

SOURCE: Esri; Prepared by Jacobsen Daniels, 2020

Boston Logan RNAV (GPS) RWY 4L EA



Figure 2-3

RNAV (GPS) RWY 4L Procedure

FAA to Host Virtual Public Workshops on Draft Environmental Assessment for a Proposed New Approach Procedure to Runway 4-Left at Boston Logan International Airport

Workshop participants will learn about the Draft Environmental Assessment and the proposed procedure and can ask questions of FAA air traffic control and environmental experts.

Residents may view the Draft Environmental Assessment and register to participate in the workshops at FAABostonWorkshops.com beginning Sept. 21, 2020. You do not have to register to participate. The FAA also will livestream the sessions on YouTube and Facebook. Residents who are not online can participate by calling 877-853-5247 or 888-788-0099 as the workshops begin.

Workshop Schedule

October 23, 2020 – 11 a.m. to 12:30 p.m.

October 28, 2020 – 6 to 7:30 p.m.

Residents who are not online can view electronic or paper copies of the Draft Environmental Assessment at certain public libraries in the study area including Dorchester, Mattapan, Roxbury, South Boston, South End, Brookline, Milton and Quincy. Please contact your library to access the document.

The FAA opened a 60-day public comment period on the Draft Environmental Assessment which runs from Sept. 21 to Nov. 20, 2020. Residents may comment through the website, by email at FAABostonWorkshops@esassoc.com or through U.S. Mail at: Environmental Science Associates c/o Boston Logan RNAV (GPS) Approach EA, 4200 West Cypress St., Suite 450, Tampa, FL 33607

For more information about FAA's Community Involvement initiatives for Boston visit:

https://www.faa.gov/air_traffic/community_involvement/bos/



FAA September 15, 2020:

"The proposed new procedure closely follows the path of the existing visual approach for Runway 4-Left. It will enhance safety and flight efficiency by enabling air traffic controllers to more precisely monitor arriving aircraft, **especially in bad weather. When visibility is low, flights will be able to land on Runway 4-Left helping to reduce late night arrivals at the airport. Currently, aircraft can land on the runway only in good weather.**"

FAA wants to make 4L into an all-weather runway parallel to the 4R all-weather runway.

Even though 4L and 4R are designed for use when the wind is out of the Northeast (which is **18%** of the year) 4L and 4R already get **33%** of **all** Logan arrivals each year.

Why? Because when the cloud ceiling drops below 1800 feet, 4R is used for landings even in crosswinds and tailwinds from West, East and South so long as the wind is at 11mph or below.

Other runways **could** be used in West, East or South winds, rain or shine. For those runways the winds are in the proper heading, but aren't used..

Now FAA wants to make 4L **also** an-all weather runway so Milton residents will be under **both** arrival paths when cloud ceiling drops below 1800 feet in any wind from NE and all other winds at 11 mph or below. **Many more planes.**

DRAFT EA PROPOSED 4L RNAV
WILL BE AN ALL WEATHER PATH

ASSUMES ONLY 7 IMC DAYS A YEAR ...AND THUS:

ADDS 359 NEW ARRIVALS TO 4L IN ITS FIRST YEAR

NET 255 NEW ARRIVALS IN FIRST YEAR

4R NOW AT MAX THROUGHPUT

NOISE: 4L RNAV HAS NO SIGNIFICANT IMPACT

Milton: Baseline: 41.46 to 58.16 DNL dB

Baseline=11/1/2018 to 10/31/2019

Proposed RNAV: 41.45 to 58.13 DNL dB

See also Figure 4-3

EJ: MINORITY/LOW INCOME POPULATIONS WON'T
DETECT THE RELATIVELY SMALL INCREASE IN
NOISE/POLLUTION EFFECTS VS EXTANT EFFECTS

TODAY 4L USED USUALLY WHEN 4R QUE > 10 NM

APPROXIMATELY 18% LANDINGS ARE 7 TO 10PM
RNAV WILL ALLOW 4L TO ACCEPT THEM — WHICH
MAY REDUCE CANCELLATIONS + LATER ARRIVALS

TABLE 4-6.1 AND 4-6.3 LIST DNL IMPACTS

4L/4R Arrivals for the year 2019

4L 6416

4R 58519

But NE wind = **18%** of the year. So 18% of all days? Used only 65 days of the year?

No. 4L/4R are used much more than in NE wind.

Logan 2019 Total Arrivals = 186174

$64935 \div 186174 = \text{34.9 \% of all Logan arrivals}$

Actual 4L/4R use varies each day of use => **250... 300...400...arrivals/day on 4L/4R combined**

FAA's "Yearly average Day/Night Noise Level" (DNL dB) has no correspondence to noise impacts of 4L/4R in use.

DNL dilutes by counting days not in use. And disregards intensity of noise impacts when in use.

NEW ENGLAND PATRIOTS HOME GAME NOISE

BASELINE YEAR: REGULAR 2019 SEASON

AVERAGE ATTENDANCE = 68047 FANS

FIND ATTENDANCE USING THE FAA YEARLY AVERAGE DAY/NIGHT

dB METHODOLOGY

6 DAY TIME HOME GAMES AVERAGE ATTENDANCE 69971

2 NIGHT TIME HOME GAMES average attendance 62275

*****AVERAGE DAY/NIGHT ATTENDANCE = 68047

***** FAA METHODOLOGY:

INCLUDE ALL 365 DAYS FOR A YEARLY AVERAGE , NOT PER GAME,

INCLUDE ALL DAYS OF THE YEAR, EVEN WHEN FANS [PLANES] ARE NOT THERE

$68047 \text{ FANS} \div 365 = \text{FAA "YEARLY D/N AVERAGE"} =$

*186 FANS PER DAY/NIGHT OF 2019 => COMPUTE NOISE OF 186 FANS/DAY !!

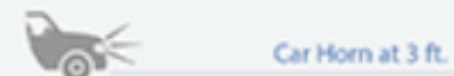
NOT NOISE OF 68047 FANS WHEN STADIUM IS IN USE (GAME DAYS)

FAA Yearly Day/Night dB IS NOT Average Noise of Days/Nights

Impacted by Overflights when 4L/4R are in use(Game Days)

COMPARATIVE NOISE LEVELS (DBA)

COMMON OUTDOOR SOUND LEVELS



Commercial Area

Quiet Urban

Quiet Rural



NOISE
LEVEL
dB(A)

110

100

90

80

70

60

50

40

30

20

10

0

COMMON INDOOR SOUND LEVELS

Rock Band



Inside Subway Train (New York)

Food Blender at 3 ft.



Garbage Disposal at 3 ft.
Shouting at 3 ft.

Vacuum Cleaner at 10 ft.



Normal Speech at 3 ft.

Large Business Office
Dishwasher Next Room

Small Theatre, Large Conference Room
(Background)



Library
Bedroom at Night
Concert Hall (Background)



Broadcast & Recording Studio

Threshold of Hearing



The human ear also responds to different pitches or frequencies of sound differently. We are less able to hear low frequencies like the rumble of thunder but hear high frequencies like the cry of a baby more strongly.

DRAFT EA EXCERPTS

THE DRAFT EA'S DNL Conclusion: Section 4.6.6

A comparison of noise exposure between the No Action Alternative and the Proposed Action Alternative indicates **no significant impacts** (increases of **DNL 1.5 dB** in areas that would be exposed to DNL values of **65 dB or higher**) to population centroids within the GSA. Though **no significant impacts** were identified, the Proposed Action was also evaluated for **any reportable increases** of 3.0 dB or greater in population centroids with a baseline exposure between DNL 60dB and DNL 65 dB, or an increase of 5.0 dB or greater for population centroids with a baseline exposure between DNL 45 dB and DNL 60 dB. There were **no reportable impacts** as a result of the Proposed Action

Milton: **Baseline: 41.46 to 58.16 DNL dB**

Baseline=11/1/2018 to 10/31/2019

Proposed RNAV: 41.45 to 58.13 DNL dB

See also Figure 4-3

A net total of 255 annual operations will be added to traffic at the Airport to represent additional operations that would currently be

canceled under the No Action Alternative. **This will occur because the additional gain in efficiency attributable to the Proposed Action increases the Airport's hourly Average Arrival Rate (AAR) and allows additional arrival operations.** These operations comprise:

An additional 359 annual arrivals to runway 4L, representing flights that are no longer canceled or delayed due to additional runway throughput available with the RNAV (GPS) RWY 4L IAP.

A reduction of 104 annual arrivals to Runway 4R, representing flights that can now use Runway 4L earlier in the day due to increased throughput and no longer need to wait to use Runway 4R.

7 DAYS IMC

**The Airport was in IMC for either:
Six consecutive daytime hours, or**

Eight of any ten daytime hours

The airport was in the Northeast configuration for at least 80% of the hours where it was in IMC.

Over the baseline timeframe, **seven** days were identified that met the above criteria. These days are listed below:

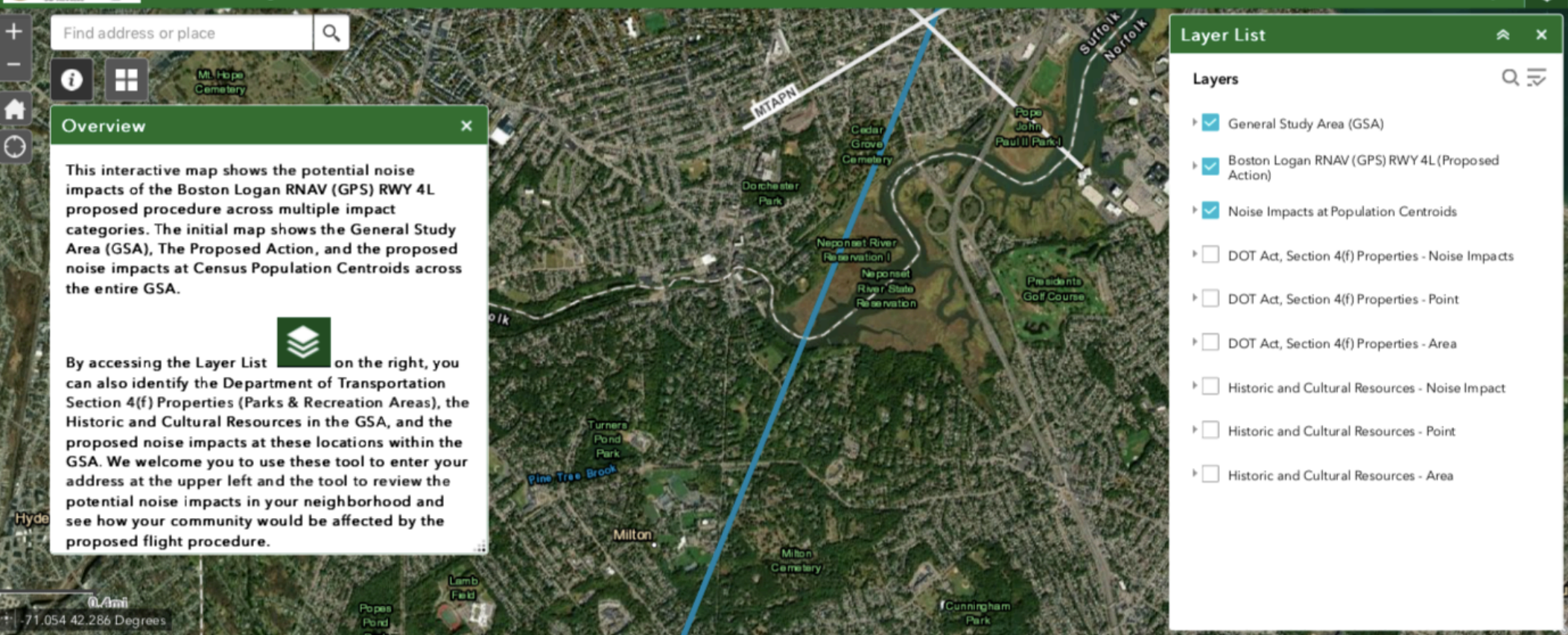
January 5, 2019, January 20, 2019, February 18, 2019
March 2, 2019 , April 22, 2019, June 1, 2019,
October 11, 2019

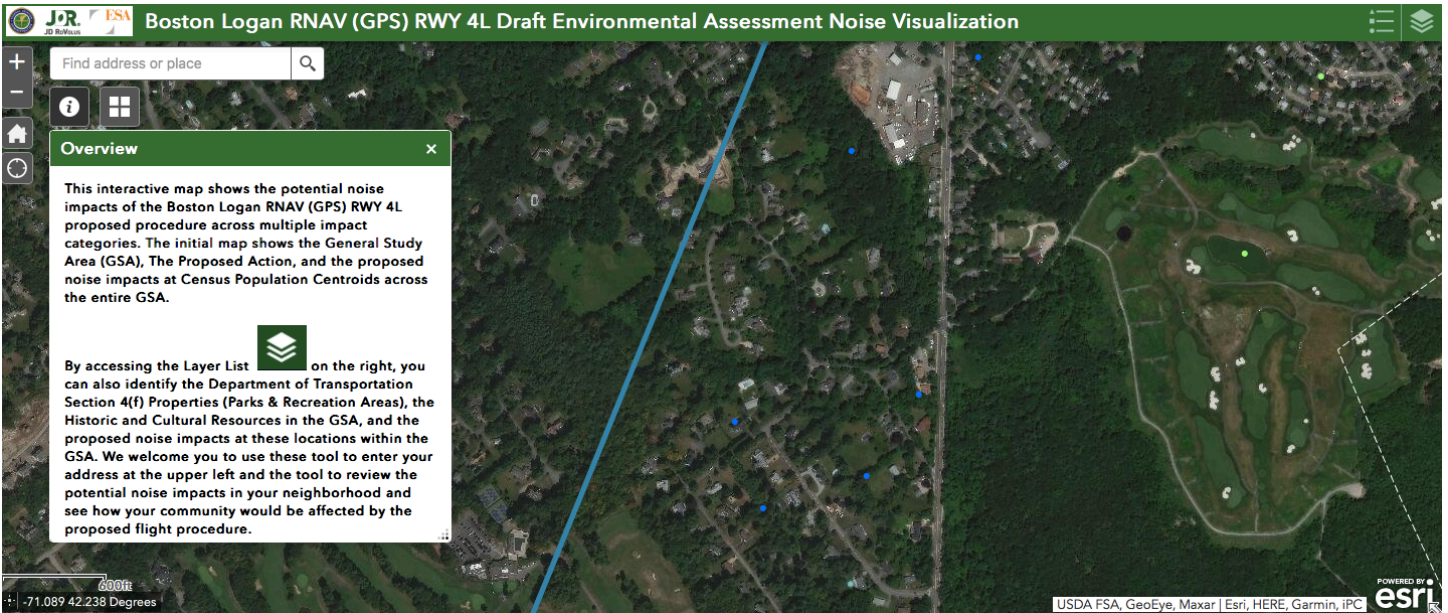
POLLUTION

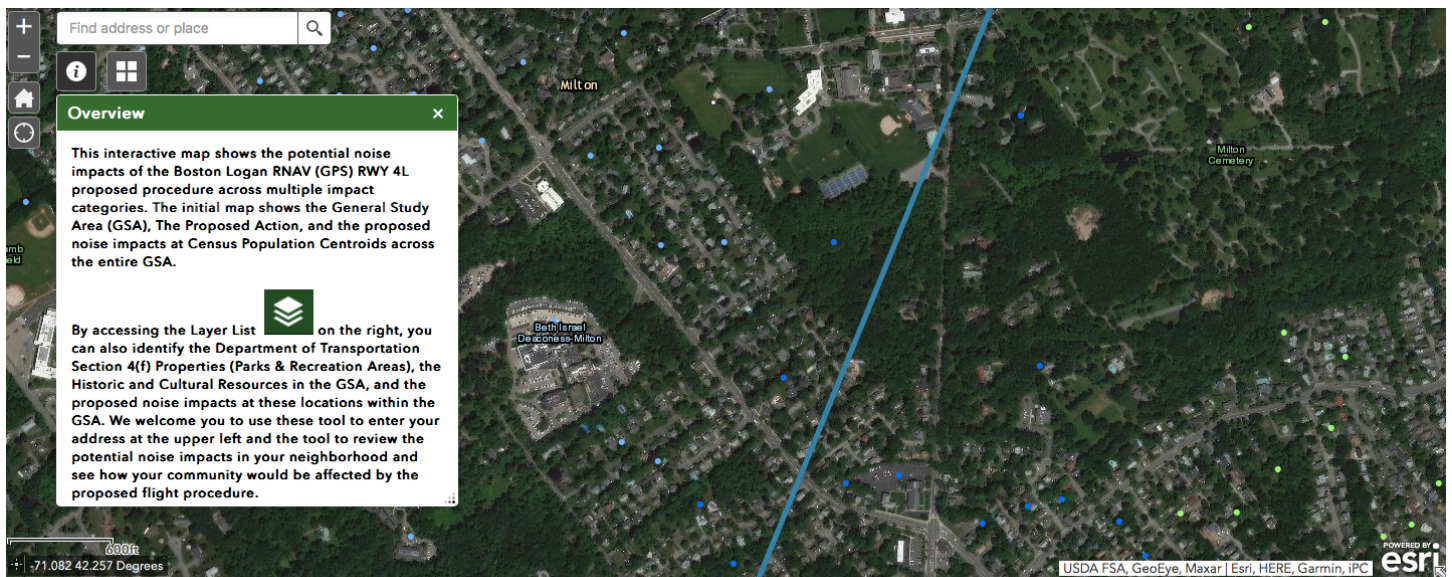
The net change in pollutant emissions below the mixing height for the Proposed Action is less than the de minimis thresholds for all criteria pollutants.

Implementing the Proposed Action will not cause exceedances of the de minimis thresholds applicable to the GSA for any pollutant. Based on the above analysis, adverse air quality impacts will not occur. Therefore, no further air quality analysis is necessary, and a conformity determination is not required.

[Figure 3-7 these EJ Census block groups are particularly concentrated to the south and west of the airport, which are the primary areas of change due to the Proposed Action. Section 4.7 states: new arrival operations comprise less than 0.5% of all arrivals at the Airport and given the high volume of flights currently using the Airport, **any potential impacts are likely to be small and not detectable to most of the overflowed population. As such, no persons of low income or minority populations are expected to experience disproportionately high and adverse effects. Accordingly, under the Proposed Action Alternative** there would be no significant EJ impacts.]



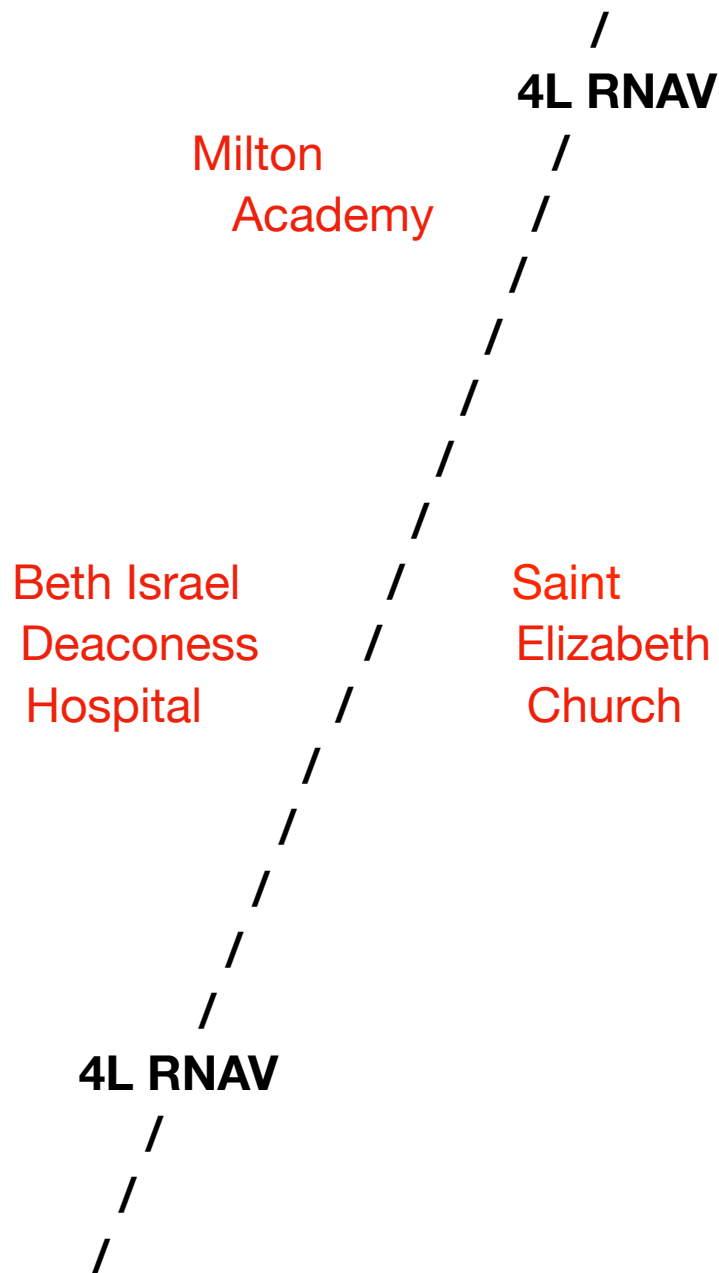




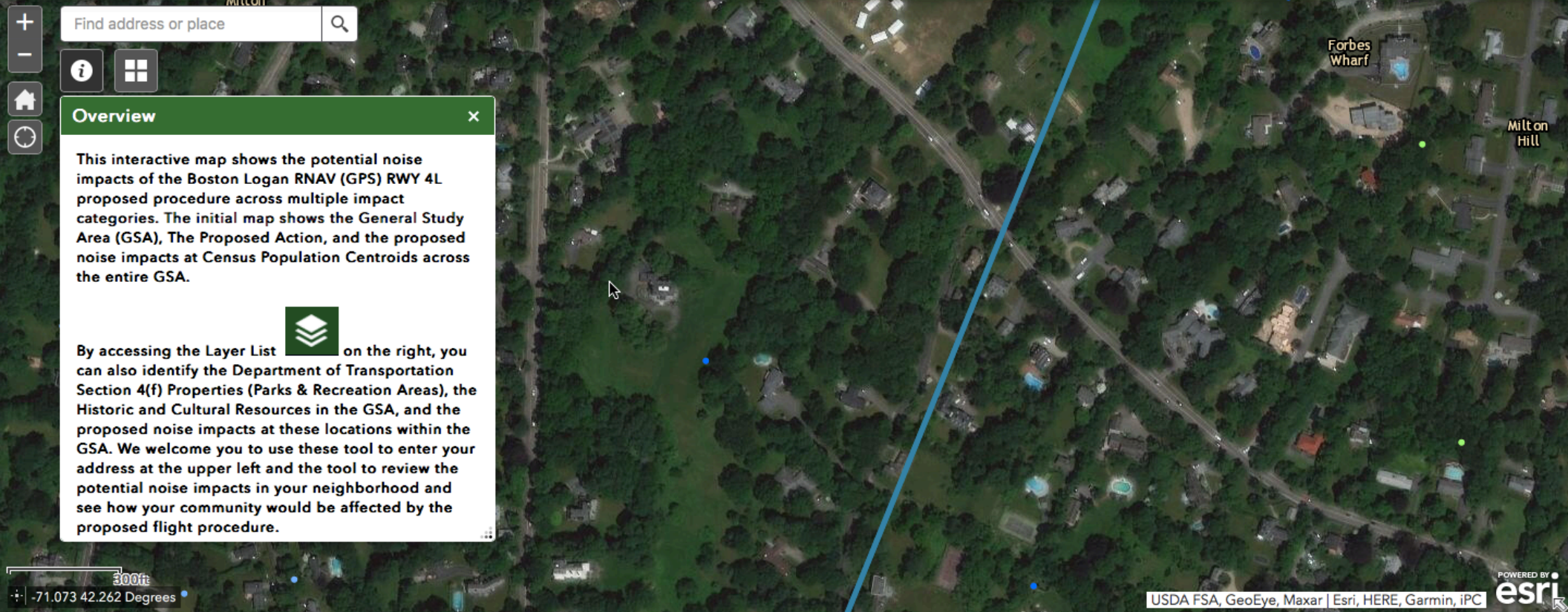
“NOISE SENSITIVE AREAS” BLASTED

4L RUNS DIRECTLY THROUGH THE **N.S.A. TRIANGLE:**

HOSPITAL, CHURCH, SCHOOL — **EACH** IS A N.S.A.



Boston Logan RNAV (GPS) RWY 4L Draft Environmental Assessment Noise Visualization



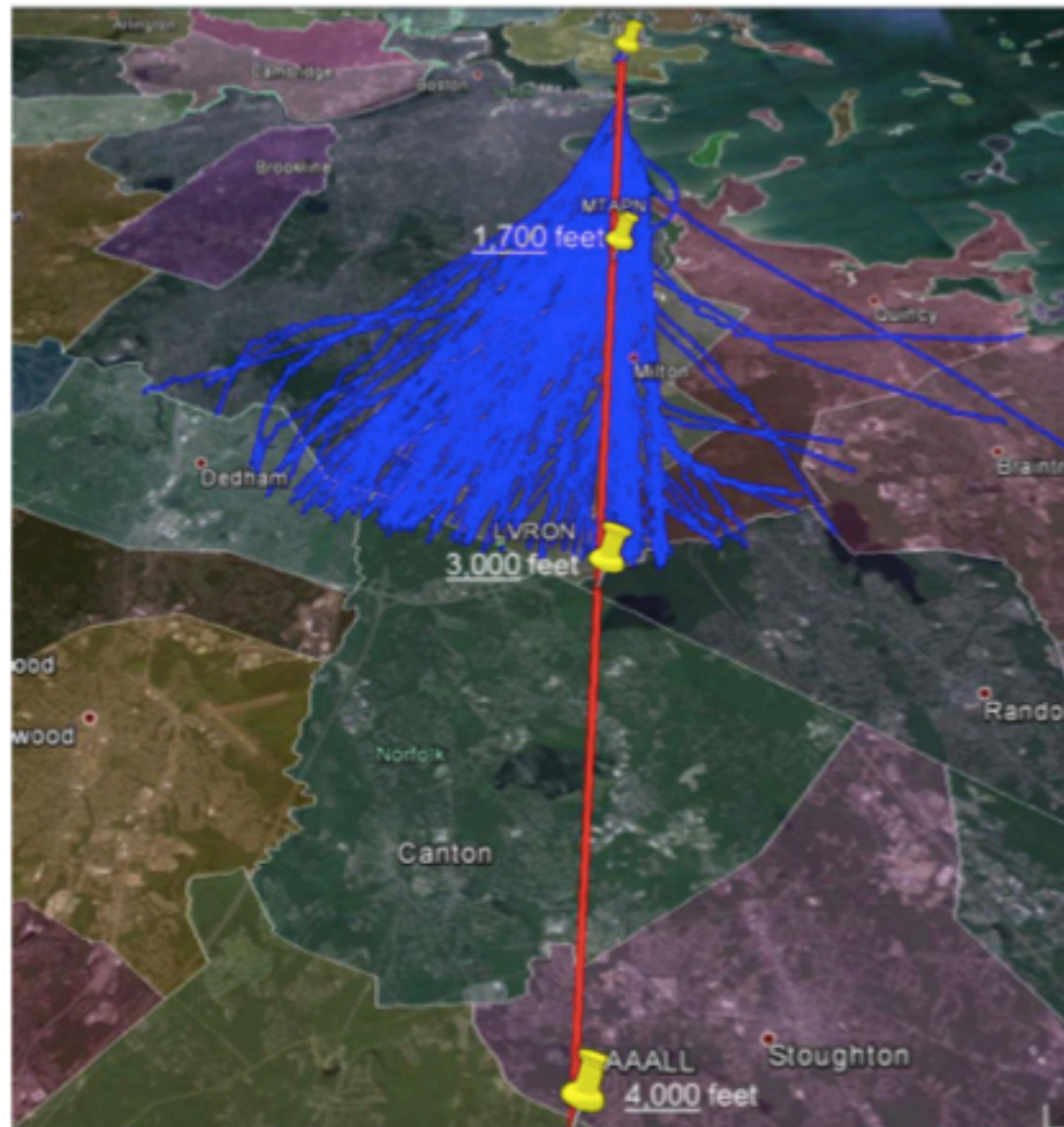


Figure 8 Proposed RNAV (GPS) IAP Course (Red) and JetBlue Visual Arrivals (Blue) to Runway 4L during April-May 2013

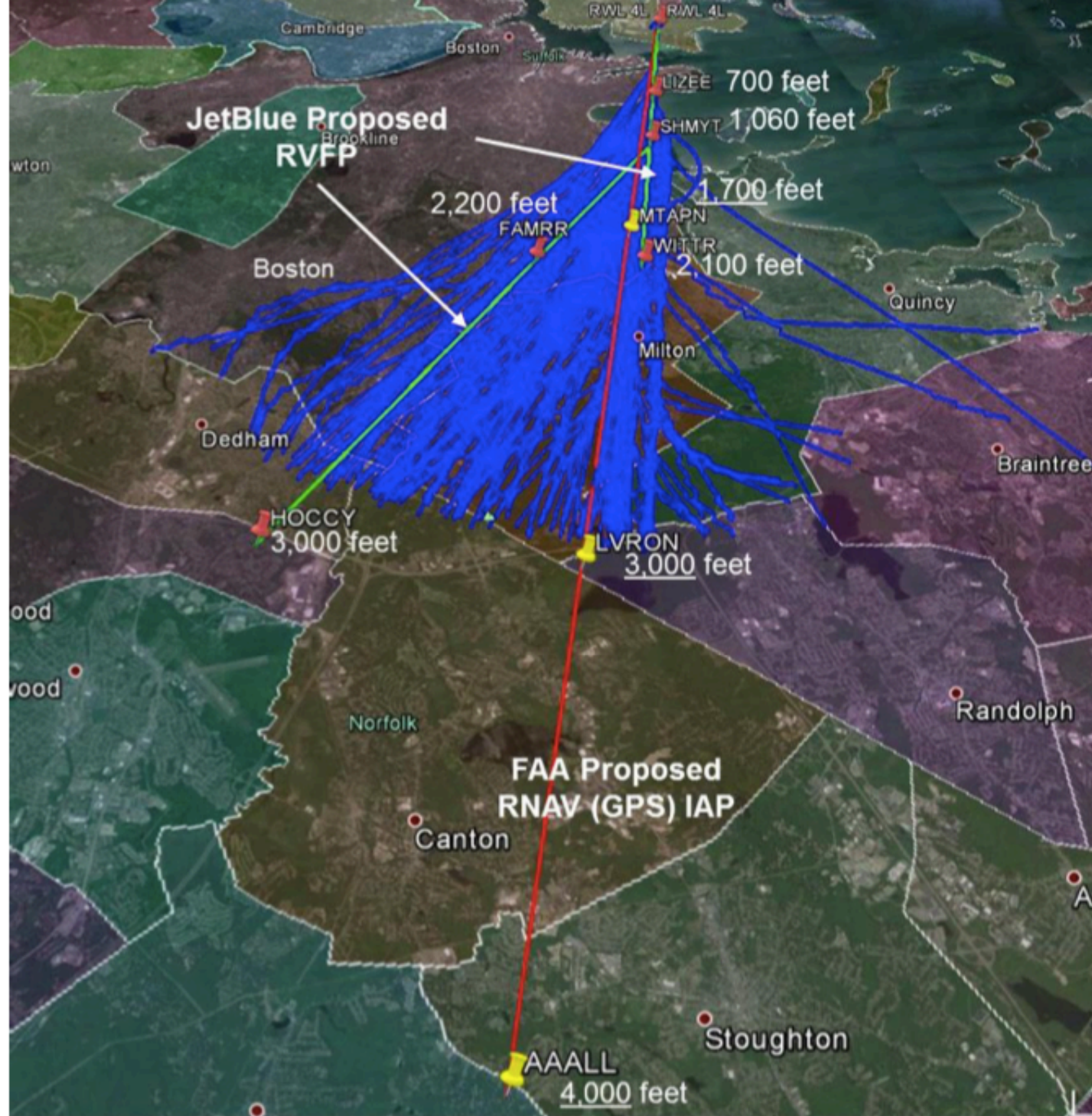
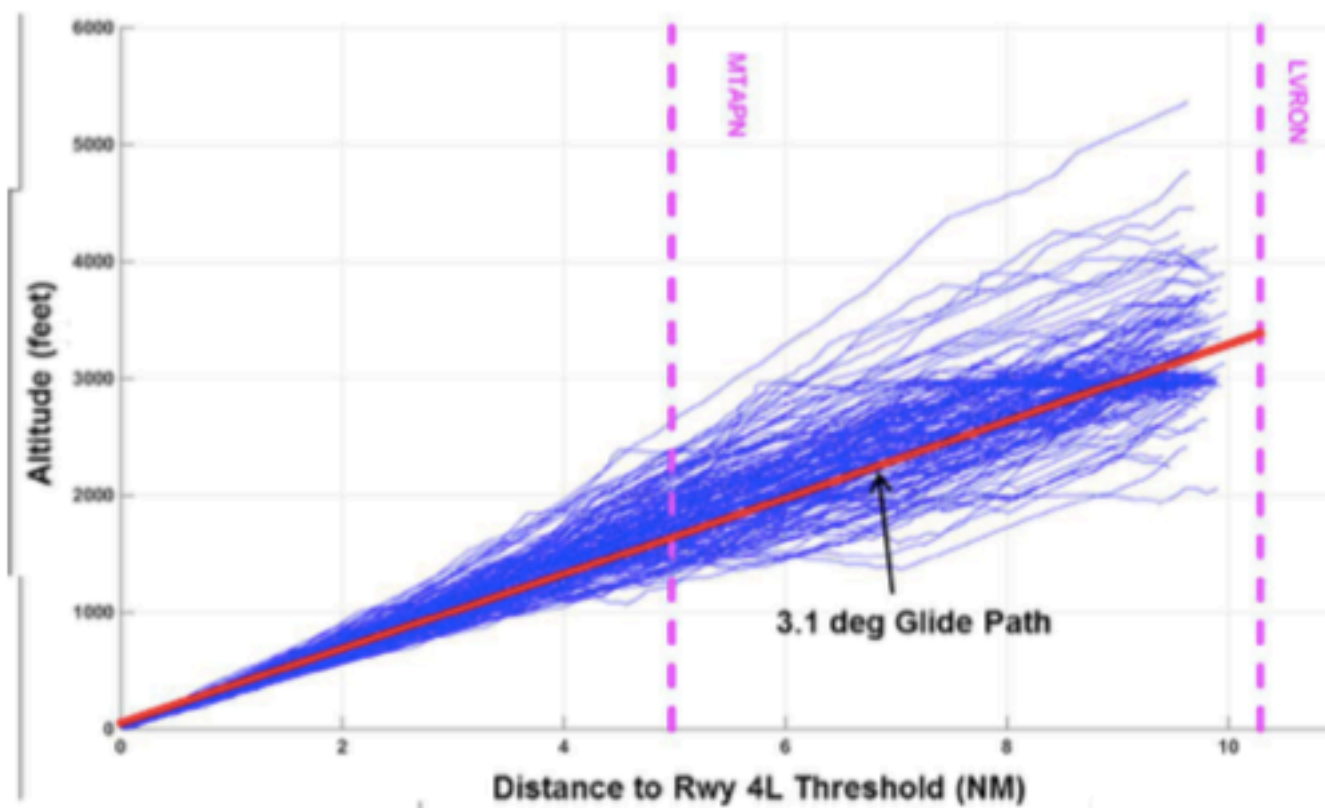


Figure 11 Proposed Runway 4L RNAV (GPS) IAP (Red) and RVFP (Green), and Representative 2013 Flight Tracks (Blue)



Also under VMC, **an estimated 2,500 aircraft** will use the Runway 4L RNAV GPS IAP for advisory guidance. It will enable use of continuous descent trajectories and a **higher glide slope** than the PAPI, also **reducing noise on the ground**. Under IMC, the Proposed Action will enable approximately **255 flights annually that now land after 10 p.m. (the onset of “night” defined by the INM) to land before 10 p.m**

[The Precision Approach Path Indicator (PAPI) systems provides pilots with visual glideslope guidance during approach for landing.]

Aircraft RNAV Utilization Summary — Use of the two RNAV arrival procedures as a function of meteorological conditions is shown in Table 8.

Table 8 Estimated Annual Aircraft Use of RNAV Approaches

RNAV Use & Wx RNAV	Cleared* IMC (Case #2)	Cleared* VMC (Case #3)	Total Cleared*	Advisory† VMC (Case #3)	Total Cleared + Advisory
RNAV GPS IAP	2,469	435	2,904	2,500	5,404
RVFP	N/A	2,825	2,825	5,000	7,825
Total	2,469	3,260	5,729	7,500	13,229

* Ground track expected to be changed from current procedure

† Ground track not expected to be changed from current procedure

LACK OF CLARITY ON USE OF 4L RNAV IN VMC

Page A-26 IER (March 23, 2016)

During VMC, over 97% of the arrivals to Runway 4L will **not** be cleared to use the proposed IAP.

Will the Draft EA adopt this statement...or not?

Page A-31 IER (March 23, 2016)

As stated in Section I.C (page 4), **it is expected that 80% to 90% of arrivals during VMC will be cleared for the controller-vector/pilot-visual procedure that is currently used (rather than being cleared for either RNAV procedure). These aircraft will, however, have the Runway 4L RNAV GPS IAP and the Runway 4L RVFP available as advisory guidance after joining the final leg of the approach that is aligned with the runway (Figure 5, page 9).**

THAT LAST SENTENCE IS KEY. UNDOES THE FIRST.

Table 4, whereas Table 13 does.) As a percentage of the applicable threshold, the largest DNL increase is 6.0%, which occurs for the $45 \leq \text{DNL} < 60$ range. Approximately 48 thousand persons would experience a DNL increase, and approximately 637 thousand persons would experience a DNL decrease (a 13-to-1 ratio). Considered in light of the threshold criteria of Table 4, the assessment is that **both actions combined will have a negligible but generally beneficial impact on the noise exposure on the ground.**

Table 14 INM Case #4 (Cumulative Impact): DNL and Population Changes

Exposure with Proposed Action	Threshold DNL Increase with Proposed Action	Maximum DNL Increase	Population* Exposed to a DNL Increase	Maximum DNL Decrease	Population Exposed to a DNL Decrease
$65 \text{ dB} \leq \text{DNL}$	1.5 dB	0.0 dB	187	—	0
$60 \text{ dB} \leq \text{DNL} < 65 \text{ dB}$	3.0 dB	0.1 dB	2,013	0.1 dB	2,092
$45 \text{ dB} \leq \text{DNL} < 60 \text{ dB}$	5.0 dB	0.3 dB	46,218	0.5 dB	635,211
TOTALS	—	—	48,418	—	637,303

*46,347 persons are exposed to DNL increases of 0.1 or 0.2 dB; 71 persons are exposed to a DNL increase of 0.3 dB.

4L RNAV DELAY REDUCTION [2016 Draft IER
APPENDIX A PAGE 60, TABLE 20] [7 IMC DAYS??]

[Arrivals delay] reduction is estimated to be 3,500 hours (which would eliminate approximately 14% of the annual arrival delays at Logan). This estimate for the total delay reduction is based on (a) a 48.4 minute average per aircraft delay reduction, as shown in Table 20; (b) a total of 4,938 aircraft experiencing a delay reduction; and (c) a conservative reduction of their product to take account of unanticipated circumstances. Based on ASDE-X data for 2013 (Section I.D), delay reductions would accrue to the 2,469 aircraft shifted from Runway 4R to 4L, and to all aircraft that would arrive on Runway 4R earlier as a result of other aircraft being shifted to Runway 4L (conservatively estimated to be one additional aircraft). As a validity check, a total delay reduction of 3,500 hours is consistent with 288 hours of delay reduction for one IMC day and 12 days of prolonged IMC. (In 2013, there were 14 days that Logan had 8 hours or more of IMC).

This analysis does not quantify the delay reduction that would be achieved during shorter periods of IMC, so it understates the amount of delay reduction likely to be achieved. [=> even more IMC use/planes]

Figure 3 Flight Path for a VMC Arrival to Runway 4L (ASQ4694)

Radar tracks for 4,375 arrivals to Runway 4L for April-May-June, 2013 are shown in Figure 4. Figure 5 shows the ground tracks for the same flights in a “location frequency” format – i.e., based on the frequency of overflights of ground locations (informally termed a “heat map”). Vertical profiles for the same set of flights are shown in Figure 6.

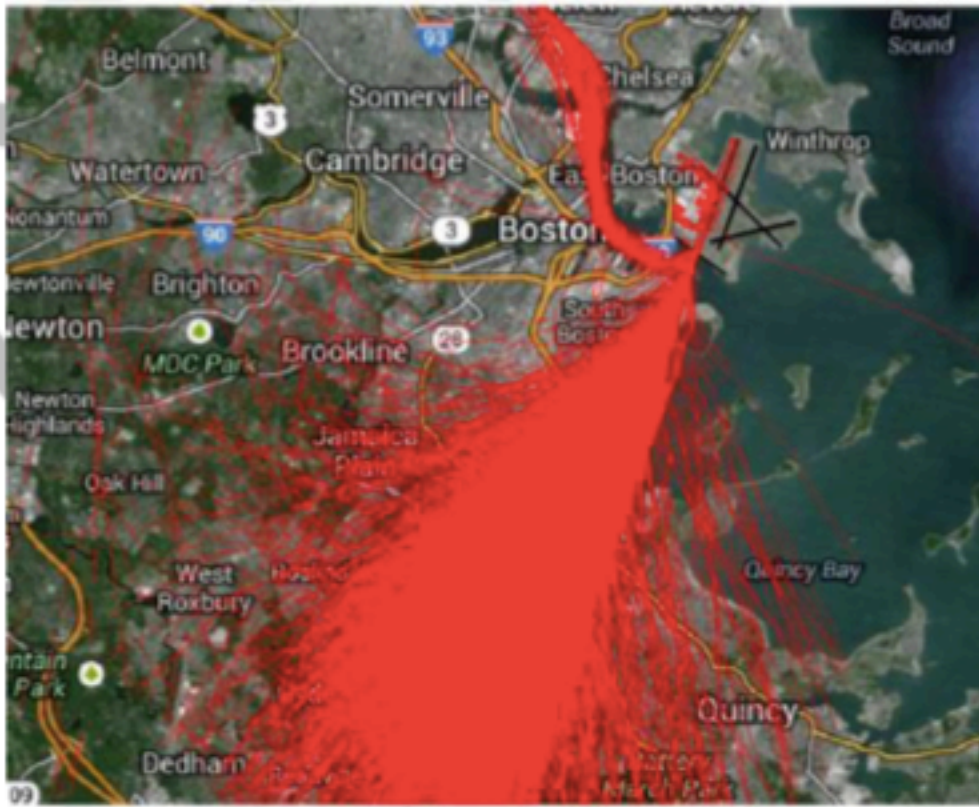


Figure 4 Tracks for 4,375 Arrivals to Runway 4L during April-June 2013

QUOTE FROM PAGE A-78 Of The Draft 4L EA:

9. Effects on the quality of the human environment that are likely to be highly controversial on environmental grounds (see Order 1050.1F, paragraph 5- 2.b.(10)).

☐ Yes ☒ No ☐ Possibly

Comment:

As evidenced by comments received by the FAA following an outreach meeting on May 18, 2015 there is opposition from some residents of Milton, MA, (approximately 108 comments received) and their elected officials regarding implementation of the Proposed Action (Runway 4L RNAV GPS IAP). Two members of the Logan Airport CAC from other communities and the Board of Health for the Town of Randolph also expressed opposition.

As stated in FAA Order 1050.1F, paragraph 5-2, opposition alone is not sufficient for a Proposed Action or its impacts to be considered highly controversial on environmental grounds. There must be a reasonable disagreement regarding the impacts of the Proposed Action. Comments received indicate that the majority of the opposition is based on noise and air quality associated with current flights over Milton.

To provide detailed information on noise impacts, FAA has done a full INM analysis for the FAA's Proposed Action, which includes analysis of the proposed JetBlue Runway 4L RVFP for cumulative impact purposes. Typically, a noise screen is conducted for these types of situation — adding instrument guidance an existing visual operation, without changing the type of aircraft, nor increasing the number of flights involved, or changing the area on the ground that is overflown. The INM cumulative analysis findings (for both proposed procedures) are summarized in Table 14 (page 39). People exposed to less noise outnumber those exposed to more noise by a 13:1 ratio. Within the Baseline 45 dB DNL contour, the maximum DNL increase is 0.3 dB. All DNL increases are negligible in comparison to the applicable thresholds shown in Table 4. For the FAA's Proposed Action individually, the maximum DNL increase is 0.1 dB and the population exposed to a decrease in DNL exceeds those exposed to an increase by a ratio of 5-to-1 (Table 11, page 36).

Email text/Questions: October 6, 2020

This email follows-up on the Regional Administrator's statement at the September 21, 2020 Zoom session with elected officials regarding the Logan Runway 4R Environmental Assessment.

We ask that these technical questions be addressed:

1) *Jet Blue Special Procedure*: Will aircraft with the 4L JetBlue Special procedure recorded in their FMS be allowed to request to use that procedure and to use it, or will the FAA state that the 4L RNAV will be the only arrival path to Runway 4L? With regard to that question, please also state:

- (A) the number of arrivals in the baseline year on the 4L JetBlue Special procedure path;**
- (B) the number of arrival aircraft expected to use the 4L RNAV path in its first year of use that otherwise would have been expected to use the JetBlue Special procedure;**

- **(C) the number of arrival aircraft, if any, expected to use the JetBlue Special procedure in the first year of implementation of the 4L RNAV path; and**
- **(D) provide a table, in format similar to Table 8 of Appendix A to the Draft EA, stating the Estimated Annual Use of 4L RNAV Approaches, on the basis of Cleared IMC, Cleared VMC, Advisory IMC (if any), Advisory VMC and Total Cleared+Advisory use while including, listed separately, as in Table 8, any RVFP use, in each of those categories.**

2) 4R RNAV Path on Noise Visualization:

Please promptly provide a version of the Noise Visualization on the same FAA website that adds the position of the Runway 4R RNAV path so that users can find answers to these questions: their location in relation to each of the closely spaced parallel runways; the combined noise impact on their location of the proposed RNAV 4L procedure and the existing 4R RNAV procedure; and compare

that noise impact level to noise impact levels at other locations.

3) **Baseline Year:** Please provide a version of the Noise Visualization as in question 2) for the baseline year. With regard to the baseline year, please also explain:

(A) On what basis has the FAA used November 1 2018 through October 31, 2019 as the baseline year rather than the baseline year used in its March 23, 2016 IER, contained in Appendix A to the draft EA?

(B) Is it correct that the Draft EA does not measure the noise impacts of consolidating the JetBlue Special procedure with the 4L Visual path into a single RNAV path?

(C) Is it correct that the Draft EA only measures the noise impact of incremental 4L arrivals due to implementation of RNAV capability to use 4L in IMC circumstances?

(D) Is it therefore correct that this EA will not address whether implementation of

the 4L RNAV procedure will have significant or reportable noise impacts under Order 1050.1f compared with the baseline year, not the baseline year used in its March 23, 2016 IER, contained in Appendix A to the draft EA?

4) Noise Contours: For the present Noise Visualization and the added 4R RNAV path noise visualizations in questions 2 and 3, please provide graphically the noise contours of aircraft traveling those paths so that residents

can answer the questions: how far from each side of the parallel paths aircraft noise extends; and what overlaps exist of noise from the two parallel 4L and 4R paths.

5) Nabove 25 Lmax peak day 60/50 [day/night] noise measurement: On the present FAA Noise Visualization and on each of the two additional versions requested above, or in another format, show what the Nabove 25 Lmax peak day 60/50 [day/night] noise measurements at locations affected solely by

the 4L and 4R RNAV paths are respectively, as well as at those locations affected by both paths' noise, using different a color for each of these three indications, or other differentiating means.

For the Nabove 25 Lmax peak day 60/50 [day/night]

noise measurement method, we refer you to Data-Driven

Flight Procedure Simulation and Noise Analysis in a Large-Scale Air

Transportation System June 2018

by Luke L. Jensen and R. John Hansman "The analysis in this thesis uses

an annoyance threshold of 25 daily flights at the 60dB (day) and 50dB

(night) level." (Section 2.8, page 59 referencing Logan runway 4L/4R

arrivals)

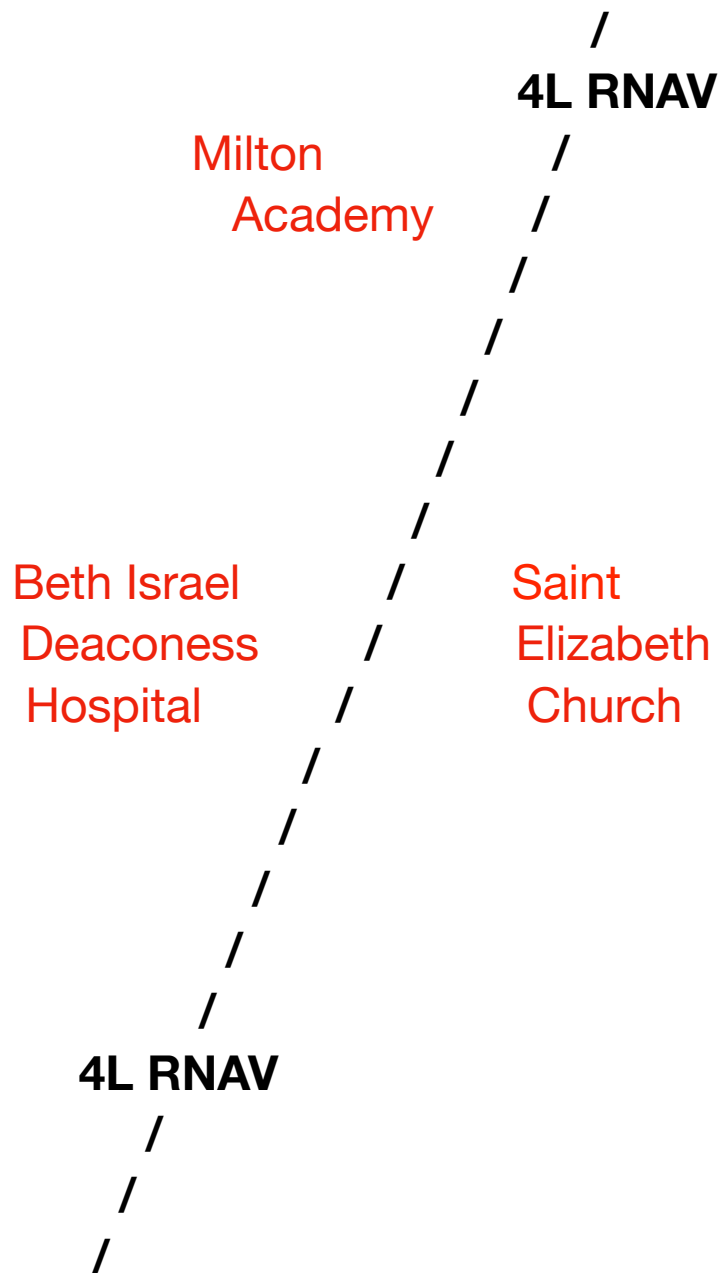
<https://pdfs.semanticscholar.org/6322/03aecd9d9a55136e8bc9e105b1e4bbc8ca93.pdf>

6) See the attached diagram illustrating that based on the Draft 4L EA Visualization the proposed 4L RNAV path will overfly the triangular areas formed by three noise sensitive areas, namely hospital center, church and rectory, and a 13-year school campus. In light of this, provide the Nabove 25 Lmax peak day 60/50 [day/night] noise measurement and corresponding DNL measurement for each of those three locations.

“NOISE SENSITIVE AREAS”

4L RUNS DIRECTLY THROUGH THE **N.S.A. TRIANGLE:**

HOSPITAL, CHURCH, SCHOOL — **EACH** IS A N.S.A.



MIT STUDY 2018 4L/4R NOISE CONTOURS

**Noise Complaints captured by preferred methodology for
RNAV analyses:**

peak-day Nabove contours at BOS (60dB day, 50dB night)

4L RNAV ENVIRONMENTAL ASSESSMENT — NEXT STEPS

RESERVE OUR OBJECTION TO ANY EA AT THIS TIME

60 DAY COMMENT PERIOD ENDS NOV. 20

FAA VIRTUAL “WORKSHOPS” OCT. 23, OCT. 28

REQUEST THAT SB SUBMIT THE FOREGOING TECHNICAL QUESTIONS TO

FAA...AND OTHERS [TBD]

TOWN: SUBMIT WRITTEN COMMENT TO FAA

OUTREACH TO MATTAPAN, DORCHESTER AND TO OTHER ELECTEDS

DORCHESTER REPORTER — MATTAPAN REPORTER— MILTON SCENE

LANDING GEAR DEPLOYMENT OBSERVATIONS

EA STANDARDS ARE FAA-“DNL- CENTRIC”: CHALLENGE EA BY FINDING

SPF DISCONNECTS

O'Hare Noise Compatibility Commission
*44 Communities and 22 School Districts Dedicated to Reducing
Aircraft Noise*

LANDING PROCEDURES

Frequently Asked Questions for Landing Procedures

On January 13, 2015 **United Airlines Assistant Chief Pilot Jeff Bayless** answered questions from ONCC Technical Committee members regarding landing procedures based on the pilot's experience.

What is the typical speed of arriving aircraft?

****Typically aircraft speed is 180 knots five miles out from the airport.**

****Five miles usually is considered the outer marker for the final approach fix.****

****At that point, landing gear and flaps will be down.**

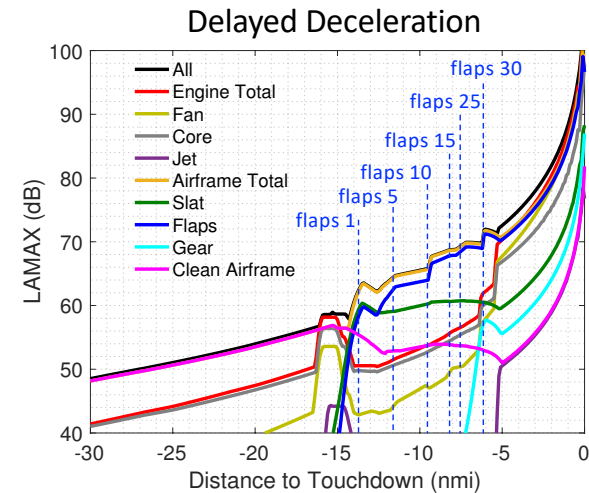
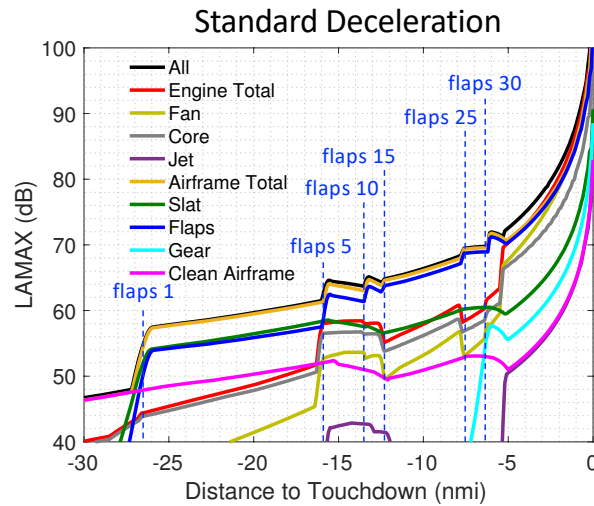
Anywhere from about 1,500 feet to 1,000 feet of altitude, the aircraft will have flaps down and will be on autopilot on the 3 degree glide slope.

There is a GPS tracking in the ILS system which indicates 3 degrees. If the aircraft goes below 3 degrees it becomes unsafe.

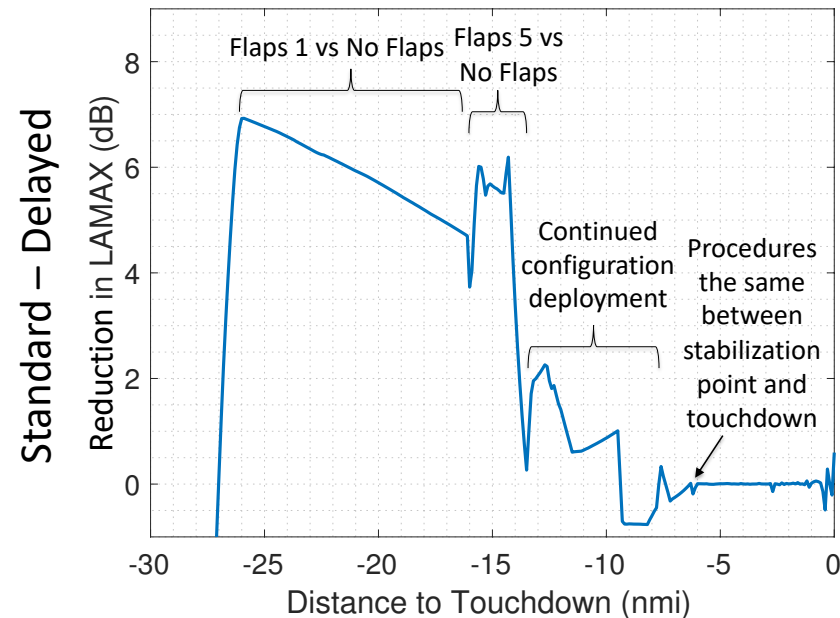
United Airlines – Captain Jeff Bayless
Jeff Bayless is Assistant Chief Pilot for United Airlines at O'Hare. Captain Bayless, a 30-year veteran pilot for United, currently serves in the company's Flight Operations Division. Today, he flies the Boeing 777 aircraft, but has also operated the A320, B-737, DC-10, B-727 and DC-8 during his United career. Captain Bayless has been a volunteer for the Air Line Pilots Association (ALPA), and earned the organization's D.B. Robinson Award for outstanding achievements in safety. He has also served as United's Managing Director of Aviation Safety.

Example Noise Impact of Delayed Deceleration Approaches

LAMAX Under the Flight Track for Boeing 737-800s



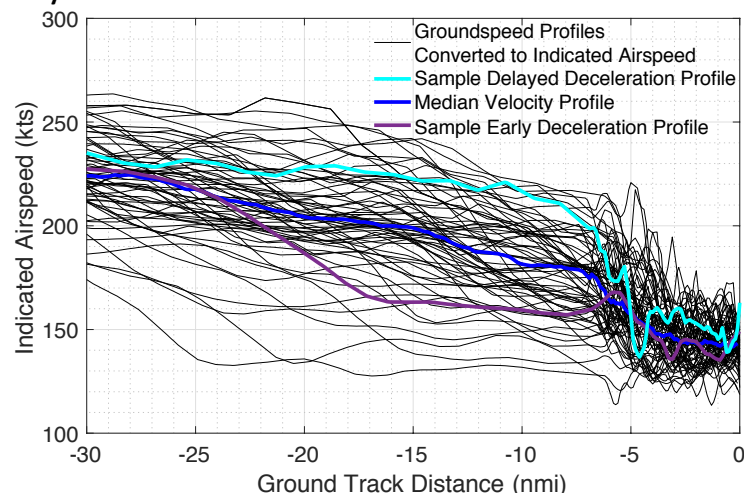
Noise Impact Comparisons



- Reduce noise by delaying deceleration and thus extension of flaps

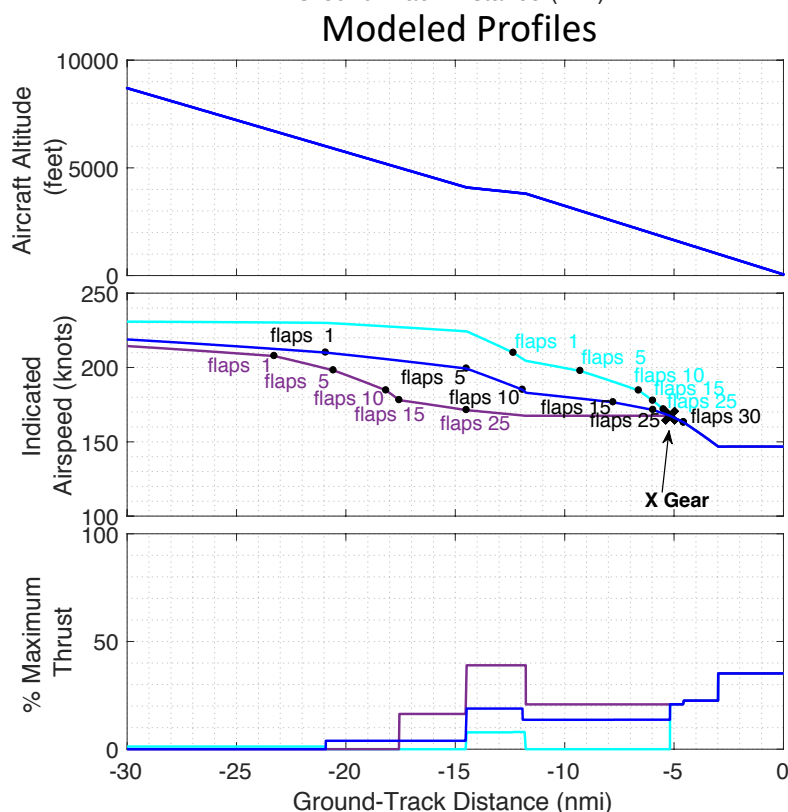
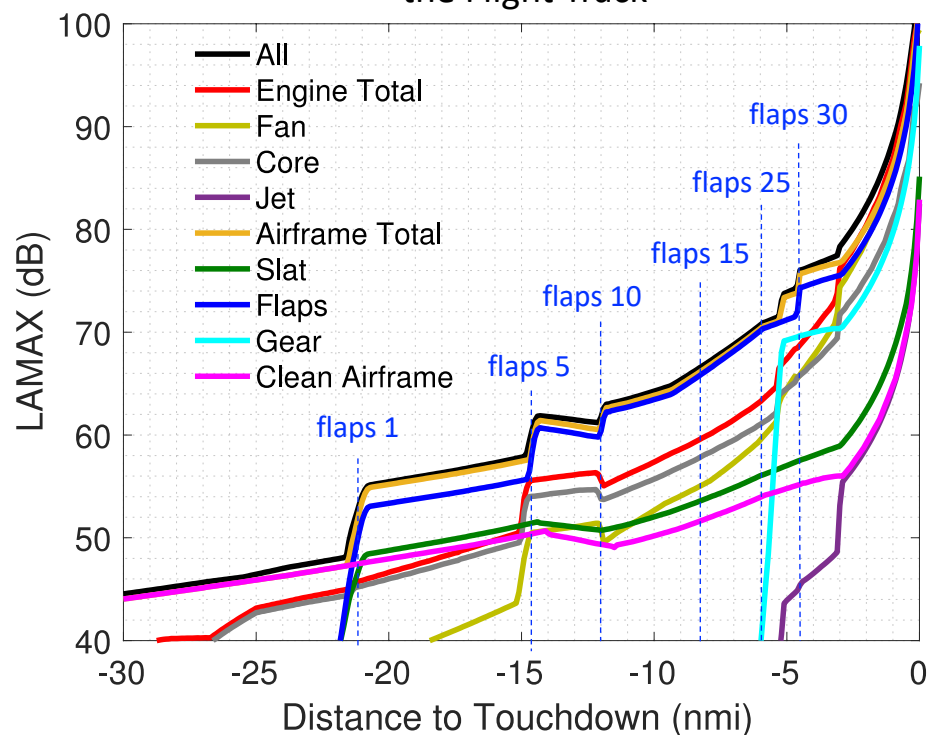
Delayed Deceleration Approaches

Velocity Radar Data for B737-800 4000ft Level Offs into 4R



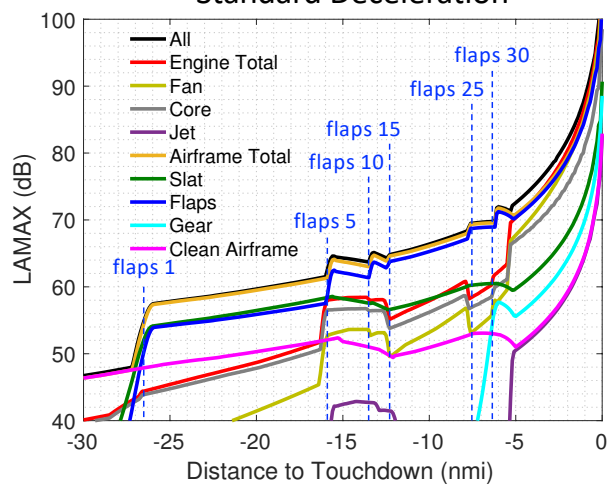
- Reduce noise by delaying extension of flaps
- Potential concerns from ATC and pilots regarding different deceleration rates and managing traffic
- Must decelerate early enough to assure stable approach criteria

Example Noise Component Breakdown Under the Flight Track



LAMAX Under the Flight Track for Boeing 737-800s

Standard Deceleration



Delayed Deceleration

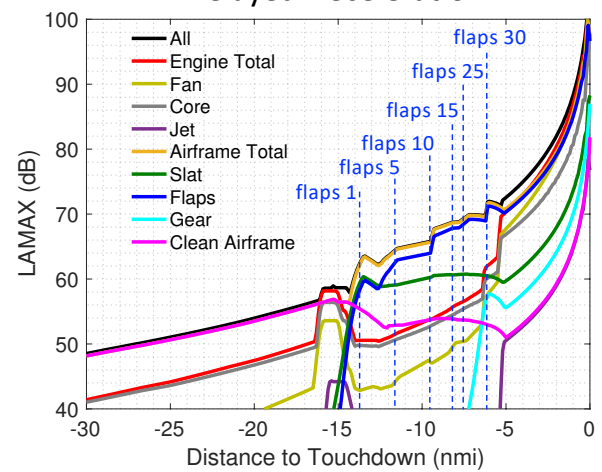
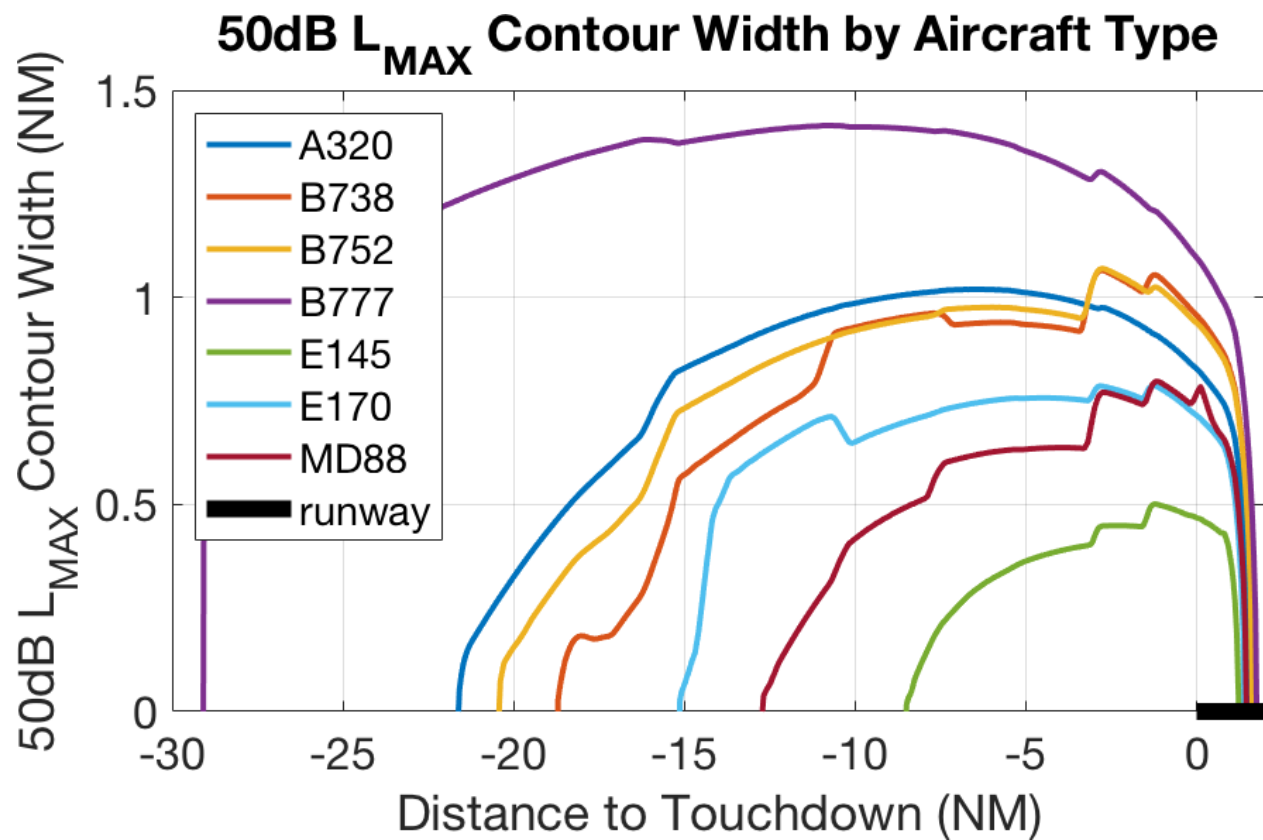
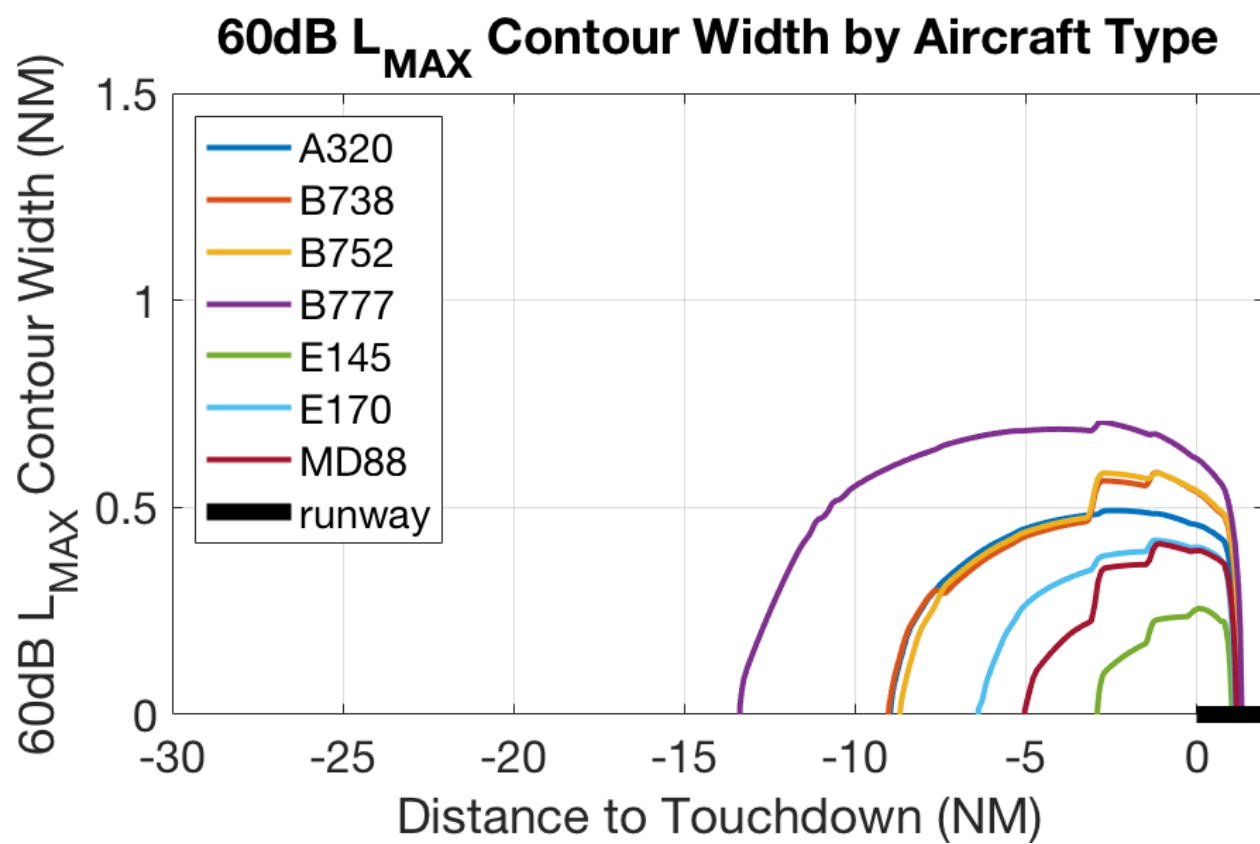


Figure 41. Approach L_{MAX} contour widths for 7 fleet types following radar median approach profiles







Massport Community Advisory Committee
One Broadway, 14th Floor
Cambridge, MA 02142

May 18, 2020

(VIA ELECTRONIC MAIL)

Colleen D'Alessandro, ANE-1, FAA New England Regional Administrator
Colleen.Dalessandro@faa.gov

RE: Proposed Runway 4L Environmental Assessment Timeline and Process

Dear Ms. D'Alessandro:

Thank you for your continued engagement with the Massport Community Advisory Committee (MCAC), as well as the participation of your fellow colleagues at the Federal Aviation Administration (FAA), especially during these extraordinary circumstances. Due to this unprecedented health crisis and the resulting changes in standard business practices across the nation, I have been asked to request that FAA delay an upcoming environmental review process.

As you presented at our MCAC General Meeting in January, the FAA had tentatively scheduled the Environmental Assessment (EA) process for the proposed Boston Logan International (Logan) Airport Runway 4 Left (4L) Approach Procedure for the third quarter of calendar year 2020. This proposed process included a draft EA 30-day public comment period during which the FAA would hold two public workshops. Furthermore, FAA staff proposed to hold a public workshop separate from and prior to the formal public workshops following an MCAC General Meeting. We discussed the issue with our membership and determined that while a workshop prior to the formal EA comment period was important, a more appropriate venue would be within the communities and neighborhoods affected by this proposed change. The MCAC membership also expressed reservations at the FAA's proposed use of a workshop format versus a formal public hearing and questioned the ability of commenters to effect any meaningful change on a proposed procedure. In response to a request for an update on the timeline for the 4L EA process, you indicated on May 6, 2020 that the FAA is tentatively planning to begin the 30-day public comment period on September 21, 2020.

On May 14, 2020, the MCAC's Milton representative, Tom Dougherty, brought forward the request to delay the 4L EA process citing three main reasons:

First, the neighborhoods impacted by the proposed 4L RNAV flight path include two densely populated areas – Mattapan (82% African American) and Dorchester (43% African American) – where residents are dealing with high incidence of COVID-19 health and economic impacts. There are many working in the area – healthcare workers at Carney Hospital, a COVID-19 dedicated facility, mass transit employees – that are essential employees working to provide basic services to the region. Other families are dealing with unemployment, small business loss, food stamp needs, and home childcare issues. These families need to focus on these urgent needs.

Second, due to the COVID-19 restrictions related to group gatherings and urging social distancing, residents have been unable to have their own preparatory meetings among affected community members to address and ready collective thought on the EA issues.



Massport Community Advisory Committee
One Broadway, 14th Floor
Cambridge, MA 02142

The 4L EA has previously been deferred by FAA for several years for other reasons. The need for safety review of a 4L RNAV track is less at present given the very few flights occurring. For those reasons, awaiting a time when such preparatory meetings can occur would be advisable.

Third, residents likely will not be in a position to do the field work and analyses for which they have engaged an independent consultant because so few planes are flying now. That field work and analyses will aim to compare actual flight activity with FAA model assumptions over the course of the 4L arrival path.

As you and I have discussed over email, there are serious equity concerns over the use of virtual meetings with residents in lieu of the originally planned in-person public meetings. Virtual meetings are especially problematic for low income communities whose residents may lack the resources to participate; moreover, there is ongoing debate about whether a virtual meeting would be an adequate substitute for a community gathering such as this.

At a virtual meeting on May 14, 2020, the MCAC Executive Committee directed me to request that the FAA defer the 4L EA process until the later of either January 1, 2021 or two months after flights to and from Logan Airport resume with volume and frequency similar to what can be expected in future years.

As previously mentioned, at the January 2020 MCAC meeting, we requested that the FAA meet with 4L EA affected residents prior to the comment period to provide information (such as the EA Documentation itself and Volpe Center or other analyses) and to allow residents to provide input before FAA finalizes and submits its EA for public comment. We reiterate that request, adding now that considering the COVID-19 guidelines, such pre-comment period meetings should occur at the start of the deferred schedule as proposed above.

We appreciate the FAA's commitment to conduct a full Environmental Assessment process after the initial 2015 public meeting on this proposal and its recognition that conducting this enhanced review process properly and thoroughly will provide a meaningful benefit to the affected communities, businesses, and residents.

I look forward to working with you on this matter moving forward.

Sincerely,

Matthew A. Romero
Massport CAC Executive Director

cc: David Carlon, MCAC Chairman
Thomas Dougherty, MCAC Milton Representative and Treasurer
Flavio Leo, Massport Director of Aviation Planning and Strategy
Anthony Gallagher, Massport Community Relations



U.S. Department
of Transportation

**Federal Aviation
Administration**

Office of the Regional Administrator
New England Region

1200 District Avenue
Burlington, MA 01803-5299

June 11, 2020

Mr. Matthew A. Romero, Executive Director
Massport Community Advisory Committee
One Broadway, 14th Floor
Cambridge, MA 02142

Dear Mr. Romero:

Thank you for your May 18, 2020, correspondence on behalf of the Massport Community Advisory Committee (MCAC). This letter is in response to MCAC's request to delay the environmental review process for the proposed General Edward Lawrence Logan International (BOS) Area Navigation (RNAV) Global Positioning System (GPS) Runway (RWY) 4 Left (4L) [RNAV (GPS) RWY 4L] approach procedure. The proposed action will establish an instrument approach procedure to Runway 4L, where no instrument approach procedure is currently published, that will enhance both safety and efficiency at BOS and in the National Airspace System (NAS). As a result of the expected benefits and with recent proven success conducting virtual public workshops for other initiatives, the FAA intends to proceed with the project as currently scheduled.

The implementation of the RNAV (GPS) RWY 4L will enhance safety specifically by:

- 1) Allowing air traffic control to more precisely monitor each aircraft both vertically and laterally along the arrival track;
- 2) Enable air traffic control and operators to conduct instrument approaches to Runway 4L when Runway 4 Right (R) is not available and;
- 3) Significantly reduce the need to use the Instrument Landing System (ILS) approach to Runway 15R with a transition to a Visual Approach (VA) to Runway 4L (ILS 15R VA 4L) procedure.

The implementation of the RNAV (GPS) RWY 4L will enhance efficiency by improving aircraft arrival rates and will reduce pushing delays incurred during the daytime into the nighttime, particularly during inclement weather.

The FAA first notified the community of its intent to conduct an Environmental Assessment (EA) in 2015 as a result of input from community members and elected officials regarding the level of environmental review planned for the project. After securing funding and procuring contract support, the FAA notified MCAC that the EA process had begun in October 2019. Continuing the EA for the proposed RNAV (GPS) RWY 4L during this time is important to increasing flight safety, and the FAA has determined that realizing the procedure's benefits are an operational necessity for BOS and the NAS. The FAA will follow its normal process to

analyze the impacts of the proposed procedure by using historical radar track data to model the baseline conditions and compare them to the expected changes from the proposed action. Since historical data will be used, the reduced operations caused by COVID-19 will not inhibit the FAA's ability to assess the environmental impacts of the procedure. Furthermore, BOS operations have increased the first week of June to a total of 2,215 operations from a total of 1,709 during the first week of May, representing an increase of nearly 30 percent; a trend we expect to continue further justifying the need for the procedure.

The FAA's environmental analysis will first be shared with the public in the form of a Draft EA, at which time the public can submit any comments or concerns they might have about the FAA's analysis. Ensuring the appropriate level of public notification about a Draft EA through interactive virtual public workshops has proven successful in achieving the desired outreach with the communities potentially affected by proposed changes to instrument flight procedures. Recently, as part of the EA process for the South Florida Metroplex project, virtual public workshops, attended by tens of thousands, were held via Zoom, Facebook, Twitter and YouTube to notify the public of the Draft EA. During the live virtual public workshops, participants could submit their questions through any one of the platforms, using a mobile device or PC, or submit inquiries through the dedicated website created for the virtual events. Community members have access to the site as a source for more information related to the Draft EA, access to recorded live question and answer sessions, and may submit comments through the site during the open comment period. Establishing this new technology-enabled environment and offering multiple opportunities for community members to attend events increased the quality and rigor of our communications and allowed the FAA to reach a much broader audience. In addition, copies of the Draft EA will be available at local libraries, which are expected to be open prior to the release of the Draft EA. These libraries allow public access to the Internet, where the public can view the website for the project and submit comments. If libraries do not open by the time the Draft EA is released, then physical copies can be mailed to residents upon request.


We appreciate MCAC sharing potential accessibility concerns with the FAA. We look forward to working with MCAC members and local community leaders to identify other accommodations that may help address specific community challenges. While the FAA understands that the COVID-19 pandemic has caused massive disruptions within communities across the world, we must continue our mission to improve safety and enhance efficiency in the National Airspace System. As a result, we intend to proceed with the project as scheduled with virtual public workshops conducted in early fall 2020.

Sincerely,

**COLLEEN M
D'ALESSANDRO**

Colleen D'Alessandro

Regional Administrator, New England Region

 Digitally signed by COLLEEN M
D'ALESSANDRO
Date: 2020.06.11 11:09:02 -04'00'

247 Adams Street Milton MA 02186

July 14, 2020

(VIA ELECTRONIC MAIL)

Colleen D'Alessandro, ANE-1, FAA New England Regional Administrator
Colleen.Dalessandro@faa.gov

RE: Proposed Runway 4L Environmental Assessment Follow Up Response

Dear Ms. D'Alessandro:

I am writing on behalf of residents of Milton, Mattapan and Dorchester, with the support of the Milton Select Board and Boston City Councilor Ms Andrea Campbell, to respond to your letter of June 11, 2020 to the MCAC. The MCAC is submitting a letter to you also.

The FAA's June 11, 2020 reply, rejecting the MCAC's request that the Logan runway 4L EA be deferred, should be reversed because it is prejudicial to the residents of Milton, Mattapan, Dorchester and other neighborhoods overflowed by the referenced RNAV flight path for these reasons:

1. The FAA bases its decision in part on the statement that BOS operations increased in the first week of June by 30% over May's operations. The FAA reply does not acknowledge that due to the CDC's Covid-19 advisory that air travel should be limited, there actually were only **5** landings on runway 4L during the entire month of May 2020. (In 2019, there were 907 arrivals in May.) Then yesterday, July 13, Massport reported that there were only **3** landings on runway 4L during the entire month of June 2020. Meanwhile, airlines have announced reductions in planned August service given the continuing Covid-19 contagion. There is no runway-utilization-related reason to resume the EA now.

2. Given the paucity of 4L arrivals due to the CDC's Covid-19 advisory, there is also no safety reason to proceed with the runway 4L arrival path EA now as contrasted with the **7 prior years** since 2013 during which FAA

announced that it would proceed with the EA but did not do so. Nor does the FAA's June 11, 2020 reply reference any recent 15R or 4L incursion or other safety instances at all.

3. The FAA's letter ignores the important predicate need for residents to have their own meetings to discuss the proposed 4L arrivals RNAV path prior to and during the EA public comment period. A large group of residents cannot readily meet in person due to Covid-19 restrictions, and many residents have no access to internet/virtual meeting capability. FAA's reply ignores residents' need for their own gatherings. Furthermore, libraries are closed. Residents without internet access cannot attend virtual-meetings among their own neighbors, nor attend a FAA virtual workshop. The FAA had no response to this very question at its recent Tampa virtual-meeting, nor did its reply to the MCAC letter address how such residents could participate meaningfully now.

4. The recent FAA virtual meetings regarding an EA for the South Central Florida Metroplex Airports confirmed added concerns that virtual meetings are no substitute for in person meetings by residents with the FAA.

There are 2.877 million residents of the Tampa metro area. The FAA's attendance record for the two days of virtual meetings indicated that 31 registered residents attended, not including Matthew Romero and myself, whom you allowed to attend as observers.

The virtual-meetings for the Tampa Airport residents provided no means for residents to engage other than by submitting a written question--without the ability to follow-up or ask for further explanation or detail, and provided no ability for participants to drill-down on summary explanations of FAA policy. In a word, it is not a fully interactive dynamic, as in-person meetings can be.

Our further concerns about the virtual-meeting modality include the following issues: FAA's voluminous EA and Appendices were not explained by slide run-through or other means during the Tampa virtual-meeting. Instead, FAA participants' terminology often equated FAA "measurements" with modeling outputs, suggesting to residents that noise data from more than a hundred thousand locations had been gathered rather than modeled. The means of measurement versus modeling and the methods of noise calculation were not clarified for residents. The FAA puts a lot of resources and effort into its virtual meetings. However, the lack of interactive dialog renders the

FAA's virtual-meeting modality not a "workshop" but rather a friendly, recital equivalent to the FAA's required flight attendant advisory content, given to minimally-participatory passengers on aircraft, or here a small number of registered live-attendee residents.

5. The FAA's Draft EA's importance, length, embedded terminologies, and assumptions render it complex. Residents will need time to read, absorb and discuss it among themselves before the public comment period begins to run. For that reason, the Draft EA should be made publicly available at least 30 days before any EA public comment period. Furthermore, any online resources like those presented at the South Central Florida Metroplex virtual meetings (e.g. interactive maps, video representations flight paths, etc.) should be made available less than 30 days prior to the commencement of the public comment period. Additionally, given economic justice concerns, please include in the information provided 30 days prior to the public comment period current census block data for the neighborhoods within the proposed 4L RNAV path's IF-to-touchdown sound contours, including race and ethnicity data as well as mean, median and modal incomes. For inclusiveness and comparison, please include separately such data for the neighborhoods overflowed by all 4L visual and FMS paths as well as neighborhoods overflowed by the parallel 4R path.

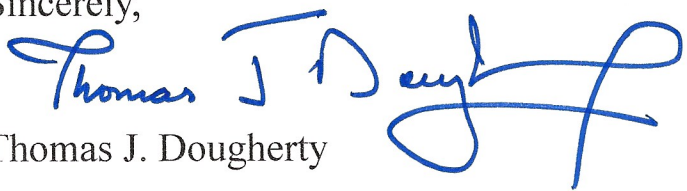
As the MCAC's May 18, 2020 letter requested, 30 days prior to commencement of the public comment period should be at least 30 days before the later of January 1, 2021, or two months after flights to and from Logan Airport resume with volume and frequency similar to what can be expected in future years. We hereby reiterate that request and timing.

We also request that when the public comment period occurs, it be extended to 90 days to permit added opportunity for resident questions, input and interaction among themselves and with the FAA.

6. Lastly, without the frequency of flights that occur absent the Covid-19 restrictions, it is impossible for residents to do the field work regarding 4L arrivals that they plan to do. The FAA's reply ignored this factor. It is a sine qua non for residents.

Thank you for your attention to this matter.

Sincerely,

The signature is written in blue ink and is a cursive representation of the name Thomas J. Dougherty. It features a large, stylized 'T' and 'D'.

Thomas J. Dougherty

cc Town of Milton Select Board
and Boston City Councilor Ms Andrea Campbell



Massport Community Advisory Committee
One Broadway, 14th Floor
Cambridge, MA 02142

July 14, 2020

(VIA ELECTRONIC MAIL)

Colleen D'Alessandro, ANE-1, FAA New England Regional Administrator
Colleen.Dalessandro@faa.gov

RE: Proposed Runway 4L Environmental Assessment Follow Up Procedural Request

Dear Ms. D'Alessandro:

Thank you for your response to my letter dated May 18, 2020 regarding the Environmental Assessment (EA) process and timeline for the proposed Boston Logan International (Logan) Airport Runway 4 Left (4L) Approach Procedure. I would also like to thank you and FAA staff for attending our virtual Massport Community Advisory Committee (MCAC) meeting on June 11, 2020 to discuss this matter further. We were disappointed that FAA denied our request to delay the timing of the 4L EA process considering the ongoing COVID-19 pandemic and the effect upon the communities, neighborhoods, and residents that would be impacted by this process. We urge FAA to reconsider our request for the delay as stated in my initial letter. Barring that, however, I would put forward some follow up requests for the Proposed 4L EA process.

As discussed at our virtual meeting, the current FAA process would release the draft EA upon the commencement of the public comment period, during which the public workshops would be conducted. We request that the Draft Proposed 4L EA be provided to members of the public no less than 30 days prior to the commencement of the public comment period. Furthermore, any online resources like those presented at the Southern Florida Metroplex virtual workshop (e.g. interactive maps, video representations of flight paths, etc.) should also be made available no less than 30 days prior to the commencement of the public comment period. This would ensure adequate time to review the Draft EA and supporting materials prior to both the workshops and the public comment period.

Your letter indicated that the FAA plans to conduct the 4L EA public workshops virtually using a format and platforms like the recent South Florida Metroplex project virtual workshops. Having attended these virtual workshops, we maintain our belief that the virtual workshop format is not an adequate substitute for in person meetings. In particular, we remain concerned for impacted communities and neighborhoods with higher proportions of residents lacking sufficient resources and availability to attend virtual meetings in a meaningful way. Adequate access to information and the ability for impacted residents to participate is critical for any environmental review process. To address these concerns, we request that the comment period be extended from the currently planned 30 days to 90 days to allow for greater participation and engagement by the impacted communities and their residents given the anticipated use of the virtual workshops format.



Massport Community Advisory Committee
One Broadway, 14th Floor
Cambridge, MA 02142

We appreciate the FAA's participation with the MCAC on matters relating to Boston Logan International Airport, and especially for your further consideration of our requests as it relates to the 4L EA. Ensuring the impacted communities, neighborhoods, and residents are fully briefed and aware of the proposed procedure and can participate and comment in a meaningful way is our primary concern on this issue.

We are also aware that some of the communities and neighborhoods plan to commit both time and monetary resources to further evaluate and study this matter and its effect on their residents. We expect they will submit follow up questions directly to FAA as well as specific recommendations or requests regarding the 4L EA process. We respectfully request that these questions and requests be fully considered and responded to by FAA as needed.

I look forward to working with you on this matter moving forward.

Sincerely,

Matthew A. Romero
Massport CAC Executive Director

cc: David Carlon, MCAC Chairman
Thomas Dougherty, MCAC Milton Representative and Treasurer
Flavio Leo, Massport Director of Aviation Planning and Strategy
Anthony Gallagher, Massport Community Relations



U.S. Department
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**Federal Aviation
Administration**

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August 7, 2020

Mr. Matthew A. Romero, Executive Director
Massport Community Advisory Committee
One Broadway, 14th Floor
Cambridge, MA 02142

Dear Mr. Romero:

Thank you for your July 14, 2020 correspondence regarding the proposed Runway (RWY) 4 Left (L) environmental assessment (EA) follow-up procedural request on behalf of the Massport Community Advisory Committee (MCAC).

In your letter, you requested the Federal Aviation Administration (FAA) delay the environmental review process for the proposed General Edward Lawrence Logan International Airport (BOS) Area Navigation (RNAV) Global Positioning System (GPS) RWY 4L [RNAV (GPS) RWY 4L] approach procedure. However, the FAA intends to proceed with the project as scheduled, with virtual public workshops to be conducted in the fall 2020 for the reasons cited in our June 11, 2020 letter.

You also requested to extend the comment period from 30 days to 90 days. After careful consideration, we have determined that we are able to extend the comment period for an additional 30 days for a total of 60 days. The draft proposed 4L EA will be provided to members of the public no less than 30 days prior to the commencement of the virtual public workshop. The draft EA and supporting information will be made available in the fall 2020. The public and stakeholders may begin to provide comments at that time for 60 days.


Finally, you requested that the FAA provide adequate access to information and the ability for impacted residents to participate in the environmental review process. The FAA plans to host two virtual workshops in the fall 2020, which will be recorded and available on YouTube and the FAA website. The proposed format for these workshops will be similar to the Southern Florida Metroplex. The FAA will consider all comments and respond to them in the final decision document. The final decision is expected to be made in the spring 2021.

We appreciate the continuing dialog with MCAC on this subject and look forward to working with MCAC members and local community leaders to identify other accommodations that may help address specific community challenges. While the FAA understands that the COVID-19 public health emergency has caused massive disruptions within communities across the world, we must continue our mission to improve safety and enhance efficiency in the National Airspace System.

Sincerely,

**COLLEEN M
D'ALESSANDRO**

Colleen M. D'Alessandro
Regional Administrator, New England Region

 Digitally signed by COLLEEN M
D'ALESSANDRO
Date: 2020.08.10 09:55:55 -04'00'

CC: Thomas Dougherty

Runway 4L/4R Arrival Paths

