

FOREWORD

The provisions of this directive are supplemental to procedures and phraseology prescribed in FAAH 7110.65; Air Traffic Control and FAAH 7210.3; Facility Operation and Administration. It prescribes air traffic control procedures and responsibilities for use by personnel assigned to the Boston Area at Boston Consolidated Terminal Radar Approach Control (TRACON) (A90). Controllers are required to be familiar with the provisions of this directive that pertain to their operational responsibilities and to exercise their best judgment if they encounter situations not covered by it.

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CHAPTER 1. GENERAL

1-1. PURPOSE. To define duties and responsibilities, depict areas of airspace allocated to each position, and provide supplemental direction as necessary for each position of operation within the Boston Area at the Boston Consolidated TRACON.

1-2. DISTRIBUTION. This directive is distributed to the Boston Area Binders, Air Traffic Manager, Assistant Air Traffic Manager, Operations Manager, Support Manager, and Training.

1-3. CANCELLATION. A90 7110.11, Boston TRACON Standard Operating Procedures, dated February 2, 2001, is canceled.

1-4. EFFECTIVE DATE. February 22, 2004.

1-5. BACKGROUND. The Standard Operating Procedures (SOP) document must, at a minimum, include the jurisdictional boundaries for each operational position/sector and the required procedures for maintaining a safe and efficient operation. The directives at this facility have addressed operational issues in many separate documents. These operational subjects are better addressed in one cohesive and accessible document and have been combined into this SOP directive.

1-5. EXPLANATION OF CHANGES. This directive is amended to reflect the change in its area of jurisdiction from Boston TRACON to the Boston Area of A90.

a. The following facility equipment has been changed:

1. ARTS and the Solid State Radar Beacon Decoder are replaced by STARS. The ARTS field inhibit/select switches have no equivalent in STARS.
2. ICSS is replaced by RDVS.
3. IDS-4 is replaced by ACE-IDS.
4. The RSIU/FFM is now limited to monitoring function only, and the alarm silence switch has been removed.
5. TDWR information is now displayed via the ACE-IDS.

b. The following position names and identifiers have been changed:

1. Satellite South to Lynch (AL)
2. Satellite North to Bedford (SB).
3. South Coordinator to Lynch Coordinator (CL).
4. North Coordinator to Bedford Coordinator (CB).
5. TRACON Data to Boston Flight Data (FDB).
6. A new Rockport Coordinator (CR) position has been established.
7. A new Boston Area Mid (BMID) position has been established.
8. The inner boundary of the Boston Tower Airspace (BOS) shelf underlying Final Vector airspace has been changed from the 5 NM range mark to the final approach fix.

c. The requirement to manually enter and check the ARTS system time has been deleted.

d. The ARTS failure/shutdown procedures have been replaced by STARS ESL procedures.

e. Responsibility for NAVAID monitoring and reporting of malfunctions has been delegated to BOS, and is deleted from this SOP.

CHAPTER 2. AIRSPACE DELEGATION

2-1. BOSTON CONSOLIDATED TRACON (A90) AIRSPACE.

a. General. A90 airspace delegation and sector boundaries are dependent on the runway configuration in use at Logan airport. The lateral and vertical limits for each radar position are depicted in Appendix 1.

b. Satellite Airspace. Beginning at the edge of BOS Airspace to 10.5 NM, at or below 2,000' MSL; from 10.5 NM to 15 NM, at or below 2,500' MSL; outside 15 NM, at or below 3,500' MSL. Additionally, from 20 NM to the edge of Area "A" underlying Plymouth sector (SM) and from 20 NM to the edge of area "A" between the BOS 275° and BOS 335° radial, at or below 4,500' MSL, excluding Final 1/Final 2 ((F1/F2) airspace above 3,500' MSL.

2-2. BOSTON TOWER AIRSPACE. 2,000' MSL and below from the Boston VORTAC to the edge of the BOS 8 DME, except 1,000' MSL and below, underlying F1/F2 airspace from the final approach fix for the approach in use to the BOS 8 DME.

CHAPTER 3. PROCEDURES

3-1. AIRSPACE USAGE.

a. Arrival/Departure Routes. Arriving/Departing aircraft should be contained within 6 NM either side of the routes depicted in Appendix 1, unless operational circumstances (i.e., weather, traffic) warrant deviation.

(1) Over-water turbojet departures and runway 27 turbojet arrivals via PVD shall cross the south shore coastline at or above 6,000' MSL for noise abatement.

(2) The sector responsible for sequencing to the secondary arrival runway shall ensure appropriate separation standards are applied between secondary runway and primary runway arrivals.

b. Transfer of Control Points.

(1) Initial Departure (ID) shall not vector BOS departing aircraft, except for emergencies, to maintain separation, or to meet turbojet noise abatement profile requirements, from the initial departure heading, as assigned by BOS, until the departing aircraft exits BOS delegated airspace.

(2) All Boston Area A90 radar positions are authorized to turn aircraft up to 30° 5 NM prior to the common boundary; except that transition sector controllers have control for turns in excess of 30° to adjust ID delivered aircraft, as necessary, to enter the receiving sector's airspace and conform with current sector flows.

c. Transfer of Communications.

(1) ID shall transfer aircraft to the appropriate transition sector climbing to the highest altitude within ID delegated airspace or lower altitude as requested by the pilot.

EXCEPTIONS: In the Land 33L/Depart 27 or 33L or Land 27/Depart 27 configurations BOS jet departures entering the Rockport (SR) sector are delivered from ID climbing to 6,000'. SR has control for climb on contact. BOS prop departures entering the SM sector are delivered from ID climbing to 6,000'. SM sector has control for climb on contact.

(2) FV shall transfer communication of BOS Arrivals to Local Control (LC) prior to the aircraft entering BOS Airspace and before crossing the final approach fix (FAF).

d. Departures. The ID controller shall be responsible to determine that automatic acquisition of a departure track has occurred and that all information in the Full Data Block (FDB) is correct using the Strip Bay Cameras.

e. Speed Restrictions. BOS Arrivals shall be handed off to FV at 210 knots unless otherwise specified by FV.

f. Quick-Look Requirements. These Quick-Look requirements are considered the minimum to meet operational needs.

(1) Final Vector 1 (F) I, X

(2) Final Vector 2 (I) F, X

(3) Rockport (R) NONE

(4) Plymouth (M)	NONE
(5) Lincoln (L)	NONE
(6) Initial Departure (D)	NONE
(7) Bedford (B)	NONE
(8) Lynch (A)	NONE
(9) Rockport Coordinator (K)	NONE
(10) Boston Area Mid (S)	NONE

3-2. AUTOMATION REQUIREMENTS.

a. STARS Data Entries.

(1) Scratch Pad ("Y")/Type-Field ("H") (fields 2 and 4) Usage.

(a) Departure/Overflight/VFR through-flight tracks shall contain a single alpha character exit fix and requested altitude (RAL) expressed in hundreds of feet in the Scratch Pad field (field 2/"Y"). RAL information is obtained from the interfacility flight plan message or entered by the appropriate controller manually through the STARS keyboard. All IFR and VFR departure tracks shall include this information. Altitude amendment received via FDIO must be entered manually. Aircraft type shall be placed in the Type field (field 4/"H"). STARS tags may contain destination airport or other operationally significant data (i.e., RVR requirements, etc.) in the Scratch Pad field (2/"Y").

(b) Arrival tracks (IFR/VFR) shall contain destination airport (if other than BOS). This information shall be placed in the Scratch Pad field (field 2/"Y"). Aircraft type information shall be placed in the Type field (field 4/"H").

(c) Scratch Pad/Type information shall be entered at the earliest possible time.

(2) Mode C Filter Limits. Set the upper altitude filter limits (unassociated and associated tracks) no lower than 1,000 above the highest altitude for which the controller is responsible. This requirement may be suspended only when clutter is excessive.

b. STARS ESL Procedures.

(1) Assign aircraft on NAS flight plans the NAS-assigned discrete beacon code as in STARS FSL operation.

(2) Assign aircraft not on NAS flight plans a discrete beacon code from one of the following local code banks:

(a) IFR aircraft: 0101 through 0117.

(b) VFR aircraft: 5120 through 5174.

NOTE: The choice must be made by the controller. ESL will not assign codes automatically.

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(3) Use of the ESL Code/ACID List is recommended to aid in maintaining identification; however, Code/ACID associations are not transmitted between positions. Reference the assigned beacon code in all transfers of radar identification.

c. STARS Handoff Redirect.

(1) If an inbound aircraft's FDB is flashing to the wrong sector, the sector controller may transfer an aircraft's data block to the correct Boston Area sector utilizing the Handoff Redirect function.

(2) If an inbound aircraft's FDB is flashing to the wrong sector, the proper receiving sector controller may utilize the Handoff Redirect function to accept the handoff.

3-3. BOSTON AREA POSITION RESPONSIBILITIES.

a. Boston Flight Data (FDB). FDB is responsible for dissemination of all appropriate information received from the ACE-IDS and FDIO equipment and ensuring that information contained in the ACE-IDS is current. FDB shall:

(1) make amendments/entries via the FDIO and STARS equipment.

(2) review flight plans for accuracy and completeness; perform required strip marking (as directed in Chapter 6), and forward flight progress strips to appropriate sectors.

(3) issue departure clearances through voice communication equipment.

(4) compile statistical data as directed by the OS/CIC.

(5) assist the facility/sectors in meeting situational objectives.

(6) forward PIREPs to Bridgeport AFSS in a timely manner

b. Bedford Coordinator (CB). CB is responsible for assisting SB, and other sectors as necessary, in providing a safe, orderly, and expeditious flow of traffic. CB shall:

(1) perform inter/intrafacility coordination.

(2) advise radar positions of accomplished coordination.

(3) perform functions to assist the radar team in meeting operational objectives.

c. Bedford Sector (SB). SB is responsible for providing a safe, orderly, and expeditious flow of traffic within delegated airspace as defined in Appendix 1, Figure 1-A. SB shall:

(1) operate radar displays, communications, automation, and weather equipment in accordance with FAA orders and directives.

(2) perform required strip marking as directed in Chapter 6.

(3) recognize potential for sector saturation and advise the OS/CIC.

(4) ensure accuracy and completeness of flight plans and clearances.

(5) ensure accuracy of STARS data tags.

d. Lynch Coordinator (CL). CL is responsible for assisting SM, AL, and other sectors as necessary, in providing a safe, orderly, and expeditious flow of traffic. CL shall:

- (1) perform inter/intrafacility coordination.
- (2) advise radar positions of accomplished coordination.
- (3) perform functions to assist the radar team in meeting operational objectives.

e. Lynch Sector (AL). AL is responsible for providing a safe, orderly and expeditious flow of traffic within delegated airspace as defined in Appendix 1, Figure 1-A. AL shall:

- (1) operate radar displays, communications, automation and weather equipment in accordance with FAA orders and directives.
- (2) perform required strip marking as directed in Chapter 6.
- (3) recognize potential for sector saturation and advise the OS/CIC.
- (4) ensure accuracy and completeness of flight plans and clearances.
- (5) ensure accuracy of STARS data tags.

f. Initial Departure (ID). ID is responsible for providing a safe, orderly, and expeditious flow of traffic within delegated airspace as defined in Appendix 1. ID shall:

- (1) operate radar displays, communications, automation, and weather equipment in accordance with FAA orders and directives.
- (2) ensure accuracy and completeness of flight plans and clearances.
- (3) utilize Tower Strip Bay Cameras and strip marking to determine aircraft departure times as required in FAAO 7110.65.
- (4) ensure accuracy of STARS data tags.
- (5) recognize potential for sector saturation and advise the OS/CIC.

g. Plymouth (SM). SM is responsible for providing a safe, orderly and expeditious flow of traffic within delegated airspace as defined in Appendix 1. SM shall:

- (1) operate radar displays, communications, automation and weather equipment in accordance with FAA orders and directives.
- (2) ensure accuracy and completeness of flight plans and clearances.
- (3) ensure accuracy of STARS data tags.
- (4) recognize potential for sector saturation and advise the OS/CIC.

h. Rockport Coordinator (CR). CR is responsible for assisting SR and other sectors as necessary, in providing a safe, orderly, and expeditious flow of traffic CR shall:

- (1) perform inter/intrafacility coordination.
- (2) advise radar position of accomplished coordination.
- (3) perform functions to assist the radar team in meeting operational objectives.

i. Rockport (SR). SR is responsible for providing a safe, orderly and expeditious flow of traffic within delegated airspace as defined in Appendix 1. SR shall:

- (1) operate radar displays, communications, automation and weather equipment in accordance with FAA orders and directives.
- (2) ensure accuracy and completeness of flight plans and clearances.
- (3) ensure accuracy of STARS data tags.
- (4) recognize potential for sector saturation and advise the OS/CIC.

j. Lincoln (SL). SL is responsible for providing a safe, orderly and expeditious flow of traffic within delegated airspace as defined in Appendix 1. SL shall:

- (1) operate radar displays, communications, automation and weather equipment in accordance with FAA orders and directives.
- (2) ensure accuracy and completeness of flight plans and clearances.
- (3) ensure accuracy of STARS data tags.
- (4) recognize potential for sector saturation and advise the OS/CIC.

k. Final Vector One (F1). F1 is responsible for providing a safe, orderly and expeditious flow of traffic within delegated airspace as defined in Appendix 1. F1 shall:

- (1) operate radar displays, communications, automation and weather equipment in accordance with FAA orders and directives.
- (2) ensure accuracy and completeness of flight plans and clearances.
- (3) ensure accuracy of STARS data tags.
- (4) recognize potential for sector saturation and advise the OS/CIC.

l. Final Vector Two (F2). F2 is responsible for providing a safe, orderly and expeditious flow of traffic within delegated airspace as defined in Appendix 1. F2 shall:

- (1) operate radar displays, communications, automation and weather equipment in accordance with FAA orders and directives.
- (2) ensure accuracy and completeness of flight plans and clearances.

- (3) ensure accuracy of STARS data tags.
- (4) recognize potential for sector saturation and advise the OS/CIC.
- (5) when appropriate, achieve visual separation with F1 traffic.

m. Operations Supervisor / Controller-in-Charge (OS/CIC). The OS/CIC is responsible for providing a full range of duties associated with watch supervision. The OS/CIC shall:

- (1) provide general supervision and assistance to specialists.
- (2) perform inter/intrafacility coordination.
- (3) notify Airway Facilities, impacted air traffic facilities, and affected positions of equipment outages.
- (4) notify appropriate facility management and the Regional Communications Center of all accidents, incidents, and other newsworthy events.
- (5) handle leave, overtime, and absences for assigned shift only, in accordance with facility directives.

3-4. AIRMETS, PIREPS, SIGMETS, and CWAS.

- a. The OS/CIC is responsible to ensure that PIREPs are solicited and disseminated for each hour that the weather conditions exist or are forecasted to be as stated in FAA Order 7110.65.
- b. FDB is responsible for forwarding PIREPs to Bridgeport AFSS in a timely manner.
- c. AIRMETS, SIGMETS and CWAS shall be posted in the ACE-IDS by the TMC as soon as they are received. The OS/CIC shall ensure that they are disseminated as soon as possible.

3-5. CONFIGURATIONS.

- a. When ILS 15R - VAP 4L/22R are being conducted, approach control shall advise these aircraft to "Expect Visual Approach Left Traffic Runway 4L" or "Expect Visual Approach Right Traffic Runway 22R" as appropriate.
- b. When LAHSO operations are in effect at BOS, Boston Area shall advise the aircraft on initial contact; e.g., "Expect landing on runway 22L to hold short of runway 27."

3-6. NON-LARGE JET AIRCRAFT ROUTES (NLJA). Boston Area may utilize existing turboprop arrival routes with jet aircraft weighing less than 75,000 lbs. Maximum Take Off Weight to runways 22L and 4L.

- a. **Runway 4L.** SR sector may vector NLJA to merge into the runway 4L turboprop flow as depicted in Appendix 1, Figure 1-T. NLJA shall be delivered to F2 at 5000' MSL.

b. Runway 22L. SM/SL sectors may vector NLJA so as to merge into the runway 22L turboprop arrival flow as depicted in Appendix 1 figure 1-U.

(1) The SM sector shall:

1 initiate a STARS hand-off to the SL sector.

2 vector the NLJA so as to enter the SL sector on a heading that will pass overhead, in the vicinity of the Norwood airport.

3 Issue a timely descent clearance to 8000' MSL.

4 complete communications transfer in a timely manner.

(2) The SL sector shall:

1 have control for turns 30 degrees either side of track within 5NM of the SL/SM boundary to adjust the flight track of the NLJA into the WOONS traffic flow.

2 have control for speed reduction to 210 knots.

3 have control for descent to 5000' MSL within A90 delegated airspace.

4 deliver NLJA to F 2 at 5000' MSL.

3-7. AIRSPACE INTRUSIONS. The following guidelines should be adhered to in tracking and identifying aircraft that enter Class A or B airspace without authorization; or Class C or D airspace without establishing communications with air traffic control.

a. The OS/CIC should:

(1) document the incident on FAA Form 7230-4, Daily Record of Facility Operations, as a Pilot Deviation – Airspace Intrusion.

(2) ensure a STARS track is initiated on the aircraft for tracking purposes.

(3) report the incident on FAA Form 8020-17, Preliminary Pilot Deviation Report.

(4) obtain statements from personnel involved in observing, tracking, and identifying the intruding aircraft.

(5) forward the information listed above to the Quality Assurance Support Specialist for processing.

b. Control Personnel shall:

(1) notify the OS/CIC when an aircraft is suspected to have entered controlled airspace without authorization or communications.

(2) attempt to establish communications, radar identify, and verify altitude of the intruder aircraft. If able to establish communications with the intrusion aircraft, advise the aircraft of his/her exact location, assist the aircraft in exiting the protected airspace, and request the pilot telephone the OS/CIC.

(3) start a STARS track on the intrusion aircraft to enable Continuous Data Recording (CDR).

(4) coordinate with adjoining facilities for identification of intrusion aircraft exiting A90 radar coverage.

3-8. WIND SOURCE. The Terminal Doppler Weather Radar Display (TDWR) information displayed in the ACE-IDS shall be used as the wind source for BOS operational purposes.

CHAPTER 4. CATEGORY I/II/III OPERATIONS

4-1. REMOTE STATUS & INTERLOCK UNIT (RSIU)/FAR FIELD MONITOR (FFM).

a. General. This section provides necessary guidance for the use and interpretation of the FFM. Inclusion of the FFM supports increased demand for CAT II/III operations by providing immediate indications of localizer inoperative or out-of-tolerance conditions, i.e., the FFM may alarm due to an outage or the localizer course may have shifted due to vehicle/aircraft encroachment into the critical area. The BOS panel is the primary panel and will serve as the ILS monitor panel for the 4R ILS system. The A90 panel has been installed as a secondary unit to provide A90 with FFM indications. Both units, however, have the ability to monitor the status of the NAVAIDs associated with the ILS.

b. Responsibilities.

(1) The OS/CIC shall suspend CAT II & III operations when the FFM is in "alarm" status until a "normal" FFM indication is observed.

(2) Operational Personnel shall:

(a) adhere to the procedures contained in FAAH 7110.65, FFM/RSIU

(b) issue the cautionary advisory "CAUTION, MONITOR INDICATES RUNWAY 4R LOCALIZER UNRELIABLE" when required.

(c) advise the OS/CIC when the prevailing weather/RVR affects the FFM/RSIU mode setting.

CHAPTER 5. POSITION CONSOLIDATION

5-1. GENERAL. Consolidating positions is the responsibility of the OS/CIC. Consolidation is performed when required, after careful consideration of traffic workload, complexity, weather, and staffing. Additionally, positions shall only be combined when all required duties/responsibilities of each position can be accomplished by the combined position.

5-2. PROCEDURES. Boston Area consolidation of positions, when appropriate, shall be accomplished as follows:

- a. F2 at F1.
- b. AL at SM.
- c. SL at ID.
- d. Boston Area Late Evening Configuration (three (3) controllers).
 - (1) F2 at F1.
 - (2) SB at SR.
 - (3) ID, AL, SM and SL at the CR position.
- e. Boston Area Midnight Configuration: All positions at either CR or the Boston Area Mid (BMID) position.

5-3. CHECKLIST. (ACE-IDS Page RELIEF BRIEF).

- a. **Consolidation.**
 - (1) Select/deselect frequencies.
 - (2) Advise Boston Area, BOS and affected facilities as necessary.
 - (3) Call forward RDVS.
 - (4) STARS combine/de-combine as required.
 - (5) Complete position relief brief (ACE-IDS page: RELIEF BRIEF).

- b. **Deconsolidation.**

- (1) Cancel call-forwarding RDVS.
- (2) Advise Boston Area, BOS and affected facilities as necessary.
- (3) Select/deselect frequencies.
- (4) STARS combine/de-combine as required.
- (5) Complete position relief brief (ACE-IDS page: RELIEF BRIEF).

5-4. POSITION BINDERS. Position Binders shall be stored and displayed via electronic means on the ACE-IDS in accordance with FAA Order 7210.3. Position Binder information may be accessed by clicking on the A90 Home page.

CHAPTER 6. STRIP MARKING

6-1. GENERAL. The NAS computer only generates strips to the Boston Area for satellite airport arrivals, departures, and overflight traffic.

6-2. STRIP USAGE. To ensure that IFR clearances are complete and correct, record flow control information, i.e., EDCT or DSP times, and forward inbound flight information to the satellite towers. Only IFR departure strips are required to be posted. IFR arrival strip posting is optional; however, when used, strip marking shall be in accordance with paragraph 6-3 of this order.

6-3. STRIP MARKING. Every effort has been made to limit strip marking to only what is needed. To eliminate any misunderstandings that may result from this minimal strip usage in the satellite sectors the following strip marking (see Figure 6-1) is required as appropriate:

- a. Box 11 - enter a four digit "release time".
- b. Box 13 – enter a check mark in this box to indicate that the departure clearance has been issued/forwarded or that the inbound information has been forwarded to the satellite airport.
- c. Box 14 - enter a four-digit EDCT or DSP time.
- d. Box 15 - enter a four digit "clearance void time".

Figure 6-1.

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				13	14	15

CHAPTER 7. CONVERGING RUNWAY DISPLAY AID FOR RWY 27/22L

7-1. CONVERGING RUNWAY DISPLAY AID.

a. General. The Converging Runway Display Aid (CRDA) software may be used during Visual Meteorological Conditions (VMC) to aid in approach spacing to intersecting runways 27 and 22L at BOS. Standard FAAH 7110.65 separation standards shall be maintained.

b. Responsibilities.

(1) The OS/CIC shall:

(a) ensure F1 and F2 positions are staffed.

(b) ensure that the STARS entries are made to enable and disable the ghost targets.

c. Procedures.

(1) The CRDA "stagger function" may be utilized to aid controller judgement in achieving desired spacing. The stagger interval shall be set at 4NM from the runway 27/22L intersection.

(2) F1 shall provide a constant 7 mile interval to runway 27.

(3) F2 shall vector runway 22L arrival aircraft so as to achieve the 4 mile stagger behind the corresponding runway 27 arrival. The 4-mile stagger may be modified due to the current meteorological conditions in order to achieve the required spacing to Logan airport.

(4) Controllers may enable/disable the CRDA tool on their individual radar scope utilizing the STARS entries contained in the ACE-IDS.

CHAPTER 8. NOISE ABATEMENT

8-1. GENERAL. It is the policy of A90 to be a good neighbor and to meet our operational responsibilities within the context of mitigating noise whenever circumstances permit. Mitigation of aircraft noise over populated areas is the responsibility of all personnel. Non-compliance with noise abatement procedures provided in this section is only permissible in those situations where aircraft separation standards could otherwise be compromised.

8-2. RESPONSIBILITIES.

a. The OS/CIC shall ensure noise abatement policy objectives are met, whenever possible and ensure the procedures contained in this directive are adhered to.

b. All control personnel shall be familiar with and adhere to the noise abatement policies and procedures provided in this directive.

8-3. LOGAN AIRPORT PROCEDURES.

a. General. Arrival aircraft shall be kept as high as possible for as long as possible consistent with optimum descent profiles criteria and facility directives.

(1) Departure aircraft shall be issued a climb to the highest possible interim altitude as soon as possible, consistent with facility directives.

(2) Flight training operations at BOS are prohibited between the hours of 11 p.m. and 7 a.m., except for initial takeoff or final landing of training flights to be conducted elsewhere.

(3) Landing on runway 22R are prohibited between the hours of 11 p.m. and 6 a.m.

(4) Landing on runway 22R shall be limited to aircraft with a noise emission level of 78 dBA or less.

a. Nocturnal Procedures. Procedures under this section shall be utilized during LIGHT traffic conditions between 11 p.m. and 6:30 a.m.

(1) Arrivals.

(a) IFR aircraft shall be vectored for a standard instrument approach, or vectored to a position no less than 5 NM from the assigned runway for a straight-in visual approach. Aircraft shall maintain no lower than 3000' MSL until passing the BOS 10 DME.

(b) VFR aircraft shall enter the BOS Class B airspace at or above 3000' MSL, weather permitting, and maintain no lower than 3000' MSL until the BOS 10 DME, unless the pilot states an operational reason requiring a lower altitude. VFR aircraft shall be vectored to a position no less than 5 NM from the assigned runway for a straight in VFR approach.

(2) Departures.

(a) IFR turbojet aircraft shall be assigned a Departure Procedure.

(b) IFR turboprop aircraft shall not be assigned an altitude of less than 3000' MSL, unless the pilot states an operational reason for requiring a lower altitude.

(c) VFR propeller driven aircraft shall not be assign an altitude of less than 3,000' MSL, weather permitting, unless the pilot states an operational reason for requiring a lower altitude.

(d) VFR/IFR propeller driven aircraft will be assigned runway heading except off runway 22R. Off runway 22R, BOS will assign heading 180° if southbound or 250° for all other aircraft. The ID controller shall not turn a propeller driven aircraft on course over a populated area until reaching 2,000' MSL.

(3) Land 33L/Depart 15R Opposite Direction Operations. In an attempt to further mitigate noise during the hours of midnight and 6:00 a.m., weather permitting, BOS may elect to utilize runway 33L for arrivals and runway 15R for departures. During these periods of opposite direction operations:

(a) arrival aircraft shall be kept on either a downwind or base leg until the departure aircraft has initiated its turn from the departure heading.

(b) if a pilot requests another runway more aligned with the wind, traffic permitting, the request shall be approved.

(c) weather must be at or above basic VFR minima.

b. Turbojet Procedures.

(1) Departures.

(a) 4R – Runway heading until the BOS 4 DME then heading 090° until clear of Nahant. The departure may be vectored westbound to pass north of Hull and above 6000' MSL in the vicinity of Deer Island. Otherwise, departures shall be vectored south to cross the shoreline westbound south of the Hull Peninsula in the vicinity of the 10-mile range mark above 6,000' MSL. Traffic vectored northbound shall cross the shoreline at or above 6,000' MSL in the vicinity of Marblehead Harbor.

(b) 9 – Runway heading until the BOS 2 DME before turning. The westbound vector shall be south of the Hull Peninsula in the vicinity of the 10 mile range mark and cross the shoreline at or above 6,000' MSL. Traffic vectored northbound must cross the shoreline at or above 6,000' MSL in the vicinity of Marblehead Harbor.

(c) 15 – Runway heading to the BOS 1 DME then turn left to 120°. North and south shoreline crossings shall be the same as for runway 9.

(d) 22R/L – Turn left to heading 140°, upon radar identification, ID will continue the turn east to pass north of the Hull Peninsula. The north and south shoreline crossing shall be the same as for runway 9.

(e) 27 – Heading 275° until the BOS 2.2 DME then turn left heading 235° until the BOS 6 DME.

(f) 33L – Runway heading until the BOS 2 DME, then turn left heading 315° until leaving 3,000' MSL or reaching the BOS 5 DME.

(2) Arrivals:

(a) 27 – via PVD shall be kept at 6,000' MSL or higher until the shoreline. Arrivals via GDM should utilize runway 27 unless the runway 27 final will become extended, then 22L LAHSO may be utilized to reduce delays.

(b) 4L/R – should be assigned runway 4R; however runway 4L should be used to prevent extended finals, delay vectoring, and delays for runway 4R departures.