

**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 ID</u> KBED | <u>PROCEDURE NAME</u> RNAV (GPS) Z RWY 11 | <u>ORIGINAL/AMENDMENT</u> 3 | <u>CITY</u> BEDFORD | <u>STATE</u> MA | | |
| <u>AIRPORT ELEVATION</u> 132 | <u>TDZE</u> 132 | <u>SUPERSEDED</u> RNAV (GPS) Z RWY 11 | <u>ORIGINAL/AMENDMENT</u> 2 | <u>DATED</u> 02/25/2021 | <u>MAG VAR</u> 16W | <u>EPOCH YEAR</u> 1995 |
| <u>FACILITY</u> RNAV | <u>COORDINATES OF FACILITIES</u> | <u>ACTUAL EFFECTIVE DATE</u> 2 DECEMBER 2021 | <u>REQUIRED EFFECTIVE DATE</u> ROUTINE | <u>CANCEL/SUSPEND</u> | | |

TAA

| FROM | FIX TYPE | TO | FIX TYPE | ALTITUDE |
|---------------------|----------|----------------|----------|----------|
| 1. 023/30 CW 203/30 | NOPT | 023/4 CW 203/4 | | 4000 |
| 2. 023/4 CW 203/4 | | ZELKA | IF/IAF | 1900 |
| 3. 203/30 CW 293/30 | | 203/4 CW 293/4 | | 2500 |
| 4. 203/4 CW 293/4 | | HIDRI | IAF | 1900 |
| 5. 293/30 CW 023/30 | | 293/4 CW 023/4 | | 2500 |
| 6. 293/4 CW 023/4 | | ZELKA | IF/IAF | 1900 |

TERMINAL ROUTES

| FROM | FIX TYPE | TO | FIX TYPE | LEG TYPE | FO/FB | RNP | COURSE | DISTANCE | ALTITUDE |
|-----------------------|----------|-----------------------|----------|----------|-------|------|--------|----------|----------|
| HIDRI | IAF | ZELKA | NOPT | TF | FB | 1.00 | 202.97 | 6.00 | 1900 |
| ZELKA | IF/IAF | JOPVU | | TF | FB | 1.00 | 112.96 | 6.24 | 1800 |
| JOPVU | FAF | SUVVO/2.20 NM TO RW11 | | TF | FB | 0.30 | 113.05 | 2.88 | |
| SUVVO/2.20 NM TO RW11 | | RW11 | MAP | TF | FO | 0.30 | 113.05 | 2.20 | |
| RW11 | MAP | 1000 MSL | | CA | | | 113.05 | | 1000 |
| 1000 MSL | | ZIMOT | | DF | FO | 1.00 | | | 2000 |



MISSED APPROACH

MAP:

LPV: DA
LNAV/VNAV: DA
LNAV: RW11

MISSED APPROACH INSTRUCTIONS:

CLIMB TO 1000 THEN CLIMBING LEFT TURN TO 2000 DIRECT ZIMOT AND HOLD.

ALTERNATE MISSED APPROACH INSTRUCTIONS:

PROFILE:

| | | | | | |
|---|---|-----------------------|------------------------|---------------|---------|
| 1. PT | SIDE OF COURSE | OUTBOUND | FT WITHIN | MILES OF | (IAF) |
| 2. HOLD NW ZELKA, LT, 112.96 | INBOUND, 1900 FT. IN LIEU OF PT (IF/IAF), | MAX 6000. | | | |
| 3. FAC: 113.05 | FAF: JOPVU | DIST FAF TO MAP: 5.08 | DIST FAF TO THLD: 5.08 | | |
| 4. MIN ALT: ZELKA 1900, JOPVU 1800, SUVVO/2.20 NM TO RW11 880 | | | | | |
| 5. DIST TO THLD FROM OM: | MM: | IM: | 150 HAT: | 252 HAT: 0.63 | GS ANT: |
| 6. MIN GP INCPT: 1800 | GP ALT AT FAF : JOPVU 1800 | | OM: | MM: | IM: |
| 7. GP ANGLE: 3.00 | 34:1: IS CLEAR | 20:1: IS CLEAR | TCH: 50.3 | | |
| 8. MSA FROM: | | | | | |

PBN REQUIREMENTS NOTE:

RNP APCH - GPS.

NOTES:

CHART NOTE: FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW -19°C OR ABOVE 54°C.
CHART PROFILE NOTE: VGSI AND RNAV GLIDEPATH NOT COINCIDENT (VGSI ANGLE {ANGLE}/TCH {FEET}).
CHART NOTE: FOR INOPERATIVE ALS, INCREASE ALL LNAV/VNAV CATS VISIBILITY TO RVR 5500.

ADDITIONAL FLIGHT DATA:

CHART WANLA
HOLD NE, LT, 223.97 INBOUND.
CHART FAS OBST: 402 TREE (25-039968) 422852N/0712048W.
CHART R-4102 A/B.
CHART VDP AT 1.45 NM TO RW11.
WAAS CHANNEL # 87000
REFERENCE PATH ID: W11A
CHART CIRCLING ICON.
LTP HAE: 12.4 M



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

ALTERNATE: NA STANDARD - CAT C 800-2 1/4, CAT D 800-2 1/2, NA WHEN LOCAL WEATHER NOT AVAILABLE.

| 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 |
| LPV DA | 384 | 2400 | 252 | 384 | 2400 | 252 | 384 | 2400 | 252 | 384 | 2400 | 252 | | | | |
| LNAV/VNAV DA | 474 | 3000 | 342 | 474 | 3000 | 342 | 474 | 3000 | 342 | 474 | 3000 | 342 | | | | |
| LNAV MDA | 660 | 2400 | 528 | 660 | 2400 | 528 | 660 | 5500 | 528 | 660 | 5500 | 528 | | | | |
| CIRCLING | 720 | 1 | 588 | 720 | 1 | 588 | 880 | 2 1/4 | 748 | 920 | 2 1/2 | 788 | | | | |

CHANGES - REASONS

1. LOWERED TAA STRAIGHT-IN 023/30 CW 203/30 TO 023/4 CW 203/4 ALTITUDE FROM 4500 TO 3800 - 2000 ROC PREVIOUSLY APPLIED TO OBSTACLE NOT IN MOUNTANEOUS AREA; 2000 ROC NOW APPLIED TO 1628 TOWER.
2. ADDED TAA RIGHT BASE 293 CW 023 SECTOR AT 2500 AND STEPDOWN SECTOR AT 1900 WITH NO CONNECTING INITIAL - ATC REQUESTED TO PROVIDE OTHER THAN RADAR VECTOR ABILITY.
3. LOWERED LEFT BASE SECTOR ALTITUDE FROM 3200 TO 2500 - 2000 ROC PREVIOUSLY APPLIED NOT REQUIRED AS SECTOR IS NOT IN MOUNTANEOUS AREA; 1000 ROC NOW APPLIED AND ALTITUDE LOWERED TO COMMON ALTITUDE (2500) WITH STRAIGHT-IN PT REQUIRED SECTOR.
4. ADDED LEFT BASE SECTOR STEPDOWN - PROVIDE COMMON ALTITUDE WITH OTHER TAA SECTORS AND ALLOW FOR DESCENT TO INITIAL SEGMENT MIN ALTITUDE; ATC REQUESTED LOWER.
5. CHANGED PBN REQUIREMENT NOTE FROM RNP APCH TO RNP APCH-GPS - PROVIDE SENSOR REQUIREMENT IAW 8260.19.
6. LOWERED CIRCLING CATS A/B MDA FROM 740/800 TO 720 - UPDATED CONTROLLING OBSTACLE (REMOVED MANUALLY PLACED TREES FROM SURVEYED AREA).

COORDINATED WITH:

A4A **ALPA** **AOPA** **APA** **HAI** **NBAA** **OTHER:** ZBW, BOS APP CON, BED ATCT, BED AMGR

| | | | | |
|--------------------------|--|---------------|-------------|--------------|
| FLIGHT CHECKED BY | <i>Digitally signed by</i> DONALD H LANIER Aug 27, 2021 | OFFICE | DATE | |
| JEREMY R VIRTS | | FPO | 08/25/2021 | |
| DEVELOPED BY | <i>Digitally signed by</i> KELLY D DEAN Aug 07, 2021 | OFFICE | DATE | |
| KELLY DEAN | | AJV-A431 | 07/16/2021 | |
| APPROVED BY | <i>Digitally signed by</i> DONALD H LANIER Aug 27, 2021 | OFFICE | DATE | TITLE |
| LONNIE EVERHART | | AJV-A430 | | MANAGER |



FAS DATA BLOCK INFORMATION

| <u>DATA FIELD</u> | <u>DATA</u> |
|--|---------------|
| OPERATION TYPE | 0 |
| SBAS SERVICE PROVIDER IDENTIFIER | 0 |
| AIRPORT IDENTIFIER | KBED |
| RUNWAY | RW11 |
| APPROACH PERFORMANCE DESIGNATOR | 0 |
| ROUTE INDICATOR | Z |
| REFERENCE PATH DATA SELECTOR | 0 |
| REFERENCE PATH IDENTIFIER (APPROACH ID) | W11A |
| LTP/FTP LATITUDE | 422818.5650N |
| LTP/FTP LONGITUDE | 0711801.2345W |
| LTP/FTP ELLIPSOIDAL HEIGHT | +00124 |
| FPAP LATITUDE | 422807.4900N |
| FPAP LONGITUDE | 0711601.7700W |
| THRESHOLD CROSSING HEIGHT (TCH) | 00050.3 |
| 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) | 50.0 |
| | |
| CRC REMAINDER | 16A29590 |

ADDITIONAL PATH POINT RECORD INFORMATION

| | |
|-------------------------|--------|
| ICAO CODE | K6 |
| LTP ORTHOMETRIC HEIGHT | +00402 |
| FPAP ORTHOMETRIC HEIGHT | +00402 |

