

**DRAFT Boston Logan Airport Noise Study (BLANS)  
CAC Subcommittee Meeting  
Massport Logan Office Center Training Room**

**MEETING SUMMARY**

January 26, 2011  
8:00 AM – 1:00 PM

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**ATTENDANCE:**

**Federal Aviation Administration (FAA)**-Terry English, Brian Brunelle, Deborah James, George Yardley, Jon Harris, Sandra Bogosian

**Massachusetts Port Authority (Massport)**-Frank Iacovino

**Community Advisory Committee (CAC)**-Sandra Kunz (Braintree), Wig Zamore (Somerville), Dick Morrison (Chelsea),

**Project Consultant (PC)**-Stephen Smith (Ricondo & Associates, Inc.)

**Independent Consultant (IC)**- Stan Matthews (Crown Consulting)

**VIA TELEPHONE and/or INTERNET CONNECTION:**

**CAC**- John Stewart (South End)

**IC**- Scott Carpenter (Landrum & Brown, Inc.), Jon Woodward (Landrum & Brown, Inc.) from 10 AM until adjournment, Stan Matthews (Crown Consulting)

**OBSERVER**

**FAA**- Alan Reed-Recorder

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References: Exhibits for Measures F-HH(v2)-33L Dep Along Mystic River and F-K(v2)-Extend Runway 27 RNAV Deps.

Post Meetings (PM) Note 1: Upon presentation at the two day meetings, the initial Exhibits were considered inadequate for complete understanding and discussion purposes by the CAC, lacking information they believed was essential in communicating pertinent details to their respective communities. While they are referenced here and were available to the stakeholders prior to the meetings, the later “improved” versions were a by-product of these meetings and were only available for viewing to those present and those having simultaneous internet access to the Go To Meeting website.

Although the intent of detailing the graphics is an integral part of these meetings and requested content information is noted below, the improved Exhibits are considered incomplete **Action Items** here (for the record), until distributed during the course of finalization of these notes/reproduction of the Exhibits by the FAA/PC. The improved Exhibits will be available through the BLANS website.

Opening Remarks:

After taking attendance, T. English reminded all that the purpose of the meeting is for the CAC to make recommendations to the FAA about how to fine tune tracks for Measures

F-HH(v2) and F-K(v2) using Google Earth and generalized land use and population maps, while J. Harris uses the TARGETs program to test fly-ability issues. Members of the BOS TRACON and BOS tower will address operational issues, while G. Yardley will address general RNAV and potential obstacle issues in response to the recommendations.

#### Measure F-HH(v2)-33L Dep Along Mystic River

The highlights of the discussion regarding this measure include the following:

- CAC's (D. Morrison/W. Zamore) primary objective is to route traffic around "Admiral's Hill", roughly located east-northeast of the departure end of Runway 33L;
- G. Yardley stated that turns cannot be made more than 15 degrees from a waypoint to another waypoint without extending the required distance between the two waypoints. Aircraft equipment sensitivity prohibits several "quick" turns prior to 5 DME on departure, due to waypoint capture and corresponding lead and lag times for that sensitivity. If ignored, aircraft would most likely come off course. This reduces predictability and substantially reduces the margin of safety in keeping aircraft separated.
- W. Zamore stated that his concern with the flight tracks and headings discussed was to ensure that they were predictable, and to avoid a densely populated area beyond the 5 DME turning point. After further review since the last BOS/TAC meeting, he indicated that the existing design appears to maximize the use of more compatible areas.
- W. Zamore stated his preference to reference population density, but felt the information available (aerial photography and population locations) should be sufficient to meet the objective of this meeting. T. English confirmed that exhibits are using 2000 Census centroid data which is what the FAA would use for determining population noise impacts from the INM studies.
- Based on viewing the thematically colored census block areas, the group discussed design options to minimize jet departures over Admiral's Hill by moving the flight track to the east over an outdoor market area. This would require staying on the initial runway heading a little longer before turning west on course and a steeper turning angle to the next waypoint. Moving the next waypoint further north was considered, but was deemed to cause a significant operational issue as described for the original F-HH measure.
- S. Smith repeated previous statements made during the last BOS/TAC meeting related to the heading used today, which was designed to avoid a school that is no longer there and the hope is to adjust the initial heading to avoid new development. G. Yardley also discussed the restrictive options available within the 2 DME point off the runway and the climb gradient requirements due to existing obstructions. .
- B. Brunelle explained the concerns of conflicting northwest IFR arrival traffic and arrivals to Hanscom Airport: as discussed at previous meetings, headings are restricted to 293-296 degrees.

- J. Harris conducted several iterations to try and meet the group's intent. Several scenarios failed due to the required distance between the first and second waypoint and large non-standard climb gradients.
- J. Harris indicated he will need some time to look at different design options to find something that can work. W. Zamore and D. Morrison felt that Jon Harris has a very good understanding of what they are trying to achieve and were comfortable with giving FAA time outside of this meeting to find a design that may work.
- The group agreed that if a design is found, the proposal will be shared with W. Zamore and D. Morrison for their review and possible concurrence.

**Action Item:** J. Harris will look at different RNAV design options to develop a procedure that maximizes to the extent possible, the following objectives:

- “funneling” aircraft tracks around Admiral's Hill preferable over the unpopulated marketplace area to the northeast of Admiral's Hill
- keep the 5 DME runway consideration intact
- maintain existing climb gradient (276'/NM)

PM Note 2: IC and PC emphasize that the “working” exhibit intends to show a deliberative process (see Opening Remarks) to avoid Admiral's Hill (for this Measure) by shifting the RNAV centerline, while maintaining the required climb gradient and getting to the point where aircraft turn to a departure fix, in-accordance-with the restrictions mentioned.

#### Measure F-K(v2)-Extend Runway 27 RNAV Deps

S. Smith presented the F-K(v2) exhibit in Google Earth. T. English commented that the intent of the exhibit was to depict the location of the RNAV design and waypoints over land use or population to help the CAC sub-committee members find possibilities for refinements.

J. Stewart questioned whether track placement could be made east or west of the 7 DME point. S. Smith described that the proposal would include a waypoint that would have traffic start transition turns about 1 mile southwest of the current WYLYY waypoint. While S. Smith confirmed the reference that noise modeling will take place after screening to determine his concerns, J. Woodward voiced compatibility issues for making further turns, commenting that it was unlikely to make a difference. J. Stewart wished to note the concerns of a Milton resident, which is why he was asking.

Each of the waypoints that define the transitional routes was discussed. For each waypoint, B. Brunelle, S. Matthews and S. Smith explained to J. Stewart the reason for the locations and the associated airspace and procedure constraints that limit the waypoint locations. J. Woodward added that the tracks are now over compatible areas. Although J. Stewart offered suggestions on where he believed the tracks could be moved, S. Matthews pointed out where boundaries and sectors are (TRACON, Bedford), which restrict any further movement considerations.

J. Stewart wished to note that he would not support the measure in this form compared to the original CAC proposal, but does understand the reasoning: it all makes sense and he doesn't see any movement that would provide any benefit, as there is no reason to move it from one persons house to another

When asked, J. Stewart confirmed with T. English that he had no plans to attend the subcommittee meeting the next day, because of his claim that the FAA had not answered his questions about the process that resulted in Measure F-V(v2). T. English noted that the FAA had previously addressed J. Stewart's questions at the October 28<sup>th</sup> BOS/TAC meeting and to refer to those BOS/TAC meeting notes. S. Kunz confirmed that she would not be attending the meeting tomorrow, but that J. Falbo would be attending in her place.

J. Woodward asked a question about Measure F-V (v2): what the potential would be of consolidating 240 and 290 tracks and moving them to the proposed 260 heading. S. Smith repeated statements made by TRACON during the last BOS/TAC meeting that FAA will not reduce the number of divergent prop headings they use today. J. Woodward requested B. Brunelle to confirm this. B. Brunelle responded that the 220 and 240 are the two routes for the southbound heading, while the existing 290 is applied to those aircraft going west and north and reducing the number of available divergent headings for props is considered a significant impact on FAA's ability to meet their mission and goals.

T. English closed the meeting by noting that discussions about Measure F-V(v2) will take place tomorrow. She recommended that the meeting being moved from an 8 AM start to 11-1 PM, due to the snow storm moving in. All agreed, including Darryl Pomicter who she joined into the telecon for his confirmation. The group will meet in 3<sup>rd</sup> floor Boardroom.

The meeting adjourned at about 1:00 PM.

**Boston Logan Airport Noise Study (BLANS)  
CAC Subcommittee Meeting  
Massport Logan Office Center Board Room**

**MEETING SUMMARY**

January 27, 2011  
11:00 AM-1:00 PM

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**ATTENDANCE:**

**Federal Aviation Administration (FAA)-** Terry English, Brian Brunelle, Deborah James, George Yardley, Sandra Bogosian, Brendan Reilly

**Massachusetts Port Authority (Massport)-**Frank Iacovino

**Community Advisory Committee (CAC)-** Jerry Falbo (Winthrop), Darryl Pomicter (Beacon Hill)

**Project Consultant (PC)-**Stephen Smith (Ricondo & Associates, Inc.)

**VIA TELEPHONE and/or INTERNET CONNECTION:**

**CAC-** John Stewart (South End) (11:00 to 11:45)

**IC-** Jon Woodward (Landrum & Brown, Inc.), Stan Matthews (Crown Consulting), Scott Carpenter (Landrum & Brown)

**OBSERVER**

**FAA-** Alan Reed-Recorder

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References: Exhibit for Measure F-V(v2)-Turbo Prop Departure Routes

PM Note 3: See PM Note 1 for January 26, 2011.

Attendance: was taken for phone participants and those present. J. Stewart said on the previous day he did not plan to participate in the meeting today, hence he was not aware of the change in time, due to a pending snowstorm. The meeting was rescheduled for 11 AM (as noted in the previous day notes). He said he tried to call into the telecom at 8 AM, which was the original scheduled start time and was only able to stay online until 12 PM.

Measure F-V(v2)-Turbo Prop Departure Routes

Summary:

In response to an earlier request from J. Stewart, T. English asked S. Smith to clarify what the current worksheet graphic illustrates. S. Smith explained that the procedure is a vector procedure (not an RNAV) and that the FAA requires at least 3 divergent headings for turboprops off of the runway. The dispersion for a vector procedure would also be much wider than an RNAV, hence the display in the original graphic. He also clarified that the 240 and 220 headings shown on the map for southbound aircraft will not change. He noted that the focus of the meeting is whether or not the CAC can identify and

recommend a more noise compatible initial heading from the runway for north, northwest and westbound aircraft that still meets the intent of Measure F-V(v2) (to reduce turboprop/prop noise over the downtown area, before initiating turns over populated areas.

T. English added that S. Smith's more detailed information (enhanced Google Earth and population maps) were intended to assist CAC in making that recommendation.

Because J. Stewart was not able to connect to "GoToMeeting" to view the more detailed information, he had to base his recommendations on the original worksheet graphic. J. Stewart said that the land use areas depicted as "compatible" shown on the map were inaccurate. S. Smith said that the land use information was taken from the MassGIS system and generalized as "compatible" and "non compatible" - compatible mainly representing residential areas. S. Smith clarified to be accurate; FAA considers all residential areas to be compatible for those exposed to noise levels below 65 DNL. For purposes of this analysis, "noise sensitive" may be a more accurate term than "compatible" land use. S. Smith also indicated that there are areas under the corridor on the map he has, and perhaps could not see them due to the corridor shading over them.

D. Pomicter said that he believed the land use/population information is accurate, but was difficult to view and understand on the graphics provided for the meeting. They are much easier to see via the Google Earth display on the screen today. Both J. Stewart and D. Pomicter agreed that more information should be included on the map exhibits, including community boundaries and titles, runway headings, and noise contours on one exhibit—as they are now on several exhibits.

D. Pomicter also commented that the purpose of this heading review is to optimize noise effects overall and staying 2,000 feet away from the downtown and Back Bay towers would be an additional goal and benefit. To be away from the towers and very dense areas and in compliance with FAR Part 91, would complement other noise reduction efforts, including Measures F-T(v2) and F-U(v2).

The FAA and S. Smith noted that FAR 91 does not apply to arrivals and departures from a runway and a separate assessment is done to determine minimum altitudes for vectoring procedures. D. Pomicter responded that he acknowledged the FAA response and would like further detail, but did not wish to argue it now—rather, it could be considered an additional benefit by the CAC. He quoted FAR 91: "Except when necessary for takeoff and landing," acknowledged that certain operations with direct headings might not be able to comply, and commented that maximum efficiency to maximize capacity did not seem to satisfy "necessary" and not at all times.

G. Yardley referred to FAA Order 8260.3B (United States for Terminal Instrument Procedures (TERPS)) that clarifies this does not apply and offered to provide a copy to D. Pomicter. A. Reed had the reference at the meeting and would make a copy for D. Pomicter, who also asked that it be clarified in the final worksheet. [Note: After the meeting, G. Yardley provided a copy of 8260.3B CHG 19, United States Standard for

Terminal Instrument Procedures (TERPS), Chap 2. General Criteria, Section 1 Common Information, Pages 7-1-7-3, Paragraphs 200-210 to D. Pomicter.]

(Administrative Note: Information pertaining to minimum safe altitude (MSA) criteria, found in FAR 91, do not apply to aircraft departure procedures on climbout (Pilot/Controller Glossary, 2/11/10). Pilots must have the ability to become established (Pilot/Controller Glossary, 2/11/10) in the enroute (FAA Order 8260.3B, Ch.19, Para 202, “level flight” segments) environment before MSA standards are applied. Para 203, application of Required Obstacle Clearance (ROC) using Terminal Instrument Procedures (TERPS) states: “While the application of TERPS criteria indirectly addresses issues of fly-ability and efficient use of NAVAID’s, the major safety contribution is the provision of obstacle clearance standards.” [FAR 97.20, Subpart C addresses-TERPS procedures])

J. Stewart said that he still did not understand how the CAC got to this point in the measure. D. Pomicter gave an outline summary and recommended he re-examine the Measure F-V worksheet and graphics produced by the FAA to improve his understanding of the process and the current, revised proposal.

J. Stewart questioned if the FAA could vector aircraft further north from the proposed 260 heading somewhere in the vicinity of the “r” in the word “tower” (referring to the Prudential Tower on the worksheet map). B. Reilly and S. Bogosian said that the FAA could vector northbound aircraft anywhere between a 260 and 290 heading, and are looking to CAC for a recommendation. S. Smith noted that the 260 heading is the revised measure proposal from the FAA to the CAC, which was accepted by the CAC, subject to minor refinement.

Before leaving the telecon at approximately 11:45 a.m., J. Stewart recommended that S. Smith draw a 290 heading on the map for group review, which would place it more over Boston Harbor and north of the Prudential Tower. S. Smith mentioned that Boston Tower currently uses a 290 heading for prop departures off of Runway 22R and that this isn’t necessarily a change from current procedures, nor would it meet the intent of the measure.

J. Woodward reiterated that the goal of the study is to reduce noise over people and suggested modeling (for the planned 260 and 290 heading) rather than (CAC) speculating on potential noise changes among headings. S. Smith reminded the group that the original CAC intent of Measure F-V is to reduce turboprop noise and overflights over the downtown area.

D. Pomicter suggested that S. Smith draw a 270 heading from Runway 22L—based on his map study, roughly following the Huntington Avenue corridor—to see if that would be over more compatible land use based on the Google Earth map. On his initial review, D. Pomicter believed that 270 might provide more noise reduction.

T. English suggested viewing the headings superimposed over the population blocks. With the population base map and after clarification of the variance between magnetic headings for aircraft movements and true north as indicated on Google Earth mapping, D.

Pomicter agreed that the 260 heading indeed seems clearly over more compatible land use when compared to the 270 heading and recommended staying with the 260 heading. He stated that if he had this clearer information initially, there would have been no need for a meeting. T. English noted that the purpose of the meeting was to use the more detailed information for CAC to make a more informed decision, as had just occurred.

The group also looked at the 290 heading in relationship to land use. The 260 heading (track) from Runway 22 places props over a large commercial/industrial area, whereas the 290 appears to cross over more populated noise sensitive areas. In addition, the 260 heading meets the original intent of the proposal. Based on this comparison, CAC/IC meeting participants agreed that the proposed and accepted 260 heading (current Measure F-V(v2)) appears to be the best option to meet the intent—subject to additional CAC membership concurrence.

T. English noted that the consensus was made without the participation of J. Stewart (no longer on the phone), who had initially recommended the 290 heading. As a result, she asked J. Falbo how the CAC would like to handle this matter. J. Falbo agreed that based on the population maps, the CAC official recommendation would be the 260 heading, but requested that FAA also show the 290 heading with the population below as supplemental information for others to see what the group used to reach the conclusion.

The CAC sub-committee representatives requested different information on the graphics, which should include:

- Higher resolution exhibits
- A 260 degree (D. Pomicter) and 290 degree (J. Stewart/J. Falbo) runway heading depiction
- 2007 noise contours as a reference of existing noise levels
- Population levels as shown at the meeting
- Community name labels and boundaries
- Ground tracks labeled, including initial, runway headings extended
- All relevant reference points (e.g., DME)

S. Smith and D. Pomicter agreed that clutter makes the exhibit confusing, but can be layered with annotations to make it more understandable. With the elements listed above, D. Pomicter believes it will be much easier to understand individually and to communicate the information to people he represents. The group agreed to develop exhibits for use to communicate within the CAC and to their communities..

D. Pomicter now believes this version of the measure should proceed as is - for noise further analysis (Level 3 screening). J. Falbo concurred, adding that the Runway 27 group should not object to the 260 heading proposal once it sees the revised exhibits, and that it satisfies CAC goals and (the CAC) will hold final judgment until the noise results are made available for review.

Meeting adjourned 12:50 PM.