

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Arrival Name	Number	STAR Computer Code	Superseded Number	Dated	Effective Date				
TMBRS (RNAV)	THREE	TMBRS.TMBRS3	TWO	06/25/2015	31OCT2024				
TRANSITION ROUTES:									
Transition Name	Transition Computer Codes	From FIX/NAVAID	To FIX/NAVAID	Course	Distance	MEA	MOCA	MAA	Crossing Altitudes / Fixes
CITYY	CITYY.TMBRS3	CITYY	CITYY						AT/ABOVE 12000
			TMBRS	004.45	23.78	6000	4400		AT/ABOVE 12000
GALLO	GALLO.TMBRS3	GALLO	GALLO						
			RENAA	325.03	33.22	FL180	10600		
			MOXEE	324.83	45.00	10000	8300		AT/ABOVE FL240
			PORTL	348.04	26.15	10000	5700		BETWEEN 16000 AND FL240
			TMBRS	348.09	13.00	6000	5700		AT/ABOVE 12000
MACHU	MACHU.TMBRS3	MACHU	MACHU						
			HUBUX	341.21	38.42	FL180	9500		
			IBALL	341.17	41.19	FL180	8200		
			AARON	341.14	33.02	16000	8200		
			MOXEE	341.13	45.00	10000	8200		AT/ABOVE FL240
			PORTL	348.04	26.15	10000	5700		BETWEEN 16000 AND FL240
			TMBRS	348.09	13.00	6000	5700		AT/ABOVE 12000
MOXEE	MOXEE.TMBRS3	MOXEE	MOXEE						AT/ABOVE FL240
			PORTL	348.04	26.15	10000	5700		BETWEEN 16000 AND FL240
			TMBRS	348.09	13.00	6000	5700		AT/ABOVE 12000
PORTL	PORTL.TMBRS3	PORTL	PORTL						BETWEEN 16000 AND FL240
			TMBRS	348.09	13.00	6000	5700		AT/ABOVE 12000
SOERN	SOERN.TMBRS3	SOERN	SOERN						
			PSARO	314.47	34.07	FL180	11400		
			MOXEE	314.29	45.00	11000	11000		AT/ABOVE FL240
			PORTL	348.04	26.15	10000	5700		BETWEEN 16000 AND FL240
			TMBRS	348.09	13.00	6000	5700		AT/ABOVE 12000
SPNSR	SPNSR.TMBRS3	SPNSR	SPNSR						
			GSTER	347.77	33.24	FL180	7500		



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TMBRS (RNAV)			THREE	TMBRS.TMBRS3		TWO			06/25/2015	31OCT2024
Transition Name	Transition Computer Codes	From FIX/NAVAID	To FIX/NAVAID	Course	Distance	MEA	MOCA	MAA	Crossing Altitudes / Fixes	
			MOXEE	347.83	45.00	10000	7200		AT/ABOVE FL240	
			PORTL	348.04	26.15	10000	5700		BETWEEN 16000 AND FL240	
			TMBRS	348.09	13.00	6000	5700		AT/ABOVE 12000	

ARRIVAL ROUTE DESCRIPTION:

FROM TMBRS ON TRACK 348.09/10.00 TO CROSS VANTZ BETWEEN 11000 AND 15000 AND AT 250 KIAS, THEN ON TRACK 348.11/17.00 TO CROSS FLOWR BETWEEN 7000 AND 9000.

LANDING RWY 10L/R: FROM FLOWR ON TRACK 322.92/6.00 TO CROSS FFULL BETWEEN 7000 AND 9000, THEN ON TRACK 322.88/4.06 TO CROSS SSAIL BETWEEN 6000 AND 8000, THEN ON TRACK 322.86/11.07 TO BBREW, THEN ON TRACK 285.96/5.15 TO CROSS PUBBB AT 5000 AND AT 210 KIAS, THEN ON TRACK 281.00. EXPECT RADAR VECTORS TO FINAL APPROACH COURSE.

LANDING RWY 21: FROM FLOWR ON TRACK 016.34/22.10 TO CROSS HHOPZ AT 7000 AND AT 210 KIAS, THEN ON TRACK 025.00. EXPECT RADAR VECTORS TO FINAL APPROACH COURSE.

LANDING RWY 28L/R: FROM FLOWR ON TRACK 016.33/13.66 TO CROSS ROAGE AT OR ABOVE 4000 AND AT 210 KIAS, THEN ON TRACK 103.00. EXPECT RADAR VECTORS TO FINAL APPROACH COURSE.

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: CITYY TRANSITION, ATC ASSIGNED ONLY.

NOTE: GPS REQUIRED FOR CITYY TRANSITION.

FIXES AND/OR HOLDING PATTERNS:

CHART HOLDING AT GALLO: HOLD SE, RT, 325.03 INBOUND, 10 NM LEGS.

CHART HOLDING AT MOXEE: HOLD S, RT, 341.13 INBOUND, 10 NM LEGS.

CHART HOLDING AT PORTL: HOLD S, RT, 348.04 INBOUND, 6 NM LEGS.

CHART HOLDING AT SPNSR: HOLD S, RT, 347.77 INBOUND, 10 NM LEGS.

CHART: CREAK, BUXOM, NACIY, ICEAX, BTG VORTAC, EUG VORTAC.

COMMUNICATIONS:

CHART: PDX APP CON, PDX TWR, PDX GND CON.

AIRPORTS SERVED:

AIRPORT ID
PDX

CITY
PORTLAND

STATE
OR

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TMBRS (RNAV)	THREE	TMBRS.TMBRS3	TWO	06/25/2015	31OCT2024

LOST COMMUNICATIONS PREFERENCES:

MAINTAIN RWY TRANSITION TERMINUS ALTITUDE UNTIL ESTABLISHED ON APPROACH PROCEDURE:
RWY 10L/R: AFTER PUBBB TURN RIGHT TO BUXOM AND PROCEED ON THE ILS OR LOC RWY 10L APPROACH.
RWY 21: AFTER HHOPZ, TURN LEFT TO CREAK AND PROCEED ON THE LOC/DME RWY 21 APPROACH.
RWY 28L/R: AFTER ROAGE, PROCEED TO ICEAX, THEN TO NACIY AND PROCEED ON THE ILS OR LOC RWY 28R APPROACH.

REMARKS:

MEAS ABOVE MOCAS REQUIRED FOR ATC COMM AND DME/DME/IRU NAVIGATION.
LOST COMM RWY 10L: CO IS 1713 MSL AAO, 454103.00N/1225454.00.00W; RWY 21 IS 3701 MSL AAO, 454300.00N/1221745.00W; RWY 28R IS 1231 MSL AAO, 453030.00N/1221530.00W.
25.49 DEG BANK ANGLE USED AT FLOWR.

ADDITIONAL FLIGHT DATA:

DME/DME ASSESSMENT: SAT (RNP 2.0)
MAG VAR: KPDx 16E/2010.
CHART AT PUBBB TERMINUS: LDG RWY 10L/R.
CHART AT HHOPZ TERMINUS: LDG RWY 21.
CHART AT ROAGE TERMINUS: LDG RWY 28L/R.
CHART: L05 AIRPORT.
CHART: 4S9 AIRPORT.
CAUTION: INTERMITTENT PARAJUMPING ACTIVITY WITHIN 8 NM SSE OF FLOWR IN THE VICINITY OF SKYDIVE OREGON (L05) AND MULINO (4S9) ARPTS, AT AND BELOW 17500.

FLIGHT INSPECTED BY:

WENDI S GIMA

ORGANIZATION:

FPO

DATE:

08/27/2024

Flight Inspected Signature:

*Digitally signed by***ROBERT G HAMILTON**

Aug 29, 2024

DEVELOPED BY:

KWEKU DONKOR

AJV-A433

7/10/2024

Developed By Signature:

*Digitally signed by***KWEKU DONKOR**

Jul 22, 2024

APPROVED BY:

BEV BORDY

AJV-A430

Approved By Signature:

*Digitally signed by***ROBERT G HAMILTON**

Aug 29, 2024

CHANGES:

1. ADDED TERMINUS DATA TO ADDITIONAL FLIGHT DATA.
2. CHANGED ALTITUDE RESTRICTION AT PORTL FROM BETWEEN 11000 AND FL240 TO BETWEEN 16000 AND FL240.
3. CHANGED CROSSING RESTRICTION AT CITYY FROM AT/ABOVE 11000 TO AT/ABOVE 12000.
4. CHANGED CROSSING RESTRICTION AT TIMBRS FROM AT/ABOVE 11000 AND AT 270 KIAS TO AT/ABOVE 12000 AND AT 270 KIAS.
5. UPDATED ENROUTE TRANSITION MEA/MOCA VALUES.
6. MOVED SSAIL 3906 FEET SE.
7. DELETED NOTE "FOR NON-GPS EQUIPEED AIRCRAFT LANDING RWY 10L/R; UBG DME MUST BE OPERATIONAL".

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8. UPDATED ALL LOST COMM INSTRUCTIONS.

9. REMOVED D-ATIS FROM COMMUNICATIONS BLOCK.

10. CHART NOTE CHANGED FROM "TURBOJET AIRCRAFT DESCEND VIA MACH NUMBR UNTIL INTERCEPTING 280 KIAS. MAINTAIN 280 KIAS UNTIL SLOWED BY THE STAR." TO "JET AIRCRAFT DESCEND VIA MACH NUMBER UNTIL 280 KIAS, IF UNABLE, ADVISE ATC."

11. MOVED PUBBB 438 FT SE.

12. CHANGED PARACHUTE ACITIVITY CAUTION NOTE FROM "CAUTION: INTERMITTENT PARAJUMPING ACTIVITY 6NM SSE OF FLOWR IN THE VICINITY OF SKYDIVE, OR (L05) AIRPORT, AT AND BELOW 14,500" TO "CAUTION: INTERMITTENT PARAJUMPING ACTIVITY 7 NM SSE OF FLOWR IN THE VICINITY OF SKYDIVE OREGON (L05) AND MULINO (4S9) ARPTS, AT AND BELOW 17500".

13. REMOVED MYCRO FROM PROCEDURE.

14. REMOVED WIDMR FROM PROCEDURE.

15. MOVED ROAGE 858 FT S.

16. ADDED CHART: 4S9 AIRPORT.

17. ADDED CHART NOTE: GPS REQUIRED FOR CITYY TRANSITION.

REASONS:

1. FAAO 8260.19J 4-5-2 h.(2).

2. MITIGATE DG VIOLATION.

3. AVOIDS CLIMBING SEGMENT CITYY TO TMBRS.

4. MITIGATES EXCESSIVE DESCENT GRADIENT PORTL TO TMDRS.

5. ATC REQUEST/NEW DME AND TERRAIN ANALYSIS.

6. RESOLVES LEG LENGTH FAILURE.

7. NEW ESV MITIGATED THIS REQUIREMENT.

8. ATC REQUEST.

9. IAW FAAO 8260.19J 4-5-12F.

10. PER 8260.19J 4-5-12F.

11. NEEDED TO KEEP LOST COMM ROUTE AT OR LESS THAN 90-DEGREES TO FINAL INTERCEPT.

12. IAW FAAO 8260.19J 4-5-12F.

13-14. NO LONGER NEEDED.

15. NEEDED TO SYNC WITH LOCATION CHANGE ON RNAV (RNP) Z RWY 28L APPROACH.

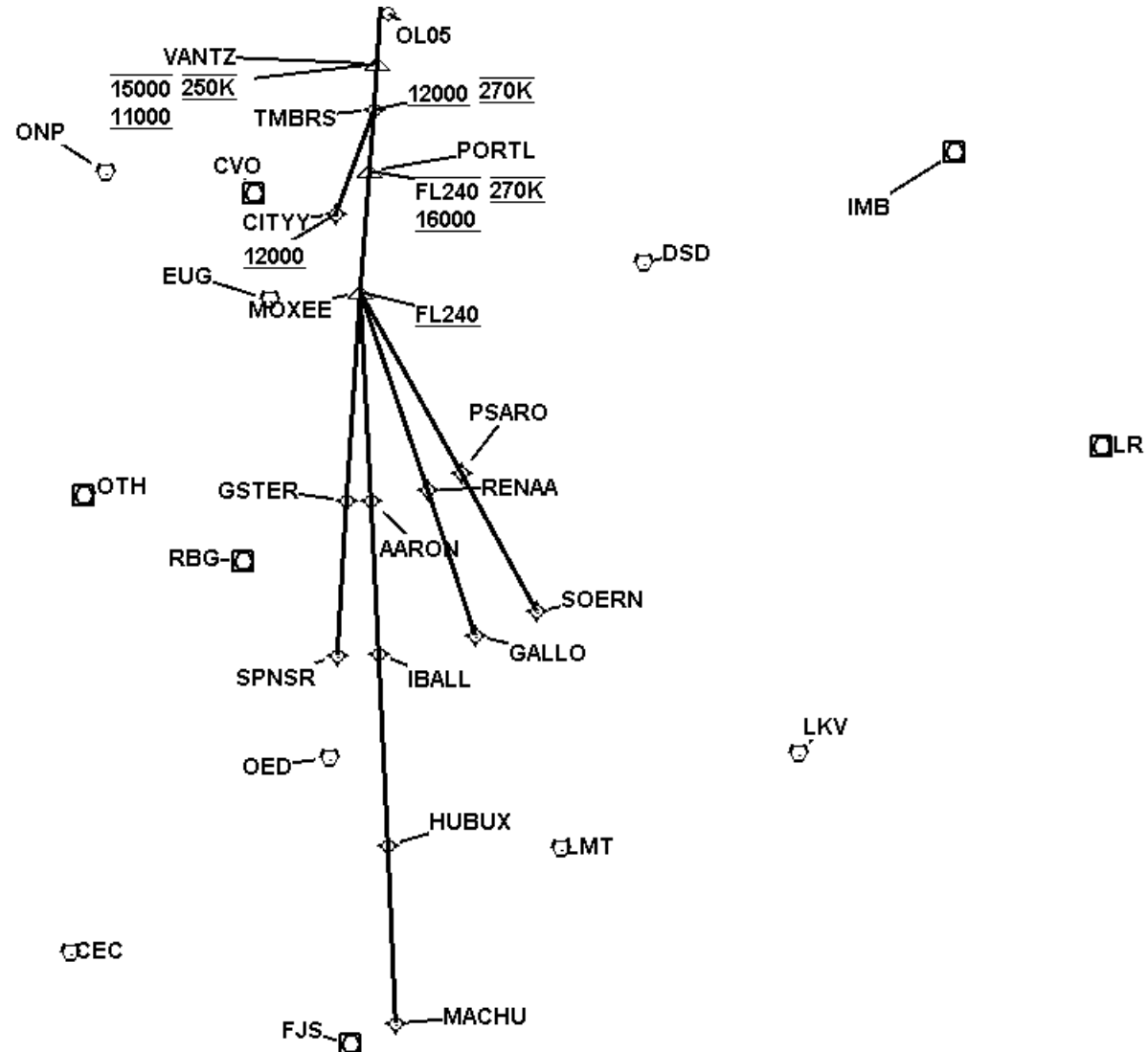
16. ATC REQUEST TO AID IN LOCATING PAJA ACTIVITY.

17. ADDED CHART NOTE: GPS REQUIRED FOR CITYY TRANSITION.

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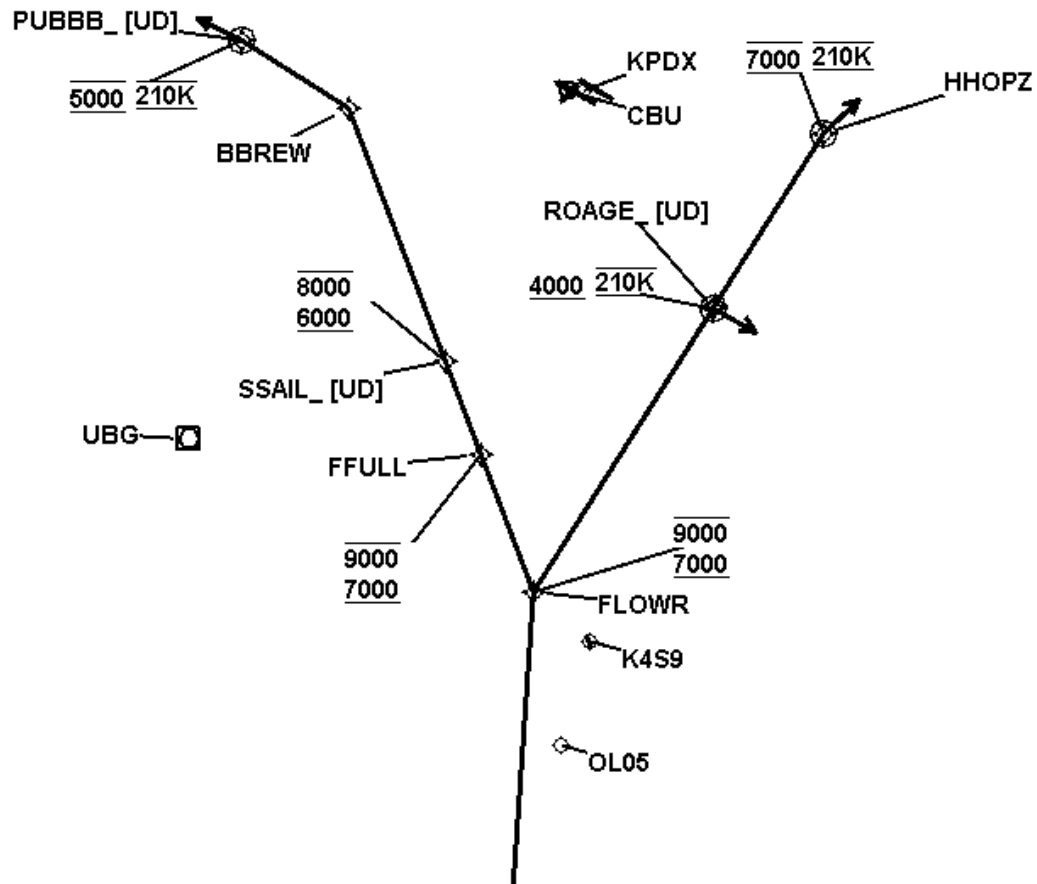
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TMBRS (RNAV)	THREE	TMBRS.TMBRS3	TWO	06/25/2015	31OCT2024
Graphic Depiction 1					



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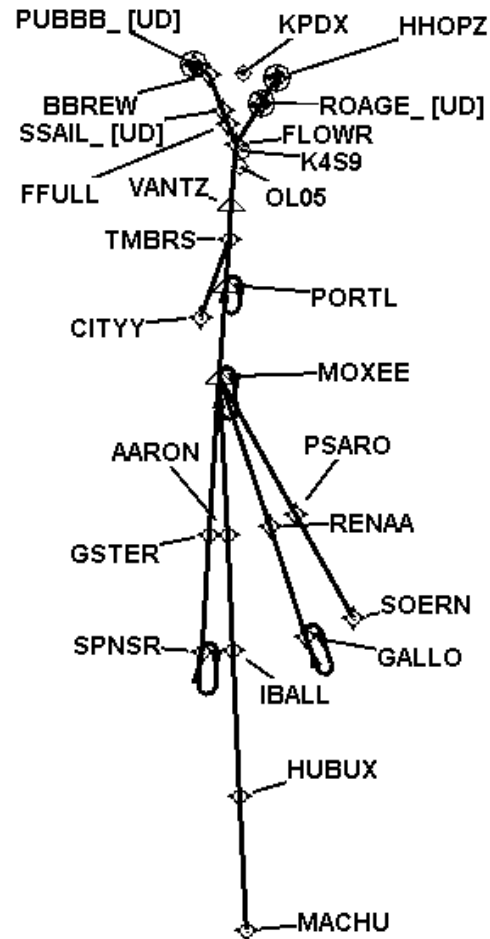
Arrival Name	Number	STAR Computer Code	Superseded Number	Dated	Effective Date
TMBRS (RNAV)	THREE	TMBRS.TMBRS3	TWO	06/25/2015	31OCT2024
Graphic Depiction 2					



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Graphic Depiction 3					



FEDERAL AVIATION ADMINISTRATION
FLIGHT STANDARDS SERVICE
STAR (DATA RECORD)

Arrival Name TMBRS (RNAV)	Number THREE	STAR Computer Code TMBRS.TMBRS3		Superseded Number TWO		Dated 06/25/2015	Effective Date 31OCT2024		
FIX/NAVAID	LAT/LONG	C	FO/FB	LEG TYPE	TC	DIST (NM)	ALTITUDE	SPEED	REMARKS
En Route Transition									
CITYY	442545.06N / 1225258.88W	Y		IF			AT/ABOVE 12000		CITYY.TMBRS3
TMBRS	444801.33N / 1224118.63W	Y	FB	TF	020.45	23.78	AT/ABOVE 12000	AT 270K	
En Route Transition									
GALLO	425505.17N / 1220950.46W	Y		IF					GALLO.TMBRS3
RENAA	432629.62N / 1222440.06W	Y	FB	TF	341.03	33.22			
MOXEE	440858.29N / 1224511.42W	Y	FB	TF	340.83	45.00	AT/ABOVE FL240		
PORTL	443503.57N / 1224236.81W	Y	FB	TF	004.04	26.15	16000BFL240	AT 270K	
TMBRS	444801.33N / 1224118.63W	Y	FB	TF	004.09	13.00	AT/ABOVE 12000	AT 270K	
En Route Transition									
MACHU	413129.73N / 1223431.23W	Y		IF					MACHU.TMBRS3
HUBUX	420953.12N / 1223702.02W	Y	FB	TF	357.21	38.42			
IBALL	425102.23N / 1223947.89W	Y	FB	TF	357.17	41.19			
AARON	432401.39N / 1224203.57W	Y	FB	TF	357.14	33.02			
MOXEE	440858.29N / 1224511.42W	Y	FB	TF	357.13	45.00	AT/ABOVE FL240		
PORTL	443503.57N / 1224236.81W	Y	FB	TF	004.04	26.15	16000BFL240	AT 270K	
TMBRS	444801.33N / 1224118.63W	Y	FB	TF	004.09	13.00	AT/ABOVE 12000	AT 270K	
En Route Transition									
MOXEE	440858.29N / 1224511.42W	Y		IF			AT/ABOVE FL240		MOXEE.TMBRS3
PORTL	443503.57N / 1224236.81W	Y	FB	TF	004.04	26.15	16000BFL240	AT 270K	
TMBRS	444801.33N / 1224118.63W	Y	FB	TF	004.09	13.00	AT/ABOVE 12000	AT 270K	
En Route Transition									
PORTL	443503.57N / 1224236.81W	Y		IF			16000BFL240	AT 270K	PORTL.TMBRS3
TMBRS	444801.33N / 1224118.63W	Y	FB	TF	004.09	13.00	AT/ABOVE 12000	AT 270K	

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STAR (DATA RECORD)

Arrival Name TMBRS (RNAV)		Number THREE		STAR Computer Code TMBRS.TMBRS3		Superseded Number TWO		Dated 06/25/2015	Effective Date 31OCT2024
FIX/NAVAID	LAT/LONG	C	FO/FB	LEG TYPE	TC	DIST (NM)	ALTITUDE	SPEED	REMARKS
En Route Transition									
SOERN	430020.85N / 1215108.99W	Y		IF					SOERN.TMBRS3
PSARO	432957.28N / 1221413.30W	Y	FB	TF	330.47	34.07			
MOXEE	440858.29N / 1224511.42W	Y	FB	TF	330.29	45.00	AT/ABOVE FL240		
PORTL	443503.57N / 1224236.81W	Y	FB	TF	004.04	26.15	16000BFL240	AT 270K	
TMBRS	444801.33N / 1224118.63W	Y	FB	TF	004.09	13.00	AT/ABOVE 12000	AT 270K	
En Route Transition									
SPNSR	425054.15N / 1225222.12W	Y		IF					SPNSR.TMBRS3
GSTER	432404.37N / 1224922.20W	Y	FB	TF	003.77	33.24			
MOXEE	440858.29N / 1224511.42W	Y	FB	TF	003.83	45.00	AT/ABOVE FL240		
PORTL	443503.57N / 1224236.81W	Y	FB	TF	004.04	26.15	16000BFL240	AT 270K	
TMBRS	444801.33N / 1224118.63W	Y	FB	TF	004.09	13.00	AT/ABOVE 12000	AT 270K	
Common Route									
TMBRS	444801.33N / 1224118.63W	Y		IF			AT/ABOVE 12000	AT 270K	TMBRS.TMBRS3
VANTZ	445759.96N / 1224018.33W	Y	FB	TF	004.09	10.00	11000B15000	AT 250K	
FLOWR	451457.20N / 1223834.79W	Y	FB	TF	004.11	17.00	7000B9000		
Runway Transition									
FLOWR	451457.20N / 1223834.79W	Y		IF			7000B9000		
FFULL	452033.01N / 1224138.37W	Y	FB	TF	338.92	06.00	7000B9000		
SSAIL	452420.04N / 1224342.85W	Y	FB	TF	338.88	04.06	6000B8000		
BBREW	453439.31N / 1224923.96W	Y	FB	TF	338.86	11.07			
PUBBB	453722.54N / 1225537.26W	Y	FO	TF	301.96	05.15	AT 5000	AT 210K	
KPDX:RWY 10L,RWY 10R				FM	297.00				

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<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>
Runway Transition									
FLOWR	451457.20N / 1223834.79W	Y		IF			7000B9000		
HHOPZ	453336.24N / 1222145.09W	Y	FO	TF	032.34	22.10	AT 7000	AT 210K	
KPDX:RWY 21				FM	041.00				
Runway Transition									
FLOWR	451457.20N / 1223834.79W	Y		IF			7000B9000		
ROAGE	452629.14N / 1222812.40W	Y	FO	TF	032.33	13.66	AT/ABOVE 4000	AT 210K	
KPDX:RWY 28L,RWY 28R				FM	119.00				

