DRAFT BOS Runway Use Plan Test Period #4 Test 4A – 04-07-2016

1. Definitions (for the purposes of these tests)

a. Configuration – Any combination of two or more runways with a defined primary arrival runway end and primary departure runway end. There may be secondary arrival runway ends and secondary departure runway ends utilized as traffic and operational conditions require.

b. Runway End – Acknowledges that each runway has two operating ends (one for arrivals and one for departures) based on direction of flow.

c. Seasonal Runway Use – Acknowledges that runway use is seasonal due to changing wind and weather conditions during the various seasons.

2. Test 4A Definition

The intent of the test is to balance the combined impact of noise exposure by runway end (i.e. with Runway 27 departures/Runway 9 arrivals and Runway 33L departures/Runway 15R arrivals) by assigning specific percentages to Runway 27 and Runway 33L departures when the Airport is in a 27/33L configuration. The intent is not to increase the overall annual combined use of Runways 27 and 33L for departures nor increase the seasonal runway use of Runways 27 and 33L during the test period.

i. When operating in a configuration with departures on Runways 27 and 33L, attempt to achieve an overall split of ??% jet departures on Runway 27 and ??% jet departures on Runway 33L

1. Recognizing that departure demand is greater during the morning peak, resulting in a greater use of Runway 27 for departures, attempt to achieve a split during the morning peak of ??% jet departures on Runway 27 and ??% jet departures on Runway 33L

2. Recognizing that arrival demand is greater during the afternoon/ evening peak, resulting in greater use of Runway 33L for departures, attempt to achieve a split during the afternoon/evening peak of ??% jet departures on Runway 27 and ??% jet departures on Runway 33L

3. During non-peak hours, attempt to achieve the overall desired daily split of ??% jet departures on Runway 27 and ??% jet departures on Runway 33L

ii. It is not intended for the overall use of Runways 27 and 33L to be greater during the test period than it has been during the same months in recent years, which has been approximately 16% for the period from May through September.

iii. The 10-knot wind restriction for Runway 14-32 as required per the FAA's 2002 Record of Decision for the Boston-Logan Airside Improvements Project will not apply during the test period. The elimination of the wind restriction is to provide FAA with more flexibility for using Runways 27 and 33L departures to balance the noise exposure by runway end, but not to increase their combined use compared with seasonal runway use during the same months in recent years.

3. Approach to Implementation

Test Periods – Tests 4A and 4B (described separately) are to be conducted simultaneously. Suggest employing a 3-month test period (not to exceed 6 months) of the runway use program instructions after the environmental documentation has been completed for an operational test per FAA Order 1050.1F: "Environmental Impacts: Policies and Procedures," dated July 16, 2015.

i. Develop ATCT language

ii. Provide instruction/training of ATCT staff

iii. Implement runway use program test

iv. Monitor ability to implement

v. Monitor effectiveness of changes in runway end use

vi. Identify problems/opportunities

vii. Make adjustments during test period

4. Metrics/Monitoring

a. ATCT Performance – These metrics are designed to specifically measure ATCT's ability to implement the test program and would be produced weekly, as appropriate:

i. *Departure Runway Split* – when operating in a configuration with departures on Runways 27 and 33L, report the hourly numbers of departures by runway for Runways 27 and 33L.

- FAA to present the hourly numbers of departures by runway for Runways 27 and 33L and calculate the percentage split by hour to show variations over the course of the day.

- Massport to calculate weekly, monthly, and overall test period hourly numbers of departures by runway and the percentage split for Runway 27 and Runway 33L.

- Massport to calculate the overall percentage split between Runway 27 and Runway 33 departures and the percentage split during the daytime hours (7:00 a.m. – 10:00 p.m.) and nighttime hours (10:00 p.m. – 7:00 a.m.).

- Massport to calculate the numbers of departures by runway for Runways 27 and 33L during the morning peak, afternoon/evening peak, and for non-peak hours.(NOTE: The specific hours for each period to be finalized working with FAA.)

- Massport to compare the overall percentage splits with the overall goal and the morning peak, afternoon/evening peak, and non-peak hour percentage splits against the goals for those periods.

ii. *Documentation* – Provide detailed operational conditions (wind, weather, airfield closures, etc.) for the test period.

b. Operational Performance – These metrics are designed to measure the operational results of implementing the program:

i. *Runway End Use Percentages* – Massport to provide daily reports of runway end use percentages to include:

Runway End Use by Day (24 hours)

Detailed Runway End Use for 6:00 am to 8:30 pm

ii. *Hourly Operational Data* – At the end of each week, Massport/FAA to provide hourly reports (taken from available sources) of wind, weather, traffic volumes, airfield closures

c. Noise Performance – These metrics are designed to measure the noise results of implementing the overall runway use program:

i. *Baseline Preparation* – Massport to update the 2015 baseline noise data for comparison purposes to include:

DNL noise contours for 65, 60, 55, and 50 dB increments

Number of people residing within each 5 dB DNL increment

DNL for the evaluation points identified in previous phases of BLANS

Noise-level weighted population data for the evaluation points *(CAC will calculate this from noise data prepared by Massport)*

ii. *Noise Analysis of Recommended Runway Use Program* – At the end of the Test Period #4 and upon development of a recommended runway use program by CAC, Massport to provide a noise analysis to include:

DNL noise contours for 65, 60, 55, and 50 dB increments

Number of people residing within each 5 dB DNL increment

DNL for the evaluation points identified in previous phases of BLANS

Noise-level weighted population data for the evaluation points *(CAC will calculate this from noise data prepared by Massport)*

d. Percentage-Based Goals – Except for those listed above, there would not be percentage-based goals for runway end utilization or configuration utilization. After the end of the test periods, the feasibility of percentage-based goals would be determined and if determined to be valuable those goals established.