Flight Procedure Tracking Form	Action: FLIGHT CHECK	Task Type: STAR	Date Open: 10/14/2011	Task #: 2011101426848001001	Request #: 20111014268480
Procedure: STAR HHOOD (RNAV) ONE PORTLAND OR KPDX		Airport ID: KPDX	Airport: PORTLAND INTL		Reimbursable #:
City: PORTLAND	ST: OR	GPS #:		Estimated Chart Date: 03/07/2013	FICO #:
Fac ID:	Fac. Type: Proc D	Specialist: CHARLES ERICKSON			

Procedure Review

P1

	Rec'd	Rel'd	Full Name	Comments
Lead:	09/10/2012	11/29/2012	LONNIE EVERHART	
QA:	11/21/2012			
Liaison:			Spurlin	DME/DME

DME / DME

ESV REQUEST INCLUDED

Procedure Comments: ENROUTE **Remark Type:** INFORMATION

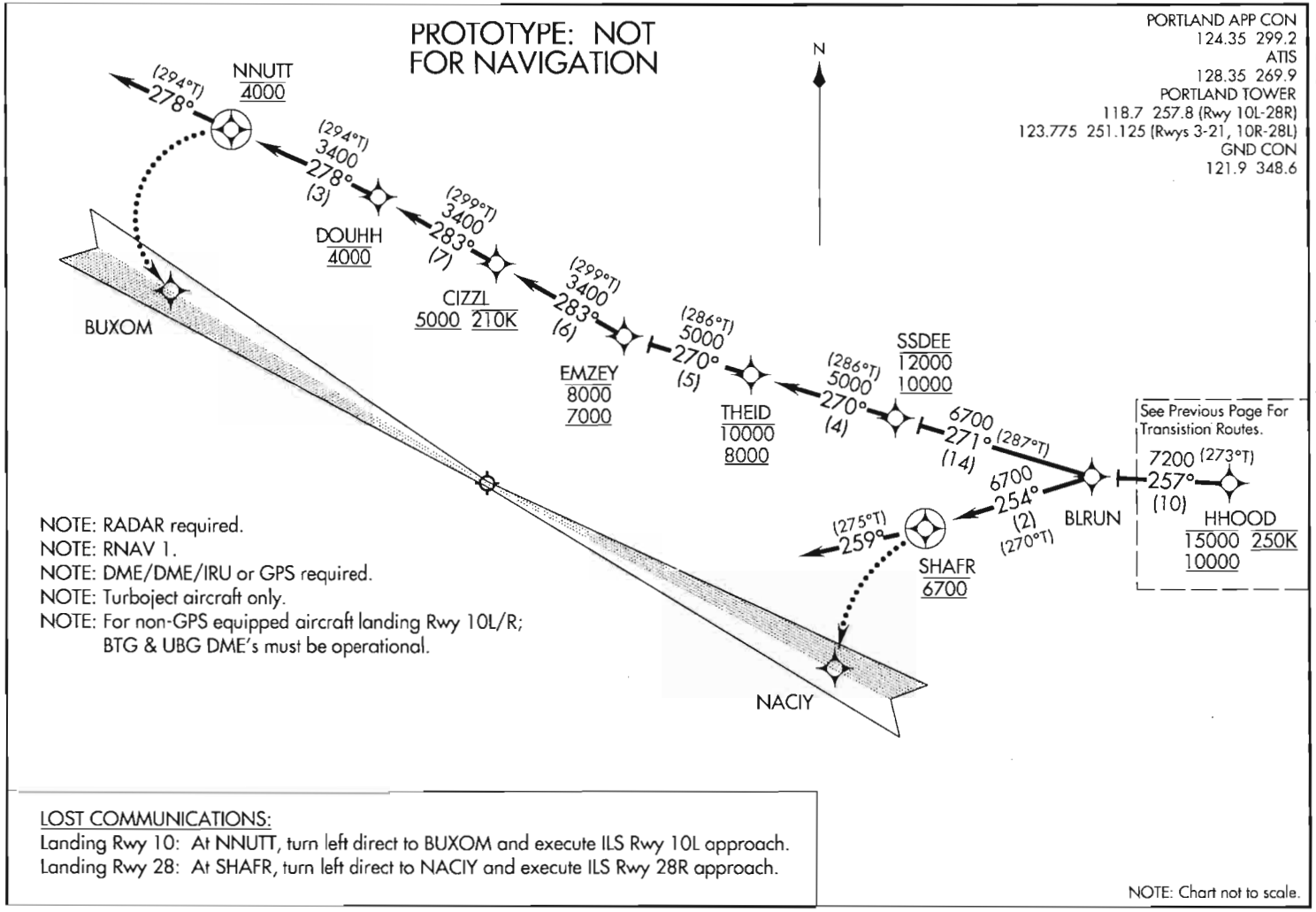
pkg 1 of 1

PORTLAND, OR PORTLAND INTL (KPDX) HHOOD ONE (STAR) ENROUTE-YES FC: 1.8.13 PUB: 1.22.13

ATTACHED FORMS: ESV REPORTS; 7100-4; 7100-3; BAYYR, ORIG; BLRUN, ORIG; CIZZL, REV 1; DOUHH, ORIG; DUFUR-INT, REV 3; EMZEY, ORIG; HANDL, ORIG; HHOOD, ORIG; JERDT, ORIG; JKNOX, ORIG; JOTBA, ORIG; JUBAR, ORIG; MYTOE, ORIG; NNUTT, ORIG; RABBI, ORIG; SHAFR, ORIG; SODDA, ORIG; SSDEE, ORIG; THEID, ORIG; YENTL, ORIG; (INFO ONLY) KLICKITAT (LTJ) VDME, REV 7.

CONTACT: PETE GETZ/LONNIE EVERHART-AVN-130 LEADS, 405.954.2079/ 405.954.4576.

LTJ : 4542.815/12106.050	DUFUR: 4525.720/12112.225	JKNOX: 4531.044/12024.679	RABBI: 4528.228/12124.923
BAYYR: 4531.726/12124.204	EMZEY: 4538.867/12229.154	JOTBA: 4510.012/12031.205	SHAFR: 4532.445/12200.292
BLRUN: 4532.290/12157.450	HANDL: 4524.443/12104.321	JUBAR: 4553.664/12046.815	SODDA: 4523.044/12105.177
CIZZL: 4541.534/12236.011	HHOOD: 4531.769/12142.901	MYTOE: 4531.615/12102.868	SSDEE: 4536.231/12216.362
DOUHH: 4544.733/12244.255	JERDT: 4518.726/12027.135	NNUTT: 4546.072/12248.575	THEID: 4537.389/12221.983
			YENTL: 4536.948/12125.734



LOST COMMUNICATIONS:
Landing Rwy 10: At NNUTT, turn left direct to BUXOM and execute ILS Rwy 10L approach.
Landing Rwy 28: At SHAFR, turn left direct to NACIY and execute ILS Rwy 28R approach.

NOTE: Chart not to scale.

HHOOD ONE ARRIVAL (RNAV) Arrival Routes
(HHOOD.HHOOD1) FIG
PORTLAND, OREGON
PORTLAND INTL (PDX)

HHOOD ONE ARRIVAL (RNAV) Arrival Routes
(HHOOD.HHOOD1) FIG
PORTLAND, OREGON
PORTLAND INTL (PDX)

ST-330 (FAA)

LTJ : 4542.815/12106.050
BAYYR: 4531 726/12124 204
BLRUN: 4532.290/12157.450
CIZZL: 4541.534/12236.011
DOUHH. 4544.733/12244.255

DUFUR: 4525.720/12112.225
EMZEY: 4538.867/12229.154
HANDL: 4524 443/12104.321
HHOOD: 4531.769/12142.901
JERDT: 4518.726/12027.135

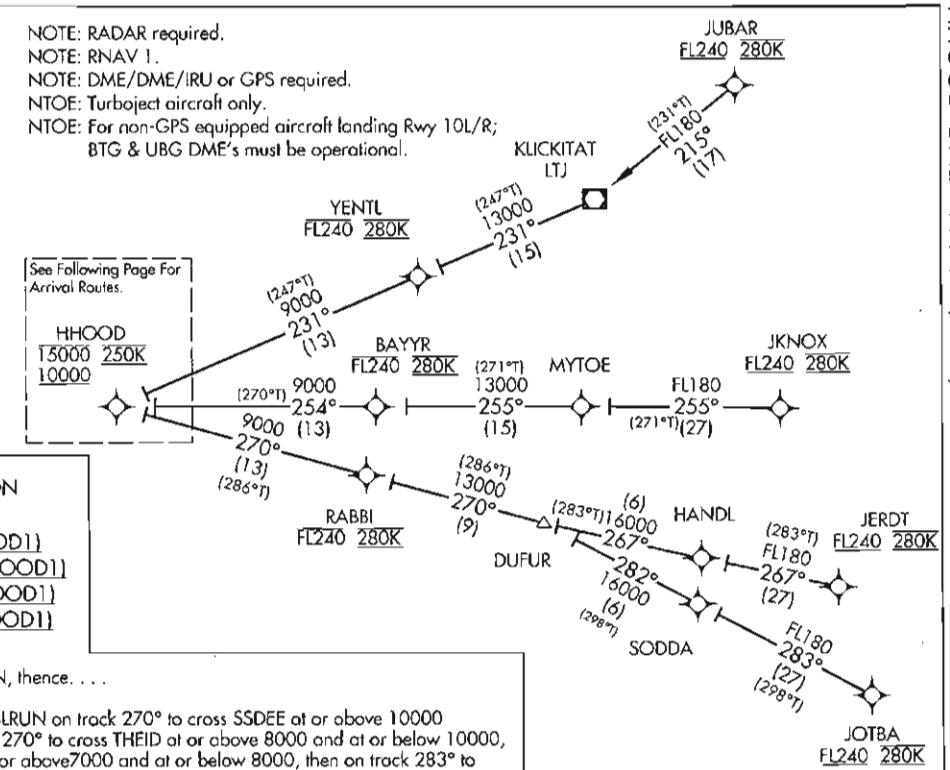
JKNOX: 4531.044/12024.679
JOTBA: 4510.012/12031.205
JUBAR: 4553.664/12046.815
MYTOE: 4531.615/12102.868
NNUTT: 4546.072/12248.575

RABBI: 4528.228/12124.923
SHAFR: 4532.445/12200.292
SODDA: 4523.044/12105.177
SSDEE: 4536 231/12216.362
THEID: 4537.389/12221.983
YENTL: 4536.948/12125.734

PORTLAND APP CON
124.35 299.2
ATIS
128.35 269.9
PORTLAND TOWER
118.7 257.8 (Rwy 10L-28R)
123.775 251.125 (Rwys 3-21, 10R-28L)
GND CON
121.9 348.6

NOTE: RADAR required.
NOTE: RNAV 1.
NOTE: DME/DME/IRU or GPS required.
NTOE: Turboject aircraft only.
NTOE: For non-GPS equipped aircraft landing Rwy 10L/R; BTG & UBG DME's must be operational.

PROTOTYPE: NOT FOR NAVIGATION



ARRIVAL ROUTE DESCRIPTION

JERDT TRANSITION (JERDT.HHOOD1)
JKNOX TRANSITION (JKNOX.HHOOD1)
JOTBA TRANSITION (JOTBA.HHOOD1)
JUBAR TRANSITION (JUBAR.HHOOD1)

From HHOOD on track 257° to BLRUN, thence. . . .

LANDING RUNWAYS 10L/R: From BLRUN on track 270° to cross SSDEE at or above 10000 and at or below 12000, then on track 270° to cross THEID at or above 8000 and at or below 10000, then on track 270° to cross EMZEY at or above7000 and at or below 8000, then on track 283° to cross CIZZL at or above 5000 at 210K, then on track 283° to cross DOUHH at 4000, then on track 278° to NNUTT at 4000, then on track 278°. If approach clearance not received by THEID, expect radar vectors to final approach course.
LANDING RUNWAYS 28L/R: From BLRUN on track 258° to cross SHAFR at 6700, then on track 259°. Expect radar vectors to final approach course.

NOTE: Chart not to scale.

(HHOOD.HHOOD1) FIG
HHOOD ONE ARRIVAL (RNAV) Transition Routes
ST-330 (FAA)
PORTLAND INTL (PDX)
PORTLAND, OREGON

HHOOD ONE ARRIVAL (RNAV) Transition Routes
(HHOOD.HHOOD1) FIG
PORTLAND, OREGON
PORTLAND INTL (PDX)

ESV Details

Originating Office :	Airspace Docket Number :	Request Type : Establish	
Facility Data			
Chart Name : WALLA WALLA	City : WALLA WALLA	Ident : ALW	State : WA
Type/Class : DME	Frequency : M1198	Reference No.: 12086020	

Expanded Service Volume Data: (Requesting Officer)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude
FAA 820991-003	222	235	125	145	200

Requirement: KPDX HHOOD STAR JERDT, JKNOX, JOTBA TRANSITIONS MITIGATE CRITICAL DME

Signature: Roller Jeanette	Routing Symbol:	Date: 08/13/2012

Expanded Service Volume Data: (FMO)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 820991-003	222	235	125	145	200	APPROVE

Requirement/Remarks: KPDX HHOOD STAR JERDT, JKNOX, JOTBA TRANSITIONS MITIGATE CRITICAL DMEAPPROVED. PEND. FLIGHT CHK/INSPECT @ THE REQ. DIST. AND MIN ALT.

Signature: Nguyen Khoat	Routing Symbol:	Date: 08/13/2012

Expanded Service Volume Data: (Super FMO)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 820991-003	222	235	125	145	200	APPROVE

Requirement/Remarks: KPDX HHOOD STAR JERDT, JKNOX, JOTBA TRANSITIONS MITIGATE CRITICAL DMEAPPROVED. PEND. FLIGHT CHK/INSPECT @ THE REQ. DIST. AND MIN ALT.

Signature: Hughes Dennis	Routing Symbol:	Date: 08/14/2012

Expanded Service Volume Data: (FIFO)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 820991-003	222	235				

Requirement/Remarks:

Signature:	Routing Symbol:	Date:

ESV Details

Originating Office :	Airspace Docket Number :	Request Type : Establish	
Facility Data			
Chart Name : DESCHUTES	City : REDMOND	Ident : DSD	State : OR
Type/Class : TACR	Frequency : M1210	Reference No.: 12097840	

Expanded Service Volume Data: (Requesting Officer)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude
FAA 698233-018	327	350	95	90	250

Requirement: KPDX HHOOD STAR JERDT, JKNOX, JOTBA & JUBAR TRANSITIONS MITIGATE CRITICAL DME

Signature: Haga Steve	Routing Symbol:	Date: 09/19/2012

Expanded Service Volume Data: (FMO)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 698233-018	327	350	95	90	250	APPROVE

Requirement/Remarks: KPDX HHOOD STAR JERDT, JKNOX, JOTBA & JUBAR TRANSITIONS MITIGATE CRITICAAPPROVED. PEND. FLIGHT CHK/INSPECT @ THE REQ. DIST. AND MIN ALT.

Signature: pham Vu	Routing Symbol:	Date: 09/19/2012

Expanded Service Volume Data: (Super FMO)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 698233-018	327	350	95	90	250	APPROVE

Requirement/Remarks: KPDX HHOOD STAR JERDT, JKNOX, JOTBA & JUBAR TRANSITIONS MITIGATE CRITICAAPPROVED. PEND. FLIGHT CHK/INSPECT @ THE REQ. DIST. AND MIN ALT.

Signature: Hughes Dennis	Routing Symbol:	Date: 09/20/2012

Expanded Service Volume Data: (FIFO)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 698233-018	327	350				

Requirement/Remarks:

Signature:	Routing Symbol:	Date:

ESV Details

Originating Office :	Airspace Docket Number :	Request Type : Establish	
Facility Data			
Chart Name : KIMBERLY	City : KIMBERLY	Ident : IMB	State : OR
Type/Class : TACR	Frequency : M1190	Reference No.: 12086042	

Expanded Service Volume Data: (Requesting Officer)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude
FAA 702017-008	281	305	100	125	200

Requirement: KPDX HHOOD STAR JERDT, JKNOX, JOTBA & JUBAR TRANSITIONS MITIGATE CRITICAL DME

Signature: Roller Jeanette	Routing Symbol:	Date: 08/13/2012

Expanded Service Volume Data: (FMO)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 702017-008	281	305	100	125	200	APPROVE

Requirement/Remarks: KPDX HHOOD STAR JERDT, JKNOX, JOTBA & JUBAR TRANSITIONS MITIGATE CRITICAAPPROVED. PEND. FLIGHT CHK/INSPECT @ THE REQ. DIST. AND MIN ALT.

Signature: Hughes Dennis	Routing Symbol:	Date: 08/14/2012

Expanded Service Volume Data: (Super FMO)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 702017-008	281	305	100	125	200	APPROVE

Requirement/Remarks: KPDX HHOOD STAR JERDT, JKNOX, JOTBA & JUBAR TRANSITIONS MITIGATE CRITICAAPPROVED. PEND. FLIGHT CHK/INSPECT @ THE REQ. DIST. AND MIN ALT.

Signature: Hughes Dennis	Routing Symbol:	Date: 08/14/2012

Expanded Service Volume Data: (FIFO)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 702017-008	281	305				

Requirement/Remarks:

Signature:	Routing Symbol:	Date:

ESV Details

Originating Office :	Airspace Docket Number :	Request Type : Establish	
Facility Data			
Chart Name : KLICKITAT	City : THE DALLES	Ident : LTJ	State : WA
Type/Class : DME	Frequency : M1157	Reference No.: 12086043	

Expanded Service Volume Data: (Requesting Officer)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude
FAA 921812-020	214	245	48	67	180

Requirement: KPDX HHOOD STAR JERDT, JKNOX, JOTBA & JUBAR TRANSITIONS MITIGATE CRITICAL DME

Signature: Roller Jeanette	Routing Symbol:	Date: 08/13/2012

Expanded Service Volume Data: (FMO)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 921812-020	214	245	48	67	180	APPROVE

Requirement/Remarks: KPDX HHOOD STAR JERDT, JKNOX, JOTBA & JUBAR TRANSITIONS MITIGATE CRITICAAPPROVED. PEND. FLIGHT CHK/INSPECT @ THE REQ. DIST. AND MIN ALT.

Signature: Nguyen Khoat	Routing Symbol:	Date: 08/13/2012

Expanded Service Volume Data: (Super FMO)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 921812-020	214	245	48	67	180	APPROVE

Requirement/Remarks: KPDX HHOOD STAR JERDT, JKNOX, JOTBA & JUBAR TRANSITIONS MITIGATE CRITICAAPPROVED. PEND. FLIGHT CHK/INSPECT @ THE REQ. DIST. AND MIN ALT.

Signature: Hughes Dennis	Routing Symbol:	Date: 08/14/2012

Expanded Service Volume Data: (FIFO)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 921812-020	214	245				

Requirement/Remarks:

Signature:	Routing Symbol:	Date:

ESV Details

Originating Office :	Airspace Docket Number :	Request Type : Establish	
Facility Data			
Chart Name : PASCO	City : PASCO	Ident : PSC	State : WA
Type/Class : DME	Frequency : M982	Reference No.: 12086021	

Expanded Service Volume Data: (Requesting Officer)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude
FAA 772937-009	207	216	98	155	200

Requirement: KPDX HHOOD STAR JERDT, JKNOX, JOTBA TRANSITIONS MITIGATE CRITICAL DME

Signature: Roller Jeanette	Routing Symbol:	Date: 08/13/2012

Expanded Service Volume Data: (FMO)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 772937-009	207	216	98	155	200	APPROVE

Requirement/Remarks: KPDX HHOOD STAR JERDT, JKNOX, JOTBA TRANSITIONS MITIGATE CRITICAL DMEAPPROVED. PEND. FLIGHT CHK/INSPECT @ THE REQ. DIST. AND MIN ALT.

Signature: Nguyen Khoat	Routing Symbol:	Date: 08/13/2012

Expanded Service Volume Data: (Super FMO)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 772937-009	207	216	98	155	200	APPROVE

Requirement/Remarks: KPDX HHOOD STAR JERDT, JKNOX, JOTBA TRANSITIONS MITIGATE CRITICAL DMEAPPROVED. PEND. FLIGHT CHK/INSPECT @ THE REQ. DIST. AND MIN ALT.

Signature: Hughes Dennis	Routing Symbol:	Date: 08/14/2012

Expanded Service Volume Data: (FIFO)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 772937-009	207	216				

Requirement/Remarks:

Signature:	Routing Symbol:	Date:

ESV Details

Originating Office :	Airspace Docket Number :	Request Type : Establish	
Facility Data			
Chart Name : NEWBERG	City : NEWBERG	Ident : UBG	State : OR
Type/Class : DME	Frequency : M1208	Reference No.: 12086041	

Expanded Service Volume Data: (Requesting Officer)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude
FAA 698230-013	45	76	100	85	200

Requirement: KPDX HHOOD STAR JERDT, JKNOX, JOTBA & JUBAR TRANSITIONS MITIGATE CRITICAL DME

Signature: Roller Jeanette	Routing Symbol:	Date: 08/13/2012

Expanded Service Volume Data: (FMO)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 698230-013	45	76	100	85	200	APPROVE

Requirement/Remarks: KPDX HHOOD STAR JERDT, JKNOX, JOTBA & JUBAR TRANSITIONS MITIGATE CRITICAAPPROVED. PEND. FLIGHT CHK/INSPECT @ THE REQ. DIST. AND MIN ALT.

Signature: Nguyen Khoat	Routing Symbol:	Date: 08/13/2012

Expanded Service Volume Data: (Super FMO)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 698230-013	45	76	100	85	200	APPROVE

Requirement/Remarks: KPDX HHOOD STAR JERDT, JKNOX, JOTBA & JUBAR TRANSITIONS MITIGATE CRITICAAPPROVED. PEND. FLIGHT CHK/INSPECT @ THE REQ. DIST. AND MIN ALT.

Signature: Hughes Dennis	Routing Symbol:	Date: 08/14/2012

Expanded Service Volume Data: (FIFO)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 698230-013	45	76				

Requirement/Remarks:

Signature:	Routing Symbol:	Date:

US Department of Transportation
Federal Aviation Administration

STAR - Standard Terminal Arrival

1. Bearings, headings, courses and radials are listed to the nearest hundredth (e.g. 360.00)
2. Distances are in nautical miles to nearest hundredth (e.g. 00.00)
3. Altitudes are minimum altitudes unless otherwise indicated

(1) Transition Routes

(a) Transition Name	(b) Transition Computer Codes	(c) From RNAV WP / FIX / NAVAID	(d) To RNAV WP / FIX / NAVAID	(e) Mag Course / Distance	(f) MEA	(g) MOCA	(h) MAA	(i) Crossing Altitudes / Fixes
JERDT	JERDT.HHOOD1	JERDT WP	JERDT WP					AT/ABOVE FL240
			HANDL WP	266.52/26.84	FL180			
			DUFUR WP	266.97/05.71	16000			
			RABBI WP	269.75/09.28	13000			AT/BELOW FL240
			HHOOD WP	269.75/13.13	9000			AT/ABOVE 10000, AT/BELOW 15000
JKNOX	JKNOX.HHOOD1	JKNOX WP	JKNOX WP					AT/ABOVE FL240
			MYTOE WP	255.45/26.86	FL180			
			BAYYR WP	254.55/15.00	13000			AT/BELOW FL240
			HHOOD WP	254.30/13.14	9000			AT/ABOVE 10000, AT/BELOW 15000
JOTBA	JOTBA.HHOOD1	JOTBA WP	JOTBA WP					AT/ABOVE FL240
			SODDA WP	282.72/27.30	FL180			
			DUFUR WP	282.37/05.64	16000			
			RABBI WP	269.75/09.28	13000			AT/BELOW FL240
			HHOOD WP	269.75/13.13	9000			AT/ABOVE 10000, AT/BELOW 15000

(2) Arrival Route Description: FROM HHOOD ON TRACK 257.00/10.24 TO BLRUN (MEA 7200), THENCE...

LANDING RUNWAYS RW10L/R: FROM BLRUN ON TRACK 270.64/13.86 TO CROSS SSDEE AT/ABOVE 10000 AND AT/BELOW 12000 (MEA 6700), THEN ON TRACK 270.40/4.11 TO CROSS THEID AT/ABOVE 8000 AND AT/BELOW 10000 (MEA 5000), THEN ON TRACK 270.42/5.24 TO CROSS EMZEY AT/ABOVE 7000 AND AT/BELOW 8000 (MEA 5000), THEN ON TRACK 283.05/5.50 TO CROSS CIZZL AT/ABOVE 5000 (MEA 3400) AT 210 KIAS, THEN ON TRACK 283.03/6.60 TO CROSS DOUHH AT 4000 (MEA 3400), THEN ON TRACK 277.92/3.31 TO NNUTT AT 4000 (MEA 3400), THEN ON TRACK 278.00. IF APPROACH CLEARANCE NOT RECEIVED BY THEID, EXPECT
Continued on block 16...

(3) Procedural Data Notes:
NOTE: RADAR REQUIRED.
NOTE: RNAV 1.
NOTE: DME/DME/IRU OR GPS REQUIRED.
NOTE: TURBOJET AIRCRAFT ONLY
NOTE: DME/DME/IRU OR GPS REQUIRED
NOTE: FOR NON-GPS EQUIPPED AIRCRAFT LANDING RY10L/R; BTG & UBG DMES MUST BE OPERATIONAL.
Continued on block 16...

(4) Fixes and/or Holding Patterns:

(5) Communications: PDX ATIS, PDX APP CON, PDX TWR, PDX GND

QUALITY A CHECKED

(6) Arrival Name	(7) Number	(8) STAR Computer Code	(9) Superseded Nr.	(10) Dated	(11) Effective Date
HHOOD RNAV STAR	ONE	HHOOD.HHOOD1	NONE		

(12) Airports Served

Airport Name	City/State
PORTLAND INTL	PORTLAND, OR

(13) Lost Communications Procedure:
LANDING RWY 10: AT NNUTT, TURN LEFT DIRECT TO BUXOM AND EXECUTE ILS RWY 10L APPROACH.
LANDING RWY 28: AT SHAFR, TURN LEFT DIRECT TO NACIY AND EXECUTE ILS RWY 28R APPROACH.

(14) Remarks:

(15) Additional Flight Data:
DME/DME ASSESSMENT: SAT (RNP 2.0).
REFERENCE MAGNETIC VARIATION = KPDX 16E/2010

QUALITY CHECKED

(6) Arrival Name	(7) Number	(8) STAR Computer Code	(9) Superseded Nr.	(10) Dated	(11) Effective Date
HHOOD RNAV STAR	ONE	HHOOD.HHOOD1	NONE		

(16) Continuation:

(1) Transition Routes

(a) Transition Name	(b) Transition Computer Codes	(c) From RNAV WP / FIX / NAVAID	(d) To RNAV WP / FIX / NAVAID	(e) Mag Course / Distance	(f) MEA	(g) MOCA	(h) MAA	(i) Crossing Altitudes / Fixes
JUBAR	JUBAR.HHOOD1	JUBAR WP	JUBAR WP					AT/ABOVE FL240
			LTJ VOR/DME	215.23/17.29	FL180			
			YENTL WP	231.09/15.00	13000			AT/BELOW FL240
			HHOOD WP	230.86/13.12	9000			AT/ABOVE 10000, AT/BELOW 15000

(2) Arrival Route Description:

RADAR VECTORS TO FINAL APPROACH COURSE.

LANDING RUNWAYS RW28L/R: FROM BLRUN ON TRACK 258.46/2.00 TO CROSS SHAFR AT 6700 (MEA 6700), THEN ON TRACK 259.00. EXPECT RADAR VECTORS TO FINAL APPROACH COURSE.

(3) Procedural Data Notes:

CHART MANDATORY 280 KIAS AT JERDT, JKNOX, JOTBA, JUBAR, RABBI, BAYYR, AND YENTL WAYPOINTS.
CHART MANDATORY 250 KIAS AT HHOOD WAYPOINT.
CHART MANDATORY 210 KIAS AT CIZZL WAYPOINT.

(17) Changes:

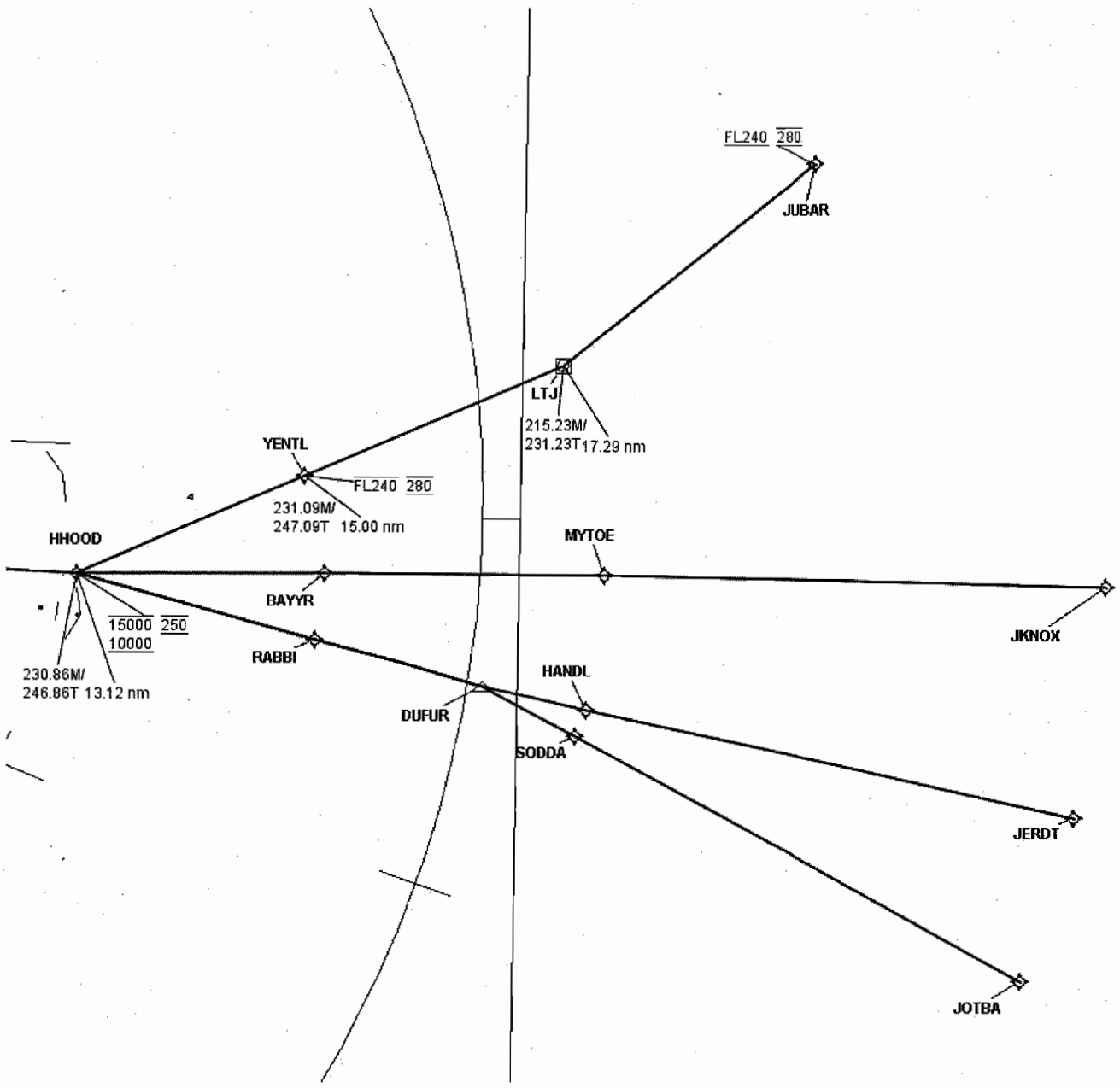
(18) Reasons for Changes:

QUALITY CHECKED

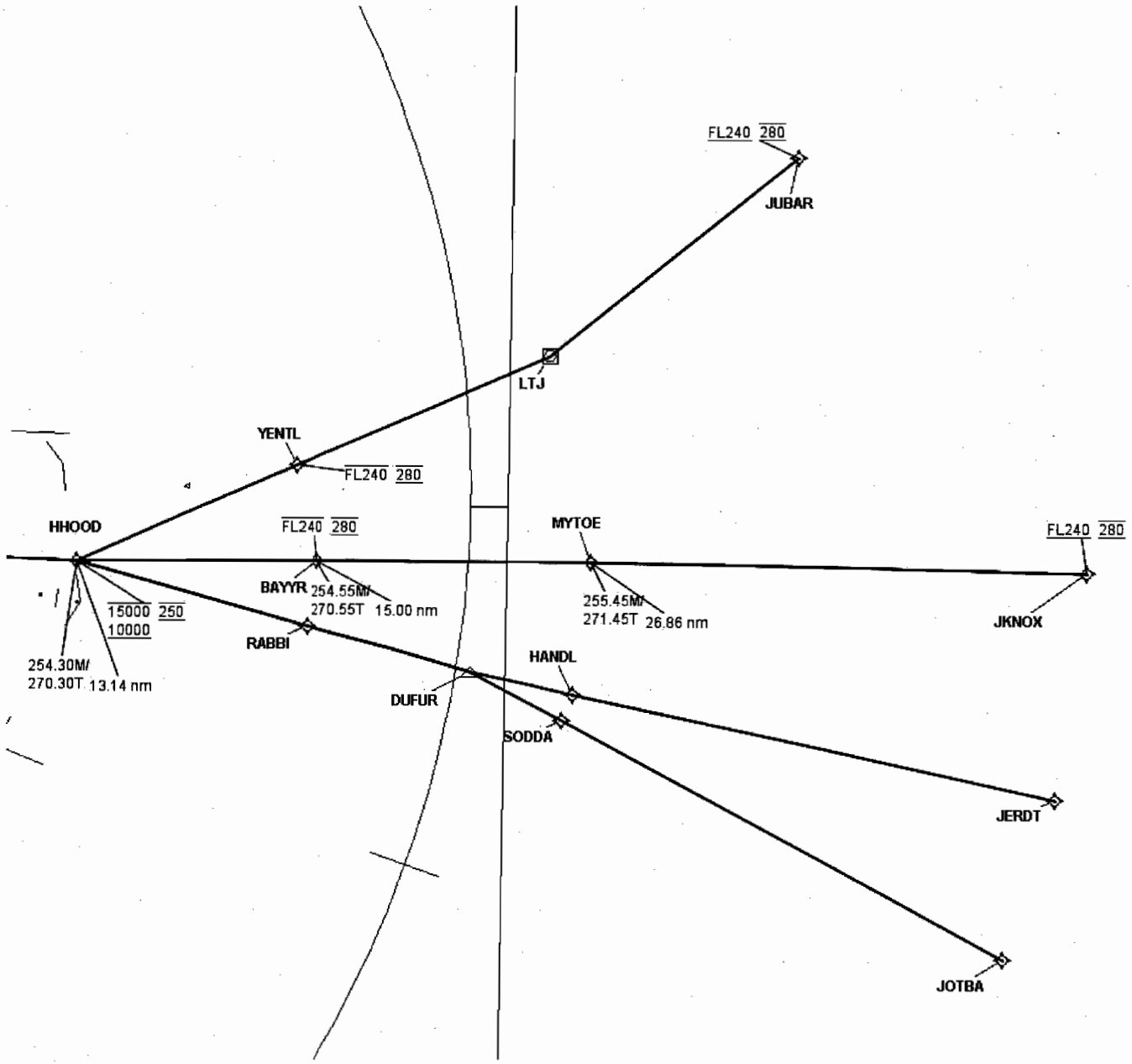
	Name (Typed and Signed), Title and Organization		DATE
Developed By	Bridgitt Arledge, Support Manager, Seattle ARTCC (253) 351-3620		
Approved	**NFPG**		
	Reg. ATD	John Warner, Manager, WSC OSG (425)203-4501	

(6) Arrival Name	(7) Number	(8) STAR Computer Code	(9) Superseded Nr.	(10) Dated	(11) Effective Date
HHOOD RNAV STAR	ONE	HHOOD.HHOOD1	NONE		

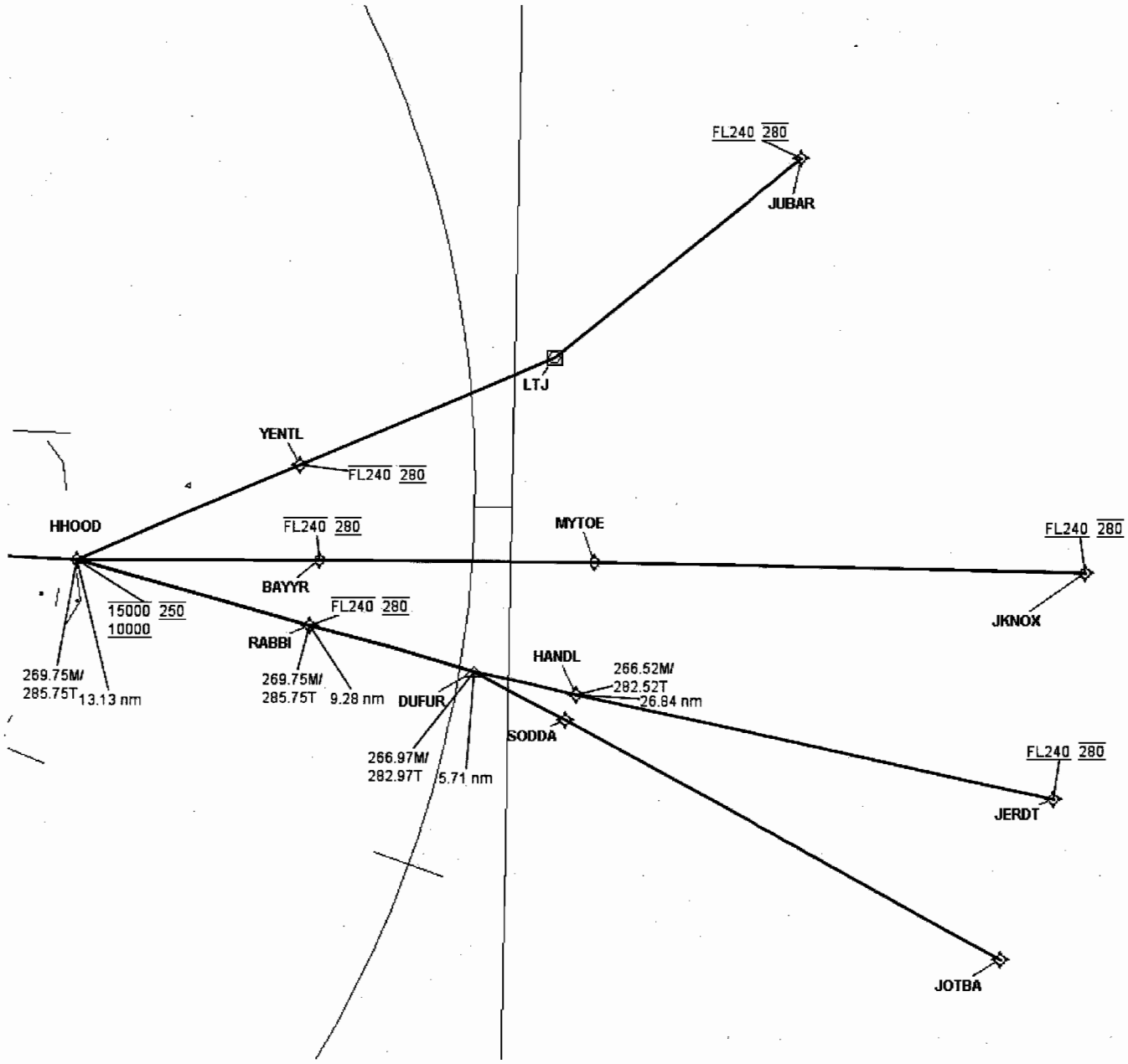
(19) Graphic Depiction (1 of 12)



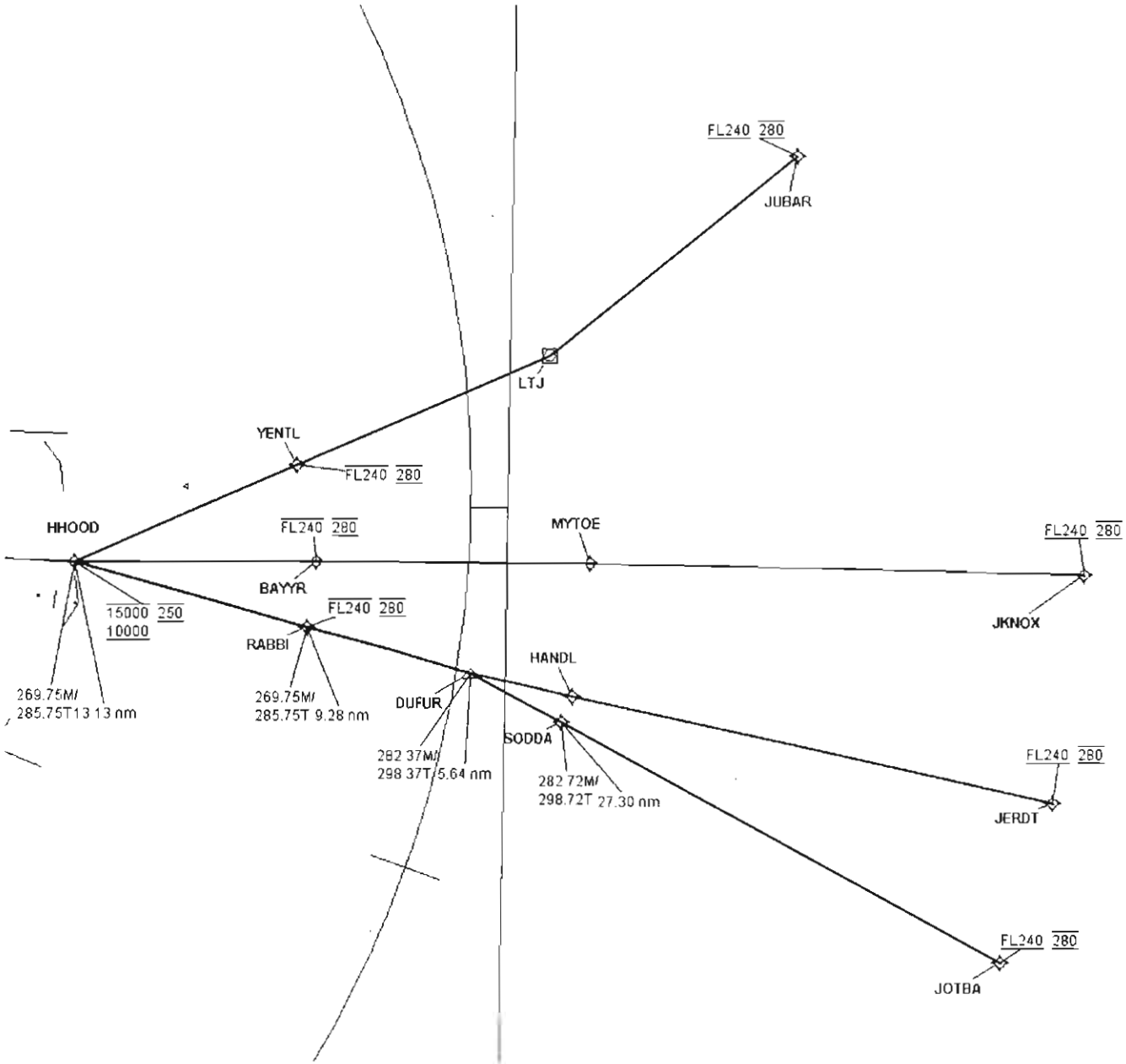
(19) Graphic Depiction (2 of 12)



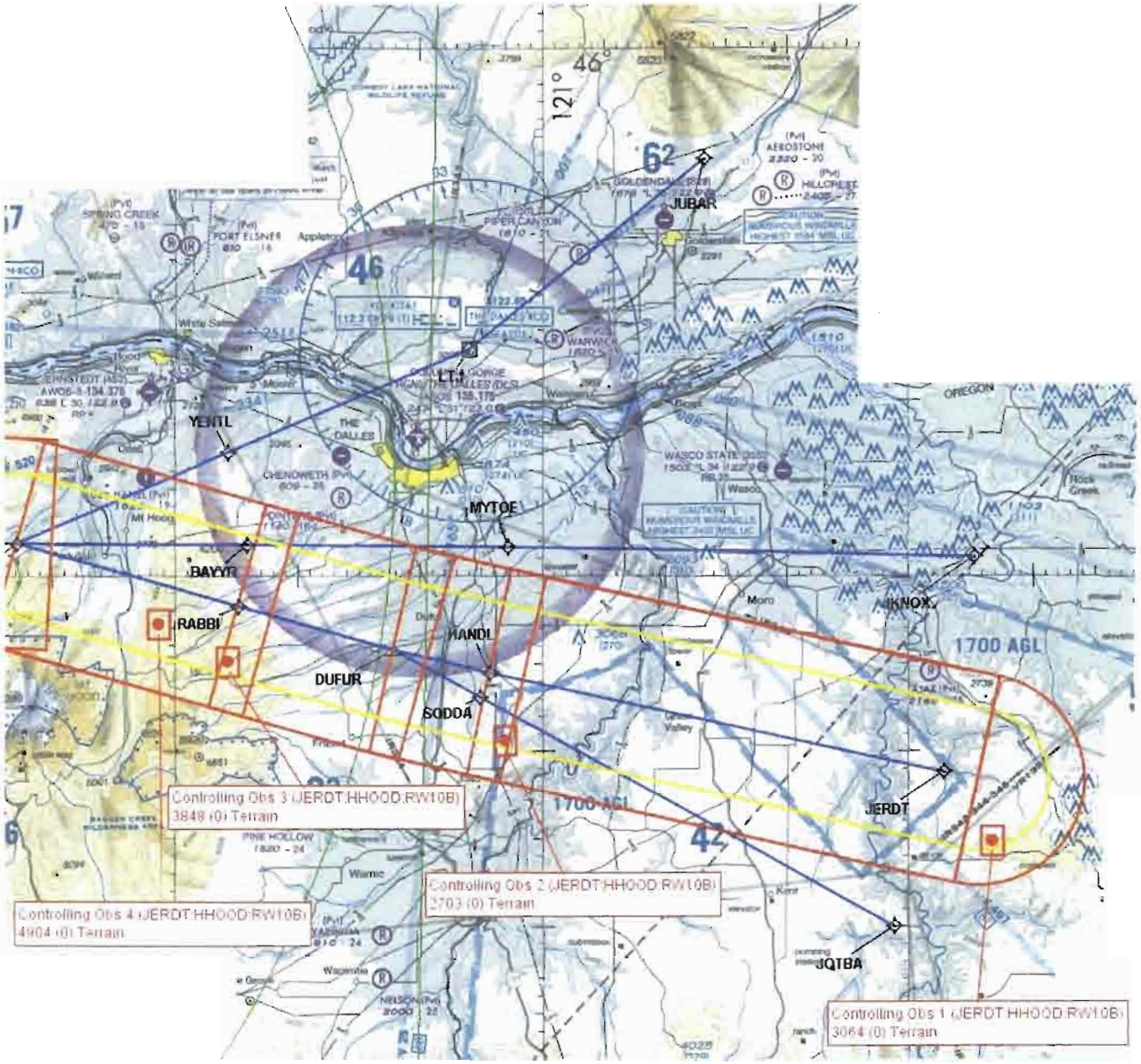
(19) Graphic Depiction (3 of 12)



(19) Graphic Depiction (4 of 12)

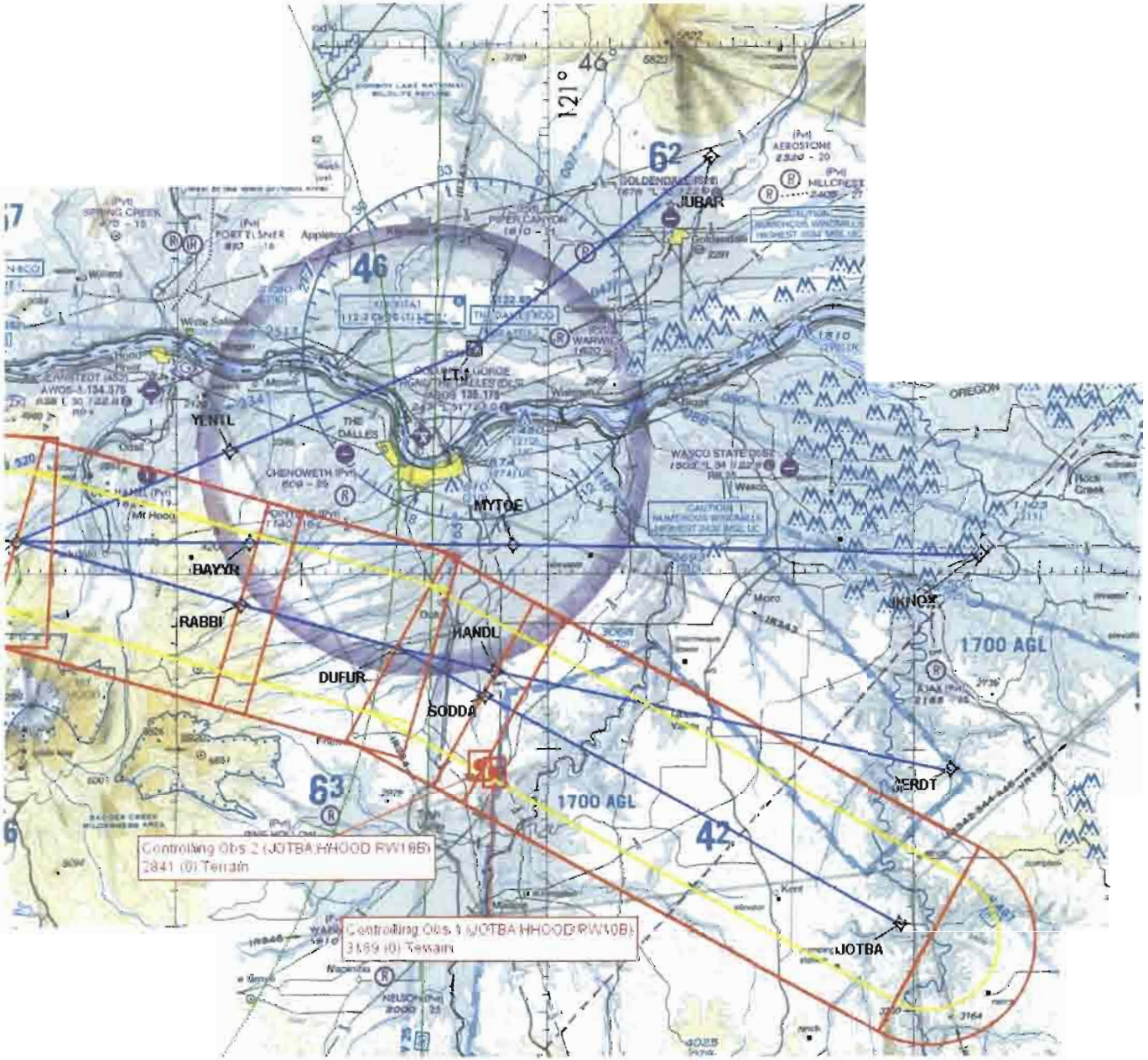


(19) Graphic Depiction (5 of 12)

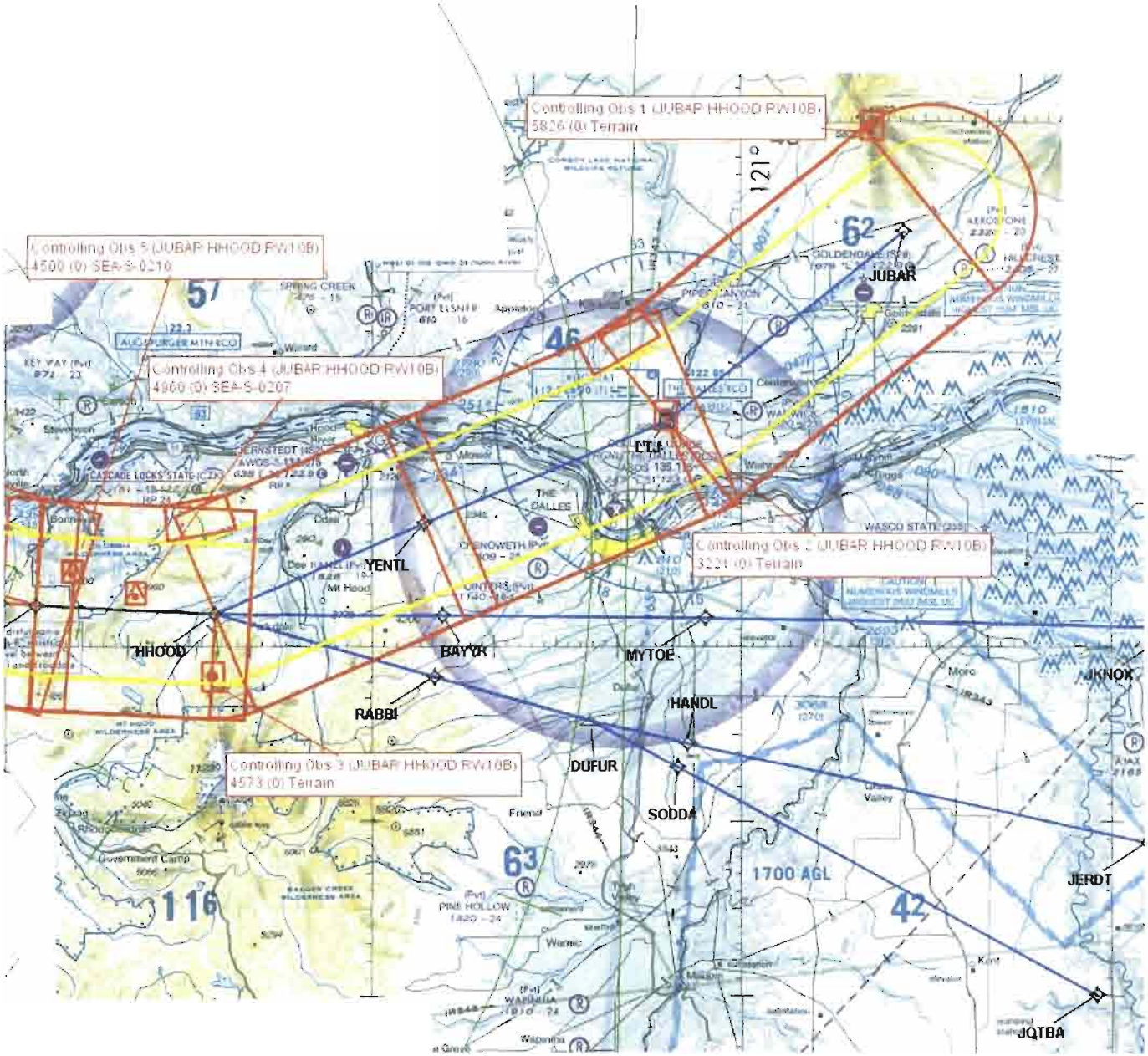


(19) Graphic Depiction (6 of 12)

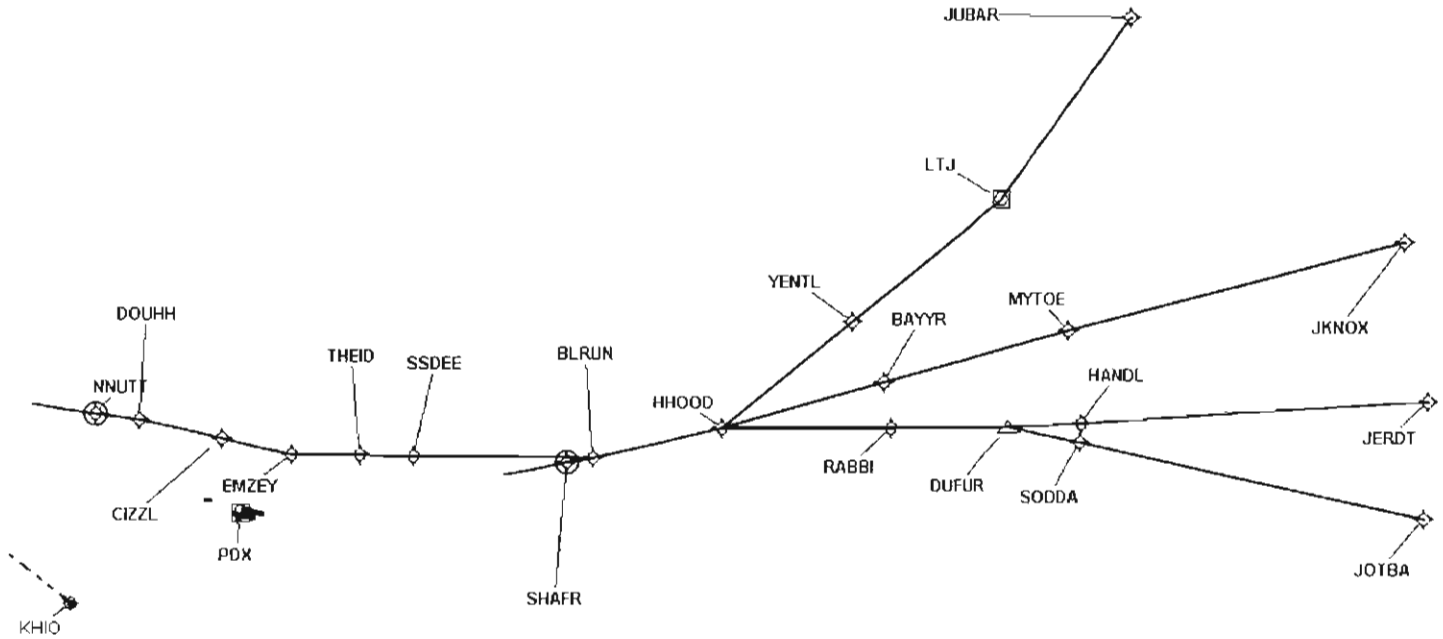
(19) Graphic Depiction (7 of 12)



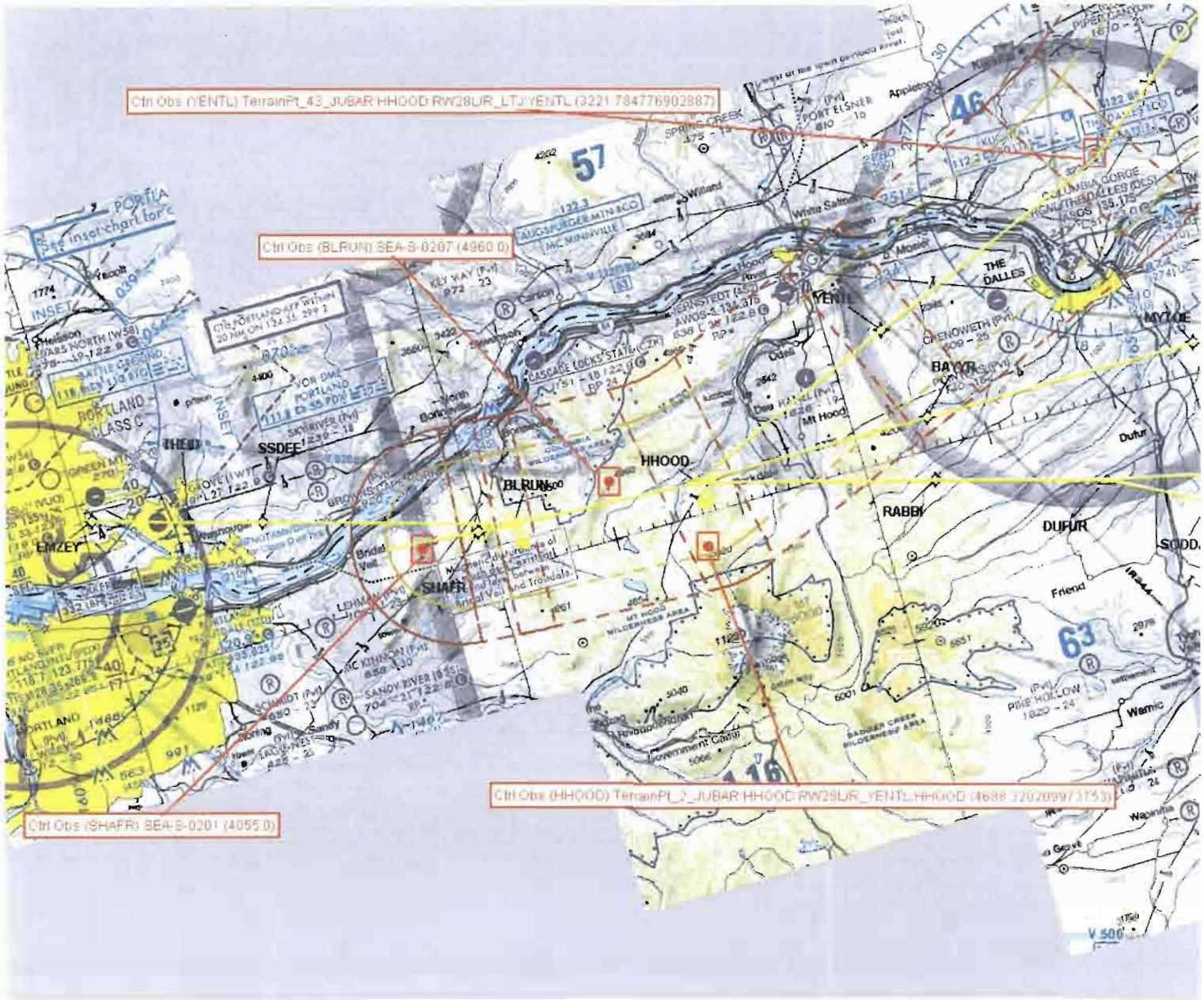
(19) Graphic Depiction (8 of 12)



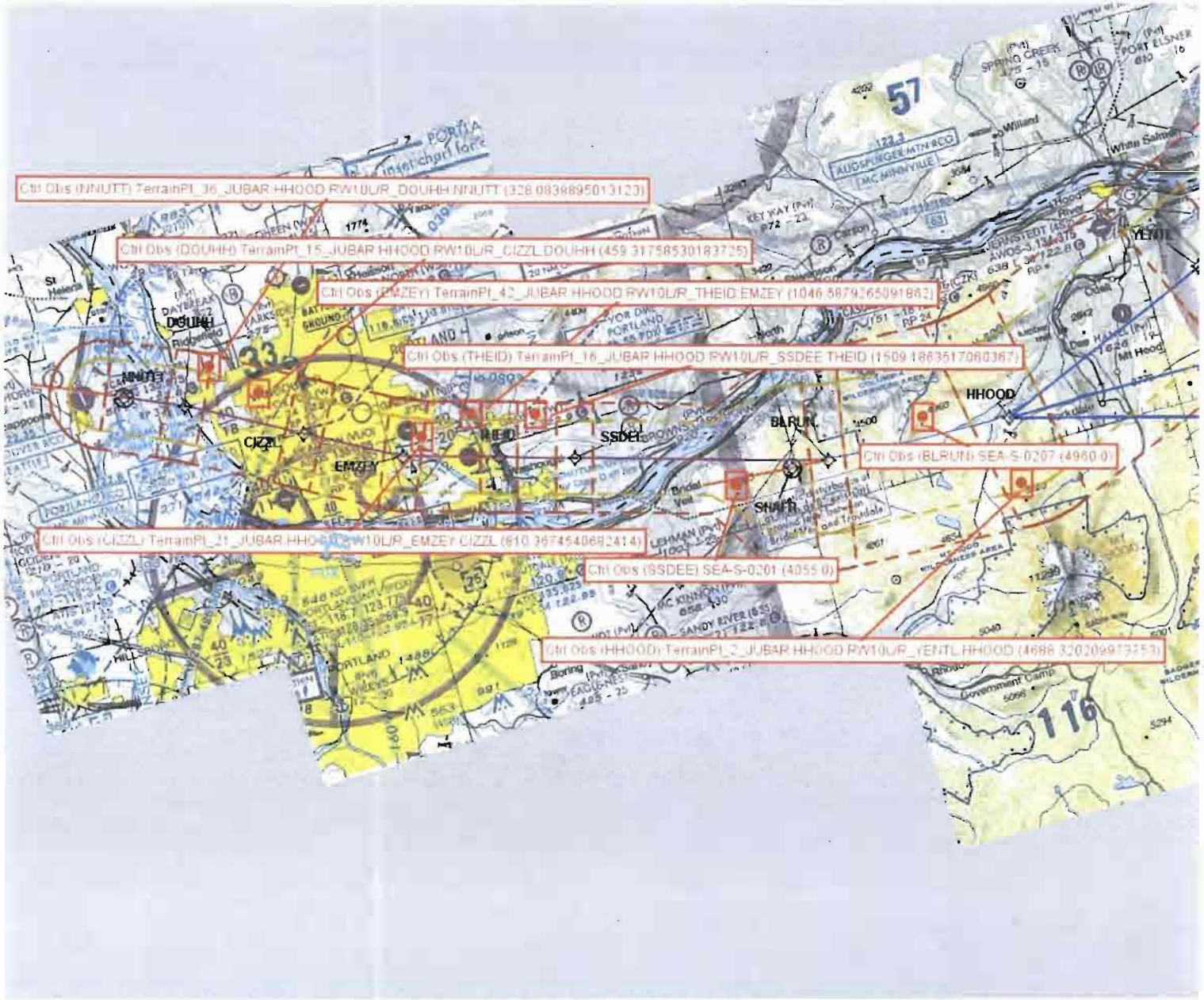
(19) Graphic Depiction (9 of 12)



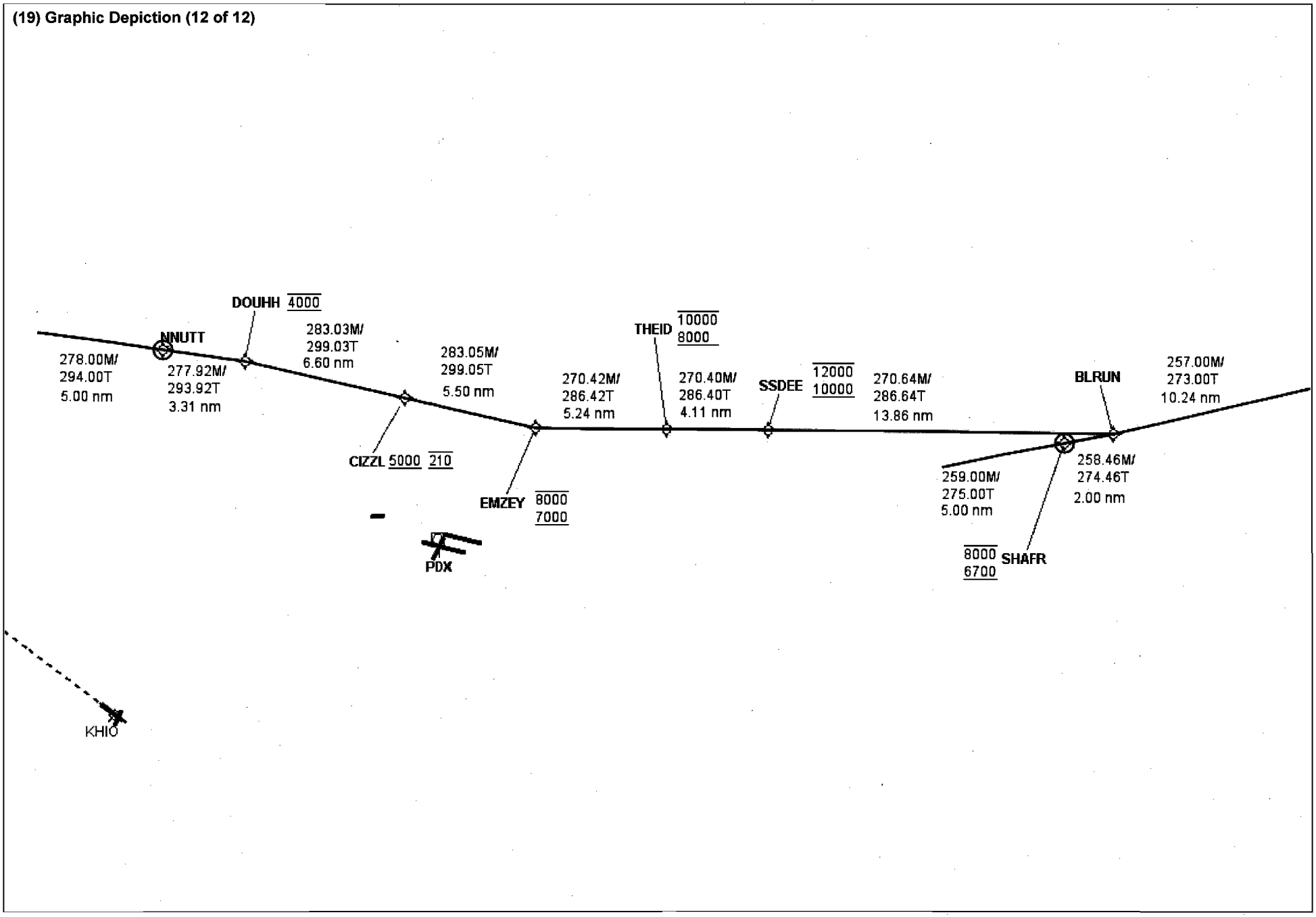
(19) Graphic Depiction (10 of 12)



(19) Graphic Depiction (11 of 12)



(19) Graphic Depiction (12 of 12)



US Department of Transportation
Federal Aviation Administration

RNAV STAR (Data Record)

(1) FIX/NAVAID	(2) LAT/LONG	(3) C	(4) FO/FB	(5) LEG	(6) TC	(7) DIST	(8) ALTITUDE	(9) SPEED	(10) REMARKS
En Route Transition									
JERDT WP	451843.54N / 1202708.11W	Y		IF			+FL240	280K	JERDT.HHOOD1
HANDL WP	452426.61N / 1210419.24W	Y	FB	TF	282.52	26.84			
DUFUR WP	452543.22N / 1211213.48W	Y	FB	TF	282.97	05.71			
RABBI WP	452813.68N / 1212455.39W	Y	FB	TF	285.75	09.28	-FL240	280K	
HHOOD WP	453146.12N / 1214254.05W	Y	FB	TF	285.75	13.13	+10000, -15000	250K	
En Route Transition									
JKNOX WP	453102.65N / 1202440.73W	Y		IF			+FL240	280K	JKNOX.HHOOD1
MYTOE WP	453136.91N / 1210252.08W	Y	FB	TF	271.45	26.86			
BAYYR WP	453143.56N / 1212412.24W	Y	FB	TF	270.55	15.00	-FL240	280K	
HHOOD WP	453146.12N / 1214254.05W	Y	FB	TF	270.30	13.14	+10000, -15000	250K	
En Route Transition									
JOTBA WP	451000.70N / 1203112.27W	Y		IF			+FL240	280K	JOTBA.HHOOD1
SODDA WP	452302.63N / 1210510.62W	Y	FB	TF	298.72	27.30			

(11) Arrival Name	(12) Number	(13) STAR Computer Code	(14) Superseded Nr.	(15) Dated	(16) Effective Date
HHOOD RNAV STAR	ONE	HHOOD.HHOOD1	NONE		

QUALITY CHECKED A

FAA Form 7100-3 (9/02)

US Department of Transportation
Federal Aviation Administration

RNAV STAR (Data Record)

(1) FIX/NAVAID	(2) LAT/LONG	(3) C	(4) FO/FB	(5) LEG	(6) TC	(7) DIST	(8) ALTITUDE	(9) SPEED	(10) REMARKS
DUFUR WP	452543.22N / 1211213.48W	Y	FB	TF	298.37	05.64			
RABBI WP	452813.68N / 1212455.39W	Y	FB	TF	285.75	09.28	-FL240	280K	
HHOOD WP	453146.12N / 1214254.05W	Y	FB	TF	285.75	13.13	+10000, -15000	250K	
En Route Transition									
JUBAR WP	455339.86N / 1204648.87W	Y		IF			+FL240	280K	JUBAR.HHOOD1
LTJ VOR/DME	454248.90N / 1210603.00W	Y	FB	TF	231.23	17.29			
YENTL WP	453656.86N / 1212544.01W	Y	FB	TF	247.09	15.00	-FL240	280K	
HHOOD WP	453146.12N / 1214254.05W	Y	FB	TF	246.86	13.12	+10000, -15000	250K	
Common Route									
HHOOD WP	453146.12N / 1214254.05W	Y		IF			+10000, -15000	250K	
BLRUN WP	453217.38N / 1215727.02W	Y	FB	TF	273.00	10.24			
Runway Transition									
BLRUN WP	453217.38N / 1215727.02W	Y		IF					

QUALITY CHECKED

(11) Arrival Name	(12) Number	(13) STAR Computer Code	(14) Superseded Nr.	(15) Dated	(16) Effective Date
HHOOD RNAV STAR	ONE	HHOOD.HHOOD1	NONE		

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RNAV STAR (Data Record)

SSDEE WP	453613.85N / 1221621.75W	Y	FB	TF	286.64	13.86	+10000, -12000		
THEID WP	453723.35N / 1222158.96W	Y	FB	TF	286.40	04.11	+8000, -10000		
EMZEY WP	453852.04N / 1222909.24W	Y	FB	TF	286.42	05.24	+7000, -8000		
CIZZL WP	454132.02N / 1223600.67W	Y	FB	TF	299.05	05.50	+5000	210K	
DOUHH WP	454443.96N / 1224415.32W	Y	FB	TF	299.03	06.60	4000		
NNUTT WP	454604.32N / 1224834.49W	Y	FO	TF	293.92	03.31	4000		
KPDX:RWY 10L/R		Y		FM	294.00				
Runway Transition									
BLRUN WP	453217.38N / 1215727.02W	Y		IF					
SHAFR WP	453226.69N / 1220017.52W		FO	TF	274.46	02.00	6700		
KPDX:RWY 28L/R				FM	275.00				

QUALITY CHECKED 4

(11) Arrival Name	(12) Number	(13) STAR Computer Code	(14) Superseded Nr.	(15) Dated	(16) Effective Date
HHOOD RNAV STAR	ONE	HHOOD.HHOOD1	NONE		

FAA Form 7100-3 (9/02)

US Department of Transportation
Federal Aviation Administration

STAR (Data Record)

ARINC PACKET - 424-18 - STAR

```
                 1         2         3         4         5         6         7         8         9         0         1         2         3
NAVAID  123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
        ------------------------------------------------------------------------------------------------------------------------------------
        SCAND        YXC   CY011210VDHW N49331795W116051573    N49331795W116051573E0160075852     NARCRANBROOK
        SUSAD        LTJ   K1011230VDHA N45424890W121060300    N45424890W121060300E0210032202     NARKLICKITAT

                 1         2         3         4         5         6         7         8         9         0         1         2         3
WP      123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
        ------------------------------------------------------------------------------------------------------------------------------------
        SUSAEAENRT   BAYYR K10    W     N45314356W121241224                    E0157     NAR           BAYYR
        SUSAEAENRT   BLRUN K10    W     N45321738W121572702                    E0158     NAR           BLRUN
        SUSAEAENRT   CIZZL K10    W     N45413202W122360067                    E0160     NAR           CIZZL
        SUSAEAENRT   DOUHH K10    W     N45444396W122441532                    E0160     NAR           DOUHH
        SUSAEAENRT   DUFUR K10    C     N45254322W121121348                    E0157     NAR           DUFUR
        SUSAEAENRT   EMZEY K10    W     N45385204W122290924                    E0160     NAR           EMZEY
        SUSAEAENRT   HANDL K10    W   H N45242661W121041924                    E0156     NAR           HANDL
        SUSAEAENRT   HHOOD K10    W     N45314612W121425405                    E0158     NAR           HHOOD
        SUSAEAENRT   JERDT K10    W   H N45184354W120270811                    E0155     NAR           JERDT
        SUSAEAENRT   JKNOX K10    W   H N45310265W120244073                    E0155     NAR           JKNOX
        SUSAEAENRT   JOTBA K10    W   H N45100070W120311227                    E0155     NAR           JOTBA
        SUSAEAENRT   JUBAR K10    W   H N45533986W120464887                    E0157     NAR           JUBAR
        SUSAEAENRT   MYTOE K10    W   H N45313691W121025208                    E0157     NAR           MYTOE
        SUSAEAENRT   NNUTT K10    W     N45460432W122483449                    E0161     NAR           NNUTT
        SUSAEAENRT   RABBI K10    W     N45281368W121245539                    E0157     NAR           RABBI
        SUSAEAENRT   SHAFR K10    W     N45322669W122001752                    E0159     NAR           SHAFR
        SUSAEAENRT   SODDA K10    W   H N45230263W121051062                    E0156     NAR           SODDA
        SUSAEAENRT   SSDEE K10    W     N45361385W122162175                    E0159     NAR           SSDEE
        SUSAEAENRT   THEID K10    W     N45372335W122215896                    E0159     NAR           THEID
        SUSAEAENRT   YENTL K10    W     N45365686W121254401                    E0158     NAR           YENTL

                 1         2         3         4         5         6         7         8         9         0         1         2         3
AIRPORT 123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
        ------------------------------------------------------------------------------------------------------------------------------------
        SUSAP KPDXK1APDX     0     110YHN45351935W122354873E016000031         1800018000C    MNAR    PORTLAND INTL

                 1         2         3         4         5         6         7         8         9         0         1         2         3
SEGMENT 123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
        ------------------------------------------------------------------------------------------------------------------------------------
        SUSAP KPDXK1EHHOOD14JERDT 010JERDTK1EA0E       IF                                + FL240     18000280
        SUSAP KPDXK1EHHOOD14JERDT 020HANDLK1EA0E    010TF                     26650268
```

QUALITY CHECKED 4

(11) Arrival Name	(12) Number	(13) STAR Computer Code	(14) Superseded Nr.	(15) Dated	(16) Effective Date
HHOOD RNAV	ONE	HHOOD.HHOOD1	NONE		

FAA Form 7100-3 (9/02)

```
SUSAP KPDXK1EHHOOD14JERDT 030DUFURK1EA0E    010TF                     26700057
SUSAP KPDXK1EHHOOD14JERDT 040RABBIK1EA0E    010TF                     26980093    - FL240          280
SUSAP KPDXK1EHHOOD14JERDT 050HHOODK1EA0EE   010TF                     26980131    B 1500010000     250
SUSAP KPDXK1EHHOOD14JKNOX 010JKNOXK1EA0E    010IF                                 + FL240     18000280
SUSAP KPDXK1EHHOOD14JKNOX 020MYTOEK1EA0E    010TF                     25550269
SUSAP KPDXK1EHHOOD14JKNOX 030BAYYRK1EA0E    010TF                     25460150    - FL240          280
SUSAP KPDXK1EHHOOD14JKNOX 040HHOODK1EA0EE   010TF                     25430131    B 1500010000     250
SUSAP KPDXK1EHHOOD14JOTBA 010JOTBAK1EA0E    010IF                                 + FL240     18000280
SUSAP KPDXK1EHHOOD14JOTBA 020SODDAK1EA0E    010TF                     28270273
SUSAP KPDXK1EHHOOD14JOTBA 030DUFURK1EA0E    010TF                     28240056
SUSAP KPDXK1EHHOOD14JOTBA 040RABBIK1EA0E    010TF                     26980093    - FL240          280
SUSAP KPDXK1EHHOOD14JOTBA 050HHOODK1EA0EE   010TF                     26980131    B 1500010000     250
SUSAP KPDXK1EHHOOD14JUBAR 010JUBARK1EA0E       IF                                 + FL240     18000280
SUSAP KPDXK1EHHOOD14JUBAR 020LTJ  K1D 0V    010TF                     21520173
SUSAP KPDXK1EHHOOD14JUBAR 030YENTLK1EA0E    010TF                     23110150    - FL240          280
SUSAP KPDXK1EHHOOD14JUBAR 040HHOODK1EA0EE   010TF                     23090131    B 1500010000     250
SUSAP KPDXK1EHHOOD15      010HHOODK1EA0E       IF                                 B 150001000018000250
SUSAP KPDXK1EHHOOD15      020BLRUNK1EA0EE   010TF                     25700102
SUSAP KPDXK1EHHOOD16RW10B 010BLRUNK1EA0E       IF                                            18000
SUSAP KPDXK1EHHOOD16RW10B 020SSDEEK1EA0E    010TF                     27060139    B 1200010000
SUSAP KPDXK1EHHOOD16RW10B 030THEIDK1EA0E    010TF                     27040041    B 1000008000
SUSAP KPDXK1EHHOOD16RW10B 040EMZEYK1EA0E    010TF                     27040052    B 0800007000
SUSAP KPDXK1EHHOOD16RW10B 050CIZZLK1EA0E    010TF                     28310055    + 05000          210
SUSAP KPDXK1EHHOOD16RW10B 060DOUHHK1EA0E    010TF                     28300066      04000
SUSAP KPDXK1EHHOOD16RW10B 070NNUTTK1EA0EY   010TF                     27790033      04000
SUSAP KPDXK1EHHOOD16RW10B 080NNUTTK1EA0EE      FM YXC CY      216735472780    D
SUSAP KPDXK1EHHOOD16RW28B 010BLRUNK1EA0E       IF                                            18000
SUSAP KPDXK1EHHOOD16RW28B 020SHAFRK1EA0EY   010TF                     25850020      06700
SUSAP KPDXK1EHHOOD16RW28B 030SHAFRK1EA0EE      FM YXC CY      211234032590    D
```

```
                1         2         3         4         5         6         7         8         9         0         1         2         3
RUNWAY  123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
        ------------------------------------------------------------------------------------------------------------------------------------
        SUSAP KPDXK1GRW10L   0098251030 N45354128W122354419+0000    -0013700030129049150IIVDG1
        SUSAP KPDXK1GRW10R   0110001030 N45354253W122371730+0000    -0015800023000053150IIPDX3
        SUSAP KPDXK1GRW28L   0110002830 N45344985W122350205+0000    -0015800023000055150IIJMJ1
        SUSAP KPDXK1GRW28R   0098252830 N45350294W122340584+0000    -0013400031053554150IIIAP1
```

QUALITY CHECKED

(11) Arrival Name	(12) Number	(13) STAR Computer Code	(14) Superseded Nr.	(15) Dated	(16) Effective Date
HHOOD RNAV	ONE	HHOOD.HHOOD1	NONE		

US Department of Transportation
Federal Aviation Administration

STAR (Data Record)

ARINC SUMMARY - 424-18 - STAR

ROUTES	TRANSITION	FIX	SEQ	USE	PATH	TURN	FO/FB	RNP	MAG(TRUE)	DISTANCE	ALTITUDE	SPEED
	JERDT	JERDT	010		IF		FB				AA FL240	AT 280
	JERDT	HANDL	020		TF		FB	1.0	266.5()	026.8		
	JERDT	DUFUR	030		TF		FB	1.0	267.0()	005.7		
	JERDT	RABBI	040		TF		FB	1.0	269.8()	009.3	AB FL240	AT 280
	JERDT	HHOOD	050		TF		FB	1.0	269.8()	013.1	BT 1500010000	AT 250
	JKNOX	JKNOX	010		IF		FB	1.0			AA FL240	AT 280
	JKNOX	MYTOE	020		TF		FB	1.0	255.5()	026.9		
	JKNOX	BAYYR	030		TF		FB	1.0	254.6()	015.0	AB FL240	AT 280
	JKNOX	HHOOD	040		TF		FB	1.0	254.3()	013.1	BT 1500010000	AT 250
	JOTBA	JOTBA	010		IF		FB	1.0			AA FL240	AT 280
	JOTBA	SODDA	020		TF		FB	1.0	282.7()	027.3		
	JOTBA	DUFUR	030		TF		FB	1.0	282.4()	005.6		
	JOTBA	RABBI	040		TF		FB	1.0	269.8()	009.3	AB FL240	AT 280
	JOTBA	HHOOD	050		TF		FB	1.0	269.8()	013.1	BT 1500010000	AT 250
	JUBAR	JUBAR	010		IF		FB				AA FL240	AT 280
	JUBAR	LTJ	020		TF		FB	1.0	215.2()	017.3		
	JUBAR	YENTL	030		TF		FB	1.0	231.1()	015.0	AB FL240	AT 280
	JUBAR	HHOOD	040		TF		FB	1.0	230.9()	013.1	BT 1500010000	AT 250
		HHOOD	010		IF		FB				BT 1500010000	AT 250
		BLRUN	020		TF		FB	1.0	257.0()	010.2		
	RW10B	BLRUN	010		IF		FB					
	RW10B	SSDEE	020		TF		FB	1.0	270.6()	013.9	BT 1200010000	
	RW10B	THEID	030		TF		FB	1.0	270.4()	004.1	BT 1000008000	
	RW10B	EMZEY	040		TF		FB	1.0	270.4()	005.2	BT 0800007000	
	RW10B	CIZZL	050		TF		FB	1.0	283.1()	005.5	AA 05000	AT 210
	RW10B	DOUHH	060		TF		FB	1.0	283.0()	006.6	AT 04000	
	RW10B	NNUTT	070		TF		FO	1.0	277.9()	003.3	AT 04000	
	RW10B	NNUTT	080		FM		FB		278.0()			
	RW28B	BLRUN	010		IF		FB					
	RW28B	SHAFR	020		TF		FO	1.0	258.5()	002.0	AT 06700	
	RW28B	SHAFR	030		FM		FB		259.0()			

POINT DATA	WAYPOINT	LAT IN SECS	LONG IN SECS	LAT IN MINS	LONG IN MINS
	YXC	N493317.95	W1160515.73	N4933.299	W11605.262
	LTJ	N454248.90	W1210603.00	N4542.815	W12106.050
	BAYYR	N453143.56	W1212412.24	N4531.726	W12124.204
	BLRUN	N453217.38	W1215727.02	N4532.290	W12157.450

QUALITY CHECKED 4

(11) Arrival Name	(12) Number	(13) STAR Computer Code	(14) Superseded Nr.	(15) Dated	(16) Effective Date
HHOOD RNAV	ONE	HHOOD.HHOOD1	NONE		

FAA Form 7100-3 (9/02)

CIZZL	N454132.02	W1223600.67	N4541.534	W12236.011
DOUHH	N454443.96	W1224415.32	N4544.733	W12244.255
DUFUR	N452543.22	W1211213.48	N4525.720	W12112.225
EMZEY	N453852.04	W1222909.24	N4538.867	W12229.154
HANDL	N452426.61	W1210419.24	N4524.444	W12104.321
HHOOD	N453146.12	W1214254.05	N4531.769	W12142.901
JERDT	N451843.54	W1202708.11	N4518.726	W12027.135
JKNOX	N453102.65	W1202440.73	N4531.044	W12024.679
JOTBA	N451000.70	W1203112.27	N4510.012	W12031.205
JUBAR	N455339.86	W1204648.87	N4553.664	W12046.815
MYTOE	N453136.91	W1210252.08	N4531.615	W12102.868
NNUTT	N454604.32	W1224834.49	N4546.072	W12248.575
RABBI	N452813.68	W1212455.39	N4528.228	W12124.923
SHAFR	N453226.69	W1220017.52	N4532.445	W12200.292
SODDA	N452302.63	W1210510.62	N4523.044	W12105.177
SSDEE	N453613.85	W1221621.75	N4536.231	W12216.363
THEID	N453723.35	W1222158.96	N4537.389	W12221.983
YENTL	N453656.86	W1212544.01	N4536.948	W12125.734
RW10L	N453541.28	W1223544.19	N4535.688	W12235.737
RW10R	N453542.53	W1223717.30	N4535.709	W12237.288
RW28L	N453449.85	W1223502.05	N4534.831	W12235.034
RW28R	N453502.94	W1223405.84	N4535.049	W12234.097

RUNWAY DATA

RWY	THRESHOLD ELEVATION	TCH
RW10L	00030	49
RW10R	00023	53
RW28L	00023	55
RW28R	00031	54

QUALITY CHECKED

(11) Arrival Name	(12) Number	(13) STAR Computer Code	(14) Superseded Nr.	(15) Dated	(16) Effective Date
HHOOD RNAV	ONE	HHOOD.HHOOD1	NONE		

RADIO FIX AND HOLDING DATA RECORD

NAME: BAYYR **STATE:** OR **COUNTRY:** US

LATITUDE/LONGITUDE: 453143.56N/1212412.24W **TYPE:** WP

AIRSPACE DOCKET: **FIX TYPE OF ACTION:** ESTABLISH

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
STAR	HHOOD			KPDX	PORTLAND	OR (US)

REQUIRED CHARTING: STAR

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: ORIG **DATE OF REVISION:** 03/07/2013

DEVELOPED BY: **DATE:** 11/06/2012 **OFFICE:** AJV-354 **NAME:** CHARLES ERICKSON

APPROVED BY: **DATE:** **OFFICE:** AJV-354 **NAME:** DEBORAH COPELAND

SIGNATURE:

DISTRIBUTION:
NFDC
FPO: WST
ARTCC: ZSE
ATC FACILITY: PDX
OTHER:

QUALITY 3 CHECKED

RADIO FIX AND HOLDING DATA RECORD

NAME: BLRUN **STATE:** OR **COUNTRY:** US

LATITUDE/LONGITUDE: 453217.38N/1215727.02W **TYPE:** WP

AIRSPACE DOCKET: **FIX TYPE OF ACTION:** ESTABLISH

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
STAR	HHOOD			KPDX	PORTLAND	OR (US)

REQUIRED CHARTING: STAR

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: ORIG **DATE OF REVISION:** 03/07/2013

DEVELOPED BY: **DATE:** 11/06/2012 **OFFICE:** AJV-354 **NAME:** CHARLES ERICKSON

APPROVED BY: **DATE:** **OFFICE:** AJV-354 **NAME:** DEBORAH COPELAND

SIGNATURE:

DISTRIBUTION:
NFDC
FPO: WST
ARTCC: ZSE
ATC FACILITY: PDX
OTHER:

QUALITY

RADIO FIX AND HOLDING DATA RECORD

NAME: CIZZL **STATE:** WA **COUNTRY:** US

LATITUDE/LONGITUDE: 454132.02N/1223600.67W **TYPE:** WP

AIRSPACE DOCKET: **FIX TYPE OF ACTION:** NO CHANGE

HOLDING: **HOLDING TYPE OF ACTION:** NO CHANGE

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
IAP	RNAV (RNP) Z RWY 10L			KPDX	PORTLAND	OR (US)
IAP	RNAV (RNP) Z RWY 10R			KPDX	PORTLAND	OR (US)
STAR	HHOOD			KPDX	PORTLAND	OR (US)

REQUIRED CHARTING: STAR, IAP

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 1 **DATE OF REVISION:** 03/07/2013

REASON FOR REVISION:
UPDATED FIX USE
ADDED STAR TO CHARTING

DEVELOPED BY: **DATE:** 11/07/2012 **OFFICE:** AJV-354 **NAME:** CHARLES ERICKSON

APPROVED BY: **DATE:** **OFFICE:** AJV-354 **NAME:** DEBORAH COPELAND

SIGNATURE:

DISTRIBUTION:
NFDC
FPO: WST
ARTCC: ZSE
ATC FACILITY: PDX
OTHER:

QUALITY 3 CHECKED

RADIO FIX AND HOLDING DATA RECORD

NAME: DOUHH **STATE:** OR **COUNTRY:** US

LATITUDE/LONGITUDE: 454443.96N/1224415.32W **TYPE:** WP

AIRSPACE DOCKET: **FIX TYPE OF ACTION:** ESTABLISH

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
STAR	HHOOD			KPDX	PORTLAND	OR (US)

REQUIRED CHARTING: STAR

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: ORIG **DATE OF REVISION:** 03/07/2013

DEVELOPED BY: **DATE:** 11/06/2012 **OFFICE:** AJV-354 **NAME:** CHARLES ERICKSON

APPROVED BY: **DATE:** **OFFICE:** AJV-354 **NAME:** DEBORAH COPELAND

SIGNATURE:

DISTRIBUTION: **NFDC**
FPO: WST
ARTCC: ZSE
ATC FACILITY: PDX
OTHER:

QUALITY 3 CHECKED

RADIO FIX AND HOLDING DATA RECORD

NAME: DUFUR **STATE:** OR **COUNTRY:** US

LATITUDE/LONGITUDE: 452543.22N/1211213.48W **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	DIST FROM FAC FEET	MRA	MAA
1	PENDLETON	PDT	VORTAC	H	241.19	261.19				20000	41000
2	PORTLAND	PDX	VOR/DME	L	079.00	099.00	60.00			20000	41000
3	KLICKITAT	LTJ	VOR/DME	H	173.27	194.27				20000	41000
4	KIMBERLY	IMB	VORTAC	H	286.94	306.94				20000	41000

EXPANDED SERVICE VOLUME (ESV):

FAC IDENT	FAC TYPE	RADIAL/BEARING	DISTANCE	MIN ALTITUDE	MAX ALTITUDE
PDX	VOR/DME	R-079	60	10000	41000

HOLDING: **HOLDING TYPE OF ACTION:** NO CHANGE

REMARKS:
PORTLAND(FAC 2)USED TO ESTABLISH FIX COORDINATES.

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
DP	BONVL	1, 2, 3, 4		KPDX	PORTLAND	OR (US)
STAR	HHOOD			KPDX	PORTLAND	OR (US)

REQUIRED CHARTING: DP, STAR

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 3 **DATE OF REVISION:** 03/07/2013

REASON FOR REVISION:
ADDED WP TO FIX TYPE
ADDED REMARK:PORTLAND(FAC 2)USED TO ESTABLISH FIX COORDINATES.
ADDED STAR TO CHARTING
MOVED PDX ESV FROM FIX USE TO ESV BLOCK
UPDATED FIX USE

DEVELOPED BY: **DATE:** 11/07/2012 **OFFICE:** AJV-354 **NAME:** CHARLES ERICKSON

APPROVED BY: **DATE:** **OFFICE:** AJV-354 **NAME:** DEBORAH COPELAND

SIGNATURE:

DISTRIBUTION: **NFDC**
FPO: WST
ARTCC: ZSE
ATC FACILITY: PDX
OTHER:

QUALITY CHECKED

RADIO FIX AND HOLDING DATA RECORD

NAME: EMZEY **STATE:** WA **COUNTRY:** US

LATITUDE/LONGITUDE: 453852.04N/1222909.24W **TYPE:** WP

AIRSPACE DOCKET: **FIX TYPE OF ACTION:** ESTABLISH

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
STAR	HHOOD			KPDX	PORTLAND	OR (US)

REQUIRED CHARTING: STAR

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: ORIG **DATE OF REVISION:** 03/07/2013

DEVELOPED BY: **DATE:** 11/07/2012 **OFFICE:** AJV-354 **NAME:** CHARLES ERICKSON

APPROVED BY: **DATE:** **OFFICE:** AJV-354 **NAME:** DEBORAH COPELAND

SIGNATURE:

DISTRIBUTION:
NFDC
FPO: WST
ARTCC: ZSE
ATC FACILITY: PDX
OTHER:

QUALITY 3 CHECKED

RADIO FIX AND HOLDING DATA RECORD

NAME: HANDL **STATE:** OR **COUNTRY:** US

LATITUDE/LONGITUDE: 452426.61N/1210419.24W **TYPE:** WP

AIRSPACE DOCKET: **FIX TYPE OF ACTION:** ESTABLISH

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
STAR	HHOOD			KPDX	PORTLAND	OR (US)

REQUIRED CHARTING: STAR, CONTROLLER, EN ROUTE HIGH

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: ORIG **DATE OF REVISION:** 03/07/2013

DEVELOPED BY: **DATE:** 11/07/2012 **OFFICE:** AJV-354 **NAME:** CHARLES ERICKSON

APPROVED BY: **DATE:** **OFFICE:** AJV-354 **NAME:** DEBORAH COPELAND

SIGNATURE:

DISTRIBUTION:
NFDC
FPO: WST
ARTCC: ZSE
ATC FACILITY: PDX
OTHER:

QUALITY CHECKED

RADIO FIX AND HOLDING DATA RECORD

NAME: HHOOD **STATE:** OR **COUNTRY:** US

LATITUDE/LONGITUDE: 453146.12N/1214254.05W **TYPE:** WP

AIRSPACE DOCKET: **FIX TYPE OF ACTION:** ESTABLISH

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
STAR	HHOOD			KPDX	PORTLAND	OR (US)

REQUIRED CHARTING: STAR

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: ORIG **DATE OF REVISION:** 03/07/2013

DEVELOPED BY: **DATE:** 11/07/2012 **OFFICE:** AJV-354 **NAME:** CHARLES ERICKSON

APPROVED BY: **DATE:** **OFFICE:** AJV-354 **NAME:** DEBORAH COPELAND

SIGNATURE:

DISTRIBUTION:
NFDC
FPO: WST
ARTCC: ZSE
ATC FACILITY: PDX
OTHER:

QUALITY CHECKED 3

RADIO FIX AND HOLDING DATA RECORD

NAME: JERDT **STATE:** OR **COUNTRY:** US

LATITUDE/LONGITUDE: 451843.54N/1202708.11W **TYPE:** WP

AIRSPACE DOCKET: **FIX TYPE OF ACTION:** ESTABLISH

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
STAR	HHOOD			KPDX	PORTLAND	OR (US)

REQUIRED CHARTING: STAR, CONTROLLER, EN ROUTE HIGH

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: ORIG **DATE OF REVISION:** 03/07/2013

DEVELOPED BY: **DATE:** 11/07/2012 **OFFICE:** AJV-354 **NAME:** CHARLES ERICKSON

APPROVED BY: **DATE:** **OFFICE:** AJV-354 **NAME:** DEBORAH COPELAND

SIGNATURE:

DISTRIBUTION:
NFDC
FPO: WST
ARTCC: ZSE
ATC FACILITY: PDX
OTHER:

QUALITY CHECKED 4

RADIO FIX AND HOLDING DATA RECORD

NAME: JKNOX **STATE:** OR **COUNTRY:** US

LATITUDE/LONGITUDE: 453102.65N/1202440.73W **TYPE:** WP

AIRSPACE DOCKET: **FIX TYPE OF ACTION:** ESTABLISH

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
STAR	HHOOD			KPDX	PORTLAND	OR (US)

REQUIRED CHARTING: STAR, CONTROLLER, EN ROUTE HIGH

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: ORIG **DATE OF REVISION:** 03/07/2013

DEVELOPED BY: **DATE:** 11/07/2012 **OFFICE:** AJV-354 **NAME:** CHARLES ERICKSON

APPROVED BY: **DATE:** **OFFICE:** AJV-354 **NAME:** DEBORAH COPELAND

SIGNATURE:

DISTRIBUTION: **NFDC**
FPO: WST
ARTCC: ZSE
ATC FACILITY: PDX
OTHER:

QUALITY CHECKED

RADIO FIX AND HOLDING DATA RECORD

NAME: JOTBA **STATE:** OR **COUNTRY:** US

LATITUDE/LONGITUDE: 451000.70N/1203112.27W **TYPE:** WP

AIRSPACE DOCKET: **FIX TYPE OF ACTION:** ESTABLISH

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
STAR	HHOOD			KPDX	PORTLAND	OR (US)

REQUIRED CHARTING: STAR, CONTROLLER, EN ROUTE HIGH

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: ORIG **DATE OF REVISION:** 03/07/2013

DEVELOPED BY: **DATE:** 11/07/2012 **OFFICE:** AJV-354 **NAME:** CHARLES ERICKSON

APPROVED BY: **DATE:** **OFFICE:** AJV-354 **NAME:** DEBORAH COPELAND

SIGNATURE:

DISTRIBUTION:
NFDC
FPO: WST
ARTCC: ZSE
ATC FACILITY: PDX
OTHER:

QUALITY CHECKED

RADIO FIX AND HOLDING DATA RECORD

NAME: JUBAR **STATE:** WA **COUNTRY:** US

LATITUDE/LONGITUDE: 455339.86N/1204648.87W **TYPE:** WP

AIRSPACE DOCKET: **FIX TYPE OF ACTION:** ESTABLISH

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
STAR	HHOOD			KPDX	PORTLAND	OR (US)

REQUIRED CHARTING: STAR, CONTROLLER, EN ROUTE HIGH

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: ORIG **DATE OF REVISION:** 03/07/2013

DEVELOPED BY: **DATE:** 11/07/2012 **OFFICE:** AJV-354 **NAME:** CHARLES ERICKSON

APPROVED BY: **DATE:** **OFFICE:** AJV-354 **NAME:** DEBORAH COPELAND

SIGNATURE:

DISTRIBUTION:
NFDC
FPO: WST
ARTCC: ZSE
ATC FACILITY: PDX
OTHER:

RADIO FIX AND HOLDING DATA RECORD

NAME: MYTOE **STATE:** OR **COUNTRY:** US

LATITUDE/LONGITUDE: 453136.91N/1210252.08W **TYPE:** WP

AIRSPACE DOCKET: **FIX TYPE OF ACTION:** ESTABLISH

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
STAR	HHOOD			KPDX	PORTLAND	OR (US)

REQUIRED CHARTING: STAR, CONTROLLER, EN ROUTE HIGH

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: ORIG **DATE OF REVISION:** 03/07/2013

DEVELOPED BY: **DATE:** 11/07/2012 **OFFICE:** AJV-354 **NAME:** CHARLES ERICKSON

APPROVED BY: **DATE:** **OFFICE:** AJV-354 **NAME:** DEBORAH COPELAND

SIGNATURE:

DISTRIBUTION:
NFDC
FPO: WST
ARTCC: ZSE
ATC FACILITY: PDX
OTHER:

QUALITY CHECKED 4

RADIO FIX AND HOLDING DATA RECORD

NAME: NNUTT **STATE:** OR **COUNTRY:** US

LATITUDE/LONGITUDE: 454604.32N/1224834.49W **TYPE:** WP

AIRSPACE DOCKET: **FIX TYPE OF ACTION:** ESTABLISH

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
STAR	HHOOD			KPDX	PORTLAND	OR (US)

REQUIRED CHARTING: STAR

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: ORIG **DATE OF REVISION:** 03/07/2013

DEVELOPED BY: **DATE:** 11/07/2012 **OFFICE:** AJV-354 **NAME:** CHARLES ERICKSON

APPROVED BY: **DATE:** **OFFICE:** AJV-354 **NAME:** DEBORAH COPELAND

SIGNATURE:

DISTRIBUTION:
NFDC
FPO: WST
ARTCC: ZSE
ATC FACILITY: PDX
OTHER:

QUALITY 3 CHECKED

RADIO FIX AND HOLDING DATA RECORD

NAME: RABBI **STATE:** OR **COUNTRY:** US

LATITUDE/LONGITUDE: 452813.68N/1212455.39W **TYPE:** WP

AIRSPACE DOCKET: **FIX TYPE OF ACTION:** ESTABLISH

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
STAR	HHOOD			KPDX	PORTLAND	OR (US)

REQUIRED CHARTING: STAR

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: ORIG **DATE OF REVISION:** 03/07/2013

DEVELOPED BY: **DATE:** 11/07/2012 **OFFICE:** AJV-354 **NAME:** CHARLES ERICKSON

APPROVED BY: **DATE:** **OFFICE:** AJV-354 **NAME:** DEBORAH COPELAND

SIGNATURE:

DISTRIBUTION: **NFDC**
FPO: WST
ARTCC: ZSE
ATC FACILITY: PDX
OTHER:

QUALITY 3 CHECKED

RADIO FIX AND HOLDING DATA RECORD

NAME: SHAFR **STATE:** OR **COUNTRY:** US

LATITUDE/LONGITUDE: 453226.69N/1220017.52W **TYPE:** WP

AIRSPACE DOCKET: **FIX TYPE OF ACTION:** ESTABLISH

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
STAR	HHOOD			KPDX	PORTLAND	OR (US)

REQUIRED CHARTING: STAR

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: ORIG **DATE OF REVISION:** 03/07/2013

DEVELOPED BY: **DATE:** 11/07/2012 **OFFICE:** AJV-354 **NAME:** CHARLES ERICKSON

APPROVED BY: **DATE:** **OFFICE:** AJV-354 **NAME:** DEBORAH COPELAND

SIGNATURE:

DISTRIBUTION:
NFDC
FPO: WST
ARTCC: ZSE
ATC FACILITY: PDX
OTHER:

QUALITY 3 CHECKED

RADIO FIX AND HOLDING DATA RECORD

NAME: SODDA **STATE:** OR **COUNTRY:** US

LATITUDE/LONGITUDE: 452302.63N/1210510.62W **TYPE:** WP

AIRSPACE DOCKET: **FIX TYPE OF ACTION:** ESTABLISH

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
STAR	HHOOD			KPDX	PORTLAND	OR (US)

REQUIRED CHARTING: STAR, CONTROLLER, EN ROUTE HIGH

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: ORIG **DATE OF REVISION:** 03/07/2013

DEVELOPED BY: **DATE:** 11/07/2012 **OFFICE:** AJV-354 **NAME:** CHARLES ERICKSON

APPROVED BY: **DATE:** **OFFICE:** AJV-354 **NAME:** DEBORAH COPELAND

SIGNATURE:

DISTRIBUTION: **NFDC**
FPO: WST
ARTCC: ZSE
ATC FACILITY: PDX
OTHER:

QUALITY CHECKED

RADIO FIX AND HOLDING DATA RECORD

NAME: SSDEE **STATE:** WA **COUNTRY:** US

LATITUDE/LONGITUDE: 453613.85N/1221621.75W **TYPE:** WP

AIRSPACE DOCKET: **FIX TYPE OF ACTION:** ESTABLISH

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
STAR	HHOOD			KPDX	PORTLAND	OR (US)

REQUIRED CHARTING: STAR

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: ORIG **DATE OF REVISION:** 03/07/2013

DEVELOPED BY: **DATE:** 11/07/2012 **OFFICE:** AJV-354 **NAME:** CHARLES ERICKSON

APPROVED BY: **DATE:** **OFFICE:** AJV-354 **NAME:** DEBORAH COPELAND

SIGNATURE:

DISTRIBUTION:
NFDC
FPO: WST
ARTCC: ZSE
ATC FACILITY: PDX
OTHER:

QUALITY 3 CHECKED

RADIO FIX AND HOLDING DATA RECORD

NAME: THEID **STATE:** WA **COUNTRY:** US

LATITUDE/LONGITUDE: 453723.35N/1222158.96W **TYPE:** WP

AIRSPACE DOCKET: **FIX TYPE OF ACTION:** ESTABLISH

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
STAR	HHOOD			KPDX	PORTLAND	OR (US)

REQUIRED CHARTING: STAR

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: ORIG **DATE OF REVISION:** 03/07/2013

DEVELOPED BY: **DATE:** 11/07/2012 **OFFICE:** AJV-354 **NAME:** CHARLES ERICKSON

APPROVED BY: **DATE:** **OFFICE:** AJV-354 **NAME:** DEBORAH COPELAND

SIGNATURE:

DISTRIBUTION:
NFDC
FPO: WST
ARTCC: ZSE
ATC FACILITY: PDX
OTHER:

QUALITY 3 CHECKED

RADIO FIX AND HOLDING DATA RECORD

NAME: YENTL **STATE:** OR **COUNTRY:** US

LATITUDE/LONGITUDE: 453656.86N/1212544.01W **TYPE:** WP

AIRSPACE DOCKET: **FIX TYPE OF ACTION:** ESTABLISH

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
STAR	HHOOD			KPDX	PORTLAND	OR (US)

REQUIRED CHARTING: STAR

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: ORIG **DATE OF REVISION:** 03/07/2013

DEVELOPED BY: **DATE:** 11/07/2012 **OFFICE:** AJV-354 **NAME:** CHARLES ERICKSON

APPROVED BY: **DATE:** **OFFICE:** AJV-354 **NAME:** DEBORAH COPELAND

SIGNATURE:

DISTRIBUTION:
NFDC
FPO: WST
ARTCC: ZSE
ATC FACILITY: PDX
OTHER:

QUALITY CHECKED 3

INFORMATION ONLY

RADIO FIX AND HOLDING DATA RECORD

NAME: KLICKITAT VOR/DME **STATE:** WA **COUNTRY:** US

LATITUDE/LONGITUDE: 454248.90N/1210603.00W **TYPE:**

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	DIST FROM FAC FEET	MRA	MAA
1	KLICKITAT	LTJ	VOR/DME	H							45000
2	DESCHUTES	DSD	VORTAC	H	347.55	005.55	88.08	88.08		7000	17500

EXPANDED SERVICE VOLUME (ESV):

FAC IDENT	FAC TYPE	RADIAL/BEARING	DISTANCE	MIN ALTITUDE	MAX ALTITUDE
DSD	VORTAC	R-348	89	7000	14500

FIX RESTRICTIONS:
MCA V25 5400 NORTHBOUND

HOLDING: **HOLDING TYPE OF ACTION:** MODIFY

PATTERNS:

PAT	DIR	IDENT	TYPE	RAD/CRS/BRG	CRS INBOUND	TURN (L OR R)	LEG LENGTH TIME	LEG LENGTH DME	HOLDING ALTITUDES MIN	HOLDING ALTITUDES MAX	TEMPLATES MIN	TEMPLATES MAX
1	E	LTJ	VOR/DME	070.00	250.00	R	1-1 1/2		8000	45000	8	29
2	E	LTJ	VOR/DME	080.00	260.00	R	1		5000	14000	5	10

CONTROLLING OBSTRUCTIONS:

PAT	AIRSPEED	OBSTRUCTION	COORDINATES	ELEVATION	ACCURACY CODE
1	230	WINDMILL (53-020275)	454426.00N/1204349.99W	3534	4D
2	200	AAO	454242.90N/1200602.40W	3420	6A
2	310	WINDMILL (53-020275)	454426.00N/1204349.99W	3534	4D

PRECIPITOUS TERRAIN ADDITIONS:

PAT	SPEED	ADDITION
1	230	204
2	200	200

HOLDING RESTRICTIONS:
HOLDING RESTRICTED TO ESTABLISHED PATTERNS.

PROCEDURES REQUIRING CLIMB-IN-HOLD:

PAT	PROCEDURE TITLE	AIRPORT IDENT	CITY	STATE
2	TAKE-OFF MINIMUMS	KDLS	THE DALLES	OR (US)

REMARKS:
PRECIPITOUS TERRAIN EVALUATION COMPLETED.

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
DP	RIVER			KPDX	PORTLAND	OR (US)
DP	REDMOND			KRDM	REDMOND	OR (US)
DP	TAKE-OFF MINIMUMS		2	KDLS	THE DALLES	OR (US)
DP	TRI CITIES			KPSC	PASCO	WA (US)
DP	GROMO			KYKM	YAKIMA	WA (US)
DP	NACHES			KYKM	YAKIMA	WA (US)
EN ROUTE	J143					OR (US)
EN ROUTE	J523					OR (US)
EN ROUTE	V112					OR (US)
EN ROUTE	V182					OR (US)
EN ROUTE	V25					OR (US)
EN ROUTE	V497					OR (US)
EN ROUTE	V520					OR (US)
IAP	RNAV (GPS) RWY 8			K9S9	LEXINGTON	OR (US)
IAP	COPTER LDA/DME RWY 25			KDLS	THE DALLES	OR (US)
IAP	LDA/DME RWY 25			KDLS	THE DALLES	OR (US)
STAR	BONVL		1	KPDX	PORTLAND	OR (US)
STAR	HHOOD			KPDX	PORTLAND	OR (US)

REQUIRED CHARTING: STAR, IAP, CONTROLLER, EN ROUTE LOW, EN ROUTE HIGH

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 7 **DATE OF REVISION:** 07/26/2012

REASON FOR REVISION:

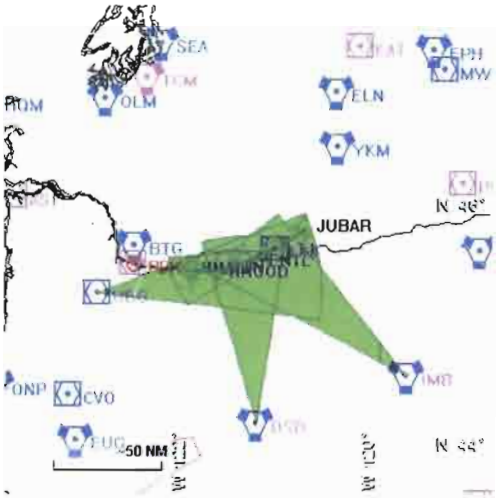
QUALITY 3 CHECKED

1. MOVED HOLDING RESTRICTED TO ESTABLISHED PATTERNS REMARK TO RESTRICTIONS.
2. MOVED PRECIPITOUS TERRAIN ADJUSTMENTS FROM REMARKS TO PRECIPITOUS TERRAIN ADJUSTMENTS BLOCK.
3. UPDATED HOLD PATTERN 2 OBSTACLE DESCRIPTION.
4. UPDATED FIX USE.
5. ADDED DSD AS FAC 2 TO SUPPORT ESV DATA.
6. CHANGED ESV DISTANCE FROM 88 TO 89, MIN ALTITUDE FROM 12000 TO 7000, MAX ALTITUDE FROM 17500 TO 14500 IAW 8260.19D CHAPTER 2 PARA 209 A.
7. MOVED ESV DATA FROM REMARKS TO ESV BLOCK.

DEVELOPED BY:	**DATE:** 12/13/2011	**OFFICE:** AVN-130	**NAME:** ADOLFO URRUTIA (JOHN LINDSEY)
APPROVED BY:	**DATE:** 05/23/2012	**OFFICE:**	**NAME:** DEZ SILAGYI
	SIGNATURE:		

DISTRIBUTION:
NFDC
FPO: WST
ARTCC: ZSE
ATC FACILITY: PDX APP CON
OTHER:

QUALITY 3 CHECKED



Name:	Steve Haga
Project Name:	KPDX HHOOD ONE STAR
Output File:	HHOOD RNAV RW28 STAR JUBAR SHAFR 20121119_1726
Procedure Name:	HHOOD RNAV RW28
Software:	RNAV-Pro™
Version:	2.36
Date/Time:	11/19/2012 5:26:07 PM
Input File:	KPDX HHOOD STAR RW28 JUBAR SHAFR 20121119_1712.txt
Databases:	AVNIS Date: 11/09/2012
	Obstacle Date: 10/20/2011
	NFD Date: 09/30/2010
	DTED® (MAX) Date: 2002

Results Summary:

Flyability	✔
DME/DME	✔
Radars	✔
Comms	
TERPS	

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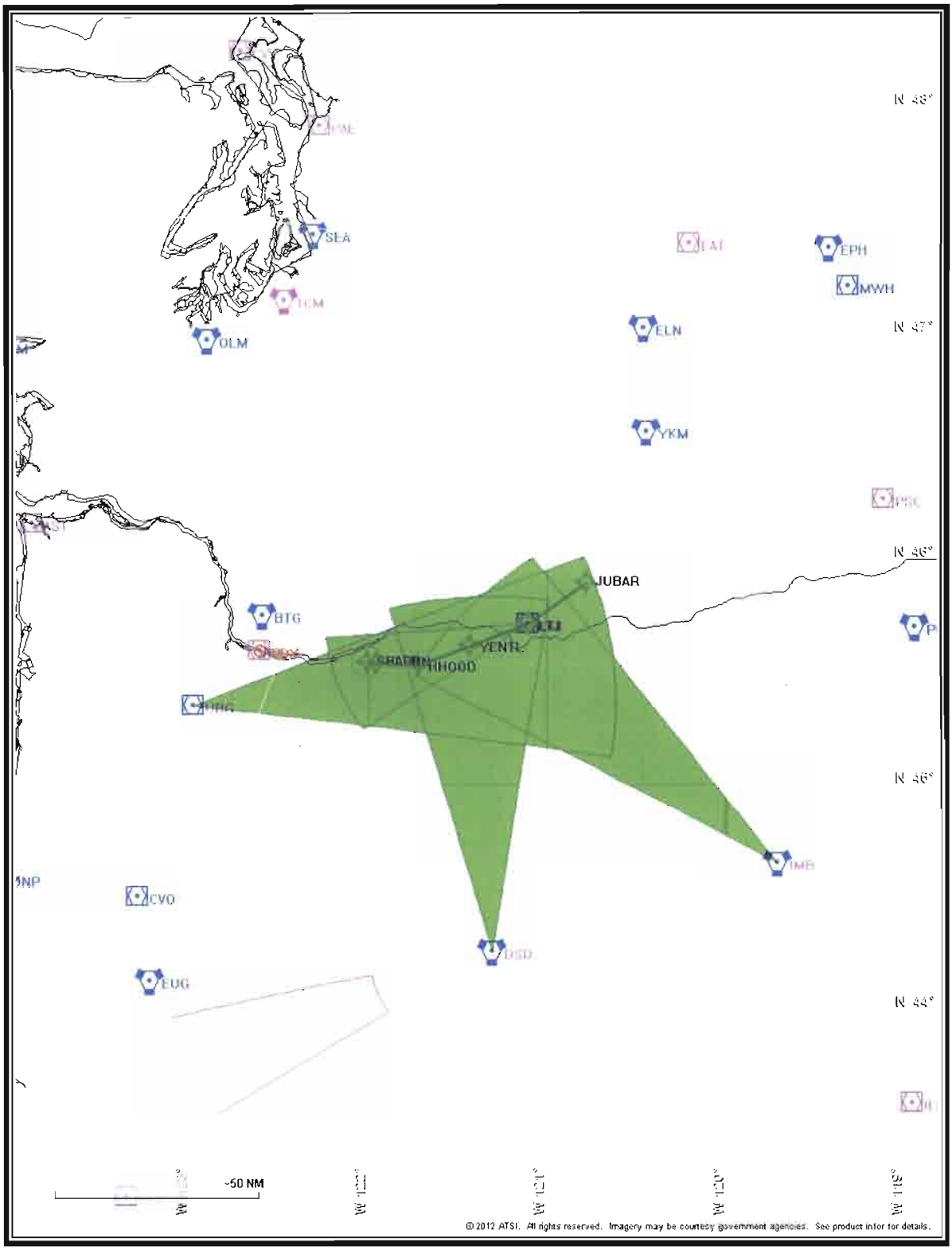
N 48°
N 47°
N 46°
N 45°
N 44°
SEA
EPH
MWH
ELN
OLM
YKM
JUBAR
BTG
YENTL
HHOOD
IMB
CVO
EUG
~50 NM
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Flight Plan

Return To Summary

Name	Type	Lat/Lon	Alt [Ft]	VNAV Mode	IAS [Kts]	Turn Type	Leg Type
JUBAR	WP	N 45° 53' 39.86" W 120° 46' 48.87"	18000.0	Step	280.0	Fly By	TF
LTJ	WP	N 45° 42' 48.90" W 121° 6' 3.00"	18000.0	Step	250.0	Fly By	TF
YENTL	WP	N 45° 36' 56.86" W 121° 25' 44.01"	13000.0	Step	250.0	Fly By	TF
HHOOD	WP	N 45° 31' 46.12" W 121° 42' 54.05"	9000.0	Step	250.0	Fly By	TF
BLRUN	WP	N 45° 32' 17.38" W 121° 57' 27.02"	7200.0	Step	210.0	Fly By	TF
SHAFR	WP	N 45° 32' 26.69" W 122° 0' 17.52"	6700.0	Step	210.0	Fly Over	TF

Flyability

Return To Summary

Settings:

Flight Type: Arrival
Aircraft Category: Cat D
Climb Gradient: *None assigned*
Ground Speeds:

Table:

200.0 Kts up to **11000.0 Ft.**
240.0 Kts up to **18000.0 Ft.**
260.0 Kts up to **24000.0 Ft.**
340.0 Kts up to **99900.0 Ft.**

Wind Settings: *None assigned*
Descent During a Turn: Allowed
VNAV Mode: Flight Plan

Entire track is fly-able

DME/DME

Return To Summary

Settings:

RNP: 2.0
Flight Mode: Manual
Line of Sight (DTED Level 0 Max): Evaluated
DME Restrictions: Evaluated
Inertial Drift: Enabled
Initial Drift: 0.558 NM
INS Drift Rate: 8.000 NM/Hour
Range Mode: OSV
Co-Frequencies: Evaluated
RNP Edges: Evaluated
Min DME Range: 3.0 NM
Allowed Gap Length: 4.0 NM
DME Types: VOR/DME , VORTAC , TACAN , and User
DME Include Angles: 30 to 150
Critical DMEs: Allowed
DoD Facilities: Not included
Foreign Facilities: Not included
Low & Terminal DMEs: Included
Flight Check DMEs: Selected
Higher Altitudes: Evaluated
Near Maximum Altitude: Evaluated

Total Number of DMEs Used: 5

Maximum DME Error: 0.830 NM.

No Critical DMEs were found.

Available DMEs: UBG, LTJ, PDT, IMB, DSD, BTG

Duplicate DMEs: HLE

Disabled DMEs: PDX

Foreign DMEs within range: YDC, YVR, YYJ

DME/DME (Continued.)

Return To Summary

DME/DME (Continued.)

Return To Summary

DMEs Used

#	Name	Lat/Lon/MAGVAR	Range	Source	Critical	Err. [NM]	Status	Time	Distance
1	LTJ	N 45° 42' 48.90" W 121° 6' 3.00" E 21	H + ESV	User	NO	0.830	Enabled	26.9 %	29.3 %
2	PDT	N 45° 41' 54.31" W 118° 56' 19.33" E 20	H	Database	NO	0.830	Enabled	2.0 %	2.1 %
3	IMB	N 44° 38' 54.21" W 119° 42' 41.87" E 20	H + ESV	User	NO	1.269	Enabled	34.4 %	37.6 %
4	UBG	N 45° 21' 11.62" W 122° 58' 41.37" E 21	H + ESV	User	NO	0.835	Enabled	38.4 %	38.3 %
5	DSD	N 44° 15' 8.53" W 121° 18' 12.38" E 18	H + ESV	User	NO	1.309	Enabled	28.9 %	27.8 %

Flight Check DME Selection

Distance [NM]	Selected DMEs					Alternate
0.0	LTJ	PDT	IMB	UBG		
16.5	LTJ	PDT	IMB	UBG	DSD	
32.2	LTJ	DSD	IMB	UBG		
44.8	LTJ	BTG	UBG			
55.5	LTJ	BTG				

Inertial Drift Segments

#	Start Location	End Location	Length [NM]
1	N 45° 52' 50.94" W 120° 48' 16.10"	N 45° 49' 32.72" W 120° 54' 8.75"	5.3
	VOR: LTJ	Available from N 45° 52' 50.94" W 120° 48' 16.10" to N 45° 49' 32.72" W 120° 54' 8.75"	
2	N 45° 32' 11.80" W 121° 41' 29.46"	N 45° 32' 26.55" W 122° 0' 15.10"	13.3
	VOR: BTG	Available from N 45° 32' 11.80" W 121° 41' 29.46" to N 45° 32' 26.55" W 122° 0' 15.10"	
	VOR: LTJ	Available from N 45° 32' 11.80" W 121° 41' 29.46" to N 45° 32' 26.55" W 122° 0' 15.10"	
	VOR: PDX	Available from N 45° 32' 11.80" W 121° 41' 29.46" to N 45° 32' 26.55" W 122° 0' 15.10"	

DME/DME (Continued.)

Return To Summary

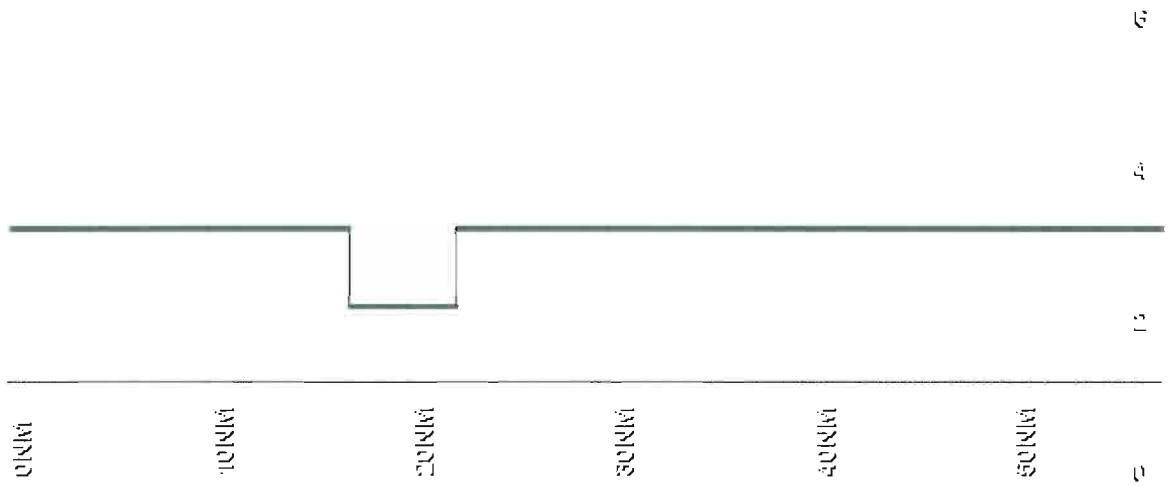
User DMEs

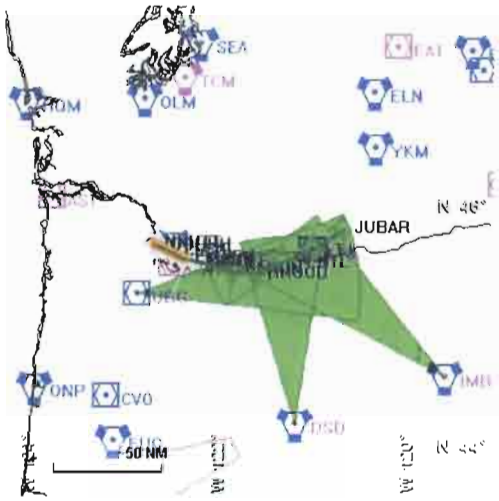
#	Name	Lat/Lon/MAGVAR	Range	Elevation [Ft]	Frequency	Replaces:	Status
1	PDX	N 45° 35' 37.30" W 122° 36' 22.57" E 20	L	23.3	111.80	PDX	Disabled
		Restriction: Bearing [True]: 21.0° to 44.0° Bearing [Mag]: 1.0° to 24.0°			Distance: Beyond 0.0 NM Altitude: Below 99999.0 Ft.		
		Restriction: Bearing [True]: 45.0° to 59.0° Bearing [Mag]: 25.0° to 39.0°			Distance: Beyond 30.0 NM Altitude: Below 99999.0 Ft.		
		Restriction: Bearing [True]: 151.0° to 250.0° Bearing [Mag]: 131.0° to 230.0°			Distance: Beyond 0.0 NM Altitude: Below 99999.0 Ft.		
		Restriction: Bearing [True]: 342.0° to 11.0° Bearing [Mag]: 322.0° to 351.0°			Distance: Beyond 0.0 NM Altitude: Below 99999.0 Ft.		
		Restriction: Bearing [True]: 11.0° to 21.0° Bearing [Mag]: 351.0° to 1.0°			Distance: Beyond 20.0 NM Altitude: Below 5500.0 Ft.		
		Restriction: Bearing [True]: 11.0° to 21.0° Bearing [Mag]: 351.0° to 1.0°			Distance: Beyond 34.0 NM Altitude: Below 6500.0 Ft.		
2	DSD	N 44° 15' 8.53" W 121° 18' 12.38" E 18	H	4101.0	117.60	DSD	Used
		Restriction: Bearing [True]: 238.0° to 258.0° Bearing [Mag]: 220.0° to 240.0°			Distance: Beyond 30.0 NM Altitude: Below 99999.0 Ft.		
		ESV: Bearing [True]: 345.0° to 368.0° Bearing [Mag]: 327.0° to 350.0°			Arc Distance: Out to 95.0 NM Altitude: 9000.0 to 25000.0 Ft.		
3	UBG	N 45° 21' 11.62" W 122° 58' 41.37" E 21	H	1440.0	117.40	UBG	Used
		ESV: Bearing [True]: 66.0° to 97.0° Bearing [Mag]: 45.0° to 76.0°			Arc Distance: Out to 100.0 NM Altitude: 8500.0 to 20000.0 Ft.		
4	IMB	N 44° 38' 54.21" W 119° 42' 41.87" E 20	H	5220.0	115.60	IMB	Used
		ESV: Bearing [True]: 301.0° to 325.0° Bearing [Mag]: 281.0° to 305.0°			Arc Distance: Out to 100.0 NM Altitude: 12500.0 to 20000.0 Ft.		
5	LTJ	N 45° 42' 48.90" W 121° 6' 3.00" E 21	H	3220.0	112.30	LTJ	Used
		ESV: Bearing [True]: 235.0° to 266.0° Bearing [Mag]: 214.0° to 245.0°			Arc Distance: Out to 48.0 NM Altitude: 6700.0 to 18000.0 Ft.		

Radar Analysis

Return To Summary

Settings: **Radar Types:** ARSR and ASR





Name:	Steve Haga
Project Name:	KPDX HHOOD RW10 STAR
Output File:	HHOOD ONE RNAV RW10 STAR JUBAR NNUTT 20121119_1803
Procedure Name:	HHOOD ONE RNAV RW10
Software:	RNAV-Pro™
Version:	2.36
Date/Time:	11/19/2012 6:03:50 PM
Input File:	KPDX HHOOD ONE STAR JUBAR NNUTT 20121119_1755.txt
Databases:	AVNIS Date: 11/09/2012
	Obstacle Date: 10/20/2011
	NFD Date: 09/30/2010
	DTED® (MAX) Date: 2002

Results Summary:

Flyability	✔
DME/DME	✔
Radars	✔
Comms	
TERPS	

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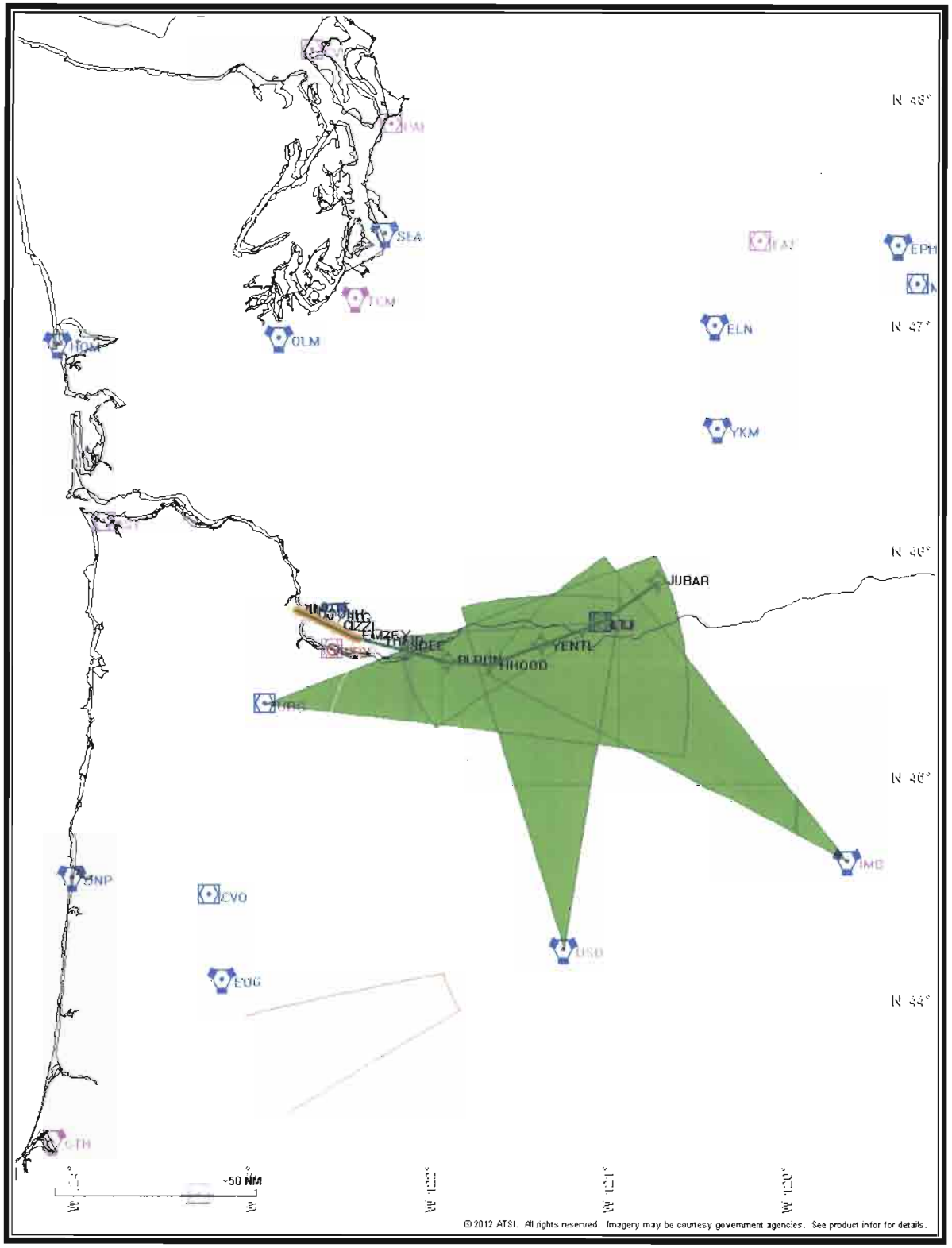
SEA
TOM
OLM
ELN
YKM
JUBAR
YENTL
HHOOD
IMB
USD
CVO
EUG
50 NM
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Flight Plan

Return To Summary

Name	Type	Lat/Lon	Alt [Ft]	VNAV Mode	IAS [Kts]	Turn Type	Leg Type
JUBAR	WP	N 45° 53' 39.86" W 120° 46' 48.87"	18000.0	Step	280.0	Fly By	TF
LTJ	WP	N 45° 42' 48.90" W 121° 6' 3.00"	18000.0	Step	250.0	Fly By	TF
YENTL	WP	N 45° 36' 56.86" W 121° 25' 44.01"	13000.0	Step	250.0	Fly By	TF
HHOOD	WP	N 45° 31' 46.12" W 121° 42' 54.05"	9000.0	Step	250.0	Fly By	TF
BLRUN	WP	N 45° 32' 17.38" W 121° 57' 27.02"	7200.0	Step	210.0	Fly By	TF
SSDEE	WP	N 45° 36' 13.85" W 122° 16' 21.75"	6700.0	Step	210.0	Fly By	TF
THEID	WP	N 45° 37' 23.35" W 122° 21' 58.96"	5000.0	Step	210.0	Fly By	TF
EMZEY	WP	N 45° 38' 52.04" W 122° 29' 9.24"	5000.0	Step	210.0	Fly By	TF
CIZZL	WP	N 45° 41' 32.02" W 122° 36' 0.67"	3400.0	Step	210.0	Fly By	TF
DOUHH	WP	N 45° 44' 43.96" W 122° 44' 15.32"	3400.0	Step	210.0	Fly By	TF
NNUTT	WP	N 45° 46' 4.32" W 122° 48' 34.49"	3400.0	Step	210.0	Fly Over	TF

Flyability

Return To Summary

Settings:

Flight Type: Arrival
Aircraft Category: Cat D
Climb Gradient: *None assigned*
Ground Speeds:

Table:

200.0 Kts up to **11000.0 Ft.**
240.0 Kts up to **18000.0 Ft.**
260.0 Kts up to **24000.0 Ft.**
340.0 Kts up to **99900.0 Ft.**

Wind Settings: *None assigned*
Descent During a Turn: Allowed
VNAV Mode: Flight Plan

Entire track is fly-able

DME/DME

Return To Summary

Settings:

RNP: 2.0
Flight Mode: Manual
Line of Sight (DTED Level 0 Max): Evaluated
DME Restrictions: Evaluated
Inertial Drift: Enabled
Initial Drift: 0.558 NM
INS Drift Rate: 8.000 NM/Hour
Range Mode: OSV
Co-Frequencies: Evaluated
RNP Edges: Evaluated
Min DME Range: 3.0 NM
Allowed Gap Length: 4.0 NM
DME Types: VOR/DME , VORTAC , TACAN , and User
DME Include Angles: 30 to 150
Critical DMEs: Allowed
DoD Facilities: Not included
Foreign Facilities: Not included
Low & Terminal DMEs: Included
Flight Check DMEs: Selected
Higher Altitudes: Evaluated
Near Maximum Altitude: Evaluated

Total Number of DMEs Used: 6

Maximum DME Error: 1.090 NM

2 Critical DMEs were found.

Available DMEs: UBG, LTJ, PDT, IMB, DSD, BTG

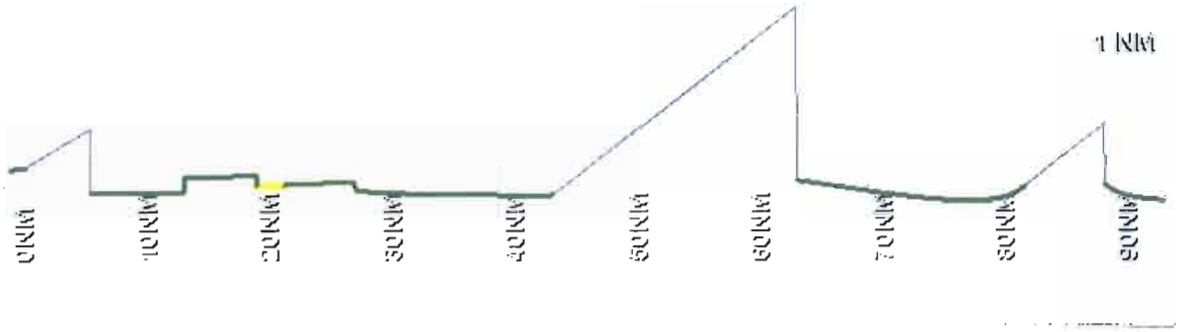
Duplicate DMEs: HLE

Disabled DMEs: PDX

Foreign DMEs within range: YDC, YVR, YYJ

DME/DME (Continued.)

Return To Summary



DME/DME (Continued.)

Return To Summary

DMEs Used

#	Name	Lat/Lon/MAGVAR	Range	Source	Critical	Err. [NM]	Status	Time	Distance
1	LTJ	N 45° 42' 48.90" W 121° 6' 3.00" E 21	H + ESV	User	NO	1.090	Enabled	15.6 %	17.9 %
2	PDT	N 45° 41' 54.31" W 118° 56' 19.33" E 20	H	Database	NO	1.090	Enabled	1.2 %	1.3 %
3	IMB	N 44° 38' 54.21" W 119° 42' 41.87" E 20	H + ESV	User	NO	1.269	Enabled	19.9 %	23.0 %
4	UBG	N 45° 21' 11.62" W 122° 58' 41.37" E 21	H + ESV	User	YES	**2.300**	Enabled	49.3 %	48.4 %
5	DSD	N 44° 15' 8.53" W 121° 18' 12.38" E 18	H + ESV	User	NO	1.569	Enabled	16.7 %	17.0 %
6	BTG	N 45° 44' 51.63" W 122° 35' 32.27" E 21	H	Database	YES	**2.294**	Enabled	27.1 %	25.0 %

Flight Check DME Selection

Distance [NM]	Selected DMEs					Alternate
0.0	LTJ	PDT	IMB	UBG		
16.5	LTJ	PDT	IMB	UBG	DSD	
32.2	LTJ	DSD	IMB	UBG		
44.8	LTJ	BTG	UBG			
55.2	LTJ	BTG	UBG			
69.5	UBG	BTG				
73.6	UBG	BTG				
78.4	UBG	BTG				
84.3	UBG	BTG				
90.7	UBG	BTG				

Inertial Drift Segments

#	Start Location	End Location	Length [NM]
1	N 45° 52' 50.94" W 120° 48' 16.10"	N 45° 49' 32.72" W 120° 54' 8.75"	5.3
	VOR: LTJ	Available from N 45° 52' 50.94" W 120° 48' 16.10" to N 45° 49' 32.72" W 120° 54' 8.75"	

DME/DME (Continued.)

Return To Summary

Inertial Drift Segments (Continued.)

#	Start Location	End Location	Length [NM]
2	N 45° 32' 11.80" W 121° 41' 29.46"	N 45° 34' 42.33" W 122° 9' 1.00"	19.8
	VOR: BTG	Available from N 45° 32' 11.80" W 121° 41' 29.46" to N 45° 34' 42.33" W 122° 9' 1.00"	
	VOR: LTJ	Available from N 45° 32' 11.80" W 121° 41' 29.46" to N 45° 33' 5.38" W 122° 1' 17.15"	
	VOR: PDX	Available from N 45° 32' 11.80" W 121° 41' 29.46" to N 45° 34' 42.33" W 122° 9' 1.00"	
	VOR: UBG	Available from N 45° 33' 49.17" W 122° 4' 46.28" to N 45° 34' 42.33" W 122° 9' 1.00"	
3	N 45° 40' 48.04" W 122° 34' 7.63"	N 45° 43' 57.13" W 122° 42' 14.32"	6.5
	VOR: BTG	Available from N 45° 40' 48.04" W 122° 34' 7.63" to N 45° 43' 57.13" W 122° 42' 14.32"	
	VOR: PDX	Available from N 45° 40' 48.04" W 122° 34' 7.63" to N 45° 43' 57.13" W 122° 42' 14.32"	
	VOR: UBG	Available from N 45° 40' 48.04" W 122° 34' 7.63" to N 45° 43' 57.13" W 122° 42' 14.32"	

User DMEs

#	Name	Lat/Lon/MAGVAR	Range	Elevation [Ft]	Frequency	Replaces:	Status
1	PDX	N 45° 35' 37.30" W 122° 36' 22.57" E 20	L	23.3	111.80	PDX	Disabled

Restriction:	Bearing [True]: 21.0° to 44.0° Bearing [Mag]: 1.0° to 24.0°	Distance: Beyond 0.0 NM Altitude: Below 99999.0 Ft.
Restriction:	Bearing [True]: 45.0° to 59.0° Bearing [Mag]: 25.0° to 39.0°	Distance: Beyond 30.0 NM Altitude: Below 99999.0 Ft.
Restriction:	Bearing [True]: 151.0° to 250.0° Bearing [Mag]: 131.0° to 230.0°	Distance: Beyond 0.0 NM Altitude: Below 99999.0 Ft.
Restriction:	Bearing [True]: 342.0° to 11.0° Bearing [Mag]: 322.0° to 351.0°	Distance: Beyond 0.0 NM Altitude: Below 99999.0 Ft.
Restriction:	Bearing [True]: 11.0° to 21.0° Bearing [Mag]: 351.0° to 1.0°	Distance: Beyond 20.0 NM Altitude: Below 5500.0 Ft.
Restriction:	Bearing [True]: 11.0° to 21.0° Bearing [Mag]: 351.0° to 1.0°	Distance: Beyond 34.0 NM Altitude: Below 6500.0 Ft.

DME/DME (Continued.)

Return To Summary

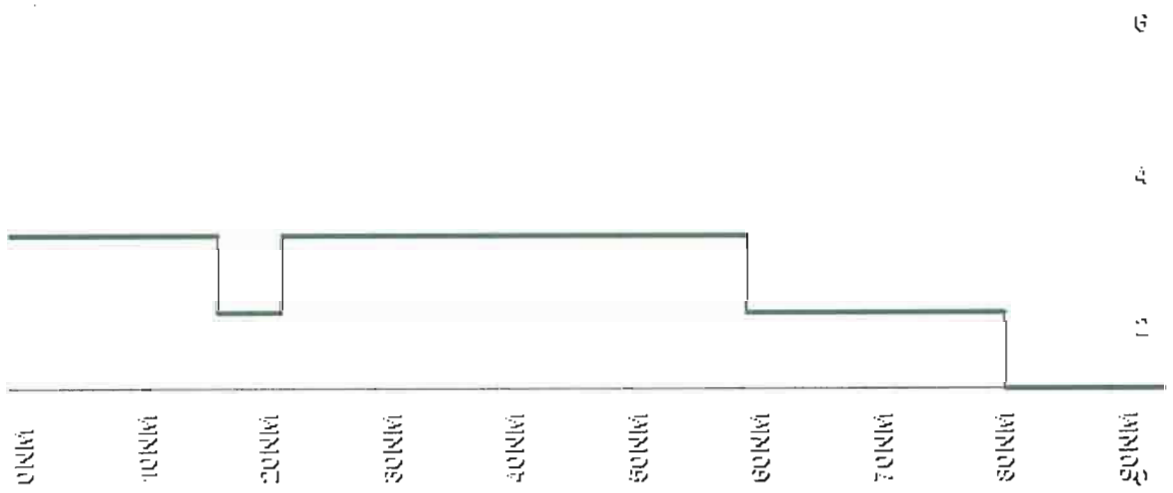
User DMEs (Continued.)

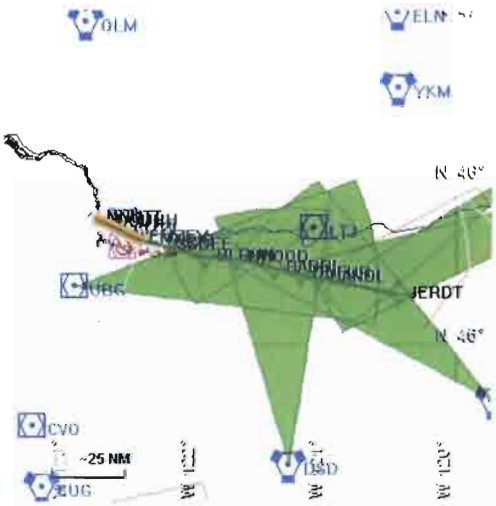
#	Name	Lat/Lon/MAGVAR	Range	Elevation [Ft]	Frequency	Replaces:	Status
2	DSD	N 44° 15' 8.53" W 121° 18' 12.38" E 18	H	4101.0	117.60	DSD	Used
		Restriction: Bearing [True]: 238.0° to 258.0° Bearing [Mag]: 220.0° to 240.0°			Distance: Beyond 30.0 NM Altitude: Below 99999.0 Ft.		
		ESV: Bearing [True]: 345.0° to 368.0° Bearing [Mag]: 327.0° to 350.0°			Arc Distance: Out to 95.0 NM Altitude: 9000.0 to 25000.0 Ft.		
3	UBG	N 45° 21' 11.62" W 122° 58' 41.37" E 21	H	1440.0	117.40	UBG	Used
		ESV: Bearing [True]: 66.0° to 97.0° Bearing [Mag]: 45.0° to 76.0°			Arc Distance: Out to 100.0 NM Altitude: 8500.0 to 20000.0 Ft.		
4	IMB	N 44° 38' 54.21" W 119° 42' 41.87" E 20	H	5220.0	115.60	IMB	Used
		ESV: Bearing [True]: 301.0° to 325.0° Bearing [Mag]: 281.0° to 305.0°			Arc Distance: Out to 100.0 NM Altitude: 12500.0 to 20000.0 Ft.		
5	LTJ	N 45° 42' 48.90" W 121° 6' 3.00" E 21	H	3220.0	112.30	LTJ	Used
		ESV: Bearing [True]: 235.0° to 266.0° Bearing [Mag]: 214.0° to 245.0°			Arc Distance: Out to 48.0 NM Altitude: 6700.0 to 18000.0 Ft.		

Radar Analysis

Return To Summary

Settings: **Radar Types:** ARSR and ASR





Name:	Steve Haga
Project Name:	KPDX HHOOD ONE STAR
Output File:	KPDX HHOOD ONE RNAV RW10 STAR JERDT NNUTT 20121120_0629
Procedure Name:	KPDX HHOOD ONE RNAV RW10
Software:	RNAV-Pro™
Version:	2.36
Date/Time:	11/20/2012 6:29:33 AM
Input File:	KPDX HHOOD ONE STAR JERDT NNUTT 20121119_1817.txt
Databases:	AVNIS Date: 11/09/2012
	Obstacle Date: 10/20/2011
	NFD Date: 09/30/2010
	DTED® (MAX) Date: 2002

Results Summary:

Flyability	✔
DME/DME	✔
Radars	✔
Comms	
TERPS	

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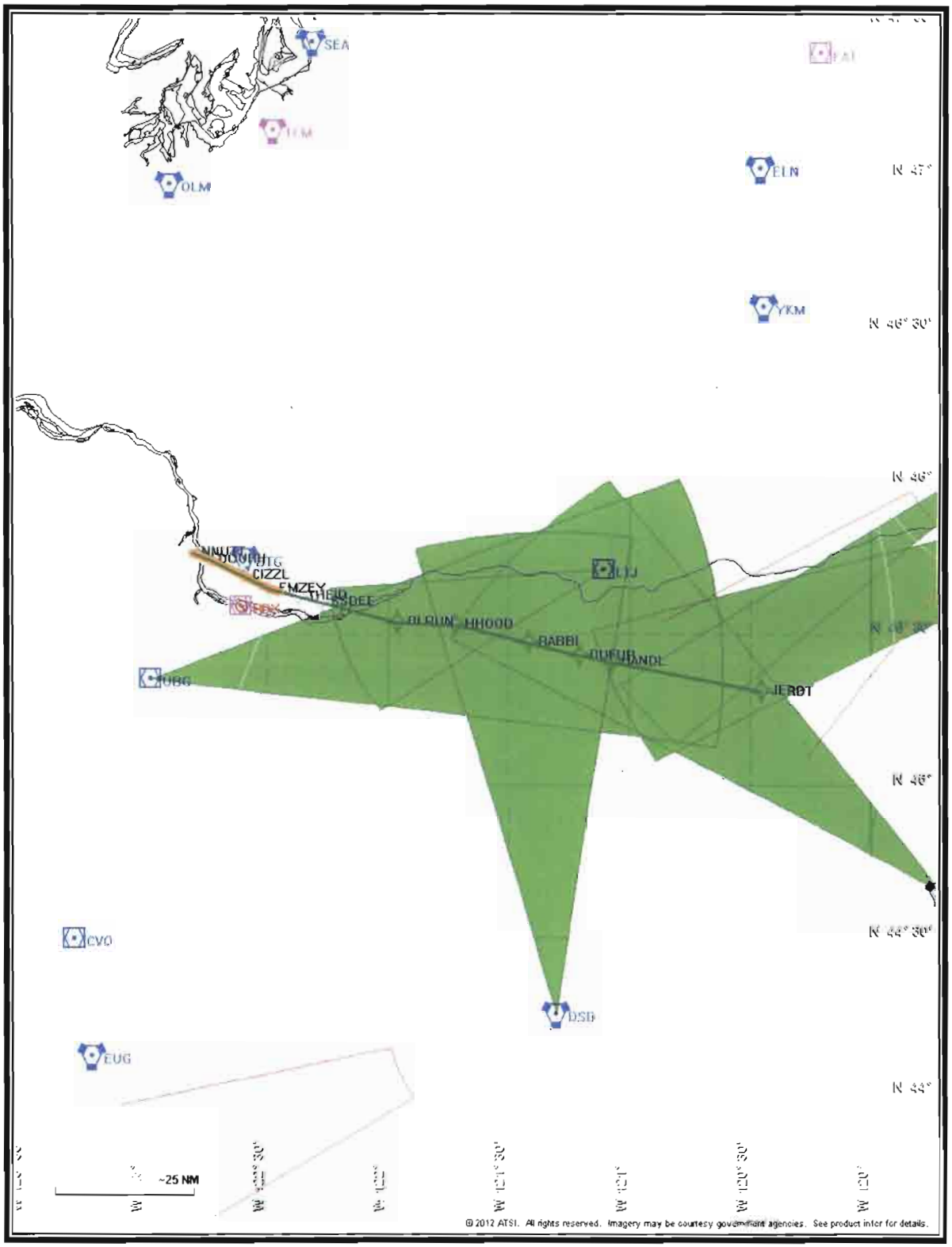
SEA
OLM
ELN
YKM
N 47°
N 46° 30'
N 46°
N 44° 30'
N 44°
CIZZL
EMZEY
HHOOD
BABBI
JERDT
CVO
DSB
EUG
~25 NM
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Flight Plan

Return To Summary

Name	Type	Lat/Lon	Alt [Ft]	VNAV Mode	IAS [Kts]	Turn Type	Leg Type
JERDT	WP	N 45° 18' 43.54" W 120° 27' 8.11"	18000.0	Step	280.0	Fly By	TF
HANDL	WP	N 45° 24' 26.61" W 121° 4' 19.24"	18000.0	Step	250.0	Fly By	TF
DUFUR	WP	N 45° 25' 43.22" W 121° 12' 13.48"	16000.0	Step	250.0	Fly By	TF
RABBI	WP	N 45° 28' 13.68" W 121° 24' 55.39"	13000.0	Step	250.0	Fly By	TF
HHOOD	WP	N 45° 31' 46.12" W 121° 42' 54.05"	9000.0	Step	250.0	Fly By	TF
BLRUN	WP	N 45° 32' 17.38" W 121° 57' 27.02"	7200.0	Step	210.0	Fly By	TF
SSDEE	WP	N 45° 36' 13.85" W 122° 16' 21.75"	6700.0	Step	210.0	Fly By	TF
THEID	WP	N 45° 37' 23.35" W 122° 21' 58.96"	5000.0	Step	210.0	Fly By	TF
EMZEY	WP	N 45° 38' 52.04" W 122° 29' 9.24"	5000.0	Step	210.0	Fly By	TF
CIZZL	WP	N 45° 41' 32.02" W 122° 36' 0.67"	3400.0	Step	210.0	Fly By	TF
DOUHH	WP	N 45° 44' 43.96" W 122° 44' 15.32"	3400.0	Step	210.0	Fly By	TF
NNUTT	WP	N 45° 46' 4.32" W 122° 48' 34.49"	3400.0	Step	210.0	Fly Over	TF

Flyability

Return To Summary

Settings:

Flight Type: Arrival
Aircraft Category: Cat D
Climb Gradient: *None assigned*
Ground Speeds:

Table:

200.0 Kts up to **11000.0 Ft.**
240.0 Kts up to **18000.0 Ft.**
260.0 Kts up to **24000.0 Ft.**
340.0 Kts up to **99900.0 Ft.**

Wind Settings: *None assigned*
Descent During a Turn: Allowed
VNAV Mode: Flight Plan

Entire track is fly-able

DME/DME

Return To Summary

Settings:

RNP: 2.0
Flight Mode: Manual
Line of Sight (DTED Level 0 Max): Evaluated
DME Restrictions: Evaluated
Inertial Drift: Enabled
Initial Drift: 0.558 NM
INS Drift Rate: 8.000 NM/Hour
Range Mode: OSV
Co-Frequencies: Evaluated
RNP Edges: Evaluated
Min DME Range: 3.0 NM
Allowed Gap Length: 4.0 NM
DME Types: VOR/DME , VORTAC , TACAN , and User
DME Include Angles: 30 to 150
Critical DMEs: Allowed
DoD Facilities: Not included
Foreign Facilities: Not included
Low & Terminal DMEs: Included
Flight Check DMEs: Selected
Higher Altitudes: Evaluated
Near Maximum Altitude: Evaluated

Total Number of DMEs Used: 8

Maximum DME Error: 1.117 NM

2 Critical DMEs were found.

Available DMEs: LTJ, PDT, ALW, IMB, PSC, UBG, BTG, DSD

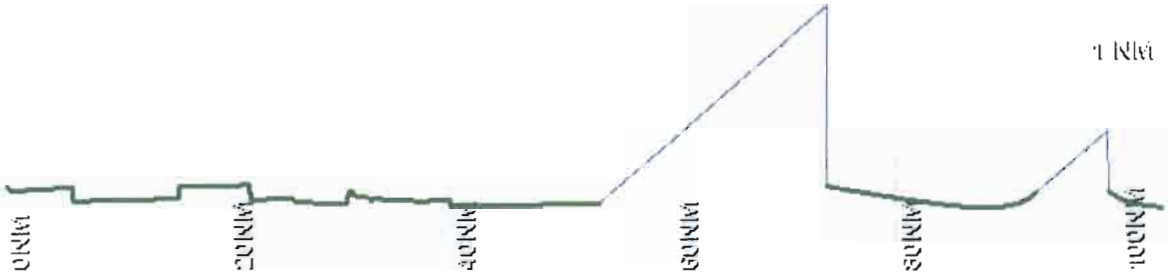
Duplicate DMEs: HLE

Disabled DMEs: PDX

Foreign DMEs within range: YYJ, YDC, YVR

DME/DME (Continued.)

Return To Summary



DME/DME (Continued.)

Return To Summary

DMEs Used

#	Name	Lat/Lon/MAGVAR	Range	Source	Critical	Err. [NM]	Status	Time	Distance
1	LTJ	N 45° 42' 48.90" W 121° 6' 3.00" E 21	H + ESV	User	NO	1.117	Enabled	28.4 %	32.5 %
2	PDT	N 45° 41' 54.31" W 118° 56' 19.33" E 20	H	Database	NO	1.117	Enabled	3.6 %	4.1 %
3	ALW	N 46° 5' 13.11" W 118° 17' 33.13" E 20	L + ESV	User	NO	1.117	Enabled	10.1 %	11.9 %
4	IMB	N 44° 38' 54.21" W 119° 42' 41.87" E 20	H + ESV	User	NO	1.117	Enabled	12.4 %	14.0 %
5	PSC	N 46° 15' 46.74" W 119° 6' 56.58" E 20	L + ESV	User	NO	1.117	Enabled	7.8 %	9.2 %
6	UBG	N 45° 21' 11.62" W 122° 58' 41.37" E 21	H + ESV	User	YES	**2.330**	Enabled	42.3 %	40.4 %
7	DSD	N 44° 15' 8.53" W 121° 18' 12.38" E 18	H + ESV	User	NO	1.520	Enabled	13.0 %	12.9 %
8	BTG	N 45° 44' 51.63" W 122° 35' 32.27" E 21	H	Database	YES	**2.321**	Enabled	25.0 %	22.7 %

Flight Check DME Selection

Distance [NM]	Selected DMEs					Alternate
0.0	LTJ	PDT	ALW	IMB	PSC	
10.1	LTJ	PDT	ALW	UBG	PSC	IMB
26.7	LTJ	PDT	IMB	UBG	BTG	
32.4	LTJ	DSD	IMB	UBG		
41.8	LTJ	DSD	IMB	UBG		
54.6	LTJ	BTG	UBG			
64.8	LTJ	BTG	UBG			
79.0	UBG	BTG				
83.1	UBG	BTG				
88.0	UBG	BTG				
93.9	UBG	BTG				
100.3	UBG	BTG				

DME/DME (Continued.)

Return To Summary

Inertial Drift Segments

#	Start Location	End Location	Length [NM]
1	N 45° 31' 17.73" W 121° 40' 28.82"	N 45° 34' 42.68" W 122° 9' 2.71"	20.5
	VOR: LTJ	Available from N 45° 31' 17.73" W 121° 40' 28.82" to N 45° 33' 5.74" W 122° 1' 18.86"	
	VOR: PDX	Available from N 45° 31' 17.73" W 121° 40' 28.82" to N 45° 34' 42.68" W 122° 9' 2.71"	
	VOR: BTG	Available from N 45° 31' 32.92" W 121° 41' 46.47" to N 45° 34' 42.68" W 122° 9' 2.71"	
	VOR: UBG	Available from N 45° 33' 49.53" W 122° 4' 47.99" to N 45° 34' 42.68" W 122° 9' 2.71"	
2	N 45° 40' 48.64" W 122° 34' 9.19"	N 45° 43' 57.73" W 122° 42' 15.88"	6.5
	VOR: BTG	Available from N 45° 40' 48.64" W 122° 34' 9.19" to N 45° 43' 57.73" W 122° 42' 15.88"	
	VOR: PDX	Available from N 45° 40' 48.64" W 122° 34' 9.19" to N 45° 43' 57.73" W 122° 42' 15.88"	
	VOR: UBG	Available from N 45° 40' 48.64" W 122° 34' 9.19" to N 45° 43' 57.73" W 122° 42' 15.88"	

User DMEs

#	Name	Lat/Lon/MAGVAR	Range	Elevation [Ft]	Frequency	Replaces:	Status
1	ALW	N 46° 5' 13.11" W 118° 17' 33.13" E 20	L	1179.4	116.40	ALW	Used

Restriction:	Bearing [True]: 30.0° to 85.0° Bearing [Mag]: 10.0° to 65.0°	Distance: Beyond 31.0 NM Altitude: Below 12500.0 Ft.
Restriction:	Bearing [True]: 85.0° to 115.0° Bearing [Mag]: 65.0° to 95.0°	Distance: Beyond 20.0 NM Altitude: Below 14500.0 Ft.
Restriction:	Bearing [True]: 115.0° to 160.0° Bearing [Mag]: 95.0° to 140.0°	Distance: Beyond 20.0 NM Altitude: Below 13500.0 Ft.
Restriction:	Bearing [True]: 160.0° to 165.0° Bearing [Mag]: 140.0° to 145.0°	Distance: Beyond 20.0 NM Altitude: Below 11500.0 Ft.
ESV:	Bearing [True]: 242.0° to 255.0° Bearing [Mag]: 222.0° to 235.0°	Arc Distance: Out to 125.0 NM Altitude: 14500.0 to 20000.0 Ft.

DME/DME (Continued.)

Return To Summary

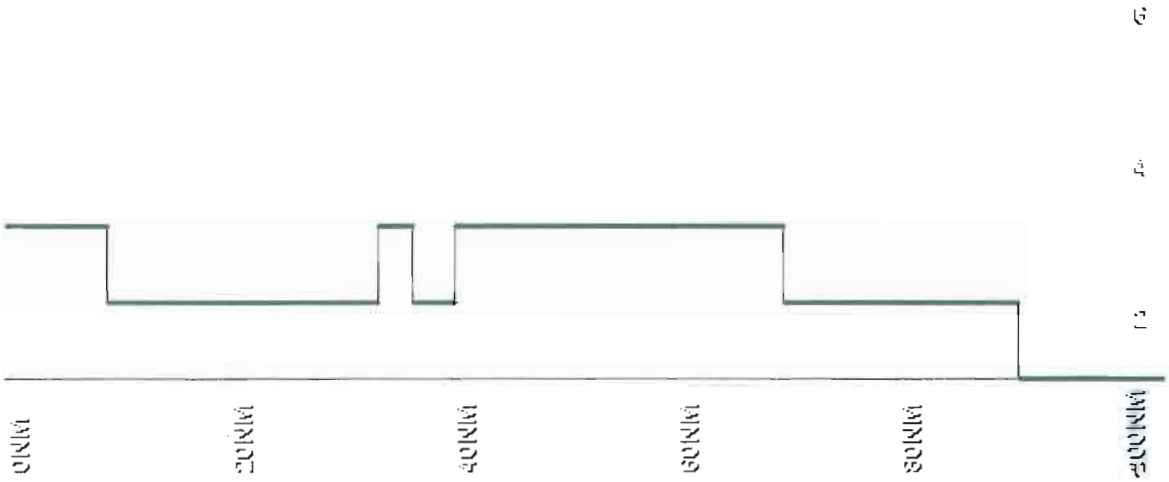
User DMEs (Continued.)

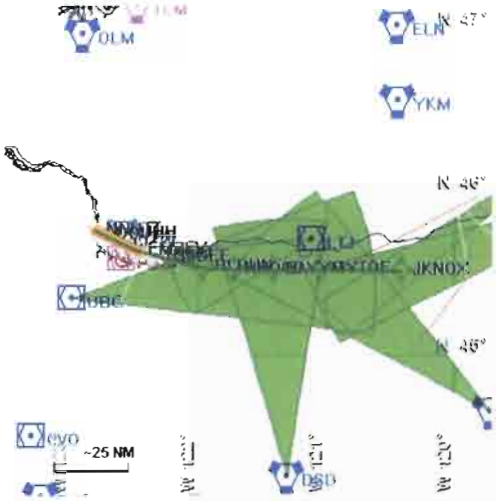
#	Name	Lat/Lon/MAGVAR	Range	Elevation [Ft]	Frequency	Replaces:	Status
2	PSC	N 46° 15' 46.74" W 119° 6' 56.58" E 20	L	404.2	108.40	PSC	Used
		Restriction: Bearing [True]: 170.0° to 215.0° Bearing [Mag]: 150.0° to 195.0°			Distance: Beyond 35.0 NM Altitude: Below 5500.0 Ft.		
		Restriction: Bearing [True]: 215.0° to 240.0° Bearing [Mag]: 195.0° to 220.0°			Distance: Beyond 35.0 NM Altitude: Below 4500.0 Ft.		
		ESV: Bearing [True]: 227.0° to 236.0° Bearing [Mag]: 207.0° to 216.0°			Arc Distance: Out to 98.0 NM Altitude: 15500.0 to 20000.0 Ft.		
3	DSD	N 44° 15' 8.53" W 121° 18' 12.38" E 18	H	4101.0	117.60	DSD	Used
		Restriction: Bearing [True]: 238.0° to 258.0° Bearing [Mag]: 220.0° to 240.0°			Distance: Beyond 30.0 NM Altitude: Below 99999.0 Ft.		
		ESV: Bearing [True]: 345.0° to 368.0° Bearing [Mag]: 327.0° to 350.0°			Arc Distance: Out to 95.0 NM Altitude: 9000.0 to 25000.0 Ft.		
4	UBG	N 45° 21' 11.62" W 122° 58' 41.37" E 21	H	1440.0	117.40	UBG	Used
		ESV: Bearing [True]: 66.0° to 97.0° Bearing [Mag]: 45.0° to 76.0°			Arc Distance: Out to 100.0 NM Altitude: 8500.0 to 20000.0 Ft.		
5	IMB	N 44° 38' 54.21" W 119° 42' 41.87" E 20	H	5220.0	115.60	IMB	Used
		ESV: Bearing [True]: 301.0° to 325.0° Bearing [Mag]: 281.0° to 305.0°			Arc Distance: Out to 100.0 NM Altitude: 12500.0 to 20000.0 Ft.		
6	LTJ	N 45° 42' 48.90" W 121° 6' 3.00" E 21	H	3220.0	112.30	LTJ	Used
		ESV: Bearing [True]: 235.0° to 266.0° Bearing [Mag]: 214.0° to 245.0°			Arc Distance: Out to 48.0 NM Altitude: 6700.0 to 18000.0 Ft.		

Radar Analysis

Return To Summary

Settings: **Radar Types:** ARSR and ASR





Name:	Steve Haga
Project Name:	KPDX HHOOD ONE STAR
Output File:	KPDX HHOOD ONE RNAV RW10 STAR JKNOX NNUTT 20121120_0634
Procedure Name:	KPDX HHOOD ONE RNAV RW10
Software:	RNAV-Pro™
Version:	2.36
Date/Time:	11/20/2012 6:34:14 AM
Input File:	KPDX HHOOD ONE STAR JKNOX NNUTT 20121119_1858.txt
Databases:	AVNIS Date: 11/09/2012
	Obstacle Date: 10/20/2011
	NFD Date: 09/30/2010
	DTED® (MAX) Date: 2002

Results Summary:

Flyability	✔
DME/DME	✔
Radars	✔
Comms	
TERPS	

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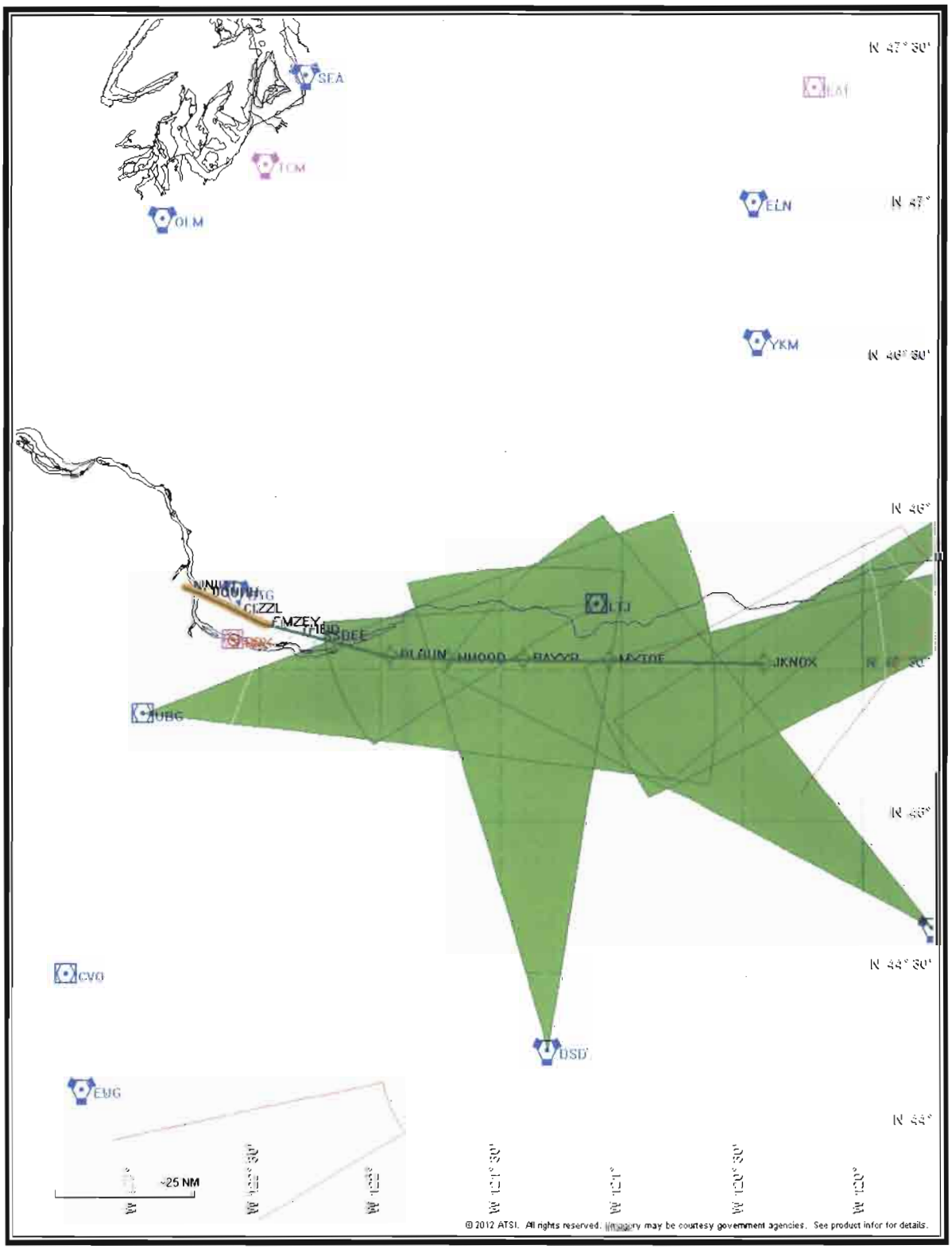
SEA
TCM
OLM
ELN
YKM
LTJ
JKNOX
UBG
CVO
DSD
EUG
~25 NM
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Flight Plan

Return To Summary

Name	Type	Lat/Lon	Alt [Ft]	VNAV Mode	IAS [Kts]	Turn Type	Leg Type
JKNOX	WP	N 45° 31' 2.65" W 120° 24' 40.73"	18000.0	Step	280.0	Fly By	TF
MYTOE	WP	N 45° 31' 36.91" W 121° 2' 52.08"	18000.0	Step	250.0	Fly By	TF
BAYYR	WP	N 45° 31' 43.56" W 121° 24' 12.24"	13000.0	Step	250.0	Fly By	TF
HHOOD	WP	N 45° 31' 46.12" W 121° 42' 54.05"	9000.0	Step	250.0	Fly By	TF
BLRUN	WP	N 45° 32' 17.38" W 121° 57' 27.02"	7200.0	Step	210.0	Fly By	TF
SSDEE	WP	N 45° 36' 13.85" W 122° 16' 21.75"	6700.0	Step	210.0	Fly By	TF
THEID	WP	N 45° 37' 23.35" W 122° 21' 58.96"	5000.0	Step	210.0	Fly By	TF
EMZEY	WP	N 45° 38' 52.04" W 122° 29' 9.24"	5000.0	Step	210.0	Fly By	TF
CIZZL	WP	N 45° 41' 32.02" W 122° 36' 0.67"	3400.0	Step	210.0	Fly By	TF
DOUHH	WP	N 45° 44' 43.96" W 122° 44' 15.32"	3400.0	Step	210.0	Fly By	TF
NNUTT	WP	N 45° 46' 4.32" W 122° 48' 34.49"	3400.0	Step	210.0	Fly Over	TF

Flyability

Return To Summary

Settings:

Flight Type: Arrival
Aircraft Category: Cat D
Climb Gradient: *None assigned*
Ground Speeds:

Table:

200.0 Kts up to **11000.0 Ft.**
240.0 Kts up to **18000.0 Ft.**
260.0 Kts up to **24000.0 Ft.**
340.0 Kts up to **99900.0 Ft.**

Wind Settings: *None assigned*
Descent During a Turn: Allowed
VNAV Mode: Flight Plan

Entire track is fly-able

DME/DME

Return To Summary

Settings:

RNP: 2.0
Flight Mode: Manual
Line of Sight (DTED Level 0 Max): Evaluated
DME Restrictions: Evaluated
Inertial Drift: Enabled
Initial Drift: 0.558 NM
INS Drift Rate: 8.000 NM/Hour
Range Mode: OSV
Co-Frequencies: Evaluated
RNP Edges: Evaluated
Min DME Range: 3.0 NM
Allowed Gap Length: 4.0 NM
DME Types: VOR/DME , VORTAC , TACAN , and User
DME Include Angles: 30 to 150
Critical DMEs: Allowed
DoD Facilities: Not included
Foreign Facilities: Not included
Low & Terminal DMEs: Included
Flight Check DMEs: Selected
Higher Altitudes: Evaluated
Near Maximum Altitude: Evaluated

Total Number of DMEs Used: 8

Maximum DME Error: 1.078 NM.

2 Critical DMEs were found.

Available DMEs: ALW, PSC, LTJ, PDT, UBG, IMB, DSD, BTG

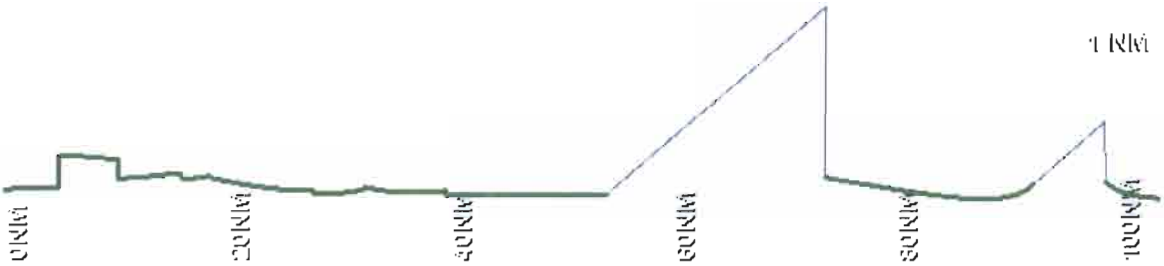
Duplicate DMEs: HLE

Disabled DMEs: PDX

Foreign DMEs within range: YDC, YYJ, YVR

DME/DME (Continued.)

Return To Summary



DME/DME (Continued.)

Return To Summary

DMEs Used

#	Name	Lat/Lon/MAGVAR	Range	Source	Critical	Err. [NM]	Status	Time	Distance
1	PSC	N 46° 15' 46.74" W 119° 6' 56.58" E 20	L + ESV	User	NO	1.078	Enabled	4.1 %	4.7 %
2	LTJ	N 45° 42' 48.90" W 121° 6' 3.00" E 21	H + ESV	User	NO	1.078	Enabled	26.5 %	30.3 %
3	ALW	N 46° 5' 13.11" W 118° 17' 33.13" E 20	L + ESV	User	NO	1.078	Enabled	9.0 %	10.6 %
4	IMB	N 44° 38' 54.21" W 119° 42' 41.87" E 20	H + ESV	User	NO	1.078	Enabled	13.1 %	14.9 %
5	PDT	N 45° 41' 54.31" W 118° 56' 19.33" E 20	H	Database	NO	1.078	Enabled	9.6 %	11.3 %
6	UBG	N 45° 21' 11.62" W 122° 58' 41.37" E 21	H + ESV	User	YES	**2.288**	Enabled	43.2 %	41.2 %
7	DSD	N 44° 15' 8.53" W 121° 18' 12.38" E 18	H + ESV	User	NO	1.529	Enabled	14.2 %	14.0 %
8	BTG	N 45° 44' 51.63" W 122° 35' 32.27" E 21	H	Database	YES	**2.282**	Enabled	25.0 %	22.7 %

Flight Check DME Selection

Distance [NM]	Selected DMEs					Alternate
0.0	LTJ	PDT	PSC	IMB	ALW	UBG
16.0	LTJ	PDT	UBG	IMB		
26.8	LTJ	PDT	UBG	IMB	DSD	
41.8	LTJ	DSD	UBG	IMB		
54.9	LTJ	BTG	UBG			
64.8	LTJ	BTG	UBG			
79.1	UBG	BTG				
83.2	UBG	BTG				
88.0	UBG	BTG				
93.9	UBG	BTG				
100.3	UBG	BTG				

DME/DME (Continued.)

Return To Summary

Inertial Drift Segments

#	Start Location	End Location	Length [NM]
1	N 45° 31' 46.07" W 121° 41' 46.35"	N 45° 34' 42.17" W 122° 9' 0.27"	19.5
	VOR: BTG	Available from N 45° 31' 46.07" W 121° 41' 46.35" to N 45° 34' 42.17" W 122° 9' 0.27"	
	VOR: LTJ	Available from N 45° 31' 46.07" W 121° 41' 46.35" to N 45° 33' 5.22" W 122° 1' 16.42"	
	VOR: PDX	Available from N 45° 31' 46.07" W 121° 41' 46.35" to N 45° 34' 42.17" W 122° 9' 0.27"	
	VOR: UBG	Available from N 45° 33' 49.97" W 122° 4' 50.10" to N 45° 34' 42.17" W 122° 9' 0.27"	
2	N 45° 40' 47.77" W 122° 34' 6.95"	N 45° 43' 56.87" W 122° 42' 13.64"	6.5
	VOR: BTG	Available from N 45° 40' 47.77" W 122° 34' 6.95" to N 45° 43' 56.87" W 122° 42' 13.64"	
	VOR: PDX	Available from N 45° 40' 47.77" W 122° 34' 6.95" to N 45° 43' 56.87" W 122° 42' 13.64"	
	VOR: UBG	Available from N 45° 40' 47.77" W 122° 34' 6.95" to N 45° 43' 56.87" W 122° 42' 13.64"	

User DMEs

#	Name	Lat/Lon/MAGVAR	Range	Elevation [Ft]	Frequency	Replaces:	Status
1	ALW	N 46° 5' 13.11" W 118° 17' 33.13" E 20	L	1179.4	116.40	ALW	Used

Restriction:	Bearing [True]: 30.0° to 85.0° Bearing [Mag]: 10.0° to 65.0°	Distance: Beyond 31.0 NM Altitude: Below 12500.0 Ft.
Restriction:	Bearing [True]: 85.0° to 115.0° Bearing [Mag]: 65.0° to 95.0°	Distance: Beyond 20.0 NM Altitude: Below 14500.0 Ft.
Restriction:	Bearing [True]: 115.0° to 160.0° Bearing [Mag]: 95.0° to 140.0°	Distance: Beyond 20.0 NM Altitude: Below 13500.0 Ft.
Restriction:	Bearing [True]: 160.0° to 165.0° Bearing [Mag]: 140.0° to 145.0°	Distance: Beyond 20.0 NM Altitude: Below 11500.0 Ft.
ESV:	Bearing [True]: 242.0° to 255.0° Bearing [Mag]: 222.0° to 235.0°	Arc Distance: Out to 125.0 NM Altitude: 14500.0 to 20000.0 Ft.

DME/DME (Continued.)

Return To Summary

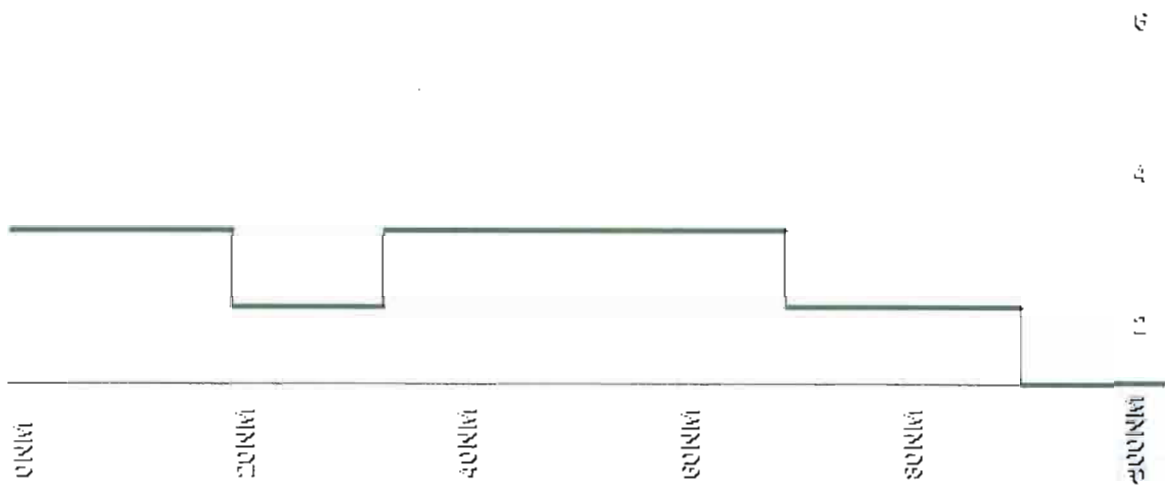
User DMEs (Continued.)

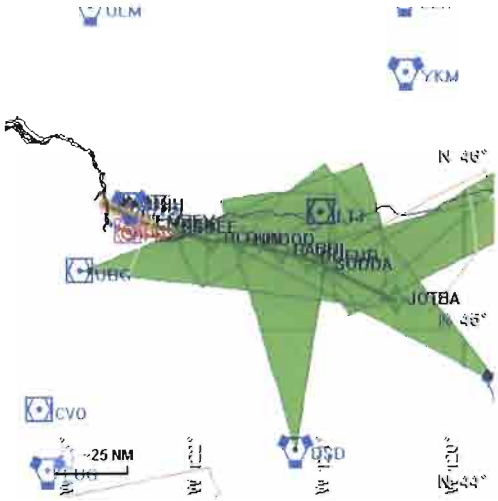
#	Name	Lat/Lon/MAGVAR	Range	Elevation [Ft]	Frequency	Replaces:	Status
2	PSC	N 46° 15' 46.74" W 119° 6' 56.58" E 20	L	404.2	108.40	PSC	Used
	Restriction:	Bearing [True]: 170.0° to 215.0° Bearing [Mag]: 150.0° to 195.0°			Distance: Beyond 35.0 NM Altitude: Below 5500.0 Ft.		
	Restriction:	Bearing [True]: 215.0° to 240.0° Bearing [Mag]: 195.0° to 220.0°			Distance: Beyond 35.0 NM Altitude: Below 4500.0 Ft.		
	ESV:	Bearing [True]: 227.0° to 236.0° Bearing [Mag]: 207.0° to 216.0°			Arc Distance: Out to 98.0 NM Altitude: 15500.0 to 20000.0 Ft.		
3	DSD	N 44° 15' 8.53" W 121° 18' 12.38" E 18	H	4101.0	117.60	DSD	Used
	Restriction:	Bearing [True]: 238.0° to 258.0° Bearing [Mag]: 220.0° to 240.0°			Distance: Beyond 30.0 NM Altitude: Below 99999.0 Ft.		
	ESV:	Bearing [True]: 345.0° to 368.0° Bearing [Mag]: 327.0° to 350.0°			Arc Distance: Out to 95.0 NM Altitude: 9000.0 to 25000.0 Ft.		
4	UBG	N 45° 21' 11.62" W 122° 58' 41.37" E 21	H	1440.0	117.40	UBG	Used
	ESV:	Bearing [True]: 66.0° to 97.0° Bearing [Mag]: 45.0° to 76.0°			Arc Distance: Out to 100.0 NM Altitude: 8500.0 to 20000.0 Ft.		
5	IMB	N 44° 38' 54.21" W 119° 42' 41.87" E 20	H	5220.0	115.60	IMB	Used
	ESV:	Bearing [True]: 301.0° to 325.0° Bearing [Mag]: 281.0° to 305.0°			Arc Distance: Out to 100.0 NM Altitude: 12500.0 to 20000.0 Ft.		
6	LTJ	N 45° 42' 48.90" W 121° 6' 3.00" E 21	H	3220.0	112.30	LTJ	Used
	ESV:	Bearing [True]: 235.0° to 266.0° Bearing [Mag]: 214.0° to 245.0°			Arc Distance: Out to 48.0 NM Altitude: 6700.0 to 18000.0 Ft.		

Radar Analysis

Return To Summary

Settings: **Radar Types:** ARSR and ASR





Name:	Steve Haga
Project Name:	KPDX HHOOD ONE STAR
Output File:	KPDX HHOOD ONE RNAV RW10 STAR JOTBA NNUTT 20121120_0624
Procedure Name:	KPDX HHOOD ONE RNAV RW10
Software:	RNAV-Pro™
Version:	2.36
Date/Time:	11/20/2012 6:24:18 AM
Input File:	KPDX HHOOD ONE STAR JOTBA NNUTT 20121119_1917.txt
Databases:	AVNIS Date: 11/09/2012
	Obstacle Date: 10/20/2011
	NFD Date: 09/30/2010
	DTED® (MAX) Date: 2002

Results Summary:

Flyability	✔
DME/DME	✔
Radars	✔
Comms	
TERPS	

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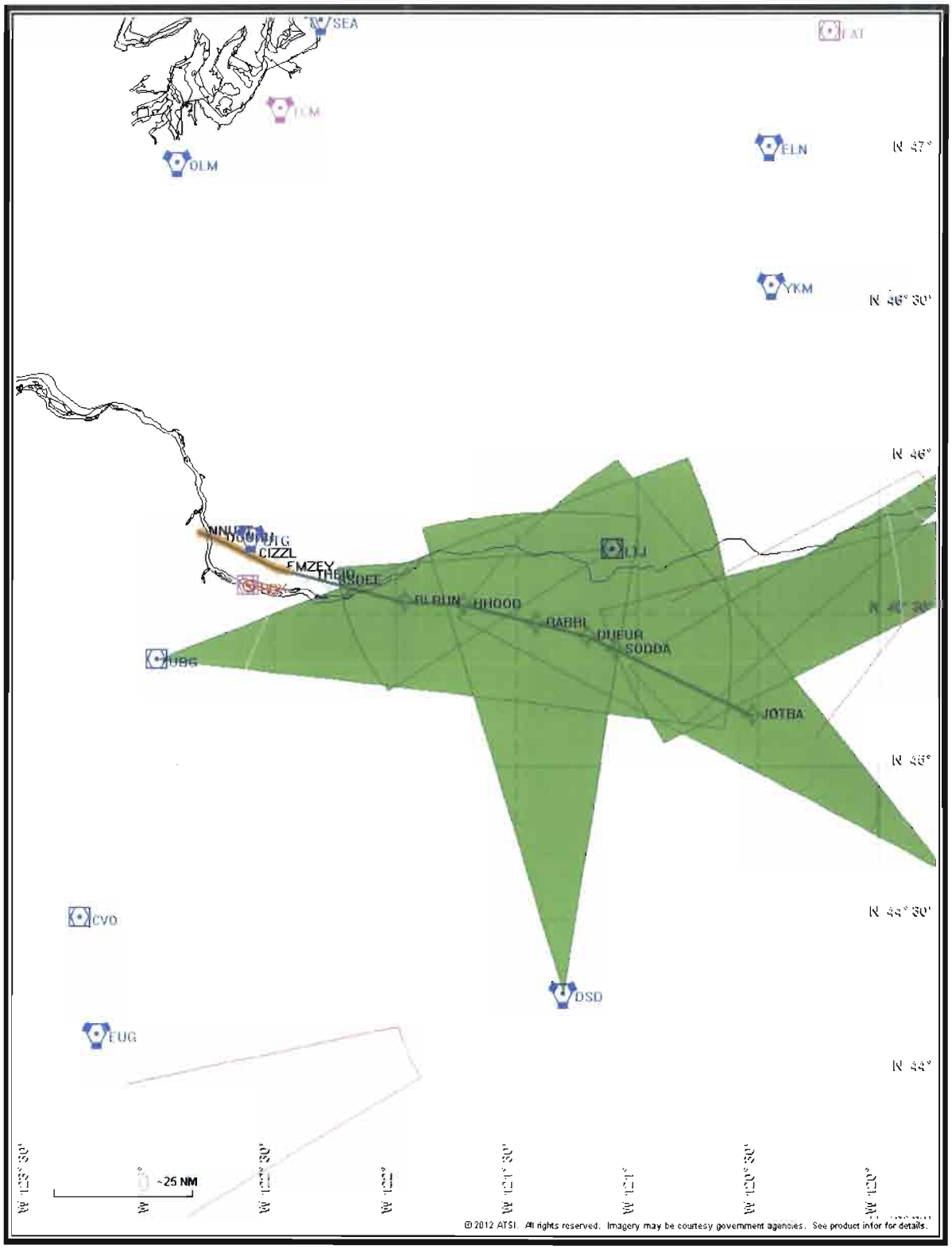
SEA
OLM
ELN
YKM
N 47°
N 46° 30'
N 46°
CIZZL
EMZEY
HHOOD
DUFUR
SODDA
JOTBA
N 45°
N 44° 30'
CVO
DSD
EUG
N 44°
~25 NM
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Flight Plan

Return To Summary

Name	Type	Lat/Lon	Alt [Ft]	VNAV Mode	IAS [Kts]	Turn Type	Leg Type
JOTBA	WP	N 45° 10' 0.70" W 120° 31' 12.27"	18000.0	Step	280.0	Fly By	TF
SODDA	WP	N 45° 23' 2.63" W 121° 5' 10.62"	18000.0	Step	250.0	Fly By	TF
DUFUR	WP	N 45° 25' 43.22" W 121° 12' 13.48"	16000.0	Step	250.0	Fly By	TF
RABBI	WP	N 45° 28' 13.68" W 121° 24' 55.39"	13000.0	Step	250.0	Fly By	TF
HHOOD	WP	N 45° 31' 46.12" W 121° 42' 54.05"	9000.0	Step	250.0	Fly By	TF
BLRUN	WP	N 45° 32' 17.38" W 121° 57' 27.02"	7200.0	Step	210.0	Fly By	TF
SSDEE	WP	N 45° 36' 13.85" W 122° 16' 21.75"	6700.0	Step	210.0	Fly By	TF
THEID	WP	N 45° 37' 23.35" W 122° 21' 58.96"	5000.0	Step	210.0	Fly By	TF
EMZEY	WP	N 45° 38' 52.04" W 122° 29' 9.24"	5000.0	Step	210.0	Fly By	TF
CIZZL	WP	N 45° 41' 32.02" W 122° 36' 0.67"	3400.0	Step	210.0	Fly By	TF
DOUHH	WP	N 45° 44' 43.96" W 122° 44' 15.32"	3400.0	Step	210.0	Fly By	TF
NNUTT	WP	N 45° 46' 4.32" W 122° 48' 34.49"	3400.0	Step	210.0	Fly Over	TF

Flyability

Return To Summary

Settings:

Flight Type: Arrival
Aircraft Category: Cat D
Climb Gradient: *None assigned*
Ground Speeds:

Table:

200.0 Kts up to **11000.0 Ft.**
240.0 Kts up to **18000.0 Ft.**
260.0 Kts up to **24000.0 Ft.**
340.0 Kts up to **99900.0 Ft.**

Wind Settings: *None assigned*
Descent During a Turn: Allowed
VNAV Mode: Flight Plan

Entire track is fly-able

DME/DME

Return To Summary

Settings:

RNP: 2.0
Flight Mode: Manual
Line of Sight (DTED Level 0 Max): Evaluated
DME Restrictions: Evaluated
Inertial Drift: Enabled
Initial Drift: 0.558 NM
INS Drift Rate: 8.000 NM/Hour
Range Mode: OSV
Co-Frequencies: Evaluated
RNP Edges: Evaluated
Min DME Range: 3.0 NM
Allowed Gap Length: 4.0 NM
DME Types: VOR/DME , VORTAC , TACAN , and User
DME Include Angles: 30 to 150
Critical DMEs: Allowed
DoD Facilities: Not included
Foreign Facilities: Not included
Low & Terminal DMEs: Included
Flight Check DMEs: Selected
Higher Altitudes: Evaluated
Near Maximum Altitude: Evaluated

Total Number of DMEs Used: 7

Maximum DME Error: 1.121 NM.

2 Critical DMEs were found.

Available DMEs: IMB, LTJ, PDT, ALW, UBG, PSC, BTG, DSD

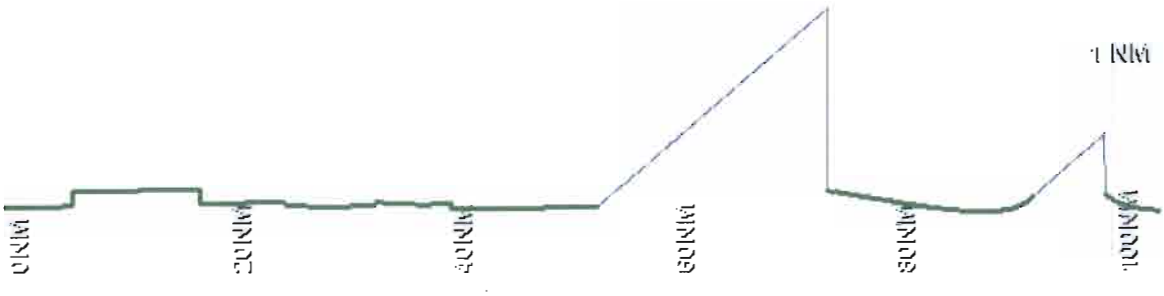
Duplicate DMEs: HLE

Disabled DMEs: PDX

Foreign DMEs within range: YYJ, YVR, YDC

DME/DME (Continued.)

Return To Summary



DME/DME (Continued.)

Return To Summary

DMEs Used

#	Name	Lat/Lon/MAGVAR	Range	Source	Critical	Err. [NM]	Status	Time	Distance
1	LTJ	N 45° 42' 48.90" W 121° 6' 3.00" E 21	H + ESV	User	NO	1.121	Enabled	33.6 %	38.6 %
2	PDT	N 45° 41' 54.31" W 118° 56' 19.33" E 20	H	Database	NO	1.121	Enabled	11.3 %	13.2 %
3	ALW	N 46° 5' 13.11" W 118° 17' 33.13" E 20	L + ESV	User	NO	1.121	Enabled	9.3 %	11.0 %
4	UBG	N 45° 21' 11.62" W 122° 58' 41.37" E 21	H + ESV	User	YES	**2.335**	Enabled	44.7 %	43.1 %
5	IMB	N 44° 38' 54.21" W 119° 42' 41.87" E 20	H + ESV	User	NO	1.121	Enabled	6.0 %	6.5 %
6	DSD	N 44° 15' 8.53" W 121° 18' 12.38" E 18	H + ESV	User	NO	1.520	Enabled	12.7 %	12.7 %
7	BTG	N 45° 44' 51.63" W 122° 35' 32.27" E 21	H	Database	YES	**2.326**	Enabled	24.9 %	22.6 %

Flight Check DME Selection

Distance [NM]	Selected DMEs					Alternate
0.0	LTJ	PDT	UBG	ALW	IMB	PSC
27.3	LTJ	PDT	UBG	BTG	IMB	
32.4	LTJ	IMB	UBG	DSD		
42.2	LTJ	IMB	UBG	DSD		
55.0	LTJ	BTG	UBG			
65.2	LTJ	BTG	UBG			
79.5	UBG	BTG				
83.6	UBG	BTG				
88.4	UBG	BTG				
94.3	UBG	BTG				
100.7	UBG	BTG				

DME/DME (Continued.)

Return To Summary

Inertial Drift Segments

#	Start Location	End Location	Length [NM]
1	N 45° 31' 15.68" W 121° 40' 18.42"	N 45° 34' 42.42" W 122° 9' 1.44"	20.6
	VOR: LTJ	Available from N 45° 31' 15.68" W 121° 40' 18.42" to N 45° 33' 5.47" W 122° 1' 17.59"	
	VOR: PDX	Available from N 45° 31' 15.68" W 121° 40' 18.42" to N 45° 34' 42.42" W 122° 9' 1.44"	
	VOR: BTG	Available from N 45° 31' 32.67" W 121° 41' 45.20" to N 45° 34' 42.42" W 122° 9' 1.44"	
	VOR: UBG	Available from N 45° 33' 49.27" W 122° 4' 46.72" to N 45° 34' 42.42" W 122° 9' 1.44"	
2	N 45° 40' 48.19" W 122° 34' 8.03"	N 45° 43' 57.28" W 122° 42' 14.72"	6.5
	VOR: BTG	Available from N 45° 40' 48.19" W 122° 34' 8.03" to N 45° 43' 57.28" W 122° 42' 14.72"	
	VOR: PDX	Available from N 45° 40' 48.19" W 122° 34' 8.03" to N 45° 43' 57.28" W 122° 42' 14.72"	
	VOR: UBG	Available from N 45° 40' 48.19" W 122° 34' 8.03" to N 45° 43' 57.28" W 122° 42' 14.72"	

User DMEs

#	Name	Lat/Lon/MAGVAR	Range	Elevation [Ft]	Frequency	Replaces:	Status
1	ALW	N 46° 5' 13.11" W 118° 17' 33.13" E 20	L	1179.4	116.40	ALW	Used

Restriction:	Bearing [True]: 30.0° to 85.0° Bearing [Mag]: 10.0° to 65.0°	Distance: Beyond 31.0 NM Altitude: Below 12500.0 Ft.
Restriction:	Bearing [True]: 85.0° to 115.0° Bearing [Mag]: 65.0° to 95.0°	Distance: Beyond 20.0 NM Altitude: Below 14500.0 Ft.
Restriction:	Bearing [True]: 115.0° to 160.0° Bearing [Mag]: 95.0° to 140.0°	Distance: Beyond 20.0 NM Altitude: Below 13500.0 Ft.
Restriction:	Bearing [True]: 160.0° to 165.0° Bearing [Mag]: 140.0° to 145.0°	Distance: Beyond 20.0 NM Altitude: Below 11500.0 Ft.
ESV:	Bearing [True]: 242.0° to 255.0° Bearing [Mag]: 222.0° to 235.0°	Arc Distance: Out to 125.0 NM Altitude: 14500.0 to 20000.0 Ft.

DME/DME (Continued.)

Return To Summary

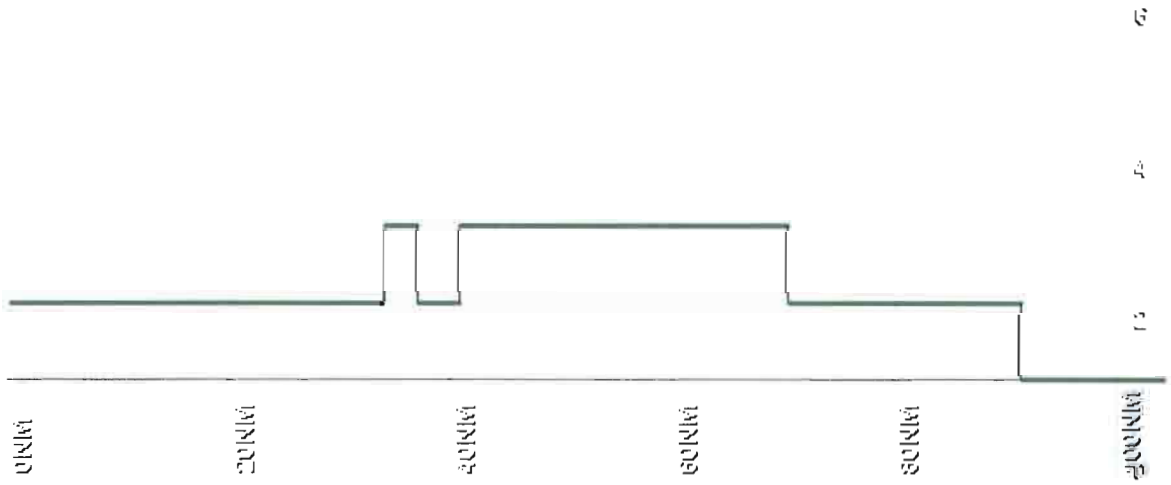
User DMEs (Continued.)

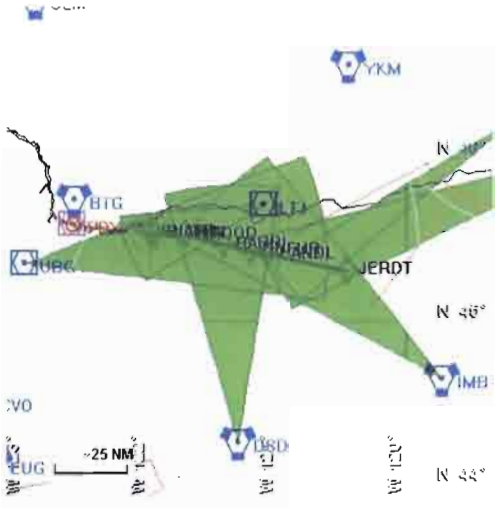
#	Name	Lat/Lon/MAGVAR	Range	Elevation [Ft]	Frequency	Replaces:	Status
2	PSC	N 46° 15' 46.74" W 119° 6' 56.58" E 20	L	404.2	108.40	PSC	Not Used
		Restriction: Bearing [True]: 170.0° to 215.0° Bearing [Mag]: 150.0° to 195.0°			Distance: Beyond 35.0 NM Altitude: Below 5500.0 Ft.		
		Restriction: Bearing [True]: 215.0° to 240.0° Bearing [Mag]: 195.0° to 220.0°			Distance: Beyond 35.0 NM Altitude: Below 4500.0 Ft.		
		ESV: Bearing [True]: 227.0° to 236.0° Bearing [Mag]: 207.0° to 216.0°			Arc Distance: Out to 98.0 NM Altitude: 15500.0 to 20000.0 Ft.		
3	DSD	N 44° 15' 8.53" W 121° 18' 12.38" E 18	H	4101.0	117.60	DSD	Used
		Restriction: Bearing [True]: 238.0° to 258.0° Bearing [Mag]: 220.0° to 240.0°			Distance: Beyond 30.0 NM Altitude: Below 99999.0 Ft.		
		ESV: Bearing [True]: 345.0° to 368.0° Bearing [Mag]: 327.0° to 350.0°			Arc Distance: Out to 95.0 NM Altitude: 9000.0 to 25000.0 Ft.		
4	UBG	N 45° 21' 11.62" W 122° 58' 41.37" E 21	H	1440.0	117.40	UBG	Used
		ESV: Bearing [True]: 66.0° to 97.0° Bearing [Mag]: 45.0° to 76.0°			Arc Distance: Out to 100.0 NM Altitude: 8500.0 to 20000.0 Ft.		
5	IMB	N 44° 38' 54.21" W 119° 42' 41.87" E 20	H	5220.0	115.60	IMB	Used
		ESV: Bearing [True]: 301.0° to 325.0° Bearing [Mag]: 281.0° to 305.0°			Arc Distance: Out to 100.0 NM Altitude: 12500.0 to 20000.0 Ft.		
6	LTJ	N 45° 42' 48.90" W 121° 6' 3.00" E 21	H	3220.0	112.30	LTJ	Used
		ESV: Bearing [True]: 235.0° to 266.0° Bearing [Mag]: 214.0° to 245.0°			Arc Distance: Out to 48.0 NM Altitude: 6700.0 to 18000.0 Ft.		

Radar Analysis

Return To Summary

Settings: **Radar Types:** ARSR and ASR





Name:	Steve Haga
Project Name:	KPDX HHOOD ONE STAR
Output File:	KPDX HHOOD ONE RNAV RW28 STAR JERDT SHAFR 20121120_0638
Procedure Name:	KPDX HHOOD ONE RNAV RW28
Software:	RNAV-Pro™
Version:	2.36
Date/Time:	11/20/2012 6:38:30 AM
Input File:	KPDX HHOOD ONE STAR JERDT SHAFR 20121119_1817.txt
Databases:	AVNIS Date: 11/09/2012
	Obstacle Date: 10/20/2011
	NFD Date: 09/30/2010
	DTED® (MAX) Date: 2002

Results Summary:

Flyability	✔
DME/DME	✔
Radars	✔
Comms	
TERPS	

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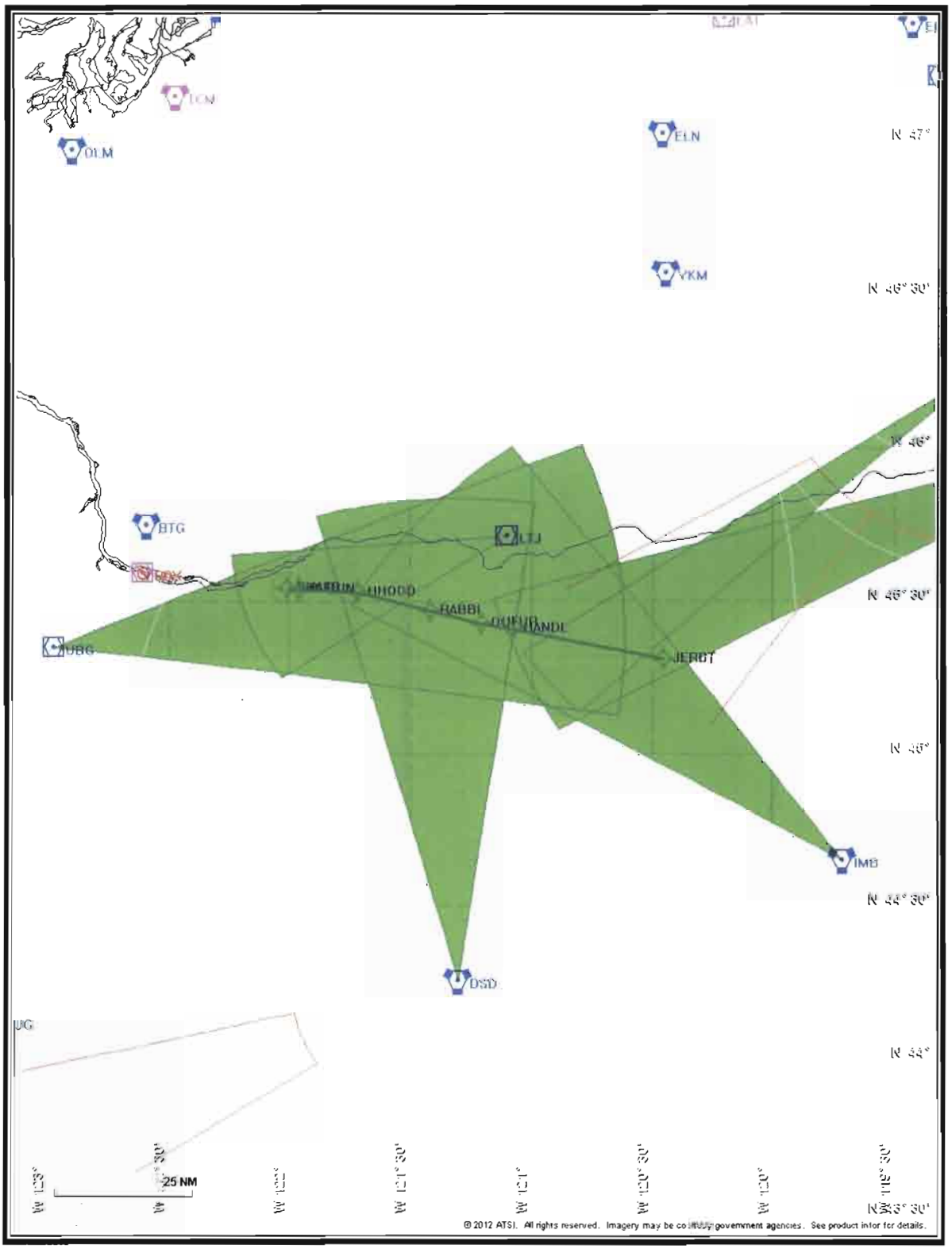
DLM
ELN
YKM
BTG
LTJ
HHOOD
RABBI
JERDT
UBG
IMB
DSD
25 NM
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government agencies. See product infor for details.

Flight Plan

Return To Summary

Name	Type	Lat/Lon	Alt [Ft]	VNAV Mode	IAS [Kts]	Turn Type	Leg Type
JERDT	WP	N 45° 18' 43.54" W 120° 27' 8.11"	18000.0	Step	280.0	Fly By	TF
HANDL	WP	N 45° 24' 26.61" W 121° 4' 19.24"	18000.0	Step	250.0	Fly By	TF
DUFUR	WP	N 45° 25' 43.22" W 121° 12' 13.48"	16000.0	Step	250.0	Fly By	TF
RABBI	WP	N 45° 28' 13.68" W 121° 24' 55.39"	13000.0	Step	250.0	Fly By	TF
HHOOD	WP	N 45° 31' 46.12" W 121° 42' 54.05"	9000.0	Step	210.0	Fly By	TF
BLRUN	WP	N 45° 32' 17.38" W 121° 57' 27.02"	7200.0	Step	210.0	Fly By	TF
SHAFR	WP	N 45° 32' 26.69" W 122° 0' 17.52"	6700.0	Step	210.0	Fly Over	TF

Flyability

Return To Summary

Settings:

Flight Type: Arrival
Aircraft Category: Cat D
Climb Gradient: *None assigned*
Ground Speeds:

Table:

200.0 Kts up to **11000.0 Ft.**
240.0 Kts up to **18000.0 Ft.**
260.0 Kts up to **24000.0 Ft.**
340.0 Kts up to **99900.0 Ft.**

Wind Settings: *None assigned*
Descent During a Turn: Allowed
VNAV Mode: Flight Plan

Entire track is fly-able

DME/DME

Return To Summary

Settings:

RNP: 2.0
Flight Mode: Manual
Line of Sight (DTED Level 0 Max): Evaluated
DME Restrictions: Evaluated
Inertial Drift: Enabled
Initial Drift: 0.558 NM
INS Drift Rate: 8.000 NM/Hour
Range Mode: OSV
Co-Frequencies: Evaluated
RNP Edges: Evaluated
Min DME Range: 3.0 NM
Allowed Gap Length: 4.0 NM
DME Types: VOR/DME , VORTAC , TACAN , and User
DME Include Angles: 30 to 150
Critical DMEs: Allowed
DoD Facilities: Not included
Foreign Facilities: Not included
Low & Terminal DMEs: Included
Flight Check DMEs: Selected
Higher Altitudes: Evaluated
Near Maximum Altitude: Evaluated

Total Number of DMEs Used: 7

Maximum DME Error: 0.857 NM.

No Critical DMEs were found.

Available DMEs: LTJ, PDT, ALW, IMB, PSC, UBG, BTG, DSD

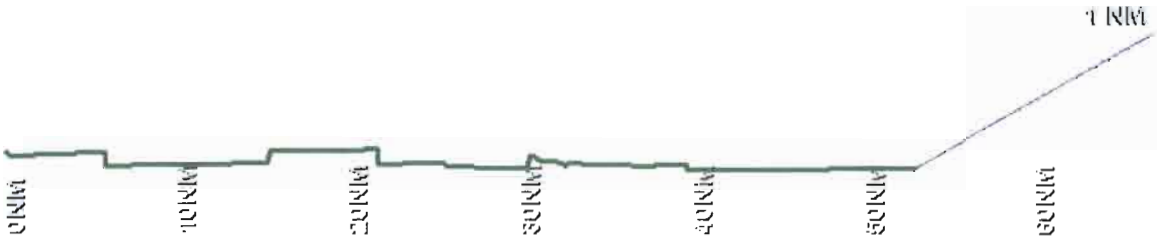
Duplicate DMEs: HLE

Disabled DMEs: PDX

Foreign DMEs within range: YYJ, YDC, YVR

DME/DME (Continued.)

Return To Summary



DME/DME (Continued.)

Return To Summary

DMEs Used

#	Name	Lat/Lon/MAGVAR	Range	Source	Critical	Err. [NM]	Status	Time	Distance
1	LTJ	N 45° 42' 48.90" W 121° 6' 3.00" E 21	H + ESV	User	NO	0.857	Enabled	46.5 %	50.3 %
2	PDT	N 45° 41' 54.31" W 118° 56' 19.33" E 20	H	Database	NO	0.857	Enabled	5.9 %	6.4 %
3	ALW	N 46° 5' 13.11" W 118° 17' 33.13" E 20	L + ESV	User	NO	0.857	Enabled	16.5 %	18.4 %
4	IMB	N 44° 38' 54.21" W 119° 42' 41.87" E 20	H + ESV	User	NO	0.857	Enabled	20.3 %	21.6 %
5	PSC	N 46° 15' 46.74" W 119° 6' 56.58" E 20	L + ESV	User	NO	0.857	Enabled	12.7 %	14.2 %
6	UBG	N 45° 21' 11.62" W 122° 58' 41.37" E 21	H + ESV	User	NO	0.866	Enabled	28.3 %	27.4 %
7	DSD	N 44° 15' 8.53" W 121° 18' 12.38" E 18	H + ESV	User	NO	1.260	Enabled	21.2 %	19.9 %

Flight Check DME Selection

Distance [NM]	Selected DMEs					Alternate
0.0	LTJ	PDT	ALW	IMB	PSC	
10.1	LTJ	PDT	ALW	UBG	PSC	IMB
26.7	LTJ	PDT	IMB	UBG	BTG	
32.4	LTJ	DSD	IMB	UBG		
41.8	LTJ	DSD	IMB	UBG		
54.6	LTJ	BTG	UBG			
65.1	LTJ	BTG				

Inertial Drift Segments

#	Start Location	End Location	Length [NM]
1	N 45° 31' 17.73" W 121° 40' 28.82"	N 45° 32' 26.65" W 122° 0' 16.87"	14.0
	VOR: LTJ	Available from N 45° 31' 17.73" W 121° 40' 28.82" to N 45° 32' 26.65" W 122° 0' 16.87"	
	VOR: PDX	Available from N 45° 31' 17.73" W 121° 40' 28.82" to N 45° 32' 26.65" W 122° 0' 16.87"	
	VOR: BTG	Available from N 45° 31' 32.92" W 121° 41' 46.47" to N 45° 32' 26.65" W 122° 0' 16.87"	

DME/DME (Continued.)

Return To Summary

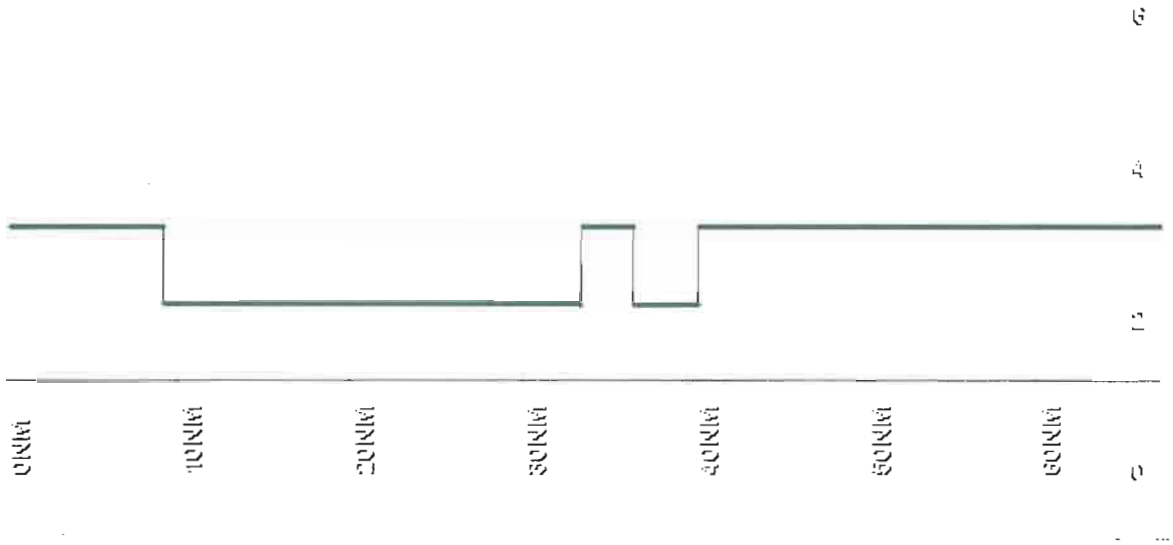
User DMEs

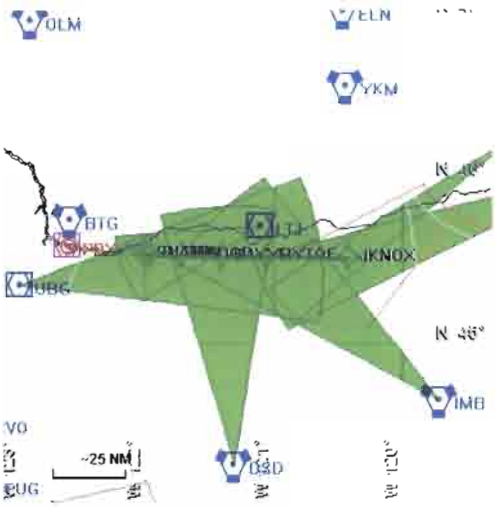
#	Name	Lat/Lon/MAGVAR	Range	Elevation [Ft]	Frequency	Replaces:	Status
1	ALW	N 46° 5' 13.11" W 118° 17' 33.13" E 20	L	1179.4	116.40	ALW	Used
		Restriction: Bearing [True]: 30.0° to 85.0° Bearing [Mag]: 10.0° to 65.0°			Distance: Beyond 31.0 NM Altitude: Below 12500.0 Ft.		
		Restriction: Bearing [True]: 85.0° to 115.0° Bearing [Mag]: 65.0° to 95.0°			Distance: Beyond 20.0 NM Altitude: Below 14500.0 Ft.		
		Restriction: Bearing [True]: 115.0° to 160.0° Bearing [Mag]: 95.0° to 140.0°			Distance: Beyond 20.0 NM Altitude: Below 13500.0 Ft.		
		Restriction: Bearing [True]: 160.0° to 165.0° Bearing [Mag]: 140.0° to 145.0°			Distance: Beyond 20.0 NM Altitude: Below 11500.0 Ft.		
		ESV: Bearing [True]: 242.0° to 255.0° Bearing [Mag]: 222.0° to 235.0°			Arc Distance: Out to 125.0 NM Altitude: 14500.0 to 20000.0 Ft.		
2	PSC	N 46° 15' 46.74" W 119° 6' 56.58" E 20	L	404.2	108.40	PSC	Used
		Restriction: Bearing [True]: 170.0° to 215.0° Bearing [Mag]: 150.0° to 195.0°			Distance: Beyond 35.0 NM Altitude: Below 5500.0 Ft.		
		Restriction: Bearing [True]: 215.0° to 240.0° Bearing [Mag]: 195.0° to 220.0°			Distance: Beyond 35.0 NM Altitude: Below 4500.0 Ft.		
		ESV: Bearing [True]: 227.0° to 236.0° Bearing [Mag]: 207.0° to 216.0°			Arc Distance: Out to 98.0 NM Altitude: 15500.0 to 20000.0 Ft.		
3	DSD	N 44° 15' 8.53" W 121° 18' 12.38" E 18	H	4101.0	117.60	DSD	Used
		Restriction: Bearing [True]: 238.0° to 258.0° Bearing [Mag]: 220.0° to 240.0°			Distance: Beyond 30.0 NM Altitude: Below 99999.0 Ft.		
		ESV: Bearing [True]: 345.0° to 368.0° Bearing [Mag]: 327.0° to 350.0°			Arc Distance: Out to 95.0 NM Altitude: 9000.0 to 25000.0 Ft.		
4	UBG	N 45° 21' 11.62" W 122° 58' 41.37" E 21	H	1440.0	117.40	UBG	Used
		ESV: Bearing [True]: 66.0° to 97.0° Bearing [Mag]: 45.0° to 76.0°			Arc Distance: Out to 100.0 NM Altitude: 8500.0 to 20000.0 Ft.		
5	IMB	N 44° 38' 54.21" W 119° 42' 41.87" E 20	H	5220.0	115.60	IMB	Used
		ESV: Bearing [True]: 301.0° to 325.0° Bearing [Mag]: 281.0° to 305.0°			Arc Distance: Out to 100.0 NM Altitude: 12500.0 to 20000.0 Ft.		
6	LTJ	N 45° 42' 48.90" W 121° 6' 3.00" E 21	H	3220.0	112.30	LTJ	Used
		ESV: Bearing [True]: 235.0° to 266.0° Bearing [Mag]: 214.0° to 245.0°			Arc Distance: Out to 48.0 NM Altitude: 6700.0 to 18000.0 Ft.		

Radar Analysis

Return To Summary

Settings: **Radar Types:** ARSR and ASR





Name:	Steve Haga
Project Name:	KPDX HHOOD ONE STAR
Output File:	KPDX HHOOD ONE RNAV RW28 STAR JKNOX SHAFR 20121120_0645
Procedure Name:	KPDX HHOOD ONE RNAV RW28
Software:	RNAV-Pro™
Version:	2.36
Date/Time:	11/20/2012 6:45:32 AM
Input File:	KPDX HHOOD ONE STAR JKNOX SHAFR 20121119_1844.txt
Databases:	AVNIS Date: 11/09/2012
	Obstacle Date: 10/20/2011
	NFD Date: 09/30/2010
	DTED® (MAX) Date: 2002

Results Summary:

Flyability	✔
DME/DME	✔
Radars	✔
Comms	
TERPS	

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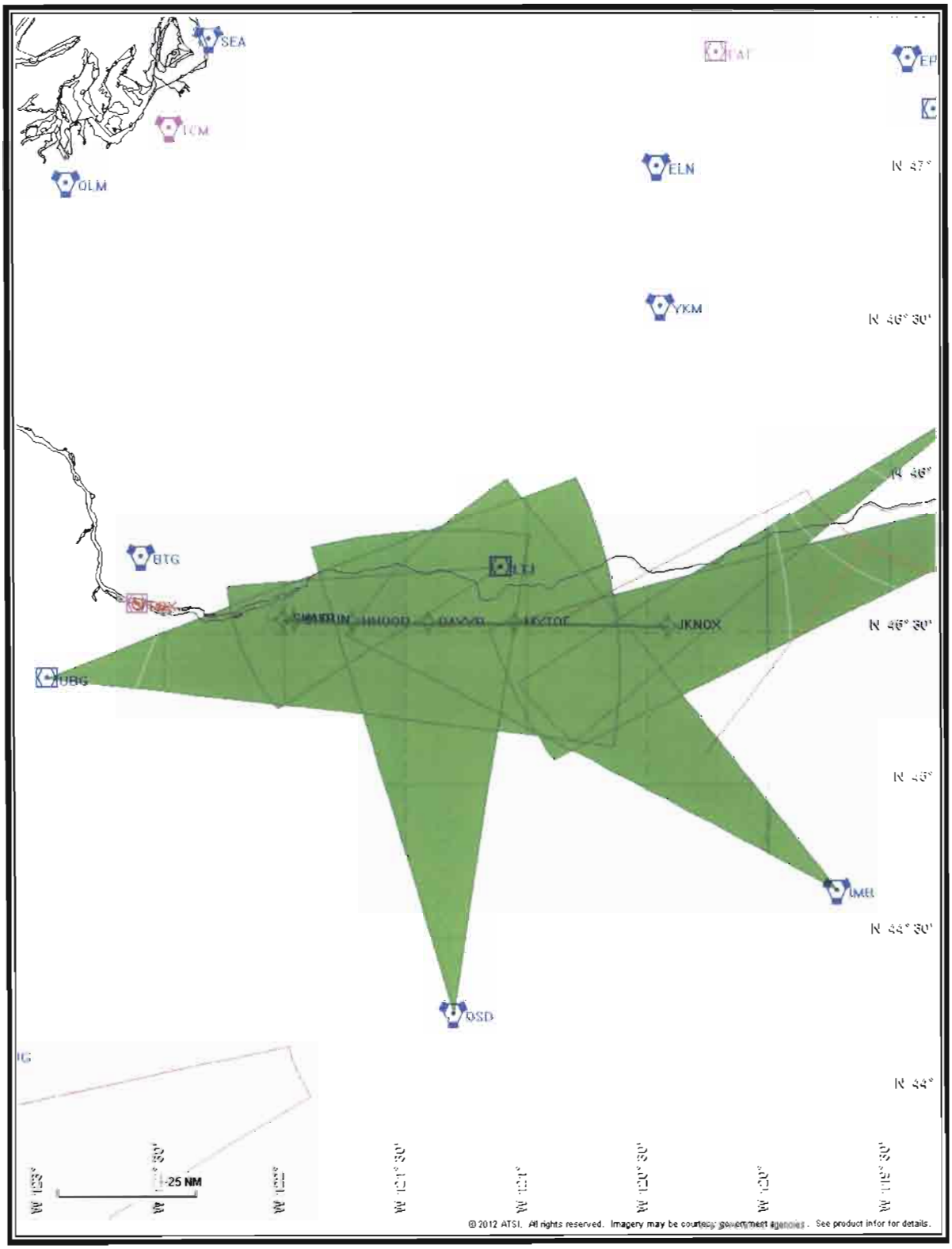
SEA
TCM
OLM
ELN
YKM
BTG
JKNOX
UBG
OSD
N 47°
N 46° 30'
N 46°
N 45°
N 44° 30'
N 44°
25 NM
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Flight Plan

Return To Summary

Name	Type	Lat/Lon	Alt [Ft]	VNAV Mode	IAS [Kts]	Turn Type	Leg Type
JKNOX	WP	N 45° 31' 2.65" W 120° 24' 40.73"	18000.0	Step	280.0	Fly By	TF
MYTOE	WP	N 45° 31' 36.91" W 121° 2' 52.08"	18000.0	Step	250.0	Fly By	TF
BAYYR	WP	N 45° 31' 43.56" W 121° 24' 12.24"	13000.0	Step	250.0	Fly By	TF
HHOOD	WP	N 45° 31' 46.12" W 121° 42' 54.05"	9000.0	Step	250.0	Fly By	TF
BLRUN	WP	N 45° 32' 17.38" W 121° 57' 27.02"	7200.0	Step	210.0	Fly By	TF
SHAFR	WP	N 45° 32' 26.69" W 122° 0' 17.52"	6700.0	Step	210.0	Fly Over	TF

Flyability

Return To Summary

Settings:

Flight Type: Arrival
Aircraft Category: Cat D
Climb Gradient: *None assigned*
Ground Speeds:

Table:

200.0 Kts up to **11000.0 Ft.**
240.0 Kts up to **18000.0 Ft.**
260.0 Kts up to **24000.0 Ft.**
340.0 Kts up to **99900.0 Ft.**

Wind Settings: *None assigned*
Descent During a Turn: Allowed
VNAV Mode: Flight Plan

Entire track is fly-able

DME/DME

Return To Summary

Settings:

RNP: 2.0
Flight Mode: Manual
Line of Sight (DTED Level 0 Max): Evaluated
DME Restrictions: Evaluated
Inertial Drift: Enabled
Initial Drift: 0.558 NM
INS Drift Rate: 8.000 NM/Hour
Range Mode: OSV
Co-Frequencies: Evaluated
RNP Edges: Evaluated
Min DME Range: 3.0 NM
Allowed Gap Length: 4.0 NM
DME Types: VOR/DME , VORTAC , TACAN , and User
DME Include Angles: 30 to 150
Critical DMEs: Allowed
DoD Facilities: Not included
Foreign Facilities: Not included
Low & Terminal DMEs: Included
Flight Check DMEs: Selected
Higher Altitudes: Evaluated
Near Maximum Altitude: Evaluated

Total Number of DMEs Used: 7

Maximum DME Error: 0.818 NM.

No Critical DMEs were found.

Available DMEs: ALW, PSC, LTJ, PDT, UBG, IMB, DSD, BTG

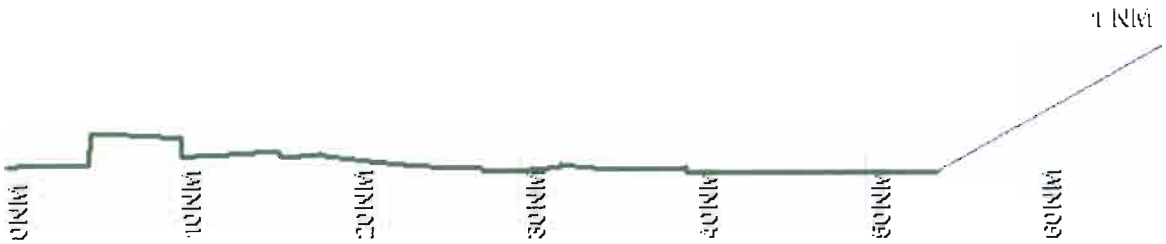
Duplicate DMEs: HLE

Disabled DMEs: PDX

Foreign DMEs within range: YDC, YYJ, YVR

DME/DME (Continued.)

Return To Summary



DME/DME (Continued.)

Return To Summary

DMEs Used

#	Name	Lat/Lon/MAGVAR	Range	Source	Critical	Err. [NM]	Status	Time	Distance
1	PSC	N 46° 15' 46.74" W 119° 6' 56.58" E 20	L + ESV	User	NO	0.818	Enabled	6.6 %	7.3 %
2	LTJ	N 45° 42' 48.90" W 121° 6' 3.00" E 21	H + ESV	User	NO	0.874	Enabled	43.3 %	46.7 %
3	ALW	N 46° 5' 13.11" W 118° 17' 33.13" E 20	L + ESV	User	NO	0.818	Enabled	14.7 %	16.4 %
4	IMB	N 44° 38' 54.21" W 119° 42' 41.87" E 20	H + ESV	User	NO	0.818	Enabled	21.4 %	23.0 %
5	PDT	N 45° 41' 54.31" W 118° 56' 19.33" E 20	H	Database	NO	0.818	Enabled	15.7 %	17.5 %
6	UBG	N 45° 21' 11.62" W 122° 58' 41.37" E 21	H + ESV	User	NO	0.824	Enabled	29.8 %	28.5 %
7	DSD	N 44° 15' 8.53" W 121° 18' 12.38" E 18	H + ESV	User	NO	1.269	Enabled	23.2 %	21.7 %

Flight Check DME Selection

Distance [NM]	Selected DMEs					Alternate
0.0	LTJ	PDT	PSC	IMB	ALW	UBG
16.0	LTJ	PDT	UBG	IMB		
26.8	LTJ	PDT	UBG	IMB	DSD	
41.8	LTJ	DSD	UBG	IMB		
54.9	LTJ	BTG	UBG			
65.2	LTJ	BTG				

Inertial Drift Segments

#	Start Location	End Location	Length [NM]
1	N 45° 31' 46.07" W 121° 41' 46.35"	N 45° 32' 26.51" W 122° 0' 14.34"	13.0
	VOR: BTG	Available from N 45° 31' 46.07" W 121° 41' 46.35" to N 45° 32' 26.51" W 122° 0' 14.34"	
	VOR: LTJ	Available from N 45° 31' 46.07" W 121° 41' 46.35" to N 45° 32' 26.51" W 122° 0' 14.34"	
	VOR: PDX	Available from N 45° 31' 46.07" W 121° 41' 46.35" to N 45° 32' 26.51" W 122° 0' 14.34"	

DME/DME (Continued.)

Return To Summary

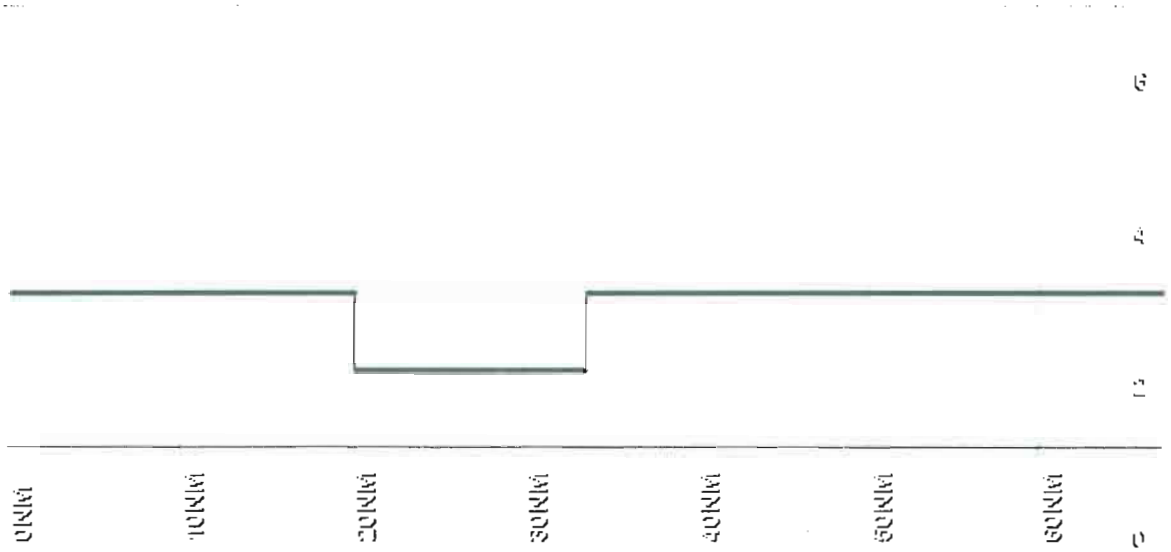
User DMEs

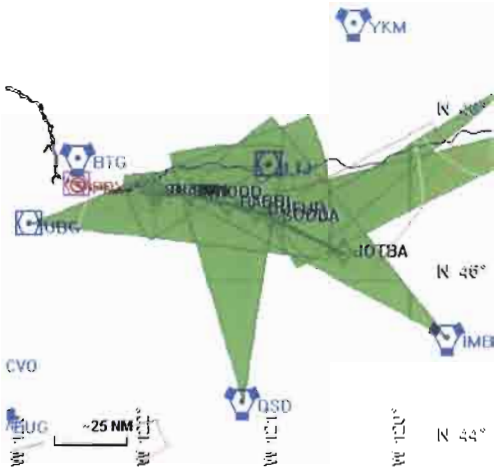
#	Name	Lat/Lon/MAGVAR	Range	Elevation [Ft]	Frequency	Replaces:	Status
1	ALW	N 46° 5' 13.11" W 118° 17' 33.13" E 20	L	1179.4	116.40	ALW	Used
		Restriction: Bearing [True]: 30.0° to 85.0° Bearing [Mag]: 10.0° to 65.0°			Distance: Beyond 31.0 NM Altitude: Below 12500.0 Ft.		
		Restriction: Bearing [True]: 85.0° to 115.0° Bearing [Mag]: 65.0° to 95.0°			Distance: Beyond 20.0 NM Altitude: Below 14500.0 Ft.		
		Restriction: Bearing [True]: 115.0° to 160.0° Bearing [Mag]: 95.0° to 140.0°			Distance: Beyond 20.0 NM Altitude: Below 13500.0 Ft.		
		Restriction: Bearing [True]: 160.0° to 165.0° Bearing [Mag]: 140.0° to 145.0°			Distance: Beyond 20.0 NM Altitude: Below 11500.0 Ft.		
		ESV: Bearing [True]: 242.0° to 255.0° Bearing [Mag]: 222.0° to 235.0°			Arc Distance: Out to 125.0 NM Altitude: 14500.0 to 20000.0 Ft.		
2	PSC	N 46° 15' 46.74" W 119° 6' 56.58" E 20	L	404.2	108.40	PSC	Used
		Restriction: Bearing [True]: 170.0° to 215.0° Bearing [Mag]: 150.0° to 195.0°			Distance: Beyond 35.0 NM Altitude: Below 5500.0 Ft.		
		Restriction: Bearing [True]: 215.0° to 240.0° Bearing [Mag]: 195.0° to 220.0°			Distance: Beyond 35.0 NM Altitude: Below 4500.0 Ft.		
		ESV: Bearing [True]: 227.0° to 236.0° Bearing [Mag]: 207.0° to 216.0°			Arc Distance: Out to 98.0 NM Altitude: 15500.0 to 20000.0 Ft.		
3	DSD	N 44° 15' 8.53" W 121° 18' 12.38" E 18	H	4101.0	117.60	DSD	Used
		Restriction: Bearing [True]: 238.0° to 258.0° Bearing [Mag]: 220.0° to 240.0°			Distance: Beyond 30.0 NM Altitude: Below 99999.0 Ft.		
		ESV: Bearing [True]: 345.0° to 368.0° Bearing [Mag]: 327.0° to 350.0°			Arc Distance: Out to 95.0 NM Altitude: 9000.0 to 25000.0 Ft.		
4	UBG	N 45° 21' 11.62" W 122° 58' 41.37" E 21	H	1440.0	117.40	UBG	Used
		ESV: Bearing [True]: 66.0° to 97.0° Bearing [Mag]: 45.0° to 76.0°			Arc Distance: Out to 100.0 NM Altitude: 8500.0 to 20000.0 Ft.		
5	IMB	N 44° 38' 54.21" W 119° 42' 41.87" E 20	H	5220.0	115.60	IMB	Used
		ESV: Bearing [True]: 301.0° to 325.0° Bearing [Mag]: 281.0° to 305.0°			Arc Distance: Out to 100.0 NM Altitude: 12500.0 to 20000.0 Ft.		
6	LTJ	N 45° 42' 48.90" W 121° 6' 3.00" E 21	H	3220.0	112.30	LTJ	Used
		ESV: Bearing [True]: 235.0° to 266.0° Bearing [Mag]: 214.0° to 245.0°			Arc Distance: Out to 48.0 NM Altitude: 6700.0 to 18000.0 Ft.		

Radar Analysis

Return To Summary

Settings: **Radar Types:** ARSR and ASR





Name:	Steve Haga
Project Name:	KPDX HHOOD ONE STAR
Output File:	KPDX HHOOD ONE RNAV RW28 STAR JOTBA SHAFR 20121120_0642
Procedure Name:	KPDX HHOOD ONE RNAV RW28
Software:	RNAV-Pro™
Version:	2.36
Date/Time:	11/20/2012 6:42:04 AM
Input File:	KPDX HHOOD ONE STAR JOTBA SHAFR 20121119_1909.txt
Databases:	AVNIS Date: 11/09/2012
	Obstacle Date: 10/20/2011
	NFD Date: 09/30/2010
	DTED® (MAX) Date: 2002

Results Summary:

Flyability	✔
DME/DME	✔
Radars	✔
Comms	
TERPS	

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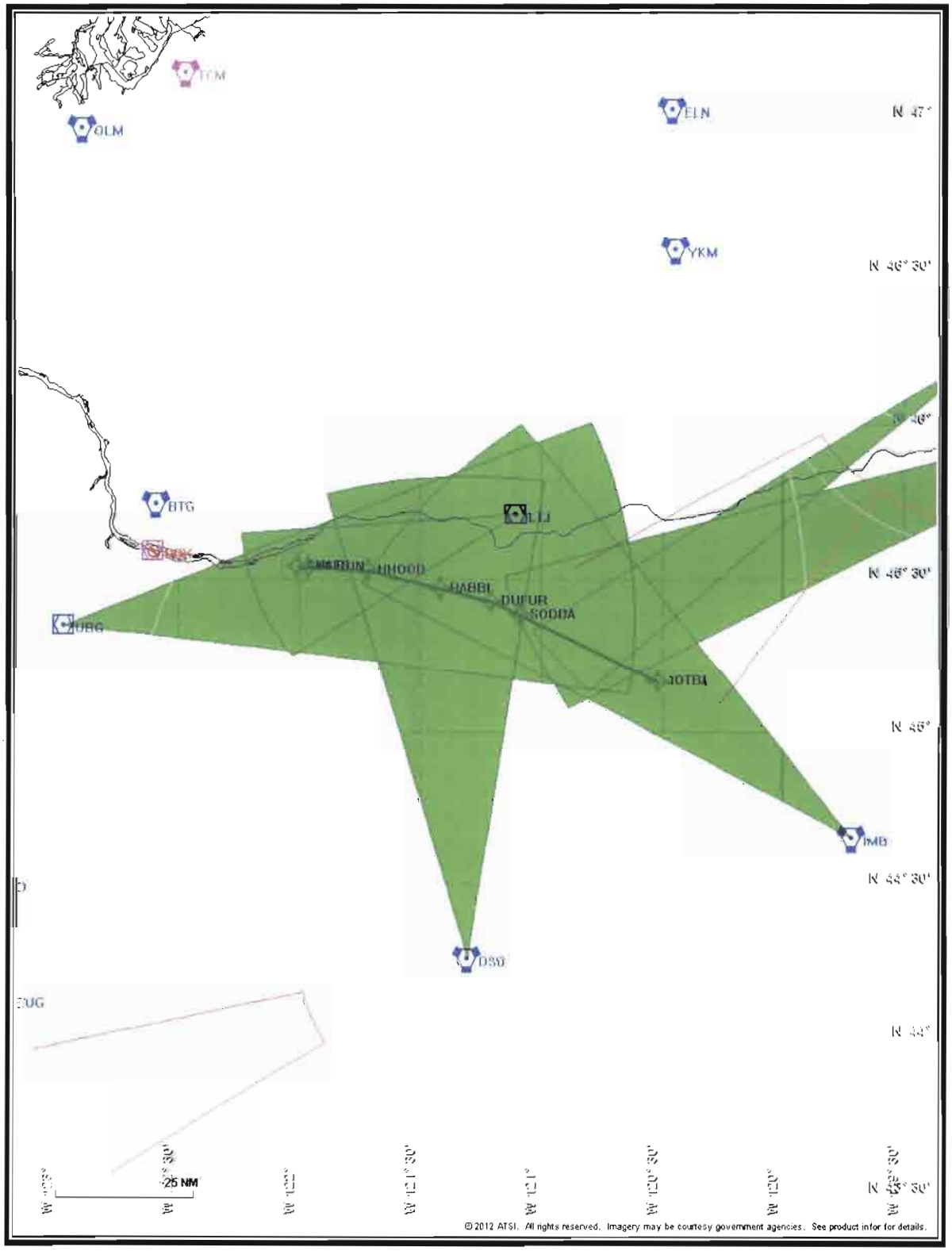
OLM
ELN
YKM
BTG
HHOOD
HABBI
DUFUR
SODDA
JOTBA
IMB
DSD
N 47°
N 46° 30'
N 46°
N 45° 30'
N 45°
N 44° 30'
N 44°
25 NM
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Flight Plan

Return To Summary

Name	Type	Lat/Lon	Alt [Ft]	VNAV Mode	IAS [Kts]	Turn Type	Leg Type
JOTBA	WP	N 45° 10' 0.70" W 120° 31' 12.27"	18000.0	Step	280.0	Fly By	TF
SODDA	WP	N 45° 23' 2.63" W 121° 5' 10.62"	18000.0	Step	250.0	Fly By	TF
DUFUR	WP	N 45° 25' 43.22" W 121° 12' 13.48"	16000.0	Step	250.0	Fly By	TF
RABBI	WP	N 45° 28' 13.68" W 121° 24' 55.39"	13000.0	Step	250.0	Fly By	TF
HHOOD	WP	N 45° 31' 46.12" W 121° 42' 54.05"	9000.0	Step	250.0	Fly By	TF
BLRUN	WP	N 45° 32' 17.38" W 121° 57' 27.02"	7200.0	Step	210.0	Fly By	TF
SHAFR	WP	N 45° 32' 26.69" W 122° 0' 17.52"	6700.0	Step	210.0	Fly Over	TF

Flyability

Return To Summary

Settings:

Flight Type: Arrival
Aircraft Category: Cat D
Climb Gradient: *None assigned*
Ground Speeds:

Table:

200.0 Kts up to **11000.0 Ft.**
240.0 Kts up to **18000.0 Ft.**
260.0 Kts up to **24000.0 Ft.**
340.0 Kts up to **99900.0 Ft.**

Wind Settings: *None assigned*
Descent During a Turn: Allowed
VNAV Mode: Flight Plan

Entire track is fly-able

DME/DME

Return To Summary

Settings:

RNP: 2.0
Flight Mode: Manual
Line of Sight (DTED Level 0 Max): Evaluated
DME Restrictions: Evaluated
Inertial Drift: Enabled
Initial Drift: 0.558 NM
INS Drift Rate: 8.000 NM/Hour
Range Mode: OSV
Co-Frequencies: Evaluated
RNP Edges: Evaluated
Min DME Range: 3.0 NM
Allowed Gap Length: 4.0 NM
DME Types: VOR/DME , VORTAC , TACAN , and User
DME Include Angles: 30 to 150
Critical DMEs: Allowed
DoD Facilities: Not included
Foreign Facilities: Not included
Low & Terminal DMEs: Included
Flight Check DMEs: Selected
Higher Altitudes: Evaluated
Near Maximum Altitude: Evaluated

Total Number of DMEs Used: 6

Maximum DME Error: 0.861 NM.

No Critical DMEs were found.

Available DMEs: IMB, LTJ, PDT, ALW, UBG, PSC, BTG, DSD

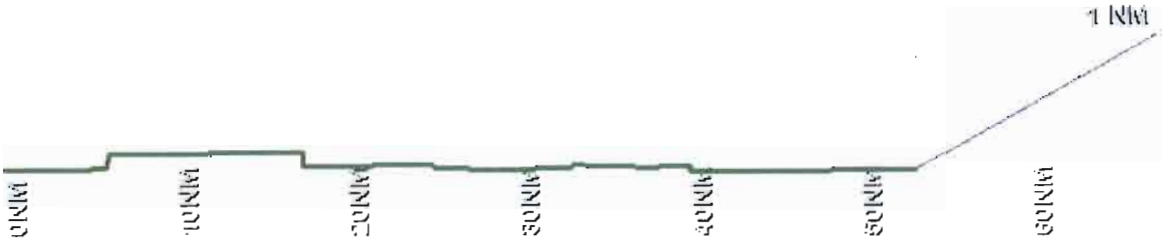
Duplicate DMEs: HLE

Disabled DMEs: PDX

Foreign DMEs within range: YYJ, YVR, YDC

DME/DME (Continued.)

Return To Summary



DME/DME (Continued.)

Return To Summary

DMEs Used

#	Name	Lat/Lon/MAGVAR	Range	Source	Critical	Err. [NM]	Status	Time	Distance
1	LTJ	N 45° 42' 48.90" W 121° 6' 3.00" E 21	H + ESV	User	NO	0.861	Enabled	54.8 %	59.5 %
2	PDT	N 45° 41' 54.31" W 118° 56' 19.33" E 20	H	Database	NO	0.861	Enabled	18.4 %	20.4 %
3	ALW	N 46° 5' 13.11" W 118° 17' 33.13" E 20	L + ESV	User	NO	0.861	Enabled	15.1 %	16.9 %
4	UBG	N 45° 21' 11.62" W 122° 58' 41.37" E 21	H + ESV	User	NO	0.870	Enabled	32.3 %	31.7 %
5	IMB	N 44° 38' 54.21" W 119° 42' 41.87" E 20	H + ESV	User	NO	0.861	Enabled	9.8 %	10.1 %
6	DSD	N 44° 15' 8.53" W 121° 18' 12.38" E 18	H + ESV	User	NO	1.260	Enabled	20.8 %	19.5 %

Flight Check DME Selection

Distance [NM]	Selected DMEs					Alternate
0.0	LTJ	PDT	UBG	ALW	IMB	PSC
27.3	LTJ	PDT	UBG	BTG	IMB	
32.4	LTJ	IMB	UBG	DSD		
42.2	LTJ	IMB	UBG	DSD		
55.0	LTJ	BTG	UBG			
65.5	LTJ	BTG				

Inertial Drift Segments

#	Start Location	End Location	Length [NM]
1	N 45° 31' 15.68" W 121° 40' 18.42"	N 45° 32' 26.58" W 122° 0' 15.55"	14.1
	VOR: LTJ	Available from N 45° 31' 15.68" W 121° 40' 18.42" to N 45° 32' 26.58" W 122° 0' 15.55"	
	VOR: PDX	Available from N 45° 31' 15.68" W 121° 40' 18.42" to N 45° 32' 26.58" W 122° 0' 15.55"	
	VOR: BTG	Available from N 45° 31' 32.67" W 121° 41' 45.20" to N 45° 32' 26.58" W 122° 0' 15.55"	

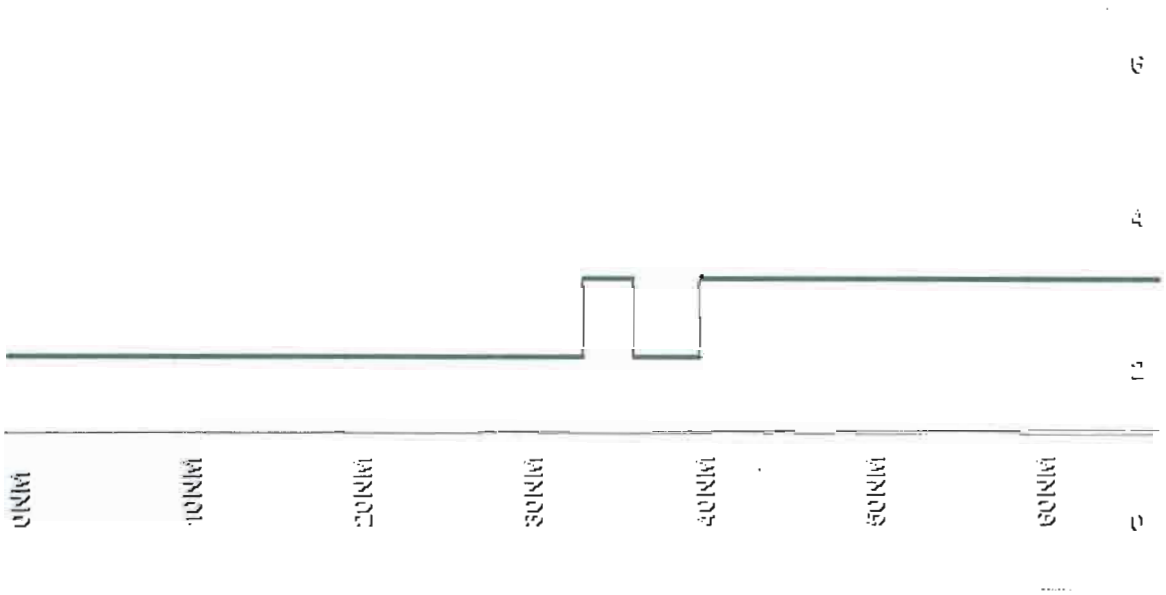
DME/DME (Continued.)

Return To Summary

User DMEs

#	Name	Lat/Lon/MAGVAR	Range	Elevation [Ft]	Frequency	Replaces:	Status
1	ALW	N 46° 5' 13.11" W 118° 17' 33.13" E 20	L	1179.4	116.40	ALW	Used
		Restriction: Bearing [True]: 30.0° to 85.0° Bearing [Mag]: 10.0° to 65.0°			Distance: Beyond 31.0 NM Altitude: Below 12500.0 Ft.		
		Restriction: Bearing [True]: 85.0° to 115.0° Bearing [Mag]: 65.0° to 95.0°			Distance: Beyond 20.0 NM Altitude: Below 14500.0 Ft.		
		Restriction: Bearing [True]: 115.0° to 160.0° Bearing [Mag]: 95.0° to 140.0°			Distance: Beyond 20.0 NM Altitude: Below 13500.0 Ft.		
		Restriction: Bearing [True]: 160.0° to 165.0° Bearing [Mag]: 140.0° to 145.0°			Distance: Beyond 20.0 NM Altitude: Below 11500.0 Ft.		
		ESV: Bearing [True]: 242.0° to 255.0° Bearing [Mag]: 222.0° to 235.0°			Arc Distance: Out to 125.0 NM Altitude: 14500.0 to 20000.0 Ft.		
2	PSC	N 46° 15' 46.74" W 119° 6' 56.58" E 20	L	404.2	108.40	PSC	Not Used
		Restriction: Bearing [True]: 170.0° to 215.0° Bearing [Mag]: 150.0° to 195.0°			Distance: Beyond 35.0 NM Altitude: Below 5500.0 Ft.		
		Restriction: Bearing [True]: 215.0° to 240.0° Bearing [Mag]: 195.0° to 220.0°			Distance: Beyond 35.0 NM Altitude: Below 4500.0 Ft.		
		ESV: Bearing [True]: 227.0° to 236.0° Bearing [Mag]: 207.0° to 216.0°			Arc Distance: Out to 98.0 NM Altitude: 15500.0 to 20000.0 Ft.		
3	DSD	N 44° 15' 8.53" W 121° 18' 12.38" E 18	H	4101.0	117.60	DSD	Used
		Restriction: Bearing [True]: 238.0° to 258.0° Bearing [Mag]: 220.0° to 240.0°			Distance: Beyond 30.0 NM Altitude: Below 99999.0 Ft.		
		ESV: Bearing [True]: 345.0° to 368.0° Bearing [Mag]: 327.0° to 350.0°			Arc Distance: Out to 95.0 NM Altitude: 9000.0 to 25000.0 Ft.		
4	UBG	N 45° 21' 11.62" W 122° 58' 41.37" E 21	H	1440.0	117.40	UBG	Used
		ESV: Bearing [True]: 66.0° to 97.0° Bearing [Mag]: 45.0° to 76.0°			Arc Distance: Out to 100.0 NM Altitude: 8500.0 to 20000.0 Ft.		
5	IMB	N 44° 38' 54.21" W 119° 42' 41.87" E 20	H	5220.0	115.60	IMB	Used
		ESV: Bearing [True]: 301.0° to 325.0° Bearing [Mag]: 281.0° to 305.0°			Arc Distance: Out to 100.0 NM Altitude: 12500.0 to 20000.0 Ft.		
6	LTJ	N 45° 42' 48.90" W 121° 6' 3.00" E 21	H	3220.0	112.30	LTJ	Used
		ESV: Bearing [True]: 235.0° to 266.0° Bearing [Mag]: 214.0° to 245.0°			Arc Distance: Out to 48.0 NM Altitude: 6700.0 to 18000.0 Ft.		

Radar Analysis

Return To Summary

Settings: **Radar Types:** ARSR and ASR