C AND D VISIBILITY TO 1 3/4 SM".</div> <div>5. CHANGED DISTANCE TO THLD FROM 200 HAT FROM 0.39 NM TO 0.51 NM.</div> <div>6. FAS DATA CHANGES: LTP LATITUDE FROM 360816.2300N TO 360816.2325N; LTP LONGITUDE FROM 0864042.8370W TO 0864042.8380W; LTP ELLIPSOIDAL HEIGHT FROM +01401 TO +01400; FPAP LATITUDE FROM 360651.2020N TO 360651.2045N; FPAP LONGITUDE FROM 0864116.1790W TO 0864116.1805W; TCH FROM 58.9 TO 60.4; CRC REMAINDER FROM 536DD89C TO 15C13A69.</div> <div>7. CHANGED SEGMENT FROM RW02R TO DECISION ALTITUDE IN TERMINAL ROUTES BLOCK FROM "755 MSL" TO "778 MSL".</div> <div>8. ADDED NOTE "PROCEDURE NA FOR ARRIVALS AT BNA VORTAC ON V140 WESTBOUND".</div>					
REASONS:					
<div>1. OPERY MOVED DUE TO CHANGE IN VARIABLES AND 8260-54A FORMULA 2-16B USED TO CALCULATE PFAF LOCATION.</div> <div>2. CHANGED TO MATCH I-VIY ILS GLIDESLOPE TCH THAT CHANGED FROM 58.9 FT TO 60.36 FT.</div> <div>3. VARIABLES USED TO CALCULATE VDP CHANGED; VGSI TCH CHANGED FROM 76.7 FT TO 78.65 FT; LTP ELEVATION CHANGED FROM 555.0 FT TO 555.5 FT.</div> <div>4. LNAV/VNAV VISIBILITY CHANGED DUE TO INCREASED DISTANCE FROM DA TO LTP; LNAV CATS C AND D VISIBILITY INCREASED IAW 8260.3, TABLE 3-5A; INOPERATIVE ALS NOTE FORMATTED IAW 8260.19G, PARA 8-6-4M(3D), AND NO-LIGHT VISIBILITY VALUES CHANGED IAW 8260.3B, TABLE 3-5A.</div> <div>5. VARIABLES USED TO CALCULATE DISTANCE TO THLD CHANGED, SUCH AS TCH AND LTP ELEVATION.</div> <div>6. CHANGES TO VARIABLES, SUCH AS THRESHOLD COORDINATES AND TCH, USED TO CALCULATE FAS DATA; CONVERSION FROM HATH TO HAT ALSO CONTRIBUTED TO CHANGES TO FAS DATA.</div> <div>7. TOUCHDOWN ZONE ELEVATION OF 578 USED TO CALCULATE DA INSTEAD OF THRESHOLD ELEVATION OF 555.</div> <div>8. NOTE ADDED IAW 8260.54A, PARA 2.7 AND FORMATTED IAW 8260.19G, PARA 8-2-5G(2).</div>					



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

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NOTES, (CONT.):

CHART NOTE: LNAV PROCEDURE NA DURING SIMULTANEOUS OPERATIONS.

CHART NOTE: DME/DME RNP-0.3 NA.

CHART PLANVIEW NOTE: PROCEDURE NA FOR ARRIVALS AT BNA VORTAC ON V140 WESTBOUND.

CHART PROFILE NOTE: VGSI AND RNAV GLIDEPATH NOT COINCIDENT (VGSI ANGLE {ANGLE}/TCH {FEET}).

CHART NOTE: FOR INOPERATIVE ALS, INCREASE LNAV/VNAV CAT D VISIBILITY TO 1 5/8 SM AND LNAV CATS C AND D VISIBILITY TO 1 3/4 SM.

CITY AND STATE
NASHVILLE, TN

ELEVATION: 599 TDZE: 578
AIRPORT NAME:
NASHVILLE INTL

FACILITY
IDENTIFIER:
RNAV

PROCEDURE NO./AMDT NO./EFFECTIVE DATE:
RNAV (GPS) Y RWY 20R, AMDT 3

SUP:
AMDT: **2C**
DATED: **12/11/2014**

QUALITY
24
CHECKED

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:					

**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	KBNA
RUNWAY	RW20R
APPROACH PERFORMANCE DESIGNATOR	0
ROUTE INDICATOR	Y
REFERENCE PATH DATA SELECTOR	0
REFERENCE PATH IDENTIFIER (APPROACH ID)	W20A
LTP/FTP LATITUDE	360816.2325N
LTP/FTP LONGITUDE	0864042.8380W
LTP/FTP ELLIPSOIDAL HEIGHT	+01400
FPAP LATITUDE	360651.2045N
FPAP LONGITUDE	0864116.1805W
THRESHOLD CROSSING HEIGHT (TCH)	00060.4
TCH UNITS SELECTOR (METERS OR FEET USED)	F
GLIDEPATH ANGLE (GPA)	03.00
COURSE WIDTH AT THRESHOLD	106.75
LENGTH OFFSET	0400
HORIZONTAL ALERT LIMIT (HAL)	40.0
VERTICAL ALERT LIMIT (VAL)	35.0
 <u>CRC REMAINDER</u>	 15C13A69

ADDITIONAL PATH POINT RECORD INFORMATION

ICAO CODE	K7
LTP ORTHOMETRIC HEIGHT	+01693
FPAP ORTHOMETRIC HEIGHT	+01693

CITY AND STATE
NASHVILLE, TN

ELEVATION: 599 TDZE: 578
AIRPORT NAME:
NASHVILLE INTL

FACILITY
IDENTIFIER:
RNAV

PROCEDURE NO./AMDT NO./EFFECTIVE DATE:
RNAV (GPS) Y RWY 20R, AMDT 3

SUP: **QUALITY
24
CHECKED**
AMDT: 2C
DATED: 12/11/2014

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		BNA VORTAC		HIKRY		1. TOWER (47-000200)		361743.00N/0863932.00W		906 (3C)	1000	AT2094		4000		
						2. TERRAIN		361030.20N/0864007.90W		799 (800)		AT594		1400		
INITIAL		TANDS		HIKRY		3. TOWER (47-023527)		362614.71N/0863646.85W		1205 (2C)	1000	AT1795		4000		
						4. TERRAIN		362918.00N/0863300.00W		949 (900)		AS1500		2400		
INTERMEDIATE		HIKRY (IF/IAF)		OPERY		1. TOWER (47-000200)		361743.00N/0863932.00W		906 (3C)	500	AT594		2000		
						5. TERRAIN		361848.00N/0863818.00W		647 (600)		AS1000		1600		
FINAL: LPV		OPERY		RW20R							ASC			778/200		
FINAL: LNAV/VNAV		OPERY		RW20R		6. TOWER (47-002563)		360903.10N/0863952.50W		706 (2C)	22.89:1	AC20 XP7		1038/460		
FINAL: LNAV		OPERY		RW20R		7. TREE		361030.20N/0864007.90W		899 (2C)	250			1160		
2. HOLD-IN-LIEU-OF-PT		HIKRY		P-5		3. TOWER (47-023527)		362614.71N/0863646.85W		1205 (2C)	1000	AT1795		4000		
						8. TERRAIN		362842.00N/0863454.00W		942 (900)		AS1500		2400		
3. MISSED APPROACH	MAP:		DA / DA / RW20R		RONLE						ASC			3000		
	ELEV:		585/855/1060				9. TOWER (47-002306)		355520.06N/0864246.17W		1547 (2C)	1000	2600			
						10. TERRAIN		355515.00N/0864318.00W		1175 (1200)		AS1500		2700		
4. CIRCLING AREA		DISTANCE		HT. ABV. ARPT.												
CATEGORY A		1.3 NM		REQUIRED	350	ACTUAL	561	11. TREE		360549.00N/0863903.00W		789 (2C)	300	SI	1160	
CATEGORY B		1.5 NM			450		561	12. TOWER (47-000499)		360949.00N/0864254.00W		816 (1A)	300	SI	1160	
CATEGORY C		1.7 NM			450		601	7. TREE		361030.20N/0864007.90W		899 (2C)	300		1200	
CATEGORY D		2.3 NM			550		781	13. AAO		360257.60N/0864316.45W		1079 (2C)	300		1380	
CATEGORY E		4.5 NM			550											
5. MINIMUM SAFE ALTITUDES											PRIMARY NAVAID: RW20R					
SECTOR		OBSTRUCTION		BRG/DIST		ELEVATION (MSL)		M S A		SECTOR		OBSTRUCTION		BRG/DIST	ELEVATION (MSL)	M S A
360-360		TWR (47-000119)		237/09.2		2049 (4D)		3100								
CITY AND STATE		ELEVATION: 599				FACILITY		PROCEDURE AND AMENDMENT NO:				REGION				
NASHVILLE, TN		AIRPORT NAME: NASHVILLE INTL				RNAV		RNAV (GPS) Y RWY 20R, AMDT 3				ASO				

PART B - SUPPLEMENTAL DATA										PART C - REMARKS: PRECIPITOUS TERRAIN EVALUATION COMPLETED. SEE ATTACHED AIRSPACE LETTER. LPV SURFACE: 34:1 VGSI DATA: 3.00/78.6 TAA NOT DEVELOPED PER ATC REQUEST. BACKUP ALTIMETER NOT REQUIRED AS KBNA HAS 24-HOUR REDUNDANT ALTIMETER SOURCES. 100 FT VEGETATION USED FOR EVALUATION PER FPT CHECKLIST. ATC REQUESTS SIMULTANEOUS APPROACH OPERATIONS WITH ALL RWY 20L ILS AND RNAV PROCEDURES. STEP-DOWN FIX(ES) IN LNAV FINAL NOT FEASIBLE. OBSTACLES REQUIRE CROSSING ALTITUDES GREATER THAN GLIDEPATH ALTITUDE. MISSED APPROACH LEVEL SURFACE OBSTACLE #9 LOCATED 1157 FT INTO SECONDARY AREA. REDUCED ROC NOT NECESSARY TO ACHIEVE CLEARANCE LIMIT ALTITUDE. KBNA ASOS ON WMSCR CRITICAL TEMPERATURES: CRITICAL LOW :-11C (+13F) CRITICAL HIGH :+54C (+130F) ACT :-11C APT ISA :+13.81C CRITICAL TEMPERATURE REMARKS AVERAGE COLD TEMPERATURE DERIVED FROM 5-YEAR HISTORY (2011-2015). CRITICAL LOW TEMPERATURE BASED ON ACT. DESCENT RATE (FPM): STANDARD TEMP 961 HIGH TEMP 1122. ORDER 8260.3, CHAPTER 2, NEW CIRCLING CRITERIA APPLIED. CAT A: 1.30NM CAT B: 1.83NM CAT C: 2.87NM CAT D: 3.75NM XP: MATCH PUBLISHED LNAV/VNAV DA.			
1. COMMUNICATIONS WITH:			2. WEATHER SERVICE			3. ALTIMETER SETTING							
BNA APP CON BNA TOWER				N W S	OTHER: ASOS		SOURCE:KBNA						
				F A A			DISTANCE:						
				A / C			HOURS REMOTE OPERATION: 0						
SATISFACTORY ON:			X	V H F	X	U H F		H F	LOCATION: KBNA		ADJUSTMENT: 0		
4. MONITOR STATUS	PRIMARY NAVAID:										100 FT VEGETATION USED FOR EVALUATION PER FPT CHECKLIST.		
	MONITOR POINT:												
	HRS OPTN:	CAT 1											
			CAT 3								ATC REQUESTS SIMULTANEOUS APPROACH OPERATIONS WITH ALL RWY 20L ILS AND RNAV PROCEDURES.		
5. APPROACH & RUNWAY LIGHTING	X	ALSF-2 02L, 02R											
		(S) SALS											
	X	MALSF 20R MALSR 02C, 20L											
	X	HIRL 02C, 02L, 02R, 13, 20C, 20L, 20R, 31											
		MIRL											
	X	REIL 13, 20C, 31											
	X	TDZ 02L, 02R											
	X	C/L 02L, 02R, 20L, 20R											
	X	OTHER (SPECIFY) VASI-6L 13 PAPI-4R 20R PAPI-4L 02R, 20C									CRITICAL TEMPERATURES: CRITICAL LOW :-11C (+13F) CRITICAL HIGH :+54C (+130F) ACT :-11C APT ISA :+13.81C		
6. RUNWAY MARKINGS	BASIC												
	ALL WEATHER PIR-G 02C, 02L, 02R, 13, 20C, 20L, 20R, 31												
	INSTRUMENT												
7. RUNWAY VISUAL RANGE	APPROACH 02C, 02L, 02R, 20L, 20R									CRITICAL TEMPERATURE REMARKS AVERAGE COLD TEMPERATURE DERIVED FROM 5-YEAR HISTORY (2011-2015). CRITICAL LOW TEMPERATURE BASED ON ACT. DESCENT RATE (FPM): STANDARD TEMP 961 HIGH TEMP 1122.			
	MIDFIELD 02R, 20L												
	ROLL OUT 02L, 02R, 20L, 20R												
8. GLIDE PATH	GP ANGLE: 3.00				ELEV RWY THRESHOLD:555.5						ORDER 8260.3, CHAPTER 2, NEW CIRCLING CRITERIA APPLIED. CAT A: 1.30NM CAT B: 1.83NM CAT C: 2.87NM CAT D: 3.75NM		
	DISTANCE FROM RWY:				ELEV GP ANTENNA:								
					THRESHOLD CROSSING HEIGHT:60.4								
9. FINAL APPROACH COURSE AIMING			X	RUNWAY THRESHOLD						FT. FROM THRESHOLD			
			X	ON CENTERLINE						FT. FROM CENTERLINE			
10. WAIVERS: NONE													
PART D - PREPARED BY: SEAN BARBEE						DATE: 07/29/2016							
TITLE: AERONAUTICAL INFORMATION SPECIALIST						OFFICE: AJV-5431							

