

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				MISSED APPROACH
FROM	TO	COURSE AND DISTANCE	ALTITUDE	
SEGOE (IAF)	MORIS (FB)	203.32 / 6.73	1800	LPV: DA LNAV/VNAV: DA LNAV: RW29
MORIS (IF)	JAYSE (FB)	293.31 / 6.02	1800	
JAYSE (FAF)	ROGGR/2.60 NM TO RW29 (FB)	293.22 / 2.49		CLIMB TO 2000 DIRECT COMON AND ON TRACK 296.86 TO SOSYO AND HOLD.
ROGGR/2.60 NM TO RW29	RW29 (MAP) (FO)	293.18 / 2.60		
RW29 (MAP)	323 MSL	293.18		
323 MSL	COMON (FB)			ADDITIONAL FLIGHT DATA: HOLD SE, RT, 293.00 INBOUND. CHART FAS OBST: 415 TREE 422713N/0711316W CHART R-4102 A/B. DISTANCE TO THLD FROM 200 HATH: 0.46 NM. CHART VDP AT 1.46 MILES TO RW29* *LNAV ONLY.
COMON	SOSYO (FO)	296.86 / 3.08	2000	

1. PT        SIDE OF COURSE        OUTBOUND        FT WITHIN        MILES OF        (IAF)
2. PROFILE STARTS AT MORIS
3. FAC: 293.22 FAF: JAYSE DIST FAF TO MAP: 5.09 THLD: 5.09
4. MIN. ALT: MORIS 1800, JAYSE 1800, ROGGR/2.60 NM TO RW29 1000\*
5. DIST TO THLD FROM OM:        MM:        IM:        150 HAT:        100 HAT:        GS ANT:
6. MIN GS INCPT: 1800 GS ALT AT: JAYSE 1800 OM:        MM:        IM:
7. GS ANGLE: 3.00 TCH: 54.7 34:1 IS CLEAR
8. MSA FROM: RW29 3300

WAAS CHANNEL # 86612  
REFERENCE PATH ID: W29A  
LTP HAE: 9.8 M

MAG VAR: 16W      EPOCH YEAR: 1995

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	323	1/2	200	323	1/2	200	323	1/2	200	323	1/2	200			
LNAV/VNAV DA	609	1 1/8	486	609	1 1/8	486	609	1 1/8	486	609	1 1/8	486			
LNAV MDA	640	1/2	517	640	1/2	517	640	1	517	640	1	517			
CIRCLING	720	1	588	720	1	588	720	1 1/2	588	780	2	648			

NOTES:  
 CHART NOTE: FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW -16C (4F) OR ABOVE 54C (130F). @ NA WHEN LOCAL WEATHER NOT AVAILABLE.  
 CHART NOTE: DME/DME RNP-0.3 NA.  
 CHART PLANVIEW NOTE: RADAR REQUIRED.  
 CHART NOTE: BARO-VNAV AND VDP NA WITH BOSTON ALTIMETER SETTING.  
 (SEE FORM 8260-10)

CITY AND STATE BEDFORD, MA	ELEVATION: 132      THRE: 123 AIRPORT NAME: LAURENCE G HANSCOM FLD	FACILITY IDENTIFIER: RNAV	PROCEDURE NO./AMDT NO./EFFECTIVE DATE: RNAV (GPS) Z RWY 29, AMDT 1	SUP: RNAV (GPS) RWY 29 AMDT: ORIG DATED 05/07/2009
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**NOTES, (CONT.):**

**CHART NOTE: FOR INOPERATIVE MALSR, INCREASE RNAV CATS C AND D VISIBILITY TO 1 3/8 MILE.**

**CHART NOTE: WHEN LOCAL ALTIMETER SETTING NOT RECEIVED, USE BOSTON ALTIMETER SETTING AND INCREASE ALL DA 49 FEET AND ALL MDA 60 FEET; INCREASE RNAV/VNAV ALL CATS VISIBILITY, RNAV AND CIRCLING CATS C AND D VISIBILITY 1/4 MILE.**



CITY AND STATE BEDFORD, MA	ELEVATION: 132      THRE: 123	FACILITY IDENTIFIER: RNAV	PROCEDURE NO./ AMDT NO./EFFECTIVE DATE: RNAV (GPS) Z RWY 29, AMDT 1	SUP: RNAV (GPS) RWY 29
	AIRPORT NAME: LAURENCE G HANSCOM FLD			AMDT: ORIG
				DATED: 05/07/2009

ALL AFFECTED PROCEDURES REVIEWED? <input type="checkbox"/> YES <input type="checkbox"/> NO	COORDINATES OF FACILITIES	REQUIRED EFFECTIVE DATE
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COORDINATED WITH:						
ATA <input type="checkbox"/>	AAT <input type="checkbox"/>	ALPA <input type="checkbox"/>	APA <input type="checkbox"/>	AOPA <input type="checkbox"/>	NBAA <input type="checkbox"/>	OTHER (specify) _____ <input type="checkbox"/>

FLIGHT CHECKED BY		
NAME:	FIFO	DATE:

DEVELOPED BY		
NAME:	FIFO	DATE:

APPROVED BY		
NAME:	FIFO	DATE:

CHANGES:  
**CHANGES CONT.**  
 15. ADDED CHART NOTE: FOR INOPERATIVE MALSR, INCREASE LNAV CATS C AND D VISIBILITY TO 1 3/8 MILE.  
 16. CHARTED R-4102 A/B.

REASONS:  
**REASONS CONT.**  
 15. IAW 8260.3B VOL 1, CHAP 3.  
 16. PROVIDE SITUATIONAL AWARENESS FOR PILOTS HOLDING AT SOSYO.

PDF EDITS:  
 1. 8260-3, TERMINAL ROUTES: ADDED "(FAF)" NEXT TO JAYSE, AND DELETED "1000" FROM SDF ALTITUDE.  
 2. 8260-3, LINE 1: DELETED "NA".  
 3. 8260-10, ARINC, SEGMENTS: ON MISSED APPROACH TF LINE, ADDED "+ 02000" IN COLUMNS 83-89.  
 4. 8260-10, ARINC, SEGMENTS: DELETED "020" FROM HM LEG IN COLUMNS 45-47.  
 5. 8260-10, FLIGHT INSPECTION SUMMARY: DELETED "2.0" NEXT TO HM RNP.  
 6. 8260-10, CHANGES: REFORMATTED 15-16 FOR READABILITY.  
 7. 8260-10, FLIGHT INSPECTION SUMMARY: ADDED "02000" NEXT TO MISSED APPROACH RNP 1.0 UNDER ALTITUDE.

EFFECTIVE CONCURRENT WITH: KBED ILS OR LOC RWY 29, AMDT 7.

QUALITY  
 &  
 CHECKED

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

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**FAS DATA BLOCK INFORMATION**

<u>DATA FIELD</u>	<u>DATA</u>
OPERATION TYPE	0
SBAS SERVICE PROVIDER IDENTIFIER	0
AIRPORT IDENTIFIER	KBED
RUNWAY	RW29
APPROACH PERFORMANCE DESIGNATOR	0
ROUTE INDICATOR	Z
REFERENCE PATH DATA SELECTOR	0
REFERENCE PATH IDENTIFIER (APPROACH ID)	W29A
LTP/FTP LATITUDE	422809.9695N
LTP/FTP LONGITUDE	0711628.4155W
LTP/FTP ELLIPSOIDAL HEIGHT	+00098
FPAP LATITUDE	422821.0300N
FPAP LONGITUDE	0711827.8800W
THRESHOLD CROSSING HEIGHT (TCH)	00054.7
TCH UNITS SELECTOR (METERS OR FEET USED)	F
GLIDEPATH ANGLE (GPA)	03.00
COURSE WIDTH AT THRESHOLD	106.75
LENGTH OFFSET	0616
HORIZONTAL ALERT LIMIT (HAL)	40.0
VERTICAL ALERT LIMIT (VAL)	35.0

**CRC REMAINDER** EA2AB43D

**ADDITIONAL PATH POINT RECORD INFORMATION**

ICAO CODE	K6
LTP ORTHOMETRIC HEIGHT	+00375
FPAP ORTHOMETRIC HEIGHT	+00375



CITY AND STATE BEDFORD, MA	ELEVATION: 132      THRE: 123	FACILITY IDENTIFIER: RNAV	PROCEDURE NO./ AMDT NO./EFFECTIVE DATE: RNAV (GPS) Z RWY 29, AMDT 1	SUP. RNAV (GPS) RWY 29
	AIRPORT NAME: LAURENCE G HANSCOM FLD			AMDT:      ORIG
				DATED:      05/07/2009

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



ALL AFFECTED PROCEDURES REVIEWED? <input type="checkbox"/> YES <input type="checkbox"/> NO	COORDINATES OF FACILITIES	REQUIRED EFFECTIVE DATE
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COORDINATED WITH:						
ATA <input type="checkbox"/>	AAT <input type="checkbox"/>	ALPA <input type="checkbox"/>	APA <input type="checkbox"/>	AOPA <input type="checkbox"/>	NBAA <input type="checkbox"/>	OTHER (specify) <input type="checkbox"/> _____

FLIGHT CHECKED BY		
NAME:	FIFO	DATE:

DEVELOPED BY		
NAME:	NFPG	DATE:

APPROVED BY		
NAME:	NFPG	DATE:

CHANGES:

REASONS:

**U.S. DEPARTMENT OF TRANSPORTATION - FEDERAL AVIATION ADMINISTRATION**  
**RNAV (GPS) STANDARD INSTRUMENT APPROACH PROCEDURE**  
 FLIGHT STANDARDS SERVICES - FAR PART 97.33

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SUSAP KBEDK6SRW29 K6PGA

0 18018003325

M



CITY AND STATE <b>BEDFORD, MA</b>	ELEVATION: <b>132</b> <b>THRE: 123</b> AIRPORT NAME: <b>LAURENCE G HANSCOM FLD</b>	FACILITY IDENTIFIER:  <b>RNAV</b>	PROCEDURE NO. / AMDT NO. / EFFECTIVE DATE: <b>RNAV (GPS) Z RWY 29, AMDT 1</b>	SUP: <b>RNAV (GPS) RWY 29</b>
				AMDT: <b>ORIG</b>
				DATED: <b>05/07/2009</b>

ALL AFFECTED PROCEDURES REVIEWED? <input type="checkbox"/> YES <input type="checkbox"/> NO	COORDINATES OF FACILITIES	REQUIRED EFFECTIVE DATE
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COORDINATED WITH:						
ATA <input type="checkbox"/>	AAT <input type="checkbox"/>	ALPA <input type="checkbox"/>	APA <input type="checkbox"/>	AOPA <input type="checkbox"/>	NBAA <input type="checkbox"/>	OTHER (specify) _____

FLIGHT CHECKED BY		
NAME:	FIFO	DATE:

DEVELOPED BY		
NAME:	NFPG	DATE:

APPROVED BY		
NAME:	NFPG	DATE:

CHANGES:

REASONS:

**U.S. DEPARTMENT OF TRANSPORTATION - FEDERAL AVIATION ADMINISTRATION**  
**RNAV (GPS) STANDARD INSTRUMENT APPROACH PROCEDURE**  
**FLIGHT STANDARDS SERVICES - FAR PART 97.33**

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ARINC SUMMARY - 424-18 - RNAV (GPS)

ROUTES	TRANSITION	FIX	SEQ	USE	PATH	TURN	FO/FB	RNP	MAG (TRUE)	DISTANCE	ALTITUDE	SPEED
	SEGOE	SEGOE	010	IAF	IF		FB					
	SEGOE	MORIS	020		TF		FB	1.0	203.3 (187.3T)	006.7	AA 01800	
		MORIS	010	FACF	IF		FB				AA 01800	
		JAYSE	020	FAF	TF		FB	0.5	293.3 (277.3T)	006.0	AA 01800	
		ROGGR	021	SDF	TF		FB	0.3	293.2 (277.2T)	002.5	AA 01000	GS 01006
		RW29	030	MAP	TF		FO	0.3	293.2 (277.2T)	002.6	AT 00178	

MISSED APPROACH	FIX	SEQ	USE	PATH	TURN	FO/FB	RNP	MAG (TRUE)	DISTANCE	ALTITUDE	SPEED
		040		CA		FB		293.2 (277.2T)		AA 00323	
	COMON	050		DF		FB					
	SOSYO	060		TF		FO	1.0	296.9 (280.9T)		AA 02000	
	SOSYO	070		HM	R	FO		293.0 (277.0T)	004.0	AA 02000	

POINT DATA	WAYPOINT	LAT IN SECS	LONG IN SECS	LAT IN MINS	LONG IN MINS
	COMON	N422839.70	W0712150.39	N4228.662	W07121.840
	JAYSE	N422731.76	W0710938.69	N4227.529	W07109.645
	MORIS	N422646.05	W0710134.39	N4226.768	W07101.573
	ROGGR	N422750.52	W0711259.29	N4227.842	W07112.988
	SEGOE	N423326.70	W0710024.87	N4233.445	W07100.415
	SOSYO	N422914.45	W0712555.75	N4229.241	W07125.929
	RW29	N422809.97	W0711628.42	N4228.166	W07116.474

RUNWAY DATA	RWY	THRESHOLD ELEVATION	TCH
	RW29	00123	55

CITY AND STATE <b>BEDFORD, MA</b>	ELEVATION: <b>132</b> THRE: <b>123</b>	FACILITY IDENTIFIER: <b>RNAV</b>	PROCEDURE NO. / AMDT NO. / EFFECTIVE DATE: <b>RNAV (GPS) Z RWY 29, 1</b>	SUP: <b>RNAV (GPS) RWY 29</b>
	AIRPORT NAME: <b>LAURENCE G HANSCOM FLD</b>			AMDT: <b>ORIG</b>
	DATED: <b>05/07/2009</b>			

ALL AFFECTED PROCEDURES REVIEWED? <input type="checkbox"/> YES <input type="checkbox"/> NO	COORDINATES OF FACILITIES	REQUIRED EFFECTIVE DATE
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COORDINATED WITH:						
<input type="checkbox"/> ATA	<input type="checkbox"/> AAT	<input type="checkbox"/> ALPA	<input type="checkbox"/> APA	<input type="checkbox"/> AOPA	<input type="checkbox"/> NBAA	<input type="checkbox"/> OTHER (specify) _____

FLIGHT CHECKED BY		
NAME:	FIFO	DATE:

DEVELOPED BY		
NAME:	NFPG	DATE:

APPROVED BY		
NAME:	NFPG	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.			
INITIAL	SEGOE	MORIS	1. TOWER (25-000575)	423153.72N/0705910.41W	686 (1A)	1000		1700			
			2. TERRAIN	423024.00N/0710521.00W	296 (300)		AS1500	1800			
INTERMEDIATE	MORIS	JAYSE	3. AAO	422651.00N/0711000.00W	581 (4E)	500	AC98	1200			
			4. TERRAIN	422654.00N/0710515.00W	325 (300)		AS1500	1800			
FINAL: LPV	JAYSE	RW29				ASC		323/200			
FINAL: LNAV/VNAV	JAYSE	RW29	5. TREE (KBEDT2682)	422726.40N/0711446.04W	314 (1A)	23.52:1		609/486			
FINAL: LNAV	JAYSE	ROGGR/2.60 NM TO	6. TOWER (25-000072)	422719.64N/0711045.93W	669 (1A)	250	RA49 DG32	1000			
		RW29									
FINAL: LNAV STEPDOWN	ROGGR/2.60 NM TO	RW29	7. TREE (KBEDT1603)	422712.90N/0711316.10W	415 (1A)	250	SA-39	640			
	RW29										
2. PROCEDURE TURN		NA									
3. MISSED APPROACH	MAP:	DA / DA / RW29	SOSYO			ASC		2000			
				8. AAO	423024.00N/0712636.00W	624 (4E)	1000	1700			
	ELEV:	155/448/540		9. TERRAIN	423024.00N/0712636.00W	424 (400)		AS1500	1900		
4. CIRCLING AREA		DISTANCE	HT. ABV. ARPT.								
CATEGORY A	1.3 NM	REQUIRED	350	ACTUAL	588	10. TWR (KBEDT2153)	422724.08N/0711559.43W	414 (1B)	300		720
CATEGORY B	1.5 NM		450		588	10. TWR (KBEDT2153)	422724.08N/0711559.43W	414 (1B)	300		720
CATEGORY C	1.7 NM		450		588	11. TREE (KBEDT0802)	422613.88N/0711827.31W	416 (1A)	300		720
CATEGORY D	2.3 NM		550		648	12. TANK (25-000535)	422644.29N/0711439.89W	463 (1A)	300		780
CATEGORY E	4.5 NM		550								
5. MINIMUM SAFE ALTITUDES					PRIMARY NAVAID: RW29						
SECTOR	OBSTRUCTION	BRG/DIST	ELEVATION (MSL)	M S A	SECTOR	OBSTRUCTION	BRG/DIST	ELEVATION (MSL)	M S A		
360-360	AAO	289/ 27.2	2215 (4E)	3300							
CITY AND STATE		ELEVATION: 132		FACILITY		PROCEDURE AND AMENDMENT NO:		REGION			
BEDFORD, MA		AIRPORT NAME: LAURENCE G HANSCOM FLD		RNAV		RNAV (GPS) Z RWY 29, AMDT 1		ANE			

PART B - SUPPLEMENTAL DATA					
1. COMMUNICATIONS WITH:		2. WEATHER SERVICE		3. ALTIMETER SETTING	
ZBW ARTCC BOS APP CON BED TOWER		<input type="checkbox"/>	N W S	OTHER: ASOS	SOURCE: KBED / KBOS
		<input type="checkbox"/>	F A A		DISTANCE: 0 / 14.10
		<input type="checkbox"/>	A / C		HOURS REMOTE OPERATION: 24 / BACKUP
SATISFACTORY ON:					
<input checked="" type="checkbox"/>	V H F	<input checked="" type="checkbox"/>	U H F	<input type="checkbox"/>	H F
LOCATION: KBED				ADJUSTMENT: 0 / 49	
4. MONITOR STATUS	PRIMARY NAVID:				
	MONITOR POINT:				
	HRS OPTN:	CAT 1			
		CAT 3			
5. APPROACH & RUNWAY LIGHTING	ALS				
	(S) SALS				
	<input checked="" type="checkbox"/>	MALSR 11 (PCL), 29 (PCL)			
	<input checked="" type="checkbox"/>	HIRL 11 (PCL), 29 (PCL)			
	<input checked="" type="checkbox"/>	MIRL 05 (PCL), 23 (PCL)			
	<input checked="" type="checkbox"/>	REIL 05, 23			
		TDZ			
	C/LINE				
<input checked="" type="checkbox"/>	OTHER (SPECIFY) VASI-4R 23 PAPI-4L 11, 29 VASI-4L 05				
6. RUNWAY MARKINGS	BASIC				
	ALL WEATHER PIR-G 11, 29				
	INSTRUMENT NPI-G 05, 23				
7. RUNWAY VISUAL RANGE	APPROACH 11				
	MIDFIELD				
	ROLL OUT				
8. GLIDE PATH	GP ANGLE: 3.00			ELEV RWY THRESHOLD: 123.0	
	DISTANCE FROM RWY:			ELEV GP ANTENNA:	
	THRESHOLD CROSSING HEIGHT: 54.7				
9. FINAL APPROACH COURSE AIMING	<input checked="" type="checkbox"/>	RUNWAY THRESHOLD			FT. FROM THRESHOLD
	<input checked="" type="checkbox"/>	ON CENTERLINE			FT. FROM CENTERLINE
10. WAIVERS: NONE					
PART D - PREPARED BY: DAVID SAUER				DATE: 01/05/2012	
TITLE: AERONAUTICAL INFORMATION SPECIALIST				OFFICE: AJV-352	

PART C - REMARKS:

PRECIPITOUS TERRAIN EVALUATION COMPLETED.

KBED AND KBOS ASOS ON SERVICE A  
VGSI DATA: 3.00/52

SEE ATTACHED AIRSPACE LETTER.

RASS PRESSURE PATTERNS SAME  
KBED 132.0 KBOS 20.0  
RA=48.2

LPV SLOPE: 34:1  
LNAV/VNAV SLOPE: 23.522:1  
AIRPORT ISA: 14.74  
ACT: -16  
AVERAGE COLD TEMPERATURE BASED ON 4 YEAR HISTORY (2006-2009).

INTERMEDIATE OBS #3 IS FOR LNAV AND LNAV/VNAV, LPV CONTROLLING OBSTACLE IS TOWER (25-000028) 422552N/0710517W 527 (1D).  
ALL INTERMEDIATE SEGMS HAVE SAME HIGH TERRAIN OBS #4.

OBS #7 LOCATED 290.37 FEET INTO LNAV FINAL SECONDARY AREA.  
CIRCLING OBS #10 IS KBEDT2153.

TAA AND FEEDER ROUTE NOT DEVELOPED PER ATC.

MINIMUM LEG LENGTH BETWEEN SEGOE AND MORIS CALCULATED USING PBN FORMULA B CALCULATOR USING 25 DEGREE BANK ANGLE.

NO VISUAL PENETRATIONS.



# RADIO FIX AND HOLDING DATA RECORD

NAME: COMON

STATE: MA

COUNTRY: US

LATITUDE/LONGITUDE: 422839.70N/0712150.39W

TYPE: WP

AIRSPACE DOCKET:

FIX TYPE OF ACTION: MODIFY

HOLDING:

HOLDING TYPE OF ACTION: NO CHANGE

**FIX USE:**

**USE TYPE**

IAP  
IAP

**USE TITLE**

RNAV (GPS) Z RWY 29  
RNAV (RNP) Y RWY 29

**FAC**

**PAT**

**AIRPORT IDENT**

KBED  
KBED

**CITY**

BEDFORD  
BEDFORD

**STATE**

MA (US)  
MA (US)

REQUIRED CHARTING: IAP

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 1

DATE OF REVISION: 09/20/2012

**REASON FOR REVISION:**

1. DELETED FAC 1, KBED R29.

DEVELOPED BY:

DATE: 01/06/2012

OFFICE: AJV-352

NAME: DAVID SAUER

APPROVED BY:

DATE:

OFFICE: AJV-352

NAME: DARRYEL ADAMS

SIGNATURE:

DISTRIBUTION:

NFDC

FPO: EST

ARTCC: ZBW

ATC FACILITY: BOS APP CON, BED ATCT

OTHER:



# RADIO FIX AND HOLDING DATA RECORD

**NAME:** JAYSE

**STATE:** MA

**COUNTRY:** US

**LATITUDE/LONGITUDE:** 422731.76N/0710938.69W

**TYPE:** WP, INT, DME

**AIRSPACE DOCKET:**

**FIX TYPE OF ACTION:** MODIFY

**FIX MAKE-UP FACILITIES:**

FAC	NAME	IDENT	TYPE	CLASS	MAG BRG	TRUE BRG	DME	DIST FROM NM	FAC FEET	MRA	MAA
1	BEDFORD	I-ULJ	LOC/DME		113.14	097.14	4.81	6.41	38971	1800	4600
2	LAWRENCE	LWM	VOR/DME	L	204.83	189.83		17.14		1800	4600

**HOLDING:**

**HOLDING TYPE OF ACTION:** NO CHANGE

**REMARKS:**

I-ULJ DME COORDINATES: 422805.50N/0711606.17W.  
8260.54A FORMULA 2-16B USED TO ESTABLISH FIX COORDINATES.

**FIX USE:**

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
IAP	ILS OR LOC RWY 29	1, 2		KBED	BEDFORD	MA (US)
IAP	RNAV (GPS) Z RWY 29			KBED	BEDFORD	MA (US)
IAP	RNAV (RNP) Y RWY 29			KBED	BEDFORD	MA (US)

**REQUIRED CHARTING:** IAP

**COMPULSORY REPORTING POINT:** NO

**RECORD REVISION NUMBER:** 6

**DATE OF REVISION:** 09/20/2012

**REASON FOR REVISION:**

1. MOVED FIX 438.94 FT EAST.
2. DELETED FAC 3, KBED R29.
3. ADDED FAC 1 AND 2 DIST FROM FAC IN NM.
4. ADDED FAC 1 DIST FROM FAC IN FT.
5. CHANGED ULJ DME COORDINATES FROM 422804.76N/0711606.58W TO 422805.50N/0711606.17W.
6. CHANGED REMARK "RNP PFAF FORMULA USED..." TO "8260.54A FORMULA 2-16B USED..."
7. CHANGED FAC 2 TRUE BRG FROM 190.07 TO 189.83.
8. CHANGED FAC 1 DME FROM 4.74 TO 4.81.

**DEVELOPED BY:**

**DATE:** 01/06/2012

**OFFICE:** AJV-352

**NAME:** DAVID SAUER

**APPROVED BY:**

**DATE:**

**OFFICE:** AJV-352

**NAME:** DARRYL ADAMS

**SIGNATURE:**

**DISTRIBUTION:**

**NFDC**  
**FPO:** EST  
**ARTCC:** ZBW  
**ATC FACILITY:** BOS APP CON, BED ATCT  
**OTHER:**



# RADIO FIX AND HOLDING DATA RECORD

NAME: MORIS

STATE: MA

COUNTRY: US

LATITUDE/LONGITUDE: 422646.05N/0710134.39W

TYPE: WP, INT, DME

AIRSPACE DOCKET:

FIX TYPE OF ACTION: MODIFY

## FIX MAKE-UP FACILITIES:

FAC	NAME	IDENT	TYPE	CLASS	MAG BRG	TRUE BRG	DME	DIST FROM FAC NM	FAC FEET	MRA	MAA
1	BEDFORD	I-ULJ	LOC/DME		113.14	097.14	10.84	12.44		1800	4600
2	LAWRENCE	LWM	VOR/DME	L	185.20	170.20		17.91		1800	4600

HOLDING:

HOLDING TYPE OF ACTION: NO CHANGE

## REMARKS:

BEDFORD (FAC 1) AND LAWRENCE (FAC 2) USED TO ESTABLISH FIX COORDINATES  
I-ULJ DME COORDINATES: 422805.50N/0711606.17W

## FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
IAP	ILS OR LOC RWY 29	1, 2		KBED	BEDFORD	MA (US)
IAP	RNAV (GPS) Z RWY 29			KBED	BEDFORD	MA (US)
IAP	RNAV (RNP) Y RWY 29			KBED	BEDFORD	MA (US)

REQUIRED CHARTING: IAP

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 6

DATE OF REVISION: 09/20/2012

## REASON FOR REVISION:

1. DELETED FAC 3, KBED R29.
2. ADDED FAC 1 AND 2 DIST FROM FAC IN NM.
3. CHANGED ULJ DME COORDINATES FROM 422804.76N/0711606.58W TO 422805.50N/0711606.17W
4. ADDED REMARK, BEDFORD (FAC 1) AND LAWRENCE (FAC 2) USED TO ESTABLISH FIX COORDINATES.

DEVELOPED BY:           DATE: 01/06/2012           OFFICE: AJV-352           NAME: DAVID SAUER

APPROVED BY:           DATE:                           OFFICE: AJV-352           NAME: DARRYL ADAMS

SIGNATURE:

DISTRIBUTION:   NFDC  
                  FPO: EST  
                  ARTCC: ZBW  
                  ATC FACILITY: BOS APP CON, BED ATCT  
                  OTHER:

CHECKED

# RADIO FIX AND HOLDING DATA RECORD

NAME: ROGGR

STATE: MA

COUNTRY: US

LATITUDE/LONGITUDE: 422750.52N/0711259.29W

TYPE: WP, INT, DME

AIRSPACE DOCKET:

FIX TYPE OF ACTION: MODIFY

## FIX MAKE-UP FACILITIES:

FAC	NAME	IDENT	TYPE	CLASS	MAG BRG	TRUE BRG	DME	DIST FROM NM	FAC FEET	MRA	MAA
1	BEDFORD	I-ULJ	LOC/DME		113.14	097.14	2.32	3.92		820	4600
2	LAWRENCE	LWM	VOR/DME	L	213.05	198.05		17.43		820	4600

HOLDING:

HOLDING TYPE OF ACTION: NO CHANGE

## REMARKS:

COORDINATES ESTABLISHED 2.6NM FROM KBED R29 THLD.  
I-ULJ DME COORDINATES: 422805.50N/0711606.17W.

## FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
IAP	ILS OR LOC RWY 29	1, 2		KBED	BEDFORD	MA (US)
IAP	RNAV (GPS) Z RWY 29			KBED	BEDFORD	MA (US)

REQUIRED CHARTING: IAP

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 1

DATE OF REVISION: 09/20/2012

## REASON FOR REVISION:

1. MOVED FIX 619.42 FT EAST.
2. DELETED FAC 1, KBED R29
3. ADDED FAC 1, I-ULJ LOC.
4. ADDED FAC 2, LWM VOR/DME.
5. ADDED INT AND DME TO FIX TYPE.
6. ADDED REMARK, COORDINATES ESTABLISHED 2.6NM FROM KBED R29 THLD.
7. ADDED REMARK, I-ULJ DME COORDINATES: 422805.50N/0711606.17W.

DEVELOPED BY:            DATE: 01/06/2012            OFFICE: AJV-352            NAME: DAVID SAUER

APPROVED BY:            DATE:            OFFICE: AJV-352            NAME: DARRYEL ADAMS

SIGNATURE:

DISTRIBUTION:    NFDC  
                  FPO: EST  
                  ARTCC: ZBW  
                  ATC FACILITY: BOS APP CON, BED ATCT  
                  OTHER:

QUALITY  
4  
CHECKED

# RADIO FIX AND HOLDING DATA RECORD

NAME: SEGOE

STATE: MA

COUNTRY: US

LATITUDE/LONGITUDE: 423326.70N/0710024.87W

TYPE: WP

AIRSPACE DOCKET:

FIX TYPE OF ACTION: MODIFY

HOLDING:

HOLDING TYPE OF ACTION: NO CHANGE

**REMARKS:**

NAME CHANGED FROM AREA A TO SEGOE.

**FIX USE:**

USE TYPE  
IAP

USE TITLE  
RNAV (GPS) Z RWY 29

FAC

PAT

AIRPORT IDENT  
KBED

CITY  
BEDFORD

STATE  
MA (US)

REQUIRED CHARTING: IAP

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 1

DATE OF REVISION: 09/20/2012

**REASON FOR REVISION:**

1. MOVED FIX 1.73 NM NORTH.
2. CHANGED NAME FROM AREA A TO SEGOE.
3. ADDED REMARK, NAME CHANGED FROM AREA A TO SEGOE.
4. DELETED FAC 1, MORIS.

DEVELOPED BY:

DATE: 01/06/2012

OFFICE: AJV-352

NAME: DAVID SAUER

APPROVED BY:

DATE:

OFFICE: AJV-352

NAME: DARRYEL ADAMS

SIGNATURE:

DISTRIBUTION:

NFDC  
FPO: EST  
ARTCC: ZBW  
ATC FACILITY: BOS APP CON, BED ATCT  
OTHER:



# RADIO FIX AND HOLDING DATA RECORD

**NAME:** SOSYO

**STATE:** MA

**COUNTRY:** US

**LATITUDE/LONGITUDE:** 422914.45N/0712555.75W

**TYPE:** WP, INT, DME

**AIRSPACE DOCKET:**

**FIX TYPE OF ACTION:** NO CHANGE

**FIX MAKE-UP FACILITIES:**

FAC	NAME	IDENT	TYPE	CLASS	MAG BRG	TRUE BRG	DME	DIST FROM NM	FAC FEET	MRA	MAA
1	GARDNER	GDM	VOR/DME	L	111.00	097.00	28.00	28.00		2000	17500
2	MANCHESTER	MHT	VOR/DME	L	201.93	186.93		23.03		2000	17500

**HOLDING:**

**HOLDING TYPE OF ACTION:** NO CHANGE

**PATTERNS:**

PAT	DIR	IDENT	TYPE	RAD/CRS/BRG	CRS INBOUND	TURN (L OR R)	LEG LENGTH TIME DME	HOLDING ALTITUDES MIN MAX	TEMPLATES MIN MAX
1	E	GDM	VOR/DME	111.00	291.00	R	1	2000 6000	4 6
2	SE		WP	113.00	293.00	R	4	2000 6000	4 6

**CONTROLLING OBSTRUCTIONS:**

PAT	AIRSPEED	OBSTRUCTION	COORDINATES	ELEVATION	ACCURACY CODE
1	200	AAO	423000.00N/0713133.00W	712	4E
2	200	AAO	423000.00N/0713133.00W	712	4E

**HOLDING RESTRICTIONS:**

HOLDING LIMITED TO ESTABLISHED PATTERNS.

**REMARKS:**

GARDNER (FAC 1) AND MANCHESTER (FAC 2) USED TO ESTABLISH FIX COORDINATES  
PRECIPITOUS TERRAIN EVALUATION COMPLETED.

**FIX USE:**

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE (US)
EN ROUTE	V431	1, 2				MA (US)
IAP	ILS OR LOC RWY 29	1, 2		KBED	BEDFORD	MA (US)
IAP	RNAV (GPS) Z RWY 29		2	KBED	BEDFORD	MA (US)
IAP	RNAV (RNP) Y RWY 29		2	KBED	BEDFORD	MA (US)
IAP	RNAV (GPS) RWY 05			KLWM	LAWRENCE	MA (US)

**REQUIRED CHARTING:** IAP, CONTROLLER, EN ROUTE LOW

**COMPULSORY REPORTING POINT:** NO

**RECORD REVISION NUMBER:** 3

**DATE OF REVISION:** 09/20/2012

**REASON FOR REVISION:**

- ADDED REMARK, GARDNER (FAC 1) AND MANCHESTER (FAC 2) USED TO ESTABLISH FIX COORDINATES.
- CHANGED PAT 1 TYPE FROM VORTAC TO VOR/DME.
- REVISED REMARK "PRECIPITOUS TERRAIN EVALUATION COMPLETE" TO "...COMPLETED".

**DEVELOPED BY:**                      **DATE:** 04/16/2012                      **OFFICE:** AJV-352                      **NAME:** DAVID SAUER

**APPROVED BY:**                      **DATE:**                      **OFFICE:** AJV-352                      **NAME:** DARRYEL ADAMS

**SIGNATURE:**

**DISTRIBUTION:**      **NFDC**  
                              **FPO: EST**  
                              **ARTCC: ZBW**  
                              **ATC FACILITY: BOS APP CON, BED ATCT**  
                              **OTHER:**



# TERMINAL AIRSPACE DATA REQUIREMENTS

CITY: **BEDFORD**

STATE: **MA**

AIRPORT NAME: **LAURENCE G HANSCOM FLD**

ID: **KBED**

PROCEDURE: **RNAV (GPS) Z RWY 29**

AMDT: **1**

DOCKET # :

(96-AXX-X/Required/Not Required)

**ALL DIST TO 1/100 NM; ELEV TO NEAREST FT; COORD TO 1/100 SEC; DEG TO 1/100 DG.**

1. Distance from           **THLD**           to 1000' point           **3.84**            
(Enter THLD, FAF, ARP, FACILITY, as appropriate)
2. Width of           **FINAL**           segment at 1000' point           **1.20**            
(Enter appropriate segment , final, intermediate, etc.)
3. True Course of           **FINAL**           segment containing 1000' point           **277.22**
4. High Terrain in           **FINAL**           segment containing 1000' point           **381**
5. Distance from           **THLD**           to 1500' point           **5.09**            
(If 1500' point in PT maneuvering area or holding pattern note in remarks)
6. Width of           **FINAL**           segment at 1500' point           **2.00**
7. True Course of           **FINAL**           segment containing 1500' point           **277.22**
8. High Terrain in           **FINAL**           segment containing 1500' point           **381**
9. Threshold Coordinates (if straight-in) ...           **422809.97N / 0711628.42W**
10. ARP Coordinates .....           **422811.80N / 0711720.40W**
11. Runway Approach End and distance furthest from ARP.....RWY           **29**            
Distance           **0.64**           NM
12. FAF Coordinates .....           **422731.76N / 0710938.69W**            
(Click to Select)

**REMARKS: Approach/Drawing attached.**