

FEDERAL AVIATION ADMINISTRATION  
FLIGHT STANDARDS SERVICE  
STANDARD TERMINAL ARRIVAL (STAR)

Bearings, headings, courses, tracks and radials are magnetic. Elevations and altitudes are in feet, MSL. Altitudes are minimum altitudes unless otherwise indicated.  
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Arrival Name	Number	STAR Computer Code	Superseded Number	Dated	Effective Date
HHOOD (RNAV)	FIVE	HHOOD.HHOOD5	FOUR	12/07/2017	31OCT2024

TRANSITION ROUTES:

Transition Name	Transition Computer Codes	From FIX/NAVAID	To FIX/NAVAID	Course	Distance	MEA	MOCA	MAA	Crossing Altitudes / Fixes
BAYYR	BAYYR.HHOOD5	BAYYR	BAYYR						AT/ABOVE 13000
			HHOOD	254.31	14.14	8000	7000		BETWEEN 9000 AND 15000
JKNOX	JKNOX.HHOOD5	JKNOX	JKNOX						AT/ABOVE FL240
			MYTOE	255.45	26.86	17000	7000		AT/ABOVE 17000
			BAYYR	254.55	14.00	9000	7000		AT/ABOVE 13000
			HHOOD	254.31	14.14	8000	7000		BETWEEN 9000 AND 15000
JORAD	JORAD.HHOOD5	JORAD	JORAD						AT/ABOVE FL240
			LUUND	238.74	24.25	13000	7000		AT/ABOVE 17000
			YENTL	238.41	13.65	9000	7000		AT/ABOVE 13000
			HHOOD	238.14	14.16	8000	7000		BETWEEN 9000 AND 15000
JOTBA	JOTBA.HHOOD5	JOTBA	JOTBA						AT/ABOVE FL240
			SODDA	282.72	27.30	13000	7200		AT/ABOVE 17000
			RABBI	272.42	13.82	8000	7200		AT/ABOVE 13000
			HHOOD	272.19	14.13	8000	7000		BETWEEN 9000 AND 15000
RABBI	RABBI.HHOOD5	RABBI	RABBI						AT/ABOVE 13000
			HHOOD	272.19	14.13	8000	7000		BETWEEN 9000 AND 15000
SODDA	SODDA.HHOOD5	SODDA	SODDA						AT/ABOVE 17000
			RABBI	272.42	13.82	8000	7200		AT/ABOVE 13000
			HHOOD	272.19	14.13	8000	7000		BETWEEN 9000 AND 15000
YENTL	YENTL.HHOOD5	YENTL	YENTL						AT/ABOVE 13000
			HHOOD	238.14	14.16	8000	7000		BETWEEN 9000 AND 15000

ARRIVAL ROUTE DESCRIPTION:

FROM HHOOD ON TRACK 256.30/7.25 TO CROSS BEEVS AT OR ABOVE 7100, THEN ON TRACK 258.59/2.99 TO BLRUN.

LANDING RWY 10L/R: FROM BLRUN ON TRACK 270.64/13.81 TO CROSS SSDEE BETWEEN 9000 AND 11000, THEN ON TRACK 270.40/4.16 TO CROSS THEID BETWEEN 8000 AND 10000 AND AT 240 KIAS, THEN ON TRACK 270.35/4.25 TO CROSS EMZEY BETWEEN 7000 AND 8000 AND AT 230 KIAS, THEN ON TRACK 281.18/6.47 TO CROSS CIZZL AT OR ABOVE 6000 AND AT 210 KIAS, THEN ON TRACK 281.18. EXPECT RADAR VECTORS TO FINAL APPROACH COURSE.

LANDING RWY 21: FROM BLRUN ON TRACK 279.47 TO CROSS SOOZN AT 8000 AND AT 210 KIAS, THEN ON TRACK 279.47. EXPECT RADAR VECTORS TO FINAL APPROACH COURSE.

LANDING RWY 28L/R: FROM BLRUN ON TRACK 258.56/3.50 TO CROSS SHAFR AT 6700 AND AT 210 KIAS. EXPECT RNAV OR ILS RWY 28L/R APPROACH.

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**PBN REQUIREMENT NOTES:**

RNAV 1 - DME/DME/IRU OR GPS

**EQUIPMENT REQUIREMENT NOTES:**

RADAR REQUIRED

**PROCEDURAL DATA NOTES:**

NOTE: JET AIRCRAFT DESCEND VIA MACH NUMBER UNTIL 280 KIAS, IF UNABLE, ADVISE ATC.

NOTE: FOR NON-GPS EQUIPPED AIRCRAFT LANDING RWY 21, CVO DME MUST BE OPERATIONAL.

**FIXES AND/OR HOLDING PATTERNS:**

CHART: BTG VORTAC, UBG VOR/DME, BUXOM, CREAK, NACIY, NNUTT, REEDI.

SODDA: HOLD E, LT, 272.72 INBOUND, 10 NM LEGS.

JKNOX: HOLD E, RT, 255.45 INBOUND, 10 NM LEGS.

JOTBA: HOLD E, LT 282.72 INBOUND, 10 NM LEGS.

LUUND: HOLD NE, LT, 238.41 INBOUND, 10 NM LEGS.

**COMMUNICATIONS:**

CHART: APP CON, TWR, GND CON

**AIRPORTS SERVED:**

AIRPORT ID  
PDX

CITY  
PORTLAND

STATE  
OR

**LOST COMMUNICATIONS PREFERENCES:**

MAINTAIN RWY TRANSITION TERMINUS ALTITUDE UNTIL ESTABLISHED ON APPROACH PROCEDURE:

RWY 10L/R: AFTER CIZZL PROCEED TO NNUTT, THEN LEFT TURN TO BUXOM, CONDUCT THE ILS OR LOC RWY 10L APPROACH.

RWY 21: AFTER SOOZN TURN RIGHT TO CREAK AND PROCEED ON THE LOC/DME RWY 21 APPROACH.

RWY 28L/R: AFTER SHAFR PROCEED ON THE ILS OR LOC RWY 28R APPROACH.

**REMARKS:**

BEEVS-BLRUNS MTS TERRAIN; ROC REDUCTION 200 FT; LOWEST ALT PERMITTED AT BEEVS 7100 FT.

LOST COMM: RWY 10L CO IS 1713 MSL AAO, 454106.00N/1225454.00W; RWY 21 CO IS 4574 MSL AAO, 454451.00N/1221421.00W. LOST COMM RWY 28R HAS DIRECT IAP CONNECTION BETWEEN STAR/IAP.

**ADDITIONAL FLIGHT DATA:**

DME/DME ASSESSMENT: SAT (RNP 2.0)

MAG VAR: KPDX 16E/2010.

CHART AT CIZZL TERMINUS: PDX LDG RWY 10L/R.

CHART AT SOOZN TERMINUS: PDX LDG RWY 21.

CHART AT SHAFR TERMINUS: PDX LDG RWY 28L/R.

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Arrival Name	Number	STAR Computer Code	Superseded Number	Dated	Effective Date
HOOO (RNAV)	FIVE	HOOO.HOOO5	FOUR	12/07/2017	31OCT2024

**FLIGHT INSPECTED BY:**

WENDI S GIMA

**ORGANIZATION:**

FPO

**DATE:**

08/29/2024

Flight Inspected Signature:

Digitally signed by

**ROBERT G HAMILTON**

Sep 03, 2024

**DEVELOPED BY:**

KWEKU DONKOR

AJV-A433

7/10/2024

Developed By Signature:

Digitally signed by

**ROBERT G HAMILTON**

Sep 03, 2024

**APPROVED BY:**

BEV BORDY

AJV-A430

Approved By Signature:

Digitally signed by

**ROBERT G HAMILTON**

Sep 03, 2024

**CHANGES:**

1. ADDED 280 KIAS RESTRICTIONS AT LUUND, MYTOE, SODDA.
2. UPDATED ENROUTE MEA VALUES.
3. ADDED TERMINUS DATA AT CIZZL, SOOZN, SHAFR.
4. ADDED NEW FIX BEEVS, TO COMMON ROUTE BETWEEN HOOO AND BLRUN WITH ALTITUDE RESTRICTION OF AT/ABOVE 7400.
5. MOVED YENTL 1.7 NM E.
6. MOVED RABBI 1.2 NM SE.
7. MOVED LUUND 2.9 NM SE.
8. MOVED SSDEE 304 FT EAST.
9. MOVED BAYR 1 NM NE.
10. AMENDED MOCAS ON ALL ENROUTE TRANSITIONS.
11. REMOVED AIRPORT NAME FROM AIRPORTS SERVED SECTION ALONG WITH K IDENT.
12. REMOVED NNUTT FROM PROCEDURE. RETAINED AS STANDALONE FIX FOR LOST COMM.
13. REMOVED YORKY FROM PROCEDURE.
14. ADDED PROCEDURAL DATA NOTE: "FOR NON-GPS EQUIPPED AIRCRAFT LANDING RWY 21, CVO DME MUST BE OPERATIONAL."
15. TERMINATED RWY 10L/R RUNWAY TRANSITION AT CIZZL INSTEAD OF YORKY.
16. ADDED FM LEG AFTER CIZZL.
17. CHANGED CROSSING RESTRICTION AT CIZZL FROM AT OR ABOVE 5000 TO AT OR ABOVE 6000 AND AT 210 KIAS.
18. UPDATED ARRIVAL DESCRIPTIONS FOR ALL RWY TRANSITIONS.
19. UPDATED ALL LOST COMMUNICATIONS INSTRUCTIONS.
20. REMOVED D-ATIS FROM COMMUNICATIONS BLOCK.
21. ADDED 240 KIAS RESTRICTION AT THEID.
22. MOVED JORAD 6.75 NM EAST.
23. REMOVED DUFUR AND DUFUR ENROUTE TRANSITION FROM PROCEDURE (TO INCLUDE HOLDING).
24. ADDED SODDA ENROUTE TRANSITION TO PROCEDURE.
25. ADDED HOLDING AT SODDA.
26. AMENDED HOLDING PATTERN AT NEW LUUND LOCATION FROM 232.42 INBOUND TO 238.41 INBOUND.

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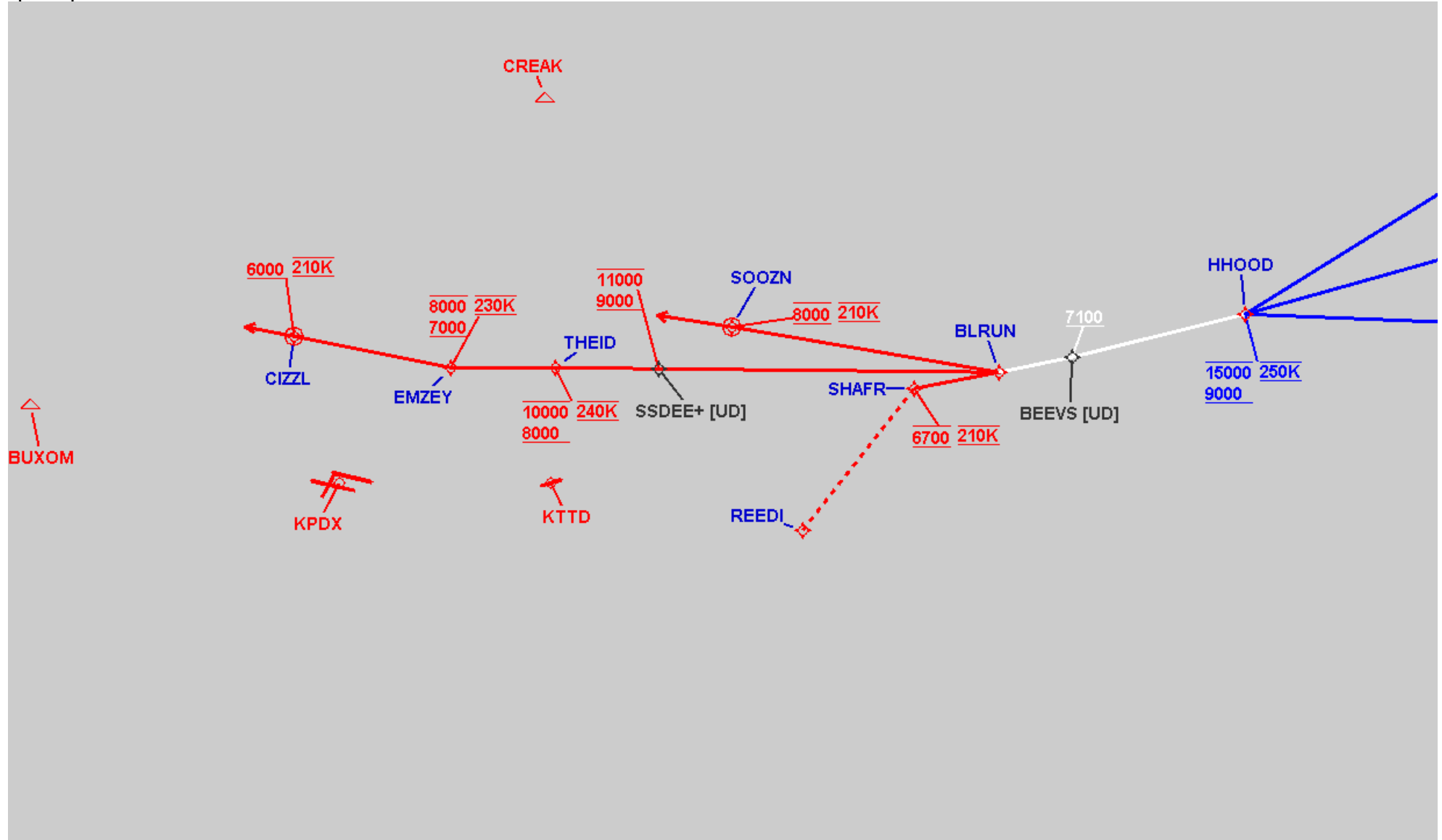
**REASONS:**

1. ATC REQUEST. FACILITATES SEQUENCING.
2. NEW ESVs ALLOWED DME/DME/IRU NAVIGATION AT LOWER ALTITUDES.
3. PER FAAO 8260.19J, 4-5-2. h. (2).
4. NEEDED TO RESOLVE LEG LENGTH FAILURE AND PROTECT FOR MOCA.
- 5-9. RESOLVED LEG LENGTH FAILURES.
10. THE COMMON ROUTE HAS A MOCA OF 7400. RAISING ALL ENROUTE MOCAS IS NECESSARY SO THERE ARE NO ASCENDING MOCAS ON THE STAR. FAAO 8260.3E 2-2-7 d. (3).
11. IAWA 8260.19J.
- 12-13. NO LONGER NEEDED.
14. DME ASSESSMENT RESULTS.
15. CONNECTS TO RNAV (RNP) Z RWY 10L/R IAPS.
16. ATC REQUEST.
17. MATCHES RESTRICTIONS ON THE IAPS.
- 18-19. ATC REQUEST.
20. IAW FAAO 8260.19J 4-5-12 f.
21. RESOLVES LEG LENGTH FAILURE DUE TO DECELERATION THEID TO EMZEY.
22. RESOLVES LEG LENGTH FAILURE.
23. ATC REQUEST. NO LONGER NEEDED.
24. ATC REQUEST. FACILITATES ARRIVAL SEQUENCING.
25. ATC REQUEST. FACILITATES ARRIVAL FLOW MANAGEMENT.
26. NEW FIX LOCATION AND HOLDING PATTERN INBOUND COURSE.

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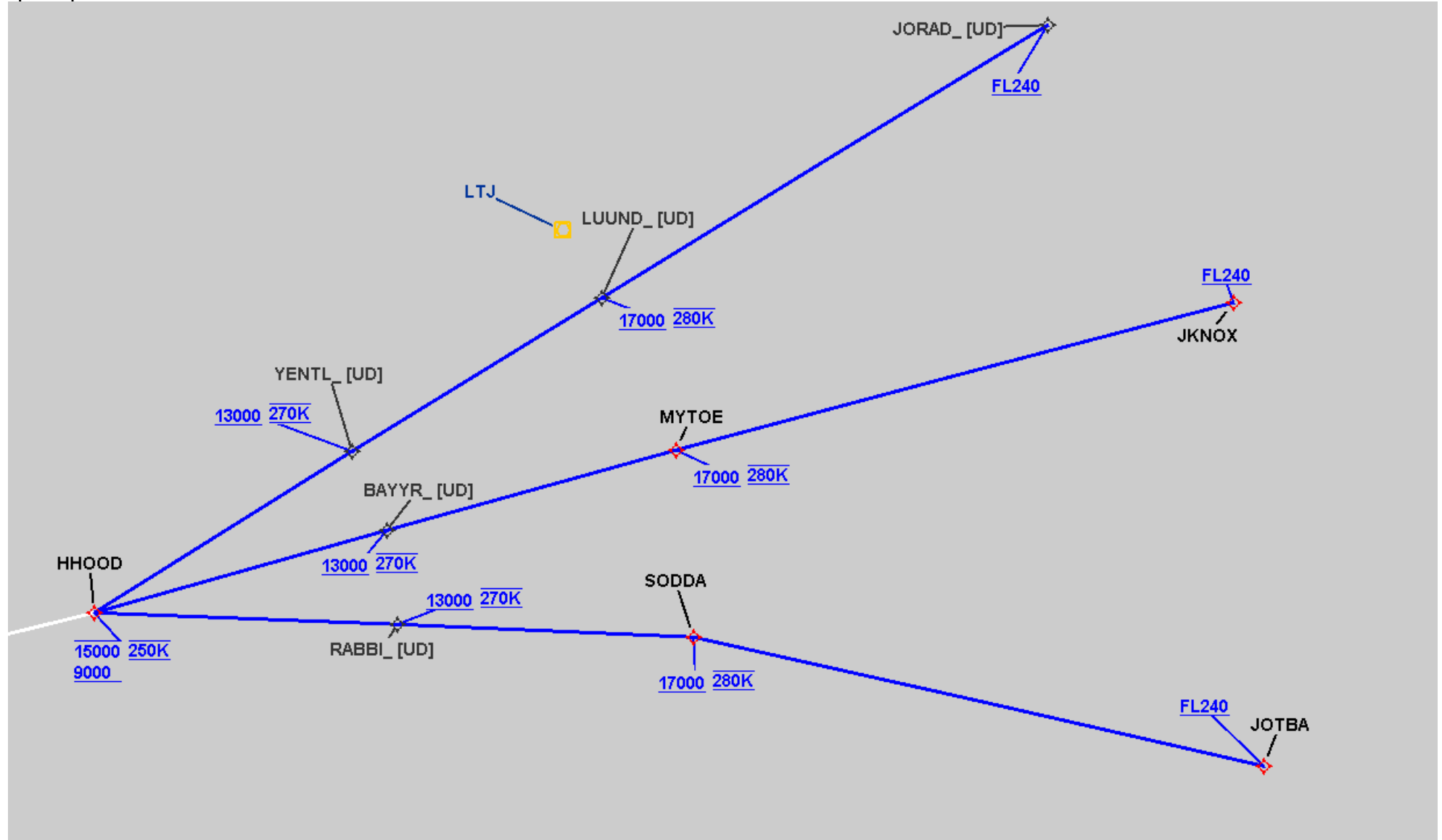
Arrival Name	Number	STAR Computer Code	Superseded Number	Dated	Effective Date
HHOOD (RNAV)	FIVE	HHOOD.HHOOD5	FOUR	12/07/2017	31OCT2024
Graphic Depiction 1					



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Graphic Depiction 2					



FEDERAL AVIATION ADMINISTRATION  
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STAR (DATA RECORD)

Arrival Name HHOOD (RNAV)	Number FIVE	STAR Computer Code HHOOD.HHOOD5		Superseded Number FOUR		Dated 12/07/2017	Effective Date 31OCT2024		
<u>FIX/NAVAID</u>	<u>LAT/LONG</u>	<u>C</u>	<u>FO/FB</u>	<u>LEG TYPE</u>	<u>TC</u>	<u>DIST (NM)</u>	<u>ALTITUDE</u>	<u>SPEED</u>	<u>REMARKS</u>
En Route Transition									
BAYYR	453143.25N / 1212246.89W	Y		IF			AT/ABOVE 13000	AT 270K	BAYYR.HHOOD5
HHOOD	453146.12N / 1214254.05W	Y	FB	TF	270.31	14.14	9000B15000	AT 250K	
En Route Transition									
JKNOX	453102.65N / 1202440.73W	Y		IF			AT/ABOVE FL240		JKNOX.HHOOD5
MYTOE	453136.91N / 1210252.08W	Y	FB	TF	271.45	26.86	AT/ABOVE 17000	AT 280K	
BAYYR	453143.25N / 1212246.89W	Y	FB	TF	270.55	14.00	AT/ABOVE 13000	AT 270K	
HHOOD	453146.12N / 1214254.05W	Y	FB	TF	270.31	14.14	9000B15000	AT 250K	
En Route Transition									
JORAD	454549.18N / 1203126.48W	Y		IF			AT/ABOVE FL240		JORAD.HHOOD5
LUUND	453921.44N / 1210447.93W	Y	FB	TF	254.74	24.25	AT/ABOVE 17000	AT 280K	
YENTL	453539.83N / 1212331.51W	Y	FB	TF	254.41	13.65	AT/ABOVE 13000	AT 270K	
HHOOD	453146.12N / 1214254.05W	Y	FB	TF	254.14	14.16	9000B15000	AT 250K	
En Route Transition									
JOTBA	451000.70N / 1203112.27W	Y		IF			AT/ABOVE FL240		JOTBA.HHOOD5
SODDA	452302.63N / 1210510.62W	Y	FB	TF	298.72	27.30	AT/ABOVE 17000	AT 280K	
RABBI	452723.04N / 1212348.37W	Y	FB	TF	288.42	13.82	AT/ABOVE 13000	AT 270K	
HHOOD	453146.12N / 1214254.05W	Y	FB	TF	288.19	14.13	9000B15000	AT 250K	
En Route Transition									
RABBI	452723.04N / 1212348.37W	Y		IF			AT/ABOVE 13000	AT 270K	RABBI.HHOOD5
HHOOD	453146.12N / 1214254.05W	Y	FB	TF	288.19	14.13	9000B15000	AT 250K	

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FIX/NAVAID	LAT/LONG	C	FO/FB	LEG TYPE	TC	DIST (NM)	ALTITUDE	SPEED	REMARKS
En Route Transition									
SODDA	452302.63N / 1210510.62W	Y		IF			AT/ABOVE 17000	AT 280K	SODDA.HHOOD5
RABBI	452723.04N / 1212348.37W	Y	FB	TF	288.42	13.82	AT/ABOVE 13000	AT 270K	
HHOOD	453146.12N / 1214254.05W	Y	FB	TF	288.19	14.13	9000B15000	AT 250K	
En Route Transition									
YENTL	453539.83N / 1212331.51W	Y		IF			AT/ABOVE 13000	AT 270K	YENTL.HHOOD5
HHOOD	453146.12N / 1214254.05W	Y	FB	TF	254.14	14.16	9000B15000	AT 250K	
Common Route									
HHOOD	453146.12N / 1214254.05W	Y		IF			9000B15000	AT 250K	HHOOD.HHOOD5
BEEVS	453203.09N / 1215312.23W	Y	FB	TF	272.30	07.25	AT/ABOVE 7100		
BLRUN	453217.38N / 1215727.02W	Y	FB	TF	274.59	02.99			
Runway Transition									
BLRUN	453217.38N / 1215727.02W	Y		IF					
SSDEE	453613.00N / 1221617.63W	Y	FB	TF	286.64	13.81	9000B11000		
THEID	453723.35N / 1222158.96W	Y	FB	TF	286.40	04.16	8000B10000	AT 240K	
EMZEY	453835.03N / 1222747.97W	Y	FB	TF	286.35	04.25	7000B8000	AT 230K	
CIZZL	454132.02N / 1223600.67W	Y	FO	TF	297.18	06.47	AT/ABOVE 6000	AT 210K	
KPDX:RWY 10L,RWY 10R				FM	297.18				
Runway Transition									
BLRUN	453217.38N / 1215727.02W	Y		IF					
SOOZN	453700.23N / 1221135.95W	Y	FO	TF	295.47	11.00	AT 8000	AT 210K	
KPDX:RWY 21				FM	295.47				



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<u>FIX/NAVAID</u>	<u>LAT/LONG</u>	<u>C</u>	<u>FO/FB</u>	<u>LEG</u> <u>TYPE</u>	<u>TC</u>	<u>DIST</u> <u>(NM)</u>	<u>ALTITUDE</u>	<u>SPEED</u>	<u>REMARKS</u>	
Runway Transition										
BLRUN	453217.38N / 1215727.02W	Y		IF						
SHAFR	453233.99N / 1220225.15W	Y	FB	TF	274.56	03.50	AT 6700	AT 210K		
KPDx:RWY 28L,RWY 28R										