

# BOS Runway Use Plan Test Period #2 – 03-31-2015

## 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. For the purposes of the tests, a configuration change would be defined as a change in the primary arrival runway end and/or primary departure runway end.
- b. Runway End – Acknowledges that each runway has two operating ends based on direction of flow.

## 2. Test Period 2 Definition

- a. To address dwell and persistence issues related to utilizing the same runways/configurations for long periods of time. The following provides more details on this element:
  - i. The original PRAS included elements to monitor and ultimately to minimize the amount of time runways were used in a 24-hour period, as well as use during longer periods.
  - ii. The approach to addressing this for this test is to request FAA to change configurations/runways during the day at two specific points.
  - iii. It is acknowledged that wind, weather, and other operational conditions may require the same primary arrival runway end and primary departure runway end during these periods.
  - iv. 9:30 am: When feasible, in order of preference, the instructions for addressing this situation are as follows:
    1. At 9:30 am, utilize a configuration that has a different primary arrival runway end and a different primary departure runway end than was being utilized for the 6:00 am to 9:30 am period.
    2. If wind, weather, or operational conditions do not allow for #1 to occur, the second preference is to utilize a configuration that has a different primary departure runway end than was being utilized for the 6:00 am to 9:30 am period.
    3. If wind, weather, or operational conditions do not allow for #1 and #2 to occur, the third preference is to utilize a configuration that has a different primary arrival runway end than was being utilized for the 6:00 am to 9:30 am period.

If more than one configuration is used during the 6:00 am to 9:30 am period, the latest configuration used for at least one hour will be identified as the configuration to change from.

- v. 2:30 pm: When feasible, in order of preference, the instructions for addressing this situation are as follows:
  - 1. At 2:30 pm, utilize a configuration that has a different primary arrival runway end and a different primary departure runway end than was being utilized for the 9:30 am to 2:30 pm period.
  - 2. If wind, weather, or operational conditions do not allow for #1 to occur, the second preference is to utilize a configuration that has a different primary departure runway end than was being utilized for the 9:30 am to 2:30 pm period.
  - 3. If wind, weather, or operational conditions do not allow for #1 and #2 to occur, the third preference is to utilize a configuration that has a different primary arrival runway end than was being utilized for the 9:30 am to 2:30 pm period.

If more than one configuration is used during the 9:30 am to 2:30 pm period, the latest configuration used for at least one hour will be identified as the configuration to change from.

### **3. Approach to Implementation**

- a. Test Periods – Suggest employing four 3-month test periods of the runway use program instructions.
  - 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 for next 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 daily:

- i. *Configuration Changes* – How many days did the configuration change? How many days did just the departure runway end change? How many days did just the primary arrival runway end change? How many days were there no changes in either primary departure or primary arrival runway ends.
- ii. *Documentation* –Provide detailed operational conditions (wind, weather, airfield closures, etc.) for the test period.
  - At 9:30 am and at 2:30 pm, ATCT to note the previous configuration and primary arrival and departure runway ends in use during the previous period
  - At 9:30 am and at 2:30 pm, ATCT to note the configuration and primary arrival and departure runway ends being utilized for each period. ATCT to provide notation of operating conditions if changes in configuration or runway end selection is not feasible. These notations should be informative but not over burdensome. For example they may include:
    - a. Winds (direction) at (speed)
    - b. Weather/visibility
    - c. Traffic volume
    - d. Runway xxx closure
    - e. Airfield maintenance

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

- i. *Runway End Use Percentages* – At the end of each month, 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. *Configuration Use Percentages* – At the end of each month, Massport to provide daily reports of configuration use percentages to include:

Configuration Use by Day (24 hours)

Configuration Use for 6:00 am to 8:30 pm

- iii. *Hourly Operational Data* – At the end of each month, 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 program:
- i. *Baseline Preparation* – Prior to implementation of the runway use program tests, Massport to prepare 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*)

*\* Note: These would be prepared for a similar 3-month period for each test and an annual period for the full program.*
  - ii. *Test Period* – At the end of the test period (specific dates to be determined), 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*)
  - iii. *Annual Analysis* – At the end of the calendar year, Massport to provide an annual 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 – For the first year (test period) 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.