

**FEDERAL AVIATION ADMINISTRATION
FLIGHT STANDARDS SERVICE
GRAPHIC DEPARTURE PROCEDURES (DP)**

Bearings, headings, courses, tracks and radials are magnetic. Elevations and altitudes are in feet, MSL. Altitudes are minimum altitudes unless otherwise indicated.
Ceilings are in feet above airport elevation. Distances are in nautical miles. Visibilities are in statute miles or feet RVR unless otherwise indicated.

<u>DP NAME</u>	<u>NUMBER</u>	<u>DP COMPUTER CODE</u>	<u>SUPERSEDED NUMBER</u>	<u>DATED</u>	<u>ACTUAL EFFECTIVE DATE</u>
HRMNS	SIX	HRMNS6.HRMNS	FIVE	06/25/2015	31OCT2024
<u>TYPE:</u>	<u>OBSTACLE</u>	<u>COPTER</u>	<u>SID</u>	<u>SPECIAL</u>	<u>RNAV</u>
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

DP ROUTE DESCRIPTION:

TAKEOFF RWY 10L: CLIMB ON HEADING 103.03 TO INTERCEPT COURSE 082.15 TO RIVRR, THEN ON DEPICTED ROUTE TO HRMNS, THENCE...
TAKEOFF RWY 10R: CLIMB ON HEADING 103.01 TO INTERCEPT COURSE 077.86 TO RIVRR, THEN ON DEPICTED ROUTE TO HRMNS, THENCE...
TAKEOFF RWY 28L: CLIMB DIRECT PEGTY, THEN ON DEPICTED ROUTE TO HRMNS, THENCE...
TAKEOFF RWY 28R: CLIMB ON HEADING 283.04 TO INTERCEPT COURSE 269.12 TO PEGTY, THEN ON DEPICTED ROUTE TO HRMNS, THENCE...

...ON TRANSITION, MAINTAIN ATC ASSIGNED ALTITUDE. EXPECT FILED ALTITUDE 10 MINUTES AFTER DEPARTURE.

TRANSITION ROUTES (GRAPHIC DEPICTION ONLY):

<u>TRANSITION NAME</u>	<u>TRANSITION COMPUTER CODE</u>	<u>FROM FIX/NAVAID</u>	<u>TO FIX/NAVAID</u>	<u>COURSE</u>	<u>DISTANCE</u>	<u>MEA</u>	<u>MOCA</u>	<u>CROSSING ALTITUDE/FIXES</u>
HYJOE	HRMNS6.HYJOE	HRMNS	HYJOE	TRACK 145.61	69.08	12000	9100	

PBN REQUIREMENT NOTES:

RNAV 1 - DME/DME/IRU OR GPS

EQUIPMENT REQUIREMENT NOTES:

RADAR REQUIRED FOR NON-GPS EQUIPPED AIRCRAFT

PROCEDURAL DATA NOTES:

NOTE: JET AIRCRAFT ONLY

TAKEOFF MINIMUMS:

RWY 10L, 10R: STANDARD WITH MINIMUM CLIMB OF 500 FT/NM TO 540
RWY 28L: STANDARD WITH MINIMUM CLIMB OF 350 FT/NM TO 540
RWY 28R: STANDARD WITH MINIMUM CLIMB OF 300 FT/NM TO 540

TAKEOFF OBSTACLES NOTES:

SEE FORM 8260-15A TAKEOFF MINIMUMS AND OBSTACLE DEPARTURE PROCEDURES (ODP).

CONTROLLING OBSTACLES:**MSA:**

MSA FROM KPDX 5800

LOST COMMUNICATIONS PROCEDURES:

ADDITIONAL FLIGHT DATA:
DME/DME ASSESSMENT SAT, RNP 2.0 SAT.
CHART: TOP ALTITUDE: ASSIGNED BY ATC.
AIRPORT MV: PDX 16E/2010.
CHART SPEED ICON MANDATORY SPEED 250 KIAS AT RUTGE.
CHART: AT OR ABOVE 5000 AT RUTGE.

AIRPORTS SERVED:			
AIRPORT ID	CITY	STATE	
KPDX	PORTLAND	OR	

COMMUNICATIONS:
CHART: D-ATIS, CLNC DEL, CPDLC, GND CON, TWR.

FIXES AND/OR NAVAIDS:
COSUG, KELLY, LEZLI, RUTGE, TOSEH

REMARKS:
RWY 10L/R LNAV ENGAGEMENT CLIMB GRADIENT REQUIRED TO ENSURE LNAV ENGAGEMENT TO MEET MINIMUM REQUIRED CLIMB-TO INTERCEPT LEG LENGTH.
RWY 28L/R LNAV ENGAGEMENT CLIMB GRADIENT REQUIRED TO ENSURE LNAV ENGAGEMENT ALTITUDE REACHED PRIOR TO ATT/FIX ERROR AT FIX PEGTY.
MSA CONTROLLING OBSTACLE: 4728 MSL AAO 455300.00N/1220324.00W.

FLIGHT INSPECTED BY	SIGNATURE	Digitally signed by	OFFICE	DATE	
	WENDI S GIMA	ROBERT G HAMILTON	FPO	08/30/2024	
		Sep 03, 2024			
DEVELOPED BY	SIGNATURE	Digitally signed by	OFFICE	DATE	
RICHARD E. CHRISTENSEN	RICHARD E. CHRISTENSEN		AJV-A431	06/26/2024	
	Jul 08, 2024				
APPROVED BY	SIGNATURE	Digitally signed by	OFFICE	DATE	TITLE
ERIC N SUSKI		ROBERT G HAMILTON	AJV-A431		MANAGER
		Sep 03, 2024			
REQUIRED EFFECTIVE DATE					
ROUTINE					

COORDINATED WITH:

A4A ☒ ALPA ☒ AOPA ☒ APA ☒ HAI ☐ NBAA ☒ OTHER: ZSE, ATCT, ST AERO, AMGR

CHANGES - REASONS:
1. FIX NAME CHANGED FROM WANOS TO RUTGE AND REMOVED WANOS NOTE IN PROCEDURAL DATA - ATC REQUEST; SIMILAR-SOUNDING NAME WHAMY NEARBY.
2. DP ROUTE DESCRIPTION TAKEOFF RWY 10L CHANGED FROM "CLIMB HEADING 103.03 TO 540, THEN DIRECT TO RIVRR, THEN ON DEPICTED ROUTE TO HRMNS, THENCE" TO "CLIMB ON HEADING 103.03 TO INTERCEPT COURSE 082.15 TO RIVRR, THEN ON DEPICTED ROUTE TO HRMNS, THENCE" - ATC/FPT REQUEST.
3. DP ROUTE DESCRIPTION TAKEOFF RWY 10R CHANGED FROM "CLIMB HEADING 103.01 TO 540, THEN DIRECT TO RIVRR, THEN ON DEPICTED ROUTE TO HRMNS, THENCE" TO "CLIMB ON HEADING 103.01 TO INTERCEPT COURSE 077.86 TO RIVRR, THEN ON DEPICTED ROUTE TO HRMNS, THENCE" - ATC/FPT REQUEST.
4. DP ROUTE DESCRIPTION TAKEOFF RWY 28L CHANGED FROM "CLIMB HEADING 283.03 TO 540, THEN DIRECT TO PEGTY, THEN ON DEPICTED ROUTE TO HRMNS, THENCE" TO "CLIMB DIRECT PEGTY, THEN ON DEPICTED ROUTE TO HRMNS, THENCE" - ATC/FPT REQUEST.
5. DP ROUTE DESCRIPTION TAKEOFF RWY 28R CHANGED FROM "CLIMB HEADING 283.04, INTERCEPT COURSE 268.00 TO PEGTY, THEN ON DEPICTED ROUTE TO HRMNS, THENCE" TO "CLIMB ON HEADING 283.04 TO INTERCEPT COURSE 269.12 TO PEGTY, THEN ON DEPICTED ROUTE TO HRMNS, THENCE" - ATC/FPT REQUEST.
6. DP ROUTE DESCRIPTION THENCE INSTRUCTIONS CHANGED FROM "MAINTAIN ASSIGNED ALTITUDE, EXPECT FILED ALTITUDE 10 MINUTES AFTER DEPARTURE" TO "ON TRANSITION, MAINTAIN ATC ASSIGNED ALTITUDE. EXPECT FILED ALTITUDE 10 MINUTES AFTER DEPARTURE" - HYJOE TRANSITION ADDED PER ATC/FPT REQUEST, VIA NO LONGER USED, AND 'MAINTAIN "ATC" ASSIGNED ALTITUDE' ADDED IAW 8260.46J 3-1-1L(6).

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HRMNS	SIX	HRMNS6.HRMNS	FIVE	06/25/2015	31OCT2024

7. TRANSITION ROUTES: ADDED HYJOE TRANSITION - PER ATC/FPT REQUEST.

8. PROCEDURAL DATA NOTES: MOVED "RADAR REQUIRED FOR NON-GPS EQUIPPED AIRCRAFT" TO EQUIPMENT REQUIREMENT NOTES, COMBINED AND MOVED "RNAV 1" AND "DME/DME/IR OR GPS" TO PBN REQUIREMENT NOTES, "CROSS WANOS AT 250 KIAS" FIX NAME CHANGED TO RUTGE AND MOVED NOTE TO ADDITIONAL FLIGHT DATA AS "CHART SPEED ICON MANDATORY SPEED 250 KIAS AT RUTGE" - IAW 8260.46J, APP E, SECTION 1, PARA 2, AND 8260.46J, PARA 2-1-1E(4)(B).

9. PROCEDURAL DATA NOTES: CHANGED NOTE FROM "TURBOJET AIRCRAFT ONLY" TO "JET AIRCRAFT ONLY" - ATC/FPT REQUEST.

10. TAKEOFF MINIMUMS: REMOVED "RWY 3, 21: NA AIR TRAFFIC" - IAW 8260.46J APPENDIX E, SECTION 1, PARA 2H(1).

11. TAKEOFF MINIMUMS RWYS 10L, 10R CHANGED FROM: "STANDARD WITH MINIMUM CLIMB OF 500 FT PER NM TO 540, THEN MINIMUM CLIMB OF 350 FT PER NM TO 3400" TO "STANDARD WITH MINIMUM CLIMB OF 500 FT/NM TO 540" - NEW OBSTACLE EVALUATION RESULTS, AND LNAV ENGAGEMENT CG REQUIRED FOR VI LEG LENGTH.

12. TAKEOFF MINIMUMS: RWY 28L CHANGED FROM "STANDARD WITH MINIMUM CLIMB OF 500 FT PER NM TO 540, THEN MINIMUM CLIMB OF 350 FT PER NM TO 2500" TO "STANDARD WITH MINIMUM CLIMB OF 350 FT/NM TO 540" - NEW OBSTACLE EVALUATION RESULTS AND LNAV ENGAGEMENT CG REQUIRED FOR ATT/FIX ERROR AT FIX PEGTY.

13. TAKEOFF MINIMUMS: RWY 28R CHANGED FROM: "STANDARD WITH MINIMUM CLIMB OF 500 FT PER NM TO 540, THEN MINIMUM CLIMB OF 350 FT PER NM TO 2500" TO "STANDARD WITH MINIMUM CLIMB OF 300 FT/NM TO 540" - NEW OBSTACLE EVALUATION RESULTS, LNAV ENGAGEMENT CG REQUIRED FOR ATT/FIX ERROR AT FIX PEGTY.

14. TAKEOFF OBSTACLE NOTES: REMOVED AND ADDED "SEE FORM 8260-15A TAKEOFF MINIMUMS AND OBSTACLE DEPARTURE PROCEDURES (ODP)" - IAW 8260.46J APP E, SECTION 1, PARA 2I.

15. MSA: ADDED MSA FROM KPDX 5800 - NEW OBSTACLE EVALUATION RESULTS, IAW 8260.46J, APP E, SECTION 1, PARA 2A.

16. ADDITIONAL FLIGHT DATA: ADDED "CHART: AT OR ABOVE 5000 AT RUTGE" - PER ACT/FPT REQUEST.

17. ADDITIONAL FLIGHT DATA: REMOVED NOTE REGARDING BTG CRITICAL DME - NEW DME/DME EVALUATION SHOWS NO CRITICAL DME.

18. ADDITIONAL FLIGHT DATA: CHANGED FROM "REFERENCE MAG VAR: KPDX 16E, EPOCH YEAR 2010" TO "AIRPORT MV: PDX 16E/2010" - IAW MEMO 283 DATED 7/15/2022.

19. COMMUNICATIONS: ADDED "CHART: D-ATIS, CLNC DEL, CPDLC, GND CON" - IAW 8260.46J, APP E, SECTION 1, PARA 2O.

20. REMARKS: ADDED "RWY 10L/R LNAV ENGAGEMENT CLIMB GRADIENT REQUIRED TO ENSURE LNAV ENGAGEMENT TO MEET MINIMUM REQUIRED CLIMB-TO INTERCEPT LEG LENGTH" AND "RWY 28L/R LNAV ENGAGEMENT CLIMB GRADIENT REQUIRED TO ENSURE LNAV ENGAGEMENT ALTITUDE REACHED PRIOR TO ATT/FIX ERROR AT FIX PEGTY" - TO EXPLAIN REASONING FOR LNAV ENGAGEMENT CG REQUIREMENT.

21. REMARKS: ADDED "MSA CONTROLLING OBSTACLE: 4728 MSL AAO 455300.00N/1220324.00W" - FOR FUTURE SPECIALISTS REFERENCE.

22. FIX AND/OR NAVAIDS: ADDED "COSUG, KELLY, LEZLI, RUTGE, TOSEH" - IAW 8260.46J APPENDIX E, SECTION 1, PARA 2(P).



FEDERAL AVIATION ADMINISTRATION
FLIGHT STANDARDS SERVICE
DEPARTURE (DATA RECORD)

DP NAME		NUMBER		DP COMPUTER CODE		SUPERSEDED NUMBER		DATED	ACTUAL EFFECTIVE DATE
HRMNS		SIX		HRMNS6.HRMNS		FIVE		06/25/2015	31OCT2024
FIX/NAVAID	LAT/LONG	C	FO/FB	LEG TYPE	TC	DIST (NM)	ALTITUDE	SPEED	REMARKS
RW10L (AER)*	453541.28N/1223544.19W*	N	-	-	-	-			*DISPL THLD (1290 FT)
	453430.72N/1223243.21W	-	-	VI	119.03	2.42			CG 500 FT/NM TO 540
RIVRR	453404.55N/1222822.20W	Y	FB	CF	098.15	3.09			
COSUG	453227.71N/1221930.64W	Y	FB	TF	104.48	6.43			
LEZLI	452819.00N/1221824.77W	Y	FB	TF	169.44	4.22			
HRMNS	445657.80N/1222325.02W	Y	FB	TF	186.47	31.56			
RW10R (AER)	453542.53N/1223717.30W	N	-	-	-	-			
	453419.73N/1223344.78W	-	-	VI	119.01	2.84			CG 500 FT/NM TO 540
RIVRR	453404.55N/1222822.20W	Y	FB	CF	093.86	3.79			
COSUG	453227.71N/1221930.64W	Y	FB	TF	104.48	6.43			
LEZLI	452819.00N/1221824.77W	Y	FB	TF	169.44	4.22			
HRMNS	445657.80N/1222325.02W	Y	FB	TF	186.47	31.56			
RW28L (AER)	453449.85N/1223502.05W	N	-	-	-	-			
PEGTY	453701.71N/1224017.66W	Y	FB	DF	-	4.30			CG 350 FT/NM TO 540
KELYY	454027.55N/1224845.50W	Y	FB	TF	300.07	6.86			
RUTGE	453851.30N/1225615.33W	Y	FB	TF	253.08	5.50	AT/ABOVE 5000	AT 250K	
TOSEH	453229.75N/1225335.44W	Y	FB	TF	163.59	6.63			
HRMNS	445657.80N/1222325.02W	Y	FB	TF	148.86	41.44			

QUALITY
8
CHECKED

<u>DP NAME</u>		<u>NUMBER</u>		<u>DP COMPUTER CODE</u>		<u>SUPERSEDED NUMBER</u>		<u>DATED</u>	<u>ACTUAL EFFECTIVE DATE</u>
HRMNS		SIX		HRMNS6.HRMNS		FIVE		06/25/2015	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>
RW28R (AER)*	453502.94N/1223405.84W*	N	-	-	-	-			*DISPL THLD (535 FT)
	453636.94N/1223807.15W	-	-	VI	299.04	3.23			CG 300 FT/NM TO 540
PEGTY	453701.71N/1224017.66W	Y	FB	CF	285.12	1.58			
KELYY	454027.55N/1224845.50W	Y	FB	TF	300.07	6.86			
RUTGE	453851.30N/1225615.33W	Y	FB	TF	253.08	5.50	AT/ABOVE 5000	AT 250K	
TOSEH	453229.75N/1225335.44W	Y	FB	TF	163.59	6.63			
HRMNS	445657.80N/1222325.02W	Y	FB	TF	148.86	41.44			
HRMNS	445657.80N/1222325.02W	Y	-	IF	-	-			HRMNS6.HYJOE
HYJOE	435120.86N/1215318.28W	Y	FB	TF	161.61	69.08			

