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

| FROM | TO | COURSE AND DISTANCE | ALTITUDE |
|---|---|---|---|
| UBG VOR/DME | DUCKA (FO) | 322.82 / 29.00 | 4500 |
| BTG VORTAC | DAFFI (FB) | 269.68 / 19.47 | 4500 |
| DAFFI (IAF) | DUCKA (NOPT) (FB) | 240.87 / 8.16 | 3700 |
| DUCKA (IF/IAF) | COUVE (FB) | 127.38 / 7.41 | 3300 |
| COUVE | DOLLA (FB) | 127.45 / 3.43 | 2900 |
| DOLLA (FAF) | JIKIM/4.50 NM TO RW13 (FB) | 127.49 / 3.63 | |
| (SEE FORM 8260-10) | | | |

## MISSED APPROACH

LPV: DA
LNAV/VNAV: DA
LNAV: RW13

CLIMB TO 3000 DIRECT ZABAX AND ON TRACK 179.77 TO UBG VOR/DME AND HOLD.

1. PT ____ SIDE OF COURSE ____ OUTBOUND ____ FT WITHIN ____ MILES OF ____ (IAF)
2. HOLD NW DUCKA, RT, 127.38 INBOUND, 3700 FT. IN LIEU OF PT (IAF)
3. FAC: 127.49 FAF: DOLLA DIST FAF TO MAP: 8.13 THLD: 8.13
4. MIN. ALT: DUCKA 3700, COUVE 3300, DOLLA 2900, JIKIM/4.50 NM TO RW13 1700*
5. DIST TO THLD FROM OM: ____ MM: ____ IM: ____ 150 HAT: ____ 100 HAT: ____ GS ANT: ____
6. MIN GS INCPT: 2900 GS ALT AT: DOLLA 2900 OM: ____ MM: ____ IM: ____
7. GS ANGLE: 3.00 TCH: 54.0 34:1 IS CLEAR
8. MSA FROM: RW13 5000

ADDITIONAL FLIGHT DATA:
HOLD S, LT, 003.00 INBOUND.
CHART FAS OBST: 363 TREE 453353N/1225811W
FAS OBST: 429 AAO 453628N/1225954W
569 AAO 453727N/1230018W.
1199 AAO 453945N/1230439W.
DISTANCE TO THLD FROM 200 HAT: 0.47 NM.
CHART VDP AT 1.35 MILES TO RW13*
*LNAV ONLY.
WAAS CHANNEL # 69502
REFERENCE PATH ID: W13A
LTP HAE: 38.1 M

MAG VAR: 16E 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 | 403 | 2400 | 200 | 403 | 2400 | 200 | 403 | 2400 | 200 | 403 | 2400 | 200 | | | |
| LNAV/VNAV DA | 650 | 5000 | 447 | 650 | 5000 | 447 | 650 | 5000 | 447 | 650 | 5000 | 447 | | | |
| LNAV MDA | 680 | 2400 | 477 | 680 | 2400 | 477 | 680 | 4000 | 477 | 680 | 5000 | 477 | | | |
| CIRCLING | 680 | 1 | 472 | 680 | 1 | 472 | 680 | 1 1/2 | 472 | 760 | 2 | 552 | | | |

NOTES:
CHART NOTE: FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW -15C (5F) OR ABOVE 54C (130F).
CHART NOTE: DME/DME RNP-0.3 NA.
CHART PROFILE NOTE: VGSI AND RNAV GLIDEPATH NOT COINCIDENT.
CHART NOTE: WHEN LOCAL ALTIMETER SETTING NOT RECEIVED, USE PORTLAND INTL ALTIMETER SETTING AND (SEE FORM 8260-10)

@ NA WHEN LOCAL WEATHER NOT AVAILABLE.

QUALITY CHECKED

| CITY AND STATE | ELEVATION: 208 TDZE: 203 AIRPORT NAME: | FACILITY IDENTIFIER: | PROCEDURE NO./AMDT NO./EFFECTIVE DATE: | SUP: RNAV (GPS) RWY 12 |
|---|---|---|---|---|
| PORTLAND, OR | PORTLAND-HILLSBORO | RNAV | RNAV (GPS) RWY 13, AMDT 1A | AMDT: 1 |
| | | | | DATED 06/03/2010 |

| ALL AFFECTED PROCEDURES REVIEWED? | COORDINATES OF FACILITIES | REQUIRED EFFECTIVE DATE |
|---|---|---|
| [ ] YES [X] NO | | **ROUTINE** |

COORDINATED WITH:

| ATA | AAT | ALPA | APA | AOPA | NBAA | OTHER (specify) |
|---|---|---|---|---|---|---|
| [ ] | [ ] | [X] | [ ] | [X] | [X] | [X] **ZSE, PDX APP CON, AMGR** |

| FLIGHT CHECKED BY | | |
|---|---|---|
| NAME: **SCOTT ANDREW THOMPSON** | FIFO **AVN-200** | DATE: **03/31/2010** |
| **DEVELOPED BY** | | |
| NAME: **VICTOR BOONE** | FIFO **AJV-354** | DATE: **07/16/2012** |
| **APPROVED BY** | | |
| NAME: **DEZ SILAGYI** **MANAGER** | FIFO **AJV-354** | DATE: |

CHANGES:

**1. CHANGED PROCEDURE NAME FROM RNAV (GPS) RWY 12 TO RWY 13.**
**2. CHANGED ALL REFERENCES FROM RWY 12 TO RWY 13 AND UPDATED ARINC CODING.**
**3. CHANGED UNCOMPENSATED BARO-VNAV SYSTEMS NOTE FROM ABOVE 49C (120F) TO ABOVE 54C (130F).**
**4. UPDATE FAS DATA SHEET FPAP COORDINATES.**

REASONS:

**1, 2. RUNWAY NUMBERING CHANGED FROM RWY 12 TO RWY 13.**
**3. PER MEMO DTD 30 MAY 2012.**
**4. AFS MEMO DTD 1/18/2011.**

QUALITY 4 CHECKED

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 aiport 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 |
|---|---|---|---|
| JIKIM/4.50 NM TO RW13 | RW13 (MAP) (FO) | 127.49 / 4.50 | |
| RW13 (MAP) | 403 MSL | 127.49 | |
| 403 MSL | ZABAX (FB) | | |
| ZABAX | UBG VOR/DME (FO) | 179.77 / 9.66 | 3000 |

NOTES, (CONT.):
INCREASE ALL DA AND MDA 60 FEET, INCREASE LNAV/VNAV ALL CATS AND LNAV CAT C AND D VISIBILITY 1/4 MILE.
CHART NOTE: FOR INOPERATIVE MALSR WHEN USING PORTLAND INTL ALTIMETER SETTING, INCREASE LPV ALL CATS VISIBILITY TO RVR 5000, LNAV/VNAV ALL CATS VISIBILITY AND LNAV CAT D VISIBILITY TO RVR 6000.

CHART NOTE: VDP AND BARO-VNAV NA WHEN USING PORTLAND INTL ALTIMETER SETTING.

QUALITY CHECKED

| CITY AND STATE | ELEVATION: 208 TDZE: 203 | FACILITY IDENTIFIER: | PROCEDURE NO./ AMDT NO./EFFECTIVE DATE: | SUP: RNAV (GPS) RWY 12 |
|---|---|---|---|---|
| PORTLAND, OR | AIRPORT NAME: PORTLAND-HILLSBORO | RNAV | RNAV (GPS) RWY 13, AMDT 1A | AMDT: 1 |
| | | | | DATED: 06/03/2010 |

| ALL AFFECTED PROCEDURES REVIEWED? | COORDINATES OF FACILITIES | REQUIRED EFFECTIVE DATE |
|---|---|---|
| ☐ YES ☐ NO | | |

COORDINATED WITH:

ATA ☐ AAT ☐ ALPA ☐ APA ☐ AOPA ☐ NBAA ☐ OTHER (specify) ☐ _____

| FLIGHT CHECKED BY | | |
|---|---|---|
| NAME: | FIFO | DATE: |
| **DEVELOPED BY** | | |
| NAME: | FIFO | DATE: |
| **APPROVED BY** | | |
| NAME: | FIFO | DATE: |

CHANGES:

REASONS:

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 aiport elevation. Distances are in nautical miles unless otherwise indicated, except visibilities which are in statute miles or in feet RVR.

## FAS DATA BLOCK INFORMATION

| DATA FIELD | DATA |
|---|---|
| OPERATION TYPE | 0 |
| SBAS SERVICE PROVIDER IDENTIFIER | 0 |
| AIRPORT IDENTIFIER | KHIO |
| RUNWAY | RW13 |
| APPROACH PERFORMANCE DESIGNATOR | 0 |
| ROUTE INDICATOR | |
| REFERENCE PATH DATA SELECTOR | 0 |
| REFERENCE PATH IDENTIFIER (APPROACH ID) | W13A |
| LTP/FTP LATITUDE | 453258.5865N |
| LTP/FTP LONGITUDE | 1225734.2205W |
| LTP/FTP ELLIPSOIDAL HEIGHT | +00381 |
| FPAP LATITUDE | 453146.9100N |
| FPAP LONGITUDE | 1225618.9500W |
| THRESHOLD CROSSING HEIGHT (TCH) | 00054.0 |
| TCH UNITS SELECTOR (METERS OR FEET USED) | F |
| GLIDEPATH ANGLE (GPA) | 03.00 |
| COURSE WIDTH AT THRESHOLD | 106.75 |
| LENGTH OFFSET | 0736 |
| HORIZONTAL ALERT LIMIT (HAL) | 40.0 |
| VERTICAL ALERT LIMIT (VAL) | 35.0 |
| CRC REMAINDER | 1D0E4489 |

## ADDITIONAL PATH POINT RECORD INFORMATION

| | |
|---|---|
| ICAO CODE | K1 |
| LTP ORTHOMETRIC HEIGHT | +00609 |
| FPAP ORTHOMETRIC HEIGHT | +00609 |

QUALITY CHECKED

| CITY AND STATE | ELEVATION: 208 TDZE: 203 | FACILITY IDENTIFIER: | PROCEDURE NO./ AMDT NO./EFFECTIVE DATE: | SUP: RNAV (GPS) RWY 12 |
|---|---|---|---|---|
| PORTLAND, OR | AIRPORT NAME: PORTLAND-HILLSBORO | RNAV | RNAV (GPS) RWY 13, AMDT 1A | AMDT: 1 |
| | | | | DATED: 06/03/2010 |

| ALL AFFECTED PROCEDURES REVIEWED? | COORDINATES OF FACILITIES | REQUIRED EFFECTIVE DATE |
|---|---|---|
| ☐ YES ☐ NO | | |

COORDINATED WITH:

ATA ☐ AAT ☐ ALPA ☐ APA ☐ AOPA ☐ NBAA ☐ OTHER (specify) ☐ _____

| FLIGHT CHECKED BY | | |
|---|---|---|
| NAME: | FIFO | DATE: |
| **DEVELOPED BY** | | |
| NAME: | FIFO | DATE: |
| **APPROVED BY** | | |
| NAME: | FIFO | DATE: |

CHANGES:

REASONS:

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

ARINC PACKET - 424-18 - RNAV (GPS)

```
                 1         2         3         4         5         6         7         8         9         0         1         2         3
NAVAID  123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
        ------------------------------------------------------------------------------------------------------------------------------------
        SUSAD        BTG   K1011660VTHW N45445212W122352953    N45445163W122353227E0210002532     NARBATTLE GROUND
        SUSAD        UBG   K1011740VDHA N45211162W122584137    N45211162W122584137E0210014402     NARNEWBERG

                 1         2         3         4         5         6         7         8         9         0         1         2         3
WP      123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
        ------------------------------------------------------------------------------------------------------------------------------------
        SUSAEAENRT   COUVE K10    C     N45421595W123072178                      E0161     NAR           COUVE
        SUSAEAENRT   DAFFI K10    C   L N45500458W123021826                      E0162     NAR           DAFFI
        SUSAEAENRT   DOLLA K10    C     N45393056W123042699                      E0161     NAR           DOLLA
        SUSAEAENRT   DUCKA K10    C     N45481275W123134009                      E0162     NAR           DUCKA
        SUSAEAENRT   JIKIM K10    C     N45363572W123012262                      E0161     NAR           JIKIM
        SUSAEAENRT   ZABAX K10    W     N45302960W122545786                      E0160     NAR           ZABAX

                 1         2         3         4         5         6         7         8         9         0         1         2         3
AIRPORT 123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
        ------------------------------------------------------------------------------------------------------------------------------------
        SUSAP KHIOK1AHIO     0     066YHN45322620W122570070E016000208         1800018000C    MNAR    PORTLAND-HILLSBORO

                 1         2         3         4         5         6         7         8         9         0         1         2         3
SEGMENT 123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
        ------------------------------------------------------------------------------------------------------------------------------------
        SUSAP KHIOK1FR13   ABTG   010BTG  K1D 0V       IF                                                18000                A JS
        SUSAP KHIOK1FR13   ABTG   020DAFFIK1EA0E  A 020TF                    26970195    + 04500                              A JS
        SUSAP KHIOK1FR13   ABTG   030DUCKAK1EA0EE B 010TF                    24090082    + 03700                              A JS
        SUSAP KHIOK1FR13   ADAFFI 010DAFFIK1EA0E  A    IF                                                18000                A JS
        SUSAP KHIOK1FR13   ADAFFI 020DUCKAK1EA0EE B 010TF                    24090082    + 03700                              A JS
        SUSAP KHIOK1FR13   AUBG   010UBG  K1D 0V       IF                                                18000                A JS
        SUSAP KHIOK1FR13   AUBG   020DUCKAK1EA0EY   020TF                    32280290    + 04500                              A JS
        SUSAP KHIOK1FR13   AUBG   030DUCKAK1EA0EE AR   HF                    12740040    + 03700                              A JS
        SUSAP KHIOK1FR13   R      010DUCKAK1EA0E  I    IF                                + 03700     18000                    A JS
        SUSAP KHIOK1FR13   R      011COUVEK1EA0E S  051TF                    12740074    + 03300                              A JS
        SUSAP KHIOK1FR13   R      020DOLLAK1EA1E  F 051TF                    12750034    + 02900                  RW13  K1PGA JS
        SUSAP KHIOK1FR13   R      020DOLLAK1EA2WALPV       ALNAV/VNAV ALNAV                                                     JS
        SUSAP KHIOK1FR13   R      021JIKIMK1EA0E S  031TF                    12750036    V 0170001706        -300            A JS
        SUSAP KHIOK1FR13   R      030RW13 K1PG0GY M 031TF                    12750045      00254             -300            A JS
        SUSAP KHIOK1FR13   R      040         0  M     CA                    1275        + 00403                              A JS
        SUSAP KHIOK1FR13   R      050ZABAXK1EA0E       DF                                                                      A JS
        SUSAP KHIOK1FR13   R      060UBG  K1D 0VY   010TF                    1798        + 03000                              A JS
        SUSAP KHIOK1FR13   R      070UBG  K1D 0VE  L   HM                    00300040    + 03000                              A JS

                 1         2         3         4         5         6         7         8         9         0         1         2         3
```

QUALITY CHECKED

| CITY AND STATE | ELEVATION: 208 TDZE: 203 | FACILITY IDENTIFIER: | PROCEDURE NO. / AMDT NO. / EFFECTIVE DATE: | SUP: RNAV (GPS) RWY 12 |
|---|---|---|---|---|
| PORTLAND, OR | AIRPORT NAME: PORTLAND-HILLSBORO | RNAV | RNAV (GPS) RWY 13, AMDT 1A | AMDT: 1 |
| | | | | DATED: 06/03/2010 |

| ALL AFFECTED PROCEDURES REVIEWED? | COORDINATES OF FACILITIES | REQUIRED EFFECTIVE DATE |
|---|---|---|
| ☐ YES ☐ NO | | |

COORDINATED WITH:

ATA ☐ AAT ☐ ALPA ☐ APA ☐ AOPA ☐ NBAA ☐ OTHER ☐ (specify) _____

| FLIGHT CHECKED BY | | |
|---|---|---|
| NAME: | FIFO | DATE: |
| **DEVELOPED BY** | | |
| NAME: | NFPG | DATE: |
| **APPROVED BY** | | |
| NAME: | NFPG | DATE: |

CHANGES:

REASONS:

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```
RUNWAY  123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
        ------------------------------------------------------------------------------------------------------------------------------
        SUSAP KHIOK1GRW13    0066001276 N45325859W122573422+0000    +0038100200000054150I

                 1         2         3         4         5         6         7         8         9         0         1         2         3
PP      123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
        ------------------------------------------------------------------------------------------------------------------------------
        SUSAP KHIOK1PR13   RW13 001 0000W13A0N4532585865W12257342205+003810300N4531469100W122561895001067507360005 40F4003501D0E4489
        SUSAP KHIOK1PR13   RW13 002E      +00609+00609LPV       69502

                 1         2         3         4         5         6         7         8         9         0         1         2         3
MSA     123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
        ------------------------------------------------------------------------------------------------------------------------------
        SUSAP KHIOK1SRW13 K1PG               0   18018005025                                                                          M
```

QUALITY CHECKED

| CITY AND STATE | ELEVATION: 208 TDZE: 203 | FACILITY IDENTIFIER: | PROCEDURE NO. / AMDT NO. / EFFECTIVE DATE: | SUP: RNAV (GPS) RWY 12 |
|---|---|---|---|---|
| PORTLAND, OR | AIRPORT NAME: PORTLAND-HILLSBORO | RNAV | RNAV (GPS) RWY 13, AMDT 1A | AMDT: 1 |
| | | | | DATED: 06/03/2010 |

| ALL AFFECTED PROCEDURES REVIEWED? | COORDINATES OF FACILITIES | REQUIRED EFFECTIVE DATE |
|---|---|---|
| ☐ YES ☐ NO | | |

COORDINATED WITH:

ATA ☐ AAT ☐ ALPA ☐ APA ☐ AOPA ☐ NBAA ☐ 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**

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.

ARINC SUMMARY - 424-18 - RNAV (GPS)

| ROUTES | TRANSITION | FIX | SEQ | USE | PATH | TURN | FO/FB | RNP | MAG(TRUE) | DISTANCE | ALTITUDE | SPEED |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | BTG | BTG | 010 | | IF | | FB | | | | | |
| | BTG | DAFFI | 020 | IAF | TF | | FB | 2.0 | 269.7(285.7T) | 019.5 | AA 04500 | |
| | BTG | DUCKA | 030 | | TF | | FB | 1.0 | 240.9(256.9T) | 008.2 | AA 03700 | |
| | DAFFI | DAFFI | 010 | IAF | IF | | FB | | | | | |
| | DAFFI | DUCKA | 020 | | TF | | FB | 1.0 | 240.9(256.9T) | 008.2 | AA 03700 | |
| | UBG | UBG | 010 | | IF | | FB | | | | | |
| | UBG | DUCKA | 020 | | TF | | FO | 2.0 | 322.8(338.8T) | 029.0 | AA 04500 | |
| | UBG | DUCKA | 030 | IAF | HF | R | FO | | 127.4(143.4T) | 004.0 | AA 03700 | |
| | | DUCKA | 010 | FACF | IF | | FB | | | | AA 03700 | |
| | | COUVE | 011 | SDF | TF | | FB | 0.5 | 127.4(143.4T) | 007.4 | AA 03300 | |
| | | DOLLA | 020 | FAF | TF | | FB | 0.5 | 127.5(143.5T) | 003.4 | AA 02900 | |
| | | JIKIM | 021 | SDF | TF | | FB | 0.3 | 127.5(143.5T) | 003.6 | AA 01700 GS 01706 | |
| | | RW13 | 030 | MAP | TF | | FO | 0.3 | 127.5(143.5T) | 004.5 | AT 00254 | |

| MISSED APPROACH | FIX | SEQ | USE | PATH | TURN | FO/FB | RNP | MAG(TRUE) | DISTANCE | ALTITUDE | SPEED |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 040 | | CA | | FB | | 127.5(143.5T) | | AA 00403 | |
| | ZABAX | 050 | | DF | | FB | | | | | |
| | UBG | 060 | | TF | | FO | 1.0 | 179.8(195.8T) | | AA 03000 | |
| | UBG | 070 | | HM | L | FO | | 003.0(019.0T) | 004.0 | AA 03000 | |

| POINT DATA | WAYPOINT | LAT IN SECS | LONG IN SECS | LAT IN MINS | LONG IN MINS |
|---|---|---|---|---|---|
| | BTG | N454452.12 | W1223529.53 | N4544.869 | W12235.492 |
| | UBG | N452111.62 | W1225841.37 | N4521.194 | W12258.690 |
| | COUVE | N454215.95 | W1230721.78 | N4542.266 | W12307.363 |
| | DAFFI | N455004.58 | W1230218.26 | N4550.076 | W12302.304 |
| | DOLLA | N453930.56 | W1230426.99 | N4539.509 | W12304.450 |
| | DUCKA | N454812.75 | W1231340.09 | N4548.213 | W12313.668 |
| | JIKIM | N453635.72 | W1230122.62 | N4536.595 | W12301.377 |
| | ZABAX | N453029.60 | W1225457.86 | N4530.493 | W12254.964 |
| | RW13 | N453258.59 | W1225734.22 | N4532.977 | W12257.570 |

| RUNWAY DATA | RWY | THRESHOLD ELEVATION | TCH |
|---|---|---|---|
| | RW13 | 00200 | 54 |

QUALITY CHECKED

| CITY AND STATE | ELEVATION: 208 TDZE: 203 | FACILITY IDENTIFIER: | PROCEDURE NO. / AMDT NO. / EFFECTIVE DATE: | SUP: RNAV (GPS) RWY 12 |
|---|---|---|---|---|
| **PORTLAND, OR** | AIRPORT NAME: **PORTLAND-HILLSBORO** | **RNAV** | **RNAV (GPS) RWY 13, AMDT 1A** | AMDT: **1** |
| | | | | DATED: **06/03/2010** |

| ALL AFFECTED PROCEDURES REVIEWED? | COORDINATES OF FACILITIES | REQUIRED EFFECTIVE DATE |
|---|---|---|
| ☐ YES ☐ NO | | |

COORDINATED WITH:

ATA ☐ AAT ☐ ALPA ☐ APA ☐ AOPA ☐ NBAA ☐ 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. |
|---|---|---|---|---|---|---|---|---|
| FEEDER | UBG VOR/DME | DUCKA | 1. AAO | 454425.30N/1230748.00W | 2417 (6A) | 2000 | | 4500 |
| | | | 2. TERRAIN | 454425.30N/1230748.00W | 2217 (2200) | | AS1500 | 3700 |
| FEEDER | BTG VORTAC | DAFFI | 3. AAO | 455130.00N/1230203.00W | 2392 (4E) | 2000 | AT108 | 4500 |
| | | | 4. TERRAIN | 455130.00N/1230203.00W | 2192 (2200) | | AS1500 | 3700 |
| INITIAL | DAFFI | DUCKA | 5. AAO | 454708.90N/1230610.70W | 2465 (6A) | 1000 | AT235 | 3700 |
| | | | 6. TERRAIN | 454708.90N/1230610.70W | 2265 (2300) | | AS1000 | 3300 |
| INTERMEDIATE | DUCKA (IF/IAF) | COUVE | 1. AAO | 454425.30N/1230748.00W | 2417 (6A) | 500 | AT383 | 3300 |
| | | | 2. TERRAIN | 454425.30N/1230748.00W | 2217 (2200) | | AS1000 | 3200 |
| INTERMEDIATE: | COUVE | DOLLA | 7. AAO | 454300.00N/1230609.00W | 2080 (4E) | 500 | DG222 AC98 | 2900 |
| STEPDOWN | | | 8. TERRAIN | 454251.00N/1230609.00W | 1821 (1800) | | AS1000 | 2800 |
| FINAL: LPV | DOLLA | RW13 | | | | ASC | | 403/200 |
| FINAL: LNAV/VNAV | DOLLA | RW13 | 9. TREE (KHIO0051) | 453352.81N/1225811.36W | 363 (1A) | 23.4:1 | | 650/447 |
| FINAL: LNAV | DOLLA | JIKIM/4.50 NM TO | 10. AAO | 453842.46N/1230412.21W | 902 (2A) | 250 | DG381 XL107 RA60 | 1700 |
| | | RW13 | | | | | RA60 DG381 XL107 | 1700 |
| 2. HOLD-IN-LIEU-OF-PT | DUCKA | P-5 | 12. AAO | 455232.50N/1232342.50W | 2693 (6A) | 1000 | | 3700 |
| | | | 13. TERRAIN | 455232.50N/1232342.50W | 2493 (2500) | | AS1000 | 3500 |
| 3. MISSED APPROACH — MAP: | DA / DA / RW13 | UBG VOR/DME | | | | ASC | | 3600 |
| | | | 14. AAO | 452112.00N/1225839.00W | 1805 (4E) | 1000 | | 2900 |
| ELEV: | 234/364/430 | | 15. TERRAIN | 452112.00N/1225839.00W | 1605 (1600) | | AS1000 | 2600 |

| 4. CIRCLING AREA | DISTANCE | HT. ABV. ARPT. REQUIRED | HT. ABV. ARPT. ACTUAL | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CATEGORY A | 1.3 NM | 350 | 472 | 9. TREE (KHIO0051) | 453352.81N/1225811.36W | 363 (1A) | 300 | | 680 |
| CATEGORY B | 1.5 NM | 450 | 472 | 9. TREE (KHIO0051) | 453352.81N/1225811.36W | 363 (1A) | 300 | | 680 |
| CATEGORY C | 1.7 NM | 450 | 472 | 9. TREE (KHIO0051) | 453352.81N/1225811.36W | 363 (1A) | 300 | | 680 |
| CATEGORY D | 2.3 NM | 550 | 552 | 9. TREE (KHIO0051) | 453352.81N/1225811.36W | 363 (1A) | 300 | HAA | 760 |
| CATEGORY E | 4.5 NM | 550 | | | | | | | |

5. MINIMUM SAFE ALTITUDES — PRIMARY NAVAID: RW13

| SECTOR | OBSTRUCTION | BRG/DIST | ELEVATION (MSL) | M S A | SECTOR | OBSTRUCTION | BRG/DIST | ELEVATION (MSL) | M S A |
|---|---|---|---|---|---|---|---|---|---|
| 360-360 | AAO | 270/ 25.6 | 3906 (6C) | 5000 | | | | | |

QUALITY CHECKED 9

| CITY AND STATE | ELEVATION: 208 / AIRPORT NAME: | FACILITY | PROCEDURE AND AMENDMENT NO: | REGION |
|---|---|---|---|---|
| PORTLAND, OR | PORTLAND-HILLSBORO | RNAV | RNAV (GPS) RWY 13, AMDT 1A | ANM |

## PART B - SUPPLEMENTAL DATA

| 1. COMMUNICATIONS WITH: | 2. WEATHER SERVICE | | | 3. ALTIMETER SETTING |
|---|---|---|---|---|
| ZSE ARTCC<br>PDX APP CON<br>HIO TOWER | | N W S | OTHER:<br>ATIS | SOURCE: KHIO / KPDX |
| | | F A A | | DISTANCE: 0 / 15.17 |
| | | A / C | | HOURS REMOTE OPERATION: |
| SATISFACTORY ON: | | | | |
| X V H F  X U H F  H F | LOCATION: KHIO | | | ADJUSTMENT: 0 / 60 |

| | | | |
|---|---|---|---|
| 4. MONITOR STATUS | PRIMARY NAVAID: | | |
| | MONITOR POINT: | | |
| | HRS OPTN: | CAT 1 | |
| | | CAT 3 | |
| 5. APPROACH & RUNWAY LIGHTING | | ALS | |
| | | (S) SALS | |
| | X | MALSR 13 (PCL) | |
| | X | HIRL 31, 13 | |
| | X | MIRL 02, 20 | |
| | X | REIL 31 | |
| | | TDZ | |
| | | C/LINE | |
| | X | OTHER (SPECIFY)<br>PAPI-4L 31, 13 VASI-4L 02, 20 | |
| 6. RUNWAY MARKINGS | BASIC | BSC-F 02, 20 | |
| | ALL WEATHER | PIR-G 13 | |
| | INSTRUMENT | NPI-G 31 | |
| 7. RUNWAY VISUAL RANGE | APPROACH | 13 | |
| | MIDFIELD | | |
| | ROLL OUT | | |
| 8. GLIDE PATH | GP ANGLE: 3.00 | | ELEV RWY THRESHOLD: 199.9 |
| | DISTANCE FROM RWY: | | ELEV GP ANTENNA: |
| | | | THRESHOLD CROSSING HEIGHT: 54.0 |
| 9. FINAL APPROACH COURSE AIMING | X | RUNWAY THRESHOLD | FT. FROM THRESHOLD |
| | X | ON CENTERLINE | FT. FROM CENTERLINE |

10. WAIVERS: NONE

| | |
|---|---|
| PART D - PREPARED BY: VICTOR BOONE | DATE: 07/16/2012 |
| TITLE: AERONAUTICAL INFORMATION SPECIALIST | OFFICE: AJV-354 |

## PART C - REMARKS:

PRECIPITOUS TERRAIN EVALUATION COMPLETED.

TERPS PARAGRAPH 289 APPLIED TO 1199 AAO
453944.84N-1230439.10W
RASS PRESSURE PATTERNS SAME
KHIO 208, KPDX 31
RA=59.91
KHIO ASOS IS ON SERVICE A.
KPDX ASOS IS ON SERVICE A.
ISA DEVIATION -30
VGSI DATA 3.00/49.0

NO ADDITIONAL AIRSPACE REQUIRED.

LPV INNER/OUTER SLOPE: 34:1
LNAV/VNAV INNER SLOPE 23.4:1
LNAV/VNAV OUTER SLOPE 34:1

ALL PROCEDURE SEGMENTS OVERLIE 700' AGL FLOOR CLASS E AIRSPACE.

TERPS, VOLUME 1, "VISUAL PORTION OF FINAL" PENETRATIONS:
20:1 (RWY 2)
311 TREE (KHIOL027) 453141.92N-1225727.03W (2.07)

FPO NOTIFIED OF 20:1 PENETRATION, PER FPO NIGHT OPERATIONS WILL NOT BE RESTRICTED ON THIS PROCEDURE PENDING AIRPORT NOTIFICATION OF VISUAL SURFACE PENETRATION.

TAA NOT DEVELOPED PER ATC REQUEST.

INTERMEDIATE CONTROLLING OBSTACLE THE SAME FOR ALL FINAL TYPES.

CLIMB IN HOLD ALTITUDE OF 3600 FOR MISSED APPROACH TO ACCOMODATE MEA.

OBST #9 LOCATED 42' INTO LNAV FINAL SECONDARY AREA.

QUALITY CHECKED

# STANDARD INSTRUMENT APPROACH PROCEDURE DATA RECORD

PART - A OBSTRUCTION DATA

| 1. APP SEGMENT | FROM | TO | OBSTRUCTION | COORDINATES | ELEV. MSL | ROC | ALT. ADJUSTMENTS | MIN. ALT. |
|---|---|---|---|---|---|---|---|---|
| **FINAL: LNAV STEPDOWN** | **JIKIM/4.50 NM TO RW13** | **RW13** | **11. AAO** | **453627.67N/1225953.65W** | **429 (2C)** | **250** | **SA-2** | **680** |

| 3. MISSED APPROACH | | |
|---|---|---|
| | MAP: | |
| | | |
| | ELEV: | |

| 4. CIRCLING AREA | DISTANCE | HT. ABV. ARPT. REQUIRED | HT. ABV. ARPT. ACTUAL |
|---|---|---|---|
| CATEGORY A | 1.3 NM | 350 | |
| CATEGORY B | 1.5 NM | 450 | |
| CATEGORY C | 1.7 NM | 450 | |
| CATEGORY D | 2.3 NM | 550 | |
| CATEGORY E | 4.5 NM | 550 | |

5. MINIMUM SAFE ALTITUDES — PRIMARY NAVAID:

| SECTOR | OBSTRUCTION | BRG/DIST | ELEVATION (MSL) | M S A | SECTOR | OBSTRUCTION | BRG/DIST | ELEVATION (MSL) | M S A |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | |
| | | | | | | | | | |

| CITY AND STATE | ELEVATION: 208 / AIRPORT NAME: | FACILITY | PROCEDURE AND AMENDMENT NO: | REGION |
|---|---|---|---|---|
| **PORTLAND, OR** | **PORTLAND-HILLSBORO** | **RNAV** | **RNAV (GPS) RWY 13, AMDT 1A** | **ANM** |

## PART B - SUPPLEMENTAL DATA

| 1. COMMUNICATIONS WITH: | | | 2. WEATHER SERVICE | | | 3. ALTIMETER SETTING |
|---|---|---|---|---|---|---|
| SATISFACTORY ON: | | | | N W S | OTHER: | SOURCE: |
| | | | | F A A | | DISTANCE: |
| | | | | A / C | | HOURS REMOTE OPERATION: |
| V H F | U H F | H F | LOCATION: | | | ADJUSTMENT: |

| | | |
|---|---|---|
| 4. MONITOR STATUS | PRIMARY NAVAID: | |
| | MONITOR POINT: | |
| | HRS OPTN: | CAT 1 |
| | | CAT 3 |

| | | |
|---|---|---|
| 5. APPROACH & RUNWAY LIGHTING | | **ALS** |
| | | **(S) SALS** |
| | | **MALS** |
| | | **HIRL** |
| | | **MIRL** |
| | | **REIL** |
| | | **TDZ** |
| | | **C/LINE** |
| | | **OTHER (SPECIFY)** |

| | |
|---|---|
| 6. RUNWAY MARKINGS | BASIC |
| | ALL WEATHER |
| | INSTRUMENT |
| 7. RUNWAY VISUAL RANGE | APPROACH |
| | MIDFIELD |
| | ROLL OUT |

| | | |
|---|---|---|
| 8. GLIDE PATH | GP ANGLE: | ELEV RWY THRESHOLD: |
| | DISTANCE FROM RWY: | ELEV GP ANTENNA: |
| | | THRESHOLD CROSSING HEIGHT: |

| | | | |
|---|---|---|---|
| 9. FINAL APPROACH COURSE AIMING | | RUNWAY THRESHOLD | FT. FROM THRESHOLD |
| | | ON CENTERLINE | FT. FROM CENTERLINE |

10. WAIVERS:

| | |
|---|---|
| PART D - PREPARED BY: | DATE: |
| TITLE: | OFFICE: |

PART C - REMARKS:

QUALITY CHECKED