

**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SUPERSEDED NUMBER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>
SSOXS	SIX	SSOXS6.SSOXS	FIVE	10/12/2017	2 DEC 2021
<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 4R:** CLIMB ON HEADING 034.74 TO 520, THEN DIRECT NHANT, THEN ON TRACK 091.09 TO CROSS HURBE AT OR ABOVE 4000, THENCE...**TAKEOFF RWY 9:** CLIMB ON HEADING 091.56 TO 520, THEN DIRECT CLAWW AT OR ABOVE 4000, AND AT OR BELOW 250 KIAS, THENCE...**TAKEOFF RWY 15R:** CLIMB ON HEADING 150.16 TO INTERCEPT COURSE 119.92 TO TASKT, DO NOT EXCEED 210 KIAS UNTIL 520 FT MSL, THENCE...**TAKEOFF RWY 22L:** CLIMB ON HEADING 214.74 TO INTERCEPT COURSE 139.72 TO TJAYY, DO NOT EXCEED 210 KIAS UNTIL 520 FT MSL, THENCE...**TAKEOFF RWY 22R:** CLIMB ON HEADING 214.74 TO INTERCEPT COURSE 144.08 TO TJAYY, DO NOT EXCEED 210 KIAS UNTIL 520 FT MSL, THENCE...**TAKEOFF RWY 27:** CLIMB ON HEADING 271.58 TO INTERCEPT COURSE 237.16 TO KIRAA, THENCE...**TAKEOFF RWY 33L:** CLIMB ON HEADING 330.17 TO INTERCEPT COURSE 313.96 TO TEKKE, THEN ON TRACK 249.77 TO CROSS COUSY AT OR ABOVE 5000, THENCE...

...ON DEPICTED ROUTE TO SSOXS. MAINTAIN 5000. EXPECT CLEARANCE TO FILED ALTITUDE/FLIGHT LEVEL WITHIN TEN (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>
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PROCEDURAL DATA NOTES:**NOTE:** DME/DME/IRU OR GPS REQUIRED.**NOTE:** RADAR REQUIRED FOR NON-GPS EQUIPPED AIRCRAFT.**NOTE:** RNAV 1.**NOTE:** FOR TURBOJETS ONLY.**NOTE:** DEPARTURE HDG/RNAV TRACKS/VECTORS ARE PREDICATED ON AVOIDING NOISE SENSITIVE AREAS. FLIGHT CREW AWARENESS AND COMPLIANCE IS IMPORTANT IN MINIMIZING NOISE IMPACTS ON SURROUNDING COMMUNITIES.**NOTE: RWY 15R, 22L, 22R:** DO NOT EXCEED 210 KIAS UNTIL LEAVING 520 FT MSL.**NOTE:** DO NOT EXCEED 250K UNTIL PASSING BRRRO.**NOTE:** DO NOT EXCEED 250K UNTIL PASSING CLAWW.**TAKEOFF MINIMUMS:****RWY 4L, 14, 15L, 32, 33R:** NA-ATC.**RWY 4R, 9, 15R, 22R, 33L:** STANDARD WITH MINIMUM CLIMB OF 500 FT PER NM TO 520.**RWY 22L:** 300-1 WITH MINIMUM CLIMB OF 500 FT PER NM TO 520, OR STANDARD WITH MINIMUM CLIMB OF 500 FT PER NM TO 520 IF TOWER REPORTS NO TALL VESSELS IN THE DEPARTURE AREA.**RWY 27:** STANDARD WITH A MINIMUM CLIMB OF 500 FT PER NM TO 1300.**TAKEOFF OBSTACLES NOTES:**

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

CONTROLLING OBSTACLES:**RWY 9:** 211 FT MSL TANK 422204.30N/0705803.73W.**RWY 22L:** 176 FT MSL SHIP RIG 422041.00N/0710053.00W.**RWY 22R:** 176 FT MSL SHIP RIG 422051.00N/0710110.00W.**RWY 27:** 720 FT MSL BLDG 422117.13N/0710323.41W (CLIMB GRADIENT). 876 FT MSL BLDG 422057.45N/0710430.58W (CLIMB-TO ALTITUDE)

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LOST COMMUNICATIONS PROCEDURES:**ADDITIONAL FLIGHT DATA:**

REFERENCE MAG VAR: KBOS 15W, EPOCH YEAR: 2020

DME/DME ASSESSMENT: SAT (RNP 2.0)

CHART: TOP ALTITUDE: 5000.

CHART: SPEED ICON MAXIMUM SPEED 250 KIAS AT BRRRO.

CHART: SPEED ICON MAXIMUM SPEED 250 KIAS AT CLAWW.

AIRPORTS SERVED:

<u>AIRPORT NAME</u>	<u>AIRPORT ID</u>	<u>CITY</u>	<u>STATE</u>
GENERAL EDWARD LAWRENCE LOGAN INTL	KBOS	BOSTON	MA

COMMUNICATIONS:

ATIS, CLNC DEL, GND CON, TOWER, DEP CON, CPDLC

FIXES AND/OR NAVAIDS:

BRRRO, BUCYK, BUZRD, CBEAR, COLYN, FENWY, JSTER, ORRRR, SEY VOR/DME.

REMARKS:

ENVIRONMENTAL REVIEW UNDER ORDER 1050.1F AND THE NOISE SCREENING HAVE BEEN ACCOMPLISHED.

FLIGHT INSPECTED BY

JORGE A MALCUN

*Digitally signed by***JOHN BORDY**

Oct 04, 2021

OFFICE

FPO

DATE

09/29/2021

DEVELOPED BY

WILLIAM D. MELTON

*Digitally signed by***WILLIAM D MELTON**

Jul 29, 2021

OFFICE

AJV-A422

DATE

06/16/2021

APPROVED BY

MARLON J. ROBINSON

*Digitally signed by***JOHN BORDY**

Oct 04, 2021

OFFICE

AJV-A420

DATE**TITLE**

MANAGER

REQUIRED EFFECTIVE DATE

ROUTINE

COORDINATED WITH:**A4A** ☒**ALPA** ☒**AOPA** ☒**APA** ☒**HAI** ☐**NBAA** ☒**OTHER:** ZBW, BOS APP CON, BOS ATCT, AMGR**CHANGES - REASONS:**

1. REPLACED FOXXX WITH TASKT ON RWY 15R TRANSITION - REDUCE ENVIRONMENTAL IMPACT.
2. AMENDED DEPARTURE ROUTE DESCRIPTIONS: FROM CLIMB HEADING TO CLIMB ON HEADING - IAW 8260.46G PARA 1-1-5A(3).
3. AMENDED RWY 33L CLIMB ON HEADING TO 330.17 - SURVEYED RUNWAY HEADING.
4. MOVED FENWY 0.62 NM SOUTHEAST FOR RWY 9 TRANSITION - MITIGATE LEG LENGTH FAILURE
5. ADDED AT OR BELOW 250 KIAS SPEED RESTRICTION AT CLAWW- MITIGATE LEG LENGTH FAILURE.
6. ADDED AR OR ABOVE 3000 ALTITUDE RESTRICION AT BRRRO - IAW 8260-46G PARA 2-1-1D(3)(B).
7. FENWY REMOVED FROM RWY 04R TRANSITION - ATC REQUEST.
8. ADDED CPDLC TO COMMUNICATIONS BLOCK - CHARTED ON CURRENT PROCEDURE.



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9. CHANGED DP ROUTE DESCRIPTION THENCE INSTRUCTIONS FROM ON DEPICTED ROUTE TO SSOXS. MAINTAIN 5000 OR LOWER ASSIGNED ALTITUDE. EXPECT CLEARANCE TO FILED ALTITUDE/ FLIGHT LEVEL WITHIN TEN (10) MINUTES AFTER DEPARTURE TO ON DEPICTED ROUTE TO SSOXS. MAINTAIN 5000 EXPECT CLEARANCE TO FILED ALTITUDE/FLIGHT LEVEL WITHIN TEN (10) MINUTES AFTER DEPARTURE - ATC REQUEST.

10. CHANGED RWY 9 DP ROUTE DESCRIPTION FROM CLIMB HEADING 091.56 TO 520, THEN DIRECT CLAWW AT OR ABOVE 4000, THENCE, TO CLIMB ON HEADING 091.56 TO 520, THEN DIRECT CLAWW AT OR ABOVE 4000, AND AT OR BELOW 250 KIAS, THENCE... - SPEED ADJUSTMENT ADDED AT CLAWW TO MITIGATE LEG LENGTH FAILURE.

11. AMENDED RWY 4R LNAV ENGAGEMENT CLIMB GRADIENT FROM 500 FT/NM TO 3600 TO 500 FT PER NM TO 520 - CLIMB GRADIENTS TO ENSURE DME/DME RECEPTION NO LONGER A REQUIREMENT.

12. AMENDED RWY 9 LNAV ENGAGEMENT CLIMB GRADIENT FROM 500 FT/NM TO 4000 TO 500 FT PER NM TO 520 - CLIMB GRADIENTS TO ENSURE DME/DME RECEPTION NO LONGER A REQUIREMENT.

13. AMENDED RWY 33L LNAV ENGAGEMENT CLIMB GRADIENT FROM 500 FT/NM TO 4900 TO 500 FT PER NM TO 520 - CLIMB GRADIENTS TO ENSURE DME/DME RECEPTION NO LONGER A REQUIREMENT.

14. DELETED RWY 33L CONTROLLING OBSTACLE - NEW EVALUATION SHOWS ALL SURFACES CLEAR.

15. ADDED REMARKS: ENVIRONMENTAL REVIEW UNDER ORDER 1050.1F AND THE NOISE SCREENING HAVE BEEN ACCOMPLISHED - PER FPT.

16. RWY 9 CONTROLLING OBSTACLE CHANGED FROM 206 FT MSL TANK 422204.30N/0705803.73W. TO 211 FT MSL TANK 422204.30N/0705803.73W. - NEW TARGETS EVALUATION.

17. RWY 27 CONTROLLING OBSTACLE CHANGED FROM 639 FT MSL BLDG 422120.28N/0710307.73W. 920 FT MSL BLDG 422050.00N/0710457.00W TO 720 FT MSL BLDG 422117.13N/0710323.41W (CLIMB GRADIENT). 876 FT MSL BLDG 422057.45N//0710430.58W (CLIMB-TO ALTITUDE) - NEW OBSTACLE EVALUATION.

18. RWY 33L CONTROLLING OBSTACLE ELIMINATED - NO PENETRATIONS IDENTIFIED IN TARGETS.

19. DELETED REMARK #1 ALL CLIMB GRADIENTS ESTABLISHED TO SUPPORT MINIMUM DME/DME/IRU RECEPTION RNAV PRO RUN ALTITUDES EXCEPT RWY 27 WHICH IS FOR OBSTACLES - CLIMB-TO ALTITUDE CHANGED TO LNAV ENGAGEMENT ALTITUDE EXCEPT FOR RWY 27 WHICH WAS UNCHANGED DUE TO OBSTACLE.

20. DELETED REMARK #2 RWY 27 920 MSL BLDG IS LOCATED JUST OUTSIDE OF OBSTACLE SEARCH TRAP. TAKEOFF MINIMUMS PROTECT AIRCRAFT FROM THE OBSTACLE - NEW CLIMB GRADIENT AND CLIMB-TO ALTITUDE OBSTACLE DOCUMENTED.

21. DELETED REMARK #3 ABBREVIATED AMENDMENT, DOES NOT MEET PERIODIC REVIEW REQUIREMENTS - FULL AMENDMENT CONDUCTED.

22. COMBINED TAKEOFF MINIMUMS FOR RWY 4R, 9, 15R, 22R, 33L- REDUCE CHART CLUTTER.



**FEDERAL AVIATION ADMINISTRATION
FLIGHT STANDARDS SERVICE
DEPARTURE (DATA RECORD)**

DP NAME				NUMBER		DP COMPUTER CODE		SUPERSEDED NUMBER		DATED		ACTUAL EFFECTIVE DATE	
SSOXS				SIX		SSOXS6.SSOXS		FIVE		10/12/2017		2 DEC 2021	
FIX/NAVAID	LAT/LONG	C	FO/FB	LEG TYPE	TC	DIST (NM)	ALTITUDE	SPEED	REMARKS				
RW04R (AER)*	422114.54N/0710037.27W*	N	-	-	-	-			* DISPL THLD (1155 FT)				
520 MSL	-	-	-	VA	019.74	-	AT/ABOVE 520		CG 500 FT PER NM TO 520				
NHANT	422623.24N/0705759.97W	Y	FB	DF	-	-							
HURBE	422738.74N/0705107.04W	Y	FB	TF	076.09	5.25	AT/ABOVE 4000						
ORRRR	422528.48N/0704513.44W	Y	FB	TF	116.41	4.87							
BUCYK	421736.11N/0704101.52W	Y	FB	TF	158.40	8.46							
JSTER	420821.83N/0703647.48W	Y	FB	TF	161.16	9.76							
SSOXS	415012.62N/0704446.26W	Y	FB	TF	198.20	19.10							
RW09 (AER)	422120.71N/0710046.42W	N	-	-	-	-							
520 MSL	-	-	-	VA	076.56	-	AT/ABOVE 520		CG 500 FT PER NM TO 520				
CLAWW	422325.27N/0704847.67W	Y	FB	DF	-	-	AT/ABOVE 4000	AT/BELOW 250K					
FENWY	422211.10N/0704306.02W	Y	FB	TF	106.29	4.40							
BUCYK	421736.11N/0704101.52W	Y	FB	TF	161.42	4.83							
JSTER	420821.83N/0703647.48W	Y	FB	TF	161.16	9.76							
SSOXS	415012.62N/0704446.26W	Y	FB	TF	198.20	19.10							
RW15R (AER)*	422221.20N/0710056.13W*	N	-	-		-			*DISPL THLD (882 FT)				
-	422033.80N/0705832.18W	-	-	VI	135.16	2.52		AT/BELOW 210K	CG 500 FT PER NM TO 520				
TASKT	421917.76N/0705206.54W	Y	FB	CF	104.92	4.93							
BRRRO	422000.78N/0704805.48W	Y	FB	TF	076.45	3.07	AT/ABOVE 3000	AT/BELOW 250K					
BUCYK	421736.11N/0704101.52W	Y	FB	TF	114.65	5.77							

QUALITY
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SSOXS		SIX		SSOXS6.SSOXS		FIVE		10/12/2017	2 DEC 2021
<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>
JSTER	420821.83N/0703647.48W	Y	FB	TF	161.16	9.76			
SSOXS	415012.62N/0704446.26W	Y	FB	TF	198.20	19.10			
RW22L (AER)*	422225.69N/0710002.85W*	N	-	-	-	-			*DISPL THLD (1199 FT)
-	422007.18N/0710109.84W	-	-	VI	199.74	2.45		AT/BELOW 210K	CG 500 FT PER NM TO 520
TJAYY	421818.19N/0705737.75W	Y	FB	CF	124.72	3.19			
BRRRO	422000.78N/0704805.48W	Y	FB	TF	076.37	7.28	AT/ABOVE 3000	AT/BELOW 250K	
BUCYK	421736.11N/0704101.52W	Y	FB	TF	114.65	5.77			
JSTER	420821.83N/0703647.48W	Y	FB	TF	161.16	9.76			
SSOXS	415012.62N/0704446.26W	Y	FB	TF	198.20	19.10			
RW22R (AER)*	422234.26N/0710019.93W*	N	-	-	-	-			*DISPL THLD (819 FT)
-	422031.57N/0710119.26W	-	-	VI	199.74	2.17		AT/BELOW 210K	CG 500 FT PER NM TO 520
TJAYY	421818.19N/0705737.75W	Y	FB	CF	129.08	3.53			
BRRRO	422000.78N/0704805.48W	Y	FB	TF	076.37	7.28	AT/ABOVE 3000	AT/BELOW 250K	
BUCYK	421736.11N/0704101.52W	Y	FB	TF	114.65	5.77			
JSTER	420821.83N/0703647.48W	Y	FB	TF	161.16	9.76			
SSOXS	415012.62N/0704446.26W	Y	FB	TF	198.20	19.10			
RW27 (AER)	422136.78N/0705915.73W	N	-	-					
-	422106.67N/0710205.64W	-	-	VI	256.58	2.16			CG 500 FT PER NM TO 1300
KIRAA	421631.48N/0710741.78W	Y	FB	CF	222.16	6.19			
COLYN	420909.66N/0710224.39W	Y	FB	TF	151.87	8.34			
SSOXS	415012.62N/0704446.26W	Y	FB	TF	145.13	23.06			

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SSOXS		SIX		SSOXS6.SSOXS		FIVE		10/12/2017	2 DEC 2021
<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>
RWY33L (AER)	422116.74N/0705929.71W	N	-						
-	422310.02N/0710201.63W	-	-	VI	315.17	2.66			CG 500 FT PER NM TO 520
TEKKK	422445.85N/0710555.09W	Y	FB	CF	298.96	3.30			
COUSY	422117.92N/0711231.70W	Y	FB	TF	234.77	6.00	AT/ABOVE 5000		
CBEAR	421519.94N/0710936.29W	Y	FB	TF	160.00	6.35			
COLYN	420909.66N/0710224.39W	Y	FB	TF	139.03	8.17			
SSOXS	415012.62N/0704446.26W	Y	FB	TF	145.13	23.06			

