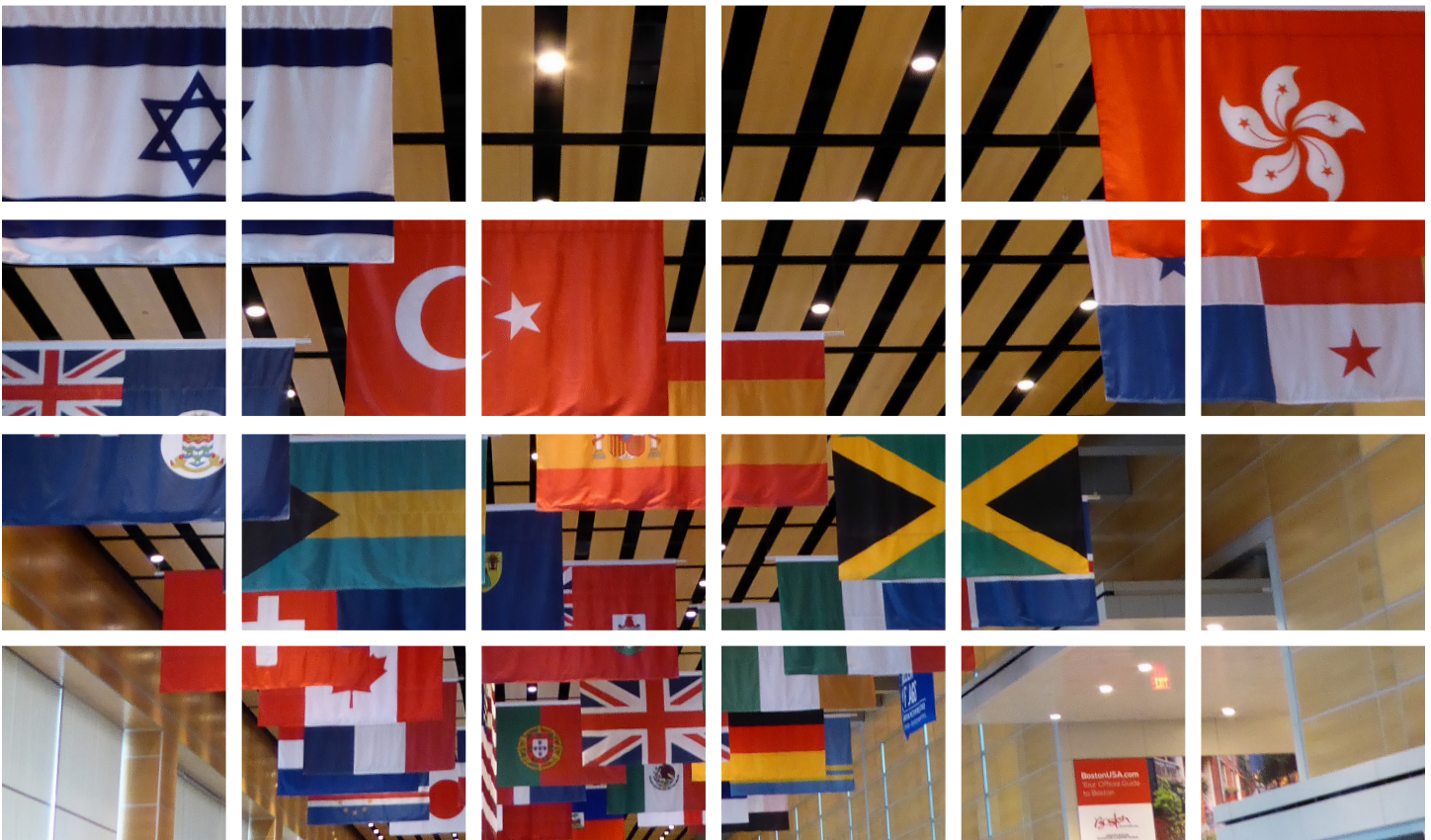


FINAL ENVIRONMENTAL ASSESSMENT/  
FINAL ENVIRONMENTAL IMPACT REPORT

# Terminal E Modernization Project

Boston-Logan International Airport  
EAST BOSTON, MASSACHUSETTS

EEA# 15434



PREPARED FOR



Massachusetts Port Authority

PREPARED BY



IN ASSOCIATION WITH

AECOM  
Harris Miller Miller & Hanson, Inc.  
KB Environmental Sciences, Inc.  
LeighFisher, Inc.

September 30, 2016

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# *Final Environmental Assessment/ Final Environmental Impact Report*

## **Boston-Logan International Airport Terminal E Modernization Project**

East Boston,  
Massachusetts

---

Prepared for **Massachusetts Port Authority**

Prepared by



In association with

**AECOM  
Harris Miller Miller & Hanson, Inc.  
KB Environmental Sciences, Inc.  
LeighFisher, Inc.**

**September 30, 2016**

This Final Environmental Assessment becomes a Federal document when evaluated, signed, and dated by the Responsible FAA Official.

A handwritten signature in blue ink, appearing to read "R. Dorelli". The signature is written in a cursive, flowing style.

September 30, 2016

---

Responsible FAA Official  
Environmental Program Manager  
FAA New England Region

Date





Massachusetts Port Authority  
One Harborside Drive  
East Boston, MA 02128-2909  
Telephone (617) 568-5000  
www.massport.com

---

September 30, 2016

Mr. Richard Doucette Secretary  
Federal Aviation Administration  
New England Region  
1200 District Avenue  
Burlington, MA 01803

Matthew Beaton  
Executive Office of Energy and  
Environmental Affairs  
MEPA Office  
100 Cambridge Street, Suite 900  
Boston, MA 02114

**Re: Boston-Logan International Airport, Terminal E Modernization Project  
Final Environmental Assessment/Final Environmental Impact Report (EEA #15434)**

Dear Secretary Beaton and Mr. Doucette:

On behalf of the Massachusetts Port Authority (Massport), we are pleased to submit this Final Environmental Assessment/Environmental Impact Report (Final EA/EIR) for the *Boston-Logan International Airport Terminal E Modernization Project* for public review. As directed on Page 15 of the MEPA Certificate issued on September 16, 2016 and consistent with the National Environmental Policy Act (NEPA), this Final EA/EIR includes copies of all comments received on the Draft EA/EIR and responses to those comments. An updated draft Section 61 Findings can be found in Chapter 3.

Also included in the Final EA/EIR is a copy of the Draft EIR Certificate and copies of the Draft EA/EIR Executive Summary in English and Spanish. Since filing of the EA/Draft EIR, the Federal Aviation Administration (FAA) has updated its draft Finding of No Significant Impact/Record of Decision (FONSI/ROD). A copy of the draft FONSI/ROD is included following this letter in the Final EA/EIR.

This Final EA/EIR is being submitted to each agency from which Massport will seek permits for the Terminal E Modernization. Massport will also circulate a copy of the Final EA/EIR and/or notify all other parties that submitted individual written comments on the Draft EA/EIR. A full copy of the Final EA/EIR, including English and Spanish versions of the Draft EA/EIR Executive Summary will be posted on Massport's website at <http://www.massport.com/environment/environmental-reporting/environmental-filings/>. Massport will also make available hard copies of the Final EA/EIR to any additional reviewers, upon request.

A copy of the Final EA/EIR will also be made available for review at the Boston Public Library - Main, Connolly, Charlestown, South Boston, and East Boston Branches, Chelsea Public Library, Winthrop Public Library, Revere Public Library, Everett Public Library, and Cambridge Public Library.

Massport respectfully requests that EEA Publish the Notice of Availability of the Final EIR in the October 5, 2016 edition of the *Environmental Monitor*. Public comments would be due November 4, 2016, and a decision on the Final EIR would be due November 11, 2016. The federal NEPA comment period will be coincident with the MEPA comment period.

If you have any questions regarding the Final EA/EIR, please contact me at 617-568-3524 or sdalzell@massport.com.

Sincerely,

**Massachusetts Port Authority**

A handwritten signature in blue ink that reads "Stewart Dalzell". The signature is fluid and cursive, with the first name "Stewart" and last name "Dalzell" clearly legible.

Stewart Dalzell, Deputy Director  
Strategic & Business Planning Department

Enclosures

cc: Massport  
FAA  
VHB  
AECOM

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**DEPARTMENT OF TRANSPORTATION  
FEDERAL AVIATION ADMINISTRATION**

**DRAFT FINDING OF NO SIGNIFICANT IMPACT/  
DRAFT RECORD OF DECISION  
DRAFT FONSI/ROD**

**Terminal E Modernization Project  
Boston - Logan International Airport, Boston, Massachusetts**

**Proposed Action**

The Massachusetts Port Authority (Massport) is the sponsor of the Terminal E Modernization Project (the Project) at Boston-Logan International Airport. The purpose of the Project is to modernize international Terminal E, entirely within the Airport footprint, to efficiently accommodate current and projected international operations and passengers, and to meet regional economic goals, while minimizing community and environmental impacts.

Terminal E consistently serves higher passenger volumes than the facility was designed to serve over four decades ago. When the terminal first opened in 1974, Logan Airport served 1.4 million international passengers a year through 12 gates. In the mid-1990s, Massport received approvals to add three new gates as part of the International Gateway/West Concourse project that expanded and updated terminal passenger handling and U.S. Customs and Border Protection facilities. Massport completed the terminal roadway, curb enhancements, and select terminal additions. After September 11, 2001, it put the expansion on hold and did not construct the three new gates. In 2015, the Airport served 5.5 million international passengers at Terminal E through the same 12 gates, causing delays on the airside ramp serving the terminal, delays in passenger processing, and overcrowding passenger holdrooms. This historic growth has occurred without significant airfield or terminal improvements, and will continue independent of facility improvements. International passenger activity is projected to reach eight million passengers in 2030 or sooner.

The modernization of Terminal E will:

- Construct seven new aircraft contact gates. These include the three gates originally approved in 1995, but never constructed, and four additional gates.
- Construct additional passenger holdrooms, concourse circulation, concessions, passenger processing (including Customs and Border Protection facilities), and expanded bag screening facilities;
- Configure the new Terminal area to provide noise buffering for adjacent neighborhoods;
- Modify airside ramp and apron areas and taxiways to accommodate the new gates, terminal improvements, and supporting facilities;
- Reconfigure adjacent landside roadways, parking, and curbs to accommodate the modernized terminal configuration;
- Provide a direct pedestrian connection between Terminal E and the Massachusetts Bay Transportation Authority (MBTA) Blue Line Airport Station; and
- Incorporate sustainability measures.

The new areas of the terminal would extend from the western end of existing Terminal E and will be four stories in height, and approximately 560,000 sf in total area. Within the terminal, space would be provided for amenities to

support future passenger volumes, including additional ticket counters, new hold rooms, the potential for a satellite Customs and Border Protection facility, baggage carousels, restrooms, etc. Additions to the terminal will be phased with four gates and associated facilities to be constructed by 2022 and the remaining gates and terminal areas to be completed by 2028.

The new terminal configuration would require relocation of some facilities and operations on the airside and landside that are currently occupying the space the new terminal would be built upon. Aircraft parking areas and ground service equipment storage would be shifted to maximize the space available on the existing paved areas of the apron and ramp. The relocated activities and associated changes in ground transportation operations are included in the analysis of environmental effects.

The revisions to the Airport Layout Plan require FAA approval. Massport and FAA prepared an Environmental Assessment/Environmental Impact Report (EA/EIR) to assess the Proposed Action under the Massachusetts Environmental Policy Act (MEPA) and the National Environmental Policy Act (NEPA), respectively. The Proposed Action will require a Construction General Permit under the National Pollutant Discharge Elimination System. See EA/EIR Table 7.1, for Anticipated Permits and Approvals.

### **Alternatives Considered**

Logan Airport has the local market demand, critical mass of airline service, and the necessary terminal and airfield facilities to support a broad international origin and destination service which cannot be replicated at smaller airports. Accordingly, the EA/EIR includes an evaluation of on-airport project alternatives according to their ability to meet the Project purpose and need, as well as considerations such as space requirements, layout efficiency, efficiency of airfield operations, and ability to buffer noise, efficiency of traffic operations and cost. All alternatives evaluated would be located on previously developed land within the Airport boundary and are expected to have very similar beneficial environmental effects. The Project reuses space already in aviation use without expansion of the airport footprint or a change in land use.

Early design concepts evaluated different configurations of the new terminal area, and North Cargo Apron area. All build alternatives considered would add the required seven new gates. The key differences among the terminal configuration alternatives relate to efficiency of interior operations, frontage on the adjacent roadway to provide curbside access to the terminal for passengers, disruption to existing terminal and apron operations, and cost. With the exception of ability to buffer ground noise from ground operations, there is very little difference among the alternatives from an environmental perspective.

Massport selected Terminal E and Roadway Option 2 as the preferred alternative. The FAA also identifies this as the environmentally preferred alternative under NEPA.

### **Public Comment**

Approximately 190 public comments were received on the draft Environmental Assessment. The majority of comments were received from residents of Hull. Comments were also received from East Boston, Milton, Belmont and Arlington, as well as businesses utilizing Boston-Logan Airport. The vast majority of comments either pertained to the belief that increased aircraft traffic could result from the Terminal E improvements, or how certain approach/departure paths were resulting in noise impacts.

Experience has shown there is little correlation between airport terminal improvements and the number of flights serving an airport. There is even less correlation between terminal improvements and how/where aircraft fly. The Terminal E improvements should not enable or induce growth at this airport. The facts demonstrate that international service demand at Boston-Logan Airport is driven by economic, regional and market factors, not by airport facility improvements. Therefore, the foreseeable environmental impacts should be localized and easily mitigated.

The issue of noise caused by aircraft overflights is, understandably, one of great concern to area residents. The FAA, working in concert with Massport and an active citizen advisory committee, has participated in a comprehensive noise study since 2003. The details of the study can be found on line at [www.bostonoverflightnoisestudy.com](http://www.bostonoverflightnoisestudy.com). The study has been organized in three phases. A number of noise mitigation measures were implemented as part of phase 1, after an environmental review was completed in 2007. That document can be found at [www.bostonoverflightnoise.com/phase1.aspx](http://www.bostonoverflightnoise.com/phase1.aspx). Additional noise mitigation measures were studied in phase 2, and tests conducted in phase 3. Phase 3 also included environmental review of RNAV procedures to various runways. These environmental documents can be found at [www.bostonoverflightnoise.com/phase3\\_documents.aspx](http://www.bostonoverflightnoise.com/phase3_documents.aspx).

There has been much public scrutiny of proposed RNAV routes being implemented nationwide. We understand the concerns expressed by residents in densely-populated areas around metropolitan airports. Changes to air traffic, even when minor, can be objectionable to those living under flight paths. Based on the substantial work that has been done on this issue at Boston-Logan Airport, with considerable public review, the various changes that have been implemented will result in a small, cumulative noise benefit to area residents. These procedures are unrelated to, and are unaffected by, the modifications to Terminal E now under consideration.

The FAA will continue to work with Massport and local communities to find ways to improve the noise environment around Boston-Logan Airport. In doing so, we will continue to conduct the necessary environmental reviews required by law. We invite continued public participation in this ongoing effort, and local residents should contact their advisory committee representatives to determine how best to channel this involvement.

On September 16, 2016, the Massachusetts Secretary of Energy and Environmental Affairs determined that the Draft EIR "adequately and properly complies with the Massachusetts Environmental Policy Act."

### **Assessment and Mitigation**

Draft EA/EIR Chapter 5, Environmental Consequences and Chapter 6, Mitigation evaluate the environmental consequences and mitigation measures of the Terminal E Modernization Project. Together with the proposed mitigation, all adverse impacts to resource categories are anticipated to be less than significant based on the significance thresholds defined in FAA Order 1050.1F. The Project will, moreover, provide significant environmental benefits. Project elements designed to provide environmental benefits or to minimize adverse impacts are described below.

- Terminal improvements will be sited, designed and constructed to serve as a noise barrier to the adjacent East Boston neighborhoods and Memorial Stadium Park to the southwest of the North Cargo apron. The new structures will have a minimum height of 45 feet above ground level. Noise levels associated with aircraft single events will decrease up to 17dB in Jeffries Point neighborhood. Any areas of predicted noise increases are negligible.

- Massport will report annually, in writing, to the FAA on the implementation and phasing of this project until its completion. This concise reporting will describe how each phase of the project compares to that which was described in the EA/EIR. As the project is implemented, the FAA will determine if any subsequent changes to the project or its phasing could trigger a Re-Evaluation under NEPA.
- Seven new gates equipped with 400 Hz power and pre-conditioned air will allow aircraft to plug-in at a gate rather than be serviced remotely as would occur without the project. This will reduce the need for on-board engine operation, thereby reducing aircraft air emissions, greenhouse gas emissions, and energy consumption. New gates will increase ramp efficiency by reducing ramp movements and minimize busing passengers between the terminal and remote aircraft parking locations (hardstands). CO, NO<sub>x</sub>, SO<sub>x</sub> emissions will decrease compared to the No-Action Alternative.
- Upon project completion, improved HOV access to the Airport will be supported via a direct pedestrian connection to the MBTA Blue Line Airport Station. Roadway and curb improvements will improve vehicle flow and HOV access (full build only).
- Passenger processing and experience will improve through building additions and new amenities.

The Project will be built to Leadership in Energy and Environmental Design (LEED®) and Massachusetts LEED Plus standards, to achieve LEED Silver, or higher certification. Additional sustainable design opportunities will be addressed as the Project progresses into design development. These design commitments will be incorporated into construction, especially as they relate to the proper specification of sustainable materials and construction practices. The project has been designed to comply with the resiliency goals set by Massport guidelines, including siting of critical infrastructure outside of future flood hazard areas.

All other impacts discussed in the EA/EIR are minor construction related impacts that are temporary in nature, including noise, air and construction related traffic. Massport commits to follow appropriate construction best management practices to minimize minor temporary construction related impacts.

**Finding of No Significant Impact**

I have carefully and thoroughly considered the facts contained in the EA. Based on that information, I find the proposed Federal action is consistent with the existing national environmental policies and objectives of Section 101(a) of the National Environmental Policy Act of 1969 (NEPA) and other applicable environmental requirements. I also find the proposed federal action will not significantly affect the quality of the human environment or include any condition requiring consultation pursuant to Section 102(2)(C) of NEPA. As a result, FAA will not prepare an EIS for this action.

APPROVED:

\_\_\_\_\_  
 Richard Doucette,  
 Environmental Program Manager, FAA New England Region

\_\_\_\_\_  
 Date

**Decision and Order**

The FAA has determined, based upon the EA/EIR, that the proposed action qualifies for a Finding of No Significant Impact. The FAA must now decide whether to approve or disapprove the revision of the Airport Layout Plan (ALP) to depict the proposed action. Massport is required to maintain an updated, FAA-approved ALP as a condition of its obligations under federal grant assurances upon acceptance of grants from the FAA. Approval to



revise the ALP would signify that applicable federal requirements relating to airport development and planning have been met and would permit Massport, as the airport sponsor, to proceed with the project. Massport may also request future funding from the FAA to implement this project. Not approving this agency action would prevent Massport from proceeding with implementation of the proposed project.

I have carefully considered the FAA's goals and objectives in relation to the proposed project. Under the authority delegated to me by the Administrator of the FAA, I find that the project in this Record of Decision (ROD) is reasonably supported. I therefore direct that the action be taken to carry out the approval of the ALP to depict the alternative selected in this ROD.

APPROVED:

\_\_\_\_\_  
Mary T. Walsh,  
Airports Division Manager, FAA New England Region

\_\_\_\_\_  
Date

Right of Appeal:

This decision and order is issued and these actions are taken pursuant to 49 U.S.C. Sections 40101 *et seq.*, Parts A and B, and constitute final orders of the Administrator that are subject to review by the appropriate Court of Appeals of the United States in accordance with the provisions of 49 U.S.C. Section 46110.

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# 1

## Introduction

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### 1.1 Introduction

The Terminal E Modernization Project *Final Environmental Assessment/Environmental Impact Report* (Final EA/EIR) is prepared in accordance with the federal National Environmental Policy Act (NEPA), its implementing Order 1050.1F, and the state Massachusetts Environmental Policy Act (MEPA), and its implementing regulations (301 CMR 11.00). This joint federal/state Final EA/EIR fulfills the requirements of NEPA and MEPA.

As per the Secretary of the Executive Office of Energy and Environmental Affairs September 16, 2016 Certificate (Chapter 2, *Responses to Comments*), this document includes: (1) responses to comments filed on the Draft EA/EIR (July 15, 2016) and (2) a revised Draft Section 61 Finding (see Chapter 3) outlining Massport's mitigation commitments for the Terminal E Modernization Project.

Since filing of the Draft EA/EIR, the Federal Aviation Administration (FAA) has updated its draft Finding of No Significant Impact/Record of Decision (FONSI/ROD). A copy of the revised draft FONSI/ROD is included at the beginning of this Final EA/EIR.

The enclosed responses to comments include both topical responses to frequent comments and separate responses to individual comments. Individual comment responses are addressed for state agencies, municipalities, elected officials, and key stakeholders. A total of 186 comment letters and/or emails were received on the Terminal E Modernization Project Draft EA/EIR. Of these, approximately 120 consisted of form letters. Comment letters were received via the U.S. Postal Service as well as by email. Each comment letter was reviewed and similar themes and issues were identified for a topical response. A total of 228 individual comments were identified in a detailed review of all comment letters.

Many comments submitted on the Terminal E Modernization Project Environmental Notification Form (ENF) and the Draft EA/EIR related to Airport-wide issues rather than the proposed Project. As described in the Secretary's Certificate issued December 15, 2015, Airport-wide comments are addressed through the annual Logan Airport Environmental Data Report (EDR) and Environmental Status and Planning Report (ESPR) filings with the MEPA Office.



To assist the reader in identifying letters or topics, the following are included in Chapter 2, *Responses to Comments*:

- Detailed responses to comments on the Secretary’s Certificate;
- Detailed responses to comments on letters received from state entities, municipalities, and elected officials;
- An index of the letters received sorted by author and topical responses to issues raised; and
- Topical responses on common themes raised by commenters.

The comment letters received are arranged first by state agency, municipalities, elected officials, nongovernment organizations, businesses, and individuals (see Table 1-1).

**Table 1-1 Comment Letters by Type**

Comment Letter by Type	Number of Letter Received
State Entities	3
Municipalities	5
Elected Officials	3
Non-Government Organizations	7
Other Organizations and Businesses	12
East Boston	73
Town of Winthrop	3
Town of Hull	69
Town of Milton	7
City of Chelsea	1
Other/unknown	1
Form Letter A	2
Form Letter B	15
Form Letter C	40
Form Letter D	57
Form Letter E	5
<b>Total Number of Comment Letters/emails Received</b>	<b>186</b>

Notes: Form Letter – A template comment letter received from multiple individuals.  
Some form letters also included individual comments that are addressed in the topical responses to comments.

### 1.1.1 Revised Draft Section 61 Findings

Chapter 3, *Revised Draft Section 61 Findings*, provides revised documentation of the mitigation commitments outlined in the Final EA/EIR by phase of Project implementation. Mitigation measures include: overall project benefits, specific operational benefits, site planning and sustainable design/greenhouse gas reduction measures, surface transportation, air quality and noise measures, stormwater management, water and wastewater, soil and groundwater, and construction period mitigation measures.



### 1.1.2 Appendices

Appendices A and B include the Executive Summary of the Draft EA/EIR both in English and Spanish. Appendix C provides information on the energy modeling and greenhouse gas assessment. Appendix D includes copies of the letters received that were addressed with topical comment responses. Appendix E includes a discussion of wastewater volumes.

### 1.1.3 Review Period and Availability

This Draft EA/EIR was submitted to the Massachusetts Executive Office of Energy and Environmental Affairs (EEA), MEPA Office and the FAA on September 30, 2016. It is expected that EEA will publish the Notice of Availability of the Final EIR in the October 5, 2016 edition of the *Environmental Monitor*. Public comments would be due November 4, 2016, and a decision on the Final EIR would be due November 11, 2016. The federal NEPA comment period will be coincident with the MEPA comment period.

This Final EA/EIR is being submitted to each agency from which Massport will seek permits for the Terminal E Modernization Project. Massport will also circulate a copy of the Final EA/EIR and/or notify all other parties that submitted individual written comments on the Draft EA/EIR. A full copy of the Final EA/EIR, including English and Spanish versions of the Draft EA/EIR Executive Summary will be posted on Massport's website at <http://www.massport.com/environment/environmental-reporting/environmental-filings/>. Massport will also make available hard copies of the Final EA/EIR to any additional reviewers, upon request.

A copy of the Final EA/EIR will also be made available for review at the Boston Public Library - Main, Connolly, East Boston, Charlestown, and South Boston Branches. Additional library distribution includes: Chelsea Public Library, Winthrop Public Library, Cambridge Main Library, Revere Public Library, and Everett Public Library.



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# 2

## Responses to Comments

### 2.1 Introduction

The Responses to Comments includes a copy of the Secretary of the Executive Office of Energy and Environmental Affairs (EEA) Certificate on the Terminal E Modernization Draft Environmental Assessment (EA)/Environmental Impact Report (EIR), as well as a copy of each comment letter received. As directed in the Certificate, many of the comment letters identified similar concerns. Therefore, this Final EA/EIR contains topical responses to comments to the extent that they are within Massachusetts Environmental Policy Act (MEPA) jurisdiction. The Secretary’s Certificate, as well as letters from the state, municipalities, and elected officials, are responded to in detail, since they included more detailed comments on a range of topics. Where applicable, the responses also refer to future Environmental Data Reports (EDR) and/or Environmental Status and Planning Reports (ESPR) to address issues that are not within the scope of this review.

Responses to comments are categorized in the topical responses, including:

- Alternatives
- Cumulative Impacts
- Environmental Justice
- Ground Transportation
- Health Effects
- Induced Growth
- MEPA Process
- Mitigation
- Parking
- Noise
- Regionalization
- Resiliency
- RNAV/aRea NAVigation departure procedures
- Stakeholder Outreach

#### How to Find Your Comment Letter and Response

The comment letters received on the Terminal E Modernization Project Draft EA/EIR are responded to in two formats – individual responses to comments and topical responses to comments.

- The Certificate and its responses can be found in **Section 2.2** of this chapter
- Letters from state entities, municipalities, and elected officials and individual responses to delineated comments can be found in **Section 2.3**
- All other letters are located in **Appendix D**. Topical responses to non-governmental organizations, businesses, and individuals can be found in **Section 2.4**.



### 2.1.1 Summary of Reviewers and Topics Raised

To assist readers, Tables 2-1, 2-2, and 2-3 list each reviewer and the topics raised in their comment letters. For responses provided, please refer to the following locations in the Final EA/EIR.

**Table 2-1 Certificate/ Comment Letters and Topics Raised - (Individual Responses)**

Reviewer	Affiliation	Topics Raised	Location in Final EA/EIR
C. Certificate – Secretary Matthew Beaton	Executive Office of Energy and Environmental Affairs (EEA)	MEPA Process, EDR/ESPR, Environmental Justice, Ground Transportation, Regionalization, Energy / Greenhouse Gas, Resiliency, RNAV, Cumulative Impacts, Mitigation, Wastewater	Section 2.2
1. John D. Viola, Deputy Regional Director	Massachusetts Department of Environmental Protection	Resiliency, Energy / Greenhouse Gas	Section 2.3.1
2. Paul F. Ormond, P.E., Energy Efficiency Engineer	Massachusetts Department of Energy Resources	Energy / Greenhouse Gas	Section 2.3.2
3. Robert D'Amico Senior Planner	Boston Transportation Department	General Support	Section 2.3.3
4. Murphy, Hesse, Toomey & Lehane, LLP	Town of Milton	MEPA Process, Induced Growth, Cumulative Impacts	Section 2.3.4
5. Board of Selectmen	Town of Milton	RNAV	Section 2.3.5
6. Philip Lemnios, Town Manager	Town of Hull	RNAV	Section 2.3.6
7. Frank Ciano Myron Kassaraba	Town of Arlington Town of Belmont	Cumulative Impacts, RNAV	Section 2.3.7
8. Senator Boncore, Representative Madaro, and Councilor LaMattina	The General Court of Massachusetts	Environmental Justice, Mitigation, Health Effects, Noise, Regionalization, Stakeholder Outreach	Section 2.3.8
9. Congressman Michael Cupuano	Congress of the United States - House of Representatives	RNAV, General Support	Section 2.3.9
10. Roy Avellaneda	Chelsea Councilor-at-Large	Induced Growth, Cumulative Impacts, Noise	Section 2.3.10
11. Frederick Salvucci	Former Massachusetts Secretary of Transportation	Ground Transportation, RNAV, Environmental Justice/Outreach, MEPA Process, Mitigation, Noise	Section 2.3.11



**Table 2-2 Comment Letters from NGOs and Business and Topics Raised - (Topical Responses)**

<b>Reviewer</b>	<b>Affiliation</b>	<b>Topics Raised</b>	<b>Location in Final EA/EIR</b>
<b>Non-Governmental Organizations</b>			
12. Aaron M. Toffler, Esq	Air Impact Relief Inc.	MEPA Process	Section 2.4.7
13. Aaron M. Toffler, Esq	Air Impact Relief Inc.	Environmental Justice, Mitigation, Parking, Regionalization	Sections 2.4.3, 8,10,11
14. Kalila Barnett	Alternatives for Community & Environment, Inc. (ACE)	Environmental Justice, Induced Growth, MEPA Process, Regionalization	Sections 2.4.3, 6, 7, 11
15. Jill V. Horwood Julie Wormser	Boston Harbor Now	Ground Transportation, Mitigation, Resiliency,	Sections 2.4.4, 8, 12
16. The Quiet Skies Committee	Hull Neighbors for Quiet Skies	Induced growth, RNAV	Sections 2.4.6, 13
17. Gloribell Mota	Neighbors United for a Better East Boston (NUBE)	Environmental Justice, Mitigation	Sections 2.4. 3, 8
18. Dan Nicolai	Service Employees International Union (SEIU)	Alternatives, Cumulative Impacts, Environmental Justice, Ground Transportation, Induced Growth, MEPA Process, Noise, Stakeholder Outreach	Sections 2.4.1, 2, 3, 4, 6, 7, 9, 14
<b>Business Community</b>			
19. Richard A. Dimino	A Better City	Ground Transportation, General Support	Sections 2.4 and 2.4.4
20. Abbie R. Goodman	American Council of Engineering Companies of Massachusetts (ACEC/MA)	General Support	Section 2.4
21. Richard Doherty	Association of Independent Colleges and Universities in Massachusetts (AICUM)	General Support	Section 2.4
22. Richard C. Lord	Associated Industries of Massachusetts (AIM)	General Support	Section 2.4
23. William Guenther	Boston Financial Services Leadership Council (BFSLC)	General Support	Section 2.4
24. John Erwin	Conference of Boston Teaching Hospitals (COBTH)	General Support	Section 2.4
25. James E. Rooney	Greater Boston Chamber of Commerce	General Support	Section 2.4
26. Patrick B. Moscaritolo	Greater Boston Convention & Visitors Bureau	General Support	Section 2.4
27. Louis A. Mandarini, Jr.	Local 22 Construction & General Laborers' Union	General Support	Section 2.4
28. JD Chesloff	Massachusetts Business Roundtable	General Support	Section 2.4
29. Christopher R. Anderson	Massachusetts High Technology Council	General Support	Section 2.4
30. Susan Houston	MassEcon	General Support	Section 2.4



Table 2-3 Comment Letters from Individuals/Topics Raised - (Topical Responses)

Reviewer	Affiliation	Topics Raised	Location in Final EA/EIR
<b>Individual Interested Parties</b>			
31. Acevedo, Joshua	East Boston resident	Mitigation	Section 2.4.8
32. Aiken, David	East Boston resident	MEPA Process	Section 2.4.7
33. Ayed, Magdalena	East Boston resident	Cumulative Impacts	Section 2.4.2
34. Borthwick, Jesse	East Boston resident	Cumulative Impacts, Noise,	Sections 2.4.2, 9
35. Connor, Karen	East Boston resident	General Concern	Section 2.4
36. Curtis, Jessica	East Boston resident	Environmental Justice, Health Effects, Induced Growth, Stakeholder Outreach	Sections 2.4.3, 5, 6, 14
37. D'Amore, Patricia	East Boston resident	Environmental Justice, MEPA Process, Stakeholder Outreach	Sections 2.4.3, 7, 14
38. Doering, Carol	East Boston resident	Environmental Justice, Stakeholder Outreach	Sections 2.4.3, 14
39. Gates, Judy	East Boston resident	MEPA Process	Section 2.4.7
40. McCauley, Kathleen	East Boston resident	MEPA Process, RNAV	Sections 2.4.7, 13
41. Miller, Gail	East Boston resident	Cumulative Impacts, Environmental Justice, MEPA Process, Regionalization, Stakeholder Outreach	Sections 2.4.2, 3, 7, 11, 14
42. Myers, Celeste, Ribeiro	East Boston resident	MEPA Process	Section 2.4.7
43. O'Reilly, Jane	East Boston resident	General Concern	Section 2.4
44. Passariello, Steve	East Boston resident	General Concern	Section 2.4
45. Rosales, Carlos	East Boston resident	Environmental Justice, Stakeholder Outreach	Sections 2.4.3, 14
46. Ryan, Daniel	East Boston resident	Alternatives, Cumulative Impacts	Sections 2.4.1, 2
47. Starrett, Sussana	East Boston resident	Environmental Justice, MEPA Process, Stakeholder Outreach	Sections 2.4.3, 7, 14
48. Thiru, Kannan	East Boston resident	Alternatives, Ground Transportation, Resiliency	Sections 2.4.1, 4, 12
49. Tyler, Melissa	East Boston resident	Mitigation	Section 2.4.8
50. Walkey, John	East Boston resident	Cumulative Impacts, Environmental Justice Regionalization, Stakeholder Outreach	Sections 2.4.2, 3, 11, 14
51. Welch, Mary Ellen	East Boston resident	Ground Transportation, Health Effects, MEPA Process	Sections 2.4.4, 5, 7
52. Banzett, Robert	Hull resident	RNAV	Section 2.4.13
53. Brennan, John	Hull resident	Noise	Section 2.4.9
54. Carer, Tom	Hull resident	General Concern	Section 2.4
55. Connor, Sheila	Hull resident	Mitigation, RNAV	Sections 2.4.8, 13
56. Curtis, Nancy	Hull resident	RNAV	Section 2.4.13
57. Karoff, Paul	Hull resident	RNAV	Section 2.4.13
58. Kerr, Jeff	Hull resident	RNAV	Section 2.4.13
59. Kinkhead, Liz	Hull resident	Noise	Section 2.4.9
60. Maher, Chris	Hull resident	Noise	Section 2.4.9
61. McCarthy, William	Hull resident	RNAV	Section 2.4.13
62. Ray, Neil	Hull resident	Noise, RNAV	Sections 2.4.9, 13
63. Christiansen, Cindy	Milton resident	RNAV	Section 2.4.13
64. Haynes, Patricia	Milton resident	Induced Growth	Section 2.4.6





Table 2-3 Comment Letters from Individuals/Topics Raised - (Topical Reponses) Continued

Reviewer	Affiliation	Topics Raised	Location in Final EA/EIR
<b>Individual Interested Parties</b>			
65. Schmidt, Andy	Milton resident	Cumulative Impacts, Induced Growth, , Mitigation, RNAV	Sections 2.4.2, 6, 8, 13
66. Julia Howington	Winthrop resident	Alternatives, Ground Transportation, MEPA Process, Mitigation, Regionalization	Sections 2.4.1, 4, 7,8,11
67. Mary Mitchell	Winthrop resident	Ground Transportation, Regionalization	Sections 2.4.4, 11
68. Mimi Callum	Winthrop resident	Noise	Section 2.4.9
Form Letter A (2)	Primarily Milton	MEPA Process, RNAV	Sections 2.4.7, 13
Form Letter B (15)	Primarily East Boston	Environmental Justice, MEPA Process Regionalization	Sections 2.4.3, 7, 11
Form Letter C (40)	Primarily East Boston	Environmental Justice, Mitigation, Regionalization	Sections 2.4.3, 8
Form Letter D (57)	Primarily Hull	RNAV	Section 2.4.13
Form Letter E (5)	Primarily East Boston	Environmental Justice, MEPA Process	Sections 2.4.3, 7



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2.2 Executive Office Of Energy and Environmental Affairs (EEA)  
Secretary's Certificate on the Draft EIR



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*The Commonwealth of Massachusetts*  
*Executive Office of Energy and Environmental Affairs*  
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September 16, 2016

CERTIFICATE OF THE SECRETARY OF ENERGY AND ENVIRONMENTAL AFFAIRS  
 ON THE  
 DRAFT ENVIRONMENTAL IMPACT REPORT

PROJECT NAME : Terminal E Modernization  
 PROJECT MUNICIPALITY : East Boston  
 PROJECT WATERSHED : Boston Harbor  
 EEA NUMBER : 15434  
 PROJECT PROPONENT : Massachusetts Port Authority  
 DATE NOTICED IN MONITOR : July 20, 2016

As Secretary of Energy and Environmental Affairs, I hereby determine that the Draft Environmental Impact Report (DEIR) submitted on this project **adequately and properly** complies with the Massachusetts Environmental Policy Act (MEPA; M.G.L. c.30, ss.61-62I) and with its implementing regulations (301 CMR 11.00). Consistent with Section 11.08 (8)(b)(2)(b) of the MEPA regulations, I am requiring the Proponent to file responses to comments on the DEIR and draft Section 61 Findings. The responses to comments and draft Section 61 Findings shall be filed, circulated, and reviewed as a Final Environmental Impact Report (FEIR).

Comments on the DEIR reflect myriad concerns regarding existing airport operations and noise levels and potential increases in impacts associated with long-term growth. I have received comment letters from elected officials, including U.S. Congressman Michael E. Capuano, State Senator Joseph Boncore, State Representative Adrian Madaro, Boston City Councilor Salvatore LaMattina, and Chelsea City Councilor Roy Avellaneda. Comments were also submitted by municipalities, State and regional agencies, environmental advocacy groups, businesses and residents. The issue of cumulative airport-wide impacts, particularly noise and air quality, is not new to the review of projects at Logan Airport. As noted in past Certificates, the EIR is not intended to address broad concerns associated with airport operations and growth. The venue for addressing cumulative environmental impacts is through the Environmental Status and Planning Reports (ESPR) and Environmental Data Reports (EDR). Through these reports, Logan Airport is subject to comprehensive and regular MEPA review, including opportunities for public comment on the cumulative impacts. This regular updating and reporting on planning and cumulative impacts is unique among State Agencies. It reflects the challenge and complexity of

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managing and modernizing Logan Airport within a dense, urban area. It recognizes that the proximity of communities to the Airport warrants an enhanced level of public engagement and a concerted, long-term effort to minimize and mitigate impacts.

Subsequent ESPRs and EDRs will update the cumulative impacts of passenger growth and associated ground and aircraft operations based on revised forecasts and update and revise environmental management plans to address impacts. Future submittals will continue to document potential impacts and trends and propose measures to implement the broad goal of maintaining or reducing Logan's overall environmental impacts, even as annual passenger volumes rise in the future. The next ESPR will analyze calendar year 2016 and will likely be filed in 2017 or 2018 and the next EDR will analyze calendar year 2015 and will likely be filed in the fall of 2016.

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Over the past year, Massport has engaged in a concerted outreach effort with elected officials, municipalities and community groups to identify and discuss potential Massport projects, including but not limited to, Terminal E. Massport created the Logan Airport Impact Advisory Group (IAG) to solicit comment and to identify and prioritize projects and programs of significance to the IAG. One project prioritized through this process is the construction of a pedestrian connection between the Massachusetts Bay Transportation Authority (MBTA) Blue Line Airport Station to Terminal E. Massport has incorporated this connection into the Terminal E project. I commend Massport for its outreach efforts which have been beneficial to informing the MEPA process. I encourage Massport to continue a productive dialogue with interested stakeholders, including through the IAG.

C.4

Project Description

The project proposes modernizing Boston-Logan International Airport's John A. Volpe International Terminal (Terminal E) with a 560,000-square foot (sf) addition that corrects facility deficiencies and accommodates current and anticipated passenger volumes. The project includes three gates which previously underwent MEPA review (International Gateway Project, EEA #9791) but were not constructed, and four additional aircraft gates, passenger holdrooms, concourse, concessions, and passenger processing areas. The project includes Customs and Border Patrol (CBP) and Federal Inspection Services (FIS) facilities to replace and expand FIS facilities that were originally reviewed under MEPA (Terminal B, Pier A Improvements/Sacilite FIS Facility, EEA #12235) but also not constructed. The project includes a direct pedestrian connection between Terminal E and the MBTA Blue Line Airport Station.

Terminal E was constructed in 1974 with 12 gates and served 1.4 million annual passengers. In 2014, it served approximately five million passengers. The DEIR indicates that the current level of passenger activity routinely causes severe congestion in the terminal at peak times, leading to greatly reduced customer service, and inefficient operations in the terminal and gates. According to the DEIR, gate congestion leads to airside delays and inefficiencies on the North Apron. When no gates are available, arriving aircraft and passengers are held on the apron. The DEIR indicates that aircraft must use remote parking facilities at hardstands in the North Cargo Area and passengers are bused to the terminal during peak periods when there are insufficient gates. The DEIR builds upon the information presented in the ENF regarding challenges associated with current operations at Terminal E. Massport has clearly demonstrated the need for the project and made a compelling case for the expansion.



The DEIR provided additional information to clarify and revise project phasing. The project is proposed in two phases. Phase 1 will be constructed from 2018 – 2022 and will include construction of four new gates with associated passenger holdrooms and elevators/escalators to relieve existing deficiencies and accommodate interim growth. A partial new concourse will be constructed to allow for future expansion to a seven-gate facility at full build-out. Phase 1 will not require modifications to roadway realignment. Phase 2 will be built by 2028 and will provide three additional gates and the MBTA connection. The DEIR indicates the project will be fully constructed and operational by 2030. Due to planning and budget constraints, the MBTA pedestrian connection has been shifted from Phase 1 as proposed in the ENF to Phase 2. The DEIR indicates that no other significant changes have occurred since the ENF was filed.

The project will displace ground service equipment (GSE), other airside activities, existing surface parking, the cell phone lot, and the gas station which will be relocated within existing airport boundaries. Relocation of ground facilities that conflict with the new concourse location, including the gas station, will occur in Phase 1.

Environmental Status and Planning Report (ESPR) and Environmental Data Reports (EDRs)

The MEPA environmental review process for Logan Airport occurs on two levels: airport-wide and project-specific. The ESPR and EDR provide a “big picture” analysis of the environmental impacts of current and anticipated levels of airport-wide activities (including aircraft operations and passenger activity), and presents comprehensive strategies to avoid, minimize and mitigate impacts. The ESPR is generally updated on a five-year basis; the most recent ESPR for the year 2011 was filed in April 2013 and it contained updated passenger activity levels and aircraft operations forecasts through 2030. EDRs evaluate environmental conditions for the reporting year as compared to the previous year and are filed in the years between ESPRs. The most recent EDR for the year 2014 was filed in October 2015. The EDR provided a comprehensive cumulative analysis of the effects of all Logan Airport activities based on actual passenger activity and aircraft operation levels in 2014 and presents environmental management plans for addressing environmental impacts. The ESPR is supplemented by (and ultimately incorporates) the EDRs and the detailed analyses and mitigation commitments that emerge from project-specific reviews. This process provides a comprehensive and continuous review of airport programs, projects, environmental impacts and associated data.

The 2015 EDR Scope includes, but is not limited to, reporting on noise, air quality, and long-term parking management. The 2015 EDR and 2016 ESPR should reflect the proposed connection to the Airport Station, provide updates on the planning and design of the connection, and identify the anticipated ridership, changes in the HOV mode share, and ground access planning considerations.

The MEPA regulations (Section 11.06(2)) indicate that during the course of an ENF review I may review any relevant information from any other source to determine whether to require an EIR, and, if so, what to require in the Scope. To provide context for this project-specific review and because many issues raised by commenters relate to airport-wide operations and impacts, this Certificate refers to documents from the ESPR process (EEA#3247/5146).

Logan Airport and Project Site

The Airport boundary encompasses approximately 2,400 acres in East Boston and Winthrop, including approximately 700 acres underwater in Boston Harbor. The Airport is surrounded on three sides by Boston Harbor and is accessible by two public transit lines and the roadway system. The airfield is comprised of six runways and approximately 15 miles of taxiway. Logan Airport has four passenger terminals, A, B, C, and E, each with its own ticketing, baggage claim, and ground transportation facilities.

Terminal E is located adjacent to the North Cargo Area, closest to the MBTA Blue Line Airport Station. Land uses in the area of the proposed project include UPS aircraft parking and loading area, the airport’s Remain Over Night aircraft parking area, the North Cargo Area equipment storage area, a building occupied by United Parcel Service (UPS), the MBTA Blue Line Airport Station, airport roadways, various short-term and cell phone parking lots, and a gas station.

The project site is located within the coastal zone of Massachusetts. The entirety of the project site is comprised of previously disturbed impervious area. It is not located in Priority or Estimated Habitat as mapped by the Division of Fisheries and Wildlife’s (DFW) Natural Heritage and Endangered Species Program (NHESP). The project site does not contain wetland resource areas regulated pursuant to the Wetland Protect Act and its implementing regulations (310 CMR 10.00).

The ENF identified the following projects within the vicinity of Terminal E that have been reviewed under MEPA: Terminal A Replacement (EEA#9329), Terminal E Modifications (EEA#9324), Federal Inspection Services (FIS) Facility and West Concourse Project / International Gateway (EEA#9791), and Terminal B, Pier A Improvements/Satellite FIS Facility (EEA#12235).

Permitting and Jurisdiction

The project is undergoing MEPA review and required an ENF pursuant to 301 CMR 11.03(6)(b)(6) because it will be undertaken by a State Agency and results in the expansion of an existing terminal at Logan Airport by greater than 100,000 sf.

The project requires a Sewer Permit Modification from the Boston Water and Sewer Commission (BWSC) and may require an Industrial User Permit from the Massachusetts Water Resource Authority (MWRA). The project may be subject to Massachusetts Office of Coastal Zone Management (CZM) federal consistency review.

The project requires approval by the Federal Aviation Administration (FAA) for changes to the Airport Layout Plan and, therefore, requires an Environmental Assessment (EA) under the National Environmental Policy Act (NEPA). The project also requires a National Pollutant Discharge Elimination System (NPDES) General Permit for Construction from the U.S. Environmental Protection Agency.



*Environmental Justice Policy*

I have received numerous comment letters regarding environmental justice and concerns that the burden of cumulative noise, air pollution, and traffic impacts associated with growth and increased operations will be borne by neighboring communities, independent of this specific project. The Executive Office of Energy and Environmental Affairs (EEA) Environmental Justice Policy (EJ Policy) was designed to improve protection of low income and communities of color from environmental pollution as well as promote community involvement in planning and environmental decision-making to maintain and/or enhance the environmental quality of their neighborhoods. Massport provided outreach consistent with the spirit and intent of the enhanced public participation provisions of the EJ Policy. Massport requested and was granted an extension of the comment period to provide additional time to review and comment on the DEIR. The meeting notice was published in English and Spanish in the Boston Herald and the East Boston Times. Spanish language translation was also provided at a Public Information Meeting held the evening of August 10, 2016 at the Mario Umama Middle School Academy Auditorium in East Boston. I received many comment letters requesting Massport provide a Spanish language version of the Executive Summary provided with the DEIR filing. Massport has indicated it will provide a Spanish translation of the DEIR Executive Summary. I encourage Massport to continue providing translated Executive Summaries with all future MEPA filings.

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*Alternatives Analysis*

The DEIR included an expanded alternatives analysis that identified the planning metrics, facility requirements, and assumptions used to design the project and to determine the final number of gates based on the passenger projections for year 2030. The DEIR provided a gating analysis for forecast passenger activity and aircraft operations levels to determine the number of gates required to accommodate the volumes of passengers and aircraft that will be arriving and departing at Terminal E during the average weekday peak-hours. As described in the DEIR, Massport has limited control over the scheduling of transatlantic flights, which are subject to lengthy flight times and time zone changes that cause arrival and departure peaks to occur within a relatively short time period. The DEIR indicates that peak hour for international departures will be between 9:00 pm to 10:00 pm and the peak hour for international arrivals will be between 6:00 pm and 7:00 pm. According to the DEIR, approximately 1,954 passengers are projected to depart in 2030 during the peak hour (9:00 pm to 10:00 pm) and 1,885 passengers are projected to arrive during the peak hour (6:00 pm to 7:00 pm). Based on this, the gating analysis indicates that Logan Airport will require an additional seven gates for a total of 19 gates to efficiently support international operations.

The DEIR identified the number of planes that are forced to "hard stand" during peak hours due to lack of available gates under existing, future No-Build, and future Build-Conditions. As described in the DEIR, in the summer of 2015, aircraft scheduling demanded 13 gates, one more than the existing twelve gates. Throughout 2015, only 10 of the existing 12 Terminal E gates were available for use as two were decommissioned to allow for construction of the Terminal E Renovation and Enhancements Project. From April to September 2015, facility constraints at Terminal E resulted in 293 gate-delays, which affected approximately 44,000 passengers and 49 ramp busing operations to remote hardstands which affected over 8,200 passengers. As described in the DEIR, aircraft waiting for gates account for 55-percent of total delays at Terminal E, while busing operations to remote hardstands account for 11-percent of

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scope and extends to all aspects of the project that may cause Damage to the Environment, as defined in the MEPA regulations.

*Environmental Impacts and Mitigation*

As described in the ENF, the project includes construction of approximately 500,000 to 700,000 sf of new floor area (for a maximum 1,500,000 sf total), and will increase both water consumption and wastewater generation by approximately 25,600 gallons per day (76,800 gpd total). The project will not create new impervious area and will eliminate approximately 60 parking spaces. The DEIR indicates that the project will accommodate existing and forecasted passenger levels and operations and, therefore, will not increase passenger enplanements or vehicle trips.

Measures to avoid, minimize and mitigate project impacts include reducing air emissions, greenhouse gas (GHG) emissions, and energy consumption compared to existing conditions by improving access to gate plug-ins, pre-conditioned air, and reducing busing operations. In addition, the building is designed to act as a noise barrier to the adjacent residential areas and Memorial Stadium Park.

*Review of the DEIR*

The DEIR has been filed to provide additional information regarding the necessary details of design and development of the Terminal E expansion to support assessment of potential impacts and has been coordinated with the federal NEPA process. In accordance with my Certificate on the ENF, the Environmental Assessment (EA) as required under NEPA formed the basis of the DEIR. This Certificate applies to the review of the project under MEPA only, and does not restrict the ability of the federal government to act on those aspects of the project subject to NEPA. The DEIR included FAA's draft Finding of No Significant Impact (FONSI). The DEIR described the proposed project, identified existing conditions, described potential environmental impacts and mitigation measures, and provided an expanded discussion of alternatives. It included an update on state, local, and federal permitting and provided a discussion of permitting requirements and the project's consistency with regulatory standards. At Massport's request, the comment period was extended by three weeks to September 9, 2016.

The DEIR identified ongoing projects that are currently under construction and are assumed to be completed prior to commencement of construction for the Terminal E Project. It also identified a potential parking garage, which is predicated on the approval of a draft regulatory change by MassDEP to amend the Logan Airport Parking Freeze Regulation (310 CMR 7.30). The DEIR indicates that the potential parking garage will be subject to MEPA review pursuant to 301 CMR 6(a)(7) because it will be constructed by a State Agency and will include construction of 1,000 or more new parking spaces. This project is conceptual in nature and the DEIR did not provide a schedule or timeline for its design or construction or for initiating MEPA review. I encourage Massport to consult with the MEPA Office prior to preparing an ENF for this project.

<sup>1</sup> The Federal Aviation Administration (FAA) is reviewing the project as an Environmental Assessment (EA) under the National Environmental Policy Act (NEPA).

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total delays. According to the DEIR, in the proposed (2030) Build-Condition, only two operations will require use of a "hard stand" and busing, whereas under the No-Build, 17 flights (arrival and departure) per day will require busing operations. The DEIR also included a summary of key aircraft gate and passenger terminal area facility program requirements for the proposed project to address current deficiencies and meet the needs for future anticipated aircraft and passenger handling.

The DEIR evaluated the following alternate configurations of the new terminal area and the North Apron:

- Alternative A: Separate Core Terminal – New linear concourse and terminal core, with new separate curb frontage.
- Alternative B: Concourse Extension – Extension from existing concourse extending westward from the Gate 12 area at the west end of Terminal E.
- Alternative C: Satellite Concourse – New portion of the terminal positioned as a separate two-sided concourse structure with underground passageway connecting the new gates to the existing terminal space.
- Alternative D: Extended Core Terminal (*Preferred Alternative*) – New extension of the existing concourse, terminal core, and terminal frontages.

Each alternative included seven new gates consistent with the need identified in the gating analysis. The key differences among the terminal configuration alternatives relate to efficiency of interior operations, frontage on the adjacent roadway, disruption to the existing operations during construction, and cost. With the exception of the ability to buffer ground noise from ground operations, there is little difference in environmental impacts among the alternatives. Alternative D was selected as it provides the greatest passenger processing efficiency, interior space, and noise buffering benefits compared to the other alternatives.

Massport also evaluated three alternative roadway configurations based on the preferred terminal configuration. The three roadway alternatives (Bi-Level S-Curves, Single S-Curve, and Northern Loop Ramps) all extend the roadway frontage to facilitate drop-off and pick-up along the new building area, and realign the roadway ramps servicing Terminal E. The DEIR indicates that the roadway configurations have similar environmental impacts since the limit of work is currently fully developed and that all build options will replicate the existing traffic flow patterns. The Preferred Alternative (Single S-Curve) was selected as it provides the best alignment for traffic operations while minimizing the overall footprint.

Comments on the DEIR continue to request that Massport accommodate more demand at regional airports in lieu of or in conjunction with the proposed project. I acknowledge that long-term strategies to mitigate Logan's impacts will continue to include an emphasis on diverting travel to regional airports and to rail. As indicated in the Certificate on the ENF, regional transportation will continue to be addressed through the ESPR and EDR, not through this project specific review.

*GHG Emissions*

Because I required an EIR, the project is subject to review under the May 2010 MEPA Greenhouse Gas (GHG) Emissions Policy and Protocol ("the Policy"). The DEIR included an analysis of GHG emissions and mitigation measures that is generally in accordance with the standard requirements of the MEPA GHG Policy and Protocol; however, the FEIR must address

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several issues. The DEIR did not address many of the comments and recommendations provided in the DOER ENF comment letter. I refer Massport to DOER's comment letter. In addition, discrepancies exist between the mitigation measures presented in Table 6-1 (Summary of Terminal E Modernization Beneficial Measures), the "Sustainability Features" narrative (Section 6.2.2), the Draft Section 61 Findings (Appendix B), and the information provided in the MEPA Greenhouse Gas Analysis Technical Report (Appendix G). It is unclear which GHG reduction measures have been committed to by the Proponent and which will continue to be evaluated. For example, many measures included in Table 6-1 which summarizes Massport's commitments to beneficial measures are subsequently referred to (in Section 6.2.2 of the narrative) as measures "to-be considered for their feasibility and applicability" during the preliminary design phase and later design phases. As indicated below, the Response to Comments must provide a detailed response to address each of the issues identified in DOER's comment letter and draft Section 61 Findings should be revised accordingly.

The Base Case scenario is based on the 8th Edition of the Massachusetts Building Code that includes the International Energy Conservation Code 2012. The eQUEST v.3.64 modeling software was used to perform the GHG analysis. The DEIR indicates that Massport will build the Terminal E project to achieve LEED Silver or higher certification. The DEIR summarized the following design mitigation measures that were modeled in the GHG analysis and proposed for adoption by the Proponent:

- Improved building envelope (wall insulation of U-0.05, roof insulation of U-0.037, improved glazing of U-0.34, and reduced window to wall ratio of 25%)
- Improved Air Handling Units (Variable Air Volume with reduced fan power per cfm; dual enthalpy air economizer to maximize benefit of using outdoor air to condition the building; automatic rest of fan static pressure and supply air temperature based on space loading to reduce fan power, cooling energy, and heating energy);
- Efficient water loops with reduced water supply temperature and wider return temperatures to reduce demand on the pumping and fan systems; and
- Reduced interior lighting power density (LPD) of 0.62 W/SF and reduced exterior lighting power of 9.3 kW.

These design measures were not identified in Table 6-1 or specifically identified in the draft Section 61 Findings. They should be incorporated into revised draft Section 61 Findings. The DEIR identifies the several energy conservation measures that were considered and eliminated primarily for concerns regarding constructability, ease of operations and maintenance and cost. Measures that were eliminated include automated reflective interior blinds to reduce solar heat gain, geothermal heat pumps, fan cycling based on occupancy load, and combined heat and power (CHP). I refer the Proponent to DOER's comment letter which recommends further evaluation of CHP to address Terminal E's service water loads. Massport has indicated that conversion of the equipment at Logan's Central Heating and Cooling Plant will be evaluated as the equipment reaches the end of its useful life. I expect that further evaluation of CHP will be evaluated as part of that process and reported in future EDRs and ESPRS.

Massport has committed to evaluate the following energy efficiency measures as project design progresses: dual box minimum, fin tube radiation, energy recovery wheel, dynamic V8 filtration, and implementation of a solar photovoltaic (pv) array. According to the DEIR, these

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measures could increase energy savings by 70% compared to the currently proposed project. However, the DEIR does not indicate why these mitigation measures cannot be incorporated into the project design at this time nor does it identify the additional analysis that would be required to inform a determination during subsequent design. In addition, Section 6.2.2 of the DEIR notes that Massport will investigate the feasibility of providing 2.5% of the project's power with on-site renewable energy through the use of Solar PV, and the Greenhouse Gas Analysis Technical Report (Appendix G) indicates that a 300 kW solar PV array may continue to be evaluated for inclusion in the project. As part of this evaluation, Massport should identify the total rooftop area available for a potential solar PV array and perform a financial feasibility analysis. To date Massport has installed a total of approximately 916 kW of solar PV at Logan and Hanscom airports. The FEIR should identify the basis for delaying a decision regarding installation of a solar PV project on the rooftop of Terminal E or, at a minimum, re-affirm the commitment to build it as "solar ready" until subsequent design phases.

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Stationary source GHG emissions associated with the energy use of the proposed Terminal E expansion are estimated to generate 5,850 tpy of CO<sub>2</sub> in the Base Case Scenario. Through the adoption of energy efficiency measures, the Preferred Alternative will reduce CO<sub>2</sub> emissions associated with the terminal expansion by 685 tpy, for a total of 5,165 tpy, or a 11.7 percent decrease. The GHG analysis also evaluated total net new GHG emissions from aircraft, GSE, airside ground access vehicles, and additional energy demand associated with the Terminal E expansion. The FAA's Aviation Environmental Design Tool (AEDT) and EPA's MOVES and NONROAD models were used to calculate the GHG emissions associated with the operations, including aircraft engines, GSE/auxiliary power units (APUs), and ground access vehicles. Changes to operations are estimated to reduce GHG emissions by an additional 5,371 tpy.

*Climate Change Adaptation and Resiliency*

The DEIR described the project's consistency with Massport's Disaster and Infrastructure Resiliency Planning (DIRP) Study and Floodproofing Design Guide. Terminal E will be above the projected 2070 coastal flood elevation. The Design Guide establishes Design Flood Elevations (DFEs) that are more conservative than existing building code requirements. The DEIR indicates that the first level of the project and associated utilities and critical equipment is generally located above the DFE. In areas where spaces must be located below the DFE, critical areas will be flood proofed or protected through use of the following measures: watertight shields on doors, windows, and louvers; exterior and interior membranes and sealants; drainage collection systems and sump pumps; early warning devices to monitor water levels; sealing electrical conduits and other utilities; back-flow preventer valves on drainage and sanitary sewer piping; and use of flood openings to equalize hydrostatic pressure. The DEIR notes that Massport has consulted with CZM regarding development of coastal resiliency design measures. Massport will continue consultations with CZM and MBTA and to review existing station vulnerabilities, as operations of the Blue Line and this station are important to support Massport HOV goals. Updates on this consultation and the design measures that are considered and/or incorporated into the design to improve the MBTA station's coastal resiliency should be provided in the EDR and ESPP documents.

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*Air Quality*

The DEIR included an analysis to determine whether and to what extent the proposed project will increase criteria pollutants. The analysis evaluated changes in emissions from aircraft engines, APUs and GSE, airside vehicles, and airport passenger and employee motor vehicles under the 2030 No-Build and 2030 Build scenarios. The FAA's AEDT was used to evaluate changes in emissions from aircraft ground operations. EPA's MOVES and NONROAD models were used to evaluate changes in emissions from ground support equipment and motor vehicle emissions. Results of the analysis indicate that total emissions of all pollutants will decrease within the project area under future conditions with the proposed project compared to future conditions without the project.

	Carbon Monoxide	Volatile Organic Compounds	Nitrogen Oxides	Sulfur Oxides	Particulate Matter <sub>10</sub>	Particulate Matters
2030 No-Build	294 tpy	35 tpy	59 tpy	9 tpy	11 tpy	4 tpy
2030 Build Condition	268 tpy	33 tpy	33 tpy	6 tpy	10 tpy	3 tpy
Percent Change	-9%	-6%	-44%	-33%	-9%	-25%

The DEIR indicates that the reductions are largely due to the availability and use of gate-furnished electricity and air conditioning rather than APUs while parked at hardstands; reduced reliance on GSE to transport passengers, baggage, and cargo; and improved aircraft operational conditions (e.g., less congestion and delay) on the taxiways and aprons. The DEIR indicates that project complies with the applicable emission thresholds contained in the State Implementation Plan (SIP) and will not cause or contribute to a violation of the National Ambient Air Quality Standards (NAAQS). The DEIR quantified temporary construction-related impacts and confirmed that construction-related emissions will not exceed applicable emission thresholds.

Total air quality emissions from all sources at Logan Airport in recent years are significantly less than they were a decade ago; however, the 2014 EDR demonstrated that total emissions are increasing incrementally. The overall reduction is associated with industry trends of accommodating the demands of increasing passenger and cargo activity levels with fewer aircraft operations generating fewer emissions. Massport will continue to assess the applicability of emissions reduction measures to the extent practicable and report on air quality in the ESPP and the EDR.

*Noise*

The DEIR asserts that the project will not result in any changes to the number and type of aircraft operations when compared to the Future No-Build Alternative. It indicates that demand is driven by economic and market factors; and, therefore, growth at Logan Airport will continue to occur regardless of the Terminal E project. Cumulative impacts will continue to be addressed through the ESPP and EDR.

The DEIR included a noise evaluation which evaluated project-related ground noise conditions and the ability of the terminal extension to mitigate noise. The noise model also

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identified how changes in the use of Terminal E gates and the North Cargo Area will affect ground noise levels. The extension of Terminal E has been designed to provide a noise barrier between the airport and the community. It will result in reduced noise levels at Jeffries Point, East Boston Memorial Park, and most residential areas in East Boston west of the ramp areas between Route 1A and Putnam Street. Specifically, the project will reduce noise from aircraft ground operations near Terminal E by five to 18 dB and from single event maximum noise levels by two to 15 dB in the Jeffries Point neighborhood. It will reduce noise from aircraft ground operations near Terminal E by three to 15 dB and from single event maximum noise levels by 1 to eleven dB in the Bremen Street area south of Putnam Street to Route 1A. The DEIR indicates that the project will not result in a significant noise increase within the Day-Night Average Sound Level (DNL) 65 dB contour.

I received many letters which identify a particular concern with concentrations of flight tracks and increased flight frequency due to the FAA's area navigation (RNAV) procedures. The primary purpose of the RNAV procedures is to increase safety and operational efficiency. As documented in the ESRP and annual EDR submittals, implementation of several of the RNAV procedures have generated increased noise complaints in some towns surrounding Logan Airport and I have received many comment letters from residents of the Town of Hull on this issue. The procedures themselves have resulted in aircraft at higher altitudes although patterns are concentrated over certain communities. I note that the FAA is implementing the RNAV program nation-wide. This program is separate from and unrelated to the Terminal E Modernization project. Through my review of the ESRP and EDRs, I am aware of The Boston Logan Airport Noise Study (BLANS)<sup>2</sup>; an ongoing and joint effort between the FAA, Massport, and the Logan Airport Citizen Advisory Committee (CAC). The RNAV procedures to Runways 27, 4L, and 33L were subject to review during Phase 3 of the BLANS<sup>3</sup>. The purpose of Phase 3, currently underway, is to identify opportunities to balance the use of Logan's runways and reduce persistent noise over communities. Flight operations are significantly lower than historic levels; however, I acknowledge that projected increases in flight operations will increase cumulative noise impacts compared to existing conditions. As noted previously, the ESRP and EDRs provide a forum and meaningful opportunities for public review of information and analysis related to these issues. I also encourage residents to contact their CAC representatives to identify additional methods to participate in improving the noise environment around Boston-Logan Airport.

*Construction Period*

The DEIR provided additional construction phase information (presented below in the Mitigation Measures section) to identify construction period impacts and measures to control construction traffic, air quality, noise, and water quality impacts.

*Mitigation/Draft Section 61 Findings*

The DEIR contained a separate chapter on mitigation measures and provided draft Section 61 Findings in an Appendix. It generally describes mitigation measures and contains commitments to mitigation. As noted earlier, additional clarity is necessary regarding those

<sup>2</sup>Information on the Boston Logan Airport Noise Study can be found at <http://www.bostonoverflight.com/index.aspx>  
<sup>3</sup> These environmental documents can be found at [http://www.bostonoverflight.com/phase3\\_documents.aspx](http://www.bostonoverflight.com/phase3_documents.aspx)

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measures that are commitments and those that will be evaluated as project design progresses. This is particularly relevant to the GHG mitigation measures. The Proponent has committed to implement the following measures to avoid, minimize, and mitigate environmental impacts:

*Operational Impacts*

- The Terminal E expansion has been sited and will be designed to act as a noise barrier to the adjacent East Boston neighborhoods and Memorial Stadium park to the southwest of the North Apron. The new structures will have a minimum height of 45-ft above ground level.
- New gates will have electric power and pre-conditioned air to allow aircraft to plug in at gate rather than be serviced remotely to reduce need for on-board engine/auxiliary power unit operation, thereby reducing aircraft air emissions and GHG emissions.
- New gates will increase ramp efficiency and reduce movements on North Apron and the need to bus passengers between terminal and remote aircraft parking locations, thereby reducing ground transportation related air emissions and mobile source GHG emissions.
- Roadway and curb improvements which will improve vehicle flow and high-occupancy vehicle access.

*Sustainable Design Features/Greenhouse Gas Emissions*

- Improved building envelope (wall insulation of U-0.05, roof insulation of U-0.037, improved glazing of U-0.34, and reduced window to wall ratio of 25%).
- Improved Air Handling Units.
- Efficient water loops with reduced water supply temperature and wider return temperatures to reduce demand on the pumping and fan systems.
- Reduced interior lighting power density of 0.62 W/SF and reduced exterior lighting power of 9.3 kW.
- The roof design will incorporate materials with a minimum reflectance rating of 0.70 and emittance value of at least 0.75 for a minimum of 75% of the available roof area. Roofing materials will be non-glare to reduce heat island effect.
- Final design will incorporate infrastructure for collection, storage, and handling of recyclable materials.
- The contractor will be required to develop a construction waste management plan that requires diversion or reduction of construction waste by at least 75%.
- Massport will establish a project-specific goal for sourcing materials extracted, harvested, recovered, and/or manufactured within New England.
- The project will be designed to achieve energy efficiencies of a minimum of 20% below the MA Energy Code.
- Continued investigation into the feasibility of supplying 2.5% of the project's power with on-site renewable energy systems.
- The project will be developed to accommodate rooftop solar.
- Project will include water conservation devices that reduce water use by 20% below the MA Plumbing Code.
- Project will incorporate occupancy sensors in all indoor areas to reduce electrical demand.

*Construction Period*

- Work hours will be limited to 7:00 AM to 5:00 PM unless constrained by operational conditions at the Airport.



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- Adequate storage areas for construction supplies will be maintained on airport property.
  - Soil Management Plan will be developed based on sub-surface investigations to address identification and disposal of contaminated materials.
  - Stormwater Pollution Prevention Plan will be developed to keep sediment and contaminants out of the stormwater management system during construction.
  - Management Plan for Dewatering will be developed (if required) to address requirements for testing, handling, and treatment prior to discharge of contaminated groundwater.
  - Rodent control, inspection, monitoring, and treatment will be carried out before, during, and after completion of all foundation and utilities demolition and construction work.
  - Rodent extermination prior to work will consist of treatment throughout the project area, including building exteriors and interiors and will continue throughout construction.
  - Noise control techniques will be used to reduce noise from pile driving by at least 5 A-weighted decibels (dBA) below unmitigated levels through enclosing the point of impact for the pile drive; installation of an impact cushion between the pile drive and the pile; or requiring the application of energy-absorbing material to steel piles.
  - Measures to reduce ground transportation impacts from project construction include:
    - Designated truck routes designed to keep construction-related traffic off of residential streets unless they are seeking construction-related access to or from local businesses.
    - Concrete production/batching will occur in existing plants with access to Route 1A or I-90 to reduce on-airport activities and to consolidate truck trips.
    - Construction companies will be encouraged to provide off-Airport parking for their employees and to provide shuttle services from these locations.
  - The following measures will address construction phase air quality impacts:
    - Enforcement of construction vehicle anti-idling provisions;
    - Retrofitting diesel construction equipment with diesel oxidation catalysts and/or particulate filters;
    - Fugitive dust will be controlled via wetting or sweeping and all trucks hauling materials from the construction site will be covered.

Responses to Comments

The Response to Comments should contain a copy of this Certificate and a copy of each comment letter received on the DEIR. Comment letters may be provided electronically on a CD. As many of the comment letters identify similar concerns, the FEIR may contain a thematic response to comments to the extent that they are within MEPA jurisdiction. The response can also refer to future EDRs and/or ESPRs to address issues that are not within the Scope of this review. This directive is not intended, and shall not be construed, to enlarge the scope beyond what has been expressly identified in this Certificate. I recommend that Massport employ an indexed response to comments format, supplemented as appropriate with direct narrative response.

The response to comments section should address specific comments from DOER and a revised GHG analysis should be provided, if necessary to provide a meaningful response. The Response to Comments should clarify GHG reduction measures and to demonstrate that GHG emissions will be minimized, avoided, and mitigated to the maximum extent practicable. I expect that the FEIR will provide a comprehensive and thoughtful response to the DOER comment letter and that Massport will consult with DOER prior to filing the Response to Comments.

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Mitigation/Draft Section 61 Findings

The Response to Comments should include revised draft Section 61 Findings which should include a complete list of all mitigation measures developed through MEPA review of the project, including but not limited to, measures specifically incorporated into the terminal design or operational measures to minimize GHG emissions. The Section 61 findings should clarify which GHG mitigation measures are proposed as mitigation and which will continue to be evaluated. It should reconcile the data contained in Table 6-1, Sustainability Features narrative in Section 6.2.2, and the information provided in the GHG Analysis Technical Report (Appendix G). The revised draft Section 61 Findings should clarify the reduction in GHG emissions (compared to the base case) that is being committed to as mitigation. The draft Section 61 Findings should also identify whether each mitigation commitment will be incorporated or provided as part of Phase 1, Phase 2, or both phases of the project.

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To ensure that all GHG emissions reduction measures adopted by the Proponent in the Preferred Alternative are actually constructed or performed, I require proponents to provide a self-certification to the MEPA Office. Specifically, Massport must provide a certification to the MEPA Office signed by an appropriate professional (e.g., engineer, architect, transportation planner, general contractor) indicating that the all of the mitigation measures proposed in the EIR have been incorporated into the project. Alternatively, Massport may certify that equivalent emissions reduction measures that collectively are designed to reduce GHG emissions by the same percentage as the measures outlined in the EIR, based on the same modeling assumptions, have been adopted. The certification should be supported by plans that clearly illustrate where GHG mitigation measures have been incorporated. For those measures that are operational in nature (i.e. TDM) the Proponent should provide an updated plan identifying the measures, the schedule for implementation and how progress towards achieving the measures will be obtained. The commitment to provide this self-certification in the manner outlined above should be incorporated into the draft Section 61 Findings included in the EIR.

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Circulation

In accordance with Section 11.16 of the MEPA Regulations and as modified by this Certificate, Massport should circulate a hard copy of the FEIR to each State and City Agency from which the Proponent will seek permits. Massport must circulate a copy of the FEIR to all other parties that submitted individual written comments. Per 301 CMR 11.16(5), the Proponent may circulate copies of the FEIR to these other parties in CD-ROM format or by directing commenters to a project website address. However, Massport should make available a reasonable number of hard copies to accommodate those without convenient access to a computer and distribute these upon request on a first-come, first-served basis. Massport should send correspondence accompanying the CD-ROM or website address indicating that hard copies are available upon request, noting relevant comment deadlines, and appropriate addresses for submission of comments. A CD-ROM copy of the filing should also be provided to the MEPA Office. A copy of the EIR should be made available for review at the following Libraries: Boston Public Library – Main, Connolly, Orient Heights, Charlestown, and East Boston Branches, Chelsea Public Library, Winthrop Public Library, Revere Public Library, Everett Public Library, Milton Public Library, and Hull Public Library.

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Conclusion

Based on a review of the DEIR, consultation with State Agencies, and a review of comment letters, I have determined that the DEIR adequately and properly complies with MEPA and its implementing regulations. The Proponent may submit the Response to Comments and draft Section 61 Findings as the FEIR.

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September 16, 2016

Date



Matthew A. Beaton

Comments received:

7/28/2016	Greater Boston Convention & Visitors Bureau
8/1/2016	MassEcon
8/1/2016	Murphy, Hesse, Toomey & Lehane, LLP on behalf of the Town of Milton
8/3/2016	Local 22, Construction & General Laborers' Union
8/3/2016	Mary J. Ryan
8/3/2016	Air Impact Relief (AIR) via Aaron Toffler
8/5/2016	American Council of Engineering Companies of Massachusetts (ACEC/MA)
8/5/2016	Associated Industries of Massachusetts (AIM)
8/10/2016	Conference of Boston Teaching Hospitals
8/11/2016	Boston Financial Services Leadership Council (BFSLC)
8/11/2016	Susanna Sturrett
8/12/2016	Massachusetts Business Roundtable
8/14/2016	Magdalena Ayed
8/15/2016	Juan Ramos
8/15/2016	Linda Barber
8/15/2016	Sema Bekiroglu
8/16/2016	Town of Hull, Philip Lemnios, Town Manager
8/16/2016	Edward J. MacLean
8/16/2016	Renee MacLean
8/17/2016	Andrea White
8/17/2016	David Gardner
8/17/2016	Eugene Courier
8/17/2016	Evie Rose
8/17/2016	Herb Zeller
8/17/2016	Hull Neighbors for Quiet Skies
8/17/2016	Ira Fleishman
8/17/2016	Jen Hartnett-Bullen

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8/17/2016	Joe Berkeley
8/17/2016	Juliet Floyd
8/17/2016	Karen Delano
8/17/2016	Kathy A. Beiter
8/17/2016	Linda Karoff
8/17/2016	Lisa Borden
8/17/2016	Maria Gracetta
8/17/2016	Mary Schultz
8/17/2016	Michael Doiron
8/17/2016	Michael Parks
8/17/2016	Phillip R. Delano
8/17/2016	Richard Monarch
8/17/2016	Robert Stenberg
8/17/2016	Rosanne Bush
8/17/2016	Sallyann Kakas
8/17/2016	Sarah & Harold Chisholm
8/17/2016	Susan Ovans
8/17/2016	Thomas Hardey
8/17/2016	Tim Fox
8/17/2016	Val Woolley
8/18/2016	Betsy Lewenberg
8/18/2016	Jeff Kerr
8/18/2016	Karen Walsh
8/18/2016	Lloyd Emery
8/18/2016	Nancy Curtis
8/18/2016	Robyn Riddle
8/18/2016	Sheila Connor
8/18/2016	Stephen Etkind
8/18/2016	Nicole Dunn
8/18/2016	Patricia Hynes
8/18/2016	Mr. and Mrs. Tomassini
8/18/2016	Pamela Loring
8/18/2016	Canice Thymne
8/18/2016	John Brennan
8/18/2016	James & Barbara Barrow
8/18/2016	Rebecca and Tillmann Hein
8/18/2016	Stephanie B. Shafran
8/18/2016	Diane & George Nissopoulos
8/18/2016	Chris Misher
8/18/2016	Donna Goes
8/18/2016	Liz West
8/18/2016	Mary Devin
8/18/2016	Marjorie E. Wiseman
8/18/2016	Ellen

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8/18/2016 Dorothy Tan  
 8/18/2016 Charleen Tyson  
 8/19/2016 Ssaross@comcast.net  
 8/19/2016 Town of Milton, Board of Selectmen  
 8/19/2016 Liz Kinkhead  
 8/19/2016 Colleen MacDonald  
 8/19/2016 A Better City  
 8/19/2016 Steve West  
 8/19/2016 Lois Freedman  
 8/19/2016 Pam Sargent  
 8/19/2016 Paul Karoff  
 8/19/2016 Neill K. Ray  
 8/19/2016 Arlington and Belmont Representatives to the Logan CAC and Massport CAC  
 8/19/2016 Kathleen T. McCarthy  
 8/19/2016 William G. McCarthy  
 8/19/2016 Boston Harbor Now  
 8/19/2016 Andrew Schmidt  
 8/19/2016 Alex D. Doucette  
 8/19/2016 Massachusetts Department of Environmental Protection (MassDEP)  
 8/20/2016 Robert Banzett  
 8/22/2016 Association of Independent Colleges and Universities in Massachusetts (AICUM)  
 8/23/2016 Patricia McKinley  
 8/23/2016 Maria Argos Barber  
 8/23/2016 Joshua Acevedo  
 8/23/2016 Elizabeth Kay  
 8/25/2016 Eida Prudden  
 9/6/2016 Tom Carey  
 9/6/2016 Congressman Michael Capuano  
 9/7/2016 Greater Boston Chamber of Commerce  
 9/8/2016 Chris Marchi  
 9/8/2016 Steve Holt  
 9/8/2016 Caroline J. Mailhot  
 9/8/2016 Encida Figueroa  
 9/8/2016 Sam Albertson  
 9/8/2016 Emily Hyman  
 9/8/2016 Peter I. Dunn  
 9/8/2016 Mimi L. Callum  
 9/8/2016 Massachusetts High Technology Council  
 9/8/2016 Jane O'Reilly  
 9/9/2016 Roy Avallameda, Councilor at Large, Chelsea  
 9/9/2016 Susanna Surratt  
 9/9/2016 Michael, Allyson, Willa and Miles Simons  
 9/9/2016 Carlos Rosales  
 9/9/2016 Margaret Morris

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9/9/2016 Kathleen McCauley  
 9/9/2016 Lindsay Rosenfeld  
 9/9/2016 John Antonellis  
 9/9/2016 John Casamassima  
 9/9/2016 Brian Gammon  
 9/9/2016 Celeste Ribeiro Myers  
 9/9/2016 Theresa Teshia Malloneck  
 9/9/2016 Melissa Tyler  
 9/9/2016 Sandra Nijjar  
 9/9/2016 Joanne T. Pomodoro  
 9/9/2016 Air Impact Relief (AIR) via Aaron Toffler  
 9/9/2016 Alexis Pumphrey  
 9/9/2016 Maria Eugenia Corbo  
 9/9/2016 Magdalena Ayed  
 9/9/2016 Gail Miller  
 9/9/2016 Daniel Ryan  
 9/9/2016 Karen Sullivan  
 9/9/2016 John Walkley  
 9/9/2016 Edward, Camille & Renee MacLean  
 9/9/2016 Service Employees International Union (SEIU) 32BJ, District 615  
 9/9/2016 Alternatives for Community & Environment, Inc. (ACE)  
 9/9/2016 Judy Gates  
 9/9/2016 Mary Ellen Welch  
 9/9/2016 David Aiken  
 9/9/2016 Kannan Thiru  
 9/9/2016 Frederick Salvucci  
 9/9/2016 Neighbors United for a Better East Boston (NUBE)  
 9/9/2016 Angel C  
 9/9/2016 Rudi Seitz  
 9/9/2016 Alfred A. Pucillo  
 9/9/2016 Lydia Edwards  
 9/9/2016 Patricia J. D'Amore  
 9/9/2016 Alexis Daniels  
 9/9/2016 Tina Kelly  
 9/9/2016 Barbara McDonough  
 9/9/2016 Madeleine Steczynski  
 9/9/2016 Karen Connor  
 9/9/2016 Regina Marchi  
 9/9/2016 Roberto Verthelyi  
 9/9/2016 Vanessa Fazio  
 9/9/2016 Chrissy Holt  
 9/9/2016 Liz Norziger  
 9/9/2016 Heather Kros  
 9/9/2016 June Krinsky-Rudder



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9/9/2016	Kim Foltz	
9/9/2016	Nancy Lec	
9/9/2016	Jessica L. Curtis, JD	
9/9/2016	Matthew Neave	
9/9/2016	Cindy L. Christiansen	
9/9/2016	Michael Passariello	
9/9/2016	Elizabeth Kay	
9/10/2016	Rob Pyles	
9/10/2016	Jesse Borthwick	
9/10/2016	Steve Passariello	
9/10/2016	Carrie Van Horn	
9/10/2016	John Tyler	
9/10/2016	Kristen D'Avolio	
9/10/2016	Craig Belaney	
9/10/2016	Cindy M. Lopez	
9/10/2016	Laura Macias Grondin	
9/10/2016	Sandra Downey	
9/10/2016	Christopher A. Zeien	
9/10/2016	Carol Doering	
9/12/2016	Department of Energy Resources (DOER)	
9/13/2016	Anthony M. Majahad	
9/13/2016	State Senator Boncore, State Representative Madaro, and City Councilor LaMattina	
9/13/2016	Mary Mitchell	
9/14/2016	Olena Chuyan	
9/14/2016	Julia Howington	
9/16/2016	Karen Maddalena	
9/16/2016	Boston Transportation Department (BTD)	

MAB/PRC/prc

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**Executive Office of Energy and Environmental Affairs (EEA) Secretary's Certificate on the Draft EIR**

<b>Comment #</b>	<b>Author</b>	<b>Topic</b>	<b>Comment</b>	<b>Response</b>
C.1	Certificate Secretary Matthew Beaton	MEPA Process	As Secretary of Energy and Environmental Affairs, I hereby determine that the Draft Environmental Impact Report (DEIR) submitted on this project adequately and properly complies with the Massachusetts Environmental Policy Act (MEPA; M.G.L. c.30, ss.61-621) and with its implementing regulations (301 CMR 11.00). Consistent with Section 11.08 (8)(b)(2) of the MEPA regulations, I am requiring the Proponent to file responses to comments on the DEIR and draft Section 61 Findings. The responses to comments and draft Section 61 Findings shall be filed, circulated, and reviewed as a Final Environmental Impact Report (FEIR).	As directed by the Secretary, this Terminal E Modernization Project Final Environmental Assessment (EA)/Environmental Impact Report (EIR) includes responses to comments on the Draft Environmental Impact Report (Draft EIR) with supporting technical information, and updated draft Section 61 Findings.  The responses to comments and draft Section 61 Findings are being filed, circulated, and reviewed as the Final EIR.
C.2	Certificate Secretary Matthew Beaton	Cumulative Impacts	Subsequent ESPRs and EDRs will update the cumulative impacts of passenger growth and associated ground and aircraft operations based on revised forecasts and update and revise environmental management plans to address impacts.	The upcoming 2016 Environmental Status and Planning Report (ESPR), will include updated passenger, operations, and cargo forecasts for future year 2035. The cumulative impact of additional flights and passenger activity levels will be assessed for noise, air quality/greenhouse gas (GHG) emissions, ground access, and water quality. Environmental management plans will be updated to address anticipated impacts, as appropriate.
C.3	Certificate Secretary Matthew Beaton	Cumulative Impacts	Future [EDR/ESPR]submittals will continue to document potential impacts and trends and propose measures to implement the broad goal of maintaining or reducing Logan's overall environmental impacts, even as annual passenger volumes rise in the future.	The upcoming 2016 ESPR, will include updated passenger, operations, and cargo forecasts for future year 2035. The cumulative impact of additional flights and passenger activity levels will be assessed for noise, air quality/greenhouse gas, ground access, and water quality. The document will also report on the status of Section 61 Findings for recent projects.
C.4	Certificate Secretary Matthew Beaton	Environmental Justice/Outreach	I encourage Massport to continue a productive dialogue with interested stakeholders, including through the IAG.	Massport is committed to an extensive stakeholder engagement process in a variety of forums, and will continue to reach out to all sectors of the community. It met regularly with the East Boston Logan Impact Advisory Group (LIAG) to provide briefings on a variety of topics. Please see Stakeholder Outreach and Environmental Justice topical responses for additional information.
C.5	Certificate Secretary Matthew Beaton	Cumulative Impacts	The 2015 EDR Scope includes, but is not limited to, reporting on noise, air quality, and long-term parking management. The 2015 EDR and 2016 ESPR should reflect the proposed connection to the Airport Station, provide updates on the planning and design of the connection, and identify the anticipated ridership, changes in the HOV mode share, and ground access planning considerations.	The 2015 Environmental Data Report (EDR), to be filed in late 2016, will describe the current state of planning for the pedestrian connector for Airport Station. The 2016 ESPR will also describe progress on planning and design for the proposed connection to the Airport Station, and will identify the anticipated ridership, changes in the high occupancy vehicle mode share, and ground access planning considerations.
C.6	Certificate Secretary Matthew Beaton	MEPA Process	At Massport's request, the comment period was extended by three weeks to September 9, 2016.	The extended comment period allowed more time for review of the Environmental Assessment/Draft Environmental Impact Report.
C.7	Certificate Secretary Matthew Beaton	Ground Transportation	The DEIR identified ongoing projects that are currently under construction and are assumed to be completed prior to commencement of construction for the Terminal E Project. It also identified a potential parking garage... This project is conceptual in nature and the DEIR did not provide a schedule or timeline for its design or construction or for initiating MEPA review. I encourage Massport to consult with the MEPA Office prior to preparing an ENF for this project.	Massport will consult with MEPA prior to the submission of an Environmental Notification Form on the Parking Garage Project.

**Executive Office of Energy and Environmental Affairs (EEA) Secretary's Certificate on the Draft EIR**

<b>Comment #</b>	<b>Author</b>	<b>Topic</b>	<b>Comment</b>	<b>Response</b>
C.8	Certificate Secretary Matthew Beaton	Environmental Justice/Outreach	Massport has indicated it will provide a Spanish translation of the DEIR Executive Summary. I encourage Massport to continue providing translated Executive Summaries with all future MEPA filings.	Massport has prepared an Executive Summary to the Draft EIR in Spanish and will include this in the Final EA/EIR (See Appendix B). Future Logan Airport environmental filings with MEPA will include a Spanish-language summary, and others as appropriate.
C.9	Certificate Secretary Matthew Beaton	Regionalization	Comments on the DEIR continue to request that Massport accommodate more demand at regional airports in lieu of or in conjunction with the proposed project. I acknowledge that long-term strategies to mitigate Logan's impacts will continue to include an emphasis on diverting travel to regional airports and to rail. As indicated in the Certificate on the ENF, regional transportation will continue to be addressed through the EDR and EDR, not through this project-specific review.	The EDRs and EDRs include a chapter dedicated to reporting on planning and activities of airports in the region.  Additional information on Regionalization is provided in Section 2.4.11.
C.10	Certificate Secretary Matthew Beaton	Energy / GHG	The DEIR included an analysis of GHG emissions and mitigation measures that is generally in accordance with the standard requirements of the MEPA GHG Policy and Protocol; however, the FEIR must address several issues.	Massport has addressed the items raised in the Department of Energy Resources (DOER) letter and has met with DOER to review the response that is included in this Final EA/EIR. Please refer to Appendix C for additional information. Since the filing of the Draft EIR, the design for the terminal has evolved. The inclusion of at least 25,000 sf of PV panels on the roof of the terminal area restrooms is now a firm project commitment. In addition, the new terminal area restrooms' hot water will be heated by solar panels which will reduce energy consumption and in turn will reduce greenhouse gas emissions.
C.11	Certificate Secretary Matthew Beaton	Energy / GHG	The DEIR did not address many of the comments and recommendations provided in the DOER ENF comment letter. I refer Massport to DOER's comment letter. In addition, discrepancies exist between the mitigation measures presented in Table 6-1 (Summary of Terminal E Modernization Beneficial Measures), the "Sustainability Features" narrative (Section 6.2.2), the Draft Section 61 Findings (Appendix B), and the information provided in the MEPA Greenhouse Gas Analysis Technical Report (Appendix G).	The DOER comments on the Draft EIR have been addressed and documented in the responses to comments. The mitigation measures presented in Table 6-1 of the Draft EA/EIR have been added to the Section 61 Findings commitments. Additional greenhouse gas mitigation commitments have also been added to this Final EA/EIR's revised draft Section 61 Findings commitments (see Chapter 3).
C.12	Certificate Secretary Matthew Beaton	Energy / GHG	It is unclear which GHG reduction measures have been committed to by the Proponent and which will continue to be evaluated. For example, many measures included in Table 6-1 which summarizes Massport's commitments to beneficial measures are subsequently referred to (in Section 6.2.2 of the narrative) as measures "to-be considered for their feasibility and applicability" during the preliminary design phase and later design phases.	As shown in Appendix C, the greenhouse gas reduction measures to which Massport is now committing are clearly documented. Massport commits to at least 20% energy reduction over the requirements in the Massachusetts Energy Code, and Massport also commits to approximately 30% reduction in building-related greenhouse gas emissions compared to a standard building built to Code. Additional greenhouse gas reduction measures will be assessed as design proceeds. This percentage will be verified through the GHG measure self-certification process to be undertaken by Massport.
C.13	Certificate Secretary Matthew Beaton	Energy / GHG	As indicated below, the Response to Comments must provide a detailed response to address each of the issues identified in DOER's comment letter and draft Section 61 Findings should be revised accordingly.	The items raised in the DOER comment letter are addressed in Appendix C, which includes a detailed memorandum documenting the additional analyses and mitigation commitments, followed by an updated technical report. In addition, the draft Section 61 Findings have been updated to clarify the greenhouse gas reduction mitigation commitments.



**Executive Office of Energy and Environmental Affairs (EEA) Secretary's Certificate on the Draft EIR**

<b>Comment #</b>	<b>Author</b>	<b>Topic</b>	<b>Comment</b>	<b>Response</b>
C.14	Certificate Secretary Matthew Beaton	Energy / GHG	<p>The DEIR summarized the following design mitigation measures that were modeled in the GHG analysis and proposed for adoption by the Proponent: Improved building envelope (wall insulation of U-0.05; roof insulation of U-0.037; improved glazing of U-0.34, and reduced window to wall ratio of 25%)</p> <ul style="list-style-type: none"> <li>- Improved Air Handling Units (Variable Air Volume with reduced fan power per cfm, dual enthalpy air economizer to maximize benefit of using outdoor air to condition the building; automatic rest of fan static pressure and supply air temperature based on space loading to reduce fan power, cooling energy, and heating energy);</li> <li>- Efficient water loops with reduced water supply temperature and wider return temperatures to reduce demand on the pumping and fan systems; and</li> <li>- Reduced interior lighting power density (LPD) of 0.62 W/SF and reduced exterior lighting power of 9.3 kW.</li> </ul> <p>These design measures were not identified in Table 6-1 or specifically identified in the draft Section 61 Findings. They should be incorporated into revised draft Section 61 Findings.</p>	<p>Since the filing of the Draft EA/EIR, the design for the terminal has evolved. At this time the inclusion of at least 25,000 sf of PV panels on the roof of the terminal expansion is a firm commitment. In addition, the new terminal area restrooms hot water will be heated by solar panels which will reduce energy consumption which in turn will reduce GHG emissions. The benefit of these items are calculated and updated in Appendix C. All measures are now contained in the revised draft Section 61 Findings (See Chapter 3).</p>
C.15	Certificate Secretary Matthew Beaton	Energy / GHG	<p>The DEIR identifies the several energy conservation measures that were considered and eliminated primarily for concerns regarding constructability, ease of operations and maintenance and cost. Measures that were eliminated include automated reflective interior blinds to reduce solar heat gain, geothermal heat pumps, fan cycling based on occupancy load, and combined heat and power (CHP).</p>	<p>The Proposed Action has been updated to now include two additional Accepted Energy Conservation Measures (ECMs). Massport has committed to include these measures into the design of the Proposed Action (1) incorporation of at least 25,000 sf of PV panels, and (2) incorporation of solar panel heating of domestic hot water for public restrooms.</p> <p>These two measures increase the energy savings of the Proposed Project to 18.8% and a reduction of greenhouse gases by 27 % compared to the Base Building. The remaining ECM's listed were considered but not committed to due to cost benefit analysis. The analysis and additional detail are given in the Appendix A memorandum. Massport commits to at least 20% energy reduction over the requirements in the Massachusetts Energy Code, and Massport also commits to approximately 30% reduction in building-related greenhouse gas emissions compared to a standard building built to Code.</p>
C.16	Certificate Secretary Matthew Beaton	Energy / GHG	<p>I refer the Proponent to DOER's comment letter which recommends further evaluation of CHP to address Terminal E's service water loads. Massport has indicated that conversion of the equipment at Logan's Central Heating and Cooling Plant will be evaluated as the equipment reaches the end of its useful life.</p>	<p>The evaluation of the Combined Heat and Power (CHP) will be included in the 2016 ESPR.</p>
C.17	Certificate Secretary Matthew Beaton	EDR/ESPR	<p>I expect that further evaluation of CHP will be evaluated as part of that process and reported in future EDRs and ESPRS.</p>	<p>The evaluation of the CHP will be included in the 2016 ESPR.</p>

**Executive Office of Energy and Environmental Affairs (EEA) Secretary's Certificate on the Draft EIR**

<b>Comment #</b>	<b>Author</b>	<b>Topic</b>	<b>Comment</b>	<b>Response</b>
C.18	Certificate Secretary Matthew Beaton	Energy / GHG	Massport has committed to evaluate the following energy efficiency measures as project design progresses: dual box minimum, fin tube radiation, energy recovery wheel, dynamic V8 filtration, and implementation of a solar photovoltaic (pv) array. According to the DEIR, these measures could increase energy savings by 70% compared to the currently proposed project.	The incorporation of the energy conservation measures is clarified and the greenhouse gas reductions are calculated and documented in detail in Appendix C.
C.19	Certificate Secretary Matthew Beaton	Energy / GHG	The DEIR does not indicate why these mitigation measures cannot be incorporated into the project design at this time nor does it identify the additional analysis that would be required to inform a determination during subsequent design.	Additional explanation regarding the feasibility of implementing the suggested greenhouse gas reducing measures is included in Appendix C. The Appendix C includes a memorandum which documents the energy conservation measures identified in the Draft EA/EIR and their associated GHG reduction benefits. It also reports on additional ECMS suggested by DOER and evaluates their GHG reduction potential. Detailed calculations are provided to substantiate the conclusions.
C.20	Certificate Secretary Matthew Beaton	Energy / GHG	In addition, Section 6.2.2 of the DEIR notes that Massport will investigate the feasibility of providing 2.5% of the project's power with on-site renewable energy through the use of Solar PV; and the Greenhouse Gas Analysis Technical Report (Appendix G) indicates that a 300 kW solar PV array may continue to be evaluated for inclusion in the project. As part of this evaluation, Massport should identify the total rooftop area available for a potential solar PV array and perform a financial feasibility analysis. To date Massport has installed a total of approximately 916 kW of solar PV at Logan and Hanscom airports.	Since the filing of the Draft EA/EIR, the design for the terminal has evolved. At this time the inclusion of at least 25,000 sf of PV panels on the roof of the terminal expansion is a firm commitment. In addition, the new terminal area restructure hot water will be heated by solar panels. Massport will consider various options for financing the PV installations, such as a third party arrangement. This will be further refined as the design proceeds.
C.21	Certificate Secretary Matthew Beaton	Energy / GHG	The FEIR should identify the basis for delaying a decision regarding installation of a solar PV project on the rooftop of Terminal E or, at a minimum, re-affirm the commitment to build it as "solar ready" until subsequent design phases.	As described above, Massport is committing to installing at least 25,000 sf of solar PV on the roof of extended Terminal E, as part of this project. The directive to make available roof area "solar ready" will be incorporated into the design process. See Appendix C for additional information.
C.22	Certificate Secretary Matthew Beaton	Resiliency	The DEIR notes that Massport has consulted with CZM regarding development of coastal resiliency design measures. Massport will continue consultations with CZM and MBTA and to review existing station vulnerabilities, as operations of the Blue Line and this station are important to support Massport HOV goals. Updates on this consultation and the design measures that are considered and/or incorporated into the design to improve the MBTA station's coastal resiliency should be provided in the EDR and ESFR documents.	Updates on this consultation and the design measures that are considered and/or incorporated into the design to improve the Massachusetts Bay Transportation Authority's (MBTA) station's coastal resiliency will be provided in the future 2016 ESFR and EDRs, as appropriate.
C.23	Certificate Secretary Matthew Beaton	Energy / GHG	Massport will continue to assess the applicability of emissions reduction measures to the extent practicable and report on air quality in the ESFR and the EDR.	Future EDRs and ESFRs will outline additional emission reduction measures that are under consideration by Massport. The status of air quality will continue to be reported upon annually in the 2015 EDR to be filed later in 2016 and subsequent ESFRs and EDRs.

Executive Office of Energy and Environmental Affairs (EEA) Secretary's Certificate on the Draft EIR				
Comment #	Author	Topic	Comment	Response
C.24	Certificate Secretary Matthew Beaton	Cumulative Impacts	... project will not result in any changes to the number and type of aircraft operations when compared to the Future No-Build Alternative. It indicates that demand is driven by economic and market factors; and, therefore, growth at Logan Airport will continue to occur regardless of the Terminal E project. Cumulative impacts will continue to be addressed through the ESRP/ EDR.	The EDRs and ESRPs will provide a detailed assessment and reporting of the cumulative impacts of Logan Airport aviation operations and related activities. Massport is unique among state agencies and airports in the U.S. for publishing annual environmental reports specifically designed to describe, analyze, and forecast the cumulative effects of Logan Airport operations based on current and anticipated future operating conditions. This process was developed to allow individual projects at Logan Airport to be considered and analyzed in the broader, Airport-wide context. The ESRP and EDRs also include information regarding all the projects planned or under construction at Logan Airport and provides a preview to the public and regulators of upcoming projects and activities. Subsequent ESRPs and EDRs will update the cumulative impacts of passenger growth and associated ground and aircraft operations based on revised forecasts and will update and revise environmental management plans to address impacts. Future EDRs/ESPRs will continue to document potential impacts and trends and propose measures to implement the broad goal of maintaining or reducing Logan Airport's overall environmental impacts, even as annual passenger volumes rise in the future. These annual publications will continue reporting on Massport's progress in meeting its mitigation commitments. ESRP and EDRs provide a forum and meaningful opportunities for public review of information and analysis related to airport planning and operations, Airport activities, and effects on noise, air quality, ground access and water quality.
C.25	Certificate Secretary Matthew Beaton	RNAV	The primary purpose of the RNAV procedures is to increase safety and operational efficiency. As documented in the ESRP and annual EDR submittals, implementation of several of the RNAV procedures have generated increased noise complaints in some towns surrounding Logan Airport and I have received many comment letters from residents of the Town of Hull on this issue. The procedures themselves have resulted in aircraft at higher altitudes although patterns are concentrated over certain communities. I note that the FAA is implementing the RNAV program nation-wide. This program is separate from and unrelated to the Terminal E Modernization project.	The FAA has been actively studying the noise and other environmental impacts of proposed flight path changes to Logan Airport's runways. The Boston Logan Airport Noise Study, or BLANS, has been going on since 2008 and there has been a Logan Airport Community Advisory Committee (CAC) working with the FAA and Massport on providing community representation. Detailed information from the studies can be found at: <a href="http://www.bostonoverflightnoise.com">http://www.bostonoverflightnoise.com</a> . That study continues to be the appropriate forum for those discussions. For over three decades, Massport has provided an annual report on the noise environment of Logan Airport, as documented in the EDRs and ESRPs. These annual reports also provide updates on the BLANS study and other FAA initiatives. The FAA NextGen initiative, is a national effort to improve the daily operations of the entire National Airspace System. This has resulted in changes in flight track and airspace around the country with resultant changes in the noise environment. The FAA prepared an EA that studies the change in RNAV, which enables aircraft to fly on any desired flight path within the coverage of ground- or space-based navigation aids, within the limits of the capability of the self-contained systems, or a combination of both capabilities. RNAV aircraft have better access and flexibility for point-to-point operations.

**Executive Office of Energy and Environmental Affairs (EEA) Secretary's Certificate on the Draft EIR**

<b>Comment #</b>	<b>Author</b>	<b>Topic</b>	<b>Comment</b>	<b>Response</b>
C.26	Certificate Secretary Matthew Beaton	Cumulative Impacts	As noted previously, the ESRP and EDRs provide a forum and meaningful opportunities for public review of information and analysis related to these issues.	Massport is committed to providing information on activity levels and forecasts, planning project, environmental impacts and progress on meeting mitigation commitments in the EDRs and ESRPs. These annual documents provide an opportunity for Massport to share the status of activities with the community and receive input.
C.27	Certificate Secretary Matthew Beaton	Energy / GHG	Additional clarity is necessary regarding measures that are commitments and those that will be evaluated as project design progresses. This is particularly relevant to the GHG mitigation measures.	See Chapter 3, Revised Draft Section 61 Findings which has been updated to reflect the full range of mitigation commitments that will be undertaken as part of the Terminal E Modernization Project.
C.28	Certificate Secretary Matthew Beaton	MEPA Process	The Response to Comments should contain a copy of this Certificate and a copy of each comment letter received on the DEIR.	This Final EA/EIR follows the Secretary's guidance for content and distribution. See Chapter 4, Distribution.
C.29	Certificate Secretary Matthew Beaton	MEPA Process	Comment letters may be provided electronically on a CD.	This Final EA/EIR follows the Secretary's guidance for content and distribution. A link to the document is provided on Massport's website; printed copies are provided in local libraries and will also be available on request.
C.30	Certificate Secretary Matthew Beaton	MEPA Process	As many of the comment letters identify similar concerns, the FEIR may contain a thematic response to comments to the extent that they are within MEPA jurisdiction.	See Chapter 2, Responses to Comments which includes detailed individual responses for several reviewers' letters that includes varied comments. The remainder of the letters reflected similar themes and are addressed in topical Responses as suggested in the Certificate.
C.31	Certificate Secretary Matthew Beaton	MEPA Process	The response can also refer to future EDRs and/or ESRPs to address issues that are not within the Scope of this review.	As directed by the Secretary, the responses to comments address Project-specific items and concerns. Airport-wide issues will continue to be addressed in EDRs and ESRPs.
C.32	Certificate Secretary Matthew Beaton	MEPA Process	This directive is not intended, and shall not be construed, to enlarge the scope beyond what has been expressly identified in this Certificate.	As directed by the Secretary, the responses to comments address Project-specific items and concerns. Airport-wide issues will continue to be addressed in EDRs and ESRPs.
C.33	Certificate Secretary Matthew Beaton	MEPA Process	I recommend that Massport employ an indexed response to comments format, supplemented as appropriate with direct narrative response.	See Chapter 2, Response to Comments, which includes detailed individual responses for several reviewers' letters that includes varied comments. The remainder of the letters reflected similar themes and are addressed in topical Responses, (See Section 2.4).
C.34	Certificate Secretary Matthew Beaton	Energy / GHG	The response to comments section should address specific comments from DOER and a revised GHG analysis should be provided, if necessary to provide a meaningful response.	Appendix C includes a detailed memorandum documenting additional energy modeling and greenhouse gas assessment and mitigation commitments that Massport has undertaken since the filing of the Draft EA/EIR. It also includes an updated energy model and greenhouse gas technical report.
C.35	Certificate Secretary Matthew Beaton	Energy / GHG	The Response to Comments should clarify GHG reduction measures and to demonstrate that GHG emissions will be minimized, avoided, and mitigated to the maximum extent practicable.	The Revised Draft Section 61 Findings includes all greenhouse gas reduction measures to which Massport is committing. The benefit of these measures in reducing greenhouse gases is calculated and documented in Appendix C.

**Executive Office of Energy and Environmental Affairs (EEA) Secretary's Certificate on the Draft EIR**

<b>Comment #</b>	<b>Author</b>	<b>Topic</b>	<b>Comment</b>	<b>Response</b>
C.36	Certificate Secretary Matthew Beaton	Energy / GHG	I expect that the FER will provide a comprehensive and thoughtful response to the DOER comment letter and that Massport will consult with DOER prior to filing the Response to Comments.	Massport met with DOER and MEPA prior to the Final EA/EIR filing to provide an update on the progress on the Terminal E Modernization Project regarding energy reducing measures and associated greenhouse gas reductions. See Appendix C.
C.37	Certificate Secretary Matthew Beaton	Mitigation	The Response to Comments should include revised draft Section 61 Findings which should include a complete list of all mitigation measures developed through MEPA review of the project, including but not limited to, measures specifically incorporated into the terminal design or operational measures to minimize GHG emissions.	See Chapter 3, Revised draft Section 61 Findings which include all mitigation measures developed during the MEPA review of the project including measures specifically incorporated into the terminal design or operational measures to minimize greenhouse gas emissions.
C.38	Certificate Secretary Matthew Beaton	Energy / GHG	The Section 61 findings should clarify which GHG mitigation measures are proposed as mitigation and which will continue to be evaluated. It should reconcile the data contained in Table 6-1, Sustainability Features narrative in Section 6.2.2, and the information provided in the GHG Analysis Technical Report (Appendix G).	The Section 61 findings clarify which greenhouse gas mitigation measures are proposed as mitigation and which will continue to be evaluated. Information reflected in Table 6-1, Sustainability Features narrative in Section 6.2.2 of the DEIR, and the information provided in the GHG Analysis Technical Report are consistent and now contained in the revised Section 61 Findings.
C.39	Certificate Secretary Matthew Beaton	Energy / GHG	The revised draft Section 61 Findings should clarify the reduction in GHG emissions (compared to the base case) that is being committed to as mitigation.	The Terminal E Modernization Project will reduce greenhouse gas emissions through reducing aircraft idling, increasing use of pre-conditioned air, allowing aircraft the ability to plug into the gates and reduce use of auxiliary power units, and improving landside vehicular flow. In addition, various greenhouse gas reduction measures are incorporated into the building's design such as solar PV and incorporation of solar panel heating of domestic hot water for public restrooms. All PV installations would be subject to review and approval by the FAA particularly focusing on avoiding solar glare impacts. Massport commits to at least 20% energy reduction over the requirements in the Massachusetts Energy Code, and Massport also commits to approximately 30% reduction in building-related greenhouse gas emissions compared to a standard building built to Code.
C.40	Certificate Secretary Matthew Beaton	Mitigation	The draft Section 61 Findings should also identify whether each mitigation commitment will be incorporated or provided as part of Phase 1, Phase 2, or both phases of the project.	All the mitigation measures will be implemented in Phase 1 with the exception of the pedestrian connector to MBTA Airport Station and those facilities associated with the construction of the remaining additional gates which are slated for Phase 2.
C.41	Certificate Secretary Matthew Beaton	Energy / GHG	To ensure that all GHG emissions reduction measures adopted by the Proponent in the Preferred Alternative are actually constructed or performed, I require proponents to provide a self-certification to the MEPA Office. Specifically, Massport must provide a certification to the MEPA Office signed by an appropriate professional (e.g., engineer, architect, transportation planner, general contractor) indicating that the all of the mitigation measures proposed in the EIR have been incorporated into the project.	Massport will undertake a self-certification process to confirm that the greenhouse gas mitigation commitments have been incorporated into the project. Certification will be conducted by an appropriately qualified professional.
C.42	Certificate Secretary Matthew Beaton	Energy / GHG	Alternatively, Massport may certify that equivalent emissions reduction measures that collectively are designed to reduce GHG emissions by the same percentage as the measures outlined in the EIR, based on the same modeling assumptions, have been adopted.	Massport will undertake a self-certification process to confirm that the greenhouse gas mitigation commitments have been incorporated into the project. Certification will be conducted by an appropriately qualified professional.

**Executive Office of Energy and Environmental Affairs (EEA) Secretary's Certificate on the Draft EIR**

<b>Comment #</b>	<b>Author</b>	<b>Topic</b>	<b>Comment</b>	<b>Response</b>
C-43	Certificate Secretary Matthew Beaton	Energy / GHG	The certification should be supported by plans that clearly illustrate where GHG mitigation measures have been incorporated. For those measures that are operational in nature (i.e. TDM) the Proponent should provide an updated plan identifying the measures, the schedule for implementation and how progress towards achieving the measures will be obtained. The commitment to provide this self-certification in the manner outlined above should be incorporated into the draft Section 61 Findings included in the EIR.	The self-certification documentation will address the requirements in the Certificate and the commitment to conducting self-certification will be included in the draft Section 61 Findings.
C-44	Certificate Secretary Matthew Beaton	MEPA Process	In accordance with Section 11.16 of the MEPA Regulations and as modified by this Certificate, Massport should circulate a hard copy of the FEIR to each State and City Agency from which the Proponent will seek permits.	Massport will circulate the Final EA/EIR as required. See Chapter 4, Distribution.
C-45	Certificate Secretary Matthew Beaton	MEPA Process	Massport must circulate a copy of the FEIR to all other parties that submitted individual written comments. Per 301 CMR 11.16(5), the Proponent may circulate copies of the FEIR to these other parties in CD-ROM format or by directing commenters to a project website address.	Massport will circulate the Final EA/EIR as required. See Chapter 4, Distribution.
C-46	Certificate Secretary Matthew Beaton	MEPA Process	However, Massport should make available a reasonable number of hard copies to accommodate those without convenient access to a computer and distribute these upon request on a first-come, first-served basis. Massport should send correspondence accompanying the CD-ROM or website address indicating that hard copies are available upon request, noting relevant comment deadlines, and appropriate addresses for submission of comments.	Massport provide notification to reviewers of the availability of the Final EA/EIR with associated comment deadlines and addresses for submission of comments.  Massport will provide a link to its website where the Final EA/EIR will be available for review. In addition, Massport will provide printed copies to the libraries listed in the Distribution list in Chapter 4 and will make printed copies available on request.
C-47	Certificate Secretary Matthew Beaton	MEPA Process	A CD-ROM copy of the filing should also be provided to the MEPA Office. A copy of the EIR should be made available for review at the following Libraries: Boston Public Library -Main, Connolly, Orient Heights, Charlestown, and East Boston Branches, Chelsea Public Library, Winthrop Public Library, Revere Public Library, Everett Public Library, Milton Public Library, and Hull Public Library.	Massport provides notification to reviewers of the availability of the Final EA/EIR with associated comment deadlines and addresses for submission of comments.  Massport will provide a link to its website where the Final EA/EIR will be available for review. In addition, Massport will provide printed copies to the libraries listed in the Distribution List in Chapter 4 and will make printed copies available on request.
C-48	Certificate Secretary Matthew Beaton	MEPA Process	Based on a review of the DEIR, consultation with State Agencies, and a review of comment letters, I have determined that the DEIR adequately and properly complies with MEPA and its implementing regulations. The Proponent may submit the Response to Comments and draft Section 61 Findings as the FEIR.	As directed by the Secretary, this Final EIR includes responses to comments on the Draft EIR and supporting technical information and updated draft Section 61 Findings.



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## 2.3 Key Letters and Responses

The following letters are included in this section:

- 2.3.1 Letter 1: Massachusetts Department of Environmental Protection -- John D. Viola, Deputy Regional Director
- 2.3.2 Letter 2: Massachusetts Department of Energy Resources -- Paul F. Ormond, P.E.
- 2.3.3 Letter 3: Former Massachusetts Secretary of Transportation -- Frederick Salvucci
- 2.3.4 Letter 4: Boston Transportation Department -- Robert D'Amico
- 2.3.5 Letter 5: Town of Milton -- Murphy, Hesse, Toomey & Lehane, LLP
- 2.3.6 Letter 6: Town of Milton -- Board of Selectmen
- 2.3.7 Letter 7: Town of Hull -- Town Manager, Philip Lemnios
- 2.3.8 Letter 8: Town of Arlington/Town of Belmont -- Frank Ciano, Myron Kassaraba
- 2.3.9 Letter 9: The General Court of Massachusetts -- Senator Boncore, Representative Madaro, and Councilor LaMattina
- 2.3.10 Letter 10: Congress of the United States, House of Representatives -- Congressman Michael Cupuano
- 2.3.11 Letter 11: Chelsea Councilor-at-Large -- Roy Avellaneda



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2.3.1 Letter 1: Massachusetts Department of Environmental Protection --  
John D. Viola, Deputy Regional Director



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Commonwealth of Massachusetts  
Executive Office of Energy & Environmental Affairs

**Department of Environmental Protection**  
Northeast Regional Office • 205B Lowell Street, Wilmington MA 01887 • 978-684-3200

Charles D. Baker  
Governor  
Kayn E. Polito  
Lieutenant Governor

Matthew A. Beaton  
Secretary  
Marin Stueberg  
Commissioner

Letter 1

August 19, 2016

Matthew A. Beaton, Secretary  
Executive Office of  
Energy & Environmental Affairs  
100 Cambridge Street  
Boston MA, 02114

RE: Boston  
Terminal E Modernization Project  
Boston-Logan International Airport  
EEA # 15434 (also #9791 and #12235)

Attn: MEPA Unit

Dear Secretary Beaton:

The Massachusetts Department of Environmental Protection Northeast Regional Office (MassDEP-NERO) has reviewed the Draft Environmental Impact Report (DEIR) submitted by Massachusetts Port Authority (Massport) to expand the John A. Volpe International Terminal E by about 560,000 square feet (four stories) for a total of about 1,500,000 sf on a 37-41 acre site in Boston (EEA #15434). The two-phase project proposal includes seven new aircraft gates, passenger hold rooms, a concourse, concession areas, passenger processing areas, and expanded bag screening and make-up facilities. A direct pedestrian connection between Terminal E and the Blue Line Airport Station also is planned. Airside modifications of the taxi lanes and aircraft apron layout in the vicinity of Terminal E are needed to accommodate the new gates and enlarged terminal. Reconfiguration of the airport roadway from Terminal E to the turnaround west of the terminal also will be necessary. In addition, seven jet fuel hydrants will be installed. These changes are anticipated to displace the United Parcel Service (UPS) operations and a gas station. The UPS will be relocated to the South Cargo area and the gas station will be moved to the Harborside Drive area of the airport property. MassDEP provides the following comments.

**Wastewater**

Although the ENF stated that an additional 25,600 gallons per day (gpd) of wastewater flow would be added from the Terminal E expansion project, (for a total for 76,800 gpd), the DEIR (page A-43, response to comment 4.1) indicates that the project would generate 11,000 gpd for a total of 66,000 gpd. The reduction in wastewater flow estimate should be explained in greater detail in the FEIR, using the Title 5 flow rates for equivalent activities.

1.1

This information is available in alternate format. Call Michelle Waters-Ekman, Diversity Director, at 617-292-5751, TTY# MassRelay Service 1-800-435-2270  
MassDEP Website: www.mass.gov/dep  
Printed on Recycled Paper

Terminal E Modernization Project EEA # 15434

Based on a reduced flow of 11,000 gpd, Massport is not proposing to undertake infiltration and inflow removal, as would be required under the terms of the MassDEP regulations at 314 CMR 12.04(2)(d), which requires sewer authorities with permitted combined sewer overflows, including the Boston Water and Sewer Commission, to require removal of four gallons of infiltration and inflow (I/I) for each gallon of new wastewater flows generated for any new connection where greater than 15,000 gallons per day of new wastewater flows will be generated.

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**Climate Change/Sea Level Rise**

Massport has prepared flood-proofing design guidelines that will be used in the design of the Terminal E modernization and expansion project. The DEIR acknowledges that Massport is preparing for extreme flooding events and will continue consultation with Massachusetts Coastal Zone Management during the design process. The Flood Insurance Rate Map, Map Number 25025C00821, March 16, 2016 locates the 100-year flood elevation (Zone AE elevation 10) to the west of the project site, near the Airport MBTA station.

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**Greenhouse Gas (GHG) Emissions**

The DEIR has provided a GHG analysis for the Terminal E building and the operation of Terminal E, which includes operational emissions for aircraft engines, ground support equipment/auxiliary power units, and ground access vehicles.

The direct and indirect stationary source, GHG emissions were modeled for the changed building dimensions using eQUEST model, version 3.64 to predict the emissions generated by the Build Condition which was compared with the annual CO<sub>2</sub> emissions for a baseline, defined by the 8<sup>th</sup> edition of the MA Building Code, (including the 2012 International Energy Conservation Code (IECC) with the modeling protocol of ASHRAE 90.1-2010, Appendix G). Supporting data and graphic simulation output data were provided in Volume II-Technical Appendix, Appendix G.

Terminal E is being designed to achieve LEED Silver for New Construction. As proposed the GHG analysis predicts that the GHG emissions for Terminal E would be reduced by 685 tons per year (tpy) to 5,165 tpy, compared with the Baseline project which is estimated to generate 5,850 tpy of CO<sub>2</sub>. The energy efficiency measures proposed for the Terminal E building are generally attributable to a cool roof, a higher performance building envelop, higher efficiency HVAC (heating and cooling) with exhaust air energy recovery, daylighting and sensors to control lighting, and lower power lighting density.

The operational aspects of Terminal E are predicted to reduce about 15 percent of the CO<sub>2</sub> emissions (59,179 tpy generated) compared with the no action alternative which is estimated to generate 69,715 tpy of CO<sub>2</sub>.

Massport makes a commitment in the DEIR to reduce GHG emissions by 20 percent over the requirements in the MA Energy Code (ASHRAE 909.1-2007, Appendix G, which also is reported to be at least a 13.8 percent reduction from ASHRAE 90.1-2010, Appendix G (Response to comment 4.14, page A-45). MassDEP notes that this level of reduction is less than the 15 percent goal established for projects proposed after the imposition of more rigorous energy requirements the MA Building Code, 8<sup>th</sup> edition. However, Massport responded to the

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Department of Energy Resources (page A-50), that additional measures are under consideration that potentially could achieve a 23.7 percent reduction in GHG emissions.

Massport also is proposing to pursue acquisition of at least 2.5 percent of its energy from renewable energy sources. The rooftop of the expanded Terminal E will be solar ready as a means to achieve this goal.

**Recycling**

MassDEP applauds Massport’s solid waste diversion program that recycles nearly 100 percent of construction and demolition materials. In addition, consistent with the *Logan Airport Sustainability Management Plan*, Massport is increasing municipal solid waste recycling by two percent per passenger per year through 2030, with interim goals to reduce solid waste by 40 percent in 2018 and 60 percent by 2020.

**Massachusetts Contingency Plan (MCP)/M.G.L. c.21E**

Massport proposes to develop a Soil Management Plan in order to determine whether soils excavated for the facilities’ foundations may be reused, recycled or disposed consistent with the existing Response Action Outcomes for areas of the sites under Release Tracking Numbers. Release Abatement Measures plans and Massport’s soil management policy. A groundwater management plan also will be developed for dewatering, collection, testing, treatment, and disposal or discharge of groundwater where necessary.

The MassDEP Northeast Regional Office appreciates the opportunity to comment on this proposed project. If you have any general questions regarding these comments, please contact [Nancy.Baker@state.ma.us](mailto:Nancy.Baker@state.ma.us), MEPA Review Coordinator at (978) 694-3338.

Sincerely,

This final document copy is being provided to you electronically by the Department of Environmental Protection. A signed copy of this document is on file at the DEP office listed on the footerhead.

John D. Viola  
Deputy Regional Director

cc: Broma Simon, Massachusetts Historical Commission  
Eric Worrall, Rachel Freed, Kevin Brander, MassDEP-NERO  
John E. Sullivan, BWSC

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**Letter 1: Massachusetts Department of Environmental Protection – John D. Viola, Deputy Regional Director**

Comment #	Author	Topic	Comment	Response
1.1	Massachusetts Department of Environmental Protection	Wastewater	The reduction in wastewater flow estimate should be explained in greater detail in the FEIR, using the Title 5 flow rates for equivalent activities. Based on a reduced flow of 11,000 gpd, Massport is not proposing to undertake infiltration and inflow removal, as would be required under the terms of the MassDEP regulations at 314 CMR 12.04(2)(d), which requires sewer authorities with permitted combined sewer overflows, including the Boston Water and Sewer Commission, to require removal of four gallons of infiltration and inflow (I/I) for each gallon of new wastewater flows generated for any new connection where greater than 15,000 gallons per day of new wastewater flows will be generated.	Appendix E, Wastewater, documents the assumptions and calculations used to estimate anticipated additional waste water flows associated with the Terminal E Modernization Project.
1.2	Massachusetts Department of Environmental Protection	Resiliency	The DEIR acknowledges that Massport is preparing for extreme flooding events and will continue consultation with Massachusetts Coastal Zone Management during the design process. The Flood Insurance Rate Map, Map Number 25025C0082J, March 16, 2016 locates the 100-year flood elevation (Zone AE elevation 10) to the west of the project site, near the Airport MBTA station.	Massport will continue to consult with Massachusetts Coastal Zone Management during the design process.
1.3	Massachusetts Department of Environmental Protection	Energy / GHG	Massport makes a commitment in the DEIR to reduce GHG emissions by 20 percent over the requirements in the MA Energy Code (ASHRAE 909.1-2007, Appendix G, which also is reported to be at least a 13.8 percent reduction from ASHRAE 90.1-2010, Appendix G (Response to comment 4.14, page A-45). MassDEP notes that this level of reduction is less than the 15 percent goal established for projects proposed after the imposition of more rigorous energy requirements the MA Building Code, 8th edition. However, Massport responded to the Department of Energy Resources (page A-50), that additional measures are under consideration that potentially could achieve a 23.7 percent reduction in GHG emissions.	Massport commits to at least 20% energy reduction over the requirements in the Massachusetts Energy Code, and Massport also commits to a approximately 30% reduction in building-related greenhouse gas emissions compared to a standard building built to Code. The measures that make up this reduction are further described in Appendix C.

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2.3.2 Letter 2: Massachusetts Department of Energy Resources --  
Paul F. Ormond, P.E.



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Letter 2

COMMONWEALTH OF MASSACHUSETTS  
 EXECUTIVE OFFICE OF  
 ENERGY AND ENVIRONMENTAL AFFAIRS  
**DEPARTMENT OF ENERGY RESOURCES**  
 100 CAMBRIDGE ST., SUITE 1020  
 BOSTON, MA 02114  
 Telephone: 617-626-7300  
 Facsimile: 617-727-0030

Logan Terminal E, EEA #15434  
 Boston, Massachusetts

measures are not indicated as adopted. We recommended additional information be provided to explain why these effective measures were not adopted. We also recommended these results be translated to impact on GHG reduction. This does not appear to be included in the submission.

2.2  
 Cont.

• With many acres of building footprint, the 25,000-sf solar PV array analyzed occupies only a few percent of the available roof. Solar PV can be both a cost-effective and high-impact GHG mitigation strategy. For this reason, we requested more information about roof uses to understand how much of the roof is potentially available for solar PV, beyond the 25,000 sf identified. This does not appear to be included in the submission.

2.3

• With restaurants and other similar uses, we would expect relatively large service water loads. These loads are designed to be met with electric water heaters. We recommended investigating meeting these loads with combined heat and power. An analysis of this does not appear to be included in the submission.

2.4

The following two items were addressed in the submission:

- The proponent addressed our inquiry about shading devices. (This measure was not accepted due to past experience with maintenance difficulties.)
- The proponent addressed our inquiry about elevators, escalators, and baggage handling equipment. (Following Appendix G, maintaining similar process loads in both baseline and design cases.)

The following is a new comment

2.5

- Appendix G of the building code requires that the window to wall ratio for the baseline building be equal to the window to wall ratio for the proposed building, or no larger than 40%, *whichever is smaller*. In this case, baseline window to wall ratio should be 25%, not 40% as currently shown. We request that the modeling and reporting be revised to reflect this code requirement. Otherwise, reported energy and GHG reductions are overestimated.

Sincerely,



Paul F. Ormond, P.E.  
 Energy Efficiency Engineer  
 Massachusetts Department of Energy Resources

Charles D. Baker  
 Governor

Karyn E. Polito  
 Lt. Governor

Matthew A. Beaton  
 Secretary

Judith F. Judson  
 Commissioner

12 September 2016

Matthew Beaton, Secretary  
 Executive Office of Energy & Environmental Affairs  
 100 Cambridge Street  
 Boston, Massachusetts 02114  
 Attn: MEPA Unit

RE: Logan Terminal E, Boston, Massachusetts EEA #15434

Cc: Arah Schuur, Director of Energy Efficiency Programs, Department of Energy Resources  
 Judith Judson, Commissioner, Department of Energy Resources

Dear Secretary Beaton:

We've reviewed the Draft Environmental Impact Report (DEIR) and additional information received 12 September 2016 (collectively "the submission").

At the proponent's request, the DOER previously provided expedited comments on a draft version of this DEIR on 30 June 2016. At that time, we indicated that we were pleased to see many efficiency and renewable measures analyzed and incorporated. We also recommended, however, that certain additional analyses be provided. Unfortunately, our recommendations appear to be only partially addressed.

Of our six recommendations, the following four do not appear to be included in the submission:

- We recommended that the team investigate through modeling improved wall and fenestration beyond what was currently proposed. The objective of this was to examine the effect on GHG reduction, and judge whether additional wall/window mitigation may be worth pursuing. This does not appear to be included in the submission. 2.1
- Five efficiency measures (dual box, fin tube, energy recovery, dynamic filtration, and solar PV) are presented which, according to the submission, would increase energy savings by 70% compared to the currently committed energy reduction. However, these 2.2

**Letter 2: Massachusetts Department of Energy Resources - Paul F. Ormond, P.E.**

<b>Comment #</b>	<b>Author</b>	<b>Topic</b>	<b>Comment</b>	<b>Response</b>
2.1	Massachusetts Department of Energy Resources	Energy / GHG	We recommended that the team investigate through modeling improved wall and fenestration beyond what was currently proposed. The objective of this was to examine the effect on GHG reduction, and judge whether additional wall/window mitigation may be worth pursuing. This does not appear to be included in the submission.	As requested by DOER, additional modeling has been performed, the findings of which are in Appendix C. The results of the modeling reveal that while the additional suggested mitigation could be beneficial, the energy savings and resultant greenhouse gas (GHG) reductions of the additional options are small.
2.2	Massachusetts Department of Energy Resources	Energy / GHG	Five efficiency measures (dual box, fin tube, energy recovery, dynamic filtration, and solar PV) are presented which, according to the submission, would increase energy savings by 70% compared to the currently committed energy reduction. However, these measures are not indicated as adopted. We recommended additional information be provided to explain why these effective measures were not adopted. We also recommended these results be translated to impact on GHG reduction. This does not appear to be included in the submission.	Additional explanation regarding the feasibility of implementing the suggested greenhouse gas reducing measures is included in Appendix C. Appendix C includes a memorandum which documents the energy conservation measures identified in the Draft EA/EIR and their associated GHG reduction benefits. It also reports on additional ECMs suggested by DOER and evaluates their GHG reduction potential. Detailed calculations are provided to substantiate the conclusions.
2.3	Massachusetts Department of Energy Resources	Energy / GHG	With many acres of building footprint, the 25,000-sf solar PV array analyzed occupies only a few percent of the available roof. Solar PV can be both a cost-effective and high impact GHG mitigation strategy. For this reason, we requested more information about roof uses to understand how much of the roof is potentially available for solar PV, beyond the 25,000 sf identified. This does not appear to be included in the submission.	While subject to advancement of design, there will be over 200,000 sf of roof for the Proposed Project. As noted elsewhere at least 25,000 sf of roof mounted PV panel has been incorporated into the Proposed Project, there will also be significant area of solar panel on the roof to heat domestic hot water. Other factors that must be considered in maintaining unobstructed roof area are: 1) avoidance of visual glare which could impact pilots, 2) obstruction of viewlines from airline clubs and public spaces located on fourth level (which look over the third level roof), 3) free air movement for ventilation (intake and exhaust) for mechanical (fan) rooms located on the fourth level, 4) obstruction of viewlines from public and club spaces in the existing terminal, and 5) cost and payback of such systems.
2.4	Massachusetts Department of Energy Resources	Energy / GHG	With restaurants and other similar uses, we would expect relatively large service water loads. These loads are designed to be met with electric water heaters. We recommended investigating meeting these loads with combined heat and power. An analysis of this does not appear to be included in the submission.	As noted above, incorporation of solar panels to heat domestic hot water has now been incorporated into the Proposed Project. This will heat water utilized in restrooms throughout the expanded building. The use of solar heating reduces the electric energy needed to provide hot water thus minimizing applicability of combined heat and power.  The other component of domestic hot water is used by concessions. Water to concessions is metered individually. Hot water usage by each concession is a function of the specific use by the concessionaire - these needs vary greatly. At this time the mix of concessions is not known. The type and mix on concessions will be determined by proposals from developers, as part of an airport-wide or terminal-wide procurement.  A range of potential benefits for use of Combined Heat and Power (CHP) has been developed, and is shown in Appendix C. However, the implementation of individual concession specific CHP equipment appears problematic and thus is not incorporated into the Proposed Project at this time.

**Letter 2: Massachusetts Department of Energy Resources - Paul F. Ormond, P.E.**

Comment #	Author	Topic	Comment	Response
2.5	Massachusetts Department of Energy Resources	Energy / GHG	Appendix G of the building code requires that the window to wall ratio for the baseline building be equal to the window to wall ratio for the proposed building, or no larger than 40%, whichever is smaller. In this case, baseline window to wall ratio should be 25%, not 40% as currently shown. We request that the modeling and reporting be revised to reflect this code requirement. Otherwise, reported energy and GHG reductions are overestimated.	The reported energy and GHG reductions are correctly accounted for in the energy model. The baseline building model correctly follows code and uses 25% window to wall ratio which is equal to the proposed building. Therefore there is zero impact to current reported energy and GHG reductions due to this comment. Both the baseline and proposed building models simulate an equal window to wall ratio following Appendix G as required by the building code. This can be noted in the eQUEST energy modeling simulation output. There are two outputs, one for the baseline building and one for the proposed building. The outputs show the 'WINDOW AREA (SOFT)' to be equal (84246.2) for both the baseline building and the proposed building. The updated Energy Model is provided in Appendix C.

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2.3.3 Letter 3: Former Massachusetts Secretary of Transportation --  
Frederick Salvucci



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Letter 3

**Letter of Comment  
On Environmental Analysis of Terminal E Expansion at Logan**

*Via First Class Mail, and Email to: Page.Czepiga@state.ma.us*

September 9, 2016

Secretary Matthew Beaton  
Executive Office of Energy and Environmental Affairs  
Attn: Page Czepiga, EEA No. 15434  
100 Cambridge Street, Suite 900  
Boston, MA 02114

Dear Secretary Beaton,

This is a comment letter about the proposal to expand Terminal E at Logan Airport.

This proposed expansion is huge, and will cause massive impacts on the ground access system, and air traffic systems, exceeding capacity, and consequently generate significant adverse environmental impacts on both the region and local communities, with particular impact on environmental justice populations.

A. The document is totally inadequate, in that it does not describe how the transportation system of autos and transit can support such a large increase in passenger activity, so the analysis has a severe segmentation flaw, and EOEE should require a comprehensive analysis including a description of how Massport proposes to handle the ground access of passengers to the expanded terminals, and the environmental impacts of those plans.

When Logan last increased terminal size and capacity to accommodate larger planes (and therefore attract substantially more passengers) in the early 1990s, it was in the context of an enormous increase in roadway capacity through the construction of the Big Dig, and a planned significant increase in transit capacity, especially the connection of the Blue Line to the Red Line, which was to be in service by 2010, and benefit both travelers destined to Logan, AND commuters from East Boston, Revere, and Winthrop, who would relieve pressure on the Ted Williams and Summer Tunnel by using public transportation, AND a strengthened parking Freeze at LOGAN which Massport explicitly agreed to as part of the entire package of Big Dig commitments. Massport also initiated the Logan express services, to encourage air travelers and airport workers to access Logan without their cars. Moreover, Massport also initiated an aggressive cooperative regionalization plan to encourage diversion of air demand from Logan to Rhode Island and New Hampshire.

These ground access commitments entered into were explicitly intended to avoid the re-congestion of the big dig facilities. The commitments, recorded in the Conservation Law foundation agreement, as well as the DEP vent shaft permits of 1991, and the SIP under the Federal Clean Air act, have not been adequately honored, and in fact, the tunnels are now re-congesting, exactly as feared, and represent precisely the outcome that the mitigating measures were intended to preclude. It would be a tragic mistake for regional mobility to allow such an unbalanced plan to

1

go forward without full disclosure, analysis, fully adequate and fully funded mitigation measures with enforceable deadlines.

In short, the air terminal expansion of the early 1990's was accompanied by a comprehensive well-funded program to ensure that the increased travel to the terminals could be handled reasonably by increased supply of auto, transit, and Logan Express capacity, and not overload the systems to the disadvantage of the general public, especially the East Boston, Revere and Winthrop residents who are currently confined to a congested corridor with inadequate transit service, and very congested roads. This balanced program was also seen as a major issue of equity for low and moderate income, and ethnic minority populations (later called environmental justice communities).

The current proposed plan has none of that balance, and follows a few decades of bad faith non implementation of the Blue To Red connector by 2010 that had been promised in the DEP regulations. Worse yet, it is an open secret that Massport wants to renege on its support of the Logan Freeze, further abandoning the balance of the earlier approach, and is doing this without disclosure or analysis in documentation of the terminal expansion to which it is logically joined.

B.

In addition, there is no analysis of how the airspace capacity will be capable of handling the added frequency of flights that will be accommodated by the expanded terminals and what impact this increase will have on further increasing the disproportionate share of overflight imposed on East Boston, Chelsea, and Point Shirley in Winthrop ever since runway 14-32 was constructed, and put into operation without honoring the mitigation commitments of FAA administrator Garvey to safeguard against increasing the share of overflight in Chelsea and East Boston and Point Shirley, and providing for peak pricing of landing fees to reduce the intensity of use of the runways to reduce passenger delay AND to increase the feasibility of more over water operations of aircraft. This document is simply silent on the abandonment of the prior unfulfilled commitments. Moreover, the air service this expansion is intended to attract includes a greater share of flights between 10:00 pm and 6:00 am, disrupting sleep, particularly in the environmental justice neighborhoods located closest to the runways, and represents a violation of the letter and spirit of state and federal Environmental Justice regulations

3.1

C.

There is no analysis of the compounding effect of ground transportation and aviation impacts on the closest communities. It has been known for decades that respiratory problems are suspiciously high in the neighborhoods close to Logan. It is common for environmental justice communities to be affected by multiple problems detectable mostly by adverse public health outcomes. But this document does not analyze the questions, adopting a sort of don't ask/don't tell strategy, which should not be accepted.

EOEE should require a re-scoping of a comprehensive and transparent accounting of the entire aviation and required ground access proposal, along with its environmental justice aspects, explicitly including the failure to complete past formally adopted mitigation commitments and DEP and EPA regulations, and should prohibit any piecemeal segmented actions by Massport or FAA until the entire comprehensive analysis is complete with an adequate renewed aggressive and fully funded implementation plan to ensure the honoring of past commitments, and development of sufficient new initiatives to redress the EJ violations inherent in the current proposal.

In my past roles as Secretary of Transportation, and Massport board member, I personally participated in the negotiation of these agreements and commitments, and am prepared to swear under oath to the veracity of these comments, and the urgent need for EOEE to reject this

2

segmented and inadequate document, and review the prior impacts and mitigation commitments and their state of incomplete implementation, as well as the new impacts reasonable anticipated in the environmental justice communities of Chelsea, East Boston, Revere, and Winthrop, if this proposal were to be implemented.

3.5

D. The document includes no analysis of the adverse impact on development opportunities in the environmental justice communities.

For example, both the Beachmont and Suffolk Downs MBTA stations should be opportunities for transit oriented development and affordable housing, if the Blue to Red connection had been completed by 2010 as required in the DEP regulations of 1991 and 1993, these sites would be prime. Instead, these sites constitute a threat of further auto oriented development, using the existing (unused) 6,000 spaces as a "grandfather" right, threatening both Logan and the IA corridor communities with grid lock. The approval of the Wynn Casino in Everett will generate severe problems in a corridor that today carries some Northshore traffic. Once the casino is open, the IA corridor will suffer even more traffic congestion than at present. Massport should be considering these threats to regional accessibility, and developing collaborative approach with Revere and Boston to redirect development in a transit oriented direction. But without the completion of the Blue Line, this is problematic.

E. Finally, the question of financing raises important environmental justice questions. The new capacity of the Big dig was supposed to be a shared resource to improve conditions for both Logan and the IA communities, but approximately half of the autos using the Ted Williams and Summer Tunnels are serving Logan Airport. Based upon the beneficiary principle, there should be a payment to MassDot for every Logan destined vehicle, which Massport should assess upon the airlines through increased landing fees. This would create a robust revenue stream to support construction of the Blue to Red connector, extending the Blue Line to Lynn, expanding South Station, renewing and improving the Silver Line, all of which enhance access to Logan and Massport's seaport/financial district activities. It is not too late to honor the CLF commitments using equitable funding sources. Massport should be required to develop financially secured transit improvements to offset existing excessive congestion of the tunnels, and reduce future impact prior to any approval of the terminal expansion. A plan to do this should be required element of a new expanded MEPA scope.

3.6

Sincerely,

Frederick Salvucci  
6 Leicester street  
Brighton, MA 02135



**Letter 3: Former Massachusetts Secretary of Transportation - Frederick Salvucci**

Comment #	Author	Topic	Comment	Response
3.1	Salvucci, Frederick (Former Massachusetts Secretary of Transportation)	Ground Transportation	EODE should require a comprehensive analysis including a description of how Massport proposes to handle the ground access of passengers to the expanded terminals, and the environmental impacts of those plans.	<p>Massport has far exceeded its transit commitments under the 1989 Logan Freeze Amendment. Today Massport subsidizes free Silver Line service to South Station, and it has built Logan Express (LEX) into the seventh largest transit system in Massachusetts. Since the 1989 Logan Freeze Amendment Massport has continued to strengthen transit access to Logan Airport. Collectively, these services have resulted in a HOV/shared-ride mode share of about 30% – making Logan Airport the top-ranked U.S. airport for High Occupancy Vehical (HOV)/shared-ride access.</p> <p>In 2005, Massport purchased eight MBTA Silver Line buses, and it pays for their operations and maintenance. Since 2012, Massport has subsidized Silver Line travel so that all passengers who board at Logan Airport terminals can ride for free. Massport provides free shuttle buses between the Logan terminals and the Blue Line Airport Station. Massport spends \$24M a year for HOV services.</p> <p>Logan Express bus service (LEX). Since 1986, Massport has expanded from its two original LEX sites to include five locations in the region: Braintree, Framingham, Woburn, Peabody, and Boston / Back Bay (started in 2014 as a pilot program). Total ridership for LEX in 2014 was 1.42 million passengers – a five-fold increase since 1989. In 2015, Massport opened its first parking garage at a LEX location, doubling the capacity at its Framingham facility, for a construction cost of \$35 million. For additional information see Section 2.4.4 and 2.4.10.</p>

**Letter 3: Former Massachusetts Secretary of Transportation - Frederick Salvucci**

Comment #	Author	Topic	Comment	Response
3.2	Salvucci, Frederick (Former Massachusetts Secretary of Transportation)	RNAV	In addition, there is no analysis of how the airspace capacity will be capable of handling the added frequency of flights that will be accommodated by the expanded terminals and what impact this increase will have on further increasing the disproportionate share of overflight imposed on East Boston, Chelsea, and Point Shirley in Winthrop ever since runway 14-32 was constructed, and put into operation without honoring the mitigation commitments of FAA administrator Ganvey to safeguard against increasing the share of overflight in Chelsea and East Boston and Point Shirley, and providing for peak pricing of landing fees to reduce the intensity of use of the runways to reduce passenger delay AND to increase the feasibility of more over water operations of aircraft.	The Secretary's Certificate on the Draft EIR acknowledges that the "primary purpose of the RNAV procedures is to increase safety and operational efficiency. As documented in the ESR and annual EDR submittals, implementation of several of the RNAV procedures have generated increased noise complaints in some towns surrounding Logan Airport and I have received many comment letters from residents of the Town of Hull on this issue. The procedures themselves have resulted in aircraft at higher altitudes although patterns are concentrated over certain communities. I note that the FAA is implementing the RNAV program nation-wide. This program is separate from and unrelated to the Terminal E Modernization project." See Section 2.4.13. The primary driver of demand for air travel at Logan Airport is regional/local economic conditions and socio-economic trends, which are independent of specific infrastructure enhancements made at the Airport. The historic growth at Logan Airport that occurred without additional gates demonstrates that demand at Logan Airport is driven by the economic and market factors, not airport improvements. Logan Airport will handle the same level of increased international passenger activity whether or not Terminal E is modernized. The Project will not result in any changes to the number and type of aircraft operations when compared to the future condition with no terminal improvements (the Future No-Build Alternative). The same number of passengers will be accommodated with or without the Project, however, without the Project, there will be negative environmental impacts as described in the Draft EA/EIR. See Section 2.4.2 and 2.4.6.
3.3	Salvucci, Frederick (Former Massachusetts Secretary of Transportation)	Environmental Justice/Outreach	There is no analysis of the compounding effect of ground transportation and aviation impacts on the closest communities. It has been known for decades that respiratory problems are suspiciously high in the neighborhoods close to Logan. It is common for environmental justice communities to be affected by multiple problems detectable mostly by adverse public health outcomes.	The Massachusetts Department of Public Health (MassDPH) has conducted a Logan Airport-specific health study. The results of this study and follow-up actions by MassDPH and Massport have been reported in the annual Environmental Data Report (EDR) filings. The MassDPH study found no connection between cancer and Logan Airport operations and confirmed that Logan Airport emissions are "highest near the perimeter of the airport and fall off rapidly with increased distance." The Study also notes that Logan Airport-related air pollutant concentrations are low relative to background levels. MassDPH found no noise-related health impacts and no association between air pollution exposure areas and cardiovascular outcomes. The study did find two respiratory outcomes: chronic obstructive pulmonary disease (COPD) and probable asthma in children within the high exposure area close to the Airport. Massport is funding MassDPH's efforts to address these two outcomes through work with Massachusetts General Hospital and other neighborhood health agencies. Massport has provided an update on the status and findings of the MassDPH Health Study and Massport's air quality studies in the annual EDRs and ESRRs. For additional information see Sections 2.4.3 and 2.4.5.

**Letter 3: Former Massachusetts Secretary of Transportation - Frederick Salvucci**

Comment #	Author	Topic	Comment	Response
3.4	Salvucci, Frederick (Former Massachusetts Secretary of Transportation)	MEPA Process	EODE should require a re-scoping of a comprehensive and transparent accounting of the entire aviation and required ground access proposal, along with its environmental justice aspects, explicitly including the failure to complete past formally adopted mitigation commitments and DEP and EPA regulations, and should prohibit any piecemeal segmented actions by Massport or FAA until the entire comprehensive analysis is complete with an adequate renewed aggressive and fully funded implementation plan to ensure the honoring of past commitments, and development of sufficient new initiatives to redress the EJ violations inherent in the current proposal.	EEA has considered this comment and issued its Certificate. The Final EIR meets all Certificate requirements. For additional information see Section 2.4.3.
3.5	Salvucci, Frederick (Former Massachusetts Secretary of Transportation)	Mitigation	Massport should be required to develop financially secured transit improvements to offset existing excessive congestion of the tunnels, and reduce future impact prior to any approval of the terminal expansion. A plan to do this should be required element of a new expanded MEPA scope.	Volume in the Ted Williams Tunnel is increasing, however the proportion of Airport related traffic has held steady at about 60% to 65% with the percentage of Logan Airport- associated traffic being lowest when tunnel use is at its peak.
3.6	Salvucci, Frederick (Former Massachusetts Secretary of Transportation)	Noise	In conclusion, I am asking that the regulating environmental agencies, MEPA and NEPA revisit Massport's lack mitigation offered to Chelsea to reduce the negative impact the expansion of Terminal E will have on the residents of Chelsea. Additionally, I would ask those same agencies and the FAA force a new sound impact study be done to include the increased flights over Chelsea. I believe the area shown below would warrant sound proofing mitigation as a result of the increase in flights.	To evaluate the effectiveness of the terminal extension as a noise barrier, the Draft EA/EIR modeled ground noise levels from aircraft operations associated with Terminal E in the North Apron area under both the Future No-Build and Future Build conditions in accordance with FAA guidelines. Noise is evaluated in terms of any changes in noise sources associated with the future Terminal E Modernization Project when compared to the No-Action Alternative. Under FAA Order 1050.1F and Order 5050.4B, a significant adverse effect occurs when the project would cause receivers in noise sensitive areas to experience a noise increase of at least 1.5 dB.  By configuring the extended terminal sections to serve as a noise barrier to the community, the Terminal E Modernization Project would significantly reduce noise levels from ground operations as compared to the future No-Action Alternative. Any predicted noise level increases are below the levels that are perceptible to humans and in areas already eligible for sound insulation. All of the modeled sites show no perceptible increase in single event maximum noise levels. In some cases, there was a decrease in ground noise of up to 17 dB with the extended concourse serving as a noise barrier. The ground noise effects were not found to extend as far as Chelsea. For additional information see Section 2.4.9.

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#### 2.3.4 Letter 4: Boston Transportation Department -- Robert D'Amico



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Letter 4



BOSTON  
TRANSPORTATION  
DEPARTMENT

ONE CITY HALL SQUARE • ROOM 721  
BOSTON, MASSACHUSETTS 02201  
617-635-4680 • FAX 617-635-4295

August 2, 2016

Executive Office of Energy  
& Environmental Affairs

Mr. Richard Doucette  
Federal Aviation Administration  
New England Region  
1200 District Avenue  
Burlington, Massachusetts 01803

Secretary Matthew Beaton  
Executive Office of Energy and Environmental Affairs  
MEPA Office 100 Cambridge Street  
Boston, Massachusetts 02114

Re: **Boston-Logan International Airport, Terminal E Modernization Project  
Environmental Assessment/Draft Environmental Impact Report (DEIR)  
(EEA #15434)**

Please be advised that the Boston Transportation Department (BTD) has reviewed the above document and is pleased to provide the following comments for your review.

Logan International Airport has been one of the fastest growing airports in the United States. Over the past several years, Logan has experienced a growth of 32% in overall passenger volumes. In 2015, Logan served 33.4 million passengers with international flights growing at a faster rate than domestic flights.

**Project Need**

The Massachusetts Port Authority (Massport) has not added any gates to Terminal E since 1974 when the original 12 gates were constructed within the new Terminal E Project. The economic growth in the City of Boston can reflect the service demand at Logan. The current level of service at Terminal E must be addressed and this project, with the addition of seven (7) new gates, will accomplish that important responsibility. Not only will this project dramatically improve the international passenger experience, it will also modify the apron areas and improve supporting facilities as well. More importantly, the reconfiguration of the adjacent landside roadways, parking and curbside service will improve vehicular movements and overall traffic flow.

MARTIN J. WALSH, Mayor



PHOTO: DON-REKLE/NPR

BOSTON TRANSPORTATION DEPARTMENT  
ONE CITY HALL SQUARE • ROOM 721 • BOSTON, MA 02201 • 617-635-4680

Page 2, Logan Airport Terminal E Modernization Project.

An important example of the critical nature of this project is the recent growth in the number of airlines serving the Boston market. Strong international growth was recently driven by several new foreign carriers including Et Al, Emirates, Turkish Airlines, Hainah Airlines and Cathy Pacific. According to market analysts, several additional airlines are considering Boston along with current carriers adding service. Quite clearly, the changing economic environment in Boston demands service at Logan to reflect the world class city it represents.

**Build Options**

Subsequent to a review of the design options presented in the document, BTD agrees with Massport that Option 2 (Proposed Action) would best serve the traveling public and overall airport traffic operations. The advantage of this option is that only one level requires an S-curve and the radius is slightly larger resulting in a more comfortable turning operation and provides improved operational efficiency.

**Pedestrian Connection to the MBTA Blue Line Airport Station**

As a part of the Terminal E Expansion and Modernization Project, Massport is planning to provide a direct, weather-protected pedestrian connection to the MBTA Airport Blue line Station. This will be a critical component of the entire project since it will not only provide passenger comfort and convenience it will also have a positive effect on the high occupancy vehicle demand as a result of the current and future growth in international market operations at Terminal E.

BTD will be looking forward to the details involved with the inclusion of the pedestrian connection into the overall design for Terminal E. In our opinion, this will reduce the reliance for vehicular demand as well as improve on Massport's goal to achieve a 35% HOV ground traffic ratio at Logan.

If there should be any concerns regarding this letter, I may be reached at 617-635-3076 or by e-mail at [bob.damico@boston.gov](mailto:bob.damico@boston.gov)

Sincerely,

Robert D'Amico  
Senior Planner

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Letter 4: Boston Transportation Department - Robert D'Amico			
Comment #	Author	Topic	Response
4.1	Boston Transportation Department	Ground Transportation	<p><b>Comment</b></p> <p>As a part of the Terminal E Expansion and Modernization Project, Massport is planning to provide a direct, weather-protected pedestrian connection to the MBTA Airport Blue line Station. This will be a critical component of the entire project since it will not only provide passenger comfort and convenience it will also have a positive effect on the high occupancy vehicle demand as a result of the current and future growth in international market operations at Terminal E. BTD will be looking forward to the details involved with the inclusion of the pedestrian connection into the overall design for Terminal E. In our opinion, this will reduce the reliance for vehicular demand as well as improve on Massport's goal to achieve a 35% HOV ground traffic ratio at Logan.</p> <p><b>Response</b></p> <p>Massport will provide details of the pedestrian connection in forthcoming Environmental Data Reports (EDRs) and Environmental Status and Planning Reports (ESPRs) as the design evolves.</p>

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### 2.3.5 Letter 5: Town of Milton -- Murphy, Hesse, Toomey & Lehane, LLP



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**MURPHY, HESSE, TOOMEY & LEHANE, LLP**  
**Attorneys At Law**

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**Please respond to Quincy**

**VIA EMAIL to Page.Czepiga@state.ma.us**

August 2, 2016

Page Czepiga

Executive Office of Energy and Environmental Affairs (EEA)  
100 Cambridge St., Suite 900 (9th Floor)

Attn: MEPA Office  
Boston MA, 02114

**VIA EMAIL to SDalzell@massport.com**

Stewart Dalzell, Deputy Director  
Strategic Business and Planning Department  
Massachusetts Port Authority  
One Harborside Drive  
East Boston, MA 02129

Dear Ms. Czepiga & Mr. Dalzell:

This office represents the Town of Milton, Massachusetts ("Milton"), which respectfully requests an extension of time in which to submit its comments on the Environmental Assessment/Draft Environmental Impact Report for the Boston-Logan International Airport, Terminal E Modernization Project (IEA #15434) by 30 days, from August 19, 2016, until September 19, 2016.

This extension of time to submit Milton's comments is required because of the size and complexity of the over 100 page document, and because the current comment deadline date makes it impossible for the Milton Board of Selectmen to meet and discuss the document and prepare comments prior to the deadline, in part because of vacation schedules. Further, extending the comment period an additional 30 days during vacation and season and over the

**MURPHY, HESSE, TOOMEY & LEHANE, LLP**  
**Attorneys At Law**

August 2, 2016  
Page 2

Labor Day holiday will benefit all of citizens impacted by this project who may wish to submit comments.

Thank you for your consideration of this request.

(Signed)  
  
Karis L. North

cc: Milton Board of Selectmen  
Annemarie Fagan, Milton Town Administrator

939716v1

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**Letter 5: Town of Milton - Murphy, Hessem Toomey & Lehane, LLP**

Comment #	Author	Topic	Comment	Response
5.1	Town of Milton- Murphy, Hesse, Toomey & Lehane, LLP	MEPA Process	This office represents the Town of Milton, Massachusetts ("Milton"), which respectfully requests an extension of time in which to submit its comments on the Environmental Assessment/Draft Environmental Impact Report for the Boston-Logan International Airport, Terminal E Modernization Project (EEA #15434) by 30 days, from August 19, 2016, until September 19, 2016.	In response to this and other requests, the 30-day comment period was extended by 3 weeks.

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### 2.3.6 Letter 6: Town of Milton -- Board of Selectmen



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Letter 6

COMMONWEALTH OF MASSACHUSETTS  
TOWN OF MILTON  
OFFICE OF SELECTMEN

525 CANTON AVENUE, MILTON, MA 02166

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ANNEMARIE FAGAN  
TOWN ADMINISTRATOR

SELECTMEN  
KATHLEEN M. CONLON  
CHAIRMAN  
DAVID T. BURNES  
SECRETARY  
J. THOMAS HURLEY  
MEMBER

August 17, 2016

Mr. Richard Doucette  
Federal Aviation Administration  
New England Region  
1200 District Avenue  
Burlington, MA 01803

Secretary of Energy and Environmental Affairs  
Executive Office of Energy and Environmental Affairs (EEA)

Attn: MEPA Office  
Page Czepiga, EEA No. 15434  
100 Cambridge St., Suite 900  
Boston MA, 02114

Stewart Dalzell, Deputy Director  
Strategic Business and Planning Department  
Massachusetts Port Authority  
One Harborside Drive  
East Boston, MA 02129

**RE: Environmental Assessment/Draft Environmental Impact Report for the Boston-Logan International Airport, Terminal E Modernization Project (EEA #15434)**

Dear Mr. Doucette, Ms. Czepiga, and Mr. Dalzell:

The Town of Milton, Massachusetts ("Milton") respectfully submits the following comments on the Environmental Assessment/Draft Environmental Impact Report for the Boston-Logan International Airport, Terminal E Modernization Project (EEA #15434).

**Introduction**

The Environmental Assessment/Draft Environmental Impact Report ("EA/EIR") is fundamentally flawed because it entirely fails to address on the ground noise and pollution impacts to surrounding communities such as Milton that will be impacted by the increased aircraft operations at Boston Logan International Airport ("Logan") resulting from the Terminal E Modernization Project ("the Project"). These already existing noise and pollution impacts will be further exacerbated by the additional international flight activity. That these flights are likely to utilize the RNAV or other

arrival paths for Runways 4R and 4L and the departure paths for Runways 27 and 33L, only makes an unbearable situation over Milton even worse.<sup>1</sup>

The EA/EIR does nothing to address these impacts, and in fact, Massport abdicates its responsibility as the operator of Logan Airport by throwing up its proverbial hands in the document and stating that these additional flights are coming, whether Terminal E is modernized<sup>2</sup> or not. The EA/EIR notes that the number of international passengers served by Terminal E increased from 1.4 million in 1974 to 5.5 million in 2015 and is expected to increase to 8 million "in 2030 or sooner."<sup>3</sup> The EA/EIR fails to recognize that further "modernization", i.e., expansion, of Terminal E will in and of itself drive increased airline traffic to Logan. Therefore, we request that the EA/EIR be revised and the scope expanded to include an analysis of these noise and pollution impacts from increased international overflights on the surrounding communities. We further request that no Finding of No Significant Impact ("FONSI") be authorized unless and until such impacts are appropriately studied.

On numerous occasions in recent years, we have notified the FAA and Massport of the intolerable and unacceptable level and frequency of airplane noise over the Town of Milton.<sup>4</sup> During face-to-face meetings with the FAA and Massport, we have reiterated these concerns and sought temporary and permanent solutions. However, to date, neither the FAA nor Massport has offered any solutions. Unless and until the FAA and Massport adequately address the very serious public health and quality of life issues that Milton has raised time and again, no further expansion of airport operations should proceed.

**Insufficient Scope of the EA/EIR Concerning Noise Impacts**

The impact of increased international flight capacity at Logan Airport from the Project will have noise impacts to surrounding communities beyond those impacts presented and analyzed in the EA/EIR. The scope of the EA/EIR is limited to noise impacts only in the physical locations immediately surrounding Terminal E. The document completely ignores the noise impacts of increased international flights on any of the communities within the Logan overflight area and under the RNAVs and other flight paths that will be utilized by these aircraft. Table 4-1, which purports to list the NEPA and MEPA resources analyzed for the EA/EIR, with respect to Noise and Noise Compatible Land Use, states:

The Project would not increase the number of aircraft operations or passenger activity levels; therefore, aircraft noise levels at or surrounding the Airport would not be expected to change compared to the No-Action Alternative. The Project would not affect runway use, but would alter airspace ground operations in the North Apron

<sup>1</sup> We have previously asked the FAA to consider removing the wind restriction on Runway 14/32, which would open up Runway 14/32 for more arrivals, allow for another 2-runway arrival configuration using Runways 32 and 27 in northwest winds, and help to avoid the overuse of Runways 4R and 4L for arrivals.

<sup>2</sup> We note that the term "modernization" is used regularly by the FAA and Massport when it really means "expansion." We believe it is to Massport's benefit to be clear and up front about its intentions with the public it serves and with the communities it both serves and impacts.

<sup>3</sup> See, for example, our letter dated April 2, 2014 to the FAA and Massport attached hereto as Exhibit A; our letter dated November 5, 2015 to the Executive Office of Energy and Environmental Affairs attached hereto as Exhibit B; our letter dated November 9, 2015 to the FAA, Massport and the Logan Airport Community Advisory Committee, Inc. attached hereto as Exhibit C; our letter dated March 22, 2016 to the FAA and Massport attached hereto as Exhibit D; and our letter dated July 19, 2016 to the FAA attached hereto as Exhibit E.



area including location of aircraft parking, use of new gates and remote hardstands, and busing and ground support equipment.

This description of the Project contradicts and ignores the statistics and arguments presented by Massport in the preceding sections of the EA/EIR, which outline the need and the justification for the Project. On one hand, Massport is telling the public that Logan is one of the “fastest growing major U.S. airports,” and the volume of international flight operations is increasing, and on the other hand it is analyzing the environmental impacts of the Project based on “no increase in aircraft operations or passenger activity levels.”

Part 2 of the EA/EIR outlines in some detail the increase in both passengers and in total aircraft operations at Logan. Figure 2-3 demonstrates an increase in the total number of flights at Logan over the past four years to be approximately 50,000. Assuming airport operations 24 hours per day, 7 days per week, this is an additional flight every 10 minutes, over increasingly narrow and focused RNAV corridors and other instrument and visual approaches. The amount of this increase due to international flights is not specified, but based on the information presented in Figure 2-4 of the EA/EIR, the number of international flights at Logan has increased by 17.5% since 2008. Tables 2-4 and 2-5 indicate that number is projected to increase even further by 2030. Because of the uncertainty associated with these international schedules, it is clear that the hours of operations due to these flights will be even further extended, causing additional noise impacts on the already overburdened surrounding communities into the late hours of the night and the early hours of the morning.

Given its own data, Massport’s statement that “the Project” will not increase aircraft or passenger operations cannot be true. Because of this increased flight activity, the EA/EIR should include an analysis of the increased runway use at Logan, by runway end, attributable to the Project, so that the communities under the impacted RNAVs and other flight paths will have fair notice of the increased noise impacts and have a fair and thorough ability to analyze and comment on those impacts.

**The Project has the Potential to Increase Noise Complaints Even Further**  
 Milton currently receives a disproportionate number of airplane operations from Logan. A predominantly residential community with a population of 27,000, comprising of only 13.3 square miles, Milton bears the brunt of heavy air traffic from three (3) existing RNAVs (4R, 27 and 33L), and two proposed RNAVs concerning 4L. The skies over Milton are already saturated with too many airplanes, often from very early morning until very late at night.<sup>4</sup> The Project and the increased international flights in and out of Logan will only exacerbate that situation.

Complaints about the noise levels in Milton are getting worse. Through June 30, 2016, Milton residents filed 8,608 noise complaints with Massport. This is 55% of all noise complaints filed in 2016 through this date (15,514 total) and more than the total number of complaints filed with Massport in all of 2013 (6,881). The situation in Milton has become so intolerable that since

<sup>4</sup> For example, based on FAA ARTIS information, in July 2016, Runway 4R/L had 218 hours or 29.3% usage (based on a 744 hour month). 4R/L was also used on 2 Saturdays and 3 Sundays. July was a relatively light month for Milton overflights. In May 2016, Runway 4R was used for landings for 300 hours or 40.3% usage (i.e., 6,596 low-flying jets or 44% of all arrivals). In May 2016, Runway 4L was used for landings for 109 hours or 14.6% usage, bringing the percentage of jet arrivals overflying Milton during May to 50%.

6.2

January 1, 2012, Milton has filed 18,295 noise complaints – more than the next five most impacted communities combined (Somerville, Cambridge, Hull, Belmont, and Arlington). Increasing international flights over Milton will result in even more complaints filed with the Massport hotline. Noise complaints are substantial evidence of a noise problem, even absent corroborating data showing a DNL above 65. *Helicopter Association International v. FAA*, 722 F.2d 430, 435-37 (D.C. Cir. 2013). Further, the FAA has long standing authority to regulate to protect people and property from aircraft noise. *Id.* at 435, 437-38.

As noted above, despite our multiple requests, the FAA has failed to offer any remedial measures – even temporary remedial measures while long-term solutions are worked out – to alleviate the burden of concentrated flight paths and increased air traffic over Milton. Unless and until the FAA makes a serious effort to alleviate the existing burden of airplane noise and pollution over Milton, we are concerned that increased airport operations will not be managed in a manner that protects the public health and the quality of life of the residents of Milton and other affected communities.

**Discussion of Cumulative Impacts are Omitted from the EA/EIR**  
 FAA Order 5050.4 (NEPA Implementing Instructions for Airport Actions), section 706e(1) requires that “to complete the EA’s cumulative analysis, the Affected Environment section should include critical background information on past, present, and reasonably foreseeable future actions.” This cumulative analysis must include the environmental effect of these actions, even if the impact of each individual action is relatively minor. *See* CEQ Guidelines 1508.7 and 1508.25. No cumulative analysis has been completed for the Project or is presented in the EA/EIR.

While the *construction* of the Project is unlikely to have any direct impact on Milton and the surrounding communities, Massport’s own information demonstrates that the *implementation* of the Project will likely cause additional noise and pollution impacts from the increase in international flight operations at Terminal E.<sup>5</sup> Because this cumulative impact has not been evaluated and considered in the EA/EIR document, the analysis is insufficient, and should be revised to include an appropriate scope, and an appropriate analysis of cumulative impacts to all of the surrounding communities under the RNAVs and other flight paths which will be impacted by these increased international flight operations.

**No Discussion of Increased Air Pollution due to Increased Flight Operations**

As with the discussion of noise impacts, the EA/EIR limits its discussion of pollution impacts to those resulting from the construction of the Project, and resulting on-airport operations only. The EA/EIR does not address the increased pollution associated with increased airline operations over the surrounding communities under the RNAVs. Data demonstrates that aircraft emissions, particularly of fine particulates, impacts public health directly by depositing particulates into the lungs and indirectly by contributing to ozone and smog. FAA’s own analysis of aviation emissions cites to research that indicates “fine particulate matter is responsible for the majority of the health

<sup>5</sup> This EA/EIR should contain an analysis of impacts from both construction and implementation; otherwise, it is arguable that the document has been improperly segmented, or, as is set forth in this letter, is incomplete. Both NEPA and MEPA require a project proponent to analyze the entire project and project impacts, not just one component of a project.

6.3

risks from aviation emissions.<sup>6</sup> These particulates contribute to increased heart and lung disease, including increased hospital admissions, emergency room visits, and work absences. Children and the elderly are especially vulnerable to exposure to fine particulates. This fine particulate exposure is increasing in Milton, from an increased number of arriving aircraft, flying at less than 3000 feet over our town, particularly to runways 4R and 4RL.

**Conclusion**

In making these comments, Milton recognizes the revenue and commercial activity that efficient international flight operations provides to Massport, the airlines, and the Boston and Massachusetts economies. Indeed, Section 2 of the EA/EIR begins with a recitation of estimated economic benefits to the New England region due to Logan operations. However, these benefits cannot and should not be the only factor in analyzing the Project. Massport, the FAA, and the Secretary also have a responsibility to protect the citizens in the surrounding communities from the negative impacts associated with the Project, including increased noise and increased pollution from the growing volume of international flight operations. Milton and other heavily impacted communities should not be expected to shoulder the burden of these region-wide benefits with their health and quality of life.

The quality of life in Milton has suffered and the health and well-being of our residents have been adversely impacted while decisions about Logan Airport are made solely to benefit air travelers and the airline industry. We respectfully request that decisions also be made that consider the impact to surrounding communities, that the EA/EIR be revised and the scope expanded to include an analysis of these noise and pollution impacts from increased international overflights on the surrounding communities, and that no FONSI be authorized unless and until such impacts are appropriately studied and the FAA and Massport demonstrate that they can solve the serious airplane noise and pollution problems that Milton has brought to their attention time and time again.

Sincerely,

Milton Board of Selectmen

  
Kathleen M. Conlon, Chairman

  
David T. Burnes, Secretary

  
Thomas Hurley, Member

<sup>6</sup> Aviation Emissions, Impacts & Mitigation: A Primer (FAA, Office of Environment and Energy), January 2015.

cc:

- U.S. Secretary of Transportation Anthony Foxx
- FAA Administrator Michael Huerta
- Governor Charlie Baker
- U.S. Senator Edward J. Markey
- U.S. Senator Elizabeth Warren
- Congressman Stephen F. Lynch
- Congressman Michael E. Capuano
- State Senator Brian A. Joyce
- State Representative Walter F. Timilty
- State Representative Daniel R. Cullinane
- Town Administrator Annemarie Fagan
- Cindy L. Christiansen, Ph.D., Massport and Logan CAC Representative
- Milton Airplane Noise Advisory Committee
- Milton Board of Health
- John P. Flynn, Esq., Milton Town Counsel
- Karis L. North, Esq.



# EXHIBIT A

## COMMONWEALTH OF MASSACHUSETTS

### TOWN OF MILTON OFFICE OF SELECTMEN

825 CANTON AVENUE, MILTON, MA 02186

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ANNEMARIE FAGAN  
TOWN ADMINISTRATOR

SELECTMEN  
DENIS F. KECHANE  
CHAIRMAN  
J. THOMAS HURLEY  
SECRETARY  
KATHLEEN M. CONLON  
MEMBER

April 2, 2014

Ms. Amy L. Corbett  
Regional Administrator  
New England Region  
Federal Aviation Administration  
12 New England Executive Park  
Burlington, MA 01803-5299

Mr. Thomas P. Glynn  
Chief Executive Officer  
Massport Executive Offices  
1 Harborside Drive  
East Boston, MA 02128

Dear Ms. Corbett and Mr. Glynn:

The Town of Milton has experienced a marked increase in air traffic and, as a result, the Board of Selectmen has received complaints from residents about airplane noise, pollution and related health risks. As you know, there is growing medical evidence that airplane noise is associated with a variety of health issues such as an increased risk of cardiovascular disease, coronary heart disease and stroke.<sup>1,2,3</sup> Some residents of Milton have reported to us that they are suffering from negative health impacts caused by noise and air pollution generated by the increased air traffic. Interrupted sleep, anxiety, annoyance and reduced quality of life are problems that have been commonly cited to us. Additionally, many residents are concerned about the impact that the increased amount of air traffic over Milton has on the value of their property. We seek your assistance in alleviating these health risks and concerns and we propose certain actions below that the FAA and/or Massport can take to accomplish this result.

The Board of Selectmen requests your assistance in reducing airplane noise over Milton from flights arriving at and departing from Logan International Airport ("Logan"). Specifically, we request that action be taken to equitably distribute air traffic by reducing (i) the number of aircraft arrivals from the southwest on the 4/22 parallel runways (the "4s") and (ii) the number of aircraft departures from the west on runway 27 and the northwest on runway 331, that fly over

<sup>1</sup> Residential exposure to aircraft noise and hospital admissions for cardiovascular diseases: multi-airport retrospective study *BMJ* 2013;347:f5561 doi: 10.1136/bmj.f5561 (Published 8 October 2013)

<sup>2</sup> Aircraft noise and cardiovascular disease near Heathrow airport in London: small area study *BMJ* 2013;347:f5432 doi: 10.1136/bmj.f5432 (Published 8 October 2013)

<sup>3</sup> Airport noise and cardiovascular disease *BMJ* 2013;347:f5752 doi: 10.1136/bmj.f5752 (Published 8 October 2013)  
AM 29843904

Ms. Amy L. Corbett  
Mr. Thomas P. Glynn  
April 1, 2014

Milton. Many residents are impacted by the noise from these departures after they have endured days of noise from runway 4 arrivals.

Runway use statistics show that the 4s are the most heavily used arrival runways at Logan. Meteorological conditions (e.g., weather and wind) are not the only factors that contribute to heavy use of the 4s. Sections 1.3.3 and 1.3.6 of the enclosed Boston AR/TC (Air Route Traffic Control Center) Standard Operating Procedure for Logan ("SOP") designate the 4s as the default arrival runways even in calm wind conditions. We request that these sections of the SOP be revised to designate over-water arrivals and departures as the calm-wind configuration.

As you know, the Logan Airport Community Advisory Committee ("CAC") is developing a new runway use plan. We support the adoption of a new runway use plan that will distribute air traffic more equitably over the communities surrounding Logan.

In addition to establishing a new runway use plan, the Milton Board of Selectmen requests that the FAA and/or Massport take the following actions:

1. Implement Controlled Descents – this will require aircraft to remain at a higher altitude over a large portion of densely populated areas; may also result in reduced fuel burn.
2. Implement Steeper Glide Paths – this will require aircraft to remain at a higher altitude over a large portion of densely populated areas; may also result in reduced fuel burn.
3. Localizer Offset – offsetting the 4R localizer to the east will route arrivals over the water and reduce noise and pollution impacts on densely populated areas.
4. Implement and Monitor Runway Use Plan – in addition to developing a new runway use plan, the implementation of a more robust air traffic monitoring system will create accountability to ensure plan adherence.
5. Establish Nighttime Noise Abatement Policy – requiring over-water arrivals and departures at night, as weather permits, will reduce noise and pollution impacts on densely populated areas.

We look forward to receiving your response and working with you to find an equitable solution to the ongoing impacts from increased air traffic over Milton.

Sincerely,

  
Denis F. Keohane, Chairman

  
Thomas Hurley, Secretary

  
Kathleen M. Conlon, Member

Enclosure  
AM 29649330.4

Ms. Amy L. Corbett  
Mr. Thomas P. Glynn  
April 1, 2014

cc: U.S. Senator Edward J. Markey  
U.S. Senator Elizabeth Warren  
Congressman Steven F. Lynch  
Congressman Michael E. Caputo  
State Senator Brian A. Joyce  
State Representative Walter F. Timilty  
State Representative Daniel R. Cullinane  
Mr. Christopher Zambuto, Milton CAC representative  
Mr. David Gadhine, Milton CAC representative (alternate)  
Ms. Sheryl Flotman and Mr. Philip Jettening, Co-Chairs, Milton Citizens Against Aviation Impact

AM 29649330.4

# EXHIBIT B

COMMONWEALTH OF MASSACHUSETTS  
**TOWN OF MILTON**  
OFFICE OF SELECTMEN



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SECRETARY  
KATHLEEN M. CONLON  
MEMBER

November 5, 2015

The Honorable Matthew Beaton, Secretary  
Executive Office of Energy and Environmental Affairs  
Attn: Massachusetts Environmental Policy Act ("MEPA") Office  
Anne Canaday, EEA No. 3247  
100 Cambridge Street, Suite 900  
Boston, MA 02114

Re: Comments of the Town of Milton on the Boston-Logan International Airport 2014  
Environmental Data Report (2014 EDR)

Dear Secretary Beaton,

The Board of Selectmen of the Town of Milton ("Milton") is pleased to provide the following  
comments in response to the Boston-Logan International Airport 2014 Environmental Data  
Report ("2014 EDR"):

### 1. Background and Impact of Logan Operations in Milton

Milton is a predominantly residential community with a population of 27,000, which is racially  
diverse (71 % white, 20 % African American). Comprised of only 13.3 square miles, Milton  
bears the brunt of heavy air traffic arriving and departing Boston-Logan International Airport  
through three (3) RNAVs (designated as 4R, 27 and 33L), with two more RNAVs proposed by  
the FAA this year (4L visual and 4L instrument). Because it is mostly comprised of single-  
family homes with backyards, people often choose to live in Milton to raise their families. Thus,  
the tremendous amount of aircraft noise imposed on the town severely diminishes the quality and  
standard of living, as residents report they are unable to enjoy either their homes and properties,  
or Milton's recreational areas and open spaces.

Ultimately, Milton seeks fairness and equity in the distribution of airplane operations and the  
impacts of those operations. We believe that Milton receives a disproportionate impact of  
airplane operations in the Boston-Logan area. The skies over Milton are already saturated with  
airplanes, often from very early morning until very late at night. Implementation of two new  
RNAVs over Milton (4L visual and 4L instrument) will increase the existing inequity. We  
request that the Secretary work with Massport, Milton and the CAC and establish an effective  
process to remedy this problem.

884454v1



The arrival flight path for the heavily used arrival runways 4R/4L (30% 4R, 5% 4L – Table 6-5) were narrowed and concentrated into RNAV routes and the impact on residents has been severe. Additional routing changes to Runway 27 departures were made in March 2013 that also affected areas of Milton. The FAA relied upon a Categorical Exclusion, circumventing full environmental assessment, to implement the runway 27 RNAV in March 2013, which concentrated flight paths over a narrow area, rather than a more equitable distribution. Because this RNAV overflies Milton at low altitudes beginning sometimes before 5:00 A.M., departures from runway 27 cause substantial adverse effects on those under or near it in Milton. The 2014 EDR fails to note that Milton is affected by Runway 27 departures.

The runway 33L departure RNAV was routed over West Milton in June 2013, despite objections from more than 1,000 residents and elected officials. The 2014 EDR fails to note that Milton is affected by Runway 33L departures.

The FAA is relying upon a Categorical Exclusion again, to establish and implement two new 4L RNAVs – 4L instrument and 4L visual. Milton objects to this repeated and incorrect use of the Categorical Exclusions, and has set forth its detailed reasoning in a June 29, 2015 comment letter to the FAA. In sum, the Categorical Exclusion fails to take into account the cumulative impact of three (3), let alone five (5), RNAVs operating over Milton. The ongoing RNAVs implementation is disruptive to and within Milton. As the data set forth below indicates, there has been a 25-fold increase in noise complaints recorded from Milton since 2012. That disruption (and the number of complaints recorded) will only be exacerbated by the implementation of two more RNAVs over Milton. Also, Milton has several schools, which are highly sensitive communities, which are under the concentrated RNAV flight paths and impacted by the ongoing RNAV implementations.

In the last several years, more data has been provided which indicates airplane noise in overflown communities disrupts sleep patterns, which has been shown to result in adverse human health impacts. The noise from airplane overflights can also negatively impact property values. Fewer buyers are willing to purchase a home in an area with known noise impacts, and prices can be suppressed.

Anecdotal data from Milton residents indicate that the noise from airplanes in Milton is clearly heard above background noise in both commercial and residential areas. Additionally, these noise events disrupt conversations both indoors and outside, and disrupt sleep. As elected officials, we hear frequently from Milton residents who suffer from interrupted sleep, anxiety and a reduced quality of life because of the noise pollution caused by very frequent – and some days continuous – flights over Milton at low altitudes. We cannot overstate the seriousness of the health problems that these RNAVs cumulatively pose for Milton residents, and the adverse cumulative environmental impact that the RNAVs and the low flying planes have on our entire community.

**2. Increased Noise Complaints Reported.**

884454v1

Table 6-17 demonstrates that no single community makes as many complaints on the Noise Complaint Line as Milton. According to 2014 EDR, Milton had the highest number of total calls from any town in 2014—2,669 recorded complaints. The second largest was Hull with 1,855 recorded complaints.

Complaints on the Massport complaint line from Milton have increased from an average of 9 per month in 2012, to an average of 160 per month in 2013, to an average of 222 per month in 2014. That represents a 25-fold increase in noise complaints.<sup>1</sup> Even more troubling, based on data available on the Massport website, but not presented in the 2014 EDR, the noise complaints are not just limited to the summer months, but continue growing in volume in every month of the year as the Boston Logan Airport throughput increases because of routing efficiencies due to the implementation of RNAV procedures. Of the 34 months of complaint data recorded since 2012, the number of complaints recorded in each month except for five (mostly winter) months, has exceeded the total number of complaints recorded in 2012.

Heavily used recreational areas in Milton such as Houghton's Pond, normally enjoyed by thousands of Milton and Boston residents in the summer, and the Ponkapoog Trail in the Blue Hills reservation, have also been severely impacted with the concentration of and alterations in the 4R flight path with many low flying planes now traversing these important regional recreational facilities. These new "highways in the sky" are creating noise levels that prevent enjoyment of these natural settings. According to the Massachusetts Department of Conservation and Recreation, the Blue Hills is home to 50 prehistoric sites, 15 historic structures listed on the National Register of Historic Places, and a National Historic Landmark. The Blue Hills Meteorological Observatory. Increased noise is incompatible with these locations and their mission to provide green space and outdoor recreation.

**3. Increased Nighttime Operations.**

The 2014 EDR acknowledges that nighttime operations at Logan – defined as from 10:00 P.M. to 7:00 A.M. – have increased significantly. Total use during nighttime hours increased by 5% in 2014, compared to 2013, and has increased by almost 12% since 2010 (Table 6-3).

We request that the Secretary work with Massport and Milton to implement additional late night aircraft restrictions, similar to those set forth in 740 CMR 24.04, which are more protective of Milton and its residents. In particular, it is important to discuss restrictions on RNAV usage and routes that overly residential neighborhoods, including spreading the routes further so that the nighttime noise is less concentrated in residential neighborhoods, or moving routes over the ocean during certain periods of time.

**4. Disproportionate Distribution of Aircraft.**

The 2014 EDR describes the Preferential Runway Advisory System ("PRAS") as being:

<sup>1</sup> Noise complaints for 2015 have only been tabulated through September, and average 165 monthly. So far, the number of complaints recorded in 2015 has been similar to the number of complaints in January-May of 2014 and have greatly exceeded the number of complaints recorded in January-May of 2013 and 2012.

884454v1



a set of short-term and long-term runway use goals that include the use of a computer program that recommends to FAA air traffic controllers, runway configurations that will meet weather and demand requirements and provide an equitable distribution of Logan Airport's noise impacts on surrounding communities. The two primary objectives of the PRAS goals are to distribute noise on an annual basis, and to provide short-term relief from continuous operations over the same neighborhoods at the ends of the runways.

2014 EDR, page 6-17 (emphasis added).

The report indicates that the system experienced a technical malfunction that was not corrected. Because it was not meeting its goals, presumably because it was not functioning, the Logan Airport CAC voted to abandon the PRAS goals in 2012. However, no other guidelines were put in its place, and Massport still reports runway usage with respect to the PRAS goals (Table 6-6). The PRAS goals offer at least some picture of what a fair distribution of aircraft traffic might look like using one particular tool, i.e. differential runways (being mindful that these PRAS goals were created well before RNAV concentrated flight routes were implemented). Thus, at this stage, only achieving balanced runway usage would not be sufficient to relieve those under the RNAV's although it would be a step in the right direction.

We note that while the PRAS goal for arrivals on runways 4R/4L is 21.1%, the 2014 effective usage is reported at 28.1%. When added to the impacts from the southbound 27 departures (3.4% of all departures) and 33L departures (2.3% of all departures)<sup>2</sup>, Milton is impacted by much of the daily airline traffic moving in and out of Logan, and in a greater proportion than was initially planned or expected, based on the PRAS goals.

#### 5. Mitigation.

The 2014 EDR indicates that "100% of residences exposed to noise levels greater than DNL 65 dB in 2014 are eligible to participate in Massport's residential sound insulation program." 2014 EDR, Figure page 6-3. We submit that this is simply an inadequate standard for participation in Massport mitigation programs. It is clear that the 65 DNL standard is antiquated, inadequate to protect public health, and does not adequately protect sensitive subpopulations. It does not address the acute highs in airport noise impacts actually experienced by residents, but lumps all noise together in 24-hour annual averages. Milton is not alone in this contention. That this measure is inadequate to measure impacts, particularly in metro areas surrounding airports, is a significant issue being raised by communities around the country, including New York City, Washington DC, Chicago, Los Angeles, and Phoenix.

Even if the DNL standard would be retained, there is consensus developing, supported by WHO data and used on many other countries, that the important regulatory value is 55dB, not 65 dB. Modeled data for Milton indicates that the DNL is 54.5dB in Cunningham Park (the only noise monitor in the Town). Based on this value, Milton should qualify for residential sound

<sup>2</sup> This Milton overflight information for runways 27 and 33L departures was reported to the Milton CAC representative by Massport staff on 8/5/14 via email.

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insulation/mitigation funding. We request the ability to participate in this program for Milton schools, and for all Milton residences. We would appreciate your assistance in working with Massport to make these measures and this funding available within Milton.

#### 6. Air Pollution and Public Health.

We note that the 2014 EDR only discussed air pollution from airport operations in the context of the actual operations of Logan airport, on Logan property. We believe that this perspective is overly narrow. Recent studies at LAX (Hudda, et al., May 2014) found ultrafine particle counts as far as ten miles from heavily used arrival runways. We request that Massport, in conjunction with the Department of Public Health ("DPH") and the Department of Environmental Protection ("DEP") conduct noise and air pollution studies in communities like Milton, that receive a substantial number of low-flying arrival aircrafts. This work would be consistent with the East Boston neighborhood study completed by DPH in 2014.<sup>3</sup>

#### 7. Conclusion and Request for Assistance.

Thank you for your attention to and consideration of our comments on the 2014 EDR. We believe that there can be solutions available to remedy and mitigate the ongoing impact of Logan operations on the residents of Milton. We request that the Secretary work with Massport, Milton, the CAC, and other affected communities to help establish a process to remedy the multiple impacts discussed above. We would appreciate a time to meet with you and your staff to personally discuss the concerns we have outlined here, as well as our suggestions for improvements going forward.

Sincerely,

Board of Selectment of the Town of Milton

  
David T. Burnes, Chairman

  
Kathleen M. Conlon, Member

<sup>3</sup> The report of that study may be found here:  
<http://www.mass.gov/eohhs/docs/dph/environmental/investigations/logan/airport-airport-health-study-final.pdf>

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## **EXHIBIT C**

cc: Congressman Stephen F. Lynch  
Congressman Michael E. Capuano  
U.S. Senator Elizabeth A. Warren  
U.S. Senator Edward J. Markey  
State Senator Brian A. Joyce  
State Representative Walter F. Timilty  
State Representative Daniel R. Cullinane  
Milton Board of Health  
Milton Airplane Noise Advisory Committee  
Milton CAC Representative Cindy L. Christiansen  
Milton CAC Representative (Alternate) David Godine  
Milton Logan Representative Caroline A. Kinsella  
Karis L. North, Esq.





COMMONWEALTH OF MASSACHUSETTS  
**TOWN OF MILTON**  
 OFFICE OF SELECTMEN  
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ANNE MARIE FAGAN  
 TOWN ADMINISTRATOR

SELECTMEN  
 J. THOMAS HURLEY  
 CHAIRMAN  
 DAVID T. BURNES  
 SECRETARY  
 KATHLEEN M. CONILON  
 MEMBER

November 9, 2015

VIA EMAIL AND U.S. MAIL

Ms. Amy Lind Corbett  
 Regional Administrator  
 New England Region  
 Federal Aviation Administration  
 12 New England Executive Park  
 Burlington, MA 01803-5299

Mr. Thomas P. Glynn  
 Chief Executive Officer  
 Massport Executive Offices  
 1 Harborside Drive  
 East Boston, MA 02128

Mr. Darryl Pomieter  
 President  
 Logan Airport Community Advisory Committee, Inc.  
 136 Myrtle Street  
 Boston, MA 02114-4447

Re: Boston Logan Airport Noise Study

Dear Ms. Corbett, Mr. Glynn and Mr. Pomieter:

Last year, we wrote to the FAA and Massport to advise you of the negative effects that increased air traffic over the Town of Milton, and the noise and air pollution associated with it, has had upon the people we represent. We asked the FAA to distribute air traffic equitably by redistributing arrivals on runways 4R and 4L and departures on runways 27 and 33L. We also requested that the new runway use plan to be developed by the Logan Airport Community Advisory Committee ("CAC") take five specific actions, including the implementation of steeper glide paths and controlled descents and the redirection of arriving flights and all nighttime flights over the ocean. A copy of our April 2, 2014 letter is attached hereto as Exhibit A. By letter

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 Mr. Thomas P. Glynn  
 Mr. Darryl Pomieter  
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dated April 11, 2014, Massport referred our letter to the CAC and "ask[ed] [the CAC] to take up these issues at their next meeting." A copy of Massport's letter is attached hereto as Exhibit B.

During the past year, the situation has worsened considerably. Residents of Milton continue to complain to us, their elected representatives, about interrupted sleep, anxiety, and a reduced quality of life because of the marked increase in air traffic. Too often, it is difficult for many of our residents to have a conversation outdoors because airplanes are flying at very low altitudes and with great frequency. The number of complaints we receive has only continued to grow.<sup>1</sup>

As you know, there is medical evidence that airplane noise is associated with health issues such as an increased risk of cardiovascular disease, coronary heart disease and stroke.<sup>2</sup> Additionally, many Milton residents are concerned about the impact that the increased volume of airplane noise and pollution has on property values. Copies of a few representative samples of the many letters and emails that we have received from Milton residents in recent times are attached hereto as Exhibit C.

Four runways (arrivals on 4R and 4L and southbound departures on 27 and 33L) place air traffic over Milton. Currently, three (3) RNAVs (for runways 4R, 27 and 33L) fly over Milton. Earlier this year, the FAA proposed to add two (2) more RNAVs, each for runway 4L, to the sky over Milton. If implemented, the FAA's proposal would result in five (5) RNAVs over Milton.<sup>3</sup> The existing situation, let alone the proposed two additional RNAVs, is inequitable.

It appears that neither Massport nor the FAA has taken any action to address the concerns we raised last year. Our representative to the CAC, Cindy L. Christensen, Ph.D., a professional researcher and statistician, recently brought to our attention several issues that she believes are flaws in the Boston Logan Airport Noise Study ("BLANS") that are outlined below, after first

<sup>1</sup> Milton had the highest number of total calls from any town by far in 2014, with 2,669 recorded complaints, and has had the highest number of noise complaints for each of the last three calendar years. Complaints on the Massport complaint line have increased for Milton from an average of 9 per month in 2012, to an average of 160 per month in 2013, to an average of 222 per month in 2014. That represents a 25-fold increase in noise complaints. Noise complaints for 2015 have only been tabulated through September, and average 220 monthly.

<sup>2</sup> Residential exposure to aircraft noise and hospital admissions for cardiovascular diseases: multi-airport retrospective study *BMJ* 2013;347:f5561 doi: 10.1136/bmj.f5561 (Published 8 October 2013); Aircraft noise and cardiovascular disease near Heathrow airport in London: small area study *BMJ* 2013;347:f5432 doi: 10.1136/bmj.f5432 (Published 8 October 2013); Airport noise and cardiovascular disease *BMJ* 2013;347:f5752 doi: 10.1136/bmj.f5752 (Published 8 October 2013).

<sup>3</sup> On June 29, 2015, we submitted comments to the FAA objecting to the implementation of the two proposed 4L RNAVs and seeking relief from the overuse of runway 4R. We understand that the 4L RNAV proposals and the many written comments submitted to the FAA are still under review.

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Mr. Thomas P. Glynn  
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have the noise exposure and impacts by runway end and by community from runway end. (6) does not have the information about all aircraft (i.e., not only jets), and (7) does not have complete information on runway use restrictions.

Dr. Christiansen has reported to us that her review of the BLANS III testing design, which has focused so far only on problems of "dwell and persistence", shows that it is flawed because it (a) omits some configurations, (b) includes some configurations that are seldom used, (c) fails to include other configurations as choices, (d) fails to account for the fact that some communities are affected by multiple configurations, (e) does not focus on the communities with the biggest problems, and (f) fails to reflect seasonal effects on configuration changes, given that the testing period is only 6 months and the weather patterns at Logan Airport change significantly from winter to summer.

Specifically, Dr. Christiansen has reported to us the following problems:

1. The most frequently used 4/9 configuration (configuration #1; runways 4R/L were used for 35% of all jet arrivals in 2014 and runway 9 was used for 30.7% of departures) is given as a first choice for a switch in 4 of the 5 remaining configurations in Test #1. The only place that 4/9 shows up as third choice is in configuration #6 (1/5/9), which is used only about 1% of the time. This does not result in a fair distribution.
2. In 50% of the configurations for Test #1, the 22R/L runways, which are seldom used alone during high demand periods, are the alternate first choice. This means that to be compliant with the Test #1 decision matrix when demand is high, the FAA will always use the other first choice, which is 4/9. This is a serious flaw in the BLANS design.
3. Runway 27 departures also include runway 33L departures as documented in the description of the configurations for Test #1 and Test #2. Because of the south turn for 27 departures that was designed to avoid flying over parts of Jamaica Plain, Brookline and beyond, the same communities to the south (Milton, Roslindale, Hyde Park and others) that receive the 27 southbound departures also receive the 33L southbound departures. This does not result in a fair distribution.
4. Configuration #2, Test #1 (33/27) has a first choice switch to the 4/9 configuration. This makes no sense if the goal of the design is not to burden the same people with both the sound of departing aircraft when they try to fall asleep at night and the sound of arriving aircraft waking them up the next morning. The design ignores the fact that some communities, like Milton, receive both the Runway 27 departures and the 4R/L arrivals.

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trying to discuss and resolve these problems through the CAC and its consultant. Because of the timing of the current work on Phase III of the BLANS study, we believe it is important that Massport and the FAA work with Milton and the CAC to address these concerns now, before it becomes too late.

In addition, Dr. Christiansen also reports that the CAC has not received important information that it requested from the FAA and Massport on January 15, 2015. The purpose of this letter is to request that (A) Massport and the FAA take the necessary steps to work with the CAC to correct the BLANS flaws, (B) Massport and the FAA provide the requested information to the CAC and (C) the FAA address Milton's concerns about the significant overuse of the 4R/L runways and the virtually constant noise created by the three (3) RNAVs (particularly the 4R RNAV) when they are in use. Specifically, the Town of Milton respectfully requests that the BLANS III testing, as presently designed, be stopped and redesigned so that a new runway usage plan that will distribute air traffic across the Greater Boston metropolitan area in an equitable manner can be achieved.<sup>4</sup>

#### BLANS III Design and Analysis Flaws

Dr. Christiansen has reported to us that despite being two (2) years into the BLANS III study, with the Test #1 period completed and the Test #2 period ending soon, the CAC does not have all of the data it needs to achieve its goals. Despite promising statements made by the Project Management Team near the start of the BLANS III process about the goals to be achieved,<sup>5</sup> to date the CAC has been unable to make a determination of a valid metric that constitutes a "more equitable distribution of noise" or any determinations as to what the annual runway goals are. Moreover, we understand that the CAC (1) has not been able to correlate complaints and noise with testing and configuration changes; (2) does not have flight path maps; (3) does not have flight track maps; (4) does not know which runway use affects which communities; (5) does not

<sup>4</sup> See "Overview of Boston Logan Operations and Noise from Overflight" presentation to Massport's Board of Directors dated March 19, 2015: "Phase III, Runway Use: Goal is to balance use of runways when possible (e.g., wind and weather permitting)."

<sup>5</sup> The minutes of the Project Management Team's November 14, 2013 meeting record the following statements:

"...She [Terry English, FAA, BLANS Program Manager] also referenced the BLANS Phase 3 scope of work that includes a dual CAC goal of 'reducing noise' and providing a more equitable distribution of noise."

"[Brian Brunelle FAA, Boston Logan Airport Traffic Control Tower]... It is also critical that the CAC state what their annual runway use goals are. Otherwise there is nothing to achieve."

See Minutes from Phase 3 Boston Logan Airport Noise Study (BLANS) Management Meeting Date: November 14, 2013 Time: 10:00 a.m. - 1:00 p.m.



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Configuration #2, with its first choice in the decision matrix to be an acceptable switch to the 4/9 configuration, leads to this inequitable result, and it must be revised and revised.

5. The number of configurations has changed from Test #1 to Test #2. One technical committee document proposed five runway configurations. Test #1 has six. Test #2 has seven, but only six are used as "prior" runway configurations. It is not clear who chose the runway configurations in the decision matrices for the two tests.<sup>6</sup> These inconsistencies are unexplained and result in decision matrices that would never be approved by a scientific peer-review process.

6. Test #1 allowed two runway configurations as first choices, one as a second choice and another as a third choice. Test #2 now gives several first choice configurations with 4/9 included in each. This design gives the FAA approval for switching from one configuration to the 4/9 and offers no guidance toward the BLANS goal to balance runway use.

7. The decision matrix for configuration changes is designed to allow a change in the departure runway to trump a change in the arrival runway, protecting communities under departure paths over communities under arrival paths if a change cannot be made to protect both. However, a runway 9 departure is considered an "over the water" procedure according to Massport's Noise Abatement Office; the design does not account for the fact that there is no departure-overflown community to protect when runway 9 departures persist. When runway 9 has been used for departures, paired for about 3.5% of the arrivals to 4R/L, the first priority should be to relieve those communities under the arrival path. A well-thought out design should take this into account if the intent is to fairly distribute the burden of Logan Airport's air traffic.

8. The denominator for rates of configuration change should not be the total number of days but, rather, the number of days when a change is possible because of wind direction and speed. To do otherwise presents an inaccurate picture of an increased rate of success and produces a statistic that is meaningless for assessing good-faith efforts by the FAA and Massport to distribute planes fairly across the metroplex. Tuning, concentration and

<sup>6</sup> At the July 6, 2015 CAC meeting, Dr. Christiansen asked the FAA's consultant, Mr. Adams, who chose the runway configurations in the decision matrix. Mr. Adams advised Dr. Christiansen that the FAA chose the configurations. However, at the September 10, 2015 meeting, CAC President Darryl Pomier told Dr. Christiansen that the prior CAC President, Sandra Kuntz, had determined the configurations. A third alternative is offered in the FAA's press release about Test #1, in which the FAA stated that Massport determined the configurations for Test #1.

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number of operations from runway use when weather conditions force configuration choice should be considered in the decision matrix for times when configuration choice is not affected by nature, but not in the denominator of the proportion representing successful decisions with respect to fairness.

9. During the Test # 2 period, the FAA is being encouraged to switch configurations in the morning and afternoon. However, Mr. Gene Brown, a former Milton CAC Representative, gathered the following statistics for the 40-day period from September 1, 2015 through October 10, 2015, which show that the FAA did not switch configurations on many days even when wind speed and direction allowed it. These statistics are of particular concern to us. During this period of time, we heard from many residents who complained about constant and brutally loud noise:

- o Of the 960 available hours (40 days x 24 hours per day) for landing aircraft from September 1, 2015 through October 10, 2015, 466 hours had landings on runway 4R/L. This means that runways 4R/L were used 48.5% of the time during this 40-day period.
- o East/Northeast wind use of 4R/L occurred for 296 hours; Southeast to South wind use of 4R/L occurred for 94 hours; Northwest wind use of 4R/L was 57 hours; West, southwest and calm or variable use of 4R/L was 19 hours. If runways 4R/L were only used for east and northeast wind conditions during this time period, usage would have been 30.1%, not 48.5%.
- o Runways 4R/L were used for landings on 33 days, or 82.5% of these 40 days.
- o Nocturnal hours use of runway 4R/L (10 PM - 6 AM) was 85 hours or 26.6% of the 320 nocturnal hours in the time period.
- o Even though the goal for Test #2 of BLANS III is to switch runway configurations twice per day when weather conditions allow, of the 144 hours during the October 1 through October 6 time frame, 4R/L was used for 129 hours, leaving only 15 hours without arrivals being flown over Milton during these six days. On some of these days, the choice to use 4R/L for arrivals was weather-related. However, on the sixth day (October 6, 2015), after five consecutive days of 19 to 24 hour use of 4R/L, Massport closed runways 33L and 15R for maintenance, resulting in yet another 19 hours of 4R/L use when the winds were northwest and calm and when another configuration could have been used.

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- o Data on runway use for many of these 40 days shows a gross overuse of 4R/L for arrivals. Here are just a few examples:
  - On September 1, Milton had 10 hours of arrivals even though the winds were 120-10 to 200-5 (SE to SW) during this time period.
  - On September 3, Milton had 15 hours of arrivals with winds 110-4, 120-6 and 140-7 (SE).
  - On each of September 10 and September 11, Milton had 24 hours of arrivals even though the wind was northwest or at 6 knots for hours of these days.
  - After these two days of 24 hours of arrivals, on September 12, the FAA sent more arrivals over Milton between 5:00 a.m. and 8:00 a.m. when winds were 220-4 (SW), and again between 10:00 a.m. to 10:00 p.m. when winds were 090-7 to 160-7 (E and SE), for a total of 15 hours.
  - As if September 10 through September 12 were not enough to demonstrate the unfair distribution of arrivals, on September 13, Milton had 19 hours of arrivals, from 5:00 a.m. until midnight, when winds were out of the southeast and east, 110-10, 100-5 and 070-4.

10. The Project Management Team's statement in its July 17, 2015 meeting minutes that "at least one of CAC's preferences was achieved over 70 percent of the time"<sup>7</sup> is misleading. Using the identical time period and the identical assessment algorithm, the FAA reported in Table 2 of the draft report, that at least one of the configuration changes was made on 63% (not over 70%) of the 178 days in the test period. Furthermore, the inconsistencies in Tables 1 and 2, where Massport and the FAA, respectively, report their results of Test #1 are very significant. Here are two of many examples of such inconsistencies in the reported statistics:

<sup>7</sup> The Project Management Team's notes of its July 17, 2015 meeting (dated August 7, 2015) states that:

"T English (TE) asked if R Adams (RA) had attended the CAC meeting on July 6, 2015 and whether he had everything needed to assess Runway Use Test #1. ... RA said that overall he believes that Test #1 was successful noting that at least one of CAC's preferences was achieved over 70 percent of the time. He also said that there was no major disagreement from CAC members about Test #1 and that most CAC representatives were encouraged that FAA is undertaking the tests."

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- o Change from both the previous night's arrival and departure runways; 178 day period
  - Massport 51%; FAA 31%
- o Change from the previous night's arrival runway but not departure; 178 day period
  - Massport 8%; FAA 26%

The foregoing statistics demonstrate that runways 4R/L have been, and continue to be, greatly overused and that the goals of the BLANS III study are not being met.

Milton has not been alone in finding flaws in the BLANS testing. See email from John Stewart, CAC representative from Boston's South End, to CAC President Darryl Pomicier and CAC representatives dated September 9, 2015 ("Test 1 was an unmitigated disaster for the RW 27 communities. ... This Test was a failure and the South End would vehemently oppose its implementation."), attached hereto as Exhibit D.

**To Date, the CAC's Development of a Runway Use Plan Has Not Resulted in an Equitable Distribution of Air Traffic**

According to its Articles of Organization, the CAC's purpose is to:

1. "... represent the communities in the Greater Boston area which are impacted by the operations and expansion of Logan International Airport in the evaluation of present and proposed ... aircraft operations related to the airport and ways to reduce noise and mitigate the adverse impacts of the airport and its operations. ...
2. In furtherance of these purposes, the corporation will seek to protect the communities from adverse effects, including noise and air pollution and ground traffic impacts, which would be caused by Logan International Airport, including, but not limited to, expansion of Logan International Airport runways, taxiways, terminal gates, parking facilities, flightpath procedures and other airside, landside and operational capacity improvements.
3. In furtherance of these purposes, the corporation may engage in litigation before any local, state or Federal court or agency."



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See Articles of Organization of Logan Airport Community Advisory Committee, Inc. filed with the Massachusetts Secretary of State on January 21, 2003.<sup>8</sup>

We believe the CAC is being hampered in fulfilling its purpose by the lack of responsiveness to its requests for data and information from Massport and the FAA. Without this important information, and without well-designed studies, the CAC is not able to protect the communities that have been impacted the most by air traffic arriving at and departing from Logan Airport, including Milton.

The Volpe presentation at the FAA's May 18, 2015 hearing on the proposed 4L RNAV indicates that the FAA estimated DNL assuming that Logan will be in a northeast wind flow approximately 40% of the time, which are times when the 4R and 4L runways will be used. Note that 40% is in contrast to the reported annual northeast wind 18% of the time (reference: <https://www.fhpsped.gov/airports/aviation/high-speed/spotting/noise-abatement/rev-logan-airport/>). We are concerned that if Volpe made this determination last May while the Phase III process was still in the early stages, then what influence will the CAC have in ultimately redistributing air traffic to eliminate the unfair and unsafe practice of using the 4R/L runways for 40% of the Logan arrivals? Volpe's determination as to the use and distribution of arrivals on the 4R/L runways seriously undercuts the CAC's purpose and authority and makes the CAC process illusory. Full and fair evaluation of an appropriate and equitable runway distribution by the CAC in accordance with its purpose and intent is not possible where the end result is pre-determined.

There is still time during the BLANS III process for Massport and the FAA to support the CAC so that it may live up to its mission of adequately representing and protecting affected communities from the adverse impacts of noise and pollution. We believe Massport, the FAA and the CAC must act, and act soon.

<sup>8</sup> According to a letter dated October 23, 2015 from Thomas P. Glynn, Chief Executive Officer of Massport, to Senator Brian A. Joyce, "Massport believes that noise from aircraft is a regional issue that must be addressed through regional dialogue with all communities at the table, with the FAA which determines flight paths and Massport participating. Such regional community dialogue is the mission of the statutory Community Advisory Committee."

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The FAA Has Not Provided Information that the CAC Needs to Perform its Function

At the January 15, 2015 CAC meeting, the CAC voted to request updated radar flight track analyses and various noise abatement information.<sup>9</sup> Ten months later, the CAC is still waiting for this information from the FAA.

<sup>9</sup> An email from CAC President Darryl Pomier to Mr. Joe Maseo of Massport dated August 24, 2015, which was copied to all CAC members and is attached hereto as EXHIBIT E, states the following:

"In addition to completing the Boston Logan Airport Noise Study, Phase 3 for a new Runway Use Program, please consider the four Logan CAC Motions agreed to January 15, 2015 and emailed to Massport and FAA January 22 to be highest priorities for the Logan CAC:

MOTION: Moved and seconded that the FAA (with technical assistance from Massport) update the radar flight track analysis of the runway 27 departures for 2014 with respect to RNAV way points and gates. Include analysis of standard deviation of the radar tracks and compliance with the Runway 27 ROD.

MOTION AGREED TO UNANIMOUSLY.

MOTION: Moved and seconded that:

The Logan CAC requests Massport provide basic Logan Airport noise abatement information:

1. Runway Use (Arrivals and Departures Operations) by Runway End.
2. Noise (Exposure and Impacts) by Runway End.
3. Noise (Exposure and Impacts) by Community from Runway End.
4. All aircraft (not just jets).

MOTION AGREED TO UNANIMOUSLY.

MOTION: Moved and seconded that Massport and FAA representatives attend the next CAC meeting to discuss availability of real time data, queryable data, graphical data and/or reporting standards regarding aircraft arrivals and departures that includes multiple variables including runway use, wind direction, altitudes, flight track locations, numbers of planes etc.

MOTION AGREED TO UNANIMOUSLY.

MOTION: Moved and seconded that the communities of Arlington, Belmont and Watertown request through the CAC that the FAA re-examine Runway 31L RNAV SID, implemented in June of 2013, in light of the significant increase in noise complaints and negative feedback from communities since implementation; and that alternatives or modifications be considered.

MOTION AGREED TO ONE VOTE IN THE NEGATIVE."



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Mr. Thomas P. Glynn  
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We understand that, during the Project Management Team's November 2, 2015 conference call, CAC President Pomietler, referring to Test #1 and Test #2, stated "[t]hese two ended up with nothing." We also understand that there was a discussion about a lack of funding to do all of the work that the CAC wants to do, pay for the data and information requested by the CAC, analyze data from Test #1 and Test #2, and conduct Test #3 and possibly a new Test #4.

#### Conclusion

Based on all of the foregoing, we believe that BLANS III, as currently designed and being tested, may encourage the overuse of runways 4L and 4R and may fail to incorporate protection when switching runway configurations for communities like Milton that are affected by more than one configuration. Such overuse has already had a severe adverse impact upon the Town of Milton from which we seek permanent relief.

We respectfully request a fair and objective determination of runway usage configurations and a fair and equitable distribution of air traffic over the Greater Boston metropolitan area. Preferably, more arrivals would be routed over the ocean to minimize the impact on all communities surrounding Logan Airport. It is inequitable for the FAA to concentrate flight paths and overburden any community.<sup>10</sup> As noted above, we respectfully request that the BLANS III testing, as presently designed, be stopped and redesigned so that a new runway usage plan that will distribute air traffic across the Greater Boston metropolitan area in an equitable manner can be achieved. We also request that the FAA, Massport and the President of the CAC meet with us to discuss BLANS III. Milton's Town Administrator, Annemarie Fagan, will contact each of you to arrange such a meeting.

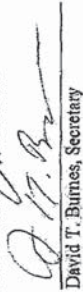
<sup>10</sup> As you know, communities in other parts of the country are experiencing the same problem that Milton is as a result of the FAA's implementation of the Next Gen RNAV system. The City of Phoenix, Arizona and residents of the Georgetown neighborhood of Washington, D.C. have filed suits against the FAA because of the extreme toll that noise from increased air traffic has taken on their residents.

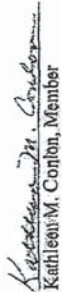
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Mr. Darryl Pomietler  
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Thank you for your consideration of this letter and the relief we request. We look forward to your response and to achieving a permanent solution to the current inequitable conditions.

Sincerely,

  
J. Thomas Harty, Chairman

  
David T. Burnes, Secretary

  
Kathleen M. Conlon, Member

cc: U.S. Senator Edward J. Markey (without exhibits)  
U.S. Senator Elizabeth Warren (without exhibits)  
Congressman Stephen F. Lynch (without exhibits)  
Congressman Michael E. Capuano (without exhibits)  
State Senator Brian A. Joyce (without exhibits)  
State Representative Walter F. Harty (without exhibits)  
State Representative Daniel R. Cullinane (without exhibits)  
Cindy L. Christiansen, Ph.D., Logan CAC Representative  
Mr. David Godine, Logan CAC Representative (Alternate) (without exhibits)  
Ms. Caroline Kinsella, Massport CAC Representative  
Milton Airplane Noise Advisory Committee (without exhibits)  
Milton Board of Health (without exhibits)  
Milton Board of Park Commissioners (without exhibits)  
Milton Council on Aging (without exhibits)  
Milton Planning Board (without exhibits)  
Milton School Committee (without exhibits)  
John P. Flynn, Esq., Milton Town Counsel  
Karis L. North, Esq., Milton Town Counsel

**EXHIBIT D**

COMMONWEALTH OF MASSACHUSETTS

TOWN OF MILTON  
OFFICE OF SELECTMEN

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SECRETARY  
KATHLEEN M. CONLON  
MEMBER

March 22, 2016

VIA EMAIL AND U.S. MAIL

Ms. Amy Lind Corbett  
Regional Administrator  
New England Region  
Federal Aviation Administration  
12 New England Executive Park  
Burlington, MA 01803-3299

Mr. Thomas P. Glynn  
Chief Executive Officer  
Massport  
1 Harborside Drive  
East Boston, MA 02128

Re: Overuse of Logan Airport Runways 4L and 4R from 3/13/16 to 3/17/16

Dear Ms. Corbett and Mr. Glynn:

We write to inform you that from approximately 5:00 a.m. on Sunday, March 13, 2016, until midnight on Wednesday, March 16, 2016, the Town of Milton experienced virtually constant noise as a result of aircraft departing from Runway 27 (7 hours) and then arriving on Runways 4R and 4L (84 hours) at Logan Airport. Many Milton residents complained to us about interrupted sleep, anxiety and other health impacts during this 91-hour period that brought far too many low-flying airplanes over our Town. At 5:15 a.m. on Thursday, March 17, after only five (5) hours of rest from landings on Runways 4R and 4L, the FAA again used Runway 4R for three more hours, this time in calm and southeast winds. The constant noise that was inflicted upon our Town by the FAA's overuse of these runways last week is unacceptable. We are seeking immediate relief to ensure that it is never repeated.

On March 17, Milton's Town Administrator, Annemarie Fagan, telephoned Ms. Corbett to discuss the situation and left a message. Ms. Fagan has not yet received the courtesy of a reply. On March 18, Ms. Fagan spoke with Frank Iacovino of Massport's Noise Abatement Office and received a routine response that was completely inadequate in light of the circumstances.

On many occasions, we have notified the FAA and Massport about the adverse effects that the RNAV system, which places an increased number of aircraft over Milton in concentrated flight paths, has had upon the people we represent. Noise is only one problem, albeit a very serious

Ms. Amy Lind Corbett  
Mr. Thomas P. Glynn  
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cc: Governor Charlie Baker  
U.S. Senator Edward J. Markey  
U.S. Senator Elizabeth Warren  
Congressman Stephen F. Lynch  
Congressman Michael E. Capuano  
State Senator Brian A. Joyce  
State Representative Walter F. Timilty  
State Representative Daniel R. Cullinane  
Cindy L. Christiansen, Ph.D., Massport and Logan CAC Representative  
Milton Airplane Noise Advisory Committee  
Milton Board of Health  
John P. Flynn, Esq., Milton Town Counsel  
Karis L. North, Esq.

Ms. Amy Lind Corbett  
Mr. Thomas P. Glynn  
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one. The public health risk from pollution that is associated with concentrated superhighways in the sky is also a very serious concern for the Milton Board of Selectmen. We have repeatedly asked the FAA to distribute air traffic equitably by redistributing some arrivals on runways 4R and 4L and departures on runways 27 and 33L. To date, we have received no assistance from the FAA or Massport to remediate the situation.

The implementation of the RNAV system has unduly burdened the Town of Milton. As you know, four (4) runways (arrivals on 4R and 4L and southbound departures on 27 and 33L) place air traffic over Milton. Currently, three (3) RNAVs (for runways 4R, 27 and 33L) fly over Milton. Last year, the FAA proposed to add two (2) more RNAVs, each for runway 4L, to the sky over Milton. If implemented, the FAA's proposal would result in five (5) RNAVs over Milton, a scenario that is wholly unacceptable to us. Our Town receives a disproportionate share of air traffic while some communities near Logan Airport receive little air traffic. That is inequitable and unsustainable over the long term.

We are once again respectfully requesting a meeting in person with senior level representatives of the FAA and Massport to discuss the problems that Milton has experienced since the RNAV system was implemented. Town Administrator Fagan will contact you to arrange a meeting. We look forward to your response and to achieving a permanent solution to the current inequitable conditions. Thank you for your anticipated cooperation.

Sincerely,

  
J. Thomas Hübner, Chairman

  
David T. Burnes, Secretary

  
Kathleen M. Conlon, Member



# EXHIBIT E



COMMONWEALTH OF MASSACHUSETTS  
**TOWN OF MILTON**  
OFFICE OF SELECTMEN

525 CANTON AVENUE, MILTON, MA 02186

TEL 617-899-4643  
FAX 617-899-9741

ANNEMARIE FAGAN  
TOWN ADMINISTRATOR

SELECTMEN  
KATHLEEN M. CONLON  
CHAIRMAN  
DAVID T. BURNES  
SECRETARY  
J. THOMAS HURLEY  
MEMBER

July 19, 2016

VIA EMAIL AND U.S. MAIL

Ms. Amy Lind Corbett  
Regional Administrator  
New England Region  
Federal Aviation Administration  
12 New England Executive Park  
Burlington, MA 01803-5299

Mr. Todd Friedenbergl  
Deputy Regional Administrator  
New England Region  
Federal Aviation Administration  
12 New England Executive Park  
Burlington, MA 01803-5299

Dear Ms. Corbett and Mr. Friedenbergl:

Thank you for meeting with Town Administrator Annemarie Fagan, Logan Community Advisory Committee ("CAC") Representative Cindy Christiansen, Airplane Noise Advisory Committee Chair Andy Schmidt, and me on Friday, June 17, 2016, to discuss the ongoing burdens that the FAA's NextGen program have placed upon the Town of Milton. We appreciate your time and your willingness to listen to our concerns about the volume, frequency and altitude of aircraft flying over the Town of Milton.

Milton seeks real solutions and permanent relief from the RNAVs that have overburdened our community and saturated our skies with aircraft in concentrated flight paths, often for more than 19 hours a day and for multiple consecutive days. To sum up the problem succinctly, there are too many airplanes flying over Milton. I write to summarize the issues we discussed as well as some measures that Milton representatives proposed during our meeting for your consideration.

(1) Reduce Volume of Arrivals to Runways 4R and 4L

During the month of May 2016, 6,596 airplanes flew over Milton to land on Runway 4R. This number represents 44.4% of all arrivals to Logan. During the past twelve (12) months, 33% of arriving jets flew over Milton to land on Runway 4R and an additional 5% landed on Runway 4L. The current situation is unacceptable to Milton, as is the projection used in the May 18, 2015 presentation and analysis prepared by Volpe showing that the baseline (current) percentage

Ms. Amy Lind Corbett  
Mr. Todd Friedenber  
July 19, 2016  
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of arrivals flying over Milton to land on Runways 4R and 4L is 40%. Over the last seven years 36% of jet arrivals have landed on Runways 4R and 4L (31% and 5%, respectively). The PRAS goal is 21.1% effective runway use. Forty percent (40%) of arrivals flying over Milton cannot be part of the FAA's plan for managing and equitably distributing the burden of flight operations at Logan Airport. Forty percent (40%) of arrivals is not acceptable to the Town of Milton.

The FAA must reduce the volume of air traffic over Milton substantially, to at least the PRAS goal of 21.1% effective runway use. It is unjust and inequitable that some communities that are as close to Logan Airport as Milton is have virtually no arrival or departure flight paths over them while Milton bears the burden of a high percentage of arrivals. Moving arriving aircraft from the Runway 4R RNAV to the proposed Runway 4L RNAV, which would also fly over Milton, will not solve the problem that our Town is experiencing as a result of the FAA's NextGen system. Air traffic must be dispersed equitably among all of the communities in Greater Boston, all of which benefit from Logan Airport's proximity to them. That is the only sustainable solution to the problem that the FAA's NextGen program has created for Milton.

While the FAA's NextGen program may have achieved efficiencies for airlines, it has failed to protect the health and safety of people on the ground below the RNAV flight paths. As the Board of Selectmen has informed the FAA and Massport previously, the NextGen system has adversely impacted the quality of life and health of many Milton residents.

Reducing the percentage of arrivals over Milton is Milton's primary request and one that we believe can be accomplished quickly by making runway use choices that spread flights across all runway configurations more equitably. Such a reduction would occur, for example, by removing the designation of the Runway 4/9 configuration as the calm-wind arrival/departure runways, by using Runway 15R for arrivals when demand is low and the winds are from the southeast; and by ending the increasing practice of using Runway 4R for arrivals in northwest winds.

Additionally, we recommend that, each day, the Logan tower be provided with information about the previous day's and week's runway use to inform the tower's decision-making for runway configuration choices. We look forward to hearing additional, concrete ideas that the FAA may have for reducing the use of Runways 4R and 4L that will promote fairness and a more equitable shared burden across communities.

## (2) Other Relief

As we discussed, we believe there are several other measures that the FAA can implement quickly if not immediately to provide some relief to Milton, to neighboring communities and, in the case of (d) and (e) below, to the nation. We summarize them here for your convenience, in no particular order of priority:

Ms. Amy Lind Corbett  
Mr. Todd Friedenber  
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## (a) NABBO Waypoint

During our meeting, we asked the FAA to assess potential noise reduction by requiring arrivals to Runway 4R to turn south of the NABBO waypoint at an altitude of 3,000 feet or higher and then follow a continuous descent approach to the airport. Similarly, arrivals to Runway 4L should turn south of a waypoint that is equivalent to NABBO (i.e., at or above 3,100 feet) and follow a continuous descent approach to the airport. If your assessment of the noise impact of these requirements is consistent with our expectations (i.e., that it would reduce the noise burden), we would ask the FAA to implement such turning requirements immediately. Currently, the NABBO waypoint is not being observed uniformly by pilots. Approximately one-third of aircraft arriving on Runway 4R is turning north of the NABBO waypoint, which inflicts additional and unnecessary noise on Milton residents.

## (b) Departures from Runway 27

Departures from Runway 27 are required to make a quick southbound turn to fly over the Roxbury neighborhood of Boston and avoid flying over the more affluent communities to the west of Boston. These southbound departures then fly over Milton and other communities southwest of the airport before looping toward their final destination. Residents of the avoided communities west of Boston benefit greatly from having an airport approximately six miles from their homes and yet do not share the burden of noise and pollution associated with the airport. This is an inequitable result that must be re-examined by the FAA.

## (c) Departures from Runway 33L

Many flights departing Logan Airport from Runway 33L do not follow the prescribed RNAV flight path and instead turn southeast around the KIRAA waypoint (a waypoint for the departure flight path from Runway 27). Their failure to follow the 33L RNAV flight path puts more planes over Milton at a low altitude. We ask the FAA to ensure that departures from Runway 33L follow the RNAV flight path and not turn before the RNAV procedures dictate that they should.

## (d) Vortex Generators

The FAA should require all airline operators to install vortex generators on the wings of the A320 series aircraft in order to reduce noise. At our meeting, Mr. Schmidt gave you 3-D copies of a vortex generator. They are lightweight and inexpensive and are already



Ms. Amy Lind Corbett  
Mr. Todd Friedenber  
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in use in Europe. Vortex generators are standard equipment on all new A320 series aircraft. The FAA should mandate their use on all A320 aircraft flying in U.S. air space.

**(e) Continuous Descent**

Since the implementation of the NextGen system, airplanes arriving on Runways 4R and 4L at Logan Airport have been flying over Milton at altitudes (under 2,000 feet) that are too low. Historically, airplanes flying over Milton were at higher altitudes. The noise created by low-flying, frequent (i.e., often at 30-second intervals and sometimes at the same time on parallel paths) aircraft over our Town is intolerable. We understand that a continuous descent reduces the noise from arriving aircraft while also saving fuel. We ask the FAA to require a continuous descent approach for arrivals to Logan in order to keep the planes higher in the sky for a longer period of time and reduce the significant noise burden that has been placed on Milton.

**(f) Runway Restrictions**

At our meetings, we discussed the possibility, first suggested by FAA Tower personnel during a recent CAC conference call, of removing the wind restriction on Runway 14/32. This would open up Runway 14/32 for more arrivals, allow for another 2-runway arrival configuration using Runways 32 and 27 in northwest winds, and help to avoid the overuse of Runways 4R and 4L for arrivals. Because Mr. Friedenber indicated that it will take time and work to remove the wind restriction, we ask the FAA to coordinate with Massport and to commence the process of reviewing the restriction and implementing a change as soon as possible.

We look forward to a continued dialogue with you and the implementation of the foregoing measures in an expeditious manner. We welcome your ideas for additional solutions that will achieve a reduction in the amount of air traffic over Milton.

Thank you again for taking the time to come to Milton to meet with us.

Sincerely,

*Kathleen M. Conlon*

Kathleen M. Conlon  
Chair, Milton Board of Selectmen

Ms. Amy Lind Corbett  
Mr. Todd Friedenber  
July 19, 2016  
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cc:

Governor Charlie Baker  
U.S. Senator Edward J. Markey  
U.S. Senator Elizabeth Warren  
Congressman Stephen F. Lynch  
Congressman Michael E. Capuano  
State Senator Brian A. Joyce  
State Representative Walter F. Timilty  
State Representative Daniel R. Cullinane  
Town Administrator Annemarie Fagan  
Cindy L. Christiansen, Ph.D., Massport and Logan CAC Representative  
Mr. Andrew Schmidt  
Milton Airplane Noise Advisory Committee  
Milton Board of Health  
John P. Flynn, Esq., Milton Town Counsel  
Karis L. North, Esq.

**Letter 6: Town of Milton - Board of Selectmen**

Comment #	Author	Topic	Comment	Response
6.1	Town of Milton Board Selectmen	RNAV	Therefore, we request that the EA/EIR be revised and the scope expanded to include an analysis of these noise and pollution impacts from increased international overflights on the surrounding communities. We further request that no Finding of No Significant Impact ("FONSI") be authorized unless and until such impacts are appropriately studied.	<p>As described in the Secretary's Certificate and Finding of No Significant Impact/Record of Decision (FONSI/ROD) RNAV changes are independent of the proposed Modernization of Terminal E. The FAA has been actively studying the noise and other environmental impacts of proposed flight path changes to Logan Airport's runways. The Boston Logan Airport Noise Study, or BLANS, has been going on since 2008 and there has been a Logan Airport Community Advisory Committee (CAC) working with the FAA and Massport on providing community representation. Detailed information from the studies can be found at: <a href="http://www.bostonoverflightnoisestudy.com">http://www.bostonoverflightnoisestudy.com</a>. That study continues to be the appropriate forum for those discussions. For over three decades, Massport has provided an annual report on the noise environment of Logan Airport documented in the EDRs and ESPRs. These annual reports also provide updates on the BLANS study and other FAA initiatives.</p> <p>In the Secretary's Certificate of Adequacy on the Draft EIR, he acknowledges that the "primary purpose of the RNAV procedures is to increase safety and operational efficiency. As documented in the ESPR and annual EDR submittals, implementation of several of the RNAV procedures have generated increased noise complaints in some towns surrounding Logan Airport and I have received many comment letters from residents of the Town of Hull on this issue. The procedures themselves have resulted in aircraft at higher altitudes although patterns are concentrated over certain communities. I note that the FAA is implementing the RNAV program nation-wide. This program is separate from and unrelated to the Terminal E Modernization project." See Section 2.4.13.</p>

**Letter 6: Town of Milton - Board of Selectmen**

Comment #	Author	Topic	Comment	Response
6.2	Town of Milton Board Selectmen	Induced growth, RNAV	Given its own data, Massport's statement that "the Project" will not increase aircraft or passenger operations cannot be true. Because of this increased flight activity, the EA/EIR should include an analysis of the increased runway use at Logan, by runway end, attributable to the Project, so that the communities under the impacted RNAVs and other flight paths will have fair notice of the increased noise impacts and have a fair and thorough ability to analyze and comment on those impacts.	The primary driver of demand for air travel at Logan Airport is regional/local economic conditions and socio-economic trends, which are independent of specific infrastructure enhancements made at Logan Airport. The historic growth at Logan Airport that occurred without additional gates demonstrates that demand at Logan Airport is driven by the economic and market factors, not airport improvements. Thus, Logan Airport will handle the same level of increased international passenger activity whether or not Terminal E is modernized. The Terminal E Modernization Project will not result in any changes to the number and type of aircraft operations when compared to the future condition with no terminal improvements (the Future No-Build Alternative). The same number of passengers will be accommodated with or without the Project, however, without the Project, there will be negative environmental impacts as described in the Draft EA/EIR. In the Secretary's Certificate of Adequacy on the Draft EIR, he acknowledges that the "primary purpose of the RNAV procedures is to increase safety and operational efficiency. As documented in the ESPR and annual EDR submittals, implementation of several of the RNAV procedures have generated increased noise complaints in some towns surrounding Logan Airport and I have received many comment letters from residents of the Town of Hull on this issue. The procedures themselves have resulted in aircraft at higher altitudes although patterns are concentrated over certain communities. I note that the FAA is implementing the RNAV program nation-wide. This program is separate from and unrelated to the Terminal E Modernization project." For additional information see Sections 2.4.6 and 2.4.13.
6.3	Town of Milton Board Selectmen	Cumulative Impacts, NAV	Because this cumulative impact has not been evaluated and considered in the EA/EIR document, the analysis is insufficient, and should be revised to include an appropriate scope, and an appropriate analysis of cumulative impacts to all of the surrounding communities under the RNAVs and other flight paths which will be impacted by these increased international flight operations.	Massport is unique among state agencies and airports in the U.S. for publishing annual environmental reports specifically designed to describe, analyze, and forecast the cumulative effects of Logan Airport operations based on current and anticipated future operating conditions. This process was developed to allow individual projects at Logan Airport to be considered and analyzed in the broader, Airport-wide context. The ESPR and EDRs also include information regarding all the projects planned or under construction at Logan Airport and provides a preview to the public and regulators of upcoming projects and activities. For additional information refer to Sections 2.4.2, 2.4.6, and 2.4.13.



**Letter 6: Town of Milton - Board of Selectmen**

Comment #	Author	Topic	Comment	Response
6.4	Town of Milton Board Selectmen	RNAV	We respectfully request that decisions also be made that consider the impact to surrounding communities, that the EA/EIR be revised and the scope expanded to include an analysis of these noise and pollution impacts from increased international overflights on the surrounding communities, and that no FONSI be authorized unless and until such impacts are appropriately studied and the FAA and Massport demonstrate that they can solve the serious airplane noise and pollution problems that Milton has brought to their attention time and time again.	The FAA acknowledged that there has been much public scrutiny of proposed RNAV routes being implemented nationwide. Massport is collaborating with the FAA on resolving the RNAV issue and coordinating and communicating through the Massport CAC. The FAA understands the concerns expressed by residents in densely-populated areas around metropolitan airports. Changes to air traffic, even when minor, can be objectionable to those living under flight paths. Based on the substantial work that has been done on this issue at Logan Airport, with considerable public review, the various changes that have been implemented will result in a small, cumulative noise benefit to area residents. These procedures are unrelated to, and are unaffected by the Terminal E Modernization Project. For additional information, refer to Sections 2.4.2 and 2.4.13.

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### 2.3.7 Letter 7: Town of Hull -- Town Manager, Philip Lemnios



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Letter 7

From: Lemnios, Philip  
To: "Page.Czepeliga@state.ma.us"; "Richard.doucette@faa.gov"; Dalzell, Stewart  
Cc: Garrett, Bradley; "D.Conner, Patrick (SENI)"; "bob.fowkes@mail.boston.gov."; "David.Carroll";  
Town of Hull's Comments on Logan Airport's Terminal E Modernization Project  
Date: Tuesday, August 16, 2016 12:21:41 PM  
Attachments: Terminal E Modernization Project\_Town of Hull...Comments Attachment 08-1...pdf

August 19, 2016

Matthew A. Beaton (VIA EMAIL ONLY)  
Secretary of Energy and Environmental Affairs  
Executive Office of Energy and Environmental Affairs  
Attn: MEPA Office  
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100 Cambridge Street, Suite, 900  
Boston, MA 02114  
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Mr. Richard Doucette (VIA EMAIL ONLY)  
Federal Aviation Administration  
New England Region  
1200 District Avenue  
Burlington, MA 01803  
[richard.doucette@faa.gov](mailto:richard.doucette@faa.gov)

RE: Comments on Terminal E Modernization Project - Environmental Assessment / Draft Environmental Impact Report

Dear Secretary Beaton and Mr. Richard Doucette:

I write on behalf of the Town of Hull, which as you may recall, is one of the communities most adversely affected by airplane noise from Logan Airport. We offer these comments as an addendum to the comments we submitted on December 9, 2015.

The Environmental Assessment / Draft Environmental Impact Report highlights the many tangible and significant benefits that would result from modernizing Terminal E, addressing Logan's ability to handle the forecasted increasing demand in terms of total passengers and, in particular, international passengers. Our concerns are not with the proposed terminal modernization project itself, but with the impact that the resulting increased capacity will have on surrounding communities, and specifically on the Town of Hull. That said, we believe there are viable means to mitigate this impact and we respectfully ask for your engagement in addressing our concerns.

Currently, the Town of Hull takes on the noise burden - day and night - from a significant number of flights departing from Runway 22R and Runway 15R and flights arriving on Runway 33L. Planes departing from Runway 22R fly over Hull High School and Lillian M. Jacobs Elementary School, Runway 33L (arrivals) / 15R (departures) is the preferred and most often used runway for overnight flights. The current flight path for 33L/15R brings planes over a large portion of our small town and is already disruptive to sleep time. The Terminal E Modernization Project will result, not only in increased international

and overnight flights, but also in the accommodation of Group VI jumbo aircraft, such as the Airbus 380 and Boeing 747-8. This will impose a tremendous additional burden on our community; however, there is a noise mitigation solution.

As you see from the attached flight tracks and map of Boston Harbor, the Town of Hull is a small peninsula uniquely situated between three large bodies of water. Our unique geography provides an opportunity for noise mitigation by adjusting flight paths over water rather than over homes. The implementation of the NextGen Air Transportation System brings with it the ability to fly planes along a flight path with a dramatic increase in precision. We ask that the flight paths (i.e. RNAVs) of planes departing from Runway 22R and Runway 15R be modified to fly significantly farther out over Boston Harbor and at a higher altitude, and that planes arriving onto Runway 33L fly an over-the-harbor flight path with a continuous descent. These flight path modifications will provide a significant reduction of the noise impact on our community.

The Town of Hull requests that these modifications to the flight paths (i.e. RNAVs) be done prior to the opening of the modernized Terminal E.

We appreciate your consideration and attention to these and our previously filed comments.

Thank you for your attention to this matter.

Very truly yours,

Philip Lemnios

Philip E. Lemnios  
Town Manager, Town of Hull  
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Hull, MA 02045  
Tel: 781-925-2000  
Fax: 781-925-0224  
[plemnios@town.hull.ma.us](mailto:plemnios@town.hull.ma.us)

CC:

Mr. Stewart Dalzell (VIA EMAIL ONLY)  
Deputy Director  
Strategic and Business Planning Department  
Massachusetts Port Authority  
One Harborside Drive  
Boston, MA 02128  
[sdalzell@massport.com](mailto:sdalzell@massport.com)



# Town of Hull Terminal E Modernization Project Comments Attachment

August 19, 2016

## Mitigation Opportunities

- Hull's unique geography suited to mitigation
- Surrounded by bodies of water - Boston Harbor, Hingham Bay, and Quincy Bay
- Allows Flight Paths to be modified to provide relief to the Town of Hull, as well as the towns of Cohasset and Hingham, without impacting other communities



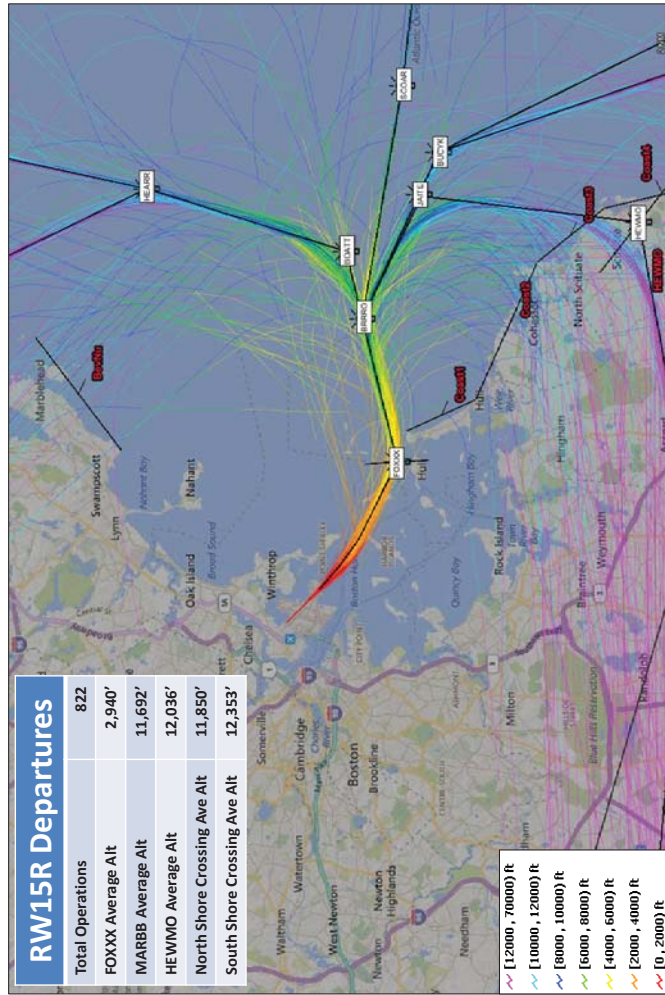
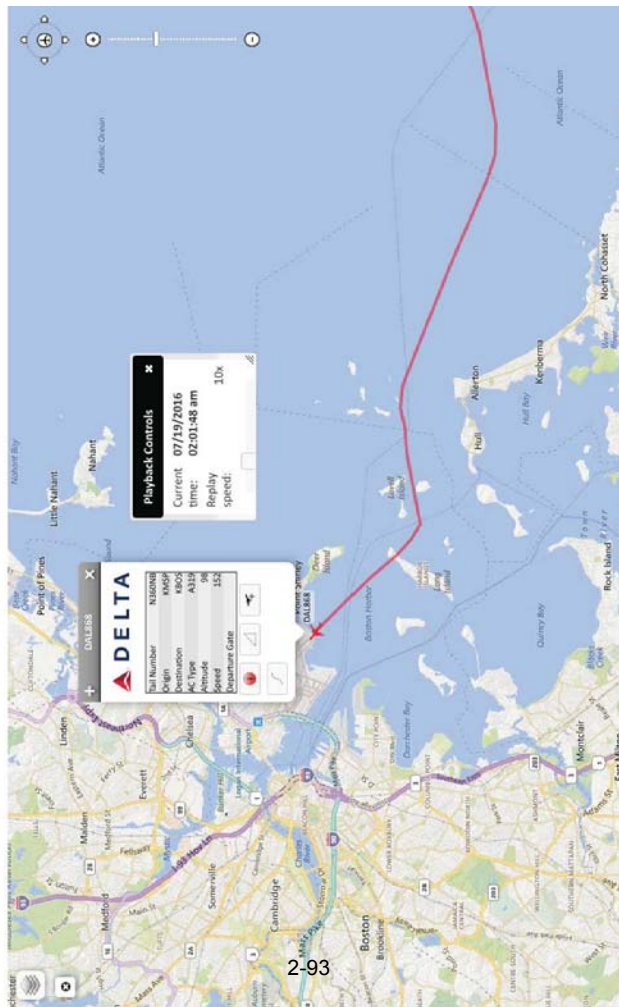








# jetBlue RNAV Example Delta Airbus A319 07/19/2016



**Letter 7: Town of Hull - Town Manager, Phillip Lemnios**

Comment #	Author	Topic	Comment	Response
7.1	Town of Hull - Phillip Lemnios, Town Manager	RNAV	We ask that the flight paths (i.e. RNAVs) of planes departing from Runway 22R and Runway 15R be modified to fly significantly farther out over Boston Harbor and at a higher altitude, and that planes arriving onto Runway 33L fly an over-the-harbor flight path with a continuous descent. These flight path modifications will provide a significant reduction of the noise impact on our community.	As described in the Secretary's Certificate and Finding of No Significant Impact/Record of Decision (FONSI/ROD) RNAV changes are independent of the proposed Modernization of Terminal E. The FAA has been actively studying the noise and other environmental impacts of proposed flight path changes to Logan Airport's runways. The Boston Logan Airport Noise Study, or BLANS, has been going on since 2008 and there has been a Logan Airport Community Advisory Committee (CAC) working with the FAA and Massport on providing community representation. Detailed information from the studies can be found at: <a href="http://www.bostonoverflightnoisestudy.com">http://www.bostonoverflightnoisestudy.com</a> . That study continues to be the appropriate forum for those discussions. For over three decades, Massport has provided an annual report on the noise environment of Logan Airport documented in the EDRs and ESRs. These annual reports also provide updates on the BLANS study and other FAA initiatives.  In the Secretary's Certificate of Adequacy on the Draft EIR, he acknowledges that the "primary purpose of the RNAV procedures is to increase safety and operational efficiency. As documented in the ESR and annual EDR submittals, implementation of several of the RNAV procedures have generated increased noise complaints in some towns surrounding Logan Airport and I have received many comment letters from residents of the Town of Hull on this issue. The procedures themselves have resulted in aircraft at higher altitudes although patterns are concentrated over certain communities. I note that the FAA is implementing the RNAV program nation-wide. This program is separate from and unrelated to the Terminal E Modernization project." For additional information see Section 2.4.13.
7.2	Town of Hull - Phillip Lemnios, Town Manager	RNAV	The Town of Hull requests that these modifications to the flight paths (i.e. RNAVs) be done prior to the opening of the modernized Terminal E.	The FAA acknowledged that there has been much public scrutiny of proposed RNAV routes being implemented nationwide. Massport is collaborating with the FAA on resolving the RNAV issue and coordinating and communicating through the Massport CAC. The FAA understands the concerns expressed by residents in densely-populated areas around metropolitan airports. Changes to air traffic, even when minor, can be objectionable to those living under flight paths. Based on the substantial work that has been done on this issue at Logan Airport, with considerable public review, the various changes that have been implemented will result in a small, cumulative noise benefit to area residents. These procedures are unrelated to, and are unaffected by the Terminal E Modernization Project. For additional information, refer to Sections 2.4.2 and 2.4.13.



2.3.8 Letter 8: Town of Arlington/Town of Belmont --  
Frank Ciano, Myron Kassaraba



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**LETTER OF COMMENT**

Via email to:  
[Page.Czepliga@state.ma.us](mailto:Page.Czepliga@state.ma.us)  
[richard.doucette@faa.gov](mailto:richard.doucette@faa.gov)  
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August 19, 2015

Richard Doucette  
Federal Aviation Administration  
New England Region  
1200 District Ave.  
Burlington, MA 01803

Secretary of Energy and Environmental Affairs  
Executive Office of Energy and Environmental Affairs  
Attn: MEPA Office  
Page Czepliga, EEA No. 15434  
100 Cambridge Street, Suite 900  
Boston, MA 02114

Stewart Dalzell  
Deputy Director  
Strategic and Business Planning Department  
Massachusetts Port Authority  
One Harborside Drive  
Boston, MA 02128

RE: Terminal E EA/DEIR Comments

To the FAA, MEPA and Massport,

This is a comment letter jointly from the Town of Arlington and the Town of Belmont responding to the request for public comment on the Environmental Assessment (EA)/Draft Environmental Impact Report (DEIR) about the proposal to expand and modernize Terminal E at Logan Airport.

We agree that there are many ground-based environmental benefits and that Boston and the region gains substantial economic benefits from having world-class facilities and a choice of options for flights to/from international destinations. It is also true that the current Terminal E facility and configuration are sub-optimal for both airlines and travelers and need updating. We appreciate the efforts made to look at the various configuration options and have no comment on the physical aspects of the one being recommended.

Our comments focus on the environmental impacts from the resulting changes in aviation operations that will be enabled by the Terminal E expansion. We believe there will be more flights and those flights will be during times of day – late evening and overnight – that currently have lower volumes. Any appreciable change in flights does have direct environmental and quality-of-life effect on the communities and people who live in the proximity of Logan Airport. While the whole region benefits - these communities bear the brunt of the environmental impact from the aviation operations coming to and leaving BOS. We ask that these impacts are included in the scope of consideration when evaluating the environmental impact of this proposal.

8.1

1. The response to our 12-9-15 comment letter on page A-253, X.2 and X.4 of the EA/DEIR states: ".....Logan Airport will handle the same level of increased international passenger activity whether or not Terminal E is modernized". We take exception to this assumption. The expansion of Terminal E will add 7 new gates to a capacity-constrained terminal. Having a modern international terminal with more capacity will make Logan airport a more desirable destination for carriers and will invite competition. Though the future is hard to predict – we don't believe that "the same number of passengers and aircraft would be accommodated under the No-Action Alternative and Proposed Action...." is a reasonable assumption. We believe that an expanded and modernized Terminal E can't help but stimulate an increase in international passengers and aircraft that would exceed the activity if no action were taken.

2. The response to our 12-9-15 comment letter on page A-254, X.6 of the EA/DEIR states: "Since most of Logan Airport's international service is to Europe and the Caribbean, these markets are expected to operate during the current daily peak period of 6:00 PM and 10:00 PM." Based on everything that we have seen and been told – Logan Airport's afternoon/evening peak has been historically from 4:00 PM to 7:00 PM. The increase in international arrivals and departures has started to "fill-in" the available capacity in the 7:00 PM – 12:00 AM time period. One can easily go to the website (<http://www.flightstats.com/>) and see that as Massport has been successful in attracting new international carriers and routes - there are now an increasing number of international arrivals from 6:00 PM and 8:00 PM with departures from 9:00 PM to 12:00 AM. These planes tend to be larger and loaded with freight so they are heavier. Some are newer aircraft and some are older depending on airline. **These flights are now extending the traditional peak period past 7:00 PM and we would expect this time period to be used even more when Terminal E has increased gate capacity.** This is a time when more people are at home and/or trying to sleep.

As Logan Airport expands its international facilities – this expansion has the very real potential to change the airport's operations regarding the type of aircraft and the times of day and volume when it is used. We ask that this potential change in aircraft mix and flight volume be evaluated and fully considered as well as what operational noise mitigation efforts should be undertaken as a result of these potential changes. This consideration should be part of the EA/DEIR process before these changes are approved.

8.2

The communities of Arlington and Belmont and our residents have been recently negatively impacted by changes made by the FAA to flight paths. We strongly believe that it is in the best interest of the FAA, MEPA and Massport to thoughtfully and intentionally consider not just the benefits of the Terminal E project but also the potential negative impacts that any changes at Logan may have on communities and residents under the flights that takeoff and land at the airport. Ongoing efforts to look at runway use and to critically evaluate the negative impacts of RNAV procedures that have and will concentrate flights over certain communities and neighborhoods should be supported and properly funded.

8.3

We appreciate the opportunity to provide additional comments as part of this process.

Sincerely,

Frank Ciano  
Town of Arlington Representative to the Logan CAC and Massport CAC

Myron Kassaraba  
Town of Belmont Representative to the Logan CAC and Massport CAC  
Email: [logancac@belmont-ma.gov](mailto:logancac@belmont-ma.gov)

**Letter 8: Town of Arlington/Town of Belmont - Frank Ciano, Myron Kassaraba**

Comment #	Author	Topic	Comment	Response
8.1	Town of Arlington and Belmont: Frank Ciano and Myron Kassaraba Representatives to the Logan CAC and Massport CAC	Cumulative Impacts	Any appreciable change in flights does have direct environmental and quality-of-life effect on the communities and people who live in the proximity of Logan Airport. While the whole region benefits - these communities bear the brunt of the environmental impact from the aviation operations coming to and leaving BOS. We ask that these impacts are included in the scope of consideration when evaluating the environmental impact of this proposal.	As described in the Secretary's Certificate and Finding of No Significant Impact/Record of Decision (FONSI/ROD) RNAV changes are independent of the proposed Modernization of Terminal E. The FAA has been actively studying the noise and other environmental impacts of proposed flight path changes to Logan Airport's runways. The Boston Logan Airport Noise Study, or BLANS, has been going on since 2008 and there has been a Logan Airport Community Advisory Committee (CAC) working with the FAA and Massport on providing community representation. Detailed information from the studies can be found at: <a href="http://www.bostonoverflightnoisestudy.com">http://www.bostonoverflightnoisestudy.com</a> . That study continues to be the appropriate forum for those discussions. For over three decades, Massport has provided an annual report on the noise environment of Logan Airport, as documented in the EDRs and ESPRs. These annual reports also provide updates on the BLANS study and other FAA initiatives. For additional information see Section 2.4.13.
8.2	Town of Arlington and Belmont: Frank Ciano and Myron Kassaraba Representatives to the Logan CAC and Massport CAC	Cumulative Impacts	We ask that this potential change in aircraft mix and flight volume be evaluated and fully considered as well as what operational noise mitigation efforts should be undertaken as a result of these potential changes. This consideration should be part of the EA/DEIR process before these changes are approved.	In the Secretary's Certificate of Adequacy on the Draft EIR, he acknowledges that the "primary purpose of the RNAV procedures is to increase safety and operational efficiency. As documented in the ESPR and annual EDR submittals, implementation of several of the RNAV procedures have generated increased noise complaints in some towns surrounding Logan Airport and I have received many comment letters from residents of the Town of Hull on this issue. The procedures themselves have resulted in aircraft at higher altitudes although patterns are concentrated over certain communities. I note that the FAA is implementing the RNAV program nation-wide. This program is separate from and unrelated to the Terminal E Modernization project." For additional information see Section 2.4.13.
8.3	Town of Arlington and Belmont: Frank Ciano and Myron Kassaraba Representatives to the Logan CAC and Massport CAC	RNAV	Ongoing efforts to look at runway use and to critically evaluate the negative impacts of RNAV procedures that have and will concentrate flights over certain communities and neighborhoods should be supported and properly funded.	The FAA acknowledged that there has been much public scrutiny of proposed RNAV routes being implemented nationwide. Massport is collaborating with the FAA on resolving the RNAV issue and coordinating and communicating through the Massport CAC. The FAA understands the concerns expressed by residents in densely-populated areas around metropolitan airports. Changes to air traffic, even when minor, can be objectionable to those living under flight paths. Based on the substantial work that has been done on this issue at Logan Airport, with considerable public review, the various changes that have been implemented will result in a small, cumulative noise benefit to area residents. These procedures are unrelated to, and are unaffected by the Terminal E Modernization Project. For additional information, refer to Sections 2.4.2 and 2.4.13.





2.3.9 Letter 9: The General Court of Massachusetts -- Senator Boncore, Representative Madaro, and Councilor LaMattina



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THE GENERAL COURT OF MASSACHUSETTS  
STATE HOUSE, BOSTON 02133-1053

September 9, 2016

Secretary Matthew Beaton  
Executive Office of Energy and Environmental Affairs  
Attn: Page Czepiga, EEA No. 15434  
100 Cambridge Street, Suite 900  
Boston, MA 02114

Dear Secretary Beaton:

We write regarding plans by the Massachusetts Port Authority ("Massport") to expand operations at Terminal E at Logan Airport. Many of our constituents have written to you expressing concerns about airport expansion, particularly the potential adverse effects of increased noise and pollution on the community of East Boston. East Boston residents have long dealt with a compromised quality of life due to Logan Airport, which has resulted in high rates of childhood asthma and adult chronic obstructive pulmonary disease, among other impacts, as outlined in the 2014 Logan Airport Health Study.

We share the concerns raised by our neighbors and urge you to further assess the long-term impacts that would result from an expansion of Terminal E. Moreover, we agree with our constituents who have called for a succinct summary of the Environmental Impact Report ("EIR") for this project. As you are aware, the EIR is very lengthy and technical, making it difficult for all residents to understand and comment. Furthermore, this document should be translated into Spanish so the large population of Spanish-speaking constituents we represent can be fully included in the process as well. These efforts would allow for a more informed constituency and broader community engagement.

We do not support expansion of Logan Airport. However, we realize that Logan is an economic engine for Massachusetts and the entire New England region, and that your decision will be influenced by these factors. With that said, we ask that if you approve this project, it be contingent upon the mitigation package the community

9.1

9.2

negotiated with Massport. This includes full funding for Piers Park Phase II, annual operating capital for the East Boston Senior Center, permanent funding for the East Boston Foundation, an increase in Massport's residential soundproofing program, and a commitment by Massport to increase the use of Logan Express by 10-15%, among other items.

9.2

We also encourage you to work with Massport to lower noise and environmental pollution levels in its host community of East Boston, and to support initiatives aimed at reducing negative health outcomes related to the airport. In addition, if this project is approved, we urge Massport to reduce the number of nighttime flights over the East Boston community, which already experiences sleep interruption due to ongoing nighttime operations. Furthermore, we ask that you work with Massport to build out its regional capacity, as well as its use of high occupancy vehicular transportation (i.e. Logan Express) to limit the negatives impacts to the East Boston community. Pollution and vehicular traffic in East Boston can be reduced by moving some domestic flights and carriers to regional airports, and expanding transit options to and from Logan (e.g. Red Line-Blue Line Connector; expansion of the Silver Line). Massport should help fund these transportation priorities, benefitting the community of East Boston and the region as a whole.

9.3

9.4

9.5

Finally, in place of ad hoc meetings, ongoing dialogue between the East Boston community and Massport is vital in order to address current and future impacts, as well as mitigation agreements. Therefore, we would like to see the Logan Impact Advisory Group become permanent, perhaps with quarterly meetings. This would assure that the community has a seat at the table to work with Massport on important issues. This high level of engagement would greatly improve the relationship between East Boston and Massport, benefiting both.

9.6

Thank you for your time and consideration.

Respectfully,

Joseph Boncore  
State Senator

Adrian Madaro  
State Representative

Salvatore LaMattina  
City Councilor

**Letter 9: The General Court of Massachusetts, Senator Boncore, Representative Madaro, and Councilor LaMattina**

Comment #	Author	Topic	Comment	Response
9.1	Senator Boncore, Representative Madaro, and Councilor LaMattina	Environmental Justice/Outreach	As you are aware, the EIR is very lengthy and technical, making it difficult for all residents to understand and comment. Furthermore, this document should be translated into Spanish so the large population of Spanish-speaking constituents we represent can be fully included in the process as well. These efforts would allow for a more informed constituency and broader community engagement.	The Draft EA/EIR contained a simplified Executive Summary. This Final EA/EIR includes a copy of the Draft EIR Executive Summary in English and translated in to Spanish (See Appendices A and B).
9.2	Senator Boncore, Representative Madaro, and Councilor LaMattina	Mitigation	With that said, we ask that if you approve this project, it be contingent upon the mitigation package the community negotiated with Massport. This includes full funding for Piers Park Phase II, annual operating capital for the East Boston Senior Center, permanent funding for the East Boston Foundation, an increase in Massport's residential soundproofing program, and a commitment by Massport to increase the use of Logan Express by 10-15%, among other items.	<p>Massport actively and continuously seeks to limit, reduce, or avoid the environmental effects associated with operations at Logan Airport. Planning and development at Logan Airport is conducted within an established framework of environmental goals and objectives.</p> <p>It is within this airport-wide context that mitigation for the Terminal E Modernization Project was developed and analyzed. Implementation of the Project itself is, in many ways, an environmentally beneficial measure, because it will have the overall effect of reducing air emissions and ground noise impacts associated with the operation of Terminal E. Project impacts are significantly reduced as compared to doing nothing to solve the existing problems at Terminal E. Furthermore, no significant adverse environmental impacts resulting from the implementation of the Project have been identified. The mitigation and environmental beneficial measures of the Project are documented in Chapter 3, Revised Draft Section 61 Findings. For additional information see Section 2.4.8.</p>
9.3	Senator Boncore, Representative Madaro, and Councilor LaMattina	Health Effects	We also encourage you to work with Massport to lower noise and environmental pollution levels in its host community of East Boston, and to support initiatives aimed at reducing negative health outcomes related to the airport.	<p>The Massachusetts Department of Public Health (MassDPH) has conducted a Logan Airport-specific health study. The results of this study and follow-up actions by MassDPH and Massport have been reported in the annual EDR filings. The MassDPH study found no connection between cancer and Logan Airport operations and confirmed that Logan Airport emissions are "highest near the perimeter of the airport and fall off rapidly with increased distance." The Study also notes that Logan Airport-related air pollutant concentrations are low relative to background levels. MassDPH found no noise-related health impacts and no association between air pollution exposure areas and cardiovascular outcomes. The study did find two respiratory outcomes: chronic obstructive pulmonary disease (COPD) and probable asthma in children within the high exposure area close to the Airport. Massport is funding MassDPH's efforts to address these two outcomes through work with Massachusetts General Hospital and other neighborhood health agencies. Massport has provided an update on the status and findings of the MassDPH Health Study and Massport's air quality studies in the annual EDRs and ESPRs. For additional information see Section 2.4.5.</p>

**Letter 9: The General Court of Massachusetts, Senator Boncore, Representative Madaro, and Councilor LaMattina**

Comment #	Author	Topic	Comment	Response
9.4	Senator Boncore, Representative Madaro, and Councilor LaMattina	Noise	In addition, if this project is approved, we urge Massport to reduce the number of nighttime flights over the East Boston community, which already experiences sleep interruption due to ongoing nighttime operations.	Like all commercial service airports in the United States, Logan Airport is subject to federal laws. The federal Airport Noise and Capacity Act (or ANCA) severely restricts Massport's ability to impose access restrictions. Since 1990, no access restriction on stage 3 aircraft has been approved by the FAA. Massport has also implemented a comprehensive noise abatement program that includes soundproofing the homes of our closest neighbors; noise abatement procedures to minimize overflights over residences and reduce engine noise on the airport surface; and a 24/7 noise complaint line for night, over-the-water departure/arrival (or "head-to-head") procedure. This procedure is utilized by FAA Air Traffic, when wind and weather allow, during the sensitive overnight period and places aircraft over Boston Harbor away from Logan Airport's surrounding communities and the urban core. For additional information see Section 2.4.9.
9.5	Senator Boncore, Representative Madaro, and Councilor LaMattina	Ground Transportation, Regionalization	Furthermore, we ask that you work with Massport to build out its regional capacity, as well as its use of high occupancy vehicular transportation (i.e. Logan Express) to limit the negatives impacts to the East Boston community. Pollution and vehicular traffic in East Boston can be reduced by moving some domestic flights and carriers to regional airports, and expanding transit options to and from Logan (e.g. Red Line-Blue Line Connector, expansion of the Silver Line). Massport should help fund these transportation priorities, benefitting the community of East Boston and the region as a whole.	Massport invests in and operates Logan Airport with a goal of increasing the number of passengers arriving by transit or other HOV/shared-ride modes. HOV modes include public transit (Blue Line rapid transit, Silver Line bus rapid transit, MBTA bus, and water transportation); Logan Express scheduled bus service; scheduled private carrier buses and vans; courtesy shuttle buses; charter buses; and unscheduled private limousines and vans. Logan Airport continues to rank at the top of U.S. airports in terms of high occupancy vehicle (HOV)/transit mode share.  Massport has considered provision of additional international service at regional airports numerous times during the analysis of Terminal E operations, both historically during previous airport improvement projects, and during the conceptual design phase of the Project. Alternatives that consider provision of international service at regional airports such as T.F. Green or Manchester-Boston Regional airports were not developed further for a number of reasons. First, international air carriers choose to fly in and out of Logan Airport to satisfy passenger demand. The demand for international travel to these regional locations is considerably lower than that of Boston. Connecting international flights to and from these airports are limited when compared to the services already found at Logan Airport. Supporting infrastructure such as Customs and Border Protection facilities, are also limited at these airports and would require additional staffing by the Transportation Security Administration and Homeland Security agencies. Thus, off-Airport alternatives were not considered for the proposed modernization of Terminal E. For additional information see Sections 2.4.4 and 2.4.11.

**Letter 9: The General Court of Massachusetts, Senator Boncore, Representative Madaro, and Councilor LaMattina**

Comment #	Author	Topic	Comment	Response
9.6	Senator Boncore, Representative Madaro, and Councilor LaMattina	Stakeholder Outreach	Therefore, we would like to see the Logan Impact Advisory Group become permanent, perhaps with quarterly meetings. This would assure that the community has a seat at the table to work with Massport on important issues. This high level of engagement would greatly improve the relationship between East Boston and Massport, benefiting both.	<p>Massport has engaged the public with extensive notice and opportunities for public review of the Terminal E Modernization Project. The public engagement process is a priority of Massport for all of our projects. Since July 2015, Massport has participated in numerous public meetings and presentations which have been consistently publicized in dual languages. Throughout this process we have received feedback from the public. We value this feedback and have been and will continue to be responsive.</p> <p>Massport has engaged in a concerted outreach effort involving various stakeholders including elected officials, municipalities and community groups. In addition to the public outreach conducted by Massport as part of the MEPA process, the public is also engaged in the East Boston Logan Airport Impact Advisory Group. The group includes Presidents/leaders of 12 East Boston community groups and local elected officials/City of Boston. For additional information see Section 2.4.14.</p>





2.3.10 Letter 10: Congress of the United States, House of Representatives  
-- Congressman Michael Cupuano



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WASHINGTON  
1414 Longworth Building  
Washington, DC 20515-2108  
202-225-5111  
Fax 202-225-9322  
Committee on Financial Services  
Committee on Transportation & Infrastructure  
Ranking Democratic Member  
Subcommittee on Railroads,  
Pipelines and Hazardous Materials  
Committee on Ethics  
Democratic Steering & Policy Committee



Letter 10

MASSACHUSETTS  
Main Office  
110 First Street  
Cambridge, MA 02141-2108  
617-621-6208  
Fax 617-621-8628

Boston  
Roxbury Community College  
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Room 124

## Congress of the United States House of Representatives

Michael E. Capuano  
7th District, Massachusetts

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SEP 19 2016

MEPA

Secretary Matthew Beaton  
Executive Office of Energy and Environmental Affairs  
MEPA Office

Attn: MEPA Office  
Page Czepiga, EEA No. 15434  
100 Cambridge Street, Suite 900  
Boston, MA 02114

September 6, 2016

Mr. Richard Doucette  
Federal Aviation Administration  
New England Region  
1200 District Avenue  
Burlington, MA 01803

Dear Secretary Beaton and Mr. Doucette,

I am writing to offer comments on the Boston-Logan International Airport Terminal E Modernization Project Environmental Assessment/Draft Environmental Impact Report. I appreciate the opportunity to offer my thoughts on this important project.

I support the Terminal E Modernization Project. Boston is an important international hub for business and tourism and we ignore that fact at our peril. The overall experience for international travelers, regardless of point of origin, and international carriers is currently less than adequate. There are not enough gates to accommodate demand and in particular, to my knowledge, not enough gates capable of accepting the Airbus A380 aircraft. As for Terminal E itself, it is too small to accommodate current and future passenger traffic adequately. In particular, Terminal E lacks adequate space for passengers who are waiting to board flights, for US Customs and Border Patrol to operate efficiently and for baggage screening to be done efficiently.

There are also obvious benefits to the environment coming from this project. For example, more gates means planes will spend circling the airport, or sitting on the tarmac waiting for a space to open. This makes for less air pollution. Terminal E itself can be brought up to contemporary energy and sustainability standards. Its design will serve to better shield the immediate East Boston neighborhood from noise generated by aircraft on the ground using Terminal E (ie, the North Apron).

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capuano.house.gov  
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I appreciate Massport's analysis of expected future international passenger levels, and I certainly hope Massport's forecast of 8.0 million passengers by 2030 is accurate, as I believe the Boston area benefits greatly from being a gateway for international travelers. I also appreciate Massport's projections for future international operations, showing an anticipated increase of just over 22,000 flights annually between 2014 and 2030.

My concern and request deals strictly with the increase in flights annually and the noise these overflights will generate. I understand that, overall, GPS guided flight paths have reduced the total number of people impacted by aircraft noise. At the same time, however, these flight paths have increased the frequency of noise for those individuals who remain under them. I feel that any improvements to Logan Airport – no matter how much I support them – that will lead to an increase in flights should be subject to as full an environmental study possible. The Terminal E Modernization Project is no exception.

In closing, I appreciate the opportunity to offer my thoughts on the Boston-Logan International Airport Terminal E Modernization Project Environmental Assessment/Draft Environmental Impact. I support the project and look forward to its completion, and ask that it go through a more rigorous environmental study.

Sincerely,

Michael E. Capuano  
Member of Congress

CC:  
Mr. Stewart Dalzell  
Massachusetts Port Authority  
One Herberside Drive  
Boston, MA 02128

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WWW.HOUSE.GOV/CAPUANO  
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**Letter 9: The General Court of Massachusetts, Senator Boncore, Representative Madaro, and Councilor LaMattina**

Comment #	Author	Topic	Comment	Response
10.1	Congressman Michael Capuano, 7th District Massachusetts	RNAV	<p>My concern and request deals strictly with the increase in flights annually and the noise these overflights will generate. I understand that, overall, GPS guided flight paths have reduced the total number of people impacted by aircraft noise. At the same time, however, these flight paths have increased the frequency of noise for those individuals who remain under them. I feel that any improvements to Logan Airport - no matter how much I support them - that will lead to an increase in flights should be subject to as full an environmental study possible. The Terminal E Modernization Project is no exception.</p>	<p>The primary driver of demand for air travel at Logan Airport is regional/local economic conditions and socio-economic trends, which are independent of specific infrastructure enhancements made at Logan Airport. The historic growth at Logan Airport that occurred without additional gates demonstrates that demand at Logan Airport is driven by the economic and market factors, not airport improvements. Thus, Logan Airport will handle the same level of increased international passenger activity whether or not Terminal E is modernized. The Terminal E Modernization Project will not result in any changes to the number and type of aircraft operations when compared to the future condition with no terminal improvements (the Future No-Build Alternative). The same number of passengers will be accommodated with or without the Project, however, without the Project, there will be negative environmental impacts as described in the Draft EA/EIR.</p> <p>In the Secretary's Certificate of Adequacy on the Draft EIR, he acknowledges that the "primary purpose of the RNAV procedures is to increase safety and operational efficiency. As documented in the ESPP and annual EDR submittals, implementation of several of the RNAV procedures have generated increased noise complaints in some towns surrounding Logan Airport and I have received many comment letters from residents of the Town of Hull on this issue. The procedures themselves have resulted in aircraft at higher altitudes although patterns are concentrated over certain communities. I note that the FAA is implementing the RNAV program nation-wide. This program is separate from and unrelated to the Terminal E Modernization project." For additional information see Sections 2.4.2, 2.4.6, and 2.4.13.</p>



### 2.3.11 Letter 11: Chelsea Councilor-at-Large -- Roy Avellaneda



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**ROY AVELLANEDA, COUNCILOR-AT-LARGE, CITY OF CHELSEA**

Stewart Dalzell  
 Deputy Director  
 Environmental, Planning & Permitting  
 Massachusetts Port Authority  
 One Harborside Drive  
 East Boston, MA 02128  
 sdalzell@massport.com

September 9, 2016

I am writing to submit my comments on the joint federal Environmental Assessment and state Draft Environmental Impact Report (EA/DEIR) for the Boston-Logan International Airport Terminal E Modernization Project. I have chosen to highlight sections of the EA/DEIR and follow with comments that I would like for either Massport, National Environmental Protection Agency (NEPA), Massachusetts Environmental Protection Agency (MEPA) or the Federal Aviation Administration (FAA) to address or reply to.

**“When the Terminal first opened in 1974, the airport served 1.4 million international passengers. In 2014, the terminal served 4.9 million international passengers, and is projected to reach almost 6 million passengers per year by the year 2022.” (pg 3, Massport Environmental Notification Term E Modernization Project)**

**In the last five years, international traffic at Logan Airport has grown at unprecedented rates, and this trend is projected to continue. International service at Logan Airport has grown from 21 non-stop international destinations in 2006 to 51 in 2015. In 2013, total international passenger numbers increased by 3.7 percent over 2012 to 4.5 million, slightly exceeding the previous high level achieved in 2000. The number of international air passengers accelerated in 2014, growing by 9.8 percent to 4.9 million. By 2022, international passenger levels are projected to reach 6 million. International traffic accounted for 15.8 percent of total Logan Airport passengers in 2014. This share is projected to steadily increase through 2022 and beyond. (pg 47, Massport Environmental Notification Term E Modernization Project)**

How can Massport state that they will be increasing the number of passengers but not number of vehicle trips? Which many travel through Chelsea? Or planes? Which nearly 40% of all flights use 15L33R which

**Table 2.1 Air Passengers by Market Segment, 2000, & 2009-2014**

	2000	2009	2010	2011	2012	2013	2014
<b>Domestic</b>	23,100,645	21,767,086	23,688,471	24,579,780	24,743,008	25,977,960	26,545,978
<b>International</b>	4,513,192	3,696,336	3,681,739	4,215,071	4,383,501	4,545,799	4,992,225
Europe/Middle East	2,948,452	2,805,825	2,672,635	2,939,226	2,896,002	2,901,529	3,194,109
Bermuda/ Caribbean	693,620	636,719	486,911	700,267	793,953	863,842	887,301
Canada	833,669	453,430	518,088	573,660	614,879	643,987	669,546
Asia/Pacific	37,451	0	0	0	78,484	104,235	170,867
Central/South America	0	362	4,105	1,918	627	32,425	70,402
<b>General Aviation</b>	112,996	48,664	58,752	114,416	109,134	94,872	96,242
<b>Total Passengers</b>	<b>27,726,833</b>	<b>25,512,086</b>	<b>27,428,962</b>	<b>28,909,267</b>	<b>29,235,643</b>	<b>30,218,631</b>	<b>31,534,445</b>

directs planes over Chelsea. Table 2.1 in the Massport Environmental Notification Term E Modernization Project shows that the number of passengers has risen 14% since 2000.

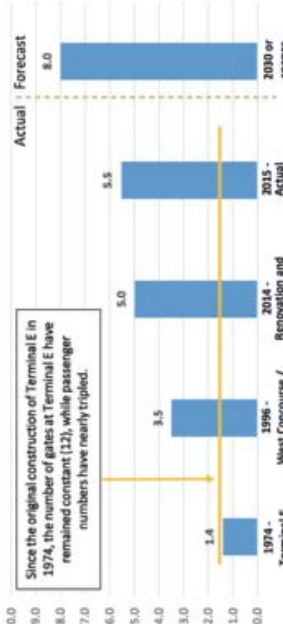
**Table 2-3 Passenger Activity and Forecasts, 2014, 2017, and 2030 or Sooner**

Year	Forecast Passengers			% of Total Passengers	
	Domestic	International	Total	Domestic	International
2014 Actual <sup>1</sup>	26,545,978	4,992,225	31,538,203	84.2%	15.8%
2017	29,987,754	6,478,554	36,466,308	82.0%	18.0%
2030 or sooner	33,004,403	8,063,068	41,067,471	80.4%	19.6%

Sources: Massport, 2015, September, 2014 EDR (EA # 3247);  
 InterVITAS, 2016, January, Forecast update to the 2011 EDR prepared for Massport.  
 Note: Tables do not include General Aviation passenger activity.  
 1 Actual 2014 passengers

Massport predicts in its Terminal E Modernization Project EA/DEIR that the number of international passengers will rise to 8 million. So, how will that not led to more flights and noise over the City of Chelsea?

**Figure 1-1: Terminal E Historical International Passenger Levels and Terminal Improvements Timeline**



**Figure 2-4 International Passenger Activity and Flights, 2008-2015**



Source: Massport

struction of the terminal extension would result in substantial noise buffering of operations on the apron resulting in ground noise reduction of up to 17 dB in some locations for a single aircraft operation event. Similarly, emissions from airside operations would be reduced due to the shorter aircraft idle time on the apron. ( pg. 1-11, Terminal E Modernization Project EA/DEIR)

**4.3.1 Noise and Noise-Compatible Land Use**

The Logan Airport EDRs/ESPRs, which are reviewed under the MEPA process and include the opportunity for public comment, provide a comprehensive annual public report on the overall noise levels at Logan Airport. The EDR/ESPR analyses consider noise associated with aircraft landing, taxiing, and taking-off from Logan Airport. Since the Terminal E Modernization Project would not affect either daily or annual aircraft operational levels, the analysis contained in this DEIR focuses on the change in aircraft operations in the immediate Project Area and potential Project noise benefits. The annual Logan Airport EDRs/ESPRs report on the overall noise levels caused by aircraft on the runways and in flight at Logan Airport. The ESPR documents include future planning contours such as the 2030 Day-Night Average Sound Level (DNL) contour published in the 2011 ESPR. The annual reports do not include localized noise caused by aircraft ground activity as the arrival and departure noise dominate the noise environment. The analysis contained in this DEIR evaluates noise levels only associated with activities on the ground on the North Apron and at Terminal E.

**( Terminal E Modernization Project EA/DEIR)**

11.3

The Proposed Project is expected to produce environmental improvements in several areas, compared with the No Action Alternative. A new direct pedestrian connection between Terminal E and the MBTA Blue Line Airport Station will improve HOV access to the entire airport. Aircraft at the Terminal will have better access to gate plug-ins and preconditioned air, reducing air emissions and energy consumption. When completed, like the new Rental Car Center, Terminal A, and other buildings at Logan Airport (Airport), Terminal E will act as a noise barrier to the adjacent neighborhood and Memorial Stadium Park. Existing Terminal E access roadways and curbs would also be reconfigured and enhanced. (pg 10, Massport Environmental Notification Term E Modernization Project)

What Massport fails to mention is that the reduced noise is only for immediate area. Not in neighboring Chelsea where the noise levels will rise with the increase of more than 20,000 flights.

Logan Airport, New England's primary domestic and international airport, plays a key role in the metropolitan Boston and New England passenger and freight transportation network and is a significant contributor to the regional economy. Logan Airport fulfills a number of roles in the local, New England and national air transportation networks. It serves as the primary airport serving the Boston metropolitan area, is the principal New England airport for long-haul services, and is a major U.S. international gateway airport for transatlantic services. Logan Airport serves as a regional connecting hub for small northern New England markets and the Massachusetts maritime counties of Barnstable, Dukes and Nantucket; and is also the busiest air cargo center in New England. (pg 51, Massport Environmental Notification Term E Modernization Project)

Nearly all of Chelsea's industrial zone is dedicated to airport related businesses. Freight forwarders, parking lots, jet fuel tanks and warehouses storing freight coming off the planes at Logan Airport dominate the use of the industrial zoned land in Chelsea. Massport continues to state that Chelsea is not impacted and more or less than any other community outside of East Boston, but facts show otherwise.

**3.6.8 Noise and Compatible Land Use**  
 The Proposed Project would not increase the number of aircraft operations or passenger traffic when compared to the future no-build alternative. Because it is positioned between the airfield and roadway, the proposed extension would dampen or deflect noise from aircraft, GSE, or other vehicles on the airside. Massport does not anticipate the Proposed Project to adversely impact future noise conditions. The Proposed Project would not affect the number of anticipated aircraft operations or generate any new vehicle trips, thus it will not be necessary to prepare project-related noise contours. (The 2014 noise contour is provided in the 2014 EDR and the projected 2030 noise contour is provided in the 2011 ESPR). However, the EA will assess the potential for ground noise impacts as a result of the Proposed Project associated with changes to the functioning of the North Cargo Area. The assessment will use an FAA-approved ground noise model to analyze any ground noise impacts that may result from changes to apron operations. The assessment will consider existing aircraft taxi and gate operations noise sources, document existing noise levels in noise-sensitive areas surrounding the study area, and discuss additional noise sources in the study area. The EA will provide a comparative analysis of existing noise conditions and future noise conditions to determine the significance of each contributing noise source, such as local automotive traffic or aircraft ground operations. (pg 51, Massport Environmental Notification Term E Modernization Project)

The Terminal E Modernization Project would reduce emissions by accommodating the increase in operations with improvements that allow aircraft to plug into a gate and operate with less idle time on the North Apron and allow the Airport to operate with fewer delays within Terminal E. The con-

11.4

11.5

Massport again fails to acknowledge increased noise over Chelsea and worsening air quality as a result of increased use of 15L/33R due to projected higher passenger and flight counts with expansion of Terminal E.

**3.6.9 Socioeconomics, Children's Environmental Health and Safety Risks**

The EA will conduct an inventory of Environmental Justice (EJ) communities in the vicinity of the Proposed Project using the MassGIS Environmental Justice Populations data layer derived from the 2010 U.S. Census. The EA will study the effects of the Proposed Project to determine if the Proposed Project has the potential to disproportionately adversely impact specific communities; the EA will specifically evaluate potential disproportionate noise and air quality impacts based on noise and air quality analysis for existing and future build years 2022 and 2030. Massport does not anticipate the Proposed Project will disproportionately impact specific communities. (pg 69, Massport Environmental Notification Term E Modernization Project)

Massport also fails in acknowledging Chelsea within its proposed project impact area and that it is a designated Environmental Justice community.

11.6

**ENF DISTRIBUTION LIST**

Distributing this Environmental Notification Form (ENF) to the public provides the information needed to formulate an opinion. The ENF will be circulated and distributed in accordance with 301 CMR 11.16 (2). This distribution list includes representatives of governmental agencies and community groups and/or local residents concerned with activities at Logan Airport. (pg 77, Massport Environmental Notification Term E Modernization Project)

**Table 4-1 National Environmental Policy Act (NEPA) and Massachusetts Environmental Policy Act (MEPA) Environmental Resources Evaluated in this EA/DEIR (Continued)**

Environmental Resource <sup>1</sup>	Explanation
Air Quality (NEPA/MEPA)	The Proposed Action would not affect the number of anticipated aircraft operations or generate any new ground access vehicle trips. The Project would not affect runway use, but would alter airside ground operations in the North Apron area including the location of aircraft parking, use of new gates and remote handstands, and taxiing and ground support equipment. See Section 4.3.3, <i>Air Quality</i> for additional information.

**Public outreach and community input is an important element of Massport's overall process for the Terminal E Modernization project. Commencing before even filing the ENF and continuing during the ongoing permitting process, Massport staff has attended various public meetings to both provide an overview and answer questions on the Terminal E Modernization. These meetings ranged from briefing local community groups in East Boston to meeting with public officials at the local, state and federal level, and meeting with key stakeholders such as major business groups, and non-profit organizations such as the Logan Community Advisory Committee. In addition to this specific outreach, the joint FAA and MEPA public meeting held on November 19, 2015 associated with the ENF filing was well attended by the public and included an extensive opportunity for questions and answers. Massport advertised the notice of the meeting in local papers in English and in Spanish. ( pg. 1-16, Terminal E Modernization Project EA/DEIR)**

I want to point out the obvious omission of the City of Chelsea on this list. Why would Massport, who has provided a section of the city with sound proofing due to use of 15R/33R and pays the local government an annual amount of \$500,000 to keep an airport related business overlay zoning district not include Chelsea or perform the same outreach? I believe it was to not allow Chelsea residents or its city representatives input on the Terminal E Expansion Project and its impact on the air quality and noise.

**2001 Runway 14R/32L FEIR**

The current operational procedures and number of flights differ widely today than what Massport provided in the 2001 Final Environmental Impact Report for 14R/32L. It was those operational procedures and estimated flight numbers that was the basis for the sound proofing mitigation package for the City of Chelsea. I therefore ask NEPA, MEPA and the FAA to use the current use of 15R/33L and the expected number of flights increased with the expansion of Terminal E to base a sound mitigation package for the City of Chelsea and the residents in that respective flight path.

**Since 2000, the number of aircraft operations at Logan Airport decreased due to changes in fleet mix, increased passenger load factors, and consolidation within the airline industry. Changes in fleet mix involved a shift to larger aircraft that are more fuel efficient and quieter than the older aircraft. (pg 2-13, Boston-Logan International Airport, Terminal E Modernization Project Environmental Assessment/Draft Environmental Impact Report EEA #15434)**

The shift to larger planes means that they will not be using 14R/32L as it is not a long enough runway to handle such planes. That means more dependence on runways such as 15R/33L. Again, leading to more flights over Chelsea.

Socioeconomics, Environmental Justice, and Children's Health and Safety Risks (NEPA)  
Several Environmental Justice communities surround Logan Airport. Project goals include measures to reduce or avoid air emissions and community noise impacts. See Section 4.3.11, Socioeconomic, Environmental Justice, and Children's Health and Safety Risks for additional information.

( pg. 4-8, Terminal E Modernization Project EA/DEIR)

Because there will be a shift to larger planes and increased use of a longer runways and an expected number in the increase of flights based on Massport projections, there will be an impact on air quality in communities such as Chelsea. Massport will negatively impact an Environmental Justice community (i.e Chelsea)

In conclusion, I am asking that the regulating environmental agencies, MEPA and NEPA revisit Massport's lack mitigation offered to Chelsea to reduce the negative impact the expansion of Terminal E will have on the residents of Chelsea. Additionally, I would ask those same agencies and the FAA force a new sound impact study be done to include the increased flights over Chelsea. I believe the area shown below would warrant sound proofing mitigation as a result of the increase in flights.

11.7



Respectfully,

Roy Avellaneda  
Councilor at Large

**Letter 11: Chelsea Councilor-at-Large - Roy Avellaneda**

Comment #	Author	Topic	Comment	Response
11.1	Councilor Roy Avellaneda, City of Chelsea	Induced Growth	How can Massport state that they will be increasing the number of passengers but not number of vehicle trips? Which many travel through Chelsea? Or planes? Which nearly 40% of all flights use 15L/33R which directs planes over Chelsea. Table 2.1 in the Massport Environmental Notification Term E Modernization Project shows that the number of passengers has risen 14% since 2000.	The primary driver of demand for air travel at Logan Airport is regional/local economic conditions and socio-economic trends, which are independent of specific infrastructure enhancements made at Logan Airport. The historic growth at Logan Airport that occurred without additional gates demonstrates that demand at Logan Airport is driven by the economic and market factors, not airport improvements. Thus, Logan Airport will handle the same level of increased international passenger activity whether or not Terminal E is modernized. The Terminal E Modernization Project will not result in any changes to the number and type of aircraft operations when compared to the future condition with no terminal improvements (the Future No-Build Alternative). The same number of passengers will be accommodated with or without the Project, however, without the Project, there will be negative environmental impacts as described in the Draft EA/EIR. The same applies to the number of vehicle trips since the same number of passengers will be accommodated with or without the terminal/facility improvements. For additional information see Sections 2.4.2 and 2.4.6.
11.2	Councilor Roy Avellaneda, City of Chelsea	Cumulative Impacts	Massport predicts in its Terminal E Modernization Project EA/DEIR that the number of international passengers will rise to 8 million. So, how will that not lead to more flights and noise over the City of Chelsea?	The historic growth at Logan Airport that occurred without significant airfield or terminal improvements demonstrates that demand at Logan Airport is driven by the economic and market factors described above, not airport improvements. Logan Airport will need to handle the increased passenger ground traffic whether or not Terminal E is modernized. Massport has not added any gates at Terminal E since the initial 12 gates were constructed in 1974. Terminal E served 1.4 million annual passengers in 1974 and nearly 5 million in 2014 without any additional gates. Massport recently upgraded three existing gates at Terminal E specifically to accommodate larger aircraft in the fleet such as the Airbus A380 and the Boeing 747-8 (Terminal E Renovation and Enhancements Project). The historic growth at Logan Airport that occurred without additional gates demonstrates that demand at Logan Airport is driven by the economic and market factors, not airport improvements. Thus, Logan Airport will handle the same level of increased international passenger activity whether or not Terminal E is modernized. The Terminal E Modernization Project will not result in any changes to the number and type of aircraft operations when compared to the future condition with no terminal improvements (the Future No-Build Alternative). The same number of passengers will be accommodated with or without the Project, however, without the Project, there will be negative environmental impacts as described in the Draft EA/EIR. For additional information see Sections 2.4.2 and 2.4.6.



**Letter 11: Chelsea Councilor-at-Large - Roy Avellaneda**

Comment #	Author	Topic	Comment	Response
11.3	Councilor Roy Avellaneda, City of Chelsea	Noise	What Massport fails to mention is that the reduced noise is only for immediate area. Not in neighboring Chelsea where the noise levels will rise with the increase of more than 20,000 flights.	<p>To evaluate the effectiveness of the terminal extension as a noise barrier, the Draft EA/EIR modeled ground noise levels from aircraft operations associated with Terminal E in the North Apron area under both the Future No-Build and Future Build conditions in accordance with FAA guidelines. Noise is evaluated in terms of any changes in noise sources associated with the future Terminal E Modernization Project when compared to the No-Action Alternative. Under FAA Order 1050.1F and Order 5050.4B, a significant adverse effect occurs when the project would cause receivers in noise sensitive areas to experience a noise increase of at least 1.5 dB.</p> <p>By configuring the extended terminal sections to serve as a noise barrier to the community, the Terminal E Modernization Project would significantly reduce noise levels from ground operations as compared to the future No-Action Alternative. Any predicted noise level increases are below the levels that are perceptible to humans and in areas already eligible for sound insulation. All of the modeled sites show no perceptible increase in single event maximum noise levels. In some cases, there was a decrease in ground noise of up to 17 dB with the extended concourse serving as a noise barrier. For additional information see Sections 2.4.2, 2.4.6 and 2.4.9.</p>
11.4	Councilor Roy Avellaneda, City of Chelsea	Cumulative Impacts	Nearly all of Chelsea's industrial zone is dedicated to airport related businesses. Freight forwarders, parking lots, jet fuel tanks and warehouses storing freight coming off the planes at Logan Airport dominate the use of the industrial zoned land in Chelsea. Massport continues to state that Chelsea is not impacted and more or less than any other community outside of East Boston, but facts show otherwise.	<p>Logan International Airport is a major economic generator for the region. Many businesses that support airport activities or rely on the airport for transportation choose to locate in areas close to airports. Logan Airport is a major economic generator for the region. Massport has no control over land use or zoning, but continues to work with surrounding municipalities in reducing traffic on local roads. Massport has also invested substantial resources in providing airport edge buffers and parklands in surrounding communities. During the past decade, Massport has invested approximately \$50 million in developing airport edge buffers and maintaining greenspace in surrounding communities. Most recently in September 2015, Massport with East Boston residents celebrated the opening of Bremen Street Dog Park, a \$25,000 project with amenities (waste stations, water fountains, benches, and play equipment) accommodating both the people and their dogs.</p> <p>The State has made significant investments in enhancing the connections to the Airport with the Ted Williams Tunnel, the Haul Road, connections to Route 1 and the ramps, all of which reduce traffic on local roads. For additional information see Section 2.4.2.</p>

**Letter 11: Chelsea Councilor-at-Large - Roy Avellaneda**

Comment #	Author	Topic	Comment	Response
11.5	Councilor Roy Avellaneda, City of Chelsea	Induced growth	Massport again fails to acknowledge increased noise over Chelsea and worsening air quality as a result of increased use of 15L/33R due to projected higher passenger and flight counts with expansion of Terminal E.	The primary driver of demand for air travel at Logan Airport is regional/local economic conditions and socio-economic trends, which are independent of specific infrastructure enhancements made at Logan Airport. The historic growth at Logan Airport that occurred without additional gates demonstrates that demand at Logan Airport is driven by the economic and market factors, not airport improvements. Thus, Logan Airport will handle the same level of increased international passenger activity whether or not Terminal E is modernized. The Terminal E Modernization Project will not result in any changes to the number and type of aircraft operations when compared to the future condition with no terminal improvements (the Future No-Build Alternative). The same number of passengers will be accommodated with or without the Project, however, without the Project, there will be negative environmental impacts as described in the Draft EA/EIR. For additional information see Sections 2.4.2 and 2.4.6.
11.6	Councilor Roy Avellaneda, City of Chelsea	Environmental Justice/Outreach	Massport also fails in acknowledging Chelsea within its proposed project impact area and that it is a designated Environmental Justice community.	Massachusetts defines environmental justice as the equal protection and meaningful involvement of all people with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies and the equitable distribution of environmental benefits. The Draft EA/EIR followed the federal and state guidance in conducting the environmental justice assessment for the Terminal E Modernization Project. The first step included identifying that there are environmental justice communities surrounding the Airport, based on federally-determined minority populations and income levels. Demographic information was derived from the most recently available census (2010). As discussed in Chapter 5, Environmental Consequences, of the Draft EA/EIR, the Project is not anticipated to result in environmental impacts, rather it has been designed to provide environmental benefits related to reduction in ground noise and air pollution. Since there was no significant adverse environmental impact as a result of the Project, no environmental justice population would be disproportionately impacted by the Terminal E Modernization Project. For additional information see Section 2.4.3.
11.7	Councilor Roy Avellaneda	MEPA Process	In conclusion, I am asking that the regulating environmental agencies, MEPA and NEPA revisit Massport's lack mitigation offered to Chelsea to reduce the negative impact the expansion of Terminal E will have on the residents of Chelsea. Additionally, I would ask those same agencies and the FAA force a new sound impact study be done to include the increased flights over Chelsea. I believe the area shown below would warrant sound proofing mitigation as a result of the increase in flights.	Airport-wide noise from flight operations was not evaluated as part of the Project, but is included in Massport's reporting through the ESRP and EDR documentation process. Airport-wide noise is mitigated through a sound insulation program. The annual EDR/ESRP provides the latest data and noise contours. These reflect current flight paths over Chelsea and other communities. Massport regularly updates the FAA with these new contours to support its robust soundproofing program. For additional information see Sections 2.4.8 and 2.4.9.





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## 2.4 Topical Responses

As described in the introduction, the following 13 topics were most commented upon by reviewers of the Draft EA/EIR. The topics are listed alphabetically and in some cases include sub topics. For example, the MEPA process topic addressed items such as an extension of the comment period, format and documentation, and the need for a Final EA/EIR.

- Alternatives
- Cumulative Impacts
- Environmental Justice
- Ground Transportation
- Health Effects
- Induced Growth
- MEPA Process
- Mitigation
- Noise
- Parking
- Regionalization
- Resiliency
- RNAV/aRea NAVigation (RNAV) departure procedures
- Stakeholder Outreach

The following section includes the detailed topical responses for items raised in the comment letters from reviewers.

### 2.4.1 Alternatives

#### **Summary of Comment Theme: Projected growth in international passengers and flights should be accommodated at other airports in the New England Region.**

The Draft EA/EIR included analysis a broad range of alternatives to adding new gates to Terminal E. These included both airfield and terminal processing management strategies and consideration of accommodating some or all of the projected growth in international passengers and flights at other airports. Because Logan Airport has very little unprogrammed space and due to operational efficiencies gained by leveraging the existing international terminal and ramp, there are no other practical on-Airport locations for the additional international gates. The two Build Alternatives evaluated in the DEIR focused on the internal processing of passengers and phasing within the same general area of the Airport. For an understanding of off-Airport options at other regional airports, please see the Draft EA/EIR Section 1.2.12, *Regionalization* which describes Logan Airport's role as the major international airport in the New England area and the ability of other regional airports to accommodate demand. Additional discussion of this topic is contained in *Chapter 3, Alternatives* of the Draft EIR and Section 2.4.1, Alternatives in this chapter of the Final EA/EIR. From a traditional environmental resources perspective, there is no difference between the Build Alternatives presented in the Draft EA/EIR since all improvements are proposed on fully developed on-Airport locations.

By implementing this project, Massport seeks to avoid the adverse impacts of the No-Action Alternative. Logan Airport's international passenger demand is growing independent of facility improvements and is projected to continue growing. By modernizing Terminal E, Massport has the opportunity to serve aircraft at the gates, to provide the environmental benefits of building a significant noise barrier between the airfield/apron activity, and building a passenger connection to the Massachusetts Bay Transportation Authority (MBTA) Blue



Line. These features will help reduce community ground noise, reduce air emissions, and make use of High Occupancy Vehicle (HOV) modes more attractive to Logan Airport passengers and employees.

## 2.4.2 Cumulative Impacts

### **Summary of Comment Theme: Massport should evaluate this Project in the context of other activity at Logan Airport; evaluate cumulative impacts.**

Massport is unique among state agencies and airports in the U.S. for publishing annual environmental reports specifically designed to describe, analyze, and forecast the cumulative effects of Logan Airport operations based on current and anticipated future operating conditions. This process was developed to allow individual projects at Logan Airport to be considered and analyzed in the broader, Airport-wide context. The ESPR and EDRs also include information regarding all the projects planned or under construction at Logan Airport and provides a preview to the public and regulators of upcoming projects and activities.

In 1979, Massport entered into an agreement with the EEA to prepare a Generic Environmental Impact Report (GEIR), now referred to as the EDR/ESPR process, to assess the environmental effects of overall changes in operations at Logan Airport. Thus, the EDR/ESPR provides the foundational analysis to allow individual projects at Logan Airport to be considered and analyzed in the broader, Airport-wide context. This process supports both the environmental review process under MEPA and National Environmental Policy Act administered by the FAA.

As stated in the introduction to the 1999 ESPR, “While the Logan ESPR and EDRs provide the broad planning context for projects proposed for Logan Airport and future planning concepts under consideration by Massport, no specific projects can be built solely on the basis of inclusion and discussion in the 1999 ESPR.” It continues to say that projects that meet MEPA or NEPA review thresholds must undergo those processes, as needed. In short, the ESPRs provide a planning context which complements the individual project-specific filings.

The 2011 ESPR has already evaluated the environmental impacts of passenger growth and associated ground and aircraft traffic beyond that presented in the Terminal E Modernization Project Environmental Notification Form and the Draft EIR. The 2011 ESPR forecast year was 2030 and represented a significant reduction in passenger activity compared to the 2020 forecast presented in the 2004 ESPR. Reasons cited for the slower growth included a steep increase in the cost of jet fuel, the 2008/2009 global economic crisis, and service reductions to smaller markets, among others. The current and forecasted activity for the Terminal E Modernization Project is fully captured within the operational and environmental impacts already studied in the 2011 ESPR.

The 2011 ESPR specifically analyzes a range of Airport-wide impacts including ground access, noise, and air quality. The following table summarizes the 2030 environmental, aircraft and ground traffic metrics already analyzed in the 2011 ESPR. These will be updated in the 2016 ESPR which is expected to be published in late 2017 or early 2018.

As specified in the EEA Secretary’s Certificate on the ENF, the Draft EA/EIR focused on the Project-specific benefits and impacts associated with the Terminal E Modernization Project, while the Airport-wide issues are addressed in the EDRs and ESPRs. The Terminal E Modernization Draft EIR is not intended to address broad concerns associated with airport operations and growth. The Certificate states that the “venue for addressing cumulative environmental impacts is through the ESPR and EDR. Through these reports, Logan Airport is subject to comprehensive and regular MEPA review, including opportunities for public comment on the cumulative impacts. This regular updating and reporting on planning and cumulative impacts is unique among state agencies. It reflects the challenge and



complexity of managing and modernizing Logan Airport within a dense, urban area. It recognizes that the proximity of communities to the Airport warrants an enhanced level of public engagement and a concerted, long-term effort to minimize and mitigate impacts.”

Subsequent ESPRs and EDRs will update the cumulative impacts of passenger growth and associated ground and aircraft operations based on revised forecasts and will update and revise environmental management plans to address impacts. Future EDRs/ESPRs will continue to document potential impacts and trends and propose measures to implement the broad goal of maintaining or reducing Logan Airport's overall environmental impacts, even as annual passenger volumes rise in the future. These annual publications will continue reporting on Massport's progress in meeting its mitigation commitments. ESPR and EDRs provide a forum and meaningful opportunities for public review of information and analysis related to airport planning and operations, Airport activities, and effects on noise, air quality, ground access and water quality.



Table 2-3 2011 ESPR Context for New Logan Projects (Summary of Key Analysis Metrics)

Analysis Year	2011	2030
<b>Passengers</b>		
Domestic Passengers	24,831,068	32,137,828
International Passengers	3,962,454	7,585,965
Total	28,907,938	39,831,471
<b>Aircraft Operations</b>	368,987	474,734
<b>Average Weekday Vehicle Miles Traveled (VMT)</b>	167,647	195,762
<b>Air Emissions Inventory</b>		
VOCs	✓	✓
CO	✓	✓
NO <sub>x</sub>	✓	✓
PM <sub>10/2.5</sub>	✓	✓
GHG	✓	✓
<b>Noise</b>		
Aircraft Fleet Mix	✓	✓
Jet Aircraft Runway Use	✓	✓
Modeled Noise Impacted Population by Community	✓	✓
<b>Ground Access</b>		
Gateway Traffic Volumes	✓	✓
Vehicle Miles Travelled (VMT)	✓	✓
Parking Demand	✓	✓(2020)
High Occupancy Vehicle Ridership	✓	
<b>Mitigation Tracking</b>	2011	2030

Notes: VOC-Volatile Organic Compounds, CO-Carbon Monoxide, NO<sub>x</sub> – Nitrogen Oxides, PM<sub>10/2.5</sub> – Particulate Matter, GHG – Greenhouse Gases



## Summary of Comment Theme: Increase in International Flights

As described in Chapter 1, *Introduction/Executive Summary*, of the 2014 EDR (EEA# 3247, October 2015), Logan Airport serves as New England's primary domestic and international airport, plays a key role in the metropolitan Boston and New England passenger and freight transportation networks, and is a significant contributor to the regional economy. Logan Airport fulfills a number of roles in the local, New England, and national air transportation networks. It serves as the primary airport serving the Boston metropolitan area, is the principal New England airport for long-haul services, and is a major U.S. international gateway airport for transatlantic services.

In 2014, Logan Airport was the 18th busiest U.S. commercial airport in North America as ranked by aircraft operations, and the 19th busiest in North America ranked by number of passengers. In the international sector, in 2014 Logan Airport ranked as the 7th largest U.S. international transatlantic gateway, and 12th largest international gateway globally. Boston is an important national and international destination, and air carriers continue to look to expand international service at Logan Airport based on current and anticipated demand.

Logan Airport is an important origin and destination (O&D) airport both nationally and internationally and has been one of the fastest growing major U.S. airports, in terms of number of passengers, over the last four years. There has been growth in both domestic and international passenger numbers. In 2014, there were approximately 4.9 million international and 26.5 million domestic passengers (excluding general aviation). O&D traffic refers to the passenger traffic that either originates or ends at a particular airport or market. A strong O&D market like Boston generates significant local passenger demand, with nearly 95% of passengers starting their journey and also ending their journey in that market. This is second only to Orlando, Florida in terms of highest O&D markets in the U.S.

While both domestic and international passenger numbers are increasing, international passenger demand is projected to increase at a faster rate than domestic passenger demand. Total international annual passenger numbers increased from 4.4 million in 2013 to 4.9 million in 2014, a 9.8% increase. The strong international passenger growth was driven by several new nonstop services introduced by a number of foreign airlines including Emirates, Turkish Airlines, Hainan Airlines, and Cathay Pacific. Recently launched international destinations include Mexico City, Tokyo, Beijing, Dubai, Istanbul, Panama City, Hong Kong, and Shanghai.

Reflecting industry trends of more passengers per flights (higher load factors) and "right sizing" of aircraft to specific routes, Logan Airport has experienced a large drop in the total number of flights, while accommodating more passengers. For example, in 2000, Logan Airport accommodated about 27 million passengers on about 490,000 flights compared to over 30 million passengers on 364,000 flights in 2004. As documented in the ESPR/EDR reports, this 25% decrease in the total number of flights since 2000 has been paralleled by significant decreases in noise and air emissions impacts during the same time period.

The primary driver of demand for air travel at Logan Airport is regional/local economic conditions and socio-economic trends, which are independent of specific infrastructure enhancements made at Logan Airport. The historic growth at Logan Airport that occurred without additional gates demonstrates that demand at Logan Airport is driven by the economic and market factors, not airport improvements. Thus, Logan Airport will handle the same level of increased international passenger activity whether or not Terminal E is modernized. The Terminal E Modernization Project will not result in any changes to the number and type of



aircraft operations when compared to the future condition with no terminal improvements (the Future No-Build Alternative). The same number of passengers will be accommodated with or without the Project, however, without the Project, there will be negative environmental impacts as described in the Draft EA/EIR.

### **Summary of Comment Theme: Community Land Use Impacts**

Logan Airport is a major economic generator for the region. Many businesses that support airport activities or rely on airports for transportation choose to locate in areas close to airports. Massport has no control over land use or zoning, but continues to work with surrounding municipalities in reducing traffic on local roads. Massport has also invested substantial resources in providing airport edge buffers and parklands in surrounding communities. During the past decade, Massport has invested approximately \$50 million in developing airport edge buffers and maintaining greenspace in surrounding communities. Most recently in September 2015, Massport and with East Boston residents celebrated the opening of Bremen Street Dog Park, a \$25,000 project with amenities (waste stations, water fountains, benches, and play equipment) accommodating both the people and their dogs.

The State has made significant investments in enhancing the connections to the Airport with the Ted Williams Tunnel, the Haul Road, connections to Route 1 and the ramps, all of which reduce traffic on local roads.

### **Summary of Comment Theme: Has the airport reached its maximum capacity?**

Changes in technology, aircraft types, and FAA procedures influences an airport's ability to accommodate demand. Reflecting industry trends of more passengers per flights (higher load factors) and "right sizing" of aircraft to specific routes, Logan Airport has experienced a large drop in the total number of flights, while accommodating more passengers. For example, in 2000 Logan Airport accommodated about 27 million passengers on about 490,000 flights compared to over 30 million passengers on 364,000 flights in 2004. As documented in the ESPR/EDR reports, this 25% decrease in the total number of flights since 2000 has been paralleled by significant decreases in noise and air emissions impacts during the same time period.

In 2005, Massport established a demand management program designed to prevent air carriers from over-scheduling Logan Airport's ability to accommodate demand. Based on pre-determined aircraft schedule thresholds, Massport will implement a peak-period surcharge designed to shift operations out of the daily peak operating periods. When needed, this will reduce airfield congestion and delay and associated noise and air emissions.

Massport monitors published air carrier schedules and non-scheduled demand, and request that aircraft operators, with assistance from the FAA if appropriate, voluntarily adjust their schedules or intended use of Logan Airport to avoid runway use delays based on 740 CMR 27.00. The regulation also provides the basis upon which peak period conditions can be declared based upon the projected level of runway use delays at Logan Airport, and for the establishment of a peak Period surcharge payable by aircraft operators. Under the regulation, Massport regularly monitors and projects aircraft operational demand based upon published schedules and other information. Using that information, Massport projects levels of delay for current and future periods and provides Logan Airport's scheduled airlines, the FAA, and general aviation, notice up to six





months in advance of the declaration of peak period conditions to allow operators and the FAA, an opportunity on a voluntary basis to adjust flight activities to an extent that will avoid peak period conditions at Logan. Under such peak period conditions, a \$150.00 peak period surcharge is applied to each operation (landing or takeoff) during peak period conditions. This fee can be adjusted if results show no change in behavior. Annual Peak Period Monitoring Reports are published by Massport in the EDR/ESPR filings with the MEPA Office.

**Summary of Comment Theme:** The Report should include an Executive Summary of 10-15 pages that is suitable for understanding by non-technical reviewers.

The Draft EA/EIR includes an Executive Summary that highlights the project elements, key findings, and mitigation commitments associated with the Terminal E Modernization Project. The Executive Summary includes graphics, charts, and photographs to illustrate the results of the assessment. Massport has prepared a Spanish-language version of the Draft EA/EIR executive summary, which is included as Appendix B of this Final EIR. Additional printed copies are available on request from Stewart Dalzell ([sdalzell@Massport.com](mailto:sdalzell@Massport.com)).

Massport makes every effort to provide documentation in "Plain English." However, many of the topics are technical in nature and are required to fulfill environmental reporting obligations. The EA/DEIR included technical analyses in accordance with NEPA as well as MEPA, which together provide a comprehensive assessment of the Terminal E Modernization Project.

### 2.4.3 Environmental Justice

**Summary of Comment Theme:** The Terminal E Modernization Project should take environmental justice communities into account.

Massachusetts defines environmental justice as the equal protection and meaningful involvement of all people with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies and the equitable distribution of environmental benefits. The Draft EA/EIR followed the federal and state guidance in conducting the environmental justice assessment for the Terminal E Modernization Project. The first step included identifying that there are environmental justice communities surrounding the Airport, based on federally-determined minority populations and income levels. Demographic information was derived from the most recently available census (2010).

As discussed in Chapter 5, *Environmental Consequences*, of the Draft EA/EIR, the Project is not anticipated to result in environmental impacts, rather it is has been designed to provide environmental benefits related to reduction in ground noise and air pollution. Since there was no significant adverse environmental impact as a result of the Project, no environmental justice population would be disproportionately impacted by the Terminal E Modernization Project. Many comments made on the Terminal E Draft EA/EIR relate to Airport-wide issues not addressed in the project-specific documentation within the Terminal E Modernization Project Draft EA/EIR. Logan Airport operations and environmental tracking of Airport-wide trends are published in the EDR and ESPR produced by Massport on a yearly basis.



### **Summary of Comment Theme: Additional effort needs to be paid to reaching out to Environmental Justice Stakeholders**

In an effort to better incorporate community issues and interests into long term planning, Massport has engaged in a robust community outreach program that, over the past year, has included many meetings and public information sessions in which Massport has briefed elected officials and surrounding communities on projects and ongoing operations at Logan Airport. See Section 2.4.14, *Stakeholder Outreach*, for a list of the groups of stakeholders who have been briefed on the Terminal E Modernization Project. Massport routinely provides notices of projects, meetings, and other events in the newspapers and always includes Spanish language papers with notification in Spanish. This was the case for the Terminal E Modernization Project. As part of the federal and state environmental review process, notices were provided regarding the availability of the Environmental Notification Form, the Draft EA/EIR, and of public meetings. At public briefings, Massport makes translators available for attendees.

At the request of several members of the public, Massport has prepared an Executive Summary of the Draft EA/EIR in Spanish and it is included as Appendix B of this Final EA/EIR. Please contact Stewart Dalzell at [sdalzell@massport.com](mailto:sdalzell@massport.com) for a printed copy of the Draft EA/EIR Executive Summary in English or Spanish. Massport will also provide Spanish-language Executive Summaries with all future Logan Airport MEPA filings.

#### **2.4.4 Ground Transportation**

### **Summary of Comment Theme: Additional international gates will mean more traffic in the surrounding communities.**

As documented in the 2014 EDR, previous EDRs and ESPRs, Massport implements a comprehensive ground transportation strategy designed to maximize transit and shared-ride options for travel to and from Logan Airport and minimize single occupancy vehicle trips by providing convenient transit, shuttle, and pedestrian connections at the Airport. By providing parking on the airport campus, this also reduces pick-up and drop-off, which in turn reduces vehicle miles traveled by allowing one round trip instead of two round trips.

Massport invests in and operates Logan Airport with a goal of increasing the number of passengers arriving by transit or other HOV/shared-ride modes. HOV modes include public transit (Blue Line rapid transit, Silver Line bus rapid transit, MBTA bus, and water transportation); Logan Express scheduled bus service; scheduled private carrier buses and vans; courtesy shuttle buses; charter buses; and unscheduled private limousines and vans. Logan Airport continues to rank at the top of U.S. airports in terms of HOV/transit mode share. Several of Massport's HOV efforts are listed below.

- The Airport is served by the MBTA Blue Line Airport Station, and Massport provides free shuttle bus service between Airport Station and all terminals.
- Massport continues its partnership with the MBTA to offer free boardings of the Silver Line bus at the Airport. The promising results of reduced dwell times and faster travel times through the terminal area led Massport to extend the free-fare program indefinitely.
- MBTA rapid transit services are supplemented by MBTA commuter ferry service and MBTA local and express bus service.



- Massport provides free and frequent shuttle bus service to and from the MBTA Blue Line station.
- Massport provides priority, designated curb areas at all Airport terminals, to support the use of HOV/transit modes, including privately-operated scheduled buses and shared-ride vans and limousine services.
- Next-bus arrival digital dynamic signs have been added to the terminal curb bus stops to now include Airport Shuttle, Blue Line/Rental Car, and Logan Express (in addition to Silver Line signage, which was previously installed).
- Massport continues to improve wayfinding for ground transportation (with an emphasis on public transportation within the terminals) resulting in enhanced directional signs in the terminals for arriving air passengers.
- Massport undertakes several efforts to avoid airport-related traffic in the neighborhoods surrounding Logan Airport. These include: the Maverick Street gate that provides resident-only access on to the Airport and the Chelsea employee parking garage which reduces employee trips in the community. Construction contractors are required to use designated construction traffic routes that avoid neighborhood streets and must join the Logan Airport Transportation Management Association. The new Green Bus Garage was built on-Airport, thus removing Massport shuttle buses from local streets; previously shuttle buses went through East Boston to the Paul Revere garage in Chelsea.

#### 2.4.5 Health Effects

##### **Summary of Comment Theme: The Project will increase flights, traffic that cause air and noise pollution and related health concerns**

For additional information related to increasing flights, please refer to Section 2.4.6, Induced Growth.

The Massachusetts Department of Public Health (MassDPH) has conducted a Logan Airport-specific health study. The results of this study and follow-up actions by MassDPH and Massport have been reported in the annual EDR filings. The MassDPH study found no connection between cancer and Logan Airport operations and confirmed that Logan Airport emissions are "highest near the perimeter of the airport and fall off rapidly with increased distance." The Study also notes that Logan air pollutant concentrations are low relative to background levels. MassDPH found no noise-related health impacts and no association between air pollution exposure areas and cardiovascular outcomes. The study did find two respiratory outcomes: chronic obstructive pulmonary disease (COPD) and probable asthma in children within the high exposure area close to the Airport. Massport is funding MassDPH's efforts to address these two outcomes through work with Massachusetts General Hospital and other neighborhood health agencies. Massport has provided an update on the status and findings of the MassDPH Health Study and Massport's air quality studies in the annual EDRs and ESPRs.



### **Summary of Comment Theme: Project Environmental Benefits**

The Terminal E Modernization Project is being designed to provide several features that would contribute to improving environmental conditions including:

- The extended concourse will be designed to serve as a noise barrier for the community. Similar to Terminal A, the community would be shielded from ground noise from aircraft operations on the apron, in some cases resulting in up to a 17 decibels (dB) decrease in sound levels compared to if the proposed Terminal E Modernization Project were not built.
- The project includes a direct, weather-protected pedestrian connection between the MBTA Blue Line Airport Station and the Terminal enhancing access to the airport.
- Providing for more efficient use of the North Apron which reduces aircraft idling and in turn improves air quality. It would also allow aircraft to plug-in at the gate, reducing the usage of auxiliary power units.
- Improving curbside operations, thus reducing automobile idling and improving traffic operations.

These features would improve noise, air quality and ground access conditions compared to if the Project were not in place.

### **Summary of Comment Theme East Boston Health Center**

Massport is working with the East Boston Neighborhood Health Center (and other health centers) and MassDPH to support respiratory health in neighborhoods. The initiative, which comes out of a ground-breaking study by MassDPH, included providing asthma screening for residents and working with MassDPH and local health organizations to provide home health kits.

#### **2.4.6 Induced Growth**

### **Summary of Comment Theme: The Project is meant to grow the Airport, not respond to growth.**

The historic growth at Logan Airport that occurred without significant airfield or terminal improvements demonstrates that demand at Logan Airport is driven by the economic and market factors described above, not airport improvements. Logan Airport will need to handle the increased passenger ground traffic whether or not Terminal E is modernized. Massport has not added any gates at Terminal E since the initial 12 gates were constructed in 1974. Terminal E served 1.4 million annual passengers in 1974 and nearly 5 million in 2014 without any additional gates. Massport recently upgraded three existing gates at Terminal E specifically to accommodate larger aircraft in the fleet such as the Airbus A380 and the Boeing 747-8 (Terminal E Renovation and Enhancements Project).

Chapter 2, *Purpose and Need*, of the Draft EA/EIR, documents that international passenger activity levels have grown significantly since the international terminal was constructed in 1974. When Massport completed the original terminal in 1974, the Airport served 1.4 million international passengers per year served out of 12 gates. Massport enhanced internal terminal passenger facilities as part of the Terminal E Modifications Project in 1997.



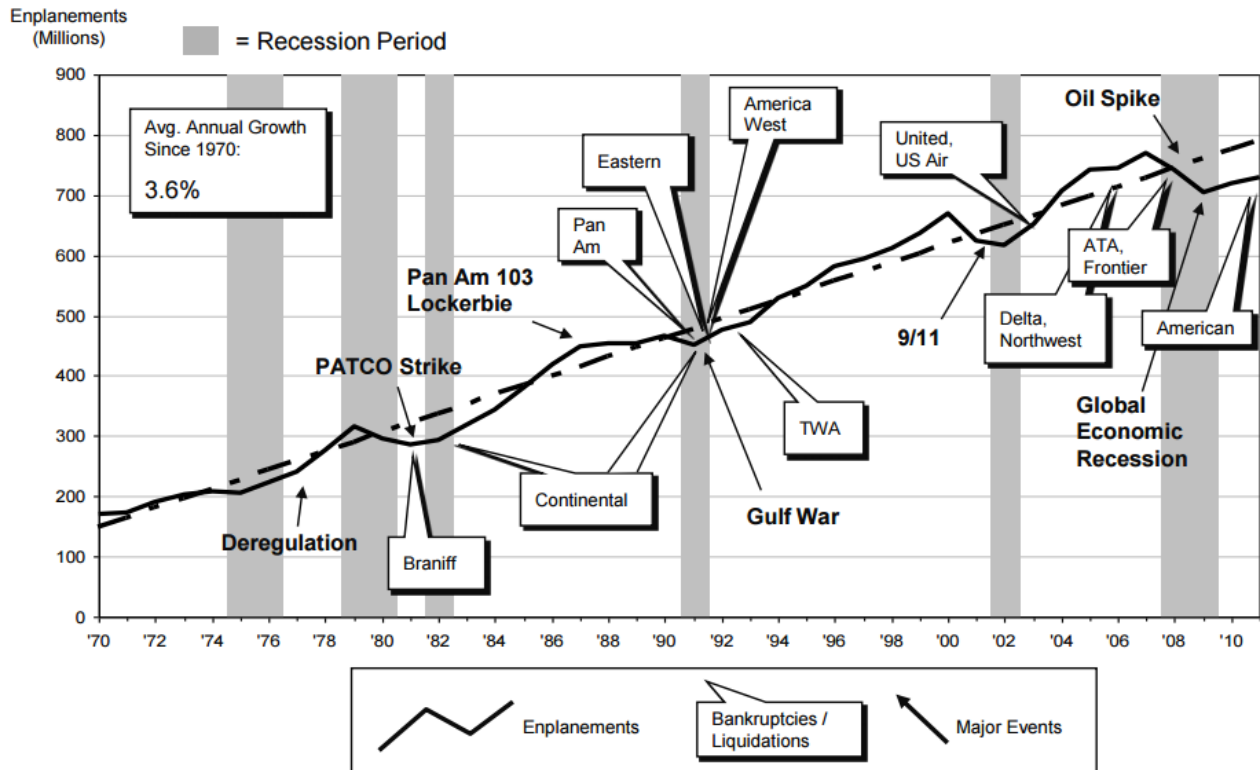
In 2002, Massport began work on the International Gateway Project, which proposed to expand and upgrade the terminal to provide better service to international passengers. This expansion project included three new gates that were approved and never built due to the economic climate post September 11, 2001. At the time Massport planned the International Gateway Project, Terminal E served approximately 3.6 million international passengers. In 2015, Terminal E served over 5.5 million international passengers, still out of the same original 12 gates, but with decreases in efficiency; this has resulted in air quality impacts and adverse impacts to the passenger experience.

However, construction of the Terminal E Modernization Project would allow passenger handling on the airside, in the terminal, and at the curbs to be conducted in a more efficient way. Additional gates would reduce the number of aircraft that have to be parked on the apron with passengers accessing the terminals via buses, and would reduce wait times for aircraft to reach gates. Passenger processing in the terminal would be enhanced with the addition of Customs and Border Protection facilities, and improvements to the curb would enhance passenger drop-off and pick-up activities and reduce recirculation of vehicles at the curb. A key feature of the Project is construction of a direct, weather-protected pedestrian connection between the terminal and the MBTA Blue Line Airport Station.

Broader national and industry conditions also impact Logan Airport's passenger demand. In general, demand for air travel has declined during all of the economic recessions of the past decades. Many of those recessions have coincided with other shocks such as the PATCO13 air traffic controllers strike in the early 1980s, the Gulf War in 1990/91, and several airline liquidations and reorganizations in the early 1990s and again in the first half of this decade. Also, external "shocks" such as the events of September 11, 2001 have challenged and changed the airline environment significantly, causing passenger travel declines and gradual recovery cycles.

In all cases, the industry recovered and growth in air passenger traffic resumed. In some cases, significant capacity reductions followed shocks. For example, similar to other recoveries that have followed each shock, passenger traffic has returned to growth following the sharp declines in 2008/2009. The global economic recession linked with the U.S. subprime mortgage crisis depressed demand. Traffic fell in 2008 and 2009 in response to drastic capacity cuts and fare increases introduced by airlines due to a weak economy and a spike in fuel prices. Passenger traffic recovery began in 2010 as economic conditions slowly improved. While traffic recovery has been gradual and industry enplanements are just now approaching pre-recession levels, growth is expected to continue in the coming years. Figure 2-13 from the 2011 *ESPR* illustrates these trends.

**Figure 2-13 U.S. Total Passenger Enplanements, 1970-2011**



Source: Airlines for America (formerly Air Transport Association); U.S. DOT, T100

### 2.4.7 Massachusetts Environmental Policy Act (MEPA) Process

#### Summary of Comment Theme: Extend the Draft EIR Comment Period.

In response to these requests, Massport requested that the comment period be extended from 30 days (as required in the MEPA regulations), to 51 days. The MEPA Office agreed and the close of the comment period was extended from August 19, 2016 to September 9, 2016. The extra time was intended to provide additional opportunity for document review and preparation of written comments.

In addition to an Executive Summary, the Draft EA/EIR included technical review in accordance with NEPA as well as MEPA which together provide a comprehensive assessment of the Terminal E Modernization Project. In addition, Airport-wide impacts (not project-specific) are assessed annually in the EDR and ESPR.





**Summary of Comment Theme: Conduct additional environmental analysis.**

On September 16, 2016, the Secretary of the EEA issued a Certificate that states the Draft EIR "adequately and properly complies with MEPA; M.G.L. c.30, ss.61-621) and with its implementing regulations (301 CMR 11.00)." This determination confirms that additional detailed analysis on the project is not required. As directed by the Secretary's Certificate, this Final EIR consists of the comment letters and responses to comments, a revised draft Section 61 Finding, and supporting documentation (as needed).

Since filing of the Draft EA/EIR, the FAA has updated its draft Finding of No Significant Impact/Record of Decision (FONSI/ROD). A copy of the draft FONSI/ROD is included at the beginning of this Final EA/EIR. The FONSI/ROD considered the facts contained in the EA and based on that information, determined that "the proposed Federal action is consistent with the existing national environmental policies and objectives of Section 101(a) of the National Environmental Policy Act of 1969 (NEPA) and other applicable environmental requirements". The FONSI/ROD also states that the "proposed Federal action will not significantly affect the quality of the human environment or include any condition requiring consultation pursuant to Section 102(2)(C) of NEPA. As a result, FAA will not prepare an EIS for this action."

#### 2.4.8 Mitigation

**Summary of Comment Theme: Massport should do more to reduce impacts of the Airport on the surrounding communities.**

Massport actively and continuously seeks to limit, reduce, or avoid the environmental effects associated with operations at Logan Airport. Planning and development at Logan Airport is conducted within an established framework of environmental goals and objectives.

It is within this airport-wide context that mitigation for the Terminal E Modernization Project was developed and analyzed. Implementation of the Project itself is, in many ways, an environmentally beneficial measure, because it will have the overall effect of reducing air emissions and ground noise impacts associated with the operation of Terminal E. Project impacts are significantly reduced as compared to doing nothing to solve the existing problems at Terminal E. Furthermore, no significant adverse environmental impacts resulting from the implementation of the Project have been identified. The following list describes the mitigation and environmental beneficial measures of the Project.

- The Terminal E Modernization Project has been sited and will be designed to act as a noise barrier to the adjacent East Boston neighborhoods and Memorial Stadium Park to the southwest of the North Apron.
- Facilitation of efficient management of international flights by allowing those flights to taxi directly to aircraft gates at Terminal E.
- The roadway and curb improvements will improve vehicle flow and HOV access at Logan Airport, thereby reducing vehicle emissions and vehicle miles traveled at and to Logan Airport.
- Building a direct, weather-protected pedestrian connection to the MBTA Blue Line Airport Station to Logan Airport, thereby improving accessibility to and from Logan Airport (Phase II of the Project).



- Sustainable design, construction, and operations guidelines will be implemented, which will lessen environmental impacts both locally and regionally during the construction phases and during long-term operation of the Project. The program will be designed, constructed and operated to achieve Leadership in Energy and Environmental Design (LEED) certification. The Authority will strive to achieve a LEED Silver rating or better as well as the goals of the Commonwealth of Massachusetts “LEED Plus” program (established by the Commonwealth’s Executive Office for Administration and Finance).
- New gates will increase ramp efficiency and reduce movements on North Apron and the need to bus passengers between terminal and remote aircraft parking locations, thereby reducing ground transportation related air emissions and mobile source greenhouse gas (GHG) emissions.
- New gates will have electric power and pre-conditioned air to allow aircraft to plug in at gate rather than be serviced remotely to reduce need for on-board engine/auxiliary power unit operation, thereby reducing aircraft air emissions and GHG emissions.
- The terminal extension will include a minimum 25,000 square feet of roof top solar photovoltaics and restroom hot water will be heated using solar units. Massport commits to additional energy-saving and greenhouse reduction actions will result in reducing energy consumption by a minimum of 20 percent compared to Code, and reducing greenhouse gases by approximately 30 percent compared to a standard building.
- Improved customer service in the terminal, as enhancement of the terminal will significantly reduce congestion and processing delays; and additional gates at the terminal will also avoid the flight delays that are currently caused both by aircraft waiting for gate availability at Terminal E and by remote parking of aircraft (and accompanying passenger busing).

#### 2.4.9 Noise

##### **Summary of Comment Theme: The project will result in more ground noise.**

To evaluate the effectiveness of the terminal extension as a noise barrier, the Draft EA/EIR modeled ground noise levels from aircraft operations associated with Terminal E in the North Apron area under both the Future No-Build and Future Build conditions in accordance with FAA guidelines. Noise is evaluated in terms of any changes in noise sources associated with the future Terminal E Modernization Project when compared to the No-Action Alternative. Under FAA Order 1050.1F and Order 5050.4B, a significant adverse effect occurs when the project would cause receivers in noise sensitive areas to experience a noise increase of at least 1.5 dB.

By configuring the extended terminal sections to serve as a noise barrier to the community, the Terminal E Modernization Project would significantly reduce noise levels from ground operations as compared to the future No-Action Alternative. Any predicted noise level increases are below the levels that are perceptible to humans and in areas already eligible for sound insulation. All of the modeled sites show no perceptible increase in single event maximum noise levels. In some cases, there was a decrease in ground noise of up to 17 dB with the extended concourse serving as a noise barrier.



The ground noise analysis in the Draft EA/EIR included consideration of surrounding neighborhoods of Eagle Hill and Orient Heights. Ground noise impacts did not extend further into other neighborhoods such as South Boston. The ground noise models are detailed and complex and produce substantial outputs, which together are aggregated to understand the future noise environment. The noise technical appendix in the Draft EA/EIR published information on modeled ground noise levels of 60 dB and 65 dB. Detailed outputs are available on request.

Airport-wide noise from flight operations was not evaluated as part of the Project, but is included in Massport's reporting through the ESPR and EDR documentation process. Airport-wide noise is mitigated through a sound insulation program.

**Summary of Comment Theme: By accommodating more international flights, there will be more nighttime flights and nighttime noise.**

As described in the Draft EA/EIR, growth in international operations is projected to occur with or without Terminal E Modernization. It is unlikely that future growth of international service will result in more late night flights. Opportunities for more nonstop service to Asia are limited given the service Logan Airport has today. Also, it is expected that the main driver for future growth is Europe and other markets not requiring late night arrivals or departures. Since most of Logan Airport's international service is to Europe and the Caribbean, these markets are expected to operate during the current daily peak period of 6:00 PM to 10:00 PM. Massport's most recent analysis of Logan Airport's fleet shows that 97% (2014) of aircraft jet operations at Logan Airport meet Stage 4 requirements, the latest and highest standard for noise and emissions currently adopted by international agreement. This latest technology also reflects the most recent advancements in fuel burn efficiency and air emissions reductions.

Like all commercial service airports in the United States, Logan Airport is subject to federal laws. The federal Airport Noise and Capacity Act (or ANCA) severely restricts Massport's ability to impose access restrictions. Since 1990, no access restriction on stage 3 aircraft has been approved by the FAA. Massport has also implemented a comprehensive noise abatement program that includes soundproofing the homes of our closest neighbors; noise abatement procedures to minimize overflights over residences and reduce engine noise on the airport surface; and a 24/7 noise complaint line for concerned residents to call. One critical noise abatement action is the late night, over-the-water departure/arrival (or "head-to-head") procedure. This procedure is utilized by FAA Air Traffic, when wind and weather allow, during the sensitive overnight period and places aircraft over Boston Harbor away from Logan Airport's surrounding communities and the urban core.

Boston is a market where connections to foreign gateways is critical to the success of that service. For that reason, most of the foreign flag, long-haul international schedules at Boston are dictated by the connecting bank structures at their foreign gateway. New carriers want to offer a competitive service that is consistent with their connecting hub operations or reflects the times their competition flies. If their competition is operating during the peak, they will want to as well. Furthermore, some airlines are benefiting from domestic connecting traffic at Logan Airport. To maximize opportunity for connecting passengers, international carriers will time their flights to the daily peak, not in the middle of the night, when service is very limited. For example, three largest European airlines, British Airways, Air France, and Lufthansa offer no departures from the U.S. after midnight.



### **Summary of Comment Theme: Noise from Overflights**

See Section 2.3.13 *RNAV (Overflights)* for a detailed response.

### **2.4.10 Parking**

**Summary of Comment Theme:** The DEIR should include analysis of Massport's plan for additional parking at Logan Airport.

The Terminal E Modernization Project and Airport-wide parking issues are independent. Regardless of whether the terminal is modernized, the demand for international travel will continue, leading to more travel to and from the Airport by all modes including drop-off/pick-up trips.

The ESPR and annual EDR updates include a substantial body of analysis on ground transportation issues. The 2014 EDR documents Massport's Long-Term Parking Management Plan, which is intended to address the parking supply, pricing, and operations associated with Logan Airport's constrained parking.

Massport owns and operates Logan Airport, which has been subject to a freeze on the number of commercial parking spaces there since 1975. The 1975 freeze, put in place by the U.S. Environmental Protection Agency (EPA), and updated in 1989 by MassDEP when it promulgated 310 CMR 7.30, was designed to reduce vehicle emissions to help meet the carbon monoxide and ozone National Ambient Air Quality Standards, for which Massachusetts was in nonattainment. Massachusetts now meets these standards.

The Logan Airport Parking Freeze has led Massport to take actions to increase public transit and HOV access to the Airport. However, a recent analysis by Massport indicates that the current commercial parking cap at the Airport is having the unintended effect of negatively impacting air quality. The analysis shows that the constrained parking supply causes 75% of passengers, who would otherwise choose to park, to use a private drop-off/pick-up mode. This choice results in up to four trips to the Airport rather than two, thereby increasing Airport-related vehicle trips and associated emissions in the metropolitan Boston area. The analysis also shows that adding 5,000 spaces to the parking freeze limit would result in a substantial decrease in vehicle trips and associated emissions and provide a significant air quality benefit.

In June 2016, Massport requested that the Massachusetts Department of Environmental Protection (MassDEP) amend 310 CMR 7.30 (Logan Airport Parking Freeze) to allow an additional 5,000 commercial parking spaces at Boston Logan International Airport coupled with requirements to evaluate ways to further support alternative transit options.

Accordingly, Massport has requested that MassDEP amend 310 CMR 7.30 to increase the commercial parking freeze limit by 5,000 spaces. The suggested amendment also would lower the limit on employee parking to reflect current levels. In keeping with the structure of the 1989 regulations, Massport has proposed that the amendments require Massport to undertake three long-term studies in support of alternative transit, including study of (1) ways to improve HOV access to Logan Airport; (2) strategies for reducing drop-off/pick-up modes;



and (3) parking pricing strategies. The amendments also would require Massport to commit to Logan Express service from the North Shore and continue to identify and implement additional suitable Logan Express sites and services.

If 310 CMR 7.30 is amended as proposed, and should Massport propose to build any new parking garage, the garage would be subject to review under the MEPA and Massport would commit, through MEPA Section 61 Findings, to additional mitigation measures with respect to the garage's environmental impacts.

The Terminal E Modernization Project and addressing Airport-wide parking are independent issues. Any new parking facility will be evaluated as a separate project, building on the analysis of this project and building on the EDR/ESPR cumulative analysis. However, due to its proximity to the proposed Project, in terms of both expected timeframe for construction and likely physical location, the potential for increased parking is evaluated as part of the cumulative impact assessment for relevant categories (ground access and air quality) in Chapter 5, *Environmental Consequences*. The Draft EA/EIR included an analysis of the Project both with and without additional on-Airport parking spaces.

#### 2.4.11 Regionalization

**Summary of Comment Theme: Growth in international operations should happen at the regional airports.**

Logan Airport serves as New England's primary domestic and international airport plays, a key role in the metropolitan Boston and New England passenger and freight transportation networks, and is a significant contributor to the regional economy. Boston is a major destination for international travelers due to its strong educational and institutional resources, economic and social diversity, cultural and historic heritage, and natural beauty. Logan Airport fulfills a number of roles in the local, New England, and national air transportation networks. It serves as the primary airport serving the Boston metropolitan area, is the principal New England airport for long-haul services, and is a major U.S. international gateway airport for transatlantic services. Logan Airport has the local market demand (within Route 128), critical mass of airline service, and the necessary terminal and airfield facilities to support a broad international origin and destination service network which cannot be replicated at smaller, regional airports.



## Summary of Comment Theme: New England Regional Airport System Plan

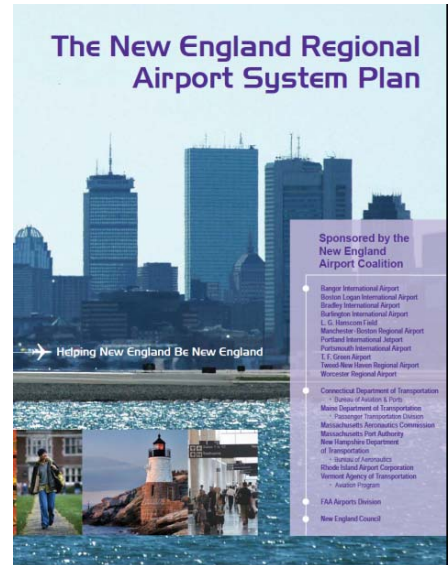
Massport, working with the FAA and other New England regional state aviation divisions, produced Regional Airport System Plans in 1995 and 2006. The plans include extensive investments in Manchester and Providence (improved access, lengthening of runways, and new terminals) which have now been accomplished. The Plans envisioned expanded high speed rail in the Northeast Corridor and that increased rail service would divert air passengers in the Logan Airport to New York City market (accomplished). The Plan calls for more investment in Logan Airport and its critical role as this region's access point to the international marketplace. The Plan identified that the short and medium haul flights would be also served by the regional airports.

## Summary of Comment Theme: Massport's Role in Regional Transportation Planning

As documented in Chapter 4, *Regional Transportation* of the 2014 EDR, the aim of regional transportation planning efforts is to reduce reliance on Logan Airport, and to provide New England travelers with a variety of viable transportation options. Massport supports several regional transportation cooperation planning efforts including: New England Regional Airport System Plan (NERASP), New England Regional Airport System Plan – General Aviation (NERASP-GA), and the Conference of New England Governors and Eastern Canadian Premiers (NEG/ECP). The NERASP study conducted in 2006 has helped to develop the primary commercial airport system in New England in order to support these benefits. Meanwhile, the NEG/ECP works to coordinate the highway, aviation, freight, and commuter rail transportation networks. Rail service such as the Amtrak Northeast Corridor and proposed improvements such as the Boston- South Station Expansion, also help to balance the passenger load among various forms of transportation. Other supporting planning forums include GreenDOT, the Healthy Transportation Compact, and Boston Metropolitan Planning Organization.

Recognizing that Logan Airport is a substantial trip generator and key transportation resource in the metropolitan area, Massport participates in several interagency transportation planning forums pertaining to enhancing a variety of travel modes. Massport supports GreenDOT's smart growth development goal by actively working to improve public transportation in the metropolitan area, a key component of smart growth principles (information on GreenDOT provided at [www.massdot.state.ma.us/GreenDOT.aspx](http://www.massdot.state.ma.us/GreenDOT.aspx)). Regional rail transportation initiatives that Massport tracks and supports include: Northeast Corridor Infrastructure Master Plan and Next-Generation High Speed Rail Plan, and the Boston-South Station Expansion.

Massport supports multimodal transportation planning and improving integration with its facilities through its permanent voting membership on the Boston MPO, providing input on policy and programming decisions. Massport plays an active role on the MPO's decision-making board, participating in policy decisions related to the Long-Range Regional Transportation Plan and project programming for the Transportation Improvement Program. The MPO also guides the work conducted by Central Transportation Planning Staff (CTPS) via its Unified Planning Work Program. CTPS are occasionally used by Massport to support its ground transportation planning initiatives.







Massport is also an ex-officio member of the Metropolitan Area Planning Council (MAPC), which is a regional planning agency serving the people who live and work in Metropolitan Boston. The MAPC mission is to promote smart growth and regional collaboration, which includes protecting the environment, supporting economic development, encouraging sustainable land use, improving transportation, ensuring public safety, advancing equity and opportunity among people of all backgrounds, and fostering collaboration among municipalities.

### **Summary of Comment Theme: Massport's Investment in Regional Airports**

Massport is the owner and operator of two regional airports, namely Hanscom Field in Bedford, MA and Worcester Regional Airport. Massport's investments in its family of airports are consistent with the Regional Plan, including:

- Acquiring and modernizing Worcester Regional Airport to better serve the commercial airline travel demands of the central Massachusetts region.
- Together with the City of Worcester, Massport is investing \$100 million over 10 years to revitalize and grow commercial operations at Worcester Regional Airport. As a result of this collaboration, JetBlue Airways has already handled over 240,000 passengers at Worcester Regional Airport since commencing operations on late 2013.
- Massport recently started construction on Worcester's Category III Instrument Landing System (ILS) to enhance operational and safety conditions to a level equal to that of all other commercial airports in New England. This project will significantly improve Worcester Regional Airport's all-weather reliability, a long-standing impediment to greater utilization of this airport.
- Massport continues to invest in Hanscom Field, New England's second busiest airport and the area's premier general aviation airport. Massport has invested or leveraged over \$75 million to improve Hanscom Field as the choice for corporate aviation. Hanscom Field is a full-service general aviation airport and popular choice for business executives who want convenient access to Eastern Massachusetts and "America's Technology Region" situated along the Route 128/95 and Route 495/3 corridors. Located about 20 miles northwest of Boston in Bedford, Massachusetts, Hanscom Field plays a critical role as a corporate reliever for Logan Airport.

The Regional Transportation chapters of Massport's annual EDRs continue to carefully track operational levels and planned infrastructure project activities at the New England regional airports. Regional use of Logan Airport compared to the other commercial service airports is also graphed. The EDR also reports on the continuing shift from air to rail in the congested Northeast Corridor from Boston to New York. The 2011 *ESPR* reported that 54% of the Boston-New York City travel was by rail; up from 20% in 2000.

### **Summary of Comment Theme: Regional Demand for Air Passenger Growth**

The region's economic growth is the primary driver of future air passenger growth at Logan Airport. The Airport serves the seventh largest metropolitan area in the nation. Residents of the Boston metropolitan area have above-average incomes and a high propensity for personal and business-related airline travel. Since no



airline maintains a connecting hub operation at the Airport, Logan Airport is principally an O&D airport. Future passenger levels are therefore largely determined by underlying market demand and are not dependent on airline connecting passengers that transfer from one flight to another without leaving the terminal area.

Air travel demand and airport passenger traffic are strongly linked to the economic characteristics of a region. The Boston service area, encompassing the Greater Boston Metropolitan Area, is a central player in the nation's finance, technology, biotechnology, healthcare, and education sectors. As one of the nation's largest population and economic centers, Boston is a mature market with a high per capita income of \$54,778 (2013) which is 31.3% percent above the U.S. average, and an unemployment rate regularly below the national average. Such favorable economic conditions contribute to the region's sustained demand for air travel.

Following the longest and deepest downturn since the Great Depression, the Massachusetts economy in recent years has recovered and consistently performed better than the nation. In fact, of the ten largest U.S. metropolitan areas in terms of economic output, the Boston economy recorded the fifth highest rate of growth between 2009 and 2013. The resilience of the Boston economy is partially attributed to the area's diversified economic base, which is spread across science and knowledge-based sectors including information technology, biotechnology, healthcare, education, and medical-scientific research and products. These industries are highly travel-dependent, boosting the O&D market. Massachusetts has benefitted from improving economic conditions in the U.S. and has been further buoyed by its strong reliance on the growing technology sector; in 2014, according to *Massbenchmarks*, state economic growth outpaced the nation's economic growth in three of four quarters.

### **Summary of Comment Theme: Provision of International Service at Other Regional Airports**

Massport has considered provision of additional international service at regional airports numerous times during the analysis of Terminal E operations, both historically during previous airport improvement projects, and during the conceptual design phase of the Project. Alternatives that consider provision of international service at regional airports such as T.F. Green or Manchester-Boston Regional airports were not developed further for a number of reasons. First, international air carriers choose to fly in and out of Logan Airport to satisfy passenger demand. The demand for international travel to these regional locations is considerably lower than that of Boston. Connecting international flights to and from these airports are limited when compared to the services already found at Logan Airport. Supporting infrastructure such as Customs and Border Protection facilities, are also limited at these airports and would require additional staffing by the Transportation Security Administration and Homeland Security agencies to support. Thus, off-Airport alternatives were not considered for the proposed modernization of Terminal E.

Regional airports such as Manchester-Boston Regional Airport, T.F. Green Airport, and Worcester Regional Airport provide critical alternatives to local passengers that otherwise would be driving to Logan Airport for the same service. For the most part, the air service from the regional airports is focused on short haul and medium haul nonstop, jet service to business and leisure destinations as well as to air carrier hubs to access longer haul options. Manchester-Boston Regional Airport and T.F. Green Airport have added new terminals, extended runways, and enhanced bad weather capabilities (Category III Instrument Landing System) that provide critical infrastructure to attract and sustain dependable, jet air service, yet they are unable to attract



significant international service. Massport is currently upgrading Worcester Regional Airport's bad weather technology to Category III as well as airfield taxiway improvements to bring Worcester Regional Airport up-to-par with the other regional airports.

Refer to the 2014 EDR, Chapter 4, *Regional Transportation*, for additional information on airports in the New England region. Annual EDRs provide ongoing context, trends, updates, and information on regional projects.

#### 2.4.12 Resiliency

##### **Summary of Comment Theme: How is Massport designing this project to address climate change and resiliency?**

Massport is a leading public transportation agency in addressing and preparing for the effects of climate change. In 2013, Massport launched a comprehensive resiliency initiative to maximize business continuity in the midst of various human and natural threats. Recent extreme storms, such as Hurricane Sandy (2012), Tropical Storm Irene (2011), and Winter Storm Nemo (2013), demonstrated the link between climate hazards and the resiliency of the built environment, including air and maritime transportation infrastructure. As part of its broader resiliency initiative, Massport conducted a Disaster and Infrastructure Resiliency Planning Study focused on the risks associated with climate change, primarily coastal flooding from extreme storms and sea level rise. The Disaster and Infrastructure Resiliency Planning Study included climate hazard analyses, vulnerability assessments for critical infrastructure, and resiliency intent recommendations for capital improvements and programming. One of the high priority recommendations was for Massport to develop and adopt design guidelines for flood resiliency, including establishing design flood elevations more stringent than required by current building codes for future flood scenarios. In April 2015, Massport published its updated Floodproofing Design Guide, which is based on the analysis and recommendations of the Disaster and Infrastructure Resiliency Planning Study. In this comprehensive Study, Massport identified various flood levels and scenarios likely to occur during storm events. This led to the development of Massport's Floodproofing Design Guidelines which is intended to prepare Massport for extreme flooding events. These guidelines will be followed in the design process for the terminal facility. For more information, visit <https://www.massport.com/media/323694/Massport-Floodproofing-Design-Guide-Revised-April-2015.pdf>.

##### **Summary of Comment Theme: Coordination with the Massachusetts Office of Coastal Zone Management (CZM)**

On April 14, 2016, Massport briefed the Massachusetts Office of Coastal Zone Management (CZM) on the Terminal E Modernization Project and the ongoing climate and resiliency efforts. Massport will continue to coordinate with CZM throughout the design process.



#### 2.4.13 FAA's aRea NAVigation (RNAV) Departure Procedures

**Summary of Comment Theme: We understand the need to modernize Terminal E, but RNAV issues should be addressed before the terminal is expanded.**

The FAA has been actively studying the noise and other environmental impacts of proposed flight path changes to Logan Airport's runways. The Boston Logan Airport Noise Study, or BLANS, has been going on since 2008 and there has been a Logan Airport Community Advisory Committee (CAC) working with the FAA and Massport on providing community representation. Detailed information from the studies can be found at: <http://www.bostonoverflightnoisestudy.com>. That study continues to be the appropriate forum for those discussions. For over three decades, Massport has provided an annual report on the noise environment of Logan Airport, as documented in the EDRs and ESPRs. These annual reports also provide updates on the BLANS study and other FAA initiatives.

In the Secretary's Certificate of Adequacy on the Draft EIR, he acknowledges that the "primary purpose of the RNAV procedures is to increase safety and operational efficiency. As documented in the ESPR and annual EDR submittals, implementation of several of the RNAV procedures have generated increased noise complaints in some towns surrounding Logan Airport and I have received many comment letters from residents of the Town of Hull on this issue. The procedures themselves have resulted in aircraft at higher altitudes although patterns are concentrated over certain communities. I note that the FAA is implementing the RNAV program nationwide. This program is separate from and unrelated to the Terminal E Modernization project."

The FAA NextGen initiative, as noted by the Secretary, is a national effort to improve the daily operations of the entire National Airspace System. This has resulted in changes in flight track and airspace around the country with resultant changes in the noise environment. The FAA prepared an EA that studies the change in RNAV, which enables aircraft to fly on any desired flight path within the coverage of ground- or space-based navigation aids, within the limits of the capability of the self-contained systems, or a combination of both capabilities. RNAV aircraft have better access and flexibility for point-to-point operations.

The FAA acknowledged that there has been much public scrutiny of proposed RNAV routes being implemented nationwide. Massport is collaborating with the FAA on resolving the RNAV issue and coordinating and communicating through the Massport CAC. The FAA understands the concerns expressed by residents in densely-populated areas around metropolitan airports. Changes to air traffic, even when minor, can be objectionable to those living under flight paths. Based on the substantial work that has been done on this issue at Logan Airport, with considerable public review, the various changes that have been implemented will result in a small, cumulative noise benefit to area residents. These procedures are unrelated to, and are unaffected by the Terminal E Modernization Project.

#### 2.4.14 Stakeholder Outreach

**Summary of Comment Theme: All stakeholders need to be fully informed on the Terminal E Modernization Project.**

In accordance with the very purpose of MEPA review, Massport has engaged the public with extensive notice and opportunities for public review of the Terminal E Modernization Project. The public engagement process is a priority of Massport for all of our projects. Since July 2015, Massport has participated in numerous public



meetings and presentations which have been consistently publicized in dual languages. Throughout this process we have received feedback from the public. We value this feedback and have been and will continue to be responsive. Below is a timetable of the many public presentations that Massport has given regarding the Terminal E Modernization Project to community groups, organizations, elected officials and others.

Massport has conducted extensive stakeholder outreach throughout the planning process including:

- Environmental Process Public Meetings (December 2015, August 2016)
- Community Groups (Fall 2015)
- Jeffries Point Neighborhood Association
- East Boston Piers Project Advisory Committee
- Orient Heights Neighborhood Association
- Gove Street Neighborhood Association
- Airport Impact Relief, Inc. (AIR, Inc.)
- Eagle Hill Civic Association
- East Boston Logan Airport Impact Advisory Group (February 2016 - Ongoing) – see below
- Elected Officials/Congressional Staff Briefing (Periodic)
- City of Boston (Periodic)
- Town of Winthrop (Periodic)
- Federal, State, and Local Agencies (Environmental Process)
- Stakeholders/Non-Government Organizations (Periodic)
- Business Community (Periodic)

### **Summary of Comment Theme: Stakeholder Notification**

In addition to giving presentations at community meetings, Massport has sought to notify and engage the public by:

- Publicly posting the Terminal E ENF filing on its website;
- Distributing a press release for notification of the MEPA hearing;
- Providing Spanish language translation at the November 19, 2016 ENF MEPA public meeting and the public briefings;
- Advertising in the East Boston Times, Winthrop Transcript, and El Mundo and El Planeta (in Spanish); and
- Including a Spanish version of the Draft EA/EIR Executive summary in this Final EA/EIR.

### **Summary of Comment Theme: Media Coverage**

Media coverage has been another venue for the public to learn about the Project with articles published in the Boston Globe, Boston Herald, and East Boston Times.



## **Summary of Comment Theme: Coordination with the East Boston Logan Airport Impact Advisory Group (LIAG)**

Massport has engaged in a concerted outreach effort involving various stakeholders including elected officials, municipalities and community groups. In addition to the public outreach conducted by Massport as part of the MEPA process, the public is also engages the East Boston Logan Airport Impact Advisory Group. The group includes Presidents/leaders of 12 East Boston community groups and local elected officials/City of Boston including:

- Neighborhood of Affordable Housing, Inc. (NOAH)
- East Boston Piers Project Advisory Council (Piers PAC)
- Eagle Hill Civic Association
- East Boston Chamber of Commerce
- East Boston Neighborhood Health Center
- Jeffries Point Neighborhood Association
- Airport Impacts Relief, Inc. (AIR, Inc.)
- Vilma's Boutique
- East Boston Greenway Council
- Orient Heights Neighborhood Association
- Gove Street Citizens Association
- Friends of the East Boston Greenway
- Mayor's Office, City of Boston
- City of Boston Transportation Department
- East Boston District City Councilor Sal LaMattina
- East Boston State Representative Adrian Madaro
- East Boston State Senator Joe Boncore





# 3

## Revised Draft Section 61 Findings

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### 3.1 Introduction

As directed by the Secretary of the Executive Office of Energy and Environmental Affairs' September 16, 2016 Certificate of Adequacy on the Draft Environmental Impact Report (EIR), this Final Environmental Assessment (EA)/EIR for the Terminal E Modernization Project includes revised draft Section 61 Findings. The mitigation commitments are outlined by phase of the Terminal E Modernization Project implementation. Mitigation measures include:

- Overall Project benefits;
- Specific operational benefits;
- Site planning and sustainable design/greenhouse gas reduction measures;
- Surface transportation measures;
- Air quality measures;
- Noise measures;
- Stormwater management;
- Water and wastewater;
- Soil and groundwater; and
- Construction period mitigation measures.

All the Project benefits and mitigation commitments are documented in the revised Section 61 Findings noting which greenhouse gas reduction measures are confirmed and which will continue to be evaluated during the design process.

**DRAFT PROJECT § 61 FINDINGS FOR TERMINAL E MODERNIZATION AT BOSTON-LOGAN INTERNATIONAL AIRPORT**

**PROPOSED RESOLUTION AND VOTE OF THE BOARD OF THE MASSACHUSETTS PORT AUTHORITY IN COMPLIANCE WITH M. G. L. c. 30, § 61**

WHEREAS, Terminal E, the international terminal of Boston-Logan International Airport (“Logan Airport”) was originally constructed in 1974 with twelve (12) aircraft gates, and served 1.4 million passengers annually; and

WHEREAS, international travel demand at Logan Airport has grown substantially over the past four decades, and particularly in the past three years, and current forecasts project that Logan Airport will serve eight million international passengers annually by 2030 or sooner; and

WHEREAS, this growth of international demand at Logan Airport has occurred without any significant improvements to Terminal E; and

WHEREAS, current conditions at Terminal E, including the shortage of available gates, result in severe congestion inside the terminal and at the curbs and roadways associated with Terminal E, as well as extended aircraft taxi times and associated idling of aircraft in the airside areas nearest the terminal; and

WHEREAS, by adding, in two phases, a total of seven new gates to Terminal E (three of which were already approved under the Massachusetts Environmental Policy Act (MEPA) in 1996, but were never constructed), and by extending the existing concourse, terminal core, and terminal roadway frontages (collectively, the “Project”), implementation of the Project will better accommodate the current and projected increased demand for international travel that is expected to occur whether or not the Project is implemented; and

WHEREAS, implementation of the Project could also reduce aircraft-related ground noise and air pollutant emissions by enabling aircraft to taxi directly to Terminal E and shut down their engines, rather than idling on the apron or park remotely; and

WHEREAS, implementation of the Project could also enhance curbside and roadway access to the terminal and increase interior terminal space, thereby reducing noise and emissions from ground transportation, as well as delays for the traveling public; and overall congestion inside Terminal E; and

WHEREAS, implementation of the Project will better accommodate the current and projected increased demand for international travel that is expected to occur whether or not the Project is implemented; and

WHEREAS, on October 30, 2015, the Authority filed an Environmental Notification Form (“ENF”) pursuant to the Massachusetts Environmental Policy Act (“MEPA”), proposing the Terminal E Modernization Project for the purpose of making certain enhancements to Terminal E, and on December 16, 2015, the Secretary of the Executive Office of Energy and Environmental Affairs (the “Secretary”) issued a Certificate and Scope for the Project environmental studies under MEPA.

WHEREAS, on September 16, 2016, the Secretary issued a Certificate on the Draft EIR stating that “As Secretary of Energy and Environmental Affairs, I hereby determine that the Draft Environmental Impact Report (DEIR) submitted on this project **adequately and properly complies** with the Massachusetts Environmental Policy Act (MEPA; M.G.L. c.30, ss.61-621) and with its implementing regulations (301 CMR 11.00). Consistent with Section 11.08 (8)(b)(2)(b) of the MEPA regulations, I am requiring the Proponent to file responses to comments on the DEIR and draft Section 61 Findings. The responses to comments and draft Section 61 Findings shall be filed, circulated, and reviewed as a Final Environmental Impact Report (FEIR)”.

**NOW THEREFORE BE IT RESOLVED AND VOTED:**

- A. The Authority hereby finds that: (a) the selection and implementation of the Project’s Preferred Alternative and assessment of environmental impacts associated with the Project are properly and adequately described and evaluated in the EA/EIR; (b) the description of such environmental impacts set forth in said documents is adopted as a specific finding herein; and (c) by implementing the mitigation measures and environmentally beneficial measures set forth in the EA/Final EIR, as modified by and as authorized and directed by this resolution, all practicable means and measures will be taken to minimize damage to the environment. In making this finding, the Authority has considered reasonably foreseeable climate change impacts and effects, including greenhouse gas emissions and potential sea level rise.
- B. The Authority hereby further finds and determines that the improvements constituting the Preferred Alternative for the Project, as set forth in the EA/EIR, will enhance the operation of Logan Airport and better serve the travelling public.
- C. The Authority hereby makes the findings set forth below in accordance with M. G. L. c.30, § 61, and hereby authorizes and directs the CEO/Executive Director to implement the measures described herein:

**1. Overall Project Benefits**

Implementation of the Project itself is, in many ways, an environmentally beneficial measure, because it will have the overall effect of reducing air emissions and ground noise impacts associated with the operation of Terminal E. In addition, with the exception of the temporary environmental impacts during its construction, described below, no significant adverse environmental impacts resulting from the implementation of the Project have been identified.

The Project and its associated program elements will offer significant environmental and operational benefits including:

- Seven new aircraft gates (up to four during Phase I of the Project and three during Phase II of the Project) equipped with 400 Hz of power and pre-conditioned air will allow aircraft to plug-in at a gate rather than be serviced remotely. This will reduce the need for on-board engine/APU operation; thereby reducing aircraft air emissions, greenhouse gas (GHG) emissions, and energy consumption.
- The improvements to the terminal will be sited, designed, and constructed to serve as a noise barrier to the adjacent East Boston neighborhoods and Memorial Stadium Park, to the southwest of the North Cargo apron, where one does not currently exist.
- The roadway and curb improvements will improve vehicle flow and high occupancy vehicle (HOV) access at Logan Airport, thereby reducing vehicle emissions and vehicle miles traveled (VMT) at and to Logan Airport.
- Building a direct, weather-protected pedestrian connection to the MBTA Blue Line Airport Station to Logan Airport, thereby improving accessibility to and from Logan Airport. (Phase II of the Project).
- Sustainable design, construction, and operations guidelines will be implemented, which will lessen environmental impacts both locally and regionally during the construction phases and during long-term operation of the Project. The program will be designed, constructed and operated to achieve Leadership in Energy and Environmental Design (“LEED”) certification. The Authority will strive to achieve a LEED Silver rating or better as well as the goals of the Commonwealth of Massachusetts “LEED Plus” program (established by the Commonwealth’s Executive Office for Administration and Finance).

## **2. Specific Operational Benefits**

Current conditions in the terminal are severely constrained by the existing facility and will only further deteriorate in the future, as the forecasted international passenger demand is realized.

The improvements proposed in this Project will provide several operational benefits, including:

- The Terminal E expansion has been sited and will be designed to act as a noise barrier to the adjacent East Boston neighborhoods and Memorial Stadium Park to the southwest of the North Apron. The new structures will have a minimum height of 45-ft above ground level.

- Facilitation of efficient management of international flights by allowing those flights to taxi directly to aircraft gates at Terminal E.
- New gates will increase ramp efficiency and reduce movements on North Apron and the need to bus passengers between terminal and remote aircraft parking locations, thereby reducing ground transportation related air emissions and mobile source GHG emissions.
- Improved customer service in the terminal, as enhancement of the terminal will significantly reduce congestion and processing delays; and additional gates at the terminal will also avoid the flight delays that are currently caused both by aircraft waiting for gate availability at Terminal E and by remote parking of aircraft (and accompanying passenger busing).

### **3. Current and Future Terminal E Operations**

Current forecasts demonstrate that the unprecedented growth of international passengers at Logan Airport will continue in the foreseeable future, regardless of whether the proposed improvements are made to Terminal E. The proposed Project will significantly enhance the Authority's ability to efficiently accommodate the current and forecasted international operations and passenger volume through improved terminal, landside, and airside facilities at Terminal E and with reduced environmental impacts.

### **4. Site Planning and Sustainable Design/Energy and Greenhouse Gas Reduction**

The Project site design:

- Makes efficient use of Terminal E and adjacent areas already in active aviation use, and is entirely within Logan Airport's footprint; and
- Improves the efficient use of existing airport access roadways and ground transportation infrastructure; and
- Follows sustainable principles/LEED criteria for siting/sustainable sites (e.g., walking distance to public transportation).

Project benefits related to planning and design include:

- Enhanced pedestrian access to airport facilities from the MBTA Airport Blue Line-Station (as part of Phase II of the Project);
- Siting and design of the building additions buffer the adjacent neighborhoods from aircraft noise;

- A project that will seek LEED certification at the Silver level rating or better and meet or exceed the goals of the Massachusetts LEED Plus program.
- Incorporation of sustainable design in design, construction, and operations including:
  - Improved building envelope (wall insulation of U-0.05, roof insulation of U-0.037, improved glazing of U-0.34, and reduced window to wall ratio of 25%);
  - Improved Air Handling Units;
  - Efficient water loops with reduced water supply temperature and wider return temperatures to reduce demand on the pumping and fan systems;
  - Reduced interior lighting power density of 0.62 W/SF and reduced exterior lighting power of 9.3 kW;
  - The roof design will incorporate materials with a minimum reflectance rating of 0.70 and emittance value of at least 0.75 for a minimum of 75% of the available roof area. Roofing materials will be non-glare to reduce heat island effect;
  - Final design will incorporate infrastructure for collection, storage, and handling of recyclable materials;
  - The contractor will be required to develop a construction waste management plan that requires diversion or reduction of construction waste by at least 75%;
  - Massport will establish a project-specific goal for sourcing materials extracted, harvested, recovered, and or manufactured within New England;
  - The project will be designed to achieve energy efficiencies of a minimum of 20% below the MA Energy Code;
  - The project will include water conservation devices that reduce water use by 20% below code;
  - The terminal extension will include a minimum 25,000 square feet of roof top solar photovoltaics and restroom hot water will be heated using solar units; and
  - The project will incorporate occupancy sensors in all indoor areas to reduce electrical demand;
- In addition, to further reduce GHG emissions Massport commits to evaluating other energy efficiency/greenhouse gas reduction measures as project design progresses.

## 5. Surface Transportation

The Project will make surface transportation operations more efficient at Logan Airport. - There will be some reduction in VMTs at the airport due to a reduction in recirculation of traffic (as part of Phase II of the Project).

- The weather protected pedestrian connector from the terminal to the MBTA Blue Line Airport Station will greatly enhance passenger accessibility at the Airport.

- Roadway and curb improvements which will improve vehicle flow and high-occupancy vehicle access, and reduce air and GHG emissions.

## **6. Air Quality**

There are no adverse air quality impacts associated with the Project. The Project benefits related to air quality include:

- The additional aircraft gates will result in reduced aircraft taxi-delay time due to less congestion in the terminal area; less use of aircraft APUs by alleviating the “hardstanding” of aircraft; the reduction of aircraft tractors, buses, and other ground support equipment (GSE) used to move aircraft, people, and cargo from the aircraft to the terminal.
- The enhancements to the curb will result in reduced curbside motor vehicle idle time, attributable to improved traffic conditions and less congestion in the terminal area; fewer VMT due to the reduction of vehicles re-circulating on the internal Airport roadways; and reduced curb roadway demand and enhanced traffic flows, thereby reducing congestion and dwell time and resulting in related improvements in air quality.
- With respect to the criteria pollutants, the Project is expected to result in a decrease in carbon monoxide (CO) emissions in the area of Terminal E and the associated aircraft apron by approximately 9%, nitrogen oxide (NO<sub>x</sub>) emissions by approximately 44%, and sulfur oxides (SO<sub>x</sub>) emissions by approximately 33% percent. Volatile organic compounds (VOCs) emissions in the project area are projected to decrease by approximately 6% and particulate matter (PM<sub>10</sub> and PM<sub>2.5</sub>) emissions are projected to decrease by approximately 9% percent and 25% percent, respectively.
- With respect to climate change emissions, Massport commits to reduce operational-related carbon dioxide (CO<sub>2</sub>) emissions associated with the Project by a minimum of 30% percent.

## **7. Noise**

There are no perceptible adverse noise impacts associated with the Project. Project benefits related to noise include:

- The design of the terminal expansion, which will wrap around the North Cargo Ramp to the existing Delta Hangar, will result in a reduction of aircraft ground noise levels at Jeffries Point, and other residential areas in East Boston, as well as at East Boston Memorial Park.
- In the Jeffries Point neighborhood, the building shielding/noise barrier provided by the expanded terminal will reduce DNL noise levels from aircraft ground operations



near Terminal E, by 5 to 18 dB for a single aircraft event. The noise shielding component of the Project will also reduce single-event maximum noise levels in Jeffries Point Area by 2 to 15 dB.

- The Project will reduce DNL noise levels from aircraft ground operations near Terminal E, in the Bremen Street area south of Putnam Street to Route 1A, by 3 to 15 dB, primarily due to the noise barrier effect of the proposed seven-gate extension of the terminal and the pedestrian connection to MBTA Airport Station. The noise barrier component of the Project will also reduce single-event maximum noise levels in the Bremen Street area south of Putnam Street to Route 1A by 1 to 11 dB from aircraft ground operations near Terminal E.
- It is expected that there will not be an increase of DNL 1.5 dB in any noise-sensitive areas greater than or equal to DNL 65 dB near the terminal.

## **8. Stormwater Management**

There are no adverse stormwater management impacts associated with this Project. Massport holds a National Pollutant Discharge Elimination System (NPDES) permit for stormwater discharges at Logan Airport. Massport's Stormwater Pollution Prevention Plan (SWPPP) addresses stormwater pollutants. The areas of Terminal E proposed for improvements are already paved and the proposed Project would not result in increased impervious surface or pollutant-generating activities on the apron or ramp. Although the distribution of stormwater will shift from apron collection roof collection, the aggregate amount of stormwater and overall stormwater runoff quality will be unchanged. The Authority's stormwater discharge will be appropriately modified as necessary to accommodate the new roof area drainage. As part of the facility upgrades, the stormwater management system will be replaced and upgraded in the project area, resulting in water quality benefits.

## **9. Water and Wastewater**

No direct or indirect water quality impacts are anticipated from the Project. The Project will connect to the MWRA wastewater system, which is ultimately treated at the Deer Island Sewage Treatment Plant in Boston Harbor. The Project is consistent with Massport's efforts to reduce the amount of wastewater generated through water efficiency strategies.

## **10. Soil and Groundwater**

The Project will have no impact on soil or groundwater, as the Project is located on previously developed land already in use. Soil and groundwater handling and management during construction will be conducted in accordance with the appropriate submittals (i.e., Release Abatement Measures, Immediate Response Actions, and/or Safety Management Plans), including appropriate permits and permissions as appropriate.

## 11. Construction Period Impacts

The Authority will require all contractors to comply with certain construction guidelines that relate to:

- The Authority has committed to diverting and/or reducing (through recycling) construction waste to landfills by at least 75 percent;
- In accordance with DEP's Clean Air Construction Initiative, the Authority will require that construction contractors to install emission control devices such as diesel oxidation catalyst and/or particulate filters on certain equipment types (*i.e.*, front-end loaders, backhoes, excavators, cranes, and air compressors);
- Retrofitting of certain construction equipment types with emission controls such as diesel oxidation catalyst and/or particulate filters;
- Selection of high efficiency "temporary" space heating /cooling systems;
- Remediate subsurface contamination, as necessary, if encountered during tank removals or other excavation activities as part of construction (in compliance with the Massachusetts Contingency Plan);
- Soil treatment and reuse on site as part of a Soil Management Plan;
- Voluntary compliance with the requirements of City of Boston noise ordinances, including restrictions on the types of equipment that can be used, and limitations on the hours when certain activities can take place (the City of Boston noise ordinance establishes restrictions during the construction hours between 6:00 PM and 7:00 AM);
- Construction worker vehicle trip limitation, including requiring contractors to provide off-airport parking and use of high-occupancy vehicle transportation modes for employees;
- Implement Indoor Air Quality (IAQ) Management Plan during construction; and
- In accordance with DEP's Clean Air Construction Initiative, the Authority requires that construction contractors install emission control devices on certain equipment types (*i.e.*, front-end loaders, backhoes, excavators, cranes, and air compressors).

The Authority will employ a team of on-site resident engineers and inspectors to monitor all construction activities related to the Project, including the following management practices:

- Full coordination with all relevant agencies including the FAA, DEP, MWRA, City of Boston, BWSC, and utility companies, as appropriate.
- Preparation of detailed pre-construction plans for traffic maintenance, construction specifications for contractors, and coordinated scheduling of all construction activities (as well as the other measures noted in the ground transportation sections above).
- Construction mitigation measures in a number of categories are described below.

#### Construction Traffic Operations

- It is expected that there will be a maximum of approximately 60 daily construction truck trips associated with this Project.
- Construction-related traffic will be required to access and egress through the North Gate using only state and federal highways and the Airport roadway network. Construction-related traffic on local East Boston roadways will be prohibited.
- Construction employee parking spaces will not be permitted on the construction site nor will provisions be made for them elsewhere on-airport with the exception of a small number of spaces for supervisory personnel. The Authority will require contractors on this Project to implement construction worker vehicle trip management measures, including requiring off-Airport parking and HOV transportation modes for contractor employees.
- Police details will be employed, as needed, to manage traffic and ensure public safety.

#### Construction Air Quality

Construction emissions will be reduced and controlled by mandatory contractor implementation of the following best practices:

- Encouragement for construction-worker site access/egress using dedicated buses and vans;
- Reduction of exposed erodible surface areas to the extent feasible;
- Covering of exposed surface areas with pavement or vegetation in an expeditious manner and periodic watering;
- Minimizing equipment idling times;
- Reduction of on-site vehicle speeds;

- Ensuring contractor implementation of appropriate fugitive dust and equipment exhaust controls;
- Use of low- or zero-emissions equipment to the maximum extent feasible; and
- Use of covered haul trucks during materials transportation.

### Construction Noise

The construction of the Project will generate some short-term noise with sound levels typical of those associated with construction activities. The sound levels from construction activities will employ measures to comply with the City of Boston's noise standards, therefore, no additional noise mitigation for construction is required. Construction equipment will use noise-reduction measures, including the use of proper mufflers, measures to limit noise from truck traffic, and will primarily operate only during daylight hours (7:00 a.m. to 7:00 p.m.).

## **12. Timing and Responsibility for Implementation**

The sustainability and energy reduction/greenhouse gas reduction measures will be implemented in the first phase of the Project, All other mitigation commitments, will also be implemented in the first Phase and second Phase, except for extending the full width of the terminal/sound barrier (3 additional gates) and the pedestrian connector and the curb improvements to be implemented in Phase II. All measures described herein will be completed upon full construction of the Project.

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# 4

## Distribution

Consistent with the Secretary’s Certificate on the Environmental Assessment (EA)/Draft Environmental Impact Report (DEIR) (see Chapter 2), the Massachusetts Environmental Policy Act (MEPA) Regulations and the Massachusetts regulation 301 CMR 11.16 (3), and the National Environmental Policy Act (NEPA), this Final EA/EIR is being circulated to each person or agency that commented on the EA/DEIR and any agency or person that requested a copy during the comment period.

This Final EA/EIR is also available on Massport’s website (<http://www.massport.com/environment/environmental-reporting/environmental-filings/>). Persons may request printed copies of this Final EA/EIR from Stewart Dalzell, telephone (617) 568-3507, or via email at: [sdalzell@massport.com](mailto:sdalzell@massport.com). Printed copies of this Final EA/EIR are available for review at the public libraries listed below.

The following is a list of recipients of this Final EA/EIR, which include representatives of governmental agencies, community groups, and local residents interested in activities at Logan Airport. The ‘P’ indicates that Massport sent a printed copy, and the ‘L’ indicates that Massport sent a letter or email providing notification of availability of the Final EA/EIR.

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# Appendices

Appendix A	Draft Environmental Assessment/ Draft Environmental Impact Report Executive Summary (English)
Appendix B	Draft Environmental Assessment/ Draft Environmental Impact Report Executive Summary (Spanish)
Appendix C	Energy and Greenhouse Gas Assessment
Appendix D	Other Comment Letters
Appendix E	Wastewater Memorandum

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Appendix A  
Draft Environmental  
Assessment/Environmental Impact  
Report Executive Summary (English)

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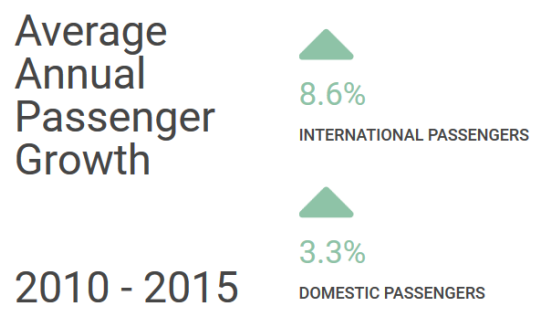
# Executive Summary

The Massachusetts Port Authority (Massport) is proposing to modernize Terminal E at Boston-Logan International Airport (Logan Airport or Airport), to accommodate current and forecasted international passenger demand. This joint federal Environmental Assessment/state Draft Environmental Impact Report (EA/DEIR) fulfills the requirements of the National Environmental Policy Act (NEPA) and the Massachusetts Environmental Policy Act (MEPA).

**When it was built in 1974, Terminal E served 1.4 million passengers. In 2015, it served 5.5 million. Despite this growth, Massport has not added any new gates to Terminal E since it was built. The shortage of available gates, results in extended aircraft taxi times, prolonged idling of aircraft on the apron and delays in passenger processing and a congested international Terminal E.**

Modernizing Terminal E would have environmental benefits to neighboring communities. The Terminal E Modernization Project is anticipated to achieve the following:

- Accommodate the existing and forecasted growth in the international market to reduce delays for the traveling public, improve apron operating efficiencies, while reducing noise and emissions from ground operations;
- Add seven new gates to the terminal, three of which were approved in the late 1990s but never built because of the downturn in aircraft operations worldwide related to the events of September 11, 2001;
- No significant noise increase within the DNL 65 dB, and a reduction of noise from aircraft ground operations on the North Apron, for example, by up to 17 decibels (dB) for a single event (i.e., from a single portion of an operation) by constructing the terminal extension to serve as a noise barrier;
- Enable international flights to taxi directly to 400-hertz (Hz) power at Terminal E gates and shut down their engines, rather than idling on the apron as they often do now;





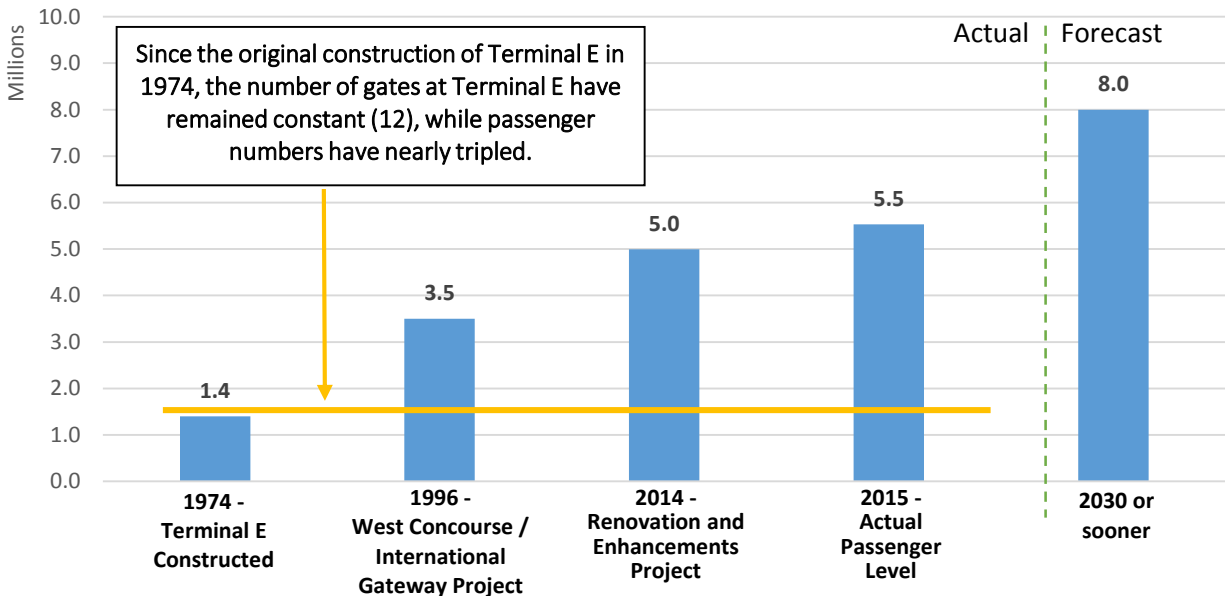


- The number of airside busing operations would decrease by 94% and airside busing vehicle miles traveled would decrease by 97%;
- Reduce aircraft towing by 49%;
- Reduce average aircraft taxi-time by 20%;
- Reduce use of on-board aircraft power units by 74%;
- Reduce vehicle curbside idle time by 13%;
- Reduce airside operational-related (i.e., aircraft, ground support equipment, and ground access vehicles) greenhouse gas emissions by 15%;<sup>1</sup>
- Reduce overall project GHG emissions (airside, curbside and new terminal) by 8%;
- Reduce nitrogen oxide (NO<sub>x</sub>) emissions by 44%;
- Reduce particulate matter (PM<sub>2.5</sub>) by 25%;
- Provide a weather-protected direct pedestrian connection between a terminal (Terminal E) and the Massachusetts Bay Transportation Authority (MBTA) Blue Line Airport Station;
- Reduce relative energy consumption by ensuring consistency with Massport's Sustainable Design Standards and Guidelines, designing to meet Leadership in Energy and Environmental Design (LEED®) Silver standards, as well as incorporating other energy conservation measures into Project design; and
- Reduce vehicle miles traveled by processing passengers more efficiently and providing curbside improvements.

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<sup>1</sup> Does not include potential reductions from building energy performance.

**Figure 1-1: Terminal E Historical International Passenger Levels and Terminal Improvements Timeline**



Sources: Massport, 2013; InterVISTAS, 2016

Notes: The Terminal E Renovation and Enhancements Project will accommodate A380 aircraft, but no new gates will be constructed as part of that ongoing project. Estimated construction completion for this project is July 2017.

The Project would modify airside apron areas and construct taxilanes to accommodate the new gates, and terminal improvements and supporting facilities to include additional space for passenger holdrooms, concourse circulation, concessions, passenger processing (including U.S. Customs and Border Protection facilities), and baggage screening. The reconfiguration of the roadways in front of and adjacent to the terminal would be required to accommodate the modernized terminal configuration. The Project would also construct a weather-protected pedestrian connection between Terminal E and the MBTA Blue Line Airport Station.

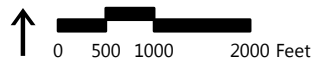
The Terminal E Modernization Project is in the planning stages with construction expected to begin in 2018. The location of the Project in relation to the community is shown in **Figure 1-2**.



**FIGURE 1-2 Logan Airport Physical Setting**

**Terminal E Modernization Project**

— Select Roadways



## 1.1 Purpose of the Project

**The purpose of the Project is to modernize Terminal E, entirely within the Airport footprint, to efficiently accommodate current and projected international operations and passengers, and to meet regional economic goals, while minimizing community and environmental impacts.**

The Terminal E Modernization Project would accommodate growth in the international air service market and help alleviate current delays as well as the adverse effects of that growth. Without the Project, Logan Airport would continue seeing growth in international passengers and aircraft operations, but there would be no significant changes to Terminal E interior or exterior facilities. Because gate service facilities would be inadequate to handle the increases when an aircraft touches down and no gate is available, more arriving aircraft would wait with engines idling until a gate is clear. If no gate becomes available, the aircraft is directed to remotely park or “hardstand” away from the terminal at a North Apron aircraft parking area. Passengers subsequently deplane on the apron with Massport busing passengers between the aircraft and the terminal. Remote hardstands routinely occur during peak periods under existing conditions, and without additional gates to accommodate the expected growth in demand for international air service at Logan Airport; such occurrences will increase in frequency.



Passenger crowding in Terminal E and busing from hardstand locations



Remote hardstand operations require the additional use of energy from aircraft idling or the use of on-board auxiliary power units as well as the use of shuttle buses that transport passengers to and from the terminal. North Apron hardstands are closer to the East Boston neighborhood than the terminal. Shuttling passengers to and from the terminal also creates conflicts with baggage and ground support equipment movements around the aircraft and on the ramp, consequently increasing times for boarding and arriving passengers. Within the terminal, existing passenger processing facilities are not adequate to accommodate the increase in service that is projected to occur by 2030 or sooner. Without improvements, this would result in increasingly long wait times at ticketing and security for departing passengers and delays at Customs and Border Protection for arriving passengers, and additional congestion at the curb and roadway.





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## 1.2 Increased Passenger Growth at Terminal E

Logan Airport has been one of the fastest growing major U.S. airports over the past four years. From 2010 to 2014, Logan Airport experienced a growth of 32% in overall passenger volumes. Logan Airport broke another record in 2015 with 33.4 million passengers served. The international segment of the air service market has seen an even higher percentage of growth than the domestic market during this period, as new nonstop international flights have doubled in the past ten years to accommodate this demand.

- Recent forecasts show that unprecedented growth will continue, and will reach 8 million annual international air passengers by 2030 or sooner.
- Terminal E in 2015 had nonstop service to 53 international destinations, up from 21 in 2012.

**This historical growth at Logan Airport has occurred without an increase in gates, demonstrating that demand at the Airport is driven by economic and market factors, not airport improvements.** Massport has not added any gates at Terminal E since the initial 12 gates were constructed in 1974. Logan Airport will need to handle the increased passengers and operations whether or not Massport modernizes Terminal E.

Terminal E will require a total of 19 gates to support international operations, seven more gates than exist today, to efficiently accommodate the forecasted volume of 8 million annual international passengers expected to pass through Logan Airport by 2030 or sooner.

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## 1.3 Logan Airport's Regional Economic and Market Context

Logan Airport is the primary airport providing international service for the New England region. Logan Airport operates within a larger network of New England regional airports that include Boston-Manchester Regional Airport (New Hampshire) and T.F. Green Airport (Rhode Island). For the most part, air service from these two regional airports is focused on short haul and medium haul nonstop, jet service to business and leisure destinations as well as to air carrier hubs to access longer haul options. The demand for international travel to these regional locations is considerably lower than that of Boston, which is a major international destination.

Connecting international flights to and from these regional airports are limited when compared to the services already found at Logan Airport. Supporting infrastructure, such as Customs and Border Protection facilities, are also limited at these airports.

95,000

Direct and indirect jobs

\$13.3 Billion

Total economic activity per year

\$1 Billion

Amount spent by overseas visitors per year (2014)

Source: Massport and InterVISTAS, 2015



With over 13 billion dollars a year in total economic activity, Logan Airport is an economic engine contributing many jobs and significant economic activity<sup>2</sup> to the Boston metropolitan area and the larger New England region.

International travel and business is central to the Massachusetts and regional economy. The city of Boston is a world-class city with companies that do business internationally and are increasingly interconnected to the global economy. Non-stop travel to global points is a central component of this new economy.

The Boston metropolitan area is a central player in the nation's finance, technology, biotechnology, healthcare, and education sectors. As one of the nation's largest population and economic centers, the City of Boston is a mature market with a per capita income of \$34,770, approximately 18% higher than the nationwide per capita income of \$28,555.<sup>3</sup>

Such favorable economic conditions drive Logan Airport's sustained demand for international air travel.

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## 1.4 Alternatives Considered and Proposed Action

Massport evaluated several options for accommodating the forecasted growth in international passengers and operations. Logan Airport serves as a major origin and destination airport and acts as the primary international gateway for the New England Region. Other regional airports serve their local service area and provide limited international service, mainly to vacation destinations. However, Logan Airport is best positioned in terms of access, competitive airfares, and available air service to meet the demands of the core international market for the Boston area. Therefore, to meet the project purpose and need, build alternatives focus on meeting the demand at Logan Airport. Alternatives were evaluated according to their ability to meet the Project purpose and need, as well as considerations such as airline network requirements, space requirements, layout efficiency, efficiency of airfield operations, ability to buffer noise, efficiency of traffic operations, overall cost, and constructability. All build alternatives considered include seven new gates with different configurations of the concourse and interior amenities. Alternatives included building a terminal extension with separate core functions, building a satellite terminal accessed through an underground walkway, building a concourse only with no processing facilities, and building a terminal extension as an expansion of the terminal core. All alternatives evaluated would be located on previously developed land within the Airport boundary, and are expected to have very similar beneficial environmental effects. The Project reuses space already in aviation use.

The Terminal E Modernization Project (see **Figure 1-3**) would extend the existing concourse, terminal core, and terminal roadway frontages. The concourse extension would connect to the Gate 12 area of the existing terminal. The extension of the terminal core would include additional ticketing, airline offices, bag screening, and bag make-up facilities, and would have the potential to allow separate Customs and Border Protection facilities including Immigration Control and Bag Claim/Customs facilities. The roadways in front of Terminal E would be upgraded to accommodate the new building configuration and provide for efficient curbside operations along the new terminal frontage for passenger pick-up and drop-off for both high-occupancy vehicles (e.g., buses and shuttles) and private vehicles. The footprint of the new terminal and roadways would require

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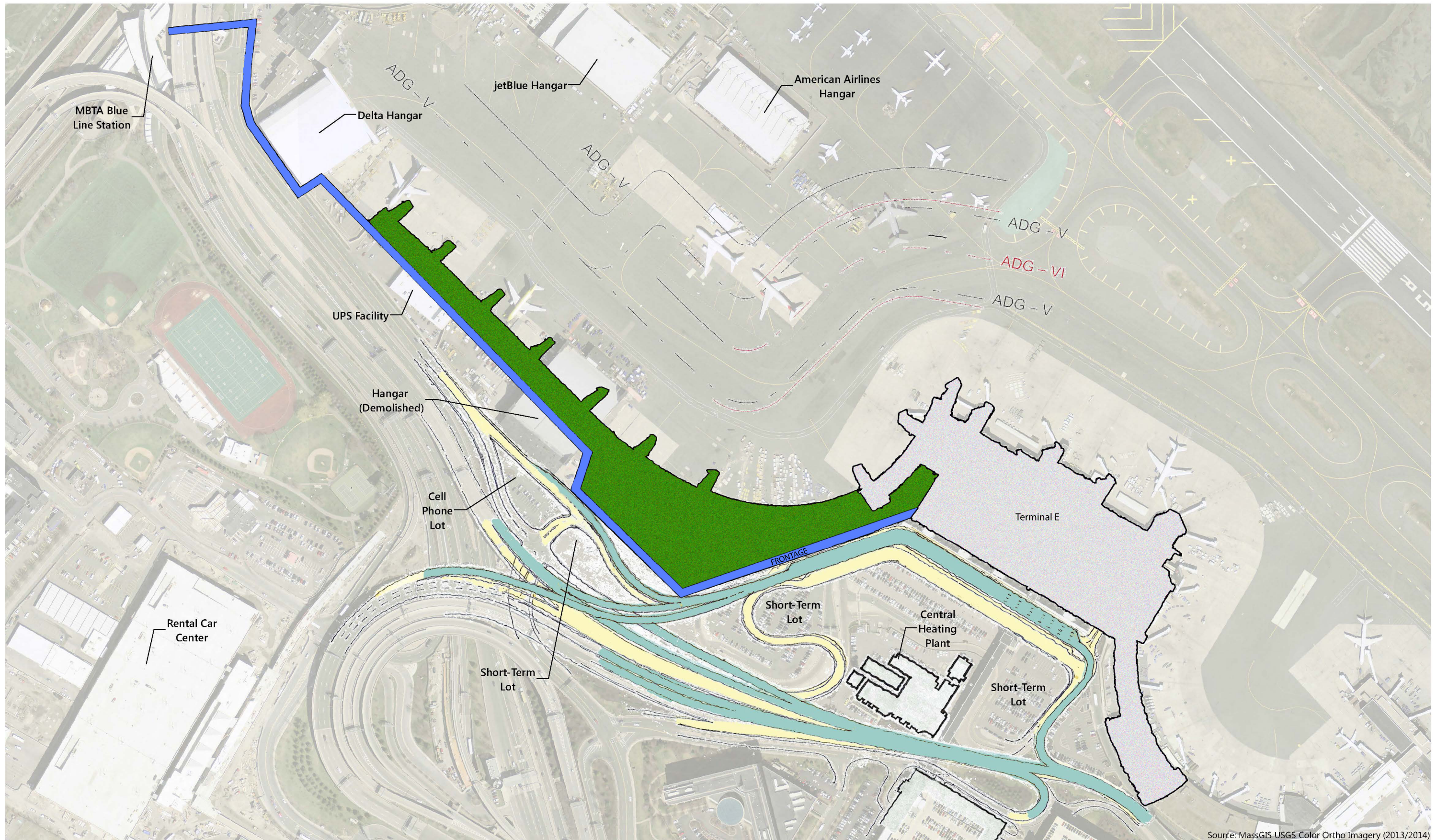
<sup>2</sup> Massport and InterVISTAS, 2015

<sup>3</sup> United States Census Bureau. 2014. *2010-2014 American Community Survey 5-Year Estimates (for the Boston-Cambridge-Newton, MA-NH Metropolitan Statistical Area)*.



some relocation of existing facilities and associated operations including the gas station and United Parcel Service (UPS) airside facilities. These would be relocated on-Airport. The Terminal E Modernization Project would provide a direct passenger connection from the terminal to the MBTA Blue Line Airport Station. This weather-protected passenger connection underscores Massport's commitment to accommodating and promoting the use of transit and high-occupancy vehicle modes of transportation Airport-wide.





Source: MassGIS USGS Color Ortho Imagery (2013/2014)

**FIGURE 1-3 Proposed Action**

**Terminal E Modernization Project**

- Proposed Terminal Building
- Arrival Level Roadways
- Existing Terminal Building
- Departure Level Roadways
- MBTA Connector





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### 1.4.1 Phasing of the Project

Based on interim operational demands and available budget, Massport is proposing that the Project be constructed in phases. Construction of the Terminal E Modernization Project is planned to commence in 2018 with the first phase complete by 2022. Phase 1 would include the construction of four new gates to relieve the existing deficiencies and accommodate interim growth. The interim phase provides a measured approach to the terminal extension, providing facilities, as they are needed, to mitigate the effect of international passenger demand fluctuations. The entire Project would be complete and operational by 2030.

### 1.4.2 Environmental Benefits of the Proposed Action

#### Proposed Action vs. No-Action Alternative

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 Passenger Processing

 Noise

 Air Pollutants

 Greenhouse Gas Emissions

 Vehicle Miles Traveled

Massport is proposing the Terminal E Modernization Project to efficiently accommodate future demand for the international air service market at Logan Airport and mitigate the adverse effects of related growth. **The additional gates and new terminal area would provide noise buffering and reduce the need for aircraft engine idling on the apron.**

Massport has seen a significant reduction in air pollutant emissions Airport-wide due to an industry shift to larger and more efficient aircraft that are quieter, emit fewer pollutants and carry more passengers per trip than ever before. In 2000, Logan Airport accommodated approximately 27 million passengers on 490,000 flights compared to over 33.4 million

passengers on 373,000 flights in 2015. As documented in the *2011 Logan Airport Environmental Status and Planning Report (ESPR)* and *2014 Environmental Data Report (EDR)*, this 24% decrease in the total number of flights since 2000 has been paralleled by substantial decreases in noise and air emissions impacts during the same time period.

The Terminal E Modernization Project would reduce emissions by accommodating the increase in operations with improvements that allow aircraft to plug into a gate and operate with less idle time on the North Apron and allow the Airport to operate with fewer delays within Terminal E. The construction of the terminal extension would result in substantial noise buffering of operations on the apron resulting in ground noise reduction of up to 17 dB in some locations for a single aircraft operation event. Similarly, emissions from airside operations would be reduced due to the shorter aircraft idle time on the apron. With respect to the criteria pollutants, carbon monoxide (CO) emissions would decrease by 9%, NO<sub>x</sub> emissions would decrease by 44%, and sulfur oxides (SO<sub>x</sub>) emissions would decrease by 33%. Volatile organic compounds (VOCs) emissions would decrease by 6% and PM<sub>10</sub> and PM<sub>2.5</sub> emissions would decrease by 9% and 25%, respectively. With respect to climate change emissions, airside operational-related carbon dioxide (CO<sub>2</sub>) emissions would decrease by 15%. By processing passengers more efficiently and providing curbside operational improvements, the Project is also expected to reduce overall vehicle miles traveled and reduce emissions from traffic.



The Project would provide an additional benefit with a direct passenger connection from the terminal to the MBTA Blue Line Airport Station. This direct, weather-protected passenger connection underscores Massport’s commitment to connectivity and passenger convenience.

## 1.5 NEPA/MEPA Compliance

The Terminal E Modernization Project is subject to both federal and state environmental regulations. For this Project, these processes are conducted jointly. The Federal Aviation Administration (FAA) has determined that the Proposed Action requires an EA under NEPA, due to changes to the Airport Layout Plan that would result from the Project’s implementation.

The Project also required the preparation of an Environmental Notification Form (ENF) under MEPA (301 CMR 11.03(6)(b) 6) as an “expansion of an existing terminal at Logan Airport by 100,000 square feet or more.” Under the MEPA thresholds, an DEIR is not automatically required. Massport filed an ENF for the Project in October 2015 (EEA #15434). No major Project changes have occurred since the ENF was filed. The MBTA pedestrian connection originally conceived in the ENF as part of Phase 1, would be built as part of Phase 2 due to planning and budget constraints.

On December 16, 2016, the Secretary of the Executive Office of Energy and Environmental Affairs issued a Certificate on the ENF that required the preparation of a focused DEIR for the Project to address specific issues relating to resiliency, greenhouse gases, air quality, and noise. The proposed scope for the EA, the Secretary’s Certificate, and public comments on the ENF helped guide the contents and analyses included in this joint EA/DEIR. This EA/DEIR describes the Proposed Action; identifies alternatives considered; and documents potential environmental effects, positive and negative, associated with Project construction and operation.

**The Project would enhance the passenger experience and is expected to result in environmental benefits for noise and air emissions compared to the No-Action Alternative.**

**Table 1-1** summarizes the environmental benefits of the Project. This EA/DEIR describes the Proposed Action, identifies alternatives considered, and documents the potential environmental effects associated with constructing and operating the proposed Terminal E Modernization Project at Logan Airport.

**Table 1-1 Summary of Environmental Benefits of Terminal E Modernization**

Environmental Resource <sup>1</sup>	Project Benefit
Noise and Noise-Compatible Land Use (NEPA)	The Terminal E Modernization Project would improve noise conditions from ground operations as compared to the future No-Action Alternative, as the terminal extension would act as a noise barrier to the community.
Surface Transportation (MEPA)	The Terminal E Modernization Project would reduce overall vehicle miles traveled as compared to the future No-Action Alternative due to reduction in recirculation of traffic at the terminal curb. The Project would not result in any reduction in level of service on any Airport roadways. There is sufficient capacity on the Massachusetts Bay Transportation Authority (MBTA) Blue Line to support any increase in passenger loads.



**Table 1-1 Summary of Environmental Benefits of Terminal E Modernization (Continued)**

<b>Environmental Resource<sup>1</sup></b>	<b>Project Benefit</b>
<b>Air Quality (NEPA/MEPA)</b>	The Terminal E Modernization Project <u>would reduce criteria pollutant emissions</u> when measured against the No-Action Alternative through reduced usage of aircraft engines, auxiliary power units, and ground support equipment. The Terminal E Modernization Project would be in conformance with the General Conformity Rule, established under the Clean Air Act, as related emissions would be within <i>de minimis</i> thresholds.
<b>Natural Resources and Energy Supply (NEPA)</b>	The Terminal E Modernization Project would not have a significant adverse impact on natural resources or energy supplies because there is sufficient capacity available to support the operation of the new building systems.
<b>Climate/GHG Emissions (NEPA/MEPA)</b>	The Terminal E Modernization Project would <u>reduce greenhouse gas emissions</u> by decreasing the number of instances when aircraft use auxiliary power units as well as ground support equipment and airside ground access vehicles.
<b>Water Resources (including Wetlands, Floodplains, Surface Waters, Wastewater, Groundwater, and Wild and Scenic Rivers) (NEPA)</b>	No direct or indirect water quality impacts are anticipated from the Terminal E Modernization Project. The Project Area is located on previously developed land in Airport use. The areas proposed for the Terminal E Modernization Project are already paved, and the Project would not result in increased impervious surfaces or pollutant-generating activities on the apron or ramp.
<b>Hazardous Materials, Solid Waste, and Pollution Prevention (NEPA)</b>	The Terminal E Modernization Project would not have a significant adverse impact related to hazardous materials or solid waste. On-site contamination encountered would be assessed and if necessary, remediated prior to and during construction activities as per the Massachusetts Contingency Plan.
<b>Coastal Resources (NEPA)</b>	The Terminal E Modernization Project is limited to paved areas of the airfield and terminal that are already in use for aviation purposes, and would not change the manner of use or quality of land in the coastal zone.
<b>Land Use (NEPA)</b>	The Terminal E Modernization Project would not result in an adverse impact to land use, as it would not change existing land uses on- or off-Airport. Massport would conduct all proposed work within the existing Airport footprint on land that is currently paved and in aviation use.
<b>Socioeconomics, Environmental Justice, and Children’s Health and Safety Risks (NEPA)</b>	The Terminal E Modernization Project would occur entirely within the Airport boundary, and would not cause a disproportionately adverse impact to economic vitality, disadvantaged populations, or the health and safety of children within neighboring communities, including those identified as Environmental Justice communities. The Project would not change any land uses, and would include measures to reduce air emissions and community noise impacts.
<b>Department of Transportation Act, Section 4(f) (NEPA)</b>	The Terminal E Modernization Project would not result in a direct or constructive use of a Section 4(f) property. The Project is located entirely within the Airport boundary, and no construction activities would take place outside the Airport property.
<b>Visual Resources/Visual Character Effects (including Light Emissions) (NEPA)</b>	The Terminal E Modernization Project would not adversely impact the visual character of the Project Area or surrounding areas. The Project would be consistent with the existing architectural character of the existing Terminal E building, and would not be highly visible from nearby residential communities due to the positioning of adjacent roadways and other existing on-Airport buildings. Massport will shield lighting associated with the Proposed Action, where feasible, to limit uncontrolled light pollution.

<sup>1</sup> Environmental resource categories as specified in FAA NEPA Orders 1050.1F and 5050.4B as well as MEPA regulations under 301 CMR 11.00.

## 1.6 Project Commitments

As part of the Terminal E Modernization Project, Massport commits to implementing the following measures, as summarized in **Table 1-2**.

**Table 1-2 Summary of Terminal E Modernization Beneficial Measures**

<b>Element</b>	<b>Beneficial Measure</b>
Project Design Features	<ul style="list-style-type: none"> <li>■ The extended terminal concourse would serve as a noise barrier to nearby residences and neighborhood recreational areas</li> <li>■ The new gates with 400-hertz (Hz) power and pre-conditioned air would allow aircraft to plug in and reduce air emissions from auxiliary power units</li> <li>■ The new gates would increase the operational efficiency of the North Apron and reduce the need for remote hardstand use and busing passengers to the terminal</li> <li>■ The Project includes a direct weather protected pedestrian connection between the Massachusetts Bay Transportation Authority (MBTA) Blue Line Airport Station and Terminal E, which would improve the passenger experience and convenience</li> </ul>
Sustainability	<ul style="list-style-type: none"> <li>■ The Terminal E Modernization Project would be built to Leadership in Energy and Environmental Design (LEED®) Silver standards, or higher</li> <li>■ As design proceeds, Massport will consider the following: <ul style="list-style-type: none"> <li>■ Incorporate materials to reduce Heat Island Effect</li> <li>■ Use of no-glare roofing material will be non-glare</li> <li>■ Prioritize materials based on lifespan and lifecycle maintenance costs</li> <li>■ Specify products with recycled content to the maximum extent practicable</li> <li>■ Incorporate infrastructure for collection, storage, and handling of recyclables (approved pre-security and post-security recycling stations, on-site collection bins, and storage dumpsters).</li> <li>■ Establish a project specific goal and specify materials extracted, harvested, recovered, and /or manufactured within New England</li> <li>■ Design Project to achieve energy efficiencies of a minimum of 20% below Massachusetts Energy code</li> <li>■ Specify energy efficient interior and exterior lighting</li> <li>■ Investigate the feasibility of supplying, at a minimum, 2.5% of the Project's power with on-site renewable energy systems</li> <li>■ Design Project to be able to accommodate roof top solar, in accordance with Federal Aviation Administration (FAA) guidance regarding glare</li> <li>■ Design infrastructure and operations that reduce water use by 20% below the Massachusetts Plumbing code</li> <li>■ Incorporate occupancy sensors with a manual override in all indoor areas</li> <li>■ Incorporate infrastructure for collection, storage, and handling of recyclables</li> <li>■ Incorporate options such as broad roof overhangs or shading devices to reduce solar heat gain and glare</li> <li>■ Install 400 Hz gate power at all newly constructed gates to support pre-conditioned air for aircraft and other state-of-the-art energy efficiency upgrades for gates to reduce use of on-board engines</li> </ul> </li> </ul>
Resiliency/Floodproofing	<ul style="list-style-type: none"> <li>■ In general, the first level (lowest floor) of the proposed Project is located above the Design Flood Elevation (DFE)</li> <li>■ Where spaces must be below the DFE, critical areas would be flood proofed through measures such as: <ul style="list-style-type: none"> <li>■ Install watertight shields on doors, windows, and louvers</li> <li>■ Use exterior and interior membranes and sealants to reduce seepage</li> <li>■ Seal electrical conduits and other utilities entering below the DFE</li> <li>■ Install drainage collection systems and sump pumps</li> <li>■ Install early warning devices to monitor water levels</li> </ul> </li> </ul>

**Table 1-2 Summary of Terminal E Modernization Beneficial Measures (Continued)**

<b>Element</b>	<b>Beneficial Measure</b>
Resiliency/Floodproofing (Continued)	<ul style="list-style-type: none"> <li>■ Install back-flow preventer valves on drainage and sanitary sewer piping located below the DFE</li> <li>■ Install flood openings to equalize the hydrostatic pressure</li> <li>■ Provide pumps to remove floodwater in non-draining areas</li> </ul>
Construction Period Mitigation	<ul style="list-style-type: none"> <li>■ Hours of work generally would be limited to typical working hours of 7:00 AM to 5:00 PM</li> <li>■ Massport would require its Construction Manager to prepare: <ul style="list-style-type: none"> <li>■ Draft Soil Management Plan</li> <li>■ Draft Stormwater Pollution Prevention Plan</li> <li>■ Draft Management Plan for Dewatering (if needed)</li> <li>■ Draft Health and Safety Plan</li> </ul> </li> <li>■ Ground transportation construction-period mitigation measures would include: <ul style="list-style-type: none"> <li>■ All trucks will access the site by Route 1A, Interstate 90, and the main Airport roadway only</li> <li>■ Trucks would be prohibited from using local streets</li> <li>■ Truck routes would be specified in contractors' construction specifications</li> <li>■ Concrete production and batching would occur in existing plants with access via Route 1A or Interstate 90</li> <li>■ Massport would encourage construction workers to use Logan Express, the water shuttle, and other modes of public transportation</li> </ul> </li> <li>■ Air quality construction-period mitigation measures would include: <ul style="list-style-type: none"> <li>■ Construction vehicle/equipment anti-idling</li> <li>■ Retrofitting of appropriate diesel construction equipment with diesel oxidation catalyst and/or particulate filters</li> <li>■ Air quality and fugitive dust management would be deployed including monitoring of construction dust; disposal options for excavated materials; and fences, wheel washing, and other methods to protect the Airport and surrounding communities from fugitive dust during construction</li> </ul> </li> <li>■ Sound levels from activities associated with the construction of the Project would be voluntarily consistent with the City of Boston's noise criteria; therefore, no construction noise mitigation is required. However, construction equipment would use noise-reduction measures such as: <ul style="list-style-type: none"> <li>■ Noise control techniques would be used to reduce noise from pile driving by at least 5 A-weighted decibels (dBA) below their unmitigated level</li> <li>■ Community noise levels would be monitored during construction to verify compliance with contract specifications and applicable state and local noise regulations</li> </ul> </li> <li>■ To protect water quality, and in compliance with the Stormwater Pollution Prevention Plan, an Erosion and Sedimentation Control Program would be put in place to minimize construction phase impacts to Boston Harbor <ul style="list-style-type: none"> <li>■ Spill prevention measures and sedimentation controls would be deployed throughout the construction phase to prevent pollution from construction equipment and erosion</li> <li>■ Erosion and sedimentation controls would be used during the airfield earthwork and construction phases</li> <li>■ Perimeter Barriers like straw wattles or compost-filled "silt sock" barriers would be placed around upland work areas to trap sediment transported by runoff before it reaches the drainage system or leaves the construction site</li> <li>■ Existing catch basins within the work areas would be protected with barriers (where appropriate) or silt sacks throughout construction</li> <li>■ Open soil surfaces would be stabilized within 14 days after grading or construction activities have temporarily or permanently ceased</li> <li>■ The contractor or subcontractor would be responsible for implementing each control shown on the Sedimentation and Erosion Control Plan</li> </ul> </li> </ul>





## 1.7 Anticipated Permits

Table 1-3 includes anticipated state and federal permits required for the Proposed Action along with the status of the permits and other approvals.

**Table 1-3 Anticipated Permits and Approvals**

Issuing Agency	Approval or Permit	Status
Federal Aviation Administration	Airport Layout Plan Approval	Approval to be issued
Federal Aviation Administration	Finding of No Significant Impact (FONSI) under the National Environmental Policy Act (NEPA)	Environmental Assessment submitted herein; determination will be made at the conclusion of the NEPA process
Federal Aviation Administration	14 CFR Part 77, Form 7460-1 Construction or Alteration Requiring Notice	As required prior to construction
Executive Office of Energy and Environmental Affairs	Secretary's Certificate under the Massachusetts Environmental Policy Act (MEPA)	Draft Environmental Impact Report (DEIR) submitted herein. A Final Environmental Impact Report (FEIR) will be noticed following the close of the comment period and issuance of the Secretary's Certificate on the DEIR.
U.S. Environmental Protection Agency Region 1	National Pollutant Discharge Elimination System (NPDES) Individual Permit	The Project would meet the standards included in Logan Airport's individual NPDES permit (No. MA0000787)
Massachusetts Contingency Plan (MCP)	Hazardous materials encountered during the development would be addressed in accordance with applicable MCP regulations	As required
Massachusetts Water Resources Authority (MWRA)	Modification to existing MWRA Sewer Use Discharge Permit	As required prior to construction

## 1.8 Public Involvement

Public outreach and community input is an important element of Massport's overall process for the Terminal E Modernization project. Commencing before even filing the ENF and continuing during the ongoing permitting process, Massport staff has attended various public meetings to both provide an overview and answer questions on the Terminal E Modernization. These meetings ranged from briefing local community groups in East Boston to meeting with public officials at the local, state and federal level, and meeting with key stakeholders such as major business groups, and non-profit organizations such as the Logan Community Advisory Committee. In addition to this specific outreach, the joint FAA and MEPA public meeting held on November 19, 2015 associated with the ENF filing was well attended by the public and included an extensive opportunity for questions and answers. Massport advertised the notice of the meeting in local papers in English and in Spanish. Additionally, Spanish translation services were provided at the meeting. Following the hearing, Massport has continued its conversation with the community regarding Terminal E, with additional briefings to local community leaders, and Massport is planning a second publicly advertised hearing following the filing of



the DEIR. Collectively, Massport has been pursuing widespread public outreach regarding the Terminal E Modernization project for more than ten (10) consecutive months.

Massport has also consulted directly with resource agencies, including Massachusetts Office of Coastal Zone Management, Massachusetts Department of Energy Resources, Executive Office of Energy and Environmental Affairs, and FAA regarding potential impacts, avoidance, and minimization of these impacts, and mitigation strategies.

The public information session was held on November 19, 2015, at 6:30 PM at the Logan Airport Rental Car Center Noddle Island Community Room. The goal of this meeting was to acquaint the nearby community with the Project, including construction schedule/activities, and to solicit input regarding potential neighborhood issues.

Massport posts information about key regulatory filings on its website. Massport also publishes annual EDRs and periodic ESPRs on its website. The most recent environmental filings, including this EA/DEIR and all supporting documentation are available on Massport's website at:

[www.massport.com/environment/environmental-reporting/environmental-filings/](http://www.massport.com/environment/environmental-reporting/environmental-filings/).

A public information briefing will be held in East Boston, MA. Massport and FAA staff will be available to discuss the Proposed Action and answer questions.

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## 1.9 Contents of this EA/DEIR

**Chapter 2, *Purpose and Need*:** This chapter provides a description of the existing and anticipated future deficiencies at Terminal E with regards to accommodating increased demand in the international air service market. It summarizes the history of improvements at the terminal, details operations and passenger forecasts through 2030, and provides baseline facility requirements for accommodating the anticipated growth.

**Chapter 3, *Alternatives and Proposed Action*:** This chapter describes the alternatives investigated, and the extent to which each alternative addresses the Project's purpose and need as well as Massport's goals for the Project. It concludes with the presentation of the preferred alternative – the Proposed Action.

**Chapter 4, *Affected Environment*:** This chapter describes the Project Area, including its natural and built environmental features, as it exists today.

**Chapter 5, *Environmental Consequences*:** This chapter presents the results of the studies and technical analyses completed to identify the environmental effects of the Proposed Action as compared to the No-Action Alternative. The discussion includes an analysis of temporary and permanent effects of the Project on the natural and built environments related to the resource areas of noise, air, surface transportation, natural resources and energy supply, climate and greenhouse gas emissions, water resources, hazardous materials, land use, socioeconomics and environmental justice, parkland, and visual resources.

**Chapter 6, *Beneficial Measures/Mitigation*:** This chapter lists Massport's commitments and additional considerations for the protection of natural and built environments during the construction period and in the long-term.



**Chapter 7, *Regulatory Compliance and Public/Agency Coordination*:** This chapter lists the federal, state, and local environmental permits required for the Proposed Action to be built.

**Chapter 8, *Distribution List*:** This chapter provides the list of interested parties and public libraries that Massport provided a copy of this EA/DEIR.

**Chapter 9, *List of Preparers*:** This chapter lists the consultant team involved with the preparation of the Terminal E Modernization EA/DEIR technical analyses and documents.

## Appendices

The extensive technical material and references used to support the analysis within this EA/DEIR are included as appendices. Supporting appendices include:

### *Volume I*

- Appendix A – MEPA Environmental Notification Form Certificate and Responses to Comments
- Appendix B – Draft Section 61 Findings

### *Volume II*

- Appendix C – Federal Aviation Administration Terminal Area Forecast
- Appendix D – Noise Technical Appendix
- Appendix E – Surface Transportation Technical Appendix
- Appendix F – Air Quality Technical Appendix
- Appendix G – Energy Model
- Appendix H – Agency Correspondence

Chapters 1 through 9 and Appendices A through B are included in Volume I of this EA/DEIR. Appendices C through H are included on Volume II. The full document is also available on a compact disc located at the end of this report. Additional materials referenced in the text are available on the Massport website at [www.massport.com/environment/environmental-reporting/environmental-filings/](http://www.massport.com/environment/environmental-reporting/environmental-filings/).

Appendix B  
Draft Environmental  
Assessment/Environmental Impact  
Report Executive Summary (Spanish)

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La Autoridad de Puertos de Massachusetts (Massport) propone modernizar la Terminal E del Aeropuerto Internacional de Boston-Logan (Aeropuerto Logan o Aeropuerto) para abastecer la actual y pronosticada demanda de pasajeros internacionales. Este documento, que combina una Evaluación Ambiental (EA) federal y un Informe Preliminar de Impacto Ambiental (DEIR) estatal, cumple con los requisitos de la Ley Nacional de Políticas Medioambientales (NEPA) y la Ley de Políticas Medioambientales de Massachusetts (MEPA).

**Al momento de su construcción en 1974, la Terminal E prestaba servicio a 1.4 millones de pasajeros. En 2015, atendía a 5.5 millones. A pesar de este crecimiento, Massport no ha agregado ninguna puerta de embarque nueva en la Terminal E desde su construcción. La falta de puertas disponibles tiene como consecuencia un aumento en el tiempo de rodaje de los aviones, una prolongación de la marcha lenta de los aviones en la plataforma, retrasos en el procesamiento de los pasajeros y la saturación de la Terminal E internacional.**

La modernización de la Terminal E traería consigo beneficios medioambientales a las comunidades vecinas. Se prevé que el Proyecto de Modernización de la Terminal E logre lo siguiente:

- abastecer el crecimiento actual y pronosticado en el mercado internacional para disminuir los retrasos de los viajeros, mejorar la eficiencia operativa de la plataforma y reducir el ruido y las emisiones producto de las operaciones en tierra;
- agregar siete puertas de embarque nuevas a la terminal, tres de las cuales fueron aprobadas a finales de la década de 1990 pero nunca se construyeron debido a la recesión mundial en las operaciones aeronáuticas como consecuencia de los eventos del 11 de septiembre de 2001;
- mantener el nivel de sonido diario (DNL) dentro de los 65 decibeles (dB) y disminuir el ruido de las operaciones en tierra de los aviones en la Plataforma Norte, por ejemplo, reducir 17 (dB) en un evento





único (es decir, en una sola operación), construyendo la extensión de la terminal para que funcione como barrera del ruido;

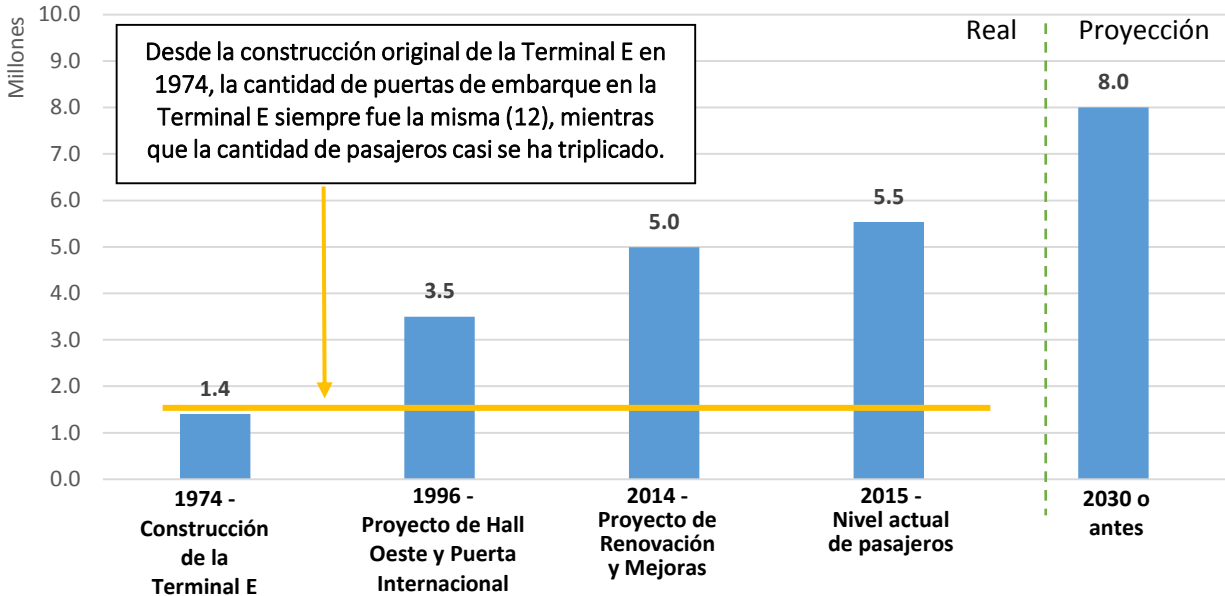
- permitir el abordaje y desembarque de vuelos internacionales directamente en las puertas de la Terminal E a una potencia de 400 hercios (Hz) y apagar los motores de los aviones, en lugar de la espera que suelen realizar actualmente;
- disminuir potencialmente la operación de traslados de pasajeros en autobús hacia los aviones en un 94% y las millas que estos autobuses recorren en un 97%;
- reducir el remolque de aviones en un 49%;
- reducir el tiempo de rodaje de los aviones en un 20%;
- disminuir el uso de las unidades de potencia auxiliar de los aviones en un 74%;
- disminuir el tiempo de espera de los vehículos en la entrada en un 13%;
- disminuir las emisiones de gases de efecto invernadero en la zona de operaciones (producido por los aviones, el equipo terrestre de soporte y los vehículos de acceso terrestre) en un 15%;<sup>1</sup>
- reducir las emisiones de gases de efecto invernadero del proyecto (en la zona de operaciones, en el acceso y en la nueva terminal) en un 8%;
- reducir las emisiones de óxido de nitrógeno (NO<sub>x</sub>) en un 44%;
- reducir las partículas (PM<sub>2.5</sub>) en un 25%;
- brindar una conexión peatonal cubierta entre la Terminal E y la estación "Airport" de la línea azul del metro de la Autoridad de Transporte de la Bahía de Massachusetts (MBTA);
- disminuir el consumo relativo de energía garantizando el cumplimiento de las Normas y Pautas de Diseño Sustentable de Massport y conforme a las Normas de Plata de Liderazgo en Energía y Diseño Ambiental (LEED®) y la incorporación de otras medidas de conservación de energía en el diseño del Proyecto; y
- disminuir las millas recorridas de los vehículos procesando a los pasajeros de manera más eficiente y proporcionando mejoras en la vía de acceso a la terminal.

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<sup>1</sup> No se incluyen las potenciales reducciones como resultado del rendimiento energético de la construcción.



**Figura 1-1: Niveles históricos de pasajeros internacionales en la Terminal E y cronología de mejoras en la terminal**



Fuentes: Massport, 2013; InterVISTAS, 2016

Notas: El Proyecto de Renovación y Mejoras de la Terminal E podrá recibir aviones A380, pero no se construirán nuevas puertas como parte de ese proyecto en curso. Se estima que la construcción de este proyecto finalizará en julio de 2017.

El Proyecto modificaría áreas de la plataforma en la zona de operaciones y construiría carriles de rodaje para alojar las nuevas puertas de embarque, además de realizar mejoras en la terminal y en las instalaciones complementarias, para incluir espacio adicional para las salas de contención de pasajeros, la circulación en el pasillo principal, locales en concesión comercial, el procesamiento de pasajeros (como las instalaciones de Aduana y Protección de Fronteras de EE. UU) y el control del equipaje. Sería necesaria la reconfiguración de la vialidad al frente de la terminal y junto a la terminal, para incluir la configuración modernizada de la terminal. Además, el Proyecto también construiría una conexión peatonal cubierta entre la Terminal E y la estación "Airport" de la línea azul del metro de la MBTA.

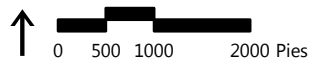
El Proyecto de Modernización de la Terminal E se encuentra en etapa de planificación y se espera que la construcción comience en 2018. En la **Figura 1-2** se muestra la ubicación del Proyecto en relación con la comunidad.



Fuente: ArcGIS Online Bing Aerial 2016

**FIGURA 1-2 Ubicación física del Aeropuerto Logan | Proyecto de Modernización de la Terminal E**

— Calles Elegidas



## 1.1 Objetivo del Proyecto

**El objetivo del Proyecto es modernizar la Terminal E completamente dentro del área del Aeropuerto, para abastecer eficientemente las operaciones y el flujo de los pasajeros internacionales actual y pronosticado, y cumplir con las metas económicas regionales, minimizando el impacto en la comunidad y el ambiente.**

El Proyecto de Modernización de la Terminal E tendría en cuenta el crecimiento del mercado de servicios aéreos internacionales y ayudaría a disminuir los retrasos actuales, además de los efectos adversos de ese desarrollo. Sin el Proyecto, el Aeropuerto Logan seguiría viendo un crecimiento de pasajeros y operaciones aeronáuticas internacionales, pero no habría cambios significativos ni en el interior ni en el exterior de la Terminal E. Debido a que las instalaciones de servicio de las puertas de embarque serían insuficientes para operar el incremento en volumen cuando un avión aterriza porque no hay puertas disponibles además una mayor cantidad de aviones deberían esperar con los motores encendidos hasta que se haya liberado alguna puertas. Si ninguna puerta se libera, el avión debe aparcar remotamente o estacionarse, en una zona de aparcamiento de aviones en la Plataforma Norte lejos de la terminal. Posteriormente, los pasajeros deben bajar del avión en la plataforma y Massport debe trasladar en autobús a los pasajeros desde el avión hasta la terminal. El uso de la zona de aparcamiento remota suele ser necesario en períodos pico en condiciones actuales. La frecuencia de estos casos aumentará en el futuro debido a la ausencia de puertas adicionales que pudiesen manejar el crecimiento esperado de la demanda de servicios aéreos internacionales en el Aeropuerto Logan.

Las operaciones de aparcamiento en zonas remotas requieren un uso adicional de energía por la marcha lenta del avión o el uso de unidades de potencia auxiliar, además del uso de autobuses que transportan pasajeros desde y hacia la terminal. Las zonas de firme aparcamiento remotas están más cerca del sector de “East Boston” que de la terminal. Trasladar pasajeros desde y hacia la terminal también genera conflictos con el equipaje y el movimiento de los equipos de soporte terrestre alrededor del avión y en la rampa. Por consiguiente, el tiempo de embarque y llegada de los pasajeros se prolonga. Aduanalmente, dentro de la terminal, las instalaciones actuales de procesamiento de pasajeros no son apropiadas para alojar el aumento de servicio actualmente y el previsto para el año 2030. Sin las mejoras, resultaría en tiempos de espera cada vez más prolongados en la zona de venta y emisión de boletos, retrasos en la Aduana y Protección de Fronteras para los pasajeros que arriban, y una mayor congestión en la vía de acceso.



Multitud de pasajeros en la Terminal E y trasladándose desde ubicaciones de firme aparcamiento







## 1.2 Aumento de pasajeros en la Terminal E

El Aeropuerto Logan ha sido uno de los aeropuertos estadounidenses de crecimiento más rápido en los últimos cuatro años. Desde 2010 a 2014, el Aeropuerto Logan tuvo un crecimiento del 32% en el volumen general de pasajeros. En 2015, el Aeropuerto Logan batió otro récord al prestar servicio a 33.4 millones de pasajeros. El mercado internacional de los servicios aéreos ha tenido un porcentaje de crecimiento aun mayor que el mercado nacional durante este período, y para abastecer esta demanda los vuelos internacionales sin escalas se duplicaron en los últimos diez años.

- Los pronósticos recientes predicen que el crecimiento progresivo continuará y que se alcanzará un volumen anual de 8 millones de pasajeros para el año 2030.
- En 2015, la Terminal E mantuvo un servicio sin escalas a 53 destinos internacionales, en comparación con los 21 que tenía en 2012.

**Este crecimiento histórico del Aeropuerto Logan se ha producido sin la adición de nuevas puertas de embarque, lo que demuestra que la demanda en el Aeropuerto está impulsada por factores económicos y comerciales, no por mejoras en el**

**Aeropuerto.** Desde que se construyeron las 12 puertas originales en 1974, Massport no agregó ninguna puerta nueva en la Terminal E. El Aeropuerto Logan deberá manejar el incremento de pasajeros y operaciones, independientemente si Massport no moderniza la Terminal E.

Para cubrir las operaciones internacionales de manera eficiente, la Terminal E necesitará un total de 19 puertas (siete más que las que existen actualmente), considerando el volumen anual previsto de 8 millones de pasajeros internacionales que se alcanzará en el año 2030.

## 1.3 Contexto económico y comercial regional del Aeropuerto Logan

El Aeropuerto Logan es el aeropuerto principal de servicios internacionales para la región de Nueva Inglaterra. Este aeropuerto opera dentro Nueva Inglaterra que incluye al Aeropuerto Regional Boston-Manchester (New Hampshire) y al Aeropuerto T. F. Green (Rhode Island). El servicio aéreo desde estos dos aeropuertos regionales se concentra principalmente en vuelos de distancia corta y media sin escalas, servicios de jet a destinos comerciales y de ocio, así como también a centros de distribución de compañías aéreas para acceder a opciones para vuelos de mayor distancia. La demanda de viajes internacionales con llegada a estos puntos regionales es significativamente más baja que la de Boston, que es un destino internacional importante. Los vuelos con conexiones internacionales desde y hacia estos aeropuertos regionales son limitados en comparación con los servicios ya establecidos en el Aeropuerto Logan. Además, la infraestructura de soporte, como las instalaciones de Aduana y Protección de Fronteras, también es limitada en estos aeropuertos.

95,000

Empleos directos e indirectos

\$13,300 millones

Actividad económica total por año

\$1,000 millones

Cantidad de dinero gastada por visitantes internacionales por año (2014)

Fuente: Massport e InterVISTAS, 2015



Con más de 13,000 millones de dólares anuales en actividad económica total, el Aeropuerto Logan es un motor de la economía que provee muchos empleos y una actividad comercial importante<sup>2</sup> a la zona metropolitana de Boston y a la región de Nueva Inglaterra.

Los vuelos y negocios internacionales son fundamentales para Massachusetts y la economía de la región. La ciudad de Boston es una ciudad de categoría mundial con compañías que operan globalmente y están cada vez más conectadas a la economía mundial. Los vuelos sin escalas a ciudades del mundo son un componente clave para esta nueva economía.

La zona metropolitana de Boston juega un papel central en las finanzas, la tecnología, la biotecnología, la atención de la salud y la educación de nuestro país. Como uno de los centros más grandes de población y economía, la ciudad de Boston es un mercado maduro con un ingreso per cápita de \$34,770, aproximadamente un 18% más que el ingreso per cápita nacional de \$28,555.<sup>3</sup>

Estas condiciones económicas favorables impulsan la demanda sostenida de vuelos internacionales en el Aeropuerto Logan.

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## 1.4 Alternativas en consideración y Propuesta de Acción

Massport evaluó diversas opciones para abastecer el crecimiento previsto de pasajeros y operaciones internacionales. El Aeropuerto Logan funciona como aeropuerto principal de origen y destino y como la puerta de entrada internacional más importante a la región de Nueva Inglaterra. Existen otros aeropuertos regionales que brindan un servicio local en la región y un servicio internacional limitado, principalmente a destinos vacacionales. El Aeropuerto Logan está mejor posicionado en términos de acceso, tarifas aéreas competitivas y servicio aéreo disponible para cubrir las demandas del mercado internacional central en la zona de Boston. Por lo tanto, para cumplir con el objetivo y la necesidad del proyecto, las alternativas de construcción se focalizan en abastecer la demanda en el Aeropuerto Logan. Se evaluaron alternativas según su capacidad para alcanzar el propósito y la necesidad del Proyecto, y también se tuvieron en cuenta consideraciones como requisitos de redes de aerolíneas, requisitos de espacio, eficiencia de la disposición espacial, eficiencia de las operaciones en la plataforma, capacidad para aislar los ruidos, eficiencia de las operaciones de tráfico, costo global y capacidad de construcción. Todas las alternativas de construcción incluyen siete puertas de embarque nuevas con diferentes configuraciones del pasillo principal y de los servicios internos. Entre las alternativas se incluye construir una extensión de la terminal con funciones centrales separadas, construir una terminal satélite a la que se accedería a través de una pasarela peatonal, construir un hall sin instalaciones de procesamiento y construir una extensión de la terminal como expansión del núcleo de la terminal. Todas las alternativas evaluadas se ubicarían en terrenos ya explotados dentro de los límites del Aeropuerto, y se espera que produzcan efectos medioambientales beneficiosos muy similares. El Proyecto reutiliza espacio ya ocupado para operaciones de aviación.

El Proyecto de Modernización de la Terminal E (consultar la **Figura 1-3**) amplía el pasillo principal actual, el núcleo de la terminal y las fachadas exteriores a la calle de acceso la terminal. La extensión del pasillo principal se conectaría con la zona de la Puerta 12 de la terminal actual. La ampliación del núcleo de la terminal incluiría

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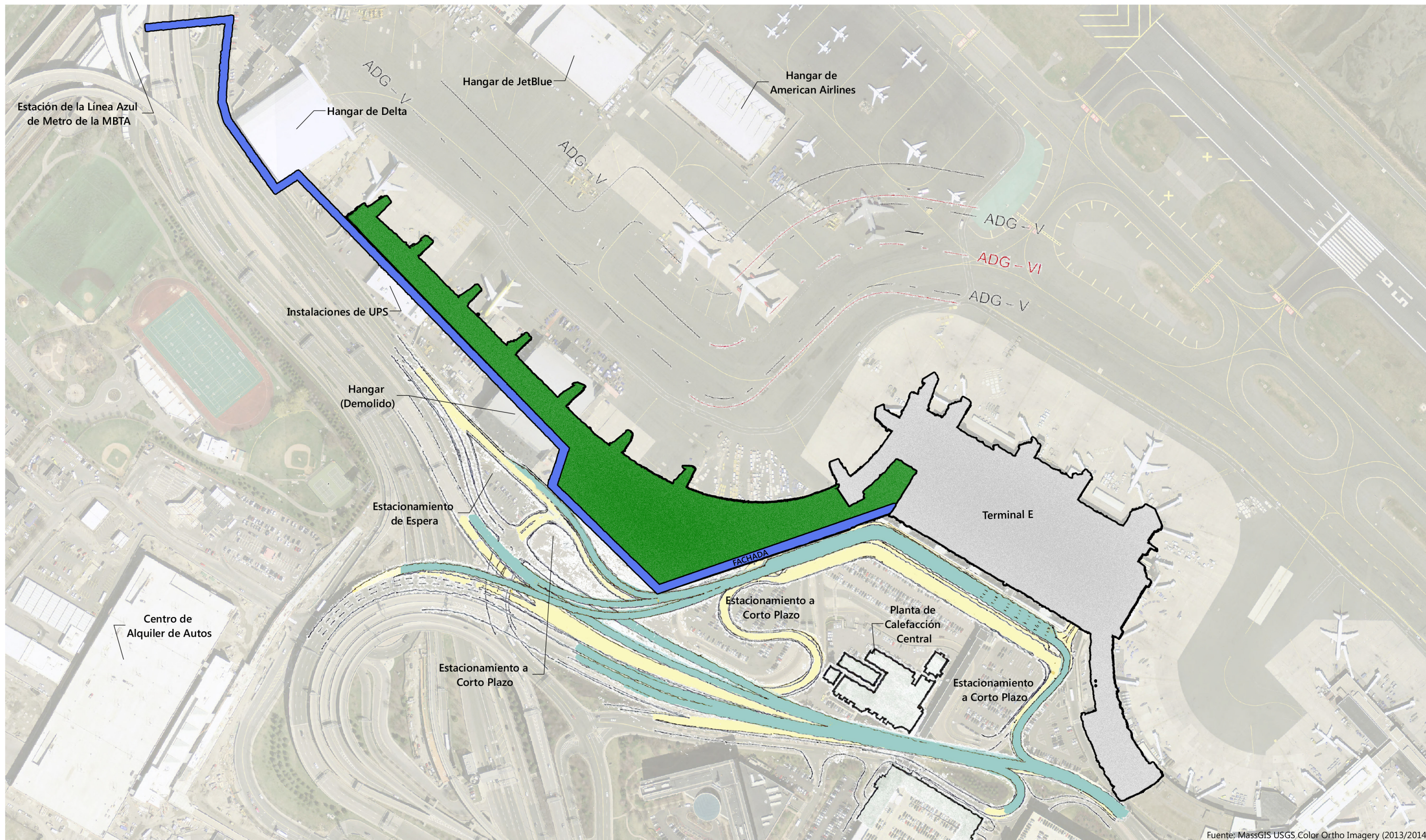
<sup>2</sup> Massport e InterVISTAS, 2015

<sup>3</sup> Oficina de Censo de Estados Unidos. 2014. *2010-2014 Encuesta Comunitaria de Estados Unidos con estimados de 5 años (en la zona de Boston-Cambridge-Newton, área metropolitana estadística de MA-NH)*.



nuevos puestos de venta y control de boletos, oficinas de aerolíneas, control de equipaje e instalaciones de armado de equipaje. Además, tendría el potencial de permitir instalaciones de Aduana y Protección de Fronteras separadas, con instalaciones de Control de Migraciones y Recolección de Equipaje y Aduana. Las calles de acceso frente a la Terminal E se mejorarían para posibilitar la nueva configuración de la construcción y permitir operaciones de tránsito eficientes en la calle a lo largo de la fachada de la nueva terminal, como el ascenso y descenso de pasajeros tanto para vehículos de alta ocupación (p. ej., autobuses y camionetas) y como para vehículos particulares. Para la huella de la nueva terminal y las nuevas calles de acceso sería necesario reubicar las instalaciones existentes y sus operaciones relacionadas, como la gasolinera y las instalaciones de United Parcel Service (UPS) en la zona de operaciones. La reubicación se mantendría dentro del Aeropuerto. El Proyecto de Modernización de la Terminal E proporcionaría una conexión directa de pasajeros entre la terminal y la estación "Airport" de la línea azul de metro de la MBTA. Esta conexión cubierta para pasajeros reitera el compromiso de Massport de adaptarse y fomentar el uso de medios masivos de transporte en todo el Aeropuerto.



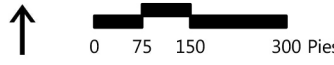


Fuente: MassGIS USGS Color Ortho Imagery (2013/2014)

**FIGURA 1-3 Propuesta de Acción**

**Proyecto de Modernización de la Terminal E**

- Propuesta de Construcción de Terminal
- Terminal Actual
- Calles en el Nivel de Llegadas
- Calles en el Nivel de Partidas
- Conexión a MBTA





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### 1.4.1 Fases del Proyecto

Según las demandas operativas provisionales y el presupuesto disponible, Massport propone desarrollar el Proyecto en fases. Se planifica comenzar la construcción del Proyecto de Modernización de la Terminal E en 2018 y completar la primera fase para 2022. La Fase 1 incluiría la construcción de cuatro puertas de embarque nuevas para corregir las deficiencias actuales y suplir el crecimiento provisional. La fase provisional proporciona un abordaje medido para la ampliación de la terminal, construyendo instalaciones en función de su necesidad a fin de mitigar el efecto de las fluctuaciones en la demanda de pasajeros internacionales. El Proyecto en su totalidad estaría terminado y en condiciones operativas para el año 2030.

### 1.4.2 Beneficios medioambientales de la Propuesta de Acción

#### Propuesta de Acción vs. Alternativa de Inacción

-  Procesamiento de pasajeros
-  Ruido
-  Contaminantes del aire
-  Emisiones de gases de efecto invernadero
-  Millas recorridas por vehículos

Massport propone el Proyecto de Modernización de la Terminal E para alojar eficientemente la demanda futura en el mercado de servicios aéreos internacionales en el Aeropuerto Logan y disminuir los efectos adversos vinculados a este crecimiento. **Las puertas adicionales y la nueva área de la terminal permitirían reducir los niveles de ruido y disminuirían la necesidad de que los aviones mantengan sus motores encendidos en la plataforma.**

Massport ha visto una reducción significativa en las emisiones contaminantes en todo el Aeropuerto debido al cambio que se produjo en la industria a favor del uso de aviones más grandes y más eficientes, que son más silenciosos y emiten menos

contaminantes, además de transportar una mayor cantidad de pasajeros por viaje que antes. En el 2000, el Aeropuerto Logan tuvo un tránsito de aproximadamente 27 millones de pasajeros en 490,000 vuelos, en comparación con los más de 33.4 millones de pasajeros en 373,000 vuelos en 2015. Como consta en el *Informe de Planificación y Estado Medioambiental del Aeropuerto Logan de 2011 (ESPR)* y en el *Informe de Datos Medioambientales de 2014 (EDR)*, este descenso del 24% en la cantidad total de vuelos desde 2000 se produjo paralelamente a reducciones sustanciales de los niveles de ruido y las emisiones al medio ambiente durante el mismo período.

El Proyecto de Modernización de la Terminal E disminuiría las emisiones manejando el aumento de las operaciones con mejoras que permitan que los aviones se conecten a una puerta y funcionen con menos tiempo de espera en la Plataforma Norte, lo que posibilitaría que el Aeropuerto opere con menos retrasos dentro de la Terminal E. La construcción de la extensión de la terminal daría como resultado una reducción sustancial del nivel de ruido de las operaciones en la plataforma, lo que a su vez disminuiría el ruido tierra en hasta 17 dB en algunos lugares, durante la operación de un solo avión. De la misma manera, las emisiones en la zona de operaciones se reducirían gracias al menor tiempo de espera de los aviones en la plataforma. Con respecto a los contaminantes de criterio, las emisiones de monóxido de carbono (CO) disminuirían en un 9%, las emisiones de NO<sub>x</sub> en un 44% y las emisiones de óxidos de azufre (SO<sub>x</sub>) en un 33%. Las emisiones de compuestos orgánicos volátiles (VOC) se reducirían en 6% y las emisiones de partículas PM<sub>10</sub> y PM<sub>2.5</sub> se reducirían en 9 y 25%, respectivamente. Con respecto a las emisiones que producen cambios climáticos, las emisiones de dióxido de carbono (CO<sub>2</sub>) por operaciones en la zona de operaciones se reducirían en un 15%. Al procesar a los pasajeros



más eficientemente y mejorar las operaciones en la vía de acceso, también se espera que el Proyecto disminuya las millas totales recorridas por los vehículos y las emisiones por el tráfico.

El Proyecto proporcionaría un beneficio adicional con una conexión de pasajeros entre la terminal y la estación “Airport” de la línea azul de metro de la MBTA. Esta conexión directa cubierta reitera el compromiso de la Massport con la conectividad y la comodidad de los pasajeros.

## 1.5 Cumplimiento con las leyes NEPA y MEPA

El Proyecto de Modernización de la Terminal E está sujeto a normas medioambientales nacionales y estatales. Para este Proyecto, estos procesos se llevarán a cabo de manera conjunta. La Administración Federal de Aviación (FAA) ha determinado que la Propuesta de Acción debe someterse a una EA según la ley NEPA, debido a los cambios en el Plano de Disposición Espacial del Aeropuerto que resultarían de la implementación del Proyecto.

Además, también fue necesaria la preparación de un Formulario de Notificación Ambiental (ENF) bajo la ley MEPA (301 CMR 11.03(6) (b) 6) como “expansión de una terminal existente en el Aeropuerto Logan de 100,000 pies cuadrados o más”. Según los límites de la MEPA, no se exige un DEIR automáticamente. La Massport presentó un ENF para el Proyecto en octubre de 2015 (EEA #15434). No se han producido cambios importantes en el Proyecto desde la presentación del ENF. La conexión peatonal a la estación de la MBTA, especificada originalmente en el ENF como parte de la Fase 1, se construiría como parte de la Fase 2, debido a restricciones en la planificación y el presupuesto.

El 16 de diciembre de 2016, el Secretario de la Oficina Ejecutiva de Energía y Asuntos Ambientales emitió un Certificado sobre el ENF que exigía la preparación de un DEIR específico para el Proyecto en el que se debían abordar asuntos específicos relacionados con la resistencia, los gases de efecto invernadero, la calidad del aire y el ruido. El alcance propuesto de la EA, el Certificado del Secretario y los comentarios públicos sobre el ENF ayudaron a guiar el contenido y los análisis incluidos en estos estudios (EA/DEIR) conjuntos. En este EA/DEIR se describe la Propuesta de Acción, se identifican las alternativas consideradas y se registran los efectos ambientales potenciales, tanto positivos como negativos, asociados con la construcción y operación del Proyecto.

**El Proyecto mejoraría la experiencia de los pasajeros y se espera que traiga beneficios ambientales en lo que respecta a ruidos y emisiones al medio ambiente, en comparación con la Alternativa de Inacción.** En la **Tabla 1-1** se resumen los beneficios medioambientales del Proyecto. En este EA/DEIR se describe la Propuesta de Acción, se identifican las alternativas consideradas y se registran los impactos ambientales potenciales asociados con la construcción y operación del Proyecto de Modernización de la Terminal E propuesto en el Aeropuerto Logan.

**Tabla 1-1 Resumen de beneficios ambientales por la modernización de la Terminal E**

Recurso ambiental <sup>1</sup>	Beneficio del Proyecto
Ruido y uso de terrenos compatible con el ruido (NEPA)	<u>El Proyecto de Modernización de la Terminal E mejoraría las condiciones de ruido</u> producto de las operaciones terrestres, en comparación la Alternativa de Inacción, ya que la extensión de la terminal funcionaría como barrera de ruido para la comunidad.
Transporte terrestre (MEPA)	El Proyecto de Modernización de la Terminal E <u>reduciría la cantidad total de millas recorridas de los vehículos</u> , en comparación con la Alternativa de Inacción, como consecuencia de la disminución en la recirculación del tráfico en la vía de acceso de la terminal. El Proyecto no causaría ninguna reducción en el nivel de servicio de ninguna de las calles del Aeropuerto. La línea azul de metro de la Autoridad de Transporte de la Bahía de Massachusetts (MBTA) cuenta con la capacidad suficiente para abastecer cualquier aumento de cantidad de pasajeros.



**Tabla 1-1 Resumen de beneficios ambientales por la modernización de la Terminal E (continuación)**

<b>Recurso ambiental<sup>1</sup></b>	<b>Beneficio del Proyecto</b>
<b>Calidad del aire (NEPA/MEPA)</b>	El Proyecto de Modernización de la Terminal E <u>reduciría las emisiones de los contaminantes de criterio</u> en comparación con la Alternativa de Inacción, como consecuencia de una disminución en el uso de los motores de los aviones, las unidades de potencia auxiliar y el equipo de soporte en tierra. El Proyecto de Modernización de la Terminal E cumpliría con la Regla de Conformidad General, establecida bajo la Ley de Aire Limpio, ya que las emisiones relacionadas se encontrarían dentro de los límites <i>mínimos</i> .
<b>Recursos naturales y suministro de energía (NEPA)</b>	El Proyecto de Modernización de la Terminal E no causaría un impacto adverso importante en los recursos naturales ni en el suministro de energía, ya que se dispone de la capacidad suficiente para proporcionar a la operación de los sistemas de la nueva construcción.
<b>Clima y emisiones de efecto invernadero (GHG) (NEPA/MEPA)</b>	El Proyecto de Modernización de la Terminal E reduciría las emisiones de <u>gases de efecto invernadero</u> reduciendo la cantidad de veces que los aviones usan unidades de potencia auxiliar, así como el uso de equipos de soporte terrestre y vehículos terrestre de acceso a la zona de operaciones.
<b>Recursos hídricos (como pantanos, llanuras de inundación, aguas superficiales, aguas residuales, agua subterránea y ríos protegidos o de caudal libre) (NEPA)</b>	No se prevé ningún impacto directo o indirecto a la calidad del agua como consecuencia del Proyecto de Modernización de la Terminal E. El Área del Proyecto está ubicada en terrenos ya explotados para uso del Aeropuerto. Las áreas propuestas para el Proyecto de Modernización de la Terminal E ya se encuentran pavimentadas y el Proyecto no causaría un aumento de superficies impermeables ni actividades contaminantes sobre la plataforma ni la rampa.
<b>Materiales peligrosos, residuos sólidos y prevención de la contaminación (NEPA)</b>	El Proyecto de Modernización de la Terminal E no causaría un impacto adverso significativo en lo que respecta a materiales peligrosos o residuos sólidos. La contaminación detectada in situ se evaluaría y, de ser necesario, se rectificaría de manera previa a las actividades de construcción o durante las actividades, según el Plan de Contingencia de Massachusetts.
<b>Recursos costeros (NEPA)</b>	El Proyecto de Modernización de la Terminal E está limitado a áreas pavimentadas del Aeropuerto y la terminal que ya se utilizan con fines aeronáuticos, y no cambiaría la manera ni la calidad de uso de los terrenos en la zona costera.
<b>Uso de terrenos (NEPA)</b>	El Proyecto de Modernización de la Terminal E no provocaría impactos adversos sobre el uso de terrenos, ya que no cambiaría el uso de los terrenos existentes ni dentro ni fuera del Aeropuerto. Massport llevaría a cabo todas las obras propuestas dentro del área actual del Aeropuerto, en terrenos ya pavimentados y en uso aeronáutico.
<b>Economía social, justicia medioambiental y riesgos a la salud infantil y la seguridad (NEPA)</b>	El Proyecto de Modernización de la Terminal E se llevaría a cabo por completo dentro de los límites del Aeropuerto y no causaría un impacto adverso desproporcionado a la vitalidad económica, a las poblaciones desfavorecidas, ni a la salud y seguridad de los niños en los sectores urbanizados cercanos, incluso aquellos identificados como comunidades de Justicia Ambiental. El Proyecto no cambiaría el uso de ningún terreno e incluiría medidas para disminuir las emisiones al medio ambiente y el impacto del ruido en las comunidades.
<b>Ley del Departamento de Transporte, Sección 4(f) (NEPA)</b>	El Proyecto de Modernización de la Terminal E no haría uso directo ni constructivo de una propiedad bajo la Sección 4(f). El Proyecto se sitúa completamente dentro de los límites del Aeropuerto, y no se realizarían actividades de construcción fuera de la propiedad del Aeropuerto.
<b>Recursos visuales/Efectos de carácter visual (incluidas emisiones de luz) (NEPA)</b>	El Proyecto de Modernización de la Terminal E no tendría un impacto adverso sobre el carácter visual de la Zona del Proyecto ni las zonas aledañas. El Proyecto respetaría el carácter arquitectónico del edificio actual de la Terminal E y no sería muy visible desde comunidades residenciales cercanas, debido al posicionamiento de las calles adyacentes y otros edificios actuales en el Aeropuerto. Massport protegerá el alumbrado relacionado con la Propuesta de Acción, donde sea posible, para limitar la contaminación lumínica sin control.

<sup>1</sup> Categorías de recursos ambientales según se especifica en las Órdenes de la NEPA 1050.1F y 5050.4B de la FAA, y según las normas de la MEPA bajo la sección 301 CMR 11.00.

## 1.6 Compromisos del Proyecto

Como parte del Proyecto de Modernización de la Terminal E, Massport se compromete a implementar las siguientes medidas, como se resume en la **Tabla 1-2**.

**Tabla 1-2 Resumen de medidas beneficiosas por la modernización de la Terminal E**

<b>Elemento</b>	<b>Medida beneficiosa</b>
Características de diseño del Proyecto	<ul style="list-style-type: none"> <li>■ La ampliación del pasillo principal de la terminal actuaría como barrera de ruido para residencias cercanas y áreas recreativas de los barrios.</li> <li>■ Las puertas nuevas con 400 hercios (Hz) de potencia y aire acondicionado permitirían a los aviones conectarse y disminuir las emisiones al medio ambiente que generan las unidades de potencia auxiliar.</li> <li>■ Las puertas nuevas aumentarían la eficiencia operativa de la Plataforma Norte y disminuirían la necesidad de recurrir al aparcamiento remoto y de trasladar en autobús a los pasajeros a la terminal.</li> <li>■ El Proyecto incluye una conexión peatonal directa cubierta entre la estación "Airport" de la línea azul de metro de la Autoridad de Transporte de la Bahía de Massachusetts (MBTA) y la Terminal E, que mejoraría la experiencia y la comodidad de los pasajeros.</li> </ul>
Sustentabilidad	<ul style="list-style-type: none"> <li>■ El Proyecto de Modernización de la Terminal E se construiría según las Normas de Plata de Liderazgo en Energía y Diseño Ambiental (LEED®) o normas superiores.</li> <li>■ A medida que avance el diseño, la Massport considerará lo siguiente: <ul style="list-style-type: none"> <li>■ incorporar materiales para reducir el efecto de isla de calor;</li> <li>■ usar material de techado sin reflectancia;</li> <li>■ priorizar los materiales según su vida útil y los costos de mantenimiento en el ciclo de duración;</li> <li>■ especificar productos con contenido reciclado en la medida máxima practicable;</li> <li>■ incorporar infraestructura para la recolección, el almacenamiento y la manipulación de productos reciclables (estaciones de reciclaje aprobadas previas y posteriores a los puestos de seguridad, recipientes de recolección in situ y contenedores de almacenamiento);</li> <li>■ definir un objetivo específico para el Proyecto y especificar los materiales extraídos, recolectados, recuperados y/o fabricados en Nueva Inglaterra;</li> <li>■ elaborar el Proyecto para que alcance una eficiencia energética de al menos 20% por debajo del Código de Energía de Massachusetts;</li> <li>■ especificar un alumbrado interior y exterior con eficiencia energética;</li> <li>■ investigar la viabilidad de suministrar, como mínimo, un 2.5% de la energía del Proyecto con sistemas de energía renovable in situ;</li> <li>■ diseñar el Proyecto para que pueda contar con un techo solar, según las pautas de la Administración Federal de Aviación (FAA) en lo que respecta a reflectancia;</li> <li>■ diseñar una infraestructura y operaciones que disminuyan el uso de agua en un 20% por debajo del Código de Plomería de Massachusetts;</li> <li>■ incorporar sensores de ocupación con anulación manual en todas las áreas interiores;</li> <li>■ incorporar infraestructura para la recolección, el almacenamiento y la manipulación de material reciclable;</li> <li>■ incorporar opciones como cornisas de techo amplias o dispositivos de sombra para reducir la ganancia del calor solar y la reflectancia;</li> <li>■ instalar una potencia de 400 Hz en todas las puertas nuevas construidas, para brindar aire acondicionado para los aviones y otras mejoras de eficiencia energética de tecnología avanzada, para disminuir el uso de los motores a bordo.</li> </ul> </li> </ul>
Resistencia/Impermeabilización de pisos	<ul style="list-style-type: none"> <li>■ En general, el primer nivel (el piso inferior) del Proyecto propuesto está ubicado por encima del Nivel de Inundación de Diseño (DFE).</li> <li>■ En los lugares donde los espacios deban ir debajo del DFE, las zonas críticas se impermeabilizarían por medio de medidas, como: <ul style="list-style-type: none"> <li>■ instalación de protectores herméticos en las puertas, ventanas y rejillas;</li> <li>■ uso de membranas exteriores e interiores, y selladores para reducir las filtraciones;</li> <li>■ sellado de los conductos eléctricos y otros servicios públicos que ingresen por debajo del DFE;</li> <li>■ instalación de sistemas de recolección de drenaje y bombas de sumidero;</li> <li>■ instalación de dispositivos de alarma temprana para controlar los niveles de agua.</li> </ul> </li> </ul>

**Tabla 1-2 Resumen de medidas beneficiosas por la modernización de la Terminal E (continuación)**

<b>Elemento</b>	<b>Medida beneficiosa</b>
Resistencia/Impermeabilización de pisos	<ul style="list-style-type: none"> <li>■ Instalación de válvulas antirreflujo en las tuberías de drenaje y los desagües sanitarios ubicados por debajo de las aberturas de rebose del DFE, para compensar la presión hidrostática.</li> <li>■ Instalación de bombas para eliminar el agua de inundación en las zonas sin drenaje.</li> </ul>
Mitigación del periodo de construcción	<ul style="list-style-type: none"> <li>■ En general, las horas de trabajo se limitarían a un horario de trabajo normal de 7:00 a. m. a 5:00 p. m.</li> <li>■ Massport solicitaría a su Director de Construcción que prepare: <ul style="list-style-type: none"> <li>■ un Plan Preliminar de Manejo del Suelo;</li> <li>■ un Plan Preliminar de Prevención de Contaminación de Aguas Pluviales;</li> <li>■ un Plan Preliminar de Manejo de Desecación (si es necesario);</li> <li>■ un Plan Preliminar de Salud y Seguridad.</li> </ul> </li> <li>■ Las medidas de mitigación del periodo de construcción para el transporte terrestre incluirían: <ul style="list-style-type: none"> <li>■ acceso al sitio de todos los camiones solo vía la Ruta 1A, la Interestatal 90 y la calle principal del Aeropuerto;</li> <li>■ los camiones tendrían prohibido usar las calles locales;</li> <li>■ las rutas de los camiones se detallarían en las especificaciones de construcción de los contratistas;</li> <li>■ la producción y dosificación del hormigón se llevaría a cabo en plantas ya existentes con acceso vía la Ruta 1A o la Interestatal 90;</li> <li>■ la Massport recomendaría a los empleados de la construcción usar el Logan Express, el transporte acuático y otros medios de transporte público.</li> </ul> </li> <li>■ Las medidas de mitigación del periodo de construcción para la calidad del aire incluirían: <ul style="list-style-type: none"> <li>■ tecnología para detener automáticamente el motor de vehículos y equipos de construcción cuando están parados;</li> <li>■ acondicionamiento de los equipos de construcción con diésel con catalizadores de oxidación para diésel y/o filtros de partículas;</li> <li>■ se implementaría la administración de la calidad del aire y la generación de polvo, que consiste en controlar el polvo de la construcción, las opciones de desecho de los materiales excavados y las cercas, el lavado de ruedas y otros métodos para proteger al Aeropuerto y a los sectores urbanizados de polvo producido durante la construcción.</li> </ul> </li> <li>■ Se mantendrían voluntariamente los niveles de ruido de actividades asociadas con la construcción del Proyecto de conformidad con los criterios de niveles de ruido de la ciudad de Boston. Por lo tanto, no sería necesaria la reducción del ruido de la construcción. Sin embargo, los equipos de construcción utilizarían medidas de reducción de ruidos. Por ejemplo: <ul style="list-style-type: none"> <li>■ se usarían técnicas de control de ruido para disminuir el ruido de los martinets en al menos 5 decibeles A (dBA) por debajo del nivel sin disminución;</li> <li>■ se controlarían los niveles de ruido en la comunidad durante la construcción, para verificar el cumplimiento con las especificaciones contractuales y las normas de ruidos estatales y locales correspondientes.</li> </ul> </li> <li>■ Para proteger la calidad del agua, y en cumplimiento con el Plan de Prevención de Contaminación de Aguas Pluviales, se implementaría un Programa de Control de Erosión y Sedimentación para minimizar el impacto de la fase de construcción en el Puerto de Boston. <ul style="list-style-type: none"> <li>■ Se implementarían medidas de prevención de derrames y controles de sedimentación a lo largo de la fase de construcción para evitar la contaminación del equipo de construcción y la erosión.</li> <li>■ Se llevarían a cabo controles de erosión y sedimentación durante las fases de movimiento de tierras y construcción en la zona del Aeropuerto.</li> <li>■ Se colocarían barreras perimetrales como mantos de paja o barreras de sacos llenos de limo alrededor de las áreas de trabajo de tierras altas para atrapar el sedimento transportado por la escorrentía antes de que llegue al sistema de drenaje o abandone el sitio de la construcción.</li> <li>■ Se protegerían con barreras o sacos de limo (donde sea necesario) los colectores de fango existentes dentro de las zonas de trabajo en toda la construcción.</li> <li>■ Se estabilizarían las superficies de tierra abierta dentro de los 14 días de que hayan concluido de forma temporal o permanente las actividades de nivelación o construcción.</li> <li>■ El contratista o subcontratista sería responsable de implementar cada control incluido en el Plan de Control de Erosión y Sedimentación.</li> </ul> </li> </ul>



## 1.7 Permisos previstos

En la **Tabla 1-3** se incluyen los permisos estatales y nacionales que, según prevemos, serán necesarios para la Propuesta de Acción, junto con el estado de los permisos y otras aprobaciones.

**Tabla 1-3 Permisos y aprobaciones previstos**

Entidad emisora	Aprobación o permiso	Estado
Administración Federal de Aviación	Aprobación del Plano de Disposición Espacial del Aeropuerto	Aprobación pendiente
Administración Federal de Aviación	Hallazgo de ningún impacto significativo (FONSI) según la Ley Nacional de Políticas Ambientales (NEPA)	Evaluación Ambiental presentada con el presente documento; la determinación se realizará al finalizar el proceso de la NEPA
Administración Federal de Aviación	Construcción o alteración que requiere aviso preliminar, 14 CFR Parte 77, Formulario 7460-1	Según sea necesario antes de la construcción
Oficina Ejecutiva de Energía y Asuntos Ambientales	Certificado del Secretario bajo la Ley de Políticas Ambientales de Massachusetts (MEPA)	Informe Preliminar de Impacto Ambiental (DEIR) entregado por medio de la presente. Se entregará un Informe Final de Impacto Ambiental (FEIR) después del cierre del período de comentarios y de la emisión del Certificado del Secretario del DEIR.
Agencia de Protección Ambiental de EE. UU. Región 1	Permiso Individual del Sistema Nacional de Eliminación de Descarga de Contaminantes (NPDES)	El Proyecto cumpliría con las normas incluidas en el permiso individual NPDES del Aeropuerto Logan (n.º MA0000787)
Plan de Contingencia de Massachusetts (MCP)	Los materiales peligrosos encontrados durante el desarrollo se tratarían según las normas correspondientes del MCP	Según corresponda
Autoridad de Recursos Hídricos de Massachusetts (MWRA)	Modificación al permiso actual de Descarga de Uso en Desagües de la MWRA	Según sea necesario antes de la construcción

## 1.8 Participación de la población

La difusión pública y la opinión de la comunidad son elementos importantes para el proceso general de Massport durante el Proyecto de Modernización de la Terminal E. Antes de presentar el ENF y durante el proceso de obtención de permisos en curso, el personal de Massport asistió a diversas reuniones públicas para brindar un panorama general y para responder preguntas acerca de la Modernización de la Terminal E. Se realizaron sesiones informativas con grupos comunitarios en la zona de East Boston, reuniones con funcionarios públicos a nivel local, estatal y nacional, y reuniones con partes interesadas clave, como grupos comerciales importantes y organizaciones sin fines de lucro, como el Comité de Asesoramiento para la Comunidad de Logan. Además de estas actividades de difusión específicas, la reunión pública conjunta de la FAA y la MEPA, realizada el 19 de noviembre de 2015 relacionada con la presentación del ENF, contó con una buena concurrencia de público y fue una excelente oportunidad para responder a muchas preguntas. Massport dio aviso de la reunión en los periódicos locales, en inglés y en español. Además, se brindó un servicio de interpretación en español durante la reunión. Después de la audiencia, Massport continuó el diálogo con la comunidad acerca de la Terminal E dando otras charlas informativas a líderes de las comunidades locales y tiene planeado organizar y anunciar una segunda audiencia después de haber presentado el DEIR. En total,





hace más de diez (10) meses consecutivos que Massport realiza acciones de difusión pública y masiva del Proyecto de Modernización de la Terminal E.

Massport también ha consultado directamente a entidades de recursos, como la Oficina de Administración de Zonas Costeras de Massachusetts, el Departamento de Recursos Energéticos de Massachusetts, la Oficina Ejecutiva de Energía y Asuntos Medioambientales y la FAA, en lo que respecta a impactos potenciales, cómo evitarlos y minimizarlos y estrategias de mitigación.

La sesión informativa pública se realizó el 19 de noviembre de 2015 a las 6:30 p. m., en el Salón Comunitario de Noodle Island, en el Centro de Alquiler de Autos del Aeropuerto Logan. El objetivo de esta reunión fue informar a la comunidad cercana sobre el Proyecto, incluido el cronograma y las actividades de construcción, y solicitar su opinión sobre problemas potenciales en los sectores urbanizados.

Massport publica información acerca de presentaciones regulatorias importantes en su página web. Además, Massport también publica Informes de Datos Ambientales (EDR) anuales e Informes de Estado y Planificación Ambiental (ESPR) periódicos en su página web. Las presentaciones Ambientales más recientes, entre ellas este EA/DEIR y toda la documentación de respaldo, se encuentran disponibles en la página web de Massport: [www.massport.com/environment/environmental-reporting/environmental-filings/](http://www.massport.com/environment/environmental-reporting/environmental-filings/).

Se llevará a cabo una sesión informativa pública en East Boston, MA. El personal de Massport y la FAA estarán disponibles para hablar acerca de la Propuesta de Acción y responder preguntas.

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## 1.9 Contenido de esta Evaluación Ambiental (EA)/Informe Preliminar de Impacto Ambiental (DEIR)

**Capítulo 2, *Objetivo y necesidad*:** En este capítulo se brinda una descripción de las deficiencias actuales y anticipadas a futuro en la Terminal E, en lo que respecta a abastecer el aumento de demanda en el mercado de servicios aéreos internacionales. Se resume el historial de las mejoras en la terminal, se detallan las provisiones sobre operaciones y pasajeros hasta el año 2030, y se especifican los requisitos fundamentales de las instalaciones para dar cabida al crecimiento previsto.

**Capítulo 3, *Alternativas y Propuesta de Acción*:** En este capítulo se describen las alternativas investigadas y la medida en la que cada alternativa aborda el objetivo y la necesidad del Proyecto, así como las metas de Massport para el Proyecto. Concluye con la presentación de la alternativa preferida: la Propuesta de Acción.

**Capítulo 4, *Ambiente afectado*:** En este capítulo se describe la Zona del Proyecto, incluidas sus características medioambientales naturales y construidas, tal como se encuentran en la actualidad.

**Capítulo 5, *Consecuencias Ambientales*:** En este capítulo se presentan los resultados de los estudios y los análisis técnicos completados para identificar los impactos ambientales de la Propuesta de Acción, en comparación con la Alternativa de Inacción. En el desarrollo se incluye un análisis de los efectos temporales y permanentes del Proyecto sobre los entornos naturales y artificiales relacionados con las áreas de ruido, aire, transporte terrestre, recursos naturales y suministro de energía, clima y emisiones de gases de efecto invernadero, recursos hídricos, materiales peligrosos, uso de terrenos, justicia socioeconómica y ambiental, espacios verdes, y recursos visuales.

**Capítulo 6, *Medidas beneficiosas y mitigación*:** En este capítulo se enumeran los compromisos de Massport y otras consideraciones para la protección de los entornos naturales y construidos durante el período de la construcción y a largo plazo.



**Capítulo 7, Cumplimiento de regulaciones y coordinación pública/con entidades:** En este capítulo se enumeran los permisos ambientales nacionales, estatales y locales necesarios para poder construir la Propuesta de Acción.

**Capítulo 8, Lista de distribución:** En este capítulo se incluye una lista de las partes interesadas y de las bibliotecas públicas a las que Massport les proporcionó una copia de este EA/DEIR.

**Capítulo 9, Lista de preparadores:** En este capítulo se describe el equipo de asesoramiento que participó en la preparación de los análisis y documentos técnicos para el EA/DEIR de la Modernización de la Terminal E.

## Apéndices

El material técnico completo y todas las referencias usadas para respaldar el análisis incluido en este EA/DEIR se incluyen como apéndices. Estos son los apéndices de referencia:

### *Volumen I*

- Apéndice A: Certificado de Formulario de Notificación Medioambiental MEPA y respuestas a comentarios
- Apéndice B: Hallazgos Provisionales de la Sección 61

### *Volumen II*

- Apéndice C: Pronóstico del Área de la Terminal de la Administración Federal de Aviación
- Apéndice D: Apéndice Técnico sobre Ruidos
- Apéndice E: Apéndice Técnico sobre Transporte Terrestre
- Apéndice F: Apéndice Técnico sobre Calidad del Aire
- Apéndice G: Modelo Energético
- Apéndice H: Correspondencia con Organismos

Los capítulos 1 a 9 y los apéndices A y B se incluyen en el volumen I de este EA/DEIR. Los apéndices C a H se incluyen en el volumen II. El documento completo también está disponible en un disco compacto al final de este informe. Puede encontrar más referencias citadas en el texto en la página web de la Massport:

[www.massport.com/environment/environmental-reporting/environmental-filings/](http://www.massport.com/environment/environmental-reporting/environmental-filings/).

## Appendix C

# Greenhouse Gas and Energy Model Report

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# Greenhouse Gas Memorandum

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AECOM  
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## Memorandum

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Date: September, 2016

To: Massport

From: Ross Edward, PE

Subject: Terminal E Modernization Project: Energy and Greenhouse Gas Modeling

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Distribution: Flavio Leo, Stewart Dalzell, Shelly Harris-Long, (MPA),  
Carol Lurie (VHB), Josh Brain (BR+A)

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Since the Draft EA/EIR on the Terminal E Modernization Project was filed, design concepts have evolved. This memorandum describes those changes and updates the Energy Modeling and Greenhouse Gas (GHG) impacts analysis presented in the Draft EA/EIR, that are now incorporated in this Final EA/EIR. Updates include the following:

- Additional conceptual design modifications that further that reduce energy consumption as confirmed by this updated Energy Modeling
- Identifying benefits of reduced energy consumption in terms of significant further reductions in Greenhouse Gas emissions of the Proposed Action as developed in the Greenhouse Gas Evaluation;
- Expands and elaborates on Potential Energy Conservation Measures cited in the Draft EA/EIR;
- Clarifies modeling inputs used in the Energy Modeling; and
- Provides the updated Greenhouse Gas calculations

### Updates to Terminal E Modernization Project

The Terminal E Modernization Project has been updated to now include two additional accepted Energy Conservation Measures (ECMs) including the incorporation of Photo Voltaic (PV) solar panels, and incorporation of solar panel heating of the domestic hot water for public restrooms. Massport has committed to include these measures into the design of the terminal modernization.

These two measures would improve the energy savings of the Terminal E Modernization Project compared to the Base Case from 13.8% to **18.8% (12,857 MMBTU)**, and reduce building Greenhouse Gas emissions by **27% (1,390 tons CO<sub>2</sub>/year)**. Details are shown in Table C-1.



**Table C-1: Energy and Greenhouse Gas Savings  
Base Case Building Compared to the Terminal E Modernization Project**

	Energy MMBTU	Cumulative Energy Savings %	GHG Tons CO <sub>2</sub> / Year	Cumulative GHG Savings Tons CO <sub>2</sub> / Year	Cumulative GHG Savings %
Base Case 90.1-2010 <sup>1</sup>	68,233	-	5,208	-	-
Draft EA/EIR Proposed Case	58,848	13.8%	4,187	1,021	20%
Final EA/EIR including Solar Hot Water for Restrooms	56,842	16.7%	4,031	1,177	23%
Final EA/ EIR including Photo Voltaic (25,000 SF)	55,377	18.8%	3,818	1,390	27%

1 American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE) 90.1-2010 (<https://www.ashrae.org/resources>)

MMBTU – million British Thermal Units; GHG – Greenhouse Gas; CO<sub>2</sub> – Carbon Dioxide

**Potential Energy Conservation Measures (ECMs) cited in the Draft EA/EIR**

Five potential efficiency measures (dual box, fin tube, energy recovery, dynamic filtration, and solar PV) were evaluated in the Draft EA/EIR; however, the brief description of these measures did not include the resultant GHG reductions. For the Final EA/EIR, these measures are further described and their GHG reduction benefits are shown in Table C-2.

**Table C-2 Potential Energy Conservation Measures – Draft EA/EIR**

	Energy MMBTU	Energy Savings %	GHG Tons CO <sub>2</sub> / Year	GHG Savings Tons CO <sub>2</sub> / Year	GHG Savings %
Dual Box Minimum	54,945	0.8%	3,790	28	0.7%
Fin Tube Radiation	54,838	0.2%	3,778	12	0.3%
Energy Recovery Wheel	50,361	8.2%	3,357	421	11.1%
Dynamic V8 Filtration	50,082	0.6%	3,327	30	0.8%
Additional PV Panels (25,000sf increment)	48,617	2.9%	3,114	213	5.6%

Sf – square feet

MMBTU – million British Thermal Units; GHG – Greenhouse Gas; CO<sub>2</sub> – Carbon Dioxide

Further information on these Potential ECMs is as follows:

**Dual Box Minimum** - This HVAC control device is designed to maintain room temperature by modulating supply airflow and temperature to the space. Basic box design typically has one minimum air flow setpoint, generally to meet heating design. The heating setpoint is often higher than the minimum required during

cooling so this results in more cooling and in turn reheat. The Dual Box Minimum control device has two minimum setpoints for air flow – with the capability to operate at two different minimum setpoints depending if in heating mode or cooling mode. This is not included in the Project at this time pending advancement of design as the improvement was very small and lacked justification of the inherent increased complexity of controls and potential maintenance. This ECM will be further evaluated during design.

**Fin Tube Radiation** – Fin tube radiation is hot water heating elements located along perimeter walls and windows that heat using natural convection and radiation rather than fans. This heating device offers a good way to meet heating loads at the building façade. It has the potential to save fan energy and provide greater control over perimeter heating than overhead air systems. Issues can stem from increased pump power, additional controls, floor area reduction and cleanliness. The improvement resulting from this ECM is very small and Massport has indicated that maintenance (keeping them clean) has been an issue in other terminals as passengers routinely spill and drop items into the equipment resulting in reduced efficiency. For these reasons this ECM has not been incorporated into the Terminal E Modernization Project conceptual design.

**Energy Recovery Wheel** - Energy Recovery Wheel utilizes exhaust energy to pretreat incoming outside air. This equipment can provide a significant benefit as they have high efficiency and can recover both sensible and latent energy which benefits in both the heating and cooling seasons. There are drawbacks such as the increase in mechanical room sizing and fan energy to overcome the additional static pressure of the heat recovery equipment in the supply and exhaust air streams. Cross contamination is another concern for the system, any odors/ chemical captured in the exhaust air stream can be transferred into the outside air stream and back into the building. Regular maintenance is also crucial to maintain optimal performance. This ECM remains a prime candidate for incorporation as design proceeds and detailed evaluation will be performed during design.

**Dynamic Filtration** – This option uses advance air filtration to reduced supply fan static pressure and can provide equal and sometimes improved filtration performance over its conventional counterpart. This has not included in the Proposed Project at this time pending advancement of design as the improvement was very small and lacked justification of the inherent increased complexity of controls and potential maintenance. This ECM will be further evaluated during design.

**Photo Voltaic (PV)** – 25,000 sf of PV panel was included as a *potential* ECM in the DEIR. Upon further consideration by Massport, this ECM has been moved to the committed category and is included in the Terminal E Modernization Project.

It is anticipated that there will be over 200,000 sf of roof for the Proposed Project. As noted above at least 25,000 sf of roof mounted PV panel has been incorporated into the Proposed Project, and there will also be an area of solar panel on the roof to heat domestic hot water. There are other factors that must be considered when trying to identify potential roof area that would be available for PV panels, such factors include: 1) analysis to confirm there is no reflective glare impacts to pilots and the FAA Air Traffic Control Tower, 2) roof shape – portions of the terminal additions will likely not have a flat roof that would be suitable for PV arrays; the entrance to the core terminal will include significant design elements and should not be tightly constrained at this point; 3) free air movement for ventilation (intake and exhaust) for mechanical (fan) rooms located on the fourth level, and 4) it is important to maintain clear viewlines from airline clubs and public spaces located on fourth level (which look over the third level roof). As these factors are addressed in the design evolution, it is anticipated that there will be a significant area of roof that has the potential for PV panels. Because Solar PV can be both a cost-effective and high-impact GHG mitigation strategy, such areas with PV panel potential will be designed to allow for future installation of PV panels.

There appears to be significant potential for a Third Party development of PV panel facility utilizing the resulting available roof area. Such Third Party arrangements are currently available and are becoming increasingly popular. Massport will entertain and evaluate Third Party proposals for development of PV Panel facilities – which may or may not directly serve the Proposed Project - but will provide energy reduction and greenhouse gas mitigation for the environment in general.

The benefit of a representative 25,000 sf PV Panel installation has been shown in the above table for reference as design advances.

### Additional ECMs in Final EA/EIR

At the suggestion of the Massachusetts Department of Energy Resources (DOER), the project team investigated improved wall and fenestration beyond what was evaluated in the Draft EA/EIR. As further suggested by DOER, the team investigated how the opportunities for energy and greenhouse gas reduction in the production of domestic hot water. The objective of these investigations was to examine the effect on GHG reduction, and judge whether additional mitigation may be worth pursuing. These additional ECMs have been investigated and identified in the revised Energy Modeling Report (See Appendix C) in the Final EA/EIR, with the results summarized in Table C-3 below

**Table C-3 Potential Energy Conservation Measures – Final EA/EIR**

	Energy MMBTU	Energy Savings %	GHG Tons CO <sub>2</sub> / Year	GHG Savings Tons CO <sub>2</sub> / Year	GHG Savings %
Increased Roof Insulation (R-45)	55,218	0.29%	3,805	13	0.3%
Increased Exterior Wall Insulation (R-20)	55,052	0.59%	3,788	30	0.8%
Increased Exposed Floor Insulation (R-30)	55,339	0.07%	3,814	4	0.1%
Triple Glazed Windows (U-value 0.21)	55,039	0.61%	3,781	37	1.0%
Concession Service Hot Water	-	4.2-8.4%	3,573-3,520	130-261	3.4-6.8%

Sf – square feet

MMBTU – million British Thermal Units; GHG – Greenhouse Gas; CO<sub>2</sub> – Carbon Dioxide

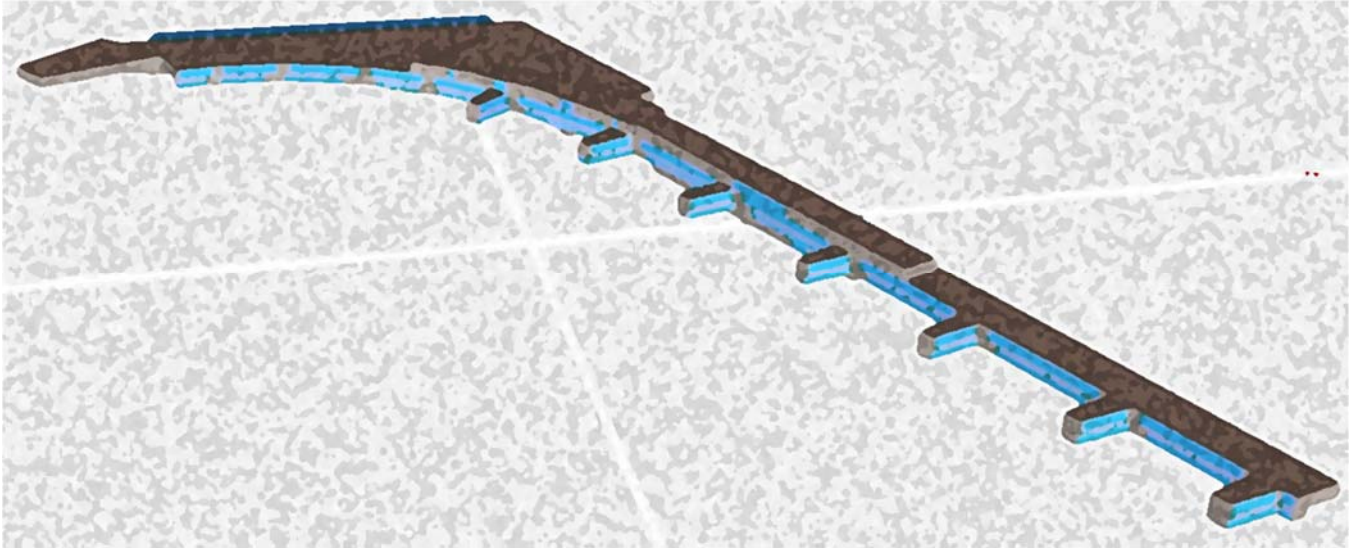
The results of these investigations identified that the further improvement of window and wall insulation values did not have a significant impact on reduction of Greenhouse Gas emissions and confirmed that the Terminal E Modernization project already incorporates effective materials and assemblies.

The investigation of domestic hot water lead to the opportunity to reduce energy and greenhouse gas by use of solar panel heating of a portion of the domestic hot water – water used in public toilet rooms. This attractive measure was then moved from the potential category to a committed mitigation measure and incorporated into the Project.

The other portion of domestic hot water for the new terminal areas will be used by concessions (retail shops, restaurants, etc.). At this early phase of design, the mix of concessions is not known. The type and mix on concessions will be determined by proposals from developers, as part of an airport-wide or terminal-wide procurement. Hot water usage by each concession is a function of the specific use by within the concession - these needs vary greatly. It is also noted that water to concessions is metered individually, and is not generated from a central hot water facility. A range of potential benefits for use of CHP has been identified. However, the implementation individual concession specific CHP equipment appears problematic and thus is not incorporated into the Proposed Project.

# Energy and Greenhouse Gas Analysis

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**Terminal E Modernization  
Boston Logan International Airport – Massachusetts Port Authority  
Boston, Massachusetts**

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**MEPA Energy and Greenhouse Gas Analysis  
September 28, 2016**

## Detailed Energy Modeling Assumptions

The following tables summarize the architectural, electrical, mechanical, and plumbing inputs used in the energy models and committed to by Massport. The Baseline Case represents the current Massachusetts Energy Code: ASHRAE 90.1-2010 based on Appendix G and ASHRAE Climate Zone 5A. The baseline energy model is first simulated at its actual orientation, then at 90°, 180° and 270° and then the energy consumption of the four runs are averaged. The Proposed Case represents the current design considerations, potential not yet committed to Energy Conservation Measures (ECM) are indicated in **Bold**.

### General

PARAMETER	BASELINE CASE/ PROPOSED CASE
<i>Energy Modeling Software</i>	eQuest 3.64, build 7130
<i>Weather File</i>	TMY3, MA_Boston_Logan_Intl_Arp
<i>Heating Design Day</i>	8.1°F
<i>Cooling Design Day</i>	87.6°F DB 71.9°F CWB 14.9 Drybulb Range

### Architectural

MODEL INPUT PARAMETER	BASELINE CASE	PROPOSED CASE
<i>Building Area (ft<sup>2</sup>)</i>	640,000	640,000
<i>Occupancy, building average (area/ person)</i>	50	50
<i>Space Set-point Cooling (F)</i>	75°F	75°F
<i>Space Set-point Heating (F)</i>	70°F	70°F
<i>Roof Assembly</i>	U-0.048	Membrane roofing system with 4 in. polyiso insulation minimum, 8 in maximum at R-6.0 per inch average of 38 R-value; U-0.027
<i>Wall Assembly - Above Grade</i>	U-0.064	Composite metal panel wall on metal stud backup with 3 in. polystyrene rigid at R-5.0 per inch; U-0.05



<i>Floor Assembly</i>	U-0.038	Exposed deck sprayed with 4 in. of urethane closed cell insulation U-0.038
<i>Vertical fenestration Area (% of wall)</i>	Equals proposed	28%
<i>Vertical Glazing U-factor</i>	Curtainwall Assembly U-factor: 0.45	Curtainwall: Double-glazed argon-filled unit with #2 low-e coating (similar to Solarbronze SB70XL) and thermally broken aluminum curtain wall assembly (similar to EFCO 5600): 0.34 (0.24 COG)
<i>Vertical Glazing SHGC</i>	0.40	0.19
<i>Vertical Glazing Tvis</i>	n/a	0.36
<i>Shading Devices</i>	None	Exterior fixed shades with exposed glazing on the curb and south side of terminal.
<i>Building Self-Shading Description</i>	None	Building is self-shaded by its own exterior surfaces.

## Electrical / Lighting

MODEL INPUT PARAMETER	BASELINE CASE	PROPOSED CASE
<i>Automatic Lighting Shutoff Method</i>	Time of day schedule with occupancy sensors in conference rooms, break rooms, and meeting rooms as required.	Time of day schedule with occupancy sensors in all enclosed spaces.
<i>Interior Lighting Power Calc Method</i>	Building Area Method	Building Area Method
<i>Average Interior Lighting Power Density (W/SF)</i>	0.77	0.62
<i>Automatic Interior Space Shutoff Control in Required Spaces</i>	Automatic shut-off in spaces as required by code based on occupancy sensor.	Automatic shut-off in all enclosed spaces based on occupancy sensor.
<i>Daylight Dimming Controls</i>	In all perimeter areas with exposure to natural daylight.	In all perimeter areas with exposure to natural daylight.

<i>Exterior Lighting Power (kW)</i>	16.0	9.3
<i>Equipment, building average (w/ft2)</i>	2.0	2.0
<i>Elevator Total Power (kW)</i>	147	147
<i>Escalator Total Power (kW)</i>	155	155
<i>Baggage Handling Equipment (kW)</i>	960	960

### Mechanical (Air-side)

MODEL INPUT PARAMETER	BASELINE CASE	PROPOSED CASE
<i>Primary HVAC Type</i>	System 7: VAV with reheat	VAV units with reheat serving the building by space type. Separate units serving holding level and club level.
<i>Cooling</i>	Chilled water (campus plant)	Chilled water (campus plant)
<i>Heating</i>	Steam (campus plant)	Steam (campus plant)
<i>Fan System Operation</i>	Fans are operated continuously	Fans are operated continuously
<i>VAV Terminal Box Minimum Flow</i>	30%	50% <b>ECM – Dual Box, 30% for cooling, 50% for heating</b>
<i>Outdoor Air Design Min Ventilation</i>	Based on 62.1-2007 minimum.	Based on 62.1-2007 minimum, approximately 23% outdoor air.
<i>HVAC Air-side Economizer Cycle</i>	Based on drybulb	Based on dual enthalpy

<i>Economizer High-Limit Shutoff</i>	70°F DB	N/A
<i>Design Airflow Rates (Conditioned)</i>	358,000 CFM	474,000 CFM
<i>Total System Fan Power (Conditioned)</i>	650 kW	570 kW
<i>Air Filtration</i>	Pre-filter – Merv 8 Post-filter – Merv 8 Final-filter – Merv 13 Carbon Filter	Pre-filter – Merv 8 Post-filter – Merv 8 Final-filter – Merv 13 Carbon Filter <b>ECM – Dynamic V8 Filter (eliminates Merv 13 and carbon)</b>
<i>Pressure Drop Adjustments</i>	MERV 13 for filters, carbon filters, sound attenuators	N/A
<i>Exhaust Air Energy Recovery</i>	None (not required)	<b>ECM – Enthalpy Heat Wheel</b>
<i>Demand Control Ventilation</i>	Spaces greater than 40 people / 1000 sq ft. and >500sf	Spaces greater than 40 people / 1000 sq ft. and >500sf
<i>Supply Air Temperature Reset Parameters</i>	Supply Air Temperature shall reset 5°F higher under minimum cooling load conditions.	Supply Air Temperature shall reset 10°F higher under minimum cooling load conditions.

**Mechanical (Waterside – Cooling)**

MODEL INPUT PARAMETER	BASELINE CASE	PROPOSED CASE
<i>Primary Cooling Source</i>	Chilled water from campus central plant	Chilled water from campus central plant
<i>Chilled Water Loop Supply Temp</i>	44°F	42°F
<i>Chilled Water (CHW) Loop Delta-T</i>	12°F	16°F
<i>CHW Loop Temp Reset Parameters</i>	Load reset	Constant temperature

<i>CHW Loop Configuration</i>	Primary, variable secondary	Variable Primary
<i>Number of Chilled Water Pumps</i>	1 – primary 1 – secondary	1 - primary
<i>Chilled Water Pump Flow Rate</i>	4,000 GPM 4,000 GPM	2,200 GPM
<i>Chilled Water Pump Power</i>	32 kW 32 kW	72 kW

### Mechanical (Waterside – Heating)

MODEL INPUT PARAMETER	BASELINE CASE	PROPOSED CASE
<i>Primary Heating Source</i>	Steam from campus central plant	Steam from campus central plant
<i>Hot Water Loop Supply Temperature</i>	180°F	200°F – preheat loop 180°F – reheat loop
<i>Hot Water Loop Delta-T</i>	50°F	20°F
<i>Hot Water Loop Temp Reset Parameters</i>	Load reset	Constant temperature
<i>Hot Water Loop Configuration</i>	Variable flow with variable speed pump	Variable flow with variable speed pump
<i>Number of Hot Water Pumps</i>	1	1
<i>Chilled Water Pump Flow Rate</i>	710	625 GPM
<i>Hot Water Pump Power</i>	10 kW	21 kW

<i>Fin Tube Radiation</i>	None	ECM – Fin tube on perimeter of holding and clubs (allows terminal box to have 30% minimum for heating, eliminated stratification issues)
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### Service Water Heating

MODEL INPUT PARAMETER	BASELINE CASE	PROPOSED CASE
<i>Service Hot Water Type</i>	Same as Proposed Case	Electric instantaneous hot water heaters
<i>Temperature</i>	140°F	140°F
<i>Flowrate (GPM)</i>	52	32

### Renewable Energy

MODEL INPUT PARAMETER	BASELINE CASE	PROPOSED CASE
<i>Photo Voltaic Array</i>	None	ECM – 300 kW
<i>Solar Hot Water</i>	None	80% of toilet room service hot water

## Energy Conservation Measures

The following is a comprehensive list of project ECMs. Each ECM has been categorized as one of the following:

- **Accepted** – the project is will include this ECM.
- **Under further consideration** – studied through energy modeling for consideration, results included in this report.
- **Investigated** – not currently accepted but investigated for energy savings sensitivity, results included in this report.
- **Rejected** – considered not viable for this project.

### ARCHITECTURAL

ECM	Details	Categorization
WALL R	Wall assembly R-values to <i>meet</i> prescriptive code minimum, including thermal bridges.	<b>Accepted</b>
WALL R +	Wall assembly R-values to go one step beyond currently proposed performance.	<b>Investigated</b>
ROOF R	Roof R-value to exceed prescriptive code minimum.	<b>Accepted</b>
ROOF R +	Roof assembly R-values to go one step beyond currently proposed performance.	<b>Investigated</b>
FLOOR R	Exposed floor assembly R-value to meet prescriptive code minimum, including thermal bridges.	<b>Accepted</b>
FLOOR R +	Exposed floor assembly R-values to go one step beyond currently proposed performance.	<b>Investigated</b>
MASS	Maximize thermal mass for thermal damping.	<b>Accepted</b>
SPANDREL	Fully insulated Spandrel.	<b>Accepted</b>
AIRTIGHT	Comprehensive air sealing. Consider blower door test, typical window tests and door tests. Refer to AAMA 101 testing procedures.	<b>Accepted</b>
LIGHT-ROOF	High-albedo roofing material.	<b>Accepted</b>
WWR ≤ 40%	Limit overall building window-to-wall ratio for vision glass to 40% or less to limit solar gains and heat loss.	<b>Accepted</b>
GLASS U	High performance double pane insulated argon filled glazing with optimized window framing selection (thermal breaks, warm edge spacers, low frame area, etc.).	<b>Accepted</b>
GLASS U+	High performance triple pane insulated glazing with optimized window framing selection (thermal breaks, warm edge spacers, low frame area, etc.).	<b>Investigated</b>
GLASS SHGC +	Optimized glass SHGC based on space conditions and direction. SHGC at 0.35 or less is highly recommended.	<b>Accepted</b>
FIXED SHADE	Fixed exterior shading devices to limit solar gains (low cost, horizontal facing south are optimal).	<b>Accepted</b>
INT BLINDS	Automated reflective interior blinds to reduce solar heat gain coefficient	<b>Rejected</b>

ELECTRICAL		
ECM	Details	Categorization
LPD -20%	Interior lighting power density reduction through LED lighting, reducing fixture count, and limiting lighting levels to code minimum.	<b>Accepted</b>
DAYLIGHT	Daylighting dimming controls for all perimeter spaces. To take credit for this reduction in the proposed design energy model, daylighting control requirements have to be part of tenant lease agreement.	<b>Accepted</b>
LIGHT-OCC	Occupancy / vacancy sensor control exceeding code.	<b>Accepted</b>
LIGHT-MULTI	Multi-scene / multi-level / bi-level to allow lighting to be reduced.	<b>Accepted</b>
EXT LPD REDUC	Exterior lighting power density reduction.	<b>Accepted</b>
ELEVATOR	High efficiency elevator and escalator.	<b>Accepted</b>

MECHANICAL		
ECM	Details	Categorization
HVAC ZONING	Separate systems for areas with differing usage, outdoor air requirements, space setpoints, etc.	<b>Accepted</b>
SEAL DUCTS	Seal and leak check all supply air ductwork.	<b>Accepted</b>
EC MOTORS	Electrically commutated motors for fan coil units, pumps, fans, where equipment is available. Can be more efficient than fan with VFD.	<b>Accepted</b>
↓AHU SP	Low static pressure, low velocity across coils and filters in AHU.	<b>Accepted</b>
↓DUCT SP	Low static pressure, low velocity in ducts.	<b>Accepted</b>
PERIMETER	Hydronic heating at the perimeter	<b>Under further consideration</b>
HW LOOPS	Separate hot water loops for reheat, preheat and perimeter heating for increased controllability.	<b>Accepted</b>
MOTOR EF	Premium-efficiency pumps and fan motors.	<b>Accepted</b>
FAN ARRAY	Mutli-fan arrays for AHUs for increased controllability.	<b>Accepted</b>
DYNAMIC V8	MERV 15 advanced low-pressure drop air filtering.	<b>Under further consideration</b>
HEAT RECOV	Heat wheel energy recovery.	<b>Under further consideration</b>
GROUND	Ground source heat pumps	<b>Rejected</b>

CONTROLS		
ECM	Details	Categorization
MIN VENT	Provide only minimum ventilation as required by code.	<b>Accepted</b>



SAT RESET	10°F supply air temperature reset.	<b>Accepted</b>
SP RESET	Static pressure reset based on terminal box positions. At a minimum have a fixed static pressure sensor with an occupied and unoccupied static pressure setpoint.	<b>Accepted</b>
+DCV	Demand controlled ventilation beyond code. Control to increase and decrease airflow based on ventilation and load.	<b>Accepted</b>
SETBACK T	Unoccupied temperature setbacks based on occupancy sensor or time of day.	<b>Accepted</b>
DUAL MAX	Dual-maximum VAV-box control which allows the minimum to be reduced below the heating airflow.	<b>Under further consideration</b>
HVAC-OCC	Occ-sensor-based temp and airflow setbacks in applicable spaces (office, conf, etc).	<b>Accepted</b>
FAN CYCLING	Turn fans (supply, return, general exhaust) off when building is not occupied. Allow to cycle on to meet load, if necessary.	<b>Rejected</b>

#### PLUMBING

ECM	Details	Categorization
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DHW -30%	Reduce domestic hot water usage by using low flow fixtures.	<b>Accepted</b>
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#### DISTRIBUTED GENERATION (ON-SITE)

ECM	Details	Categorization
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SOLAR PV	Photovoltaic array or solar hot water panels on roof.	<b>Accepted</b>
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SOLAR HW	Solar panel array to produce hot water for toilet rooms.	<b>Accepted</b>
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COGEN	Combined heat and power	<b>Investigated</b>
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## Building Efficiency Summary

There are several facets which allow this building to perform better than one constructed to the minimum high standards required by ASHRAE 90.1-2010. The highlighted differences are as follows:

**Architectural** The building envelope is expected to meet or exceed the minimum performance threshold:

- Exterior walls.
- Roof.
- Exposed floors.
- Glazing.
- Window to wall ratio.

**Air handing units** The design units are Variable Air Volume (VAV) which are similar to what is required by 90.1 in the base case. However, the design VAVs are designed to include the following attributes to improve energy efficiency:

- Oversized fans, ducts and coils resulting in reduced air velocity and static pressure. The primary energy benefit stems from reduced fan power per cfm.
- Dual enthalpy air economizer which maximizes the benefit of using outdoor air to condition the building. Rather than simply using outdoor air up to a fixed temperature (70°F in the base case), the dual enthalpy economizer selects whether to maximize outdoor air or return air based on enthalpy in either airstream. The controls will determine which airstream will consume the least amount of energy to meet the required supply conditions.
- The AHUs have the ability to both reset the fan static pressure and reset the supply air temperature based on space load conditions. These controls reduce fan power, cooling energy and heating energy.

**Water loops** The design units have been developed to be more efficient in the following ways:

- Chilled water supply temperature reduced from 44°F (base case) to 42°F with a wider return temperature. This reduces the demand on the pumping and fan systems. .

**Renewable energy** The proposed design has committed to incorporating the following renewable energy strategies to reduce grid energy demand:

- **Solar hot water for restrooms**- this system will be sized to meet the majority of the public toilet room service hot water needs.
- **Photo Voltaic (PV) (25,000 SF)**- electricity will be produced by an on-site PV array sized at approximately 300kW. This will directly offset a portion of the terminal's grid electric energy consumption.

**Potential Energy Efficiency Measures Evaluated in DEIR** The following ECMs were studied for their impact on energy consumption and their project viability and will be further considered as the design moves forward:

- **Dual Box Minimum** – allows for a terminal reheat box to have a minimum setpoint for cooling and another for heating. When using a less sophisticated standard type reheat box, there is only one setting for minimum airflow which is typically based on heating needs. In spaces that have tall ceilings the heating minimum airflow set points have to be set high to prevent stratification. This high minimum airflow then also applies when in cooling mode even though the system could operate at a lower airflow and still meet cooling loads. This results in higher fan energy, cooling energy and reheat energy.
- **Fin Tube Radiation** – reduces heating at the primary fan system and places load on the more efficient hydronic system. This allows the primary air handlers to dial back central fans and heating since the fine tube becomes the primary means for heating. It also provides a more comfortable environment for occupants who choose to be near windows on cold days.
- **Energy Recovery Wheel** – recovers energy that would otherwise be exhausted out of the building. Energy recovery wheels are very efficient at recovering energy because they capture both sensible energy (temperature) and latent energy (moisture) so are effective during heating and cooling periods. For example when in heating mode, air returning from occupied spaces is 72°F and ventilation air coming from outside is 20°F, the energy recovery system brings the ventilation air from 20°F to let's say 50°F then the 30°F difference is 'free' heating. The opposite happens

during cooling, 75°F dehumidified return air cools humid warm 87°F ventilation reducing the work of the building’s cooling coils.

- **Dynamic V8 Filtration** – Reduces air handling unit fan power while providing equivalent filtration. This system eliminates the need for HEPA filters and carbon filters which reduces the air handler static pressure. With the static pressure reduction, there is less pressure on the supply fans resulting in less energy used by the fans.
- **Photo Voltaic (PV) (25,000 SF increment)**- additional electricity will be produced by an on-site PV array sized at approximately 300kW beyond that already accepted. This will directly offset a portion of the terminal’s grid electric energy consumption.

**DOER Suggested Actions Beyond DEIR Commitments.** The following ECMs were investigated for their impact on energy consumption but are *not* currently in the proposed design. For more information please see the Technical Appendix provided at the end of this report:

- **Increased Roof Insulation (R-45)** – this looks at adding more insulation to the roof.
- **Increased Exterior Wall Insulation (R-20)** – this looks at adding more insulation to the exterior wall system.
- **Increased Exposed Floor Insulation (R-30)** – this looks at adding more insulation to the exposed floor system.
- **Triple Glazed Windows** – uses triple glazed windows for improved insulation.
- **Concession Service Hot Water CHP** – uses a natural gas combined heat and power plant to meet concession hot water demand while simultaneously producing electricity.

**Results** The following table shows the results of the energy modeling and how the proposed design currently stands against the ASHRAE 90.1-2010 Appendix G baseline case. During the initial DEIR analysis, the proposed design (DEIR Proposed Case) was indicating that 13.8% of energy and 20.0% Green House Gas (GHG) emissions could potentially be saved by incorporating all of the ECMs identified as ‘Accepted’ in the ‘Potential Energy Conservation Measures’ section in this report. However, since that initial analysis two other ECMs have been accepted and have been included in the FEIR energy modeling analysis. These new ECMs include 1) solar hot water for restrooms and 2) photo voltaic (25,000 SF) array, their contribution helps to increase percentage energy and greenhouse gas savings to 18.8% and 27% respectively.

	Energy MMBTU	Energy Savings %	GHG Tons CO2/ Year	GHG Savings Tons CO2/ Year	GHG Savings %
Base Case 90.1-2010	68,233	-	5,208	-	-
DEIR Proposed Case	58,848	13.8%	4,187	1,021	20%
FEIR including Solar Hot Water for Restrooms	56,842	16.7%	4,031	1,177	23%
FEIR including Photo Voltaic (25,000 SF)	55,377	18.8%	3,818	1,390	27%

Notes:

- 1) Findings are presented in cumulative numbers. This means the energy and GHG savings for ‘FEIR including Phot Voltaic (25,000 SF)’ includes in the impact of all the ECMs captured in ‘DEIR Proposed Case’ and ‘FEIR including Solar Hot Water for Restrooms’.
- 2) Energy Savings % and GHG Savings % represents the savings against ‘Base Case 90.1-2010.’
- 3) GHG calculations have been provided by KB Environmental Sciences, Inc.

By adding the following ECMs to the 'FEIR including Photo Voltaic (25,000 SF)' which are identified as 'Potential Energy Efficiency Measures Evaluated in DEIR' the Energy Savings % and GHG Savings % impact can be noted.

	Energy MMBTU	Energy Savings %	GHG Tons CO2/ Year	GHG Savings Tons CO2/ Year	GHG Savings %
Dual Box Minimum	54,945	0.8%	3,790	28	0.7%
Fin Tube Radiation	54,838	0.2%	3,778	12	0.3%
Energy Recovery Wheel	50,361	8.2%	3,357	421	11.1%
Dynamic V8 Filtration	50,082	0.6%	3,327	30	0.8%
Additional PV Panels (25,000sf increment)	48,617	2.9%	3,114	213	5.6%

## Notes:

- 1) These measures are modeled interactively, meaning for example that 'Fin Tube Radiation' includes the previous ECM 'Dual Box Minimum' and so forth.
- 2) Energy and GHG savings are calculated compared to the ECM before indicating independent savings.
- 3) GHG calculations have been provided by KB Environmental Sciences, Inc.

The following table highlights 'DOER Suggested Actions Beyond DEIR Commitments.' These ECMs were studied in order to test sensitivity to building components such as increasing envelope performance and utilizing CHP to produce concession service hot water and electricity. Energy values are representative of either site energy or source energy. Site energy is that which is consumed directly at the building, think utility meter. Source energy is that which is consumed to produce the energy delivered to the site. Source energy is used for the CHP metrics since site energy actually increases due to the use of natural gas to power the CHP plants. However, natural gas delivery infrastructure has an efficiency of approximately 92% compared to the electric grid's 33%. That means that of all the electric power generated at a power plant (source) only 33% reaches customers. By reducing a facility's site electric consumption, the source energy is reduced by 3 times that of the site.

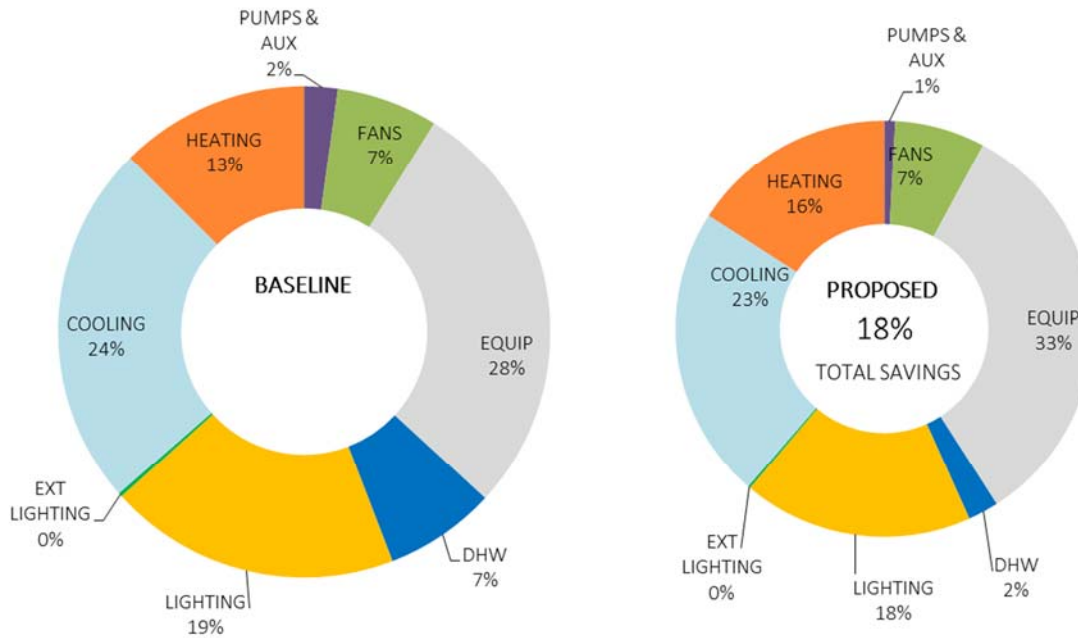
	Energy MMBTU	Energy Savings %	GHG Tons CO2/ Year	GHG Savings Tons CO2/ Year	GHG Savings %
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Increased Exposed Floor Insulation (R-30)	55,339	0.07%	3,814	4	0.1%
Triple Glazed Windows (U-value 0.21)	55,039	0.61%	3,781	37	1.0%
Concession Service Hot Water	-	4.2-8.4%	3,573-3,520	130-261	3.4-6.8%

## Notes:

- 1) These measures are modeled independently, meaning there is no interaction to the other ECMs.
- 2) Energy and GHG savings for each ECM are calculated compared to 'FEIR including Photo Voltaic (25,000 SF).'
- 3) Site energy is used in all measures except 'Concession Service Hot Water'; 'Concession Service Hot Water' is source energy.
- 4) 'Concession Service Hot Water' values are only an estimate as concession hot water needs can vary greatly depending on actual tenants.
- 5) GHG calculations have been provided by KB Environmental Sciences, Inc.

Breakdown of end uses and annual energy consumption of the baseline case and the proposed case as currently designed (not including ECMs) are on the following pages.

### ANNUAL SITE ENERGY CONSUMPTION BY END-USE

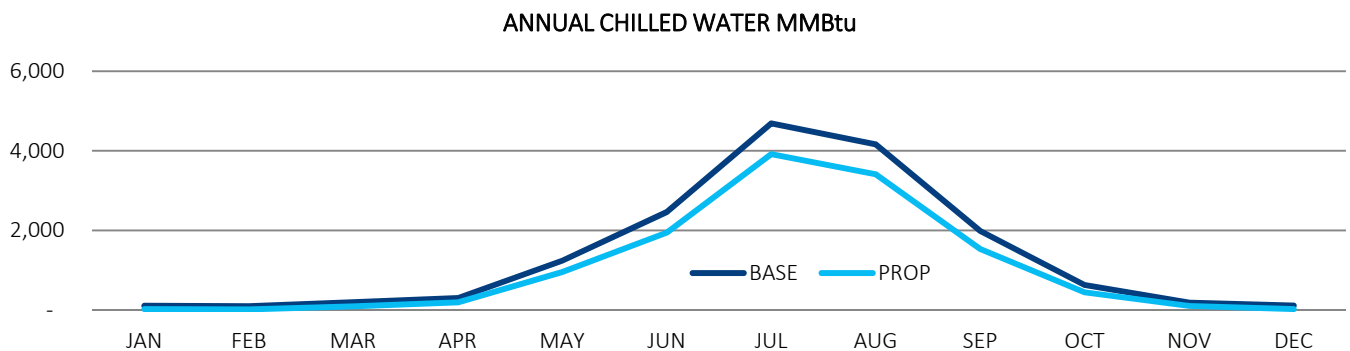
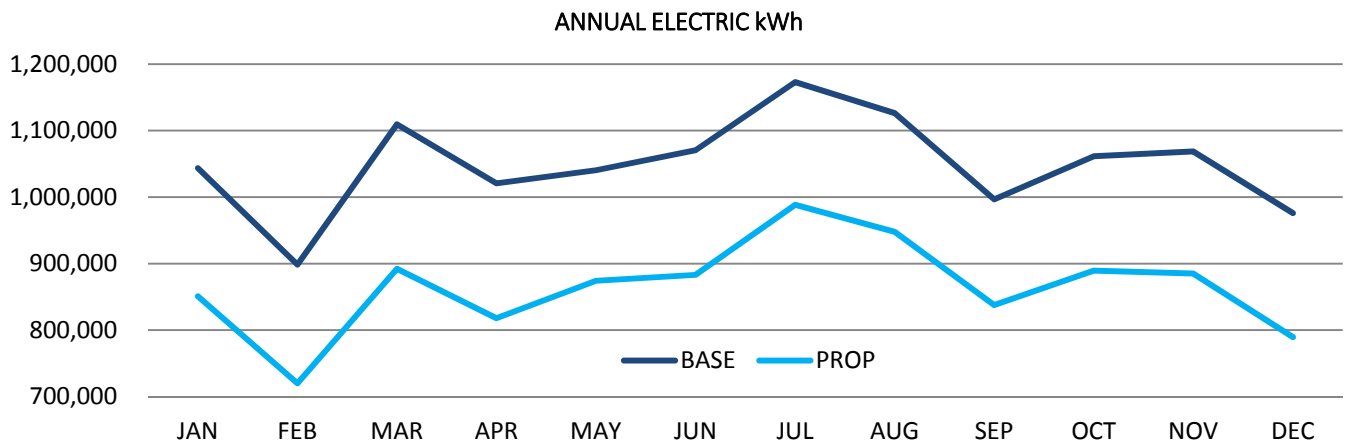


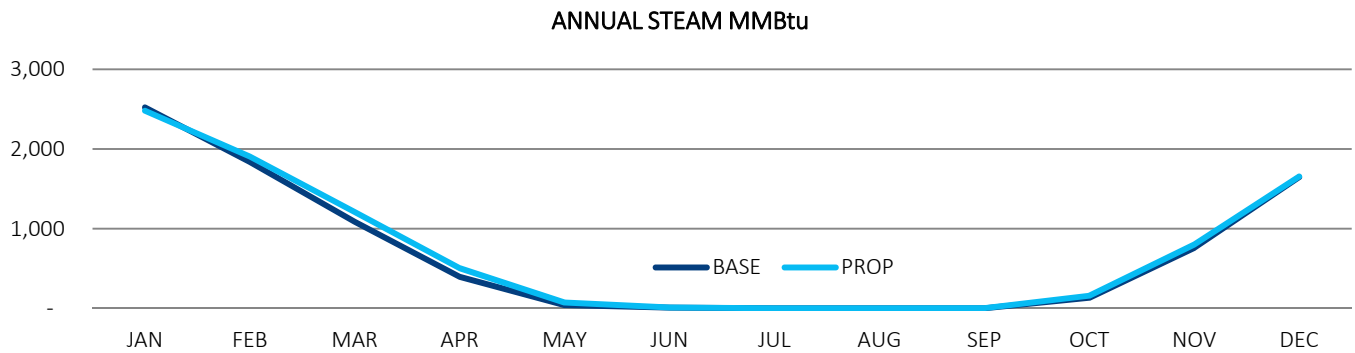
ENERGY CONSUMPTION	SOURCE	BASELINE			PROPOSED		PERCENT SAVINGS
		ENERGY (MMBTU/YR)	PERCENT OF TOTAL		ENERGY (MMBTU/YR)	PERCENT OF TOTAL	
<i>Space Cooling</i>	Chilled Water	16,140	24%	Chilled Water	12,620	23%	22%
<i>Space Heating</i>	Steam/Hot Water	8,430	12%	Steam/Hot Water	8,800	16%	-4%
<i>Pumps</i>	Electricity	1,480	2%	Electricity	470	1%	68%
<i>Fans</i>	Electricity	4,500	7%	Electricity	3,880	7%	14%
<i>Equipment Loads</i>	Electricity	18,870	28%	Electricity	18,310	33%	3%
<i>Domestic Hot Water</i>	Electricity	4,930	7%	Electricity	1,310	2%	73%
<i>Interior Lighting</i>	Electricity	12,920	19%	Electricity	9,870	18%	24%
<i>Exterior Lighting</i>	Electricity	170	0%	Electricity	100	0%	41%
<b>Total Building Energy Consumption</b>		<b>67,500</b>			<b>55,400</b>		<b>18%</b>

Note: Baseline Total Building Energy Consumption is the average of the four baseline runs.

*These energy modeling results are estimates of future energy consumption and are to be used for comparison purposes only. BR+A cannot guarantee that these results will reflect actual energy consumption due to the uncertainty of actual schedules of use, weather and many other unforeseen factors.*

MONTH	ELECTRIC kWh		CHILLED WATER MMBtu		STEAM MMBtu	
	BASE	PROPOSED	BASE	PROPOSED	BASE	PROPOSED
JAN	1,043,431	850,905	106	20	2,593	2,480
FEB	898,485	720,009	92	10	1,891	1,906
MAR	1,109,502	892,326	197	86	1,135	1,209
APR	1,020,719	817,929	305	187	437	505
MAY	1,040,316	874,217	1,273	954	56	73
JUN	1,070,381	883,037	2,520	1,944	14	11
JUL	1,172,897	988,507	4,770	3,916	0	-
AUG	1,126,352	947,718	4,247	3,412	0	-
SEP	996,569	837,682	2,042	1,531	5	3
OCT	1,061,247	889,314	646	443	154	160
NOV	1,068,525	884,910	188	102	803	802
DEC	975,941	789,594	108	19	1,703	1,655
TOTAL	12,584,363	10,376,148	16,493	12,624	8,791	8,804





## Technical Appendix

This has been provided to elaborate on the changes that have occurred since the last report issuance dated June 30, 2016. There was no change to the baseline case model from the previous run, the window to wall ratio has been confirmed as being modeled equally in both the baseline case and the proposed case models. The proposed case model was changed and re-run to account for measures that have since been accepted into the design. These measures include the two following:

1. Solar hot water for restrooms – this measure was recently added to the project scope and is considered to be accepted. This measure will use solar panels to generate hot water to offset toilet room service hot water demand. This system is expected to meet approximately 80% of the annual toilet room service hot water demands. There will be an electric heat component to serve as a booster/ back-up to the solar hot water system.
2. Photo Voltaic (25,000 SF) – this measure was initially believed not to be part of the initial project scope and was treated as a potential ECM. This has since been accepted into the project. The proposed case energy model incorporates approximately 300kW of electric PV which offsets the building's electric energy consumption.

Additional energy modeling was performed to gauge the impact of going one step beyond the current proposed design of the exterior envelope, these are identified as 'DOER Suggested Actions Beyond DEIR Commitments.' The following identifies the envelope components that were investigated using the energy model:

1. Increased roof insulation – the current design is proposed to carry an average roof insulation R-value of 38, R-value of 45 was investigated.
2. Increased Exterior Wall Insulation (R-20) – the current design calls for an R-value of 15, an R-value of 20 was investigated.
3. Increased Exposed Floor Insulation (R-30) - the current design calls for an R-value of 26, an R-value of 30 was investigated.
4. Triple Glazed Windows – the current design uses double pane glazing with argon fill with a U-value of 0.24, a triple pane option with the same solar heat gain coefficient and visible transmittance was investigated with a U-value of 0.21.

Additional energy modeling was performed to gauge the impact of using Combined Heat and Power in lieu of electric service hot water heaters these are also identified as 'DOER Suggested Actions Beyond DEIR Commitments.' The following identifies the components that were investigated:

1. Concession Service Hot Water CHP – this system would be used to meet service hot water requirements for the concessions. The plant would be expected to operate to meet these demands and in turn provide electricity offsetting building electric load. The savings predicted here is a range since concession tenant service hot water demands can vary greatly.



# Appendix D

## Other Comment Letters

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## Appendix D, Other Comment Letters

### Non-Governmental Organizations

12	Aaron M. Toffler, Esq	Air Impact Relief, Inc.	16		Hull Neighbors for Quiet Skies
13	Aaron M. Toffler, Esq	Air Impact Relief, Inc.	17	Gloribell Mota	Neighbors United for a Better East Boston (NUBE)
14	Kalila Barnett	Alternatives for Community & Environment, Inc. (ACE)	18	Dan Nicolai	Service Employees International Union (SEIU)
15	Jill V. Horwood, Julie Wormser	Boston Harbor Now			

### Other Organizations

19	Richard A. Dimino	A Better City	25	James E. Rooney	Greater Boston Chamber of Commerce
20	Abbie R. Goodman	American Council of Engineering Companies of Massachusetts (ACEC/MA)	26	Patrick B. Moscaritolo	Greater Boston Convention & Visitors Bureau
21	Richard Doherty	Association of Independent Colleges and Universities in Massachusetts (AICUM)	27	Louis A. Mandarin, Jr.	Local 22 Construction & General Laborers' Union
22	Richard C. Lord	Associated Industries of Massachusetts (AIM)	28	JD Chesloff	Massachusetts Business Roundtable
23	William Guenther	Boston Financial Services Leadership Council (BFSLC)	29	Christopher R. Anderson	Massachusetts High Technology Council
24	John Erwin	Conference of Boston Teaching Hospitals (COBTH)	30	Susan Houston	MassEcon

### East Boston Comment Letters

31	Acevedo, Josh	East Boston Resident	42	Myers, Celeste	East Boston Resident
32	Aiken, David	East Boston Resident	43	O'Reilly, Jane	East Boston Resident
33	Ayed, Magdalena	East Boston Resident	44	Passariello, Steve	East Boston Resident
34	Borthwick, Jesse	East Boston Resident	45	Rosales, Carlos	East Boston Resident
35	Connor, Karen	East Boston Resident	46	Ryan, Daniel	East Boston Resident
36	Curtis, Jessica	East Boston Resident	47	Starett, Sussana	East Boston Resident
37	D'Amore, Patricia	East Boston Resident	48	Thiru, Kannan	East Boston Resident
38	Doering, Carol	East Boston Resident	49	Tyler, Melissa	East Boston Resident
39	Gates, Judy	East Boston Resident	50	Walkey, John	East Boston Resident
40	McCauley, Kathleen	East Boston Resident	51	Welch, Mary Ellen	East Boston Resident
41	Miller, Gail	East Boston Resident			

## Appendix D, Other Comment Letters

### Hull Comment Letters

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52	Banzett, Robert	Hull Resident	58	Kerr, Jeff	Hull Resident
53	Brennan, John	Hull Resident	59	Kinkhead, Liz	Hull Resident
54	Carey, Tom	Hull Resident	60	Maher, Chris	Hull Resident
55	Connor, Shelia	Hull Resident	61	McCarthy, William	Hull Resident
56	Curtis, Nancy	Hull Resident	62	Ray, Neil	Hull Resident
57	Karoff, Paul	Hull Resident			

### Milton Comment Letters

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63	Christansen, Cindy	Milton Resident	65	Schmidt, Andy	Milton Resident
64	Hynes, Patricia	Milton Resident			

### Winthrop Comment Letters

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66	Howington, Julia	Winthrop Resident	68	Callum, Mimi	Chelsea Resident
67	Mitchell, Mary	Winthrop Resident			

### Form Letter A Commenter List

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Dunn, Peter	Milton Resident
Ryan, Mary J.	Milton Resident

### Form Letter B Commenter List

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Belaney, Craig	East Boston Resident	Lopez, Cindy	East Boston Resident
D'Avolio, Kristen	East Boston Resident	Marchi, Regina	East Boston Resident
Downey, Sandra	East Boston Resident	Nofziger, Liz	East Boston Resident
Fazio, Vanessa	East Boston Resident	Pyles, Rob	East Boston Resident
Grondin, Laura	East Boston Resident	Tyler, John	East Boston Resident
Holt, Chrissy	East Boston Resident	Van Horn, Carrie	East Boston Resident
Kros, Heather	East Boston Resident	Verthelyi, Roberto	East Boston Resident
Lee, Nancy	East Boston Resident		

### Form Letter C Commenter List

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Albertson, Samuel	East Boston Resident	Mailholt, Caroline	East Boston Resident
Antonellis, John	East Boston Resident	Majahad, Anthony	East Boston Resident
Ayed, Magdalena	East Boston Resident	Malioneck,	East Boston Resident
C, Angel	East Boston Resident	Martin, Emily	East Boston Resident
Casamassima, John	East Boston Resident	McDonough, Barbara	Brookline Resident
Chuyan, Olena	East Boston Resident	Morris, Margaret	Winthrop Resident
Corbo, Maria	East Boston Resident	Neave, Matthew	East Boston Resident
Daniels, Alexis	East Boston Resident	Nijjar, Sandra	East Boston Resident

## Appendix D, Other Comment Letters

### Form Letter C Commenter List Continued

Edwards, Lydia	East Boston Resident	Marchi, Chris	NOAH
Figueroa, Eneida	East Boston Resident	Passariello, Michael	East Boston Resident
Foltz, Kim	East Boston Resident	Pomodoro, Joanne	East Boston Resident
Gannon, Brian	East Boston Resident	Pucillo, Alfred	East Boston Resident
Hardiman, Chris	Milton Resident	Pumphrey, Alexis	East Boston Resident
Holt, Steve	East Boston Resident	Rosenfeld, Lindsay	Milton Resident
Hyman, Emily	East Boston Resident	Seit, Rudi	East Boston Resident
Kay, Elizabeth	East Boston Resident	Simons, Michael, Simons, Allyson, Simons, Willa, and Simons, Miles	East Boston Residents
Kelly, Tina	East Boston Resident	Starrett, Susanna	East Boston Resident
Krinsky-Rudder, June	East Boston Resident	Steczynski, Madeline	East Boston Resident
MacLean, Edward, MacLean, Camille, and MacLean, Renee	East Boston Residents	Sullivan, Karen	East Boston Resident
Maddalena, Karen	East Boston Resident	Zeien, Christopher	Milton Resident

### Form Letter D Commenter List

Barber, Maria Argos	Hull Resident	Karoff, Linda	Hull Resident
Barrow, James	Hull Resident	Lewenberg, Betsy	Hull Resident
Beitler, Kathy	Hull Resident	Loring, Pamela	Hull Resident
Berkley, Joe	Hull Resident	MacDonald, Colleen	Hull Resident
Borden, Elizabeth	Hull Resident	McCarthy, Kathleen	Hull Resident
Bush, Rosanne	Hull Resident	McKinley, Patricia	Hull Resident
Chisholm, Sally	Hull Resident	Monarch, Richard	Hull Resident
Courier, Eugene	Hull Resident	Nassipoulos, George	Hull Resident
Delano, Karen	Hull Resident	Ovans, Susan	Hull Resident
Delano, Phillip	Hull Resident	Parks, Michael	Hull Resident
Devin, Mary	Hull Resident	Prudden, Elda	Hull Resident
Doiron, Michael	Hull Resident	Riddle, Robyn	Hull Resident
Dorothy, Tan	Hull Resident	Rose, Evie	Hull Resident
Doucette, Alex	Hull Resident	Sargent, Pam	Hull Resident
Dunn, Nicole	Hull Resident	Schultz, Mary	Hull Resident

## Appendix D, Other Comment Letters

### Form Letter D Commenter List Continued

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Emery, Lloyd	Hull Resident	Stephanie	Hull Resident
Etkind, Stephen	Hull Resident	Stenberg, Robert	Hull Resident
Fleishman, Ira	Hull Resident	Tan, Ellen	Hull Resident
Floyd, Juliet	Hull Resident	Thynne, Canice	Hull Resident
		Mr. and Mrs.	
Fox, Tim	Hull Resident	Tomassini	Hull Resident
Freedman, Lois	Hull Resident	Tyson, Charleen	Hull Resident
Gardner, David	Hull Resident	Walsh, Karen	Hull Resident
Goes, Donna	Hull Resident	West, Liz	Hull Resident
Graceffa, Maria	Hull Resident	West, Steve	Hull Resident
Hardey, Thomas	Hull Resident	White, Andrea	Hull Resident
		Wiseman,	
Hartnett-Bullen, Jenifer	Hull Resident	Marjorie	Hull Resident
Hein, Rebecca	Hull Resident	Woolley, Val	Hull Resident
Kakas, Sallyann	Hull Resident	Zeller, Herbert	Hull Resident

### Form Letter E Commenter List

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Barber, Linda	East Boston Resident	MacLean, Renne	East Boston Resident
Bekiroglu, Sema	East Boston Resident	Ramos, Juan	East Boston Resident
MacLean, Edward	East Boston Resident		

**Czepiga, Page (EEA)**

**From:** Aaron Toffler <aaron.toffler@gmail.com>  
**Sent:** Thursday, August 04, 2016 10:09 AM  
**To:** scdzelj@massport.com; Czepiga, Page (EEA)  
**Cc:** Gail Miller; Mary Ellen Welch; The Marchis; John Walkey  
**Subject:** #15434 - Terminal E Modernization EA/DEIR

Good morning,

I am writing on behalf of Airport Impact Relief, Inc. to request an extension of time to file comments on the above-referenced EA/DEIR, published in the Environmental Monitor on July 20, 2016. We hereby request an extension of 90 days to submit comments.

As you are aware, the document that was filed is 1131 pages long, and comes at a time when many people are away on vacation for some period of time. It is very difficult to read, digest, and respond to such a long, technically-complicated document in the allotted time. Indeed, if people have questions about the document, the public meeting is scheduled only nine days prior to the deadline for comments. This is not enough time to respond in any meaningful way.

Further, this project is proposed in an Environmental Justice community, in which enhanced public participation and analysis of impacts is required. In addition to this request for an extension, we would like to know what efforts have been made to reach out to and include the very diverse populations that will be affected by this proposal.

Thank you for your consideration of this request.

Aaron Toffler

--  
Aaron Toffler  
II Think before you print

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Letter 13

September 8, 2016

The Honorable Matthew Beaton, Secretary  
Executive Office of Energy and Environmental Affairs  
100 Cambridge Street, Suite 900  
Boston, MA 02114

Re: Boston-Logan International Airport Terminal E Modernization Project – EEA #15434

Dear Secretary Beaton,

On behalf of Airport Impact Relief, Incorporated (AIR, Inc.), I am submitting this comment letter on the Environmental Assessment/Draft Environmental Impact Report (EA/DEIR) for the above-referenced proposal to expand Terminal E at Logan Airport. In addition to the substantive concerns that are presented below, AIR, Inc. also has concerns about the procedural insufficiency of the outreach and explanation of this project to an Environmental Justice community.

Not only was this eleven-hundred-plus page document noticed in the Environmental Monitor at the height of summer, when many people are away on vacation, but there was also no enhanced outreach as provided for by the Environmental Justice policy in Massachusetts (and MassDOT's own Non-Discrimination Policy referenced below). Instead, community members were left to try to digest this technical document in long-form and without the benefit, in many cases, of it being in the native language of the reader. In addition, the separation of individual development projects on airport property from any discussion of the airport's broader environmental and health impacts leaves citizens without any opportunity to understand and comment on the cumulative impacts of these projects. Commenting separately on the EDR/ESPRs, which are issued before and after documentation of specific projects, only allows citizens minimal input into the issues of the ever-increasing toll that airport projects have on near-by communities. This is surely not what was meant by "ensuring the full and fair participation in the transportation decision-making process by all potentially affected communities" as stated in the MassDOT Title VI – Non-Discrimination Policy Statement.

Substantively, AIR, Inc. continues to have the following concerns about the environmental and health effects of this expansion on the community and its residents, and respectfully requests that a Final Environmental Impact Report (EIR) be prepared to address them:

1. The EA/DEIR states that the pedestrian connection to the Blue Line will be pushed back to Phase 2 of the project due to "planning and budget constraints." This is one of the few community benefits in the project, and is an important part of reducing the overall vehicle traffic at the airport. A more detailed analysis and explanation for the delay in implementing this part of the project should be undertaken, with ample opportunity for public input.
2. The EA/DEIR indicates that 5,000 additional parking spaces will likely be needed to accommodate anticipated airport growth. Even though it is mentioned in this document, all public comments on this part of the project have been ignored and put off until the next EDR is released. This is another example of the difficulty that the community has in commenting on the totality of the project, and its impact on overall airport expansion. A Final EIR should analyze this aspect of the project as well.

3. The EA/DEIR indicates that communities abutting the airport qualify for EJ consideration, but doesn't indicate what consideration was given or what Massport did to comply with this requirement. A Final EIR should address the Environmental Justice aspects of this project in detail. Further, Massport should be directed to produce a clear, transparent, and fair process by:
  - a) producing a Summary EIR Document within the Final EIR of no more than 20 pages conveying the essential environmental impact information to inform residents about the burdens this project will cause;
  - b) writing this document in an understandable manner without overly technical language;
  - c) translating this document into Spanish and distributing it widely as part of an extended community presentation and discussion process which is respectful of family schedules and designed to achieve high levels of engagement and robust public comment;
4. A Final EIR should also be required to conduct an expanded study and assessment of opportunities to offset anticipated Logan airport growth by diverting an equal number of domestic flights through a regional air space management plan that includes all other viable airports.

Thank you for the opportunity to submit this comment letter. If you have any questions or concerns, please feel free to contact me at [aaron.toffler@gmail.com](mailto:aaron.toffler@gmail.com).

Very truly yours,

Aaron M. Toffler, Esq.  
Airport Impact Relief, Inc.

cc: Stewart Daizell, Deputy Director, Environmental Planning and Permitting, Massport



By email to Page Czepiga, MEPA Analyst, at [Page.Czepiga@state.ma.us](mailto:Page.Czepiga@state.ma.us)

September 9, 2016

Secretary Matthew Beaton  
Executive Office of Energy and Environmental Affairs (EEA)  
Attn: MEPA Office EEA# 15434  
100 Cambridge Street, Suite 900  
Boston, MA 02114

Re: Comments on the Environmental Assessment/Draft Environmental Impact Report for  
Terminal E Modernization Project, EEA # 15434

Dear Secretary Beaton:

These are comments of Alternatives for Community & Environment, Inc. (ACE) regarding several concerns about Terminal E Modernization Project's Environmental Assessment/Draft Environmental Impact Report (EA/DEIR). We urge you to require the project proponent to perform a Final Environmental Impact Report (FEIR) to address the concerns described below, and to require the proponent to greatly improve its efforts at outreach to the affected environmental justice communities in keeping with the spirit of the Massachusetts Environmental Policy Act (MEPA) and Executive Order 552, An Executive Order on Environmental Justice.

#### Summary of Concerns

The intention of the MEPA process is to fully and publicly assess the environmental consequences of projects regulated by state agencies and for those agencies to "take all feasible measures to avoid, minimize, and mitigate damage to the environment." This assessment is considered relative to alternatives to the proposed project; as such the characterization of conditions and assumptions made of alternatives is critical. We strongly feel that the proposed project has been presented in a manner that segments the full impacts and then compares them to misleading assumptions concerning future variables that favor the approval of the project. Of equal concern is the manner in which this process has been contrived to minimize public knowledge and participation in the review process. The intent of MEPA and EO#552 is to ensure that marginalized communities which are impacted by projects of this sort truly have an understanding of what is being proposed. While arguably hewing to the letter of the law, the process associated with this project has clearly violated its spirit.

#### Procedural Concerns

Our principal concern is directly pertinent to ACE's environmental justice mission. We fully expect that our state agencies will ensure that environmental justice communities are given full and careful consideration as their resources and capacities to respond to projects such as the considered one is by definition limited. The project proponent released a voluminous, eleven-hundred page report containing very technical data in the middle of July when many residents were away on vacation for the public to review. The materials were not provided in Spanish, the language of approximately half the community in East Boston and predominant in neighboring, impacted communities. Even for English speakers the technical nature of the data required an effort should have been made to translate the materials into something appropriate for the lay person to understand and critically evaluate.

A public presentation in East Boston on August 10 was sparsely attended by East Boston residents and was mainly attended by union members with different concerns or actual Massport staff. Representatives of Chelsea city council attended and made it known they had not been informed of the project or the public meeting until the last minute by others in the community, indicating a serious failure in appropriate public outreach. When a 90-day extension of time to review the EA/DEIR was requested, a 21 day extension was provided which put the deadline for comments the Friday after the Labor Day weekend, the same week of students returning to school and primary elections. Essentially the same problems of residents away on vacation, occupied with children returning to school and insufficient time to critically digest the technical information contained in the report remained.

#### EA/DEIR Concerns

We have two fundamental criticisms of the manner in which the project proponents have assessed the environmental impacts of the project. Firstly the project itself has been segmented in such a way as to avoid a full evaluation of the impacts. The project requires the accommodation of 5,000 additional parking spaces, yet does not consider the impact of this in the report or any details related to this aspect of the project.

Secondly the underlying premise that is used to evaluate alternatives is flawed. The No-Build Alternative assumes that growth in passengers and aircraft operations would continue without any increase in terminal capacity. Massport staff have repeatedly stated in public that the "planes will come regardless of what we do" which is in essence the assumption of the report. But the growth in international flights is a direct result of an aggressive, strategic marketing plan in which the Commonwealth has invested. This is not an unanticipated or uncontrolled aspect of the market – it is a conscious decision on the part of the State which has very real environmental and public health implications on specific populations, which are not being considered at any point in our regulatory procedures.

The alternative scenario for this project should be an investment in a regionalization of airport infrastructure that better distributes the environmental burdens of air travel, including ground travel to the airport and car parking. There is an inadequate evaluation of this option in the EA/DEIR.

Additionally, the concept of increased volume of traffic regardless of what infrastructure improvements are made seems to imply that putting in place the improvements will somehow not end up in an *increase* in the volume as the induced demand fills the capacity of the airport in much the same way that added lanes on a highway result in more vehicles filling those lanes. There is no reasonable expectation that the proponents would not do as they are currently do and maximize the facilities beyond their capacity to accommodate additional traffic. It is reasonable to assume that the air pollution reduction the report references as a result of idling planes currently on the tarmac being able to pull up to a gate and shutdown, would be offset by additional planes in the future following suit and simply waiting on the tarmac if indeed "the planes will come regardless of what we do." The assumption should be corrected in a new report.

We respectfully request that you consider the comments contained in this letter as well as those of local residents and community groups. We also request that you require the project proponent draft a Final Environmental Impact Report (FEIR) that considers the full impacts of this project, including the parking requirements, and provides alternatives based on appropriate assumptions and reasonable scenarios. Of equal importance the proponent should greatly improve their efforts at outreach into the environmental justice communities, providing language-appropriate materials as well as more concise summaries that distill the daunting technical data into a form more readily digested by the community. Improved outreach to local officials is clearly needed in the region. Ultimately we strongly urge the State to be more transparent in its strategic planning and development of its air travel infrastructure so that the full health impacts can really be evaluated and properly mitigated. The importance of Logan Airport to the region is undeniable but as we address its environmental impacts and prepare for future changes in climatic conditions it will be increasingly important to ensure that environmental justice communities are considered.

Very truly yours,



Kalila Barnett  
Executive Director



15 State Street, Suite 1100  
Boston, MA 02109  
617 223 8104  
bostonharborno.org

August 19, 2016

Via email to: [Page.Czepiga@state.ma.us](mailto:Page.Czepiga@state.ma.us)

Secretary Matthew A. Beaton  
Executive Office of Energy and Environmental Affairs  
Attn: Page Czepiga, MEPA Office  
100 Cambridge Street, Ste 900  
Boston, MA 02114

Re: Terminal E Modernization Project, Draft Environmental Impact Report EEA #15434

Dear Secretary Beaton,

Thank you for the opportunity to comment on the Boston-Logan International Airport Terminal E Modernization Project and Draft Environmental Impact Report (DEIR) submitted on July 15, 2016. Boston Harbor Now, and our previous organization The Boston Harbor Association, commented on the Environmental Notification Form submitted in November 2015. We continue to follow the progress of the Terminal E Expansion with a special interest in enhancing public waterfront access and water transportation. Our comments will focus on the proposed mitigation for the Terminal E expansion project.

As part of this process, Massport created the Logan Impact Advisory Group (IAG) that included community members and other stakeholders. We applaud Massport's initiative and encourage continued future collaboration with local residents.

It is our understanding that at the time the DEIR document was drafted, mitigation discussions between the IAG, local residents, and Massport were not yet finalized. After a series of six meetings with the IAG, and as reported in the August 5th edition of the *East Boston Times*<sup>1</sup>, Massport agreed to the community benefits listed below. These agreed upon benefits (and any other agreements not listed below) need to be included in the Final Environmental Impact Report.

- \$18 to \$19 million towards the construction of Piers Park Phase II
- \$180,000 towards the operating and programming budget for a future senior center
- Soundproofing technology for an additional 100 homes
- A direct connection to the Silver Line via the Blue Line at Logan's MBTA station
- Increasing the Logan Express seats by 10 to 15 percent
- Raised parking rates at airport parking lots
- Imposing a 'car tax' on vehicles parked at Logan, and
- Funding of Hubway Stations in East Boston

With anticipated growth in international travel, the main focus of the expansion project is to more effectively move six million international passengers by 2022. This is an excellent opportunity for Massport to complete much needed enhancements to the international terminal while also enhancing the local community through the above list of mitigation measures.

#### Open Space and Piers Park II

East Boston needs a well-connected network of urban parks. With the anticipated planning of Piers Park Phase II, we assume the design plans will be updated with community input to reflect changes that have occurred since it was first planned 20 years ago, e.g., the Boston Harbor cleanup, rising sea levels, current creative playground design and the changing East Boston community. Unlike its predecessor park, Piers Park Phase II is intended to be an active park. To adequately address the recreational needs of the local neighborhood, we encourage Massport to engage the Boston Parks Department and Design Museum Boston as consulting partners experienced in state-of-the-art playscapes. As long time advocates of great public waterfront spaces, we would also be glad to help in any way we can with the planning efforts.

Design Museum Boston, for example, recently curated an exhibit called *Extraordinary Playscapes*<sup>2</sup>. One of the parks highlighted was Cambridge Common just outside Harvard Square and similar in size to Piers Park II. The park includes historic monuments, energy-saving lighting, multi-use paths, an outstanding playground, and multiple playing fields.

As part of the Terminal E expansion project, Massport should provide sufficient mitigation funds to complete the planning, design and initial construction of Piers Park Phase II. We ask that a more detailed breakdown of capital cost and operations be included in future filings, including additional sources of and gaps in funding.

Piers Park Phase II is also a unique opportunity to enhance the urban waterfront landscape and build a climate resilient urban park. Climate Ready Boston's research projects 4 to 8 inches of sea level rise (above Boston Harbor levels in 2000) by 2030 and 7 inches to 1.5 feet by 2050. For the latter half of this century, the range of projections diverges more significantly with 2.4 to 7.4 feet projected by the end of the century and about a 50/50 chance that SLR will be at least 3 feet. Due to these changes in sea level, chronic flooding associated with monthly and seasonal high tides will become an increasingly serious problem. As a leading public agency in addressing and preparing for the effects of climate change,

<sup>1</sup> <http://www.easttimes.com/2016/08/05/logan-lag-holds-final-meeting/mitigation-package-forthcoming/>

<sup>2</sup> See <http://designmuseumfoundation.org/boston/blog/2016/04/28/extraordinary-playscapes/> for examples of outstanding local park design.

Massport can and should incorporate flood resilient design (e.g., living and/or terraced shorelines; salt-tolerant vegetation; and sloped, bermed landscaping to protect the neighborhood behind from wave action) to accommodate sea level rise while also enhancing existing urban landscape. The Boston Parks Department is in the process of redesigning Joe Moakley Park, just inland from South Boston's Carson Beach; Massport and BPD might benefit from sharing ideas beneficial to both locations.

**Increased Traffic Mitigation**

We appreciate Massport's commitment to a robust high-occupancy vehicle program. With increased airport traffic, it becomes increasingly important to take residents off the roads and on to protected, non-motorized walking and biking paths.

This is an opportunity for Massport to collaborate with the city and local community to mitigate increased traffic as a result of the Terminal expansion, higher transportation demands, and additional travelers. Massport should address both the needs of airport passengers and local residents who would benefit from more robust public transit options and pedestrian connections.

The East Boston Greenway provides a crucial connection between the proposed Piers Park II, Bremen Street Park, and Constitution Beach. With increased car, truck, and bus traffic to and from the airport, the Greenway provides the safest walking, running, and biking connection to the network of East Boston Park and the waterfront. Community mitigation efforts like the Hubway stations, Logan Express upgrade, Silver Line connection, and higher parking rates make the Greenway connection and water transportation transit all the more important.

Sincerely,



Jill Valdes Horwood  
Waterfront Policy Analyst



Julie Wormser  
VP of Policy



**Dalzell, Stewart**

**From:** neighbors@quieterskies.org  
**Sent:** Wednesday, August 17, 2016 2:07 PM  
**Subject:** Terminal E Public Comment from Hull Neighbors

Dear Sir:  
Hull Neighbors for Quiet Skies is a 600 plus member citizens organization formed in Hull, Massachusetts to advocate for citizens rights against the NextGen air transportation system that was instituted at Logan Airport a few years ago.

NextGen has affected the health and well-being of many of our residents who suffer under the concentrated flight corridors running over and next to the peninsula almost any hour of the day. Hull was essentially ambushed by the FAA and Massport. There was no environmental impact study, nor were there public hearings on these highways in the sky. One day the planes just appeared. Any FAA claims that our citizens would not be affected by aircraft noise were self-serving and far from the mark. We invite you to come to our town and listen for yourself. And while it may be true that NextGen allows fewer Massachusetts citizens to be affected by noise, guess who is shouldering their burden at a frightful cost?

In regards to the Terminal E expansion, we have grave concerns about the resulting increase in international flights. These large aircraft already shake us from sleep in the early morning hours of the night. We wholeheartedly concur with the letter below, which I'm sure you have received from the town of Hull, as well as several of its citizens. We ask you to please not to burden our community with more airport traffic without first finding alternatives to the ill-conceived NextGen flightpaths already in place.

On behalf of the entire Hull Neighbors for Quiet Skies membership we are,  
Yours sincerely,

The Quiet Skies Committee

- Frank Kerr
- Colleen MacDonald
- Dave Gardner
- Bob Stenberg
- Sinead Whelan
- Jeff Kerr

Hull Neighbors for Quiet Skies  
quieterskies.org

Here is the town's response to the Terminal E expansion, which we agree with and wholeheartedly support.

The Environmental Assessment / Draft Environmental Impact Report highlights the many tangible and significant benefits that would result from modernizing Terminal E, addressing Logan's ability to handle the forecasted increasing demand in terms of total passengers and, in particular, international passengers. Our concerns are not with the proposed terminal modernization project itself, but with the impact that the resulting increased capacity will have on

surrounding communities, and specifically on the Town of Hull. That said, we believe there are viable means to mitigate this impact and we respectfully ask for your engagement in addressing our concerns.

Currently, the Town of Hull takes on the noise burden - day and night - from a significant number of flights departing from Runway 22R and Runway 15R and flights arriving on Runway 33L. Planes departing from Runway 22R fly over Hull High School and Lillian M. Jacobs Elementary School. Runway 33L (arrivals) / 15R (departures) is the preferred and most often used runway for overnight flights. The current flight path for 33L/15R brings planes over a large portion of our small town and is already disruptive to sleep time. The Terminal E Modernization Project will result, not only in increased international and overnight flights, but also in the accommodation of Group VI jumbo aircraft, such as the Airbus 380 and Boeing 747-8. This will impose a tremendous additional burden on our community; however, there is a noise mitigation solution.

The Town of Hull is a small peninsula uniquely situated between three large bodies of water. Our unique geography provides an opportunity for noise mitigation by adjusting flight paths over water rather than over homes. The implementation of the NextGen Air Transportation System brings with it the ability to fly planes along a flight path with a dramatic increase in precision. We ask that the flight paths (i.e. RNAVs) of planes departing from Runway 22R and Runway 15R be modified to fly significantly farther out over Boston Harbor and at a higher altitude, and that planes arriving onto Runway 33L fly an over-the-harbor flight path with a continuous descent. These flight path modifications will provide a significant reduction of the noise impact on our community.

The Town of Hull requests that these modifications to the flight paths (i.e. RNAVs) be done prior to the opening of the modernized Terminal E.



importantly, we want to ensure that decision making process is transparent, accountable and inclusive that includes those in the community that are most impacted. We thank you in advance for your cooperation in this matter and please feel free to contact us at 617-981-4010 or gmota@nubeastboston.org for further information or clarifications.

Sincerely,  
Glorbell Mota, Lead Organizer

Cc:  
Mayor Marty Walsh  
State Senator, Joseph Boncore  
State Representative, Adrian Madaro  
District City Councilor, Salvatore LaMattina  
City Councilor At-Large, Ayanna Pressley  
City Councilor At-Large, Michael Flaherty  
City Councilor At-Large, Annissa Essaibi George  
City Councilor At-Large, Michelle Wu

September 9, 2016

Mr. Matthew Beaton  
Executive Office of Energy and Environmental Affairs  
Attn: Page Czepiga, EEA No. 15434  
100 Cambridge Street Suite 900  
Boston, MA 02114

Dear Secretary Beaton,

Neighbors United for a Better East Boston (NUBE), a community based organization with a membership comprised of 100% East Boston residents is writing to express our concerns regarding MassPort Terminal E Moderation Project, considered one of largest expansion ever of Logan Airport history. We are concerned by the serious impact this expansion will have on the health and environment of the East Boston community. What is most discerning is a process that fails to engage all community residents, therefore limiting any benefits to small group of constituents. Considering that this expansion will impact the makeup of our community for generation it's important that MEPA evaluation process is fair, inclusive and transparent.

As an organization that advocates for the inclusion of all East Boston residents, we request that this project is not approved until there is an inclusive community process that institutes an environmental impact that includes a full final environmental impact report, accountability mechanism, and transparent process. This requires providing information, and hosting community meetings in the diverse languages of our residents. We anticipate that taking these initial steps will begin the process of restoring confidence in MassPort and Executive Office of Energy and Environmental Affairs.

In addition, we believe that before further approval of the expansion, developers need to state in their project commitment and plans to:

- Ensure that the projected creation of employment opportunities at all stages from construction to permanent jobs go beyond the City of Boston Ordinance 5-5-3 Boston Residency Job Policy (Local Hiring Preference) to ensure employment opportunities to local residents. As well as, develop and share an enforcement and monitoring plan that includes commitment in contracting with contractors that have a proven history of meeting the BRJP compliance.
- Commitment to ensuring that permanent economic opportunities pay the prevailing wages and that the approximately and commercial space will be open for local small businesses and residents to access economic opportunities.
- Community engagement and process plan that engages and reflective of the majority-minority neighborhood that will be directly impacted by this expansion.

NUBE cannot support the expansion in its current form. We believe any development in our community should be done in a balanced approach that allows for a healthy dialogue, process and coexistence for all that live and share in East Boston prosperity. Most



**Czepiga, Page (EEA)**

**From:** Dan Nicolai <DNicolai@seiu32bj.org>  
**Sent:** Friday, September 09, 2016 4:47 PM  
**To:** Czepiga, Page (EEA); rdoucette@faa.gov; sdalzell@massport.com  
**Cc:** Sarah Bayer  
**Subject:** Terminal E Modernization Project Environmental Assessment/Draft EIR (EA/Draft EIR)  
**Attachments:** Memo to SEIU on Terminal E expansion DEIR 9-1-2016.pdf

**TO:** Massachusetts Secretary of Energy and Environmental Affairs  
 EEA, Attn: MEPA Office  
 Page Czepiga, EEA No. 15434  
 100 Cambridge St., Suite 900, Boston, MA 02114  
 Email: [Page.czepiga@state.ma.us](mailto:Page.czepiga@state.ma.us)

Mr. Richard Doucette  
 Federal Aviation Administration  
 New England Region  
 1200 District Ave., Burlington, MA 01803  
 Email: [rdoucette@faa.gov](mailto:rdoucette@faa.gov)

Mr. Stewart Dalzell  
 Deputy Director, Strategic and Business Planning Department  
 Massachusetts Port Authority  
 One Harborside Drive, Boston, MA 02128  
 Email: [sdalzell@massport.com](mailto:sdalzell@massport.com)

**FR:** Dan Nicolai, District Leader  
 Service Employees International Union (SEIU) 32BJ, District 615  
 26 West Street, Boston, MA 02111  
 Email: [dnicolai@seiu32bj.org](mailto:dnicolai@seiu32bj.org)

SEIU 32BJ submits this letter in response to the request for public comment on Massport's Environmental Assessment/Draft Environmental Impact Review of the Terminal E Modernization Project. In spite of the short timeline to review the 1,100+ page EA/DEIR, we have prepared these comments and commissioned an analysis by Synapse Energy Economics which we attach here and submit as part of our comment

32BJ represents over 155,000 property services workers across the East Coast, including janitors, security officers, maintenance and custodial workers, and window cleaners. Over 200 of our members work at Logan Airport. More than 2000 32BJ members reside in Logan's neighboring communities of East Boston and Chelsea. Moreover, hundreds of aviation service workers who work in low-wage, non-union jobs at Logan Airport are presently seeking union representation with 32BJ, as well. SEIU 32BJ is therefore committed to investigating the impacts of the proposed Terminal E expansion on those who work in or live near Logan Airport.

As the Synapse analysis outlines, the EA/DEIR fails to address major questions about the proposed expansion of Terminal E, including noise impacts, economic impacts, and unexamined alternatives. Many of these questions have been posed

earlier in the environmental reporting process, yet remain unanswered. For instance, the City of Boston Environment Department stated in response to Massport's Environmental Notification Form, "It is essential that, as part of this significant expansion, the Massachusetts Port Authority address the issue of Logan's maximum capacity." We agree and urge that Massport provides data to answer these questions.

Also, we are concerned that EA/DEIR fails to account for the public impact of poverty level employment at Logan Airport. According to a statewide study cited by the EA/DEIR, the average salary and benefits per full-time-equivalent worker employed as a result of Logan Airport activity is \$37,400. This average salary figure does not capture the reality of hundreds of people working in aviation service and other sectors at Logan who earn \$11 or less per hour, many of whom work part-time, often supporting families that must depend on public assistance. For low wage airport workers, as for the residents of East Boston, the proposed expansion will bring limited benefit.

We urge that Massport be required to address these issues, and to present meaningful alternatives to the Terminal E Modernization project, before this project is allowed to move forward.



## Memorandum

TO: DAN NICOLAI, 32BJ SEIU  
 FROM: DR. FRANK ACKERMAN, DR. ARIEL HOROWITZ, AND SARAH JACKSON  
 DATE: SEPTEMBER 1, 2016  
 RE: EVALUATION OF THE MASSPORT TERMINAL E MODERNIZATION PROJECT EA/DEIR

The Massachusetts Port Authority (Massport) is proposing to modernize and expand Terminal E, the international terminal, at the Boston Logan International Airport. The project will involve expanding the footprint of the terminal building, including adding seven new gates, new passenger holdrooms, concourse circulation areas, concession space, passenger processing areas (including U.S. Customs and Border Protection facilities), and expanded baggage screening areas. Massport claims this project will reduce delays, aircraft idling time, and noise in certain neighboring East Boston communities, thereby creating positive impacts on the surrounding communities. However, the Environmental Assessment /Draft Environmental Impact Report (EA/DEIR) is relatively silent on how the expansion project affects low-income workers, who tend to live very close to the airport and are disproportionately immigrants and people of color.

Both Massachusetts and the Federal government have emphasized the necessity of considering impacts on,<sup>1</sup> conducting outreach to,<sup>2</sup> and avoiding discrimination against<sup>3</sup> vulnerable populations when conducting projects such as the Terminal E Modernization. The Massachusetts Environmental Policy Act (MEPA) requires project proponents to:

provide meaningful opportunities for public review of the potential environmental impacts of Projects for which Agency Action is required, and to assist each Agency in using (in addition to applying any other applicable statutory and regulatory standards and requirements) all feasible means to avoid Damage to the Environment or, to the extent Damage to the Environment cannot be avoided, to minimize and mitigate Damage to the Environment to the maximum extent practicable.<sup>4</sup>

Environmental justice guidelines issued by the Massachusetts Executive Office of Environmental Affairs require that projects that may impact vulnerable communities be conducted with both enhanced impact

<sup>1</sup> Massachusetts Executive Order 5G2

<sup>2</sup> Environmental Justice Policy of the Massachusetts Executive Office of Environmental Affairs

<sup>3</sup> Title VI of the Civil Rights Act of 1964 42 U.S.C. § 20006f Et Seq.

<sup>4</sup> MEPA Regulations 11.01(1)(a).

analysis and enhanced outreach processes.<sup>5</sup> Federal Aviation Administration (FAA) regulations also require that a project such as Massport's proposed expansion of Terminal E consider the impacts of alternatives on "economic activity, employment, income, population, housing, public services, and social conditions."<sup>6</sup>

Despite these requirements, the EA/DEIR issued by Massport in July barely mentions the low income and minority status of surrounding communities, says nothing about airport workers' incomes or working conditions, and presents a misleading view of the project's overall impacts. It argues that the proposed expansion is the best way to handle the rapid growth in international travel but fails to provide a comparison to reasonable alternative approaches to handling this growth. The only alternative Massport considered was one in which there would be no expansion project at all (the No-Action alternative). Yet, comparisons between the Proposed Action and No-Action alternatives are misleading as they are made against a backdrop of fixed growth in travel needs and the associated impacts of that growth with and without the project. This overlooks three fundamental questions:

1. Are there significant impacts on workers and communities due to the rapid growth of traffic at Logan?
2. How should the underlying forecast of growth, which is itself highly uncertain, be used in this evaluation?
3. Will the proposed responses to the growth in air traffic disproportionately benefit the wealthiest travelers?

This evaluation presents some of the concerns we have identified with respect to the socio-economic impacts the proposed project may have that have not been properly addressed in the EA/DEIR.

### Impacts on employees and surrounding communities

As the EA/DEIR notes, East Boston is a low-income, predominantly Hispanic community (EA/DEIR, Section 4.3.11). Many of its residents, who suffer the noise, air pollution, road traffic, and other impacts of Logan Airport, cannot afford to enjoy the benefits of flying. The ongoing growth of air traffic at Logan has important impacts on this community, even if the specific design chosen for the Terminal E expansion does not.

#### Low wage airport workers

As the EA/DEIR fails to mention, Logan Airport workers are relatively low-paid, constituting another community of concern from a socioeconomic or environmental justice perspective. According to a statewide study cited by the EA/DEIR, the average salary and benefits per full-time-equivalent worker

<sup>5</sup> Environmental Justice Policy of the Massachusetts Executive Office of Environmental Affairs

<sup>6</sup> FAA Order 1050.1F, as quoted in EA/DEIR, 4-53.

employed as a result of Logan Airport activity is \$37,400.<sup>7</sup> Some airport service workers make as little as \$11 per hour.<sup>8</sup> In a 2013 study, researchers at the University of California, Berkeley, Center for Labor Research and Education and Simon Fraser University found that rampant outsourcing of airport labor in recent decades has led to significant wage erosion and decreased job security for airport workers.<sup>9</sup> They also found that many low-wage airport workers live at or near poverty and must rely on public benefits to make ends meet.<sup>10</sup> For airport workers, as for the residents of East Boston and other neighboring communities, there is limited benefit to airport expansion. Some number of new jobs will be created in the new Terminal E, but the EA/DEIR does not address the wages or working conditions of these jobs. It is hard to support a family in the Boston area on the average pay of a Logan Airport worker, and yet the EA/DEIR fails to discuss any real benefits for these residents and workers.

#### Noise impact analysis

Massport conducted an extensive noise impact analysis demonstrating that the Terminal E Modernization Project will likely reduce airport-related noise in many parts of East Boston. While thorough with respect to the areas west and northwest of the airport, the analysis neglects to discuss noise impacts for communities to the north (particularly the Orient Heights neighborhood of East Boston) and south (such as South Boston).

Modeling was conducted to determine the expected average sound level at 77 representative points to the west, northwest, and north of the airport.<sup>11</sup> While Massport's modeling does support the claim that the proposed terminal expansion will serve as a noise barrier for much of East Boston, there is no discussion of any potential sound reflection or other complex acoustic interactions that may disproportionately impact Orient Heights or other areas to the north/northeast of the airport. The EA/DEIR presents modeling results summarizing the expected difference in average sound level for the Proposed Action and No-Action alternatives.<sup>12</sup> However, data is only shown for a select number of points, of which only one is located in Orient Heights. The EA/DEIR states that full modeling results can be found in the Noise Technical Appendix, but these results appear to have been omitted. As such, effectively no noise impact results are presented for the Orient Heights neighborhood.

<sup>7</sup> Calculated from "Massachusetts Statewide Airport Economic Impact Study, Executive Summary," available at: [http://www.massdot.state.ma.us/airports/7/taocs/mass\\_exec\\_summary\\_cml.pdf](http://www.massdot.state.ma.us/airports/7/taocs/mass_exec_summary_cml.pdf). The study shows direct and indirect employment due to Logan Airport of 94,552 full-time equivalent workers; this large number apparently includes jobs created by spending by visitors who arrive at Logan Airport. It also shows a payroll total of \$3,535,892,000 (including benefits), which implies an average of \$37,400 per worker.

<sup>8</sup> Julie Pattison-Gordon, "SEU raises concerns, questions on Logan expansion," *Bay State Banner*, May 27, 2016, <http://baystatebanner.com/news/2016/may/27/seu-raises-concerns-questions-logan-expansion/>.

<sup>9</sup> Dietz, et al. 2013. *Course Correction: Reversing Wage Erosion to Restore Good Jobs at American Airports*. Available at: <http://laborcenter.berkeley.edu/course-correction-reversing-wage-erosion-to-restore-good-jobs-at-american-airports/>.

<sup>10</sup> Id.

<sup>11</sup> EA/DEIR, Figure 5-8

<sup>12</sup> EA/DEIR, Table 5-10

The EA/DEIR also disregards potential noise impacts on South Boston, which lies to the south of the airport. No points south of the airport were modeled in Massport's noise analysis.<sup>13</sup> Notably, the EA/DEIR describes a number of operational changes that are expected to accompany the Terminal Modernization Project, one of which is the shifting of UPS operations from the North Cargo Area to the South Cargo Area.<sup>14</sup> The South Cargo Area is one of the southernmost facilities at the airport<sup>15</sup> and therefore one of the closest to South Boston. However, the noise impacts of a shift in operations to the South Cargo Area are simply not discussed. By leaving out results for the Orient Heights neighborhood and neglecting to model changes to noise in South Boston, the EA/DEIR fails to analyze noise impacts on vulnerable populations apart from those that it claims will be benefited by the proposed action.

#### Outreach and opportunity for community input

Massport touts its efforts toward public outreach and community input, which are described as "an important element of Massport's overall process for the Terminal E Modernization project."<sup>16</sup> However, these outreach efforts were limited in both scope and scale with respect to the communities most affected by the project: neighboring populations in East Boston and employees at Logan airport. Indeed, the EA/DEIR does not describe any outreach efforts Massport has made to its own employees or other workers at the airport. The EA/DEIR focuses on Massport's outreach to residents of East Boston, but workers at Logan live in other parts of Boston and in neighboring municipalities. As such, outreach activities that are focused on East Boston residents may exclude those that work at the airport but live further afield, despite the fact that airport workers are among the populations most likely to be affected by construction activities, the air quality in and around the airport, and ambient airport noise levels.

Massport has held only two public meetings concerning the project. The first public meeting occurred before the filing of the EA/DEIR, on November 19, 2015.<sup>17</sup> The second public meeting was held on August 10, 2016.<sup>18</sup> Both meetings began at 6 p.m. on a weeknight. This choice of timeslot may have excluded community members who work the second or third shift, as well as presented barriers to participation for parents without ready access to childcare.

Furthermore, the nearly 1,200-page EA/DEIR was released on July 20, 2016 and Massport requested that public comments be received by August 19, 2016—just one month after release. It is unreasonable to expect impacted communities and other interested parties to fully review such a voluminous technical document and provide meaningful comments in such a short period of time. It appears that the comment period has now been extended another few weeks to September 9, 2016; however, all

<sup>13</sup> EA/DEIR, Figure 5-8

<sup>14</sup> EA/DEIR, p. 3-31.

<sup>15</sup> EA/DEIR, Figure 1-2

<sup>16</sup> EA/DEIR, p1-16

<sup>17</sup> <https://www.massport.com/media/347994/Terminal-E-Public-Meeting-Notice.pdf>

<sup>18</sup> <https://www.massport.com/media/403283/Terminal-E-Public-mtg.pdf>

public notices, as well as the EA/DEIR itself, continue to list August 19<sup>th</sup> as the comment deadline, and it does not appear that Massport has conducted any additional outreach regarding the extension of the comment deadline.

In addition to offering limited opportunity for public comment, Massport's outreach efforts were conducted only in English and Spanish. And the actual EA/DEIR and supporting technical materials are available only in English. By not providing further translation services, Massport's outreach excluded vulnerable minority-language populations in East Boston and among Logan airport employees. Data from the SEIU suggests that significant numbers of Logan employees speak languages other than English or Spanish, with the most represented languages including Amharic,<sup>19</sup> Arabic, and Haitian Creole. East Boston is also very linguistically-diverse. Approximately 14 percent of East Boston residents speak languages other than English or Spanish (Table 1).<sup>20</sup> In several of these linguistic groups, a majority of speakers describe their English proficiency as speaking less than "very well," which suggests that information in English is not accessible to them. Four-fifths of East Boston's Portuguese- and Chinese-speaking populations have low English proficiency, suggesting that members of these populations may not have an English speaker in their household. In providing information about the Terminal E Modernization Project only in English and Spanish, Massport failed to make such information accessible to these residents of the most-impacted community.

**Table 1. Languages spoken and English proficiency levels by linguistic group in East Boston.**

Language	% of East Boston Population	% of Speakers who Speak English Less than "Very Well"
Spanish	55%	69%
Portuguese	3%	61%
Arabic	3%	78%
Italian	3%	43%
Chinese	1%	80%
Others	4%	42%

Finally, numerous comments from community members emphasized that they found Massport's impact analysis to be insufficient<sup>21</sup> and requested the appointment of an Environmental Justice Coordinator to ensure appropriate opportunities for community engagement and feedback. The response to these comments simply reiterated Massport's contention that the Terminal E Modernization project will not

<sup>19</sup> Amharic is the national language of Ethiopia

<sup>20</sup> U.S. Census Bureau, American Community Survey 5-year estimate (2010-2014) for zip code 02128 (East Boston), Table B16001.

<sup>21</sup> EA/DEIR, pp A-125 through A-129; A-153 through A-156; A-181 through A-183; A-237 through A-239; and A-269 through A-273.

have any impacts on vulnerable communities and that Massport will continue to publish meeting notices in English and Spanish only.

## Alternatives Analysis

The National Environmental Policy Act and the Massachusetts Environmental Policy Act both require project proponents to evaluate a range of reasonable alternatives and methods to avoid or minimize potential environmental impacts. And as stated above, the implementation regulations of the FAA require the project proponent to examine the socio-economic impacts on local communities of a variety of alternatives. However, Massport's analysis includes only two actual alternatives: the proposal to build seven new gates with associated upgrades and a no-action alternative. There is a very brief discussion of alternative building configurations for the proposed project in Chapter 3, but these all assume the same project size (seven new gates) and associated upgrades. There is no discussion of alternatives that account for different future growth scenarios, alternatives that consider larger or smaller projects with alternate operational considerations to accommodate growth, or consideration of alternative ways to mitigate congestion at Terminal E. In fact, the "gating analysis" that Massport claims supports its determination that the proposed project is needed is not even included as a part of the EA/DEIR.

Massport's impact analysis is predicated on the assumption that the number of passengers using Terminal E and the number of international flights taking off and landing at Logan airport will be identical regardless of whether Terminal E is expanded. This assumption is based on forecasts of airport activity and the assertion that "demand at Logan Airport is driven by economic and market factors, not airport improvements."<sup>22</sup> Massport explains that because passenger activity has increased in recent years without any expansion to the airport, passenger activity should therefore be assumed to be *totally independent* of airport conditions. Despite a lengthy discussion of the challenges currently experienced by passengers and operators in Terminal E,<sup>23</sup> the notion that airport activity may have increased more had conditions been better in recent years is simply never discussed, nor is the concept that physical constraints on airport infrastructure might actually impact the rate of growth going forward. In the EA/DEIR, comparisons between the Proposed Action and No-Action alternatives are misleading because they rely on the questionable assumption of fixed growth in travel needs and the associated impacts of that growth with and without the project.

The "need" for the terminal expansion is based on a projection of future traffic, which in turn is based on a forecast of national and international economic growth over the next 15 years. Such long-term future forecasts are notoriously uncertain; for example, virtually no one anticipated the 2008 economic crisis or its effects on incomes and air travel—let alone the long-lasting effects of the September 11, 2001 terrorist attacks. The impacts of the recent Brexit vote and any future repercussions in Europe could also affect international travel forecasts. Other important factors affecting the economics of air

<sup>22</sup> EA/DEIR, p 1-6

<sup>23</sup> EA/DEIR, pp 2-1 through 2-9

travel, such as the price of oil, are also known to be volatile and uncertain. And regulation of aircraft emissions could change in the future, making air travel more expensive.

Massport performed no scenario analysis examining the impacts of the project under different levels of international passenger activity. For example, it appears that Massport did not consider a situation in which passenger activity fails to grow as expected. In such a situation, the negative impacts of constructing an expansion to Terminal E may be incurred without realizing the expected benefits.

Massport's own projection of peak hour gate requirements in 2030 ("or sooner") expects that passenger activity will grow to such an extent that the number of gates needed will exceed that of even the expanded terminal.<sup>24</sup> Yet Massport also did not examine a scenario in which the project accommodates all expected passenger growth and additional expansion could be needed. In this case, the positive impacts of the project would be eroded.

Ultimately, the promised benefits of the Terminal E Modernization Project only accrue at the levels described in the EA/DEIR if passenger activity grows at exactly the rate forecast by Massport at the time of the EA/DEIR's preparation. However, Massport's own description of passenger forecasts suggests that they are highly uncertain, as "the actual number of international passengers at Logan Airport in 2015 was nearly 428,000 passengers above the 2014 projections."<sup>25</sup> Recognizing the connection between increased passenger activity and impacts on the surrounding communities, the City of Boston asserted in its comments on the Environmental Notification Form (see Appendix A to the EA/DEIR) that "it is essential that, as part of this significant expansion, the Massachusetts Port Authority (Massport) address the issue of Logan's maximum capacity."<sup>26</sup> Massport's response was a flat refusal to even consider this matter, reiterating that "Logan Airport will handle the same level of increased international passenger activity whether or not Terminal E is modernized."<sup>27</sup> This response assumes that there is nothing that Massport or any other stakeholder can do to influence—nor any physical constraint that will affect—the amount or distribution of passenger activity and that there is no point in discussing, analyzing, or planning for a scenario in which passenger activity increases beyond the levels currently expected. Without such an analysis, Massport has left the region and its stakeholders vulnerable to unexpected changes in passenger volume.

In view of these and other uncertainties, it is important to consider alternative scenarios for the level of future international traffic at Logan Airport before committing to an expensive, disruptive, multi-year construction process. If you build it, they may not come. However, the EA/DEIR treats the forecast of rapid long-term growth in international traffic, and its uneven distribution over the hours of day, as a fixed starting point and examines only the relative merits of a single response to that rapid growth: build seven new gates. The plan itself does not meet this expected growth. Among the alternatives that

<sup>24</sup> EA/DEIR, Figure 2-9

<sup>25</sup> EA/DEIR, p2-11

<sup>26</sup> EA/DEIR, pA-57

<sup>27</sup> EA/DEIR, pA-59

should be considered is more intensive use of the existing gates. Gate requirements vary greatly by time of day (EA/DEIR, Figure 2-9), so it makes sense to explore ways to incentivize a wider time spread in gate usage, perhaps by making morning and mid-day departures more attractive relative to peak late afternoon hours. This would extend the life of the current terminal configuration, providing some insurance against a possible slump in future traffic growth.

## Renovations for whom?

Air travel is a luxury, not a necessity. As people become richer, their spending on air travel grows faster than incomes—and even faster on international travel than on domestic flights.<sup>28</sup> This implies that international passengers are disproportionately from higher-income groups.<sup>29</sup> The modifications to Terminal E are designed to serve the needs of international travelers, including significant efforts to accommodate the most elite groups of international travelers. Under the expansion proposed in the EA/DEIR, Terminal E will devote 72,800 square feet to airline clubs for frequent fliers and business and first class passengers.<sup>30</sup> The extensive reconfiguration of existing gates, as well as the design of new gates, is intended to serve the largest (Group VI) new planes with two-level entrances. Since the upper levels of two-level planes are typically devoted to business and first class seating, the two-level entrance allows premium passengers to enter and exit on their own, separate level. Will airline passengers and communities impacted by the airport bear the cost of these expensive accommodations for the comfort of the wealthiest travelers? That is the critical concern, as Massport will need to repay the costs of the bonds it will issue to pay for the expansion. In the past, such revenues have been raised through passenger facility charges levied on all customers, which would mean that improvements enjoyed only by the most elite travelers will be funded by the masses.

<sup>28</sup> Economists define a "luxury" as a good or service for which the income elasticity of demand (the percentage change in spending associated with a one percent increase in income) is greater than 1.0. In fact, the income elasticity of demand for air travel is clearly greater than 1.0—and is even greater for international than for domestic flights. Ju Dong Park and Won W. Koo (2014), "The magnitude of economic and non-economic factors on the demand for U.S. domestic air travel", *Journal of the Transportation Research Forum*, 56(3), 47-61; Craig A. Gallet and Hristos Doucoullagos (2014), "The income elasticity of air travel: A meta-analysis", *Annals of Tourism Research* 49, 141-155. See also International Air Transport Association (IATA), "Air travel demand", [http://www.iata.org/publications/economic-briefings/air\\_travel\\_demand.pdf](http://www.iata.org/publications/economic-briefings/air_travel_demand.pdf).

<sup>29</sup> Additional indirect evidence can be found in Kevin Ummler (2014), "Who pollutes? A household-level database of America's greenhouse gas footprint", Center for Global Development Working Paper 381, <http://www.cgdev.org/publication/who-pollutes-household-level-database-america-greenhouse-gas-footprint-working-paper>. See Figure 1, which shows non-gasoline transport emissions (largely from air travel) rising rapidly with income.

<sup>30</sup> EA/DEIR, Table 2-7, p.2-19.





August 19, 2016

Matthew Beaton, Secretary  
Executive Office of Energy and Environmental Affairs  
Attn: MEPA Office  
Page-Czepiga, EEA No. 15-434  
100 Cambridge Street, Suite 900  
Boston, MA 02114

Dear Secretary Beaton:

A Better City is pleased to submit comments on the federal Environmental Assessment and state Draft Environmental Impact Report (EA/DEIR) in support of the International Terminal E Modernization Project at Boston Logan International Airport. We believe that this proposal is essential for keeping pace with the continued economic growth of the Greater Boston region and carries minimal community and environmental impacts. This project will also improve efficiency for aircraft at Logan Airport and deliver a better customer experience for passengers traveling through Boston.

A Better City is a diverse group of business leaders united around a common goal — to enhance Boston and the region's economic health, competitiveness, vibrancy, sustainability and quality of life. With 130 member companies across multiple sectors, we operate between the private and public sectors using technical expertise and research capabilities to shape key policies, projects and initiatives related to transportation, land development, and energy and the environment.

Recently we released comprehensive evaluation of Greater Boston's infrastructure in a report called the State of the Build Environment. This analysis showed that by 2030, much needs to be done to upgrade Greater Boston's current transportation network, energy grid, and water and sewer systems, while simultaneously preparing for the impacts of a changing climate. The report warned that Logan Airport is on course to reach and exceed its capacity limits within fifteen years. For reasons that would negatively impact our residents, cargo, and visiting tourists, Massachusetts must take responsible steps to avoid this outcome.

If passenger air travel continues to grow at the same pace as we witnessed over the last decade, A Better City's analysis shows that Logan Airport will need to accommodate 63% more passengers on domestic and international flights by 2030. Non-stop international flights from Logan Airport have doubled in the last ten years. International passengers are up from 1.5 million in 1974 to 5.5 million in 2015 and current forecasts expect Massport will serve 8 million international travelers by 2030. Unfortunately, Terminal E

[www.abettercity.org](http://www.abettercity.org) | 33 Broad Street • Suite 300 • Boston, MA 02109 | 617.502.6240

is operating with the same twelve gates it had in 1974 when it opened. To address this current and future demand, Massport is proposing to add new gates and supporting terminal infrastructure.

The modernization of Terminal E is critical to sustaining Massachusetts' important competitive edge in international travel, which provides \$1 billion annually to the state's economy. Efficient access to Logan Airport and the travel experience throughout the facility is one of the central reasons for businesses to invest in Greater Boston.

We are pleased to see that the Terminal E modernization incorporates sustainability measures necessary to project the facility against the threat of sea-level rise, storm surge, and long-term impacts of climate change. The proposal would decrease airside operational-related greenhouse gas emissions (GHG) by 15%, overall project GHG emissions by 8%, and airside busing vehicle miles travelled by 97%. Additionally, this project as currently proposed will encourage the use of public transit, through the direct pedestrian connection between Terminal E and the MBTA's Blue Line Airport station. We look forward and appreciate Massport's continued support for increased ground access through mass transit, express bus, and water transportation.

We appreciate your consideration and fully support the important Terminal E modernization project which is necessary for the future success of Greater Boston and the New England Region.

Sincerely,

Richard A. Dimino  
President  
A Better City

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Letter 20



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Engineering Companies

of Massachusetts

The Engineering Center

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• Phone

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617/227-6783

• Email

[acecma@acecma.org](mailto:acecma@acecma.org)

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August 5, 2016

Matthew Beaton, Secretary  
 Executive Office of Energy and Environmental Affairs  
 Attn: MEPA Office  
 Page Czepiga, EEA No. 15434  
 100 Cambridge Street, Suite 900  
 Boston, MA 02114

RE: SUPPORT OF TERMINAL E MODERNIZATION

Dear Secretary Beaton:

On behalf of the American Council of Engineering Companies of Massachusetts (ACEC/MA) and our more than 110 member firms, I am writing in support of the International Terminal E Modernization Project at Boston Logan International Airport. Massport's proposal to modernize Terminal E is critical to sustaining Massachusetts' important competitive edge in international travel and commerce, and to supporting the businesses and employers in Massachusetts that are engaged in the global economy.

ACEC/MA's membership is comprised of firms that are involved in all aspects of public and private engineering and construction projects throughout the Commonwealth. The more than 6,000 people employed by ACEC/MA members rely on a vibrant economy that is driven in large part by international commerce and the diverse business sectors that make up the Massachusetts economy. These businesses – ACEC/MA members' customers – depend on the connectivity provided by Massport's international service.

Non-stop international flights from Logan Airport doubled in the last 10 years and international passengers are up from 1.5 million in 1974 to 5.5 million in 2015 and are projected to increase to 8 million. Yet Terminal E is operating with the same 12 gates it had in 1974 when it opened. This is unsustainable, and it risks curtailing the growth and activity that the Commonwealth and its business community have seen in recent years.

To address this growing need and to prepare for the future, Massport is proposing to add new gates and other supporting terminal infrastructures. We appreciate your consideration and fully support this important project for Boston and all of Massachusetts.

Sincerely yours,

Abbie R. Goodman, Executive Director  
 American Council of Engineering Companies of Massachusetts

Letter 21



11 Beacon Street, Suite 1224 | Boston, Massachusetts 02108-3016  
 617.742.5147 | Fax 617.742.3089 | [www.aicum.org](http://www.aicum.org)

August 22, 2016

Matthew Beaton, Secretary  
 Executive Office of Energy and Environmental Affairs  
 Attn: MEPA Office  
 Page Czepiga, EEA No. 15434  
 100 Cambridge Street, Suite 900  
 Boston, MA 02114

Dear Secretary Beaton:

On behalf of the Association of Independent Colleges and Universities in Massachusetts (AICUM), I am writing in support of the International Terminal E Modernization Project at Boston Logan International Airport. Massport's proposal to modernize Terminal E is critical to sustaining Massachusetts' important competitive edge in international travel, which provides \$1 billion annually to the state's economy.

One of AICUM's missions is to ensure that information about individual Massachusetts colleges—and about the Commonwealth as a hub of academic activity—is available nationally and internationally. The non-stop access to international markets that Logan provides is essential to our international students and their families to attend our colleges and universities. Additionally, these non-stop, international flights facilitate travel and collaboration among our faculty and researchers and their international colleagues.

Non-stop international flights from Logan Airport doubled in the last 10 years and international passengers are up from 1.5 million in 1974 to 5.5 million in 2015 and are projected to increase to 8 million. Yet Terminal E is operating with the same 12 gates it had in 1974 when it opened. This growth has been important for our higher education institutions to expand their global reach, but it is not sustainable and without these planned improvements these international connections and their impact on the region's economy could suffer.

To address this growing need and to prepare for the future, Massport is proposing to add new gates and supporting terminal infrastructures. We appreciate your consideration and fully support this important project for Boston and the New England Region.

Sincerely,

Richard Doherty, President

Amherst College  
 Anna Maria College  
 Assumption College  
 Babson College  
 Bay Path University  
 Becker College  
 Bentley University  
 Berklee College of Music  
 Boston Architectural College  
 Boston Baptist College  
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Letter 22

1 Beacon Street, 16th Floor  
Boston, MA 02108  
www.aimnet.org | 617.262.1180 | fax 617.536.6785

August 5, 2016

Matthew Beaton, Secretary  
Executive Office of Energy and Environmental Affairs  
Attn: MEPA Office  
Page Czepiga, EEA No. 15434  
100 Cambridge Street, Suite 900  
Boston, MA 02114

Dear Secretary Beaton:

On behalf of Associated Industries of Massachusetts (AIM) and our employer members, I am writing in support of the International Terminal E Modernization Project at Boston Logan International Airport. Massport's proposal to modernize Terminal E is critical to sustaining Massachusetts' important competitive edge in international travel and commerce, which provides \$1 billion annually to the state's economy.

AIM's membership includes 4000 companies and more than 600,000 employees. We work together to improve the business climate and create economic opportunity. The non-stop air access to international markets that Logan provides is essential to the ability of our members and their employees to compete, thrive and grow their businesses and workforce. In an increasingly globally competitive economy, Logan provides essential connectivity to international markets that Massachusetts businesses require.

Non-stop international flights from Logan Airport doubled in the last 10 years. International passengers are up from 1.5 million in 1974 to 5.5 million in 2015 and are projected to increase to 8 million. Yet Terminal E is operating with the same 12 gates it had in 1974 when it opened. This is unsustainable for our members, their international customers and prospects, and their employees who travel globally. Limited capacity at Terminal E risks curtailing the economic growth and activity the Commonwealth has seen in recent years.

To address growing needs and to prepare for the future, Massport is proposing to add new gates and the supporting terminal infrastructures. We appreciate your consideration and fully support this important project for Boston and all of Massachusetts.

Sincerely,

Richard C. Lord  
President and CEO  
Associated Industries of Massachusetts (AIM)

*Matt,  
Get members of them is any thing  
else that AIM can do - Thanks  
Rich*

BOSTON | BRIDGEWATER | BURLINGTON | HOLYOKE | MARLBOROUGH | WASHINGTON, D.C.

Letter 23

# Boston Financial Services Leadership Council

AN INITIATIVE OF  
**Mass Insight**  
GLOBAL PARTNERSHIPS

August 11, 2016

Matthew Beaton, Secretary  
Executive Office of Energy and Environmental Affairs  
Attn: MEPA Office  
Page Czepiga, EEA No. 15434  
100 Cambridge Street, Suite 900  
Boston, MA 02114

Dear Secretary Beaton:

On behalf of the Co-Chairs of The Boston Financial Services Leadership Council (BFSLC), Robert Reynolds, President & CEO, Putnam Investment & Great-West Financial; and Clay Deutsch, President & CEO, Boston Private Financial Holdings; and BFSLC members, I am writing to express support for the International Terminal E Modernization Project at Boston Logan International Airport. Massport's proposal to modernize Terminal E is critical to sustaining Massachusetts' important competitive edge in international travel, which provides \$1 billion annually to the state's economy.

The BFSLC, which Mass Insight Global Partnerships supports, brings together financial services sector CEOs and senior executives with academic partners to advocate for our state's finance sector. Massachusetts financial services firms are a key pillar of the state's economy - representing 6% of the state's workforce, 10% of Gross State Product, and 20% of business taxes. Our members have a significant global presence and the connectivity to international markets that Logan provides is essential to their continued leadership in this sector.

Non-stop international flights from Logan Airport doubled in the last 10 years and international passengers are up from 1.5 million in 1974 to 5.5 million in 2015 and are projected to increase to 8 million. This has helped fuel the international growth of our sector, yet Terminal E is operating with the same 12 gates it had in 1974 when it opened. This is unsustainable for our members and their international offices and customers that rely on Logan to maintain the connections to Massachusetts firms.

To address this growing need and to prepare for the future, Massport is proposing to add new gates and supporting terminal infrastructures. We appreciate your consideration and fully support this important project for Boston and the New England Region.

Sincerely,

William Guenther  
Chairman, CEO and Founder  
Mass Insight Global Partnerships

CC: BFSLC Co-Chair Robert Reynolds, President & CEO, Putnam Investment & Great-West Financial  
BFSLC Co-Chair Clay Deutsch, President & CEO, Boston Private Financial Holdings  
BFSLC Members

18 Tremont Street, Suite 1010, Boston, MA 02108 • Tel: 617-778-1500 • Fax: 617-778-1505

massinsight.com



11 Beaton Street, Suite 710  
 Boston, MA 02108  
 Phone: 617-723-6100  
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 www.cobth.org

August 10, 2016

Matthew Beaton, Secretary  
 Executive Office of Energy and Environmental Affairs  
 Attn: MEPA Office  
 Page Czepliga, EEA No. 15434  
 100 Cambridge Street, Suite 900  
 Boston, MA 02114

Dear Secretary Beaton:

On behalf of the Conference of Boston Teaching Hospitals (COBTH), I am writing in support of the International Terminal E Modernization Project at Boston Logan International Airport. Massport's proposal to modernize Terminal E is critical to sustaining Massachusetts' important competitive edge in international travel, which provides \$1 billion annually to the state's economy.

COBTH is an organization of thirteen Boston area teaching hospitals that work together to advance their missions of medical education and research and providing specialized care to patients from throughout the world. COBTH member hospitals serve a global population of patients that seek out the specialties and expertise these institutions provide that cannot be found elsewhere. The non-stop access to countries around the globe that Logan provides is essential for patients and their families to access the health care and services they need. As you can imagine, international patients seeking care in Boston are very often critically ill and non-stop service minimizes the risks to their health that transfers could pose.

Non-stop international flights from Logan Airport doubled in the last 10 years and international passengers are up from 1.5 million in 1974 to 5.5 million in 2015 and are projected to increase to 8 million. This has helped our hospitals reach even more patients in need. Yet Terminal E is operating with the same 12 gates it had in 1974 when it opened - this is unsustainable. When international patients come and go from Boston, they and their families are often under great stress and discomfort. An improved Terminal E would make their travel more bearable and would serve as an extension to the compassionate treatment they have come to expect by coming to Boston for their health care needs.

To address this growing need and to prepare for the future, Massport is proposing to add new gates and supporting terminal infrastructures. We appreciate your consideration and fully support this important project for Boston and the New England Region.

Sincerely,

John Erwin  
 Executive Director

Beth Israel Deaconess Medical Center - Boston Children's Hospital - Boston Medical Center - Brigham and Women's Faulkner Hospital  
 Brigham and Women's Hospital - Cambridge Health Alliance - Carney Hospital - Dana-Farber Cancer Institute - Lacey Hospital & Medical Center  
 Massachusetts Eye and Ear - Massachusetts General Hospital - St. Elizabeth's Medical Center - Tufts Medical Center

September 7, 2016

Matthew Beaton, Secretary  
 Executive Office of Energy and Environmental Affairs  
 Attn: MEPA Office  
 Page Czepliga, EEA No. 15434  
 100 Cambridge Street, Suite 900  
 Boston, MA 02114

Dear Secretary Beaton:

On behalf of the Greater Boston Chamber of Commerce and its 1,500 members, I am writing in support of the needed International Terminal E Modernization Project proposed for Boston Logan International Airport. The Chamber believes that modernizing Terminal E to allow it to better serve international passengers today, and into the future, is crucial to keeping the Boston region and Massachusetts highly competitive in today's global economy.

The Greater Boston Chamber of Commerce is the leading voice, advocate, and convener of the region's business community with 1,500 member organizations. The Chamber works with our members to create a stronger economy and make the region a top competitor in today's international innovation economy. We consistently advocate for increasing international flights to and from Boston because we know the tremendous positive impact it has on our region's economy and our members' success.

Last spring, Massport CEO Tom Glynn spoke to the Chamber's Transportation Leadership Council and presented a very solid case on the importance of modernizing Terminal E, especially on how it will contribute to increasing international travel that will make Massachusetts, and New England more connected to the global marketplace.

Today, international travel contributes more than \$1 billion to the Massachusetts economy. Non-stop international flights from Logan doubled in the last 10 years, and passengers are projected to increase to 8 million. However, Logan's terminal E is still operating with the same 12 gates it had in 1974 when it opened and saw only 1.4 million passengers. To make the needed updates, Massport is asking to add new gates and supporting infrastructure that will bring the airport into the 21<sup>st</sup> century.

To make Boston Logan Airport truly modern, and allow it to serve the region as best it can in this era of a global economy, we ask that you give consideration and full support to this project that is important to the Commonwealth's future.

Sincerely,

James E. Rooney  
 President & CEO

265 Franklin Street, 12th Floor | Boston, MA 02110-3113  
 617.227.4500 | fax:617.227.7505 | bostonchamber.com





GREATER BOSTON CONVENTION & VISITORS BUREAU

July 28, 2016

Matthew Beaton, Secretary
Executive Office of Energy and Environmental Affairs
Attn: MEPA Office
Page Czepiga, EEA No. 15434
100 Cambridge Street, Suite 900
Boston, MA 02114

Dear Secretary Beaton:

On behalf of the Greater Boston Convention & Visitors Bureau, and our 1,200 member companies, I am writing in support of the International Terminal E Modernization Project at Boston Logan International Airport. Massport's proposal to modernize Terminal E is critical to sustaining our international visitor activity which generates more than \$1.2b in spending activity for Boston and Massachusetts.

The Greater Boston Convention & Visitors Bureau is the primary private sector marketing and visitor services organization charged with the development of meetings, conventions and tourism-related business. Our goal is to enhance the economy of Boston, Cambridge and the metropolitan area. The nonstop flights from international markets that Logan provides are key to our maintaining the record visitor activity that we have experienced the last three years.

Overall, nonstop international flights to Logan Airport have doubled in the last 10 years and international passengers are up from 1.5 million in 1974 to 5.5 million in 2015 and are projected to increase to 8 million. Incredibly, Terminal E is operating with the same 12 gates it had in 1974 when it opened. To address this growing need and to prepare for the future, Massport is proposing to add new gates and supporting terminal infrastructure to ensure that international visitors have a pleasurable and world class experience from the moment they arrive in Boston until they leave. They have such experiences in other U.S. gateway airports and they should have that experience in Boston. As an industry, we are very much dependent upon Logan Airport and we need a modern and efficient international terminal facility.

We appreciate your consideration and fully support this important project for Boston and the entire Commonwealth.

Sincerely,

Patrick B. Moscaritolo

Patrick B. Moscaritolo
President and CEO

TWO COPLEY PLACE, SUITE 105, BOSTON, MA 02116
617.536.4100 Fax: 617.424.7664 888.SEE.BOSTON

Louis A. Mandarini, Jr.
Business Manager
Secretary Treasurer

Dominic Ottaviano
President
Field Representative



LOCAL 22
CONSTRUCTION & GENERAL LABORERS' UNION

RECEIVED
AUG 08 2016
MEPA

Matthew Beaton, Secretary
Executive Office of Energy and Environmental Affairs
Attn: MEPA Office
Page Czepiga, EEA No. 15434
100 Cambridge Street, Suite 900
Boston, MA 02114

Dear Secretary Beaton:

Recently it has come to our attention of the need to expand the International Terminal at Logan Airport. I am writing to encourage your office to approve Massport's proposal to modernize Terminal E. Massport and Logan are critical economic engines for the state's economy. Logan's operations support thousands of good paying jobs and the investments in maintenance and modernization at the airport generate thousands more in the construction trades.

This Terminal E modernization is just such a project. Not only will this project generate hundreds of construction jobs, it will address a serious need for more capacity in the international terminal. Non-stop international flights from Logan Airport doubled in the last 10 years and international passengers are up from 1.5 million in 1974 to 5.5 million in 2015. Yet Terminal E is operating with the same 12 gates it had in 1974 when it opened. This is unsustainable and risks holding back future economic growth for the overall region.

To address this growing need and to prepare for the future, Massport is proposing to add up to 7 new gates in the next few years. We understand that the project is in the planning stages and will begin in 2019, following regulatory and community meetings. We appreciate your consideration and support for this important project and the positive impact it will have on working men and women in Massachusetts.

Sincerely,

Louis A. Mandarini, Jr.

Louis A. Mandarini, Jr.
Business Manager/Secretary-Treasurer
Laborer's Local 22

35 HIGHLAND AVENUE, MALDEN, MA 02148 • TEL: 781-321-6616 • FAX: 781-321-6662



Matthew Beaton, Secretary  
Executive Office of Energy and Environmental Affairs  
Attn: MEPA Office  
Page Czepiga, EEA No. 15434  
100 Cambridge Street, Suite 900  
Boston, MA 02114

Dear Secretary Beaton:

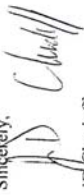
On behalf of the Massachusetts Business Roundtable, I am writing in support of the International Terminal E Modernization Project at Boston Logan International Airport. Massport's proposal to modernize Terminal E is critical to sustaining Massachusetts' important competitive edge in international travel, which provides \$1 billion annually to the state's economy.

The Roundtable's mission is to strengthen the state's economic vitality. MBR engages with public and private leaders to develop public policy solutions that enhance Massachusetts' long-term competitive position and make it a highly desirable place to do business within a global economy. The non-stop access to international markets and the growth in international destinations in recent years has been essential to our members' ability to compete, thrive and grow their businesses and workforce.

Non-stop international flights from Logan Airport doubled in the last 10 years and international passengers are up from 1.5 million in 1974 to 5.5 million in 2015 and are projected to increase to 8 million. Yet Terminal E is operating with the same 12 gates it had in 1974 when it opened. This is unsustainable for our members and their businesses.

To address this growing need and to prepare for the future, Massport is proposing to add new gates and supporting terminal infrastructures. We appreciate your consideration and fully support this important project for Massachusetts and the New England Region.

Sincerely,

  
JD Chesloff

Executive Director  
Massachusetts Business Roundtable

September 8, 2016

Matthew Beaton, Secretary  
Executive Office of Energy and Environmental Affairs  
Attn: MEPA Office  
Page Czepiga, EEA No. 15434  
100 Cambridge Street, Suite 900  
Boston, MA 02114

Dear Secretary Beaton:

The Massachusetts High Technology Council has represented leading employers from our state's technology and innovation economy for nearly four decades. (A full list of the Council's membership is attached for your reference.) Access to international markets and commercial centers is essential to our members' ability to compete globally and grow their businesses and workforce here in the Commonwealth. The existence of world class airport infrastructure to support non-stop travel to international destinations is a key to such access.

The High Tech Council's members are keenly aware of the need to expand the International Terminal at Logan Airport and, on their behalf, I write to encourage your office to approve Massport's proposal to modernize Terminal E in order to sustain Massachusetts' important competitive edge in international travel.

Non-stop international flights from Logan Airport doubled in the last 10 years and international passengers are up from 1.5 million in 1974 to 5.5 million in 2015. Yet Terminal E is operating with the same 12 gates it had in 1974 when it opened. Terminal E's existing infrastructure cannot efficiently support the increasing demand for international travel to and from Massachusetts. In addition, a high quality airport facility and travel experience can be a key part of the Massachusetts "brand" as a hub for innovation and investment.

To address this growing need and to prepare for the future, Massport is proposing to add up to 7 new gates in the next few years. We understand that the project is in the planning stages and will begin in 2019, following regulatory and community meetings. We appreciate your consideration of our views and urge you to support this important project.

Sincerely,



Christopher R. Anderson  
President  
Massachusetts High Technology Council





July 29, 2016

Matthew Beaton, Secretary  
Executive Office of Energy and Environmental Affairs  
Attn: MEPA Office  
Page Czepiga, EEA No. 15434  
100 Cambridge Street, Suite 900  
Boston, MA 02114

Dear Secretary Beaton:

On behalf of MassEcon, I am writing in support of the International Terminal E Modernization Project at Boston Logan International Airport. Massport's proposal to modernize Terminal E is critical to sustaining Massachusetts' important competitive edge in international travel, which provides \$1 billion annually to the state's economy.

Working with our public sector partners, MassEcon brings a private sector voice to marketing Massachusetts as a place to do business. Its leaders served on the Governor's Economic Development Council, and its Ambassadors – a network of business executives throughout the state – serve as peer resources for companies considering Massachusetts as an expansion location. Our membership, whose organizations are attached here, understands the importance of maintaining Logan as a leader in international travel.

The non-stop access to international markets that Logan provides is a critical competitive advantage for Massachusetts when recruiting and retaining businesses and it is essential to our partners' ability to compete, thrive and grow their businesses and workforce.

Non-stop international flights from Logan Airport doubled in the last 10 years and international passengers are up from 1.5 million in 1974 to 5.5 million in 2015 and are projected to increase to 8 million. Yet Terminal E is operating with the same 12 gates it had in 1974 when it opened. This is unsustainable for our state's employers and their international customers and their ability compete in the global arena.

To address this growing need and to prepare for the future, Massport is proposing to add new gates and supporting terminal infrastructures. We appreciate your consideration and fully support this important project for the entire Commonwealth that will help our economy continue to grow and thrive.

Sincerely,

Susan Houston  
Executive Director

161 Walnut Street  
Watertown, MA 02472  
(617) 924-4600  
www.massecon.com

The Massachusetts Alliance for Economic Development  
is a private, non-profit partnership of business, government, and industry leaders dedicated to the growth of the Commonwealth.



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Letter 31

To: Richard Doucette  
 Secretary of Energy and Environmental Affairs  
 Stewart Dalzell  
 Adrian Madaro  
 Joseph Boncore  
 Salvatore LaMattina

August 23, 2016

Re: Terminal E Expansion/New Massport Parking Garage

I am writing this brief letter in support of the proposed Terminal E Gate Expansion and additional parking garage to be located on current Massport owned property conditional on the mitigation package promised. I believe the added gates at Terminal E will have the benefit of making the terminal more friendly and inviting for both international guests traveling to Boston and Americans needing to travel internationally for work or vacation purposes. The added gates will allow flights to spend less time taxiing that will not only allow for a more enjoyable flight/return, but also reduce airplane emissions by allowing them to get to the gate quicker so that they may be powered by external GPU units located on the gates.

I am also in support of the added parking garage as long as the airport will connect to Airport Station, and that the Silver Line will connect at Airport Station as opposed to just via Airport terminals. I believe those likely to travel by car to the airport are generally not swayed to instead take public transportation should there be no available parking spaces. Instead, I believe when sufficient parking spaces are not present, more travelers tend to utilize taxis to travel to the airport and then subsequently choose the same to return after the trip. By adding parking spaces, those certain to commute via car will allow for reduced vehicle trips and hopefully less airport related congestion and pollution as it would reduce trips from four (Taxi to/from the airport) to two. However, by adding the connection from the train station to the airport it will make the connection easier for employees and travelers that utilize public transportation, and also have the potential of persuading some to choose this mode of transportation.

As mentioned earlier, my support for both of these items is conditional on Massport providing permanent funding to the East Boston Foundation in the amount of \$500,000, the providing of \$18-19 million for the construction of Piers Park Phase 2, the addition of 100 home to receive soundproofing, and the agreed amount of \$180,000 being given for a future senior center to be located in East Boston.

One additional thing I would propose is that the Terminal E Gate Expansion/New Parking Garage not have its construction begin until the construction of Piers Park Phase 2 commences. I believe it is important for East Boston residents to know for certain that Piers Park Phase 2 will come to fruition after nearly two decades. A promise of providing funds with no certain start/completion date is not enough when it could be possible that even if funding were provided that it would not be started till after all of the Roseland buildings are complete. I believe by linking the dates that it will ensure East Boston residents are able to utilize and enjoy Piers Park Phase 2 in the very near future as opposed to a distant 2-15 years as I am certain should the approval to expand the number of gates and parking spaces be granted that Massport would waste no time in getting shovels in the dirt. This way both East Boston residents, Massport, and the Greater Boston region win.

Sincerely,

Joshua Acevedo  
 East Boston Resident

**Czepiga, Page (EEA)**

Letter 32

From: David Aiken <dalkem1@gmail.com>  
 Sent: Friday, September 09, 2016 5:22 PM  
 To: Czepiga, Page (EEA)  
 Cc: Joseph.boncore@massenate.gov; Adrian.Madaro@mahouse.gov; Salvatore LaMattina; Lisa Jacobson; Dave Aiken  
 Subject: Comments RE: EEA T5434 for Massport

Ms. Czepiga,

I am submitting these comments in regards to the Massport / Logan EIR which is a difficult document to review and understand, especially given the summer time frame to review. Making sense of this 1,200 page document and the health effects it will have on our family over the coming decades that we intend to live in East Boston has been incredibly difficult and should be taken very seriously by the Commonwealth. The Baker Administration has done incredible work the last couple of years, and this is no small upgrade to have quietly slip through the summer months without more active engagement. Infrastructure improvements are very important for the economic health of our state, but so is the health of the surrounding communities and improvements to other aspects of our mobility system (the MBTA and MassDOT systems that all connect to Logan).

I would like to see your office require a full EIR for all of the impacted communities, with Massport and the Commonwealth paying for independent review and consultants on this complicated matter. There should also be accompanying summary documents in layman's terms. My wife and I chose to move to East Boston only a few years ago, but that doesn't mean that we accept the airport's non stop growth. I understand a package is on the table that Massport would commit funds for various projects as mitigation but given this comment period ends before it is clear what the final mitigation package is, means that we cannot assess how those proposed items will improve our health and overall transportation systems until this comment process is closed.

We look forward to Secretary Beaton requiring an extended MEPA process requiring a full EIR with the Commonwealth and Massport providing the resources for independent review of the information and requiring a more comprehensive, and understandable, public process.

Sincerely,

David Aiken  
 218 Everett Street  
 East Boston, MA 02128

**Czepiga, Page (EEA)**

**From:** Magdalena Ayed <magdalena.ayed@gmail.com>  
**Sent:** Sunday, August 14, 2016 8:38 AM  
**To:** Czepiga, Page (EEA)  
**Cc:** salvatore.lamatina@cityofboston.com; Adrian Madaro (adrian.madaro@mahouse.gov); Austin Blackmon; Carl Spector  
**Subject:** Comment Letter Re: Massport's Terminal E Expansion EIR

Dear Ms. Czepiga,

As you know, East Boston is a state-designated environmental justice community as granted by Executive Order 552 on November 20, 2014. We are a densely-populated, immigrant-majority and largely a lower-income community already suffering grave impacts from various environmental burdens. We have one of the highest rates of childhood asthma in the Commonwealth. Expanding Terminal E as proposed by Massport will significantly increase air pollution around our homes and put our health and that of our children at greater risk than what we already endure.

Furthermore global and local governments are looking towards forward-thinking technology and standards-setting for reducing GHG emissions in airports and within the airline industry worldwide, especially in urban settings. Recently there has been talk of the large amounts of GHG emissions that airports and the airline industry contributes to the overall global GHG emissions thus exacerbating overall climate change. Hence, there is an initiative underway of mandating better standards of GHG emission reductions at airports. How will the Terminal E Expansion address global and local trends and initiatives to reduce GHG emissions if in fact there will be an increase in passengership and flights at Logan Airport?

According to the Commonwealth's 'GHG Policy' or Policy under MEPA, when a proponent is asked by the EEA to submit a full EIR report, it must provide a full GHG emissions analysis specifying the sources and amount of emissions produced by its operations. I am not aware of this specific level information provided by Massport.

The EJ Order also states that sufficient funding must be spent on outreach activities to EJ communities like ours especially where there is a large immigrant population of non-English speakers. I haven't seen the level of outreach that is needed nor do I believe it to be a correct public participation process in an EJ community to expect it to read, technically interpret and react to a 1,100+ page report revealed on July 15, 2016 in the Environmental Monitor, an online newsletter of the EEA that a minute percentage has access to in our community and laden with technical jargon that is hard for the average person to understand (in a matter of 3 weeks). We have been placed at an unfair advantage to really understand the impacts that Terminal E expansion may have on our community's health.

Given the length and complexity of Massport's Draft Environmental Impact Report and the fact that this project constitutes the majority of the largest ever single expansion of Logan Airport, from what I understand, I request that a one year extension of the comment period be granted to afford community members in this Environmental Justice community a reasonable opportunity to read and analyze the content of this important document.

In lieu of such extension, I submit that the Massachusetts Port Authority should be expected to produce a supplemental document which will satisfy Executive Order 552, signed by providing a summary of the DEIR comprised of no more than 10 pages of written explanation.

It is extremely disappointing that Massport believes they can blind the public with a sheer volume of technical information, while they persist in ignoring important comment provided previously.



sent via email to Page.czepiga@state.us.ma

9 September 2016

Secretary of Energy and Environmental Affairs  
EEA, Attn. MEPA Office  
Ms. Page Czepiga, EEA #15434  
100 Cambridge Street, Suite 900  
Boston, MA 02114

SUBJECT: Boston-Logan International Airport, Terminal E Modernization Project Environmental Assessment/Draft Environmental Impact Report (EEA #15434)

Dear Ms. Czepiga,

I am writing regarding the Logan Terminal E Modernization Project Environmental Assessment and offer the following comments.

My wife and I own and reside in Unit 109 of the Porter Street Lofts located at 156 Porter Street in East Boston. Porter Street Lofts occupies a former factory which was converted to 216 residential condominium units in 2005. This four story linear multifamily complex faces across East Boston Memorial Park approximately 1000 feet directly to the proposed Terminal E Expansion Site. The EA/DEIR consistently fails to recognize our building as a residential property (Fig 4-3, Fig 4-4, Fig 4-6 etc). It appears that this building is the closest residential property to the proposed action and as such should be correctly noted and factored into this and any future environmental impact analyses.

Noise receiver sites R16 and R17 used for noise modeling are located on Porter Street in the shadow of Porter Street Lofts (a building some 80 feet tall which runs approximately 500 feet along Porter Street between Orleans Street and Cottage Street). In order to properly assess the noise impacts to Porter Street Loft units facing Terminal E, I would recommend these receiver sites be placed on the east side of Porter Street Lofts. Consideration should also be given to the elevation of residential units on the upper floors as higher units will receive less benefit from the barrier effects afforded by the Terminal E expansion. Perhaps R16 could be elevated to the highest floor units and R17 to ground floor units.

The EA/DEIR summarizes the Terminal E Expansion noise impacts as being positive, predicting 15 to 17 decibel reductions in noise levels based on the construction of both Phase I and Phase II. However, it has been over 20 years since the 3 gate expansion was approved and no construction has occurred. Based on this precedent, Phase II of the project could be delayed for many years or perhaps never constructed. If this were to happen, more ground operations would be shifted closer to Memorial Park and Porter Street Lofts. Noise from ground operation could also potentially reflect between the new Terminal E gates and the American Airlines Hanger increasing noise levels directed through the gap left between Phase I and the existing Delta Hanger. Therefore, the noise impacts associated with a Phase I project completion without Phase II should be fully evaluated. In order to deliver the full benefits of the "noise barrier effect" touted in the report, serious consideration should be given to combining both phases, at least constructing the entire outer shell of the Terminal E Expansion.

In addition to reviewing the EA/DEIR I have reviewed the Boston-Logan 2011 Environmental Status and Planning Report (2011 ESPR). While the proposed Terminal E expansion may well abate ground operation noise in our community (assuming both phases of the project are completed and connect the existing terminal E building to the existing Delta Hanger), I am concerned the ongoing increase and 2030 forecast expansion of international flights could lead to many more night operations, especially since 15R and 33L is the designated primary night runway. The 2011 ESPR forecast 28 additional night operations due primarily to increasing international flights. It is not clear when these operations will take place, but consideration should be given to limiting flights between 12:00 am and 6:00 am. While properties within Ldn 65 contours have benefited from noise abatement programs, many residents in East Boston and Jeffries Point have not. Not everyone can afford to run air conditioning year round, and open windows offer little in the way of noise reduction for those trying sleep.

Section 5.5.1 of the EA/DEIR states the Terminal E Modernization would not result in any changes to the number and type of aircraft operations at Logan. The addition of 7 new gates and supporting facilities described in the document add and improve ground capacity that is clearly connected to and enable the forecast increases in international flights which will directly and indirectly support expanded operations and airport noise impacts. While individual projects may be assessed separately, all projects related to the significant expansion of international flight operations at Logan as outlined in the 2011 ESPR, including direct, indirect, connected actions, should be assessed for their cumulative effect in accordance with the National Environmental Policy Act. Consideration should be given to accomplishing an Environmental Impact Statement to fully assess Logan's International Flight Expansion.

Thank you of the opportunity to comment.

With Respect,

Jesse O. Borthwick  
156 Porter Street, Unit 109  
Boston, MA 02128

**Czepiga, Page (EEA)**

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**From:** Kathleen Collins <katcoonye@gmail.com>  
**Sent:** Friday, September 09, 2016 8:39 PM  
**To:** Czepiga, Page (EEA)  
**Subject:** STOP MASSPORT EXPANSION

PLEASE be reasonable and fair! Stop expanding Massport. It is directly harmful to the residents of East Boston. The airport is big enough.

Thank you.

Karen Connor  
30 Trenton St.  
E. Boston MA 02128

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Letter: 36

## VIA ELECTRONIC MAIL

September 9, 2016

Matthew A. Beaton  
 Secretary, Executive Office of Energy and Environmental Affairs  
 Attn: Page Czepiga, EEA No. 15434  
 100 Cambridge Street Suite 900  
 Boston, MA 02114

RE: Environmental Notification Form, Terminal E Modernization Project at Boston-Logan International Airport

Dear Secretary Beaton,

We write today to express our grave concerns about the proposed Terminal E expansion at Logan Airport. As homeowners in East Boston's Wood Island neighborhood and parents of a young child, we experience both the wonder and the worry that accompanies living in such close proximity to a busy international airport. Planes are part of our daily lives. To our son's great delight, it is not uncommon to spot multiple planes arriving and departing as we enjoy our backyard regardless of the time of day. Less welcome is the constant intrusion of noise and jet exhaust fumes we experience during our daily commutes, in our backyard, and in East Boston's many parks and public spaces.

As frequent fliers for business and pleasure, we appreciate Massport's goals of improving travelers' experiences of the airport, and we understand the business imperatives that drive Massport to seek opportunities to attract international travelers from newer markets. But those goals must be balanced and, where necessary, hedged or curtailed by public policy imperatives of creating and sustaining environmentally healthy, affordable communities and neighborhoods. Logan's close proximity to downtown Boston makes it a breeze for business travelers like us to use. Unfortunately, Logan's close proximity to East Boston, our home and one of Boston's remaining diverse affordable neighborhoods, requires additional considerations to be given when a proposed plan might increase negative impacts on neighboring communities. Growth at any cost—certainly, growth without consideration of the short-term inconveniences and long-term health costs that will accrue to family budgets, employers, and the health care system at large—should no longer be acceptable.

Logan Airport is less than a half-mile from our front door as the crow flies, and so we have read and analyzed with great concern the initial findings of the public health crises which the Logan Airport Health Study of 2014 and scholarly research studies attribute directly to Logan airport (namely, childhood asthma and related issues as well as chronic obstructive pulmonary disease for adults).<sup>1</sup> Other studies have also demonstrated a link between airport noise, particulate matter, and poor health outcomes. These increased rates of chronic illness are not just health issues; they are also economic issues, as addressing them takes a toll on family budgets, impacts school and work performance, and may increase costs to our health care system. They should not be ignored or taken lightly. Indeed, while it is beyond the scope of this review process, we would greatly appreciate a health impact assessment be conducted for this and other large scale projects. Health impact assessments are required by law in other parts of the world with which Massport intends to

<sup>1</sup> MA Department of Public Health, "Logan Airport Health Study Executive Summary," available at <https://www.massport.com/media/253466/Executive-Summary-Health-Study.pdf>.

compete.<sup>2</sup> Accordingly, we join with our East Boston neighbors in requesting that you incorporate the following statements of fact into your evaluation of this damaging project:

- With 6.1 million additional passengers since 2009, Logan has already grown by more than the volume of TF Green and Manchester-Boston combined (5.7 million) over the past few years. The expanded Terminal will handle more than the entire TF Green, Worcester, Hanscom, Pease, Portland, Manchester-Boston and Bradley Airports do today combined.
- **Airport expansion plans call for a 43 percent increase in passengers**, equal to adding three times the total passenger volume of all airports in New England. Section 7, Page 21 of the 2011 ESPR states that NOx related to airport expansions will increase by 24 percent by 2030. Section 7, Page 21 of the 2011 ESPR states that flight operations will increase by 30% by 2030. This increase will cause corresponding increases in noise and pollution.
- **Noise and pollution are already on the rise**. 2014 noise contours were larger in most areas around the Airport than they were in 2013. Total VOC, NOx and PM10/PM2.5 emissions went up 2014 compared to 2013. Aircraft sources of particulate pollution increased 31 percent over the four years reported between 2010 and 2014.
- **The MBTA pedestrian connection will be built in the second phase of the project and completed by 2028, put off for 12 years**.
- Section 5, Page 14 of the DEIR states that there will be 28 more night flights (between 10:00 pm and 5:00 am) every night using the long runways pointing over Eagle Hill, Chelsea, Winthrop, South Boston, Revere, Somerville and dozens of other communities. If the volume of added flights exceed the capacity of the Head to Head noise abatement-based configuration used at Logan during overnight hours, **85 decibel airport overflights will occur as often as every 15 minutes throughout the night causing massive sleep interruption in our hard-working neighborhoods. Airport noise pollution has been shown to have significant negative impacts on the cardiac health of residents**.<sup>3</sup>
- Average daily traffic at Logan has increased 13 percent since 2010. A 2013 Air Passenger Survey revealed that only 28 percent of air passengers use HOV/shared-ride modes to access the Airport. If this trend is not improved upon, the next 10 million passengers Massport encourages to fly into Logan will produce an additional 7.2 million vehicle trips to and through our communities.

We also wish to raise our concerns about the lack of meaningful community outreach and engagement by Massport considering the scope and impact of this proposed expansion. We understand that Massport has appeared at East Boston's various neighborhood councils and held another public meeting to solicit comment. This is a wholly inadequate, "check the box" approach to community engagement—particularly in a community as diverse as East Boston and for a project of such scope. A business of Massport's size proposing a project of this magnitude, and with this much potential to negatively impact the quality of life and health of future generations of East Bostonians, must be held to a higher standard for community engagement. We respectfully request that:

- The MEPA review process be extended, requiring a full Final Environmental Impact Report in which impacted communities receive responses to their concerns about the increases in air and noise pollution

<sup>2</sup> See, e.g., Castro, A., et al. "Santa Monica Airport Health Impact Assessment: A Health-directed Summary of the Issues Facing the Community Near the Santa Monica Airport" (2010), available as of 9/9/16 at [http://www.hiaguide.org/sites/default/files/SM\\_Airport\\_Health\\_Impact\\_Assessment.pdf](http://www.hiaguide.org/sites/default/files/SM_Airport_Health_Impact_Assessment.pdf); and C. Phillips et al. "Methods for quantitative health impact assessment of an airport and waste incinerator: two case studies," (2010), available as of 9/9/16 at <http://www.tandfonline.com/doi/pdf/10.3152/146155110X488808>

<sup>3</sup> See, e.g., Correia, A., et al. "Residential Exposure to Aircraft Noise and Hospital Admissions for Cardiovascular Diseases: Multi-airport Retrospective Study," *BMJ* 2013; 347: f5561, available as of 9/9/16 at <http://www.bmj.com/content/347/bmj.f5561>.

- Massport comply with all MassDOT procedures to improve engagement within impacted Environmental Justice communities. Specifically, the Port Authority must be directed to produce a clear, transparent and fair process by:
    - Drafting a Summary EIR Document within the Final EIR of no more than 20 pages explaining the environmental impact information to inform residents about the burdens this project will cause
    - Writing this Summary Document in an understandable manner without unnecessarily technical language.
    - Translating this Summary Document into Spanish and distributing it widely as part of an extended community presentation and discussion effort which is respectful of family schedules and designed to achieve high levels of engagement and public comment;
  - Massport conduct an expanded study of opportunities to offset Logan airport growth by diverting flights through a regional air space plan which includes all other viable airports;
  - Massport strengthen and construct the project's mass transit commitments in the initial construction phase and as a prerequisite to Terminal expansion.
- We are staunchly opposed to any increased impacts on environmental or public health at Logan Airport, including those caused by this proposed expansion of Terminal E, without effective community engagement, a full-scale analysis of the negative impacts, and enforceable plans to mitigate those impacts. While we appreciate the growing pressures that Massport may feel to expand its operations, the neighborhood of East Boston—including its elderly, its children, those already affected by pulmonary and cardiac issues, and the many thousands of residents who live in Logan's shadow—already bears the brunt of the burden for Logan Airport. We believe it is time for Massport to consider an alternative strategy.

Thank you for your attention to these concerns. We appreciate all you do to keep the Commonwealth and our community safe, healthy, and vibrant.

Yours very truly,

Jessica L. Curtis, JD  
Bryan T. Schnittjer  
742 Saratoga Street  
Boston, MA 02128

CC: The Honorable Robert A. DeLeo, Speaker of the Massachusetts House of Representatives  
Senator Joseph Boncore  
Representative Adrian Madaro  
Boston City Councilor Sal LaMattina

Letter 37

Sept. 9, 2016

Mr. Matthew Beaton  
Executive Office of Energy and Environmental Affairs  
Attn: Page Czepiga, EEA No. 15434  
100 Cambridge Street, Suite 900  
Boston MA 02114

Dear Secretary Beaton,

I am again writing to express my concern over the proposed "modernization" and expansion of Terminal E at Logan International Airport and Massport's proposal to increase parking by 5,000 spaces.

Although the comment period has been extended, it is still inadequate. The Environmental Assessment/Draft Environmental Impact Report (EA/DEIR) for the above-referenced project is over 1,000 pages long, filled with technical jargon and graphs, and extremely difficult to read and absorb in the time allotted to make comments. In addition to which, the deadline for comments is the first week of school!

As a resident of an Environmental Justice Community, I feel that we are being short-changed by not having Massport be required to produce a full Environmental Impact Report. Some of my reasons for this are:

- The increased air pollution in our neighborhoods due to increased plane and vehicular traffic
- The increased noise pollution for the same reasons
- The lack of a comprehensive plan for all future expansion planned by Massport. Cumulative effects cannot be measured adequately when all the projects are presented piecemeal
- The lack of a plan to regionalize domestic flights to lessen the impact of increased international flights

It is my hope that you will carefully consider these concerns and act in the interests of the people and neighborhoods impacted by airport operations.

Sincerely,

Patricia J. D'Amore  
95 Webster Street  
East Boston, MA 02128

617-561-4808

[damorep@yahoo.com](mailto:damorep@yahoo.com)

cc: Stewart Daizell, Deputy Director, Environmental Planning and Permitting, Massport  
Sen. Joseph Boncore  
Rep. Adrian Madaro  
Councilor Salvatore LaMattina

**Czepiga, Page (EEA)**

**From:** Carol Doering <ringdoe@gmail.com>  
**Sent:** Saturday, September 10, 2016 8:44 PM  
**To:** Czepiga, Page (EEA)  
**Subject:** Proposed Expansion of Terminal E

Dear Secretary Beaton,

My family live on Frankfort St. in East Boston. We are already concerned about the high rates of asthma and hearing issues that result in East Boston from being neighbors of Logan. Now I understand that the situation will become much worse from the expansion of Terminal E.

We ask that other options be considered such as a plan to make better use of regional airports and management of peak periods of use. We ask for a proper EIR report. We ask for it to be made available in the languages of East Boston so citizens can have a real chance to know the issues.

East Boston and the rest of the city of Boston can't take MORE air and noise pollution.

Carol Doering

Sent from my iPhone

**Czepiga, Page (EEA)**

**From:** Judy Gates <gateposte@gmail.com>  
**Sent:** Friday, September 09, 2016 5:15 PM  
**To:** Czepiga, Page (EEA)  
**Cc:** joseph.boncore@masenate.gov; adrian.madaro@mahouse.gov; Salvatore LaMattina; robert.deleo@mahouse.gov  
**Subject:** Terminal E Expansion comments

Mr. Matthew Beaton

Executive Office of Energy and Environmental Affairs  
 Attn: Page Czepiga, EEA No. 15434  
 100 Cambridge Street Suite 900  
 Boston, MA 02114

Dear Secretary Beaton,

I attended the August meeting at the Umama Academy about the expansion of Terminal E. I appreciated the presentation that was made but there was a lot to absorb. And the timing wasn't the best—6 pm on a Wednesday. Hard for employed people to make it that early.

This letter expresses my concerns. I believe the expansion will have negative impacts on me and my community. I will admit that I have not read every word of the huge report but I have consulted with friends who have done so and whose evaluations and opinions I respect. I hope you will read their letters and respect their evaluations.

Along with others, I would like to see the review process extended and to see a Summary EIR Document that will tell us more clearly what the environmental impact will be. And I would like to see this distributed widely in the community.

As a resident of a East Boston, I am deeply opposed to the expansion plan at Logan. I look forward to continued and improved engagement in this critical review process and I urge you to consider the health and environmental impacts of this expansion project in this process here and now.

Sincerely,

Judy Gates  
 100 Marginal Street  
 East Boston

**From:** Kathleen McCauley <kmccauley270@gmail.com>  
**Sent:** Friday, September 09, 2016 11:33 AM  
**To:** Czepiga, Page (EEA); joseph.boncore@masenate.gov; Salvatore LaMattina  
**Subject:** Comment Letter on the Terminal E Modernization Project EEA

Mr. Matthew Beaton  
Executive Office of Energy and Environmental Affairs  
Attn: Page Czepiga, EEA No. 15434  
100 Cambridge Street Suite 900  
Boston, MA 02114

Dear Secretary Beaton,

This is a letter expressing my concerns about Terminal E Expansion at Logan Airport. This expansion has negative impacts on my community and continues serious environmental and procedural injustices within the MEPA evaluation process.

**As an East Boston voter, resident and property owner, I am opposed to any airport expansion that results in additional flight arrivals or departures between the hours of Midnight and 5AM!**

I urge you to consider the health and environmental impacts of this expansion project by requiring a full Environmental Impact Report addressing increases in air and noise pollution!  
The arguments incorporated in the MEPA comment structure, that 1) airport demand is not influenced by airport capacity and 2) increased impacts are therefore not a byproduct of airport growth, place undue burden on impacted communities to prove fundamental theories of supply and demand. They advance a false assumption that growth is unstoppable and they displace accountability for transportation outcomes the State Government, to the market.

**OF PARTICULAR NOTE:**

- Section 5, Page 14 of the DEIR states that there will be 28 more night flights (between 10:00 pm and 5:00 am) every night using the long runways pointing over Eagle Hill, Chelsea, Winthrop, South Boston, Revere, Somerville and dozens of other communities. If the volume of added flights exceed the capacity of the Head to Head noise abatement-based configuration used at Logan during overnight hours, 85 decibel airport overflights will occur as often as every 15 minutes throughout the night causing massive sleep interruption in our hard working neighborhoods
- Aircraft sources of particulate pollution increased 31% over the four years reported between 2010 and 2014

Sincerely,  
NAME: Kathleen McCauley  
ADDRESS: 44 Monmouth St East Boston MA  
PROPERTY OWNER: 270 Princeton Street East Boston MA



**Czepiga, Page (EEA)**

Letter 41

Gail C. Miller  
232 Orient Avenue  
East Boston, Ma 02128

By mail: Senator Elizabeth Warren  
Senator Edward Markey  
Representative Michael Capuano  
Representative Katherine Clark

**From:** Gail Miller <gailmiller48@icloud.com>  
**Sent:** Friday, September 09, 2016 2:52 PM  
**To:** Czepiga, Page (EEA)  
**Cc:** matthew.beaton@state.ma.us; joseph.boncore@masenate.gov; adrian.madara@mahouse.gov; s.; joseph.boncore@masenate.gov; adrian.madara@mahouse.gov; Salvatore LaMattina; <Robert.Delebo@state.ma.us>; stan.rosenberg@masenate.gov  
**Subject:** Terminal E expansion, 5,000 car garage and Terminal E Renovations andEnhancements

Dear Ms. Czepiga:

To begin my comments for the above, it should be noted that the process employed by Massport has been less than forthcoming in bringing these huge expansion projects, notably SEGMENTED, to the public's attention in the middle of the summer. By design... Most assuredly yes! Absent in this process is an executive summary, in English and any other language, least of which should be Spanish and in non-technical terms. The lack of outreach to the in-close communities honestly engaging the public is an affront to Environmental Justice Communities, of which there are at least 3...East Boston, Chelsea and Revere.

We ask what does the Environmental Justice Order mean...or are we to assume that is just "on paper"? It needs to be revisited by way of public process. Reaching out to one small Latino organization is not outreach. It just isn't!

The extension for this project is another affront because it's tagged at the end of summer, the very week kids are going back to school. When is process going to be respected and not just lip serviced? Hardly a dialogue is in place as well it should be.

The segmentation of these projects needs to be analyzed together...not in three separate reviews..... How does one honestly analyze impacts project...that is plain and very simple living the lie! There is no possibility to add operations and not add impacts; air pollution and otherwise. I cannot buy into this process. That complaint has been logged into comments for years and where is the remedy? This is an airport in Boston considered, like the banks, too big to fail!

There is no sincere effort that our community can realize where Massport has exhibited regionalization or lessening impacts on our communities when they have the capacity to do so...they have two other airports they manage. They simply refuse to do so. And to further lessen impacts they can share the airspace network with Manchester, NH and TF Green but they do not want to share the revenue/profits! They are beholden to none other than the bondholders but in their enabling legislation it mandates that they do not bring a negative impact to the quality of life to residents they abut.

I cannot address the myriad of issues in this over1,000 page document to exclaim why their project will overburden the community.

Suffice it to say that I oppose this expansion and 5,000 car ask because Massport has not done due diligence in lessening impacts to abutting communities.

As an analyst this should be obvious!

I request that you send Massport back to the drawing board through an FEIR so that we may honestly review the impacts and Massport's needs.

Sincerely,

**Czepiga, Page (EEA)**

Letter 42

From: Celeste Myers <celeste.myers@gmail.com>  
 Sent: Friday, September 09, 2016 1:29 PM  
 To: Czepiga, Page (EEA)  
 Cc: Boncore, Joseph (SEN); Madaro, Adrian C. (HOU); Salvatore LaMattina; robert.coleo@mahouse.gov  
 Subject: Comments and Gentle Reminder: East Boston is Not an Airport

Mr. Matthew Beaton  
 Executive Office of Energy and Environmental Affairs  
 Attn: Page Czepiga, EEA No. 15434  
 100 Cambridge Street Suite 900  
 Boston, MA 02114

Dear Secretary Beaton,

*I apologize for the copy and paste - however, given tight deadlines and many battles we as East Boston residents are forced to face - we have to take the divide and conquer approach. So I'm fortunate that we have warriors in East Boston that manage to keep us all informed and apprised of initiatives in the face of steep comment deadlines. That being said - I encourage you to not only appraise this segment of the MassPort expansion initiative individually - but as it would add impact in addition to existing Airport burdens as well as the coming phases.*

*Additionally - I also encourage you to reflect on the reality that the burdens that the airport, tunnels, highways, developments and countless other initiatives in the area equate to more than merely the sum of each of their total impacts - but rather, when combined, have an exponential nearly incalculable toll on the health and well being of our community.*

*Does the MA EPA have a mechanism or tool in place to define a community's tipping point? Is there an ability to determine precisely - how many burdens are too many? Is there a tool to determine how much exposure to health withering impacts is enough? If so - I implore you to put it into action for the sake of the residents, families and businesses working, living and striving to be successful here in East Boston.*

**Simply but precisely well put by the folks of East Boston some 4+ decades ago. EAST BOSTON IS NOT AN AIRPORT! I thank you and your colleagues for recognizing that.**

This is a letter expressing my concerns about Terminal E expansion at Logan Airport. This expansion has negative impacts on my community and continues serious procedural injustices within the MEPA evaluation process.

The arguments incorporated in the MEPA comment structure, that 1) airport demand is not influenced by airport capacity and 2) increased impacts are therefore not a byproduct of airport growth, place undue burden on impacted communities to prove fundamental theories of supply and demand. They advance a false assumption that growth is unstoppable and they displace accountability for transportation outcomes from Massport, to the market.

In fact, Massport can bend the trajectory of growth at Logan by promoting environmentally responsible plans. This has been demonstrated by the success of efforts in the early 1990s to reduce airport impacts by regionalizing the New England airspace resulting in gains of 17% of New England Passenger market share at TF Green and Manchester-Boston AND MIRROR IMAGE DECLINES IN BOSTON LOGAN MARKET SHARE between 1994 and 2004.

As a resident who is keenly aware of the public health crises which the Logan Airport Health Study of 2014 and scholarly research studies attribute directly to Logan airport, I insist that the State reject Massport's self-serving and unhelpful arguments and that:

1. The MEPA review process be extended, requiring a full Final Environmental Impact Report in which impacted communities receive responses to their concerns about the increases in air and noise pollution;
2. Massport comply with all MassDOT procedures to improve engagement within impacted Environmental Justice communities. Specifically, the Port Authority must be directed to produce a clear, transparent and fair process by:
  - a. Drafting a Summary EIR Document within the Final EIR of no more than 20 pages explaining the environmental impact information to inform residents about the burdens this project will cause
  - b. Writing this Summary Document in an understandable manner without unnecessarily technical language;
  - c. Translating this Summary Document into Spanish and distributing it widely as part of an extended community presentation and discussion effort which is respectful of family schedules and designed to achieve high levels of engagement and public comment
3. Massport conduct an expanded study of opportunities to offset Logan airport growth by diverting flights through a regional air space plan which includes all other viable airports;
4. Massport strengthen and construct the project's mass transit commitments in the initial construction phase and as a prerequisite to Terminal expansion.

The following are facts which I am requesting that you incorporate into your evaluation of this damaging project:

- The expanded Terminal will handle more than the entire TF Green, Worcester, Manscom, Pease, Portland, Manchester-Boston and Bradley Airports do today combined. ALL BY ITSELF
  - Airport expansion plans call for a 43% increase in passengers, equal to adding three times the total passenger volume of all airports in New England
  - Section 7, Page 21 of the 2011 ESRP states that flight operations will increase by 30% by 2030. This increase will cause corresponding increases in noise and pollution
  - Section 7, Page 21 of the 2011 ESRP states that NOx related to airport expansions will increase by 24% by 2030
  - The MBTA pedestrian connection will be built in the second phase of the project and completed by 2028, put off for 12 years. This pedestrian connection would require travelers to travel over 3,300 feet on foot, compared to an average 250 feet walk to cell phone and short term parking lots and 50 feet to the passenger car pick-up curbside, the mode Massport is making its biggest investment: Table 5-21 of the DEIR shows that curbside pick-up areas at Terminal E will be expanded by 461%
  - Section 5, Page 14 of the DEIR states that there will be 28 more night flights (between 10:00 pm and 5:00 am) every night using the long runways pointing over Eagle Hill, Chelsea, Winthrop, South Boston, Revere, Somerville and dozens of other communities. If the volume of added flights exceed the capacity of the Head to Head noise abatement-based configuration used at Logan during overnight hours, 85 decibel airport overflights will occur as often as every 15 minutes throughout the night causing massive sleep interruption in our hard working neighborhoods
  - With 6.1 million additional passengers since 2009, Logan has already grown by more than the volume of TF Green and Manchester-Boston combined (5.7 million) over the past few years
  - A 2013 Air Passenger Survey revealed that only 28 percent of air passengers use HOV/shared-ride modes to access the Airport. If this trend is not improved upon, the next 10 million passengers Massport encourages to fly into Logan will produce an additional 7.2 million vehicle trips to and through our communities
  - Noise is on the rise. 2014 noise contours were larger in most areas around the Airport than they were in 2013
  - Pollution is up. Total VOC, NOx and PM10/PM2.5 emissions went up 2014 compared to 2013
  - Average daily traffic at Logan has increased 13% since 2010
  - Aircraft sources of particulate pollution increased 31% over the four years reported between 2010 and 2014
- As a resident of a highly impacted community, I am AGGRESSIVELY OPPOSED TO ANY EXPANSION OF AIRPORT IMPACTS at Logan. I am eagerly looking forward to continued and improved engagement in this critical review process and I urge you to consider the health and environmental impacts of this expansion project in this process here and now.

Sincerely,

Celeste Ribeiro Myers  
 East Boston Advocate

**Czepigaj, Page (EEA)**

Letter 43

**From:** Jane O'Reilly <oreillyjane05@gmail.com>  
**Sent:** Thursday, September 08, 2016 10:30 PM  
**To:** Czepigaj, Page (EEA)  
**Cc:** joseph.boncore@masenate.gov; adrian.madaro@mahouse.gov; salvatore.lamatina@boston.gov; robert.deleo@mahouse.gov  
**Subject:** Strong objections to Logan airport expansion.

As you can see, I live in East Boston. I strongly, loudly, am opposed to Logan's new expansion plans. I have studied my disk and attended the meetings. It is time to admit that Logan airport can no longer serve the metropolitan area. It has run out of space. The people of East Boston will not tolerate any more expansion. The demands of 21st century transportation call for high speed trains, including rapid transit from a new modern airport away from dense urban populations. I agree with Chris Marchi's letter of protest.

I am a member of AIR  
 I am aware of modern solutions that exist in many other countries, and see no real future for Boston's claim to be a major city without similar adjustments.  
 I am so tired of fighting the cancer growing in my neighborhood that is Logan Airport and its impractical and grandiose and impossible plans.  
 I am not too pleased with Massport either.  
 Sincerely yours,  
 jane o'Reilly  
 Sent from my iPad

Jane O'Reilly  
 150 Orleans st., #407  
 East boston ma. 02128

617.567.1880

1

**Czepigaj, Page (EEA)**

Letter 44

**From:** STEVE PASSARIELLO <stepassa@yahoo.com>  
**Sent:** Saturday, September 10, 2016 12:07 AM  
**To:** Czepigaj, Page (EEA)  
**Subject:** Environmental issues

Hi.

Comment in regards to Massport Terminal E expansion.

Total impact increases on east boston and surrounding communities due to the increase in congestion of an already over burdened infrastructure. More planes equal more wait times, more taxis, busses, limos, cars, lyft, uber and all else.

Big increases in health related issues in these communities. Families are rooted here. Not leaving. I have 4 children. Asthma, big problem.

Please reconsider. Maybe the travelers need to suffer for a while. Travel is a luxury. Life is a right.  
 Steve Passariello

[Sent from Yahoo Mail on Android](#)

1

**Czepiga, Page (EEA)**

Letter 45

**From:** carlos rosales <carlosramexinc@yahoo.com>  
**Sent:** Friday, September 09, 2016 9:25 AM  
**To:** Czepiga, Page (EEA)  
**Cc:** Joseph.Boncore@massenate.gov; Adrian.Madarc@mahouse.gov; savatore.lamattina@boston.gov; Robert.Deleo@mahouse.gov  
**Subject:** airport expansion  
**Attachments:** =UTF-8Q2FydgEGZGUgQ29Zw50YXJpb3Mgc29icmUgbGEgbW9kZXJuaXphY2k= =UTF-8b77+9biB0ZXJlaW5hbCBFCBkZWwvUHJveWVjG8gRUFVFE1NDM0LmRvYw==

I write my letter in Spanish to voice in my native tongue how bad this is being run. The report was meant for someone with 2 doctorates to read, thank God for google to find the meaning of some words when used in a certain context. could you please make a report that someone with a high school education can read . how is it that the connector for poor people and environmentally conscious ones (the T connector) is a 3300 ft walk (over half a mile , and taxis only 250 ft or so

- Section 5, Page 14 of the DEIR states that there will be 28 more night flights (between 10:00 pm and 5:00 am) every night using the long runways pointing over Eagle Hill, Chelsea, Winthrop, South Boston, Revere, Somerville and dozens of other communities. If the volume of added flights exceed the capacity of the Head to Head noise abatement-based configuration used at Logan during overnight hours, 85 decibel airport overflights will occur as often as every 15 minutes throughout the night causing massive sleep interruption in our hard working neighborhoods
- With 6.1 million additional passengers since 2009, Logan has already grown by more than the volume of TF Green and Manchester- Boston combined (5.7 million) over the past few years
- A 2013 Air Passenger Survey revealed that only 28 percent of air passengers use HOV/shared-ride modes to access the Airport. If this trend is not improved upon, the next 10 million passengers Massport encourages to fly into Logan will produce an additional 7.2 million vehicle trips to and through our communities
- Noise is on the rise. 2014 noise contours were larger in most areas around the Airport than they were in 2013
- Pollution is up. Total VOC, NOx and PM10/PM2.5 emissions went up 2014 compared to 2013
- Average daily traffic at Logan has increased 13% since 2010
- Aircraft sources of particulate pollution increased 31% over the four years reported between 2010 and 2014

please explain to us in small words of no more than 3 syllables how this is good for the humans living around the airport?

thank you

Letter 46

Mr. Matthew Beaton  
 Executive Office of Energy and Environmental Affairs  
 Attn: Page Czepiga, EEA No. 15434  
 100 Cambridge Street Suite 900  
 Boston, MA 02114

September 9, 2016

Dear Secretary Beaton,

I am writing to express my concerns about Massport's plan to expand Terminal E at Logan Airport.

I attended the public meeting Massport held for the Terminal E Modernization Project on Wednesday, August 10 at the Mario Umiana Academy in East Boston. The conclusions of the Environmental Assessment/Draft Environmental Impact Report that were presented in this meeting border on preposterous. The report contends that expanding the terminal will have a *positive* environmental impact, based on calculations that use a static number of flights and passengers. This is not a reasonable supposition, and using it as the basis for this assessment is an overt maneuver to avoid examining what the actual range of potential impacts might be.

While it is true, as Massport claims, that increased passenger and flight traffic will not simply materialize just because of the existence of a new terminal, this argument is a red herring. We surely have every reason to believe that both flight and passenger traffic will increase upon the completion of an expanded terminal, and probably quite substantially. As such, the environmental impact analysis should encapsulate a range of possible increases in both passenger traffic as well as the number of flights. Moreover, the analysis should explore a scenario where the expanded terminal is pushed to its brink. Otherwise, the environmental impact is not being reasonably evaluated: the negative impacts of the proposal are being completely ignored through contortions of logic.

In summary, Massport should be forced to reexamine all of the environmental impacts that their proposed expansion would have, based on plausible projections for increases in both passenger and flight traffic. As a resident of Boston who works in East Boston, I do not see how the public could otherwise make sound judgments about whether or not the proposal's benefits outweigh its costs.

Sincerely,

Daniel E. Ryan

**Czepiga, Page (EEA)**

**From:** S Starrett <starrett@hotmail.com>  
**Sent:** Thursday, August 11, 2016 7:20 AM  
**To:** Czepiga, Page (EEA)  
**Subject:** East Boston resident - Terminal E expansion

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Dear MEPA,

I am a resident of East Boston and feel shafted by this project. Given the length and complexity of Massport's Draft Environmental Impact Report and the fact that this project constitutes the majority of the LARGEST EVER single expansion of Logan Airport, I request that a One Year extension of the comment period be granted to afford community members in this Environmental Justice community a reasonable opportunity to read and analyze the content of this important document.

In lieu of such extension, I submit that the Massachusetts Port Authority should be expected to produce a supplemental document which will satisfy Executive Order 552, signed by Governor Deval Patrick on November 20, 2014 by providing a summary of the DEIR comprised of no more than 10 pages of written explanation.

It is an outrage that the Massport believes they can blind the public with a sheer volume of technical information, while they persist in ignoring important comment provided previously.

Thank you,

Susanna Starrett

**Czepiga, Page (EEA)**

Letter 48

**From:** Kamman Thiru <sililyclantro@gmail.com>  
**Sent:** Friday, September 09, 2016 5:26 PM  
**To:** Beaton, Matthew (EEA); joseph.boncorre@masenate.gov; Adrian Madaro (adrian.madaro@mahouse.gov); Salvatore LaMattina; robert.deleo@mahouse.gov; casework@warren.senate.gov; Lemnick, Jon; Carl Spector; Austin Blackmon; Claudia Correa; Czepiga, Page (EEA)  
**Subject:** Massport Terminal E Expansion Comment

Dear elected/nominated officials with important responsibilities!

Thank you for taking public comments on this important project and for giving every comment its due consideration.

Greetings.

I am a resident of East Boston who happens to have studied climate science and sustainability. I have spent 2 days reading the EA/DEIR pertaining to Massport's Terminal E expansion proposal. Here are my objections:

1. Regarding the "no action" alternative in Chapter 5 of the EA/DEIR: "No action" here means no Terminal E extension. It does not mean not bringing in new air traffic. Why not avoid more air traffic than the current airport is able to handle? Then all the negative environmental impact identified under "no action" (like planes idling on the apron) will not be there, right?

It was said during the hearing on this EA/DEIR by Massport officials at Umana school that Massport has been adding and plans to add new air traffic (by soliciting new business) no matter what (Quote: "It is coming anyway"). Massport does not go through a community process when it does that. It is very primitive thinking that only land use extensions affect people and the environment. We should be beyond that by now.

2. Figure 2-6 in the EA/DEIR presents the estimated passenger count in 2030 at 8 million. [Climate Ready Boston](#) estimates the sea level rise in Boston by 8" to 1' being the high emission scenario, which is where we currently are, and this project does not help). Aren't we putting all those people at increased risk by bringing them to a seaside airport? As I trust you all know, we are at a crucial point in terms of climate change. All levels of government have recognized it. According to Boston's climate action plan, it is #8 in terms of its vulnerability to sea-level rise (not just because the sea is rising, but Boston is sinking to meet the sea mid-way). Besides the "LEED Silver" goal (which is sadly inadequate given the predicament we are in), this project ignores that reality for the most part. We should be seizing every opportunity to turn projects into energy-positive and carbon-negative ones that not only mitigate climate risk but be innovative in reversing it and inspiring more projects along those lines. However, this one appears to be completely uninspired same-old same-old that just wants to somehow get through the process.

If Logan is not able to handle the passenger growth, then say No to the excess. We cannot accommodate ongoing "growth" -- that means ongoing diseases and traffic congestion to this already bottlenecked city. During a time of emergency, this will multiply the problems for all. Should something like Sandy hit Boston, and we are all stranded in East Boston while some of us are dying, you don't want to be saying "How did this happen?" You should already know how. And you should already know you are the ones that should have stopped it. Don't blame anybody else. YOU! You who is reading this right now. And if you want to avoid that, do what you must and stop this project.

3. The alternatives presented in Chapter 3 of the EA/DEIR (Separate core terminal, Concourse extension, Satellite concourse) are all within the narrow scope of the terminal extension options. What about

alternatives for additional road traffic (that this extension which most certainly comes with new additional air traffic)? Massport should join hands with the city and state to explore alternative mass transport possibility if only to reduce the traffic congestion on this narrow island. There should be "Park and Ride" facilities all around the 495 and I95 belt that reduce traffic by putting people on mass transit. That is the kind of alternative that would be innovative and inspiring rather than the same old high emission status quo. Since Massport stands to profit from this move, investing in such increased mass transport mechanisms would only be right, no? And that would also make such projects more feasible for Massport than they otherwise are, right?

I am also curious about something. The city is impacted by this project. But the city's environment department is not involved. Why? Has Massport studied the assessment by Climate Ready Boston? What is Massport's preparedness plan for this new extension when flooding becomes a regular phenomenon?

Even if you see climate destabilization (and its impact particularly on Boston) as a far away cliff, what sense does it make to keep driving towards that cliff? Note that we are on a downward slope towards that cliff and the slope only gets steeper. Projects like this worsen emission, put the community around at all kinds of health risk and ongoing congestion pain, and accelerate our movement towards that cliff. LEED silver is a joke.

This is a highly irresponsible project that may give Massport some increased profits in the short term (and the state some tax money). In the long term however, it is a losing proposal for everybody, including Massport. As for the people in the surrounding communities who already pay with their health, the pain will increase right away and never relent.

Please use your natural curiosity, compassion, and courage to look at this project critically and act per your conscience in the interest of the people. That is your job. If you have any questions about my assessments, I am happy to talk anytime. My number is below.

Remember: No economy without ecology!

--  
[Kannan](#)  
[Easite Fam](#)  
 617-335-2278



**From:** Melissa Tyler <melissa@tummytoys.com>  
**Sent:** Friday, September 09, 2016 10:39 AM  
**To:** Czepiga, Page (EEA)  
**Subject:** Logan airport

Please forgive any typos or errors I am doing this on my cell phone and I am on holiday so it is not my best work.

I am opposed to the airport expansion for many reasons I know that a long letter has gone out to you in regards to what the impact is going to be short and long-term I agree with all of these points that Chris Marchi has put together.

I do not believe the mitigation money is going to fix or heal a community that will be impacted so heavily with noise pollution air pollution traffic and people as well as more commercial construction in an area that cannot handle this kind of impact.

I do not believe that we should sell the future generations a bad product for them to have to deal with. I believe we need to look at how the airport impacts us and will continue to impact us for generations to come.

Logan is currently not running to capacity it is also not working efficiently, as a frequent traveler I see many problems with how the airport is handling international travelers as well as domestic. Granting this expansion will only add to their poor behavior and poor neighbor relations I do not believe that this is needed nor will it make Logan or Boston a better place to visit.

Massport should be focusing on improving what they already own and making Boston a more efficient harbor and a beautiful place to visit rather than abandoned derelict buildings, Piers and marinas falling into the harbor that are an eyesore to the entire world who visit us in Boston.

Sincerely  
Melissa Tyler  
617-571-9031  
[www.tummytoys.com](http://www.tummytoys.com)



September 9, 2016

Secretary Matthew Beaton  
Executive Office of Energy and Environmental Affairs (EEA)  
100 Cambridge Street, Suite 900  
Boston, MA 02114  
ATTN: MEPA Office

Re: DEIR Terminal E Modernization Project  
EEA # 15434

Dear Secretary Beaton:

As an East Boston resident I want to thank you for this opportunity to provide comments on the referenced project and to strongly urge you to require that Massport prepare a Final Environmental Impact Report (FEIR) and perform public outreach that greatly improves on the very poor manner in which they have conducted outreach to date. The current process as managed by Massport has been insufficient to really inform the diverse residents of nearby communities that will be impacted by this project.

Ultimately, I strongly feel that beyond this current process what is needed is a holistic evaluation of Massport's development plans in relation to their effects on environment (air and water) from operations and resulting ground travel to and from the airport, as well as impacts on public health and community development in neighboring communities (including communities under flight paths). This evaluation should be within the context of a plan for air travel development in the region in light of development patterns and anticipated climate changes.

Problems with the Process

Massport released this huge (1,100+ pages) Environmental Assessment/Draft Environmental Impact Report on July 15, precisely when many people are on vacation and not paying attention. Similar to releasing bad news in a Friday afternoon press release, it is very obvious what their intent was. The document itself was massive and dense reading – touching on many different technical areas which were difficult to understand, even for those with some technical background. For those without the time, technical skills or even the language skills (i.e., Spanish-speakers) this document was tremendously daunting and that is assuming that these people would have even known of its existence. The outreach on this was pathetic. At the August 10<sup>th</sup> public presentation (the only presentation after the release of the document) two Chelsea City Councilors showed up to say that they didn't know about the meeting until that

day after a constituent had told them about it. The number of actual residents at the meeting was very low, an indication that the summer release plan was successful at minimizing public participation. An earlier presentation at the ConRac facilities after the release of the ENF actually had a large number of very vocal residents from East Boston and beyond. Clearly this project is a concern to many people, so what changed in the intervening months? I would hazard to guess it was not the public's interest waning, but rather the nature of the "outreach." This is completely violating any interpretation of environmental justice in our government operations. We have been denied procedural justice in this process.

Report Issues

As far as the report goes I take very strong issue with Massport's contention that the demand for greater international capacity is just some external factor they are responding to with no control. They have been ginning up business (as they should) for years. Former Governor Patrick was regularly flying to Asia, Europe and Latin America to promote the state and City and the airport that services them. Clearly there was a plan to increase international flights to Boston, so the demand should be very well understood by Massport officials and not presented like some uncontrollable force. They have been intentionally attracting increased business to their facilities, so how have they planned to deal with it and what are the real health and environmental effects of it all? This report disingenuously dodges these considerations by splitting up the project in smaller and smaller parts. The evaluation shouldn't be of Terminal E so much as the entire planned operations of the airport. The very clear example of this is the desired 5,000 car parking garage (necessitating a lifting of the mandated parking freeze as dictated by the State Implementation Plan). The impact of all those additional cars must be included in this evaluation.

This underscores the need for a transparent presentation and evaluation of Massport's development plans. Air travel is critical to our modern economy and future well-being and yet we continue to invest in an airport that is going to (not may) get flooded on a regular basis in the very near future. For the good of future generations we should be talking about increasing capacity at other regional airports and distributing our air travel facilities in a manner that is efficient and secure.

Request

I would like to respectfully request that you require Massport prepare a Final Environmental Impact Report (FEIR) that looks at the full project, including the parking requirements, and comes clean on the air (and concomitant ground) traffic projections they have used for their business planning. As part of this report they should completely rethink how they do outreach. Stop the p.r. campaign in the local paper and put those resources towards translating materials into Spanish and actually performing outreach to all affected communities (including those in the flight paths) which would mean a mailing list of elected officials in each community, as well as community groups. There should be a translation of the report not only into other languages

but also a condensed version in "plain English" to help with the technical aspects. It would be useful to have an outside firm actually evaluate the claims contained in the report for the community rather than Massport's technical consultants who obviously are presenting a very technical, confusing and one-sided analysis in their client's favor.

There is increasing knowledge of the health impacts of airports on neighboring communities and I do not think the growing conclusions from these studies are going to be very beneficial to Massport's current business model of increased concentration and traffic volume. Additionally, the climate change realities confronting us mean that solar panels and little wind turbines on parking garages are not going to be meaningful adaptations. There needs to be a broader view of our air travel infrastructure (including the ground transportation networks that get people to airports) and a strategic plan for a resilient and sustainable system. That task is not entirely on Massport, but MassDOT and the state government in general. But we need to start that process now and stop wasting time on piecemeal projects designed to slip past community objections in the dead of summer.

Respectfully yours,



John Walkey  
63 Putnam Street #1  
East Boston, MA 02128

**Czepiga, Page (EEA)**

Letter 51

**From:** Mary Ellen Welch <maryellen225@yahoo.com>  
Friday, September 09, 2016 5:16 PM  
**Sent:** Czepiga, Page (EEA)  
**To:** International Terminal E Expansion Plan  
**Subject:**

Dear Secretary Beaton,

As a lifelong resident of East Boston I write this comment letter today. The Terminal E expansion will add more noise and pollution impacts in East Boston. I know that there are already new international flights at Logan and that many more are going to come. I also know that there is strong support in the business and political communities for such growth. However I am concerned about the negative impacts such growth will have on East Boston and other communities under and near the flight paths of the airport.

So I offer some ideas about mitigation for these negative impacts. One idea is to move some of the domestic flights and carriers to other airports in the region. This move could lessen the impacts. Another mitigation idea is to charge a carbon fee for all cars entering the airport. This would help with the carbon emissions and create a pool of money for the airport to use to build more remote parking areas for the 5000 additional spaces projected as necessary because of the expansion plan.

More transit options are necessary to carry travelers to and from the airport. The Red-Blue Connector is a perfect option for those people coming from the Cambridge side of the world. The airport could help to finance this plan by giving funding to another transportation agency, the MBTA. I know there is a provision in the MassDOT regulations which allows this kind of transfer of funds from one transportation agency to another. I'm sure that Stephanie could have a staffer research this provision and share the information with the airport.

Because there is additional noise and air pollution caused by this expansion plan I the airport should do more residential soundproofing which would include air conditioning in the impacted areas. Recent health studies describe serious health effects in close in communities caused by air pollution from the airport.

I raise a question about why the two parts of the expansion proposal are presented in a segmented fashion. The proposals say that the Terminal E expansion needs the lifting of the Logan parking freeze to accommodate an additional 5000 parking spaces. Segmented planning is not good. You don't get the total impact when the plans are offered in a segmented manner.

I suggest that you require a supplemental EIR to address and these issues. Thank you, Secretary Beaton, for your consideration of these important issues.

Sincerely,

Mary Ellen Welch  
225 Webster Street  
East Boston, Massachusetts 02128

> The Town of Hull requests that these modifications to the flight paths (i.e. RNAVs) be done prior to the opening of the modernized Terminal E.

**Dalzell, Stewart**

**From:** Robert Banzett <banzett@earthlink.net>  
**Sent:** Saturday, August 20, 2016 8:52 AM  
**To:** richard.doucette@faa.gov; Page.Czepiega@state.ma.us; Dalzell, Stewart  
**Subject:** Hull Neighbors - Terminal E

To whom it may concern

You have no doubt gotten many copies of the form letter below.

I sit at my home desk at this moment listening to one aircraft after another - the sound from one just fades away as the sound of the next begins to swell. Although sometimes planes fly directly over my house on G St (denied by Massport, but true), my neighbors to the north are even more beset - conversation often stops in their houses - we only have to raise our voices to be heard over the jet noise. The flight curfew is not well enforced. We need to sleep, and we need some peace.

I do travel, and fly from Logan; I know an international airport is vital to Boston. But we must impose some restrictions on the times and flight paths for the health of our citizens.

Robert Banzett PhD, Associate Prof Harvard Med Sch  
78 G St Hull, MA

- > Dear Sirs:
- > The Environmental Assessment / Draft Environmental Impact Report highlights the many tangible and significant benefits that would result from modernizing Terminal E, addressing Logan's ability to handle the forecasted increasing demand in terms of total passengers and, in particular, international passengers. Our concerns are not with the proposed terminal modernization project itself, but with the impact that the resulting increased capacity will have on surrounding communities, and specifically on the Town of Hull. That said, we believe there are viable means to mitigate this impact and we respectfully ask for your engagement in addressing our concerns.
- > Currently, the Town of Hull takes on the noise burden - day and night - from a significant number of flights departing from Runway 22R and Runway 15R and flights arriving on Runway 33L. Planes departing from Runway 22R fly over Hull High School and Lillian M. Jacobs Elementary School. Runway 33L (arrivals) / 15R (departures) is the preferred and most often used runway for overnight flights. The current flight path for 33L/15R brings planes over a large portion of our small town and is already disruptive to sleep time. The Terminal E Modernization Project will result, not only in increased international and overnight flights, but also in the accommodation of Group VI jumbo aircraft, such as the Airbus 380 and Boeing 747-8. This will impose a tremendous additional burden on our community; however, there is a noise mitigation solution.
- > The Town of Hull is a small peninsula uniquely situated between three large bodies of water. Our unique geography provides an opportunity for noise mitigation by adjusting flight paths over water rather than over homes. The implementation of the NextGen Air Transportation System brings with it the ability to fly planes along a flight path with a dramatic increase in precision. We ask that the flight paths (i.e. RNAVs) of planes departing from Runway 22R and Runway 15R be modified to fly significantly farther out over Boston Harbor and at a higher altitude, and that planes arriving onto Runway 33L fly an over-the-harbor flight path with a continuous descent. These flight path modifications will provide a significant reduction of the noise impact on our community.

**Dalzell, Stewart**

**From:** John Brennan <jbrennan@stjoeb Bruins.com>  
**Sent:** Friday, August 19, 2016 11:39 AM  
**To:** Dalzell, Stewart  
**Subject:** AIRPLANE NOISE OVER HULL, MASSACHUSETTS.....JOHN BRENNAN

Dear Mr. Dalzell,  
I hope that you are doing well today.  
Please help to mitigate the airplane noise over the peninsula of Hull. In the years I have been in Hull (since 1948) I have never experienced such distress as to the noise of the past few years. IT IS HORRENDOUS! Our town is a small coastal town, but the quality of life here is being eroded by planes continuously flying overhead even in the wee hours of the morning!! It is quite hard to sleep at night.  
I would imagine that you are familiar with the reports from our town addressing this serious problem and our concerns. Please help us!  
Thank you.

Brennan  
Hill Road  
MA 02045

Sincerely,  
John  
6 Gallops  
Hull,

**From:** richard.doucette@faa.gov  
**To:** Dalzell, Stewart  
**Subject:** FW: Peace and quiet in hull please!!  
**Date:** Tuesday, September 06, 2016 3:20:53 PM

Letter received RE Terminal E. No Content. Just a subject line.

Richard P. Doucette  
Federal Aviation Administration  
1200 District Avenue  
Burlington MA 01803  
781-238-7613

-----Original Message-----  
**From:** Tom Carey [mailto:tomcarey@icloud.com]  
**Sent:** Wednesday, August 17, 2016 9:52 PM  
**To:** Doucette, Richard (FAA); Sally Carey  
**Subject:** Peace and quiet in hull please!!

Sent from my iPhone



**Dalzell, Stewart**

**From:** Sheila Connor <sheila.connor47@gmail.com>  
Thursday, August 18, 2016 8:02 AM  
**To:** Dalzell, Stewart  
**Subject:** Flight Paths over Hull

Stewart Dalzell  
Deputy Director  
Strategic and Business Planning Department  
Massachusetts Port Authority

Dear Mr. Dalzell,

I live at the southern end of Hull, closer to Cohasset than to Boston -where incoming planes begin to turn and line up for the approach to Logan. You would think that the pannes are using Straits Pond as a target to make the turn with an onslaught of roaring as each plane descends lower and lower. I can almost count the bolts that hold them together as they roar by - increasingly much closer together and more often throughout the night and early morning. Please do something about this traffic pattern that is being unfairly determined to fly the whole length of Hull. We need relief.

The Environmental Assessment / Draft Environmental Impact Report highlights the many tangible and significant benefits that would result from modernizing Terminal E, addressing Logan's ability to handle the forecasted increasing demand in terms of total passengers and, in particular, international passengers. Our concerns are not with the proposed terminal modernization project itself, but with the impact that the resulting increased capacity will have on surrounding communities, and specifically on the Town of Hull. That said, we believe there are viable means to mitigate this impact and we respectfully ask for your engagement in addressing our concerns.

Currently, the Town of Hull takes on the noise burden - day and night - from a significant number of flights departing from Runway 22R and Runway 15R and flights arriving on Runway 33L. Planes departing from Runway 22R fly over Hull High School and Lillian M. Jacobs Elementary School. Runway 33L (arrivals) / 15R (departures) is the preferred and most often used runway for overnight flights. The current flight path for 33L/15R brings planes over a large portion of our small town and is already disruptive to sleep time. The Terminal E Modernization Project will result, not only in increased international and overnight flights, but also in the accommodation of Group VI jumbo aircraft, such as the Airbus 380 and Boeing 747-8. This will impose a tremendous additional burden on our community; however, there is a noise mitigation solution.

The Town of Hull is a small peninsula uniquely situated between three large bodies of water. Our unique geography provides an opportunity for noise mitigation by adjusting flight paths over water rather than over homes. The implementation of the NextGen Air Transportation System brings with it the ability to fly planes

along a flight path with a dramatic increase in precision. We ask that the flight paths (i.e. RNAVs) of planes departing from Runway 22R and Runway 15R be modified to fly significantly farther out over Boston Harbor and at a higher altitude, and that planes arriving onto Runway 33L fly an over-the-harbor flight path with a continuous descent. These flight path modifications will provide a significant reduction of the noise impact on our community.

The Town of Hull requests that these modifications to the flight paths (i.e. RNAVs) be done prior to the opening of the modernized Terminal E.

Sincerely,

Sheila Connor, 7 Montana Ave, Hull MA

**Dalzell, Stewart**

**From:** Karoff, Paul <karoff@seas.harvard.edu>  
**Sent:** Friday, August 19, 2016 12:53 PM  
**To:** Page.Czepiga@state.ma.us; richard.doucette@faa.gov; Dalzell, Stewart  
**Subject:** Boston-Logan International Airport 2014 Environmental Data Report (2014 ED) - EEA # 3247

Matthew A. Beaton  
Secretary of Energy and Environmental Affairs  
Executive Office of Energy and Environmental Affairs

Richard Doucette  
Federal Aviation Administration  
New England Region

Stewart Dalzell  
Deputy Director  
Strategic and Business Planning Department  
Massachusetts Port Authority

Dear Sirs:

I have reviewed the Environmental Assessment / Draft Environmental Impact Report regarding the proposed project to modernize Terminal E. I write to express my strong concern about the impact this project could have on the Town of Hull where I reside with my family. In fact, the noise associated with the current volume of flights arriving and departing from Logan Airport – most especially arriving flights using Runway 33L – is, quite simply, unacceptable today.

I appreciate that noise from Logan traffic affects a number of communities. However, in the unique case of Hull, there is a viable step that Massport can and should take to dramatically ameliorate the airplane noise over our homes that relentlessly rattles our windows, interrupts our sleep and frays our nerves. It is really very simple. Hull is a small and densely populated strip of land surrounded by water. Rather than routing planes directly over our roofs, as has become the more frequent practice in recent months and at every hour of the day and night, mandate over-water flight paths. This may disturb the nice lady who is lighthouse keeper at Boston Light on Little Brewster Island, but she's a government employee living in government housing and it's part of her job. Over-water flight paths will greatly improve the quality of life and physical and mental health of the 10,000+ year-round residents of Hull.

Can you please explain to me why, except for instances of unusual and extreme wind conditions, all flights cannot be directed over the water instead of directly over our community? Until Massport adopts such a policy, I will strong oppose the Terminal E project.

Sincerely,

Paul Karoff  
105 Hampton Circle  
Hull, MA 02045

**Czepiga, Page (EEA)**

**From:** Nancy Curtis <nanc.sea@earthlink.net>  
**Sent:** Thursday, August 18, 2016 9:09 AM  
**To:** Czepiga, Page (EEA)  
**Subject:** Modernising Terminal E at Logan will be Hell for Hull

Matthew A. Beaton  
Secretary of Energy and Environmental Affairs  
Executive Office of Energy and Environmental Affairs

Richard Doucette  
Federal Aviation Administration  
New England Region

Stewart Dalzell  
Deputy Director  
Strategic and Business Planning Department  
Massachusetts Port Authority

Dear Sirs,

This morning was a beautiful sunrise as I walked the beach at 5:30 am. There already was a steady stream of planes flying over head. I would normally sleep till 7:00 am but the steady stream of jets over head prevents me from sleeping. I love being out side and I chose to live in Hull because I love the ocean. The peace that I found when I first moved here has been take from me and from all the citizens of Hull. I can not open a window at night to let the cool air in or sit on the porch in the evening because the constant shriek of planes makes it intolerable. I have to keep the television on to enjoy a cup of coffee in the morning rather than open the window or sit on the porch. As I type this I am having difficulty concentrating due to the traffic overhead. I am very sad that I have to consider moving from the town that I love because of plane noise.

The current plane noise should be mitigated by moving the flight paths over the water closer to Boston light. There is no question that the planes go directly over the homes in Hull. I can not imagine how horrible it will be to live in Hull if there is an increase air traffic from a "Modernising of Terminal E".

I understand that this noise can be mitigated with the increased precision that the newly acquired NextGen Air Transportation System provides. Its application can be use for more than air transportation efficiency. → **Please use NextGen Air to reduce the hardship on communities surrounding Logan.** I ask that the flight paths (i.e. RNAVs) of planes departing from Runway 22R and Runway 15R be modified to fly significantly farther out over Boston Harbor and at a higher altitude, and that planes arriving onto Runway 33L fly an over-the-harbor flight path with a continuous descent. These flight path modifications will provide a significant reduction of the noise impact on our community.

Please give this the consideration that you would if your family lived here.

Thank you,  
Nancy Curtis  
78 G st.  
Hull MA. 02045



**Dalzell, Stewart**

**From:** Jeff <jskerr@verizon.net>  
**Sent:** Thursday, August 18, 2016 9:57 AM  
**To:** Page.Czepiga@state.ma.us; richard.doucette@faa.gov; Dalzell, Stewart  
**Cc:** frankkerr@verizon.net; John.Murphy@mail.house.gov  
**Subject:** Modernization of Terminal E

Matthew A. Beaton  
Secretary of Energy and Environmental Affairs Executive Office of Energy and Environmental Affairs

Richard Doucette  
Federal Aviation Administration  
New England Region

Stewart Dalzell  
Deputy Director  
Strategic and Business Planning Department Massachusetts Port Authority

Dear Sirs:  
Regarding the Terminal E project and its detrimental effect on the town of Hull.

I find it unfaithful that the very government that is charged with caring for and securing its people's right to happiness and protecting them from undue burden by the same body, so easily ignores its responsibilities when it comes to money.

As has been demonstrated over and over by big business, when making money is the consideration all rights can and will be trampled and the well being of the population below, from infants to the very elderly, become a twig in the road that your agencies drive over without consideration or with meagerly feigned consideration. The FAA and Massport have decided it is within their power and worse their right to relegate people to 3-4 good hours of sleep per day. You have, while building your coffers, depleted ours, taking value from our homes. We have purchased properties and paid a value that included peace and quiet and in a bait and switch we have been robbed of that value.

The absurdity this has been perpetrated against thousands of citizens is overwhelming. People can't even sell their homes in an effort to escape this torture. To say the average noise levels are under .65 DCB's, a random level created by Massport and the FAA to accommodate their needs, is also ridiculous. We lay down to sleep and yes get 45 seconds of quiet but then someone bangs a drum in our ear. Yes, then we get 45 more seconds and then again a drum is banged in our ears. What low thinking Neanderthal would try to sell this noise assault as sufficiently healthy.

I am a retired Federal law enforcement agent. I was in Waco where we (the US government) used loud noise to disorient and essentially drive occupants of the compound crazy and out. The US has often used noise as torture. See Noriega and other instances. So obviously the US government see noise as a torture. Why has the grey matter in the people who are destroying and willing to destroy lives below gone into hibernation. These people should not be praised they should be jailed. This is a crime.

You can't in any form of decency increase what you are already doing to us. You must abandon this 24/7 idea and take the traffic that is already over our heads and move it out over the lighthouse where it has been since my family moved

here in 1966. This NextGen rail system in the sky may have some potential if the arrogance of government officials, namely FAA and Massport can see that a first attempt is never the last and best attempt. NextGen 1.0 must be followed by 2.0 and 3.0 until this entire problem is made right and people's lives are restored.

In a different time, people would be more than in their right to pick up stones, sticks and what ever they could muster to come for those robbing them of health, wealth and happiness. I wish it was that different time. The anger and disdain the FAA and Massport are creating is palpable and could easily and rationally be lessened with decency, intelligence and the concern for people over money. Of course you will represent money so the real fear is we are doomed to suffer under your shameful decisions..

Currently, the Town of Hull takes on the noise burden - day and night - from a significant number of flights departing from Runway 22R and Runway 15R and flights arriving on Runway 33L. Planes departing from Runway 22R fly over Hull High School and Lillian M. Jacobs Elementary School. Runway 33L (arrivals) / 15R (departures) is the preferred and most often used runway for overnight flights. The current flight path for 33L/15R brings planes over a large portion of our small town and is already disruptive to sleep time. The Terminal E Modernization Project will result, not only in increased international and overnight flights, but also in the accommodation of Group VI jumbo aircraft, such as the Airbus 380 and Boeing 747-8. This will impose a tremendous additional burden on our community; however, there is a noise mitigation solution.

The Town of Hull is a small peninsula uniquely situated between three large bodies of water. Our unique geography provides an opportunity for noise mitigation by adjusting flight paths over water rather than over homes. The implementation of the NextGen Air Transportation System brings with it the ability to fly planes along a flight path with a dramatic increase in precision. We ask that the flight paths (i.e. RNAVs) of planes departing from Runway 22R and Runway 15R be modified to fly significantly farther out over Boston Harbor and at a higher altitude, and that planes arriving onto Runway 33L fly an over-the-harbor flight path with a continuous descent. These flight path modifications will provide a significant reduction of the noise impact on our community.

The Town of Hull requests that these modifications to the flight paths (i.e. RNAVs) be done prior to the opening of the modernized Terminal E.

Jeff Kerr  
617-412-9797

Sent from my iPad



**Czepiga, Page (EEA)**

**From:** Lizbeth Kinkead <LizKinkead@outlook.com>  
**Sent:** Friday, August 19, 2016 8:26 AM  
**To:** Czepiga, Page (EEA); richard.doucette@faa.gov; sdaizell@massport.com  
**Subject:** Extreme Airplane noise over Hull, MA

TO:

Matthew A. Beaton  
 Secretary of Energy and Environmental Affairs  
 Executive Office of Energy and Environmental Affairs

Richard Doucette  
 Federal Aviation Administration  
 New England Region

Stewart Dalzell  
 Deputy Director  
 Strategic and Business Planning Department  
 Massachusetts Port Authority

Dear Sirs:

D-44

Please see this letter below which outlines the concerns of myself and the citizens from Hull who are suffering daily from the extreme airplane noise over our town.

I am in support of this message and believe you must consider the impact of the noise levels which are already intolerable and would cause considerable damage if the noise is to increase. I have filed complaints through your website and have NEVER had anyone respond to me even though this has been requested. I hope that this letter and our concerns get the attention they deserve from your offices.

The Environmental Assessment / Draft Environmental Impact Report highlights the many tangible and significant benefits that would result from modernizing Terminal E, addressing Logan's ability to handle the forecasted increasing demand in terms of total passengers and, in particular, international passengers. Our concerns are not with the proposed terminal modernization project itself, but with the impact that the resulting increased capacity will have on surrounding communities, and specifically on the Town of Hull. That said, we believe there are viable means to mitigate this impact and we respectfully ask for your engagement in addressing our concerns.

Currently, the Town of Hull takes on the noise burden - day and night - from a significant number of flights departing from Runway 22R and Runway 15R and flights arriving on Runway 33L. Planes departing from Runway 22R fly over Hull High School and Lillian M. Jacobs Elementary School. Runway 33L (arrivals) / 15R (departures) is the preferred and most often used runway for overnight flights. The current flight path for 33L/15R brings planes over a large portion of our small town and is already disruptive to sleep time. The Terminal E Modernization Project will result, not only in increased international and overnight

1

flights, but also in the accommodation of Group VI jumbo aircraft, such as the Airbus 380 and Boeing 747-8. This will impose a tremendous additional burden on our community; however, there is a noise mitigation solution.

The Town of Hull is a small peninsula uniquely situated between three large bodies of water. Our unique geography provides an opportunity for noise mitigation by adjusting flight paths over water rather than over homes. The implementation of the NextGen Air Transportation System brings with it the ability to fly planes along a flight path with a dramatic increase in precision. We ask that the flight paths (i.e. RNAVs) of planes departing from Runway 22R and Runway 15R be modified to fly significantly farther out over Boston Harbor and at a higher altitude, and that planes arriving onto Runway 33L fly an over-the-harbor flight path with a continuous descent. These flight path modifications will provide a significant reduction of the noise impact on our community.

The Town of Hull requests that these modifications to the flight paths (i.e. RNAVs) be done prior to the opening of the modernized Terminal E.

Thank you for your serious consideration of the well-being of Hull citizens.  
 Liz Kinkead

Liz Kinkead  
 28 Millford Street  
 Hull, MA 02045-2011  
 e: [LizKinkead@Outlook.com](mailto:LizKinkead@Outlook.com)  
 m: 781.534.5789

2

**Czepiga, Page (EEA)**

**From:** Chris Maher <christymaher@yahoo.com>  
**To:** Thursday, August 18, 2016 6:49 PM  
**Subject:** Czepiga, Page (EEA)  
Jasmaher, Donna Naughton  
Environmental Assessment / Draft Environmental Impact Report / Impact on Hull MA

Matthew A. Beaton  
Secretary of Energy and Environmental Affairs  
Executive Office of Energy and Environmental Affairs

Richard Doucette  
Federal Aviation Administration  
New England Region

Stewart Datzell  
Deputy Director  
Strategic and Business Planning Department  
Massachusetts Port Authority

Dear Sirs:

I fully agree with all that is written below. Since we bought our house in Hull almost 20 years ago, the noise from low flying aircraft has become much worse. I can not imagine the impact of an expansion of Logan airport in terms of the number of flights or increased hours! The noise has been both bothersome and maddening.

When we invested everything we had to move to Hull and start a family, we never expected that our future would include feeling like we were living on the edge of a runway! The noise is so loud that often, while talking in the yard, we have to ask our neighbors and guests to wait until the plane flies over to hear what they are saying. The planes wake us up late at night and in the early morning. We added a beautiful room in our attic with the intention of turning it into a master bedroom suite when our kids got older but we have chosen not to move up there because it is so loud in the summer with the windows open. The noise is loud and constant. I am hopeful that your plans will include a strategy remedy the noise that has had a negative impact on our otherwise sound investment in our community. I live between the Jacobs Elementary School and Hull High School and as a teacher and a parent I can not imagine the interference these low flying planes have in the classroom! I fully agree with and endorse the letter below to modify the flight plans over Hull as part of the Terminal E Modernization Project.

Sincerely,  
Chris Maher  
69 Main Street,  
Hull MA 02045

The Environmental Assessment / Draft Environmental Impact Report highlights the many tangible and significant benefits that would result from modernizing Terminal E, addressing Logan's ability to handle the forecasted increasing demand in terms of total passengers and, in particular, international passengers. Our concerns are not

with the proposed terminal modernization project itself, but with the impact that the resulting increased capacity will have on surrounding communities, and specifically on the Town of Hull. That said, we believe there are viable means to mitigate this impact and we respectfully ask for your engagement in addressing our concerns.

Currently, the Town of Hull takes on the noise burden - day and night - from a significant number of flights departing from Runway 22R and Runway 15R and flights arriving on Runway 33L. Planes departing from Runway 22R fly over Hull High School and Lillian M. Jacobs Elementary School. Runway 33L (arrivals) / 15R (departures) is the preferred and most often used runway for overnight flights. The current flight path for 33L/15R brings planes over a large portion of our small town and is already disruptive to sleep time. The Terminal E Modernization Project will result, not only in increased international and overnight flights, but also in the accommodation of Group VI jumbo aircraft, such as the Airbus 380 and Boeing 747-8. This will impose a tremendous additional burden on our community; however, there is a noise mitigation solution.

The Town of Hull is a small peninsula uniquely situated between three large bodies of water. Our unique geography provides an opportunity for noise mitigation by adjusting flight paths over water rather than over homes. The implementation of the NextGen Air Transportation System brings with it the ability to fly planes along a flight path with a dramatic increase in precision. We ask that the flight paths (i.e. RNAVs) of planes departing from Runway 22R and Runway 15R be modified to fly significantly farther out over Boston Harbor and at a higher altitude, and that planes arriving onto Runway 33L fly an over-the-harbor flight path with a continuous descent. These flight path modifications will provide a significant reduction of the noise impact on our community.

The Town of Hull requests that these modifications to the flight paths (i.e. RNAVs) be done prior to the opening of the modernized Terminal E.

**Dalzell, Stewart**

**From:** Kathie and Bill McCarthy <shamrock1739@msn.com>  
**Sent:** Friday, August 19, 2016 4:40 PM  
**To:** Page.Czepiga@state.ma.us; richard.doucette@faa.gov; Dalzell, Stewart  
**Subject:** Terminal E Modernization Project

Dear Mr. Matthew A. Beaton, Mr. Richard Doucette and Mr. Stewart Dalzel:

We own a summer house on Clifton Ave (Sunset Point area of Hull) in Hull, Ma. On a regular basis, planes fly directly over our house. The noise is earth shattering ! The house vibrates they are so close. This summer has been the worst yet. Once the planes start, they continue every couple of minutes, sometimes for hours at a time. It is virtually impossible to carry on a conversation while sitting on our porch, or to sleep at night. As time goes on, the property values in Hull will decrease. On a day when the planes are not crossing directly over our house, Hull is a nice, peaceful community. That is the reason we purchased this summer home, to relax on nice long weekends. Unfortunately, we have not been able to do that at all this year.

Hull is a narrow peninsula. However, there are peninsulas off the "main peninsula". Clifton Ave. is one of those peninsulas off the main portion of town. The flight paths need to be changed so that the arriving and departing planes fly over water, and not over any portion of the Town of Hull. Slight modifications to the flight paths would accomplish that. Since Hull is rather narrow, I am referring to slight modifications that would not send the planes way off course, and at the same time would not wreck havoc with the lives of those of us who live or work in Hull. I realize the importance of the Terminal E Modernization Project. However, with the proper planning and consideration for Hull, I believe your project can be successful and at the same time, give us our lives back in Hull. The only "industry" in Hull is the beach. If beachgoers stop coming to Hull for the day or to vacation for several days at a time, the town will suffer greatly economically. No one wants to go to the beach and have planes flying overhead all day.

Thank you for your consideration.

William G. McCarthy  
13 Clifton Ave.  
Hull, Ma 02045  
781-925-1295

**Dalzell, Stewart**

**From:** Neill K. Ray <nkray@comcast.net>  
Friday, August 19, 2016 2:59 PM  
**To:** Page.Czepiga@state.ma.us; richard.doucette@faa.gov; Dalzell, Stewart  
**Subject:** COMMENT: LOGAN EXPANSION

Matthew A. Beaton (% Page Czepiga), Secretary of Energy and Environmental Affairs, Executive Office of Energy and Environmental Affairs

Richard Doucette, Federal Aviation Administration, New England Region

Stewart Dalzell, Deputy Director, Strategic and Business Planning Department, Massachusetts Port Authority

I am writing about the proposed Terminal E Modernization Project at Logan Airport. Although I understand the need to upgrade and expand the international facilities at the airport, I am very concerned that no consideration has been given to the noise impact of increased flights on my community.

Currently, the residents of Hull are subjected to the noise of takeoffs and landings, literally day and night: flights departing from Runway 22R and Runway 15R and flights arriving on Runway 33L. The flights departing from Runway 22R fly over, and cause disruptions at, two schools -- Hull High School and Lillian M. Jacobs Elementary School -- as well as disturbing neighborhoods and businesses. And Runway 33L (arrivals)/15R (departures) is the preferred and most often used runway for overnight flights. These flights are directly over my house and many, many other houses in our community (and beyond), making it impossible to sleep through the night. I won't go into the consequences of this, but they are both significant and stressful.

The Terminal E Project will increase the hardships of air traffic noise over Hull by increasing international and overnight flights, as well as adding Group VI jumbo aircraft, such as the Airbus 380 and Boeing 747-8, to the list of aircraft going in and out.

For this reason, I ask that you consider -- and implement -- a noise mitigation solution as part of the Terminal E plans. Hull is a small peninsula jutting into Boston's outer harbor, so this geography allows for a relatively straightforward noise mitigation solution. We ask that the flight paths (RNAVs) of planes departing from Runway 22R and Runway 15R be modified to fly significantly farther out over Boston Harbor and at a higher altitude, and that planes arriving onto Runway 33L fly an over-the-harbor flight path with a continuous descent. These flight path modifications will provide a significant reduction of the noise impact on our community without shifting the noise burden to other communities. It is a win-win solution.

I ask that these changes in flight paths be implemented before the Terminal E project proceeds.

Thank you.

Best wishes,

Neill K. Ray  
87 Highland Avenue  
Hull, MA 02045

T (781) 925-5337

USPS cc:

Congressman Stephen Lynch, 8th District of Massachusetts

Senator Elizabeth Warren

Senator Ed Markey



**Czepiga, Page (EEA)**

**From:** Cindy L. Christiansen <clcmilton@gmail.com>  
**Sent:** Friday, September 09, 2016 11:39 PM  
**To:** Czepiga, Page (EEA)  
**Subject:** Fwd: Comment on Environmental Assessment/Draft Environmental Impact Report for the Boston Logan airport Terminal E Modernization

got a bounce back on your email address Page. here is the message again

----- Forwarded message -----

**From:** **Cindy L. Christiansen** <clcmilton@gmail.com>  
**Date:** Fri, Sep 9, 2016 at 11:33 PM  
**Subject:** Re: Comment on Environmental Assessment/Draft Environmental Impact Report for the Boston Logan airport Terminal E Modernization  
**To:** "paige.czepiga@state.ma.us" <paige.czepiga@state.ma.us>, "richard.doucette@faa.gov" <richard.doucette@faa.gov>, "sdazell@massport.com" <sdazell@massport.com>  
**Cc:** David Burnes <dburnes@townofmilton.org>, "Kathleen M. Conlon" <kconlon@townofmilton.org>, "Thomas J. Hurley" <thurley@townofmilton.org>, "Bill Driscoll Jr." <bdriscolljr@gmail.com>, Walter Timilty <walter.timilty@mahouse.gov>, Representative Stephen Lynch <ma08lima-113@mail.house.gov>, "D'Angelo, Jon (Warren)" <jon\_d'angelo@warren.senate.gov>, John <john.murphy@mail.house.gov>, Bob Fowkes <bob.fowkes@mail.house.gov>, [maura.healy@state.ma.us](mailto:maura.healy@state.ma.us), [Diego Huezo-Rosales <Diego\\_huezo-rosales@markkey.senate.gov>](mailto:Diego.Huezo-Rosales@markkey.senate.gov)

Secretary of Energy and Environmental Affairs  
 Executive Office of Energy and Environmental Affairs

Attn: MEPA Office  
 Page Czepiga, EEA No. 15434  
 100 Cambridge Street, Suite 900  
 Boston, MA 02114

Mr. Richard Doucette  
 Federal Aviation Administration  
 New England Region  
 1200 District Avenue  
 Burlington, MA. 01803

Mr. Curt Spalding, Regional Administrator  
 Environmental Protection Agency  
 5 Post Office Square - Suite 100  
 Boston, MA 02109-3912

September 9, 2016

Dear Ms. Czepiga, Mr. Doucette and Mr. Spalding:

I received notification of the public comment period for the Environmental Assessment/Draft Environmental Impact Report for the Boston Logan airport Terminal E Modernization. I thank you for the opportunity to comment. I am Milton's Logan and Massport CAC representative. I oppose any plans for modernization of Terminal E for many reasons, this one being the number one:

**Logan/Massport is already destroying parts of Milton, making it uninhabitable by the inhumane and tortuous number of planes it sends over portions of the town.**

There were over 50,000 low-flying, polluting jet arrivals over the same homes in Milton during the last 12 months. Logan and Massport have not been good neighbors, but instead have consumed the life and its quality from those citizens under the runway 4R arrival path. There is, on average, a low flying jet every 10 minutes of every hour of every day of the year over these same homes, families and schools. It is intolerable and inhumane.

The Modernization project will cause even more arrivals over Milton - that is guaranteed. Already the FAA is using the 4R arrival runway to land planes when winds are calm, mild, and strong and from the NW, N, NE, ENE, E, and SE - more than half of all possible wind directions. Over the last 12 months Logan has had an 8% increase in operations compared to the previous 12 months. HOWEVER, the increase to 4R arrivals is 15% - almost double the increase overall. And, the runway was overused even before this trending increase occurred.

You cannot send more planes over these same people and the Modernization project will cause that to happen. Some of these jets will be as big as cruise ships and will fly at 1700 feet over homes, lives, schools, playgrounds - it simply is not right.

Logan is cost shifting - shifting the costs of expansions into the daily lives of those it proclaims benefit from having an international airport. Some do benefit, but we do not. With Logan's current runway infrastructure it is incapable of fairly dispersing the operations over ALL communities that benefit from its existence. It is unjust and unfair to expect Milton to shoulder such a disproportionate amount of the operations.

Until Massport can stop the consumption and greed that affects the quality of life and health of people on the ground, especially those under the already overused 4R arrival. it should not be allowed to expand, which is exactly what this project will allow it to do.

There is solid evidence that low flying jet arrivals substantially increase the number of ultrafine particles as much as 10 miles from runway ends.

**MEPA should require pollution studies along the overused 4R flightpath, especially before declaring a finding of no-significant impact and allowing the project to continue.**

Please stop this expansion; please stop the cost shifting; please do the right thing.

Cindy L. Christiansen

+++++  
Cindy L. Christiansen, Ph.D.  
50 Calloway Street  
Milton, MA 02186  
(617) 322-9323  
Town Meeting Member Pet. 7  
Massport and Logan CAC Representative, Milton

**Dalzell, Stewart**

**From:** Patricia Hynes <hynes57@hotmail.com>  
**Sent:** Thursday, August 18, 2016 10:39 AM  
**To:** Page.Czepiga@state.ma.us; richard.doucette@faa.gov; Dalzell, Stewart  
**Subject:** Logan's Terminal E Expansion

Dear Sirs,  
I am writing to oppose the Expansion of Terminal E because I am upset over the planes that typically wake me up on most days a few minutes after 5 AM. The planes continue throughout the day and end about midnight. At times, the planes wake me up during the night and I am unable to get back to sleep. I feel lethargic during the day as a result of the lack of sleep that is caused by the planes. I am highly concerned about the noise and air pollution caused by the multitude of planes over Milton. My 96 year old mother also lives in Milton and the planes going to Logan are so low that the side of her house is illuminated and her motion sensor lights go on due to the low flying planes. I am concerned that the modernization of Terminal E will unfortunately cause additional planes to fly over Milton and at the present time Milton has an overabundance of planes. Please support Milton on this. Thank you.

Sincerely,  
Patricia Hynes

**Dalzell, Stewart**

Letter 65

Letter 66

**From:** Andy Schmidt <aschmidt.email@gmail.com>  
**Sent:** Friday, August 19, 2016 11:34 PM  
**To:** richard.doucette@faa.gov; patge.czepiga@state.ma.us  
**Cc:** Dalzell, Stewart  
**Subject:** Comments on and Objections to the Terminal E Modernization Project EA/Draft EIR

To whom it may concern,

As we enter the **16th straight hour** of air traffic and noise over the Town of Milton for reasons that are laughable at best given that wind conditions have indicated Runway 15R and/or L should be used instead of Runway 4R (which passes directly over Milton) for the vast majority of the day, I reject and oppose the plans to "modernize" Terminal E for the following reasons:

1. Milton has suffered both greatly and disproportionately under the FAA's NextGen program, which, through the introduction of RNA Vs has concentrated flight paths and airplane noise over neighborhoods like mine, resulting in as many as **400** flights passing over our homes **each day**. Per the terms used in the Draft EIR (DEIR), "modernization" simply means "expansion", ensuring that more, and larger, planes will pass over our homes, schools, and parks for even **more** hours of the day. Given the current level of disruption to our lives, and our sleep patterns, this is unacceptable.
2. Milton has filed more than 10,000 noise complaints since January 1 - more than any other town in the Commonwealth, and a full 55% of the total number of reports filed for the year. Massport and the FAA have categorically failed to reduce airplane noise in communities like Milton, instead hiding behind finger pointing and willful withholding of information that could be used to drive decisions and policies to improve the lives of residents. Given this ongoing pattern of behavior, I do not see how such an expansion would make the issue better. If anything, it will make the situation worse, resulting in an **increase** in the number of noise complaints.
3. The report and approach used to create this report suffers from logical dissonance, stating on the one hand that Logan is one of the "fastest growing US airports", while stating on the other that it analyzed the impacts of the expansion from the standpoint that there would be "no increase in aircraft operations or passenger activity levels", a categorical impossibility given the recent trends - or for that matter - reality, making the conclusions patently absurd.
4. The report seems to examine only the noise and pollution created by the *construction* of the terminal, not the actual *use* of it. For this report, or any policies or decisions driven by it, to be credible, the report *must* take into account both the cumulative impact of the anticipated increase in airplane noise (which larger planes will not solve), and the anticipated rise in air pollution into account.
5. The outcomes from the modernization of Terminal E benefit three groups: Massport, the airlines, and airline passengers. Nowhere does the quality of life in the communities surrounding Logan enter into the analysis. This is again unacceptable, both as a matter of policy and as a matter of equity.

Given the significant, and arguably fatal, flaws in the report, its methodology, and its self-serving conclusions, I urge that no Finding of No Significant Impact (FONSI) be issued unless and until the above issues are addressed, **and** Massport and the FAA take credible and effective steps to reduce the airplane noise and pollution problems that are already being experienced by the people of Milton.

Sincerely,

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**Czepiga, Page (EEA)**

**From:** Julia Collins <juliacoll@gmail.com>  
**Sent:** Wednesday, September 14, 2016 1:40 PM  
**To:** Czepiga, Page (EEA)  
**Subject:** International Terminal E Expansion Plan

Dear Secretary Beaton,

As you consider the expansion plan, I urge you to consider its negative impact on the public health and the environment in the communities surrounding the airport. I'm a current resident of Winthrop and former resident of East Boston and as such live everyday with the air pollution, noise, negative impact on property values, and most importantly the as yet unknown impacts on my health and that of my family. I'm very concerned about the addition of 5,000 parking spaces and the increased number of daily flights. I don't think the purported economic benefits outweigh the long-term costs related climate change and public health. Smart investment in environmentally-sound transit should be the way forward for Eastern Massachusetts with the current and as yet unknown impacts of climate change on life in the region. Additionally, residents were not given adequate information about the project or sufficient time to respond to this issue.

Instead, I hope you will advocate for the following alternatives to the current expansion plan:

- a thorough study of the environmental and health impacts,
- create more public transit options to decrease the car/vehicle trips to the airport (such as the Red-Blue-Line Connector) and thereby decrease emissions, traffic congestion, etc.,
- move some of the domestic flights and carriers to other airports in the region,
- charge a carbon fee for all cars entering the airport to collect funds for environmental mitigation projects, and
- require a supplemental EIR to address these issues.

You have had a strong record of protecting the environment and public health so I'm sure you'll do the right thing! Thank you for your consideration of these important issues.

Sincerely,

Julia Howington  
 56 Lowell Road  
 Winthrop, MA 02152

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RECEIVED

SEP 13 2015

MEPA

Mr. Matthew Beaton  
Executive Office of Energy and Environmental Affairs  
Attn: Page Czepiga, EEA No. 15434100  
Cambridge Street Suite 900  
Boston, MA 02114

Dear Secretary Beaton,

As a resident of the highly impacted community of Winthrop, I am AGGRESSIVELY OPPOSED TO ANY EXPANSION OF AIRPORT IMPACTS at Logan. I feel any increase in overnight flights is unacceptable. Local communities deserve to sleep. Traffic is already clogged coming in and out of the airport. Any additional traffic generated by the 43% increase in passengers will obviously compound this problem. I feel not enough is being done to encourage use of regional airports. The blue line/red line MBTA connection must be completed as well as significant upgrades to the Silver Line.

This is a letter expressing my concerns about Terminal E expansion at Logan Airport. This expansion has negative impacts on my community and continues serious procedural injustices within the MEPA evaluation process.

The arguments incorporated in the MEPA comment structure, that 1) airport demand is not influenced by airport capacity and 2) increased impacts are therefore not a byproduct of airport growth, place undue burden on impacted communities to prove fundamental theories of supply and demand. They advance a false assumption that growth is unstoppable and they displace accountability for transportation outcomes from Massport, to the market.

In fact, Massport can bend the trajectory of growth at Logan by promoting environmentally responsible plans. This has been demonstrated by the success of efforts in the early 1990's to reduce airport impacts by regionalizing the New England airspace resulting in gains of 17% of New England Passenger market share at TF Green and Manchester-Boston AND MIRRO IMAGE DECLINES IN BOSTON LOGAN MARKET SHARE between 1994 and 2004.

As a resident who is keenly aware of the public health crises which the Logan Airport Health Study of 2014 and scholarly research studies attribute directly to Logan airport, I insist that the State reject

Massport's self-serving and unhelpful arguments and that:

1. The MEPA review process be extended, requiring a full Final Environmental Impact Report in which impacted communities receive responses to their concerns about the increases in air and noise pollution; 2. Massport comply with all MassDOT procedures to improve engagement within impacted Environmental Justice communities. Specifically, the Port Authority must be directed to produce a clear, transparent and fair process by:

- a. Drafting a Summary EIR Document within the Final EIR of no more than 20 pages explaining the environmental impact information to inform residents about the burdens this project will cause
  - b. Writing this Summary Document in an understandable manner without unnecessarily technical language;
  - c. Translating this Summary Document into Spanish and distributing it widely as part of an extended community presentation and discussion effort, which is respectful of family schedules and designed to achieve high levels of engagement and public comment
3. Massport conduct an expanded study of opportunities to offset Logan airport growth by diverting flights through a regional air space plan which includes all other viable airports;
4. Massport should strengthen and construct the project's mass transit commitments in the initial construction phase and as a prerequisite to Terminal expansion.

The following are facts, which I am requesting that you incorporate into your evaluation of this damaging project:

- The expanded Terminal will handle more than the entire TF Green, Worcester, Hanscom, Pease, Portland, Manchester-Boston and Bradley Airports do today combined, ALL BY ITSELF. Airport expansion plans call for a 43% increase in passengers, equal to adding three times the total passenger volume of all airports in New England - Section 7, Page 21 of the 2011 ESPR states that flight operations will increase by 30% by 2030. This increase will cause corresponding increases in noise and pollution. Section 7, Page 21 of the 2011 ESPR states that NOx related to airport expansions will increase by 24% by 2030. The MBTA pedestrian connection will be built in the second phase of the project and completed by 2028, put off for 12 years. This pedestrian connection would require travelers to travel over 3,300 feet on foot, compared to an average 250 feet walk

to cell phone and short term parking lots and 50 feet to the passenger car pick-up curbside, the mode Massport is making its biggest investment: Table 5-21 of the DEIR shows that curbside pick-up areas at Terminal E will be expanded by 461%. Section 5, Page 14 of the DEIR states that there will be 28 more night flights (between 10:00 pm and 5:00 am) every night using the long runways pointing over Eagle Hill, Chelsea, Winthrop, South Boston, Revere, Somerville and dozens of other communities. If the volume of added flights exceed the capacity of the Head to Head noise abatement-based configuration used at Logan during overnight hours, 85 decibel airport over flights will occur as often as every 15 minutes throughout the night causing massive sleep interruption in our hard working neighborhoods. With 6.1 million additional passengers since 2009, Logan has already grown by more than the volume of TF Green and Manchester- Boston combined (5.7 million) over the past few years. A 2013 Air Passenger Survey revealed that only 28 percent of air passengers use HOV/shared-ride modes to access the Airport. If this trend is not improved upon, the next 10 million passengers Massport encourages to fly into Logan will produce an additional 7.2 million vehicle trips to and through our communities. Noise is on the rise. 2014 noise contours were larger in most areas around the Airport than they were in 2013. Pollution is up. Total VOC, NOx and PM10/PM2.5 emissions went up 2014 compared to 2013. Average daily traffic at Logan has increased 13% since 2010. Aircraft sources of particulate pollution increased 31% over the four years reported between 2010 and 2014.

Thank you for this chance to comment.

Mary Mitchell  
121 Bartlett Rd.  
Winthrop, Ma, 02152



September 8, 2016

Secretary Matthew Beaton  
Executive Office of Energy and Environmental Affairs  
MEPA Office  
EEA No. 15434  
100 Cambridge Street, Suite 900  
Boston, MA 02114

Mr. Richard Doucette  
Federal Aviation Administration  
New England Region  
1200 District Avenue  
Burlington, MA 01803

RE: Terminal E Modernization Project (EEA #15434) at Boston Logan International Airport  
Environmental Assessment

Dear Sirs:

Last Tuesday, I went over to City Hall in Chelsea and procured a copy of the DEIR, Volumes I and II. I would like to tell you that at the outset, most of it was too technical for me to digest. After all, it was written mostly by VHB, a company that is known for writing DEIRs for companies. So, I am submitting my comments based mostly from personal experience. The deafening noise of planes over my property, traffic that has been on the increase with the result of incurring more hazardous waste, and pollution, which is a corollary of the waste that is associated with vehicles travelling our city streets as well as the Tobin Bridge.

I am a resident of Admiral's Hill and live close to the top of this Hill. As such, the planes overhead are closer than say residents' homes on the middle to lower parts of the Hill. I am wondering why it is that the planes need to be so close to our property? I understand that some of them are still ascending; couldn't their path not be on the upper part of the Hill, and instead, fly over Mary O'Malley Park or better yet, the Mystic River? To my knowledge, limited at best, I wonder whether there are houseboats on the Mystic River that would be at risk from the noise or vibrations that the planes cause?

The noise is simply deafening; one cannot have a conversation over the telephone nor to a person sitting adjacent. Not possible to hear; one must simply stop talking while the plane is overhead. Much like being on someone's patio in Winthrop and waiting for the plane above to pass over. And the planes come, East to West, either every six minutes or every 8 minutes. I documented last Thursday's (September 1, 2016) flight path after a late night conversation which I had to stop while the planes were overhead. I started writing down the times the planes were overhead: 11:42 p; 11:50 p; 11:56p, midnight, then they stopped; but not so fast, on September 2, 2016 the planes resumed at 12:50 a and 12:54 a. Then they stopped for a while (or at least I went to bed by that time). Granted it is summer, and the windows are open for some fresh air, so it is exceedingly uncomfortable to hear the planes. I guess something happens to make the noise worse at night, as most of the other noises are missing. I am sure you have some fancy pictures and figures and tables used by MassPort in their bid to get what they want, an encroaching expansion of the airport to accommodate business travelers, at a resultant cost to the neighborhoods.

And speaking of accommodation, where is the accommodation to the neighbors of this airport? We are told that the footprint is not going to increase; they are just planning on using 3

Secretary Matthew Beaton  
Mr. Richard Doucette  
September 8, 2016  
Page 2

gates that they already have permission to use (but up until now have chosen not to) and have decided they now need four new gates so that the planes can fuel by the gates and not disburse more pollution. Yet, we all know, that planes are serviced by fueling; they need to "gas up", we see the round shapes of all the oil storage sheds all along Route 1A, as well as along the waterfront of Chelsea and East Boston. When the wind blows in a certain direction, people in Chelsea can smell the oil. No exaggeration. I am assuming, however, that the executives of MassPort do not live in the surrounding areas of the airport, e.g., Revere, Chelsea or East Boston...so they never get to smell the air filled with oil on a breezy evening.

Every so often there is a hue and cry of environmental justice; I would dearly like to know where the environmental justice is in Chelsea. Chelsea residents have some of the highest incidences of COPD and asthma problems. So, the expansion of Terminal E is going to bring a lot more traffic, a lot more pollution and a lot more of noise. That is common sense.

I used to take the bus to get into Boston on a daily basis; when the boats (tankers) used to motor up the Mystic River on their way in the direction to the Edison Plant, the bridge went down, and the automobiles, trucks and buses would stop on the bridge from upwards of 30 or so minutes before the drawbridge would go down. This is the newer bridge closer to the airport, that the state spent a lot of money to have built. It is unclear to me why this bridge takes longer to lower and raise a bridge than the older bridge by Pearl Street that takes a lot quicker. Nevertheless, there is a lot of pollution while the cars are idling waiting for the boat traffic to clear. So, too, the traffic will increase going into Logan airport; whether it is the pollution produced by automobiles, trucks, buses, traffic has accidents and accidents cause the flow of vehicles to come to either a stop or proceed at a snail pace. One only needs to put on any of the radio stations that produce the traffic reports

So, there was a part about alternatives to the expansion. I have an alternative. We now use the internet a lot more than in the past; why not have these business people conduct their business over skype or some type of video conferencing. That would certainly save money, time, traffic, pollution and noise. And, further, one wouldn't have to spend all that time and money on producing over a thousand pages of technical stuff that only engineers and technical people can decipher!!

I urge you to use your common sense. An expansion with more gates in a capital of a state is not the way to go. Is Boston the only place to have an international airport? Boston serves as the capital of Massachusetts; its government is a short drive away (unless it is a Friday afternoon or a Monday morning or during rush hour) of course. In this time of Homeland Security, did they weigh in as to their thoughts on this expansion?

Yes, there are traffic models, and pollution models, but that is the point. They are models; not the reality. Every time one goes to a zoning board meeting or a planning board meeting, the developer gets up and speaks with a document in hand. The document is the traffic model where the developer tries to convince the board that with an influx of a 325 unit building, the traffic

Secretary Matthew Beaton  
Mr. Richard Doucette  
September 8, 2016  
Page 3

will be minimal. Yeah, right. In a perfect world, models provide a lot of information; guess what, we don't live in a perfect world (yet).

One of the maps I have read shows that Chelsea registered 65.7 on a DB map, but Chelsea didn't come within the marked boundaries of a flight path (if I am read the map correctly)...so Chelsea as a whole has a high reading of noise. I wonder where the reading took place and I wonder what the reading would have registered had the reading taken place on the top of Admiral's Hill....

Questions and more questions. I am writing this to you as a citizen of the city of Chelsea. I pay my taxes which in part probably pays MassPort part of its revenue...but I pay more than money; I am the recipient of the bad parts, the pollution, the hazardous waste, the traffic and mostly, the noise which is deafening to say the least.

I urge you to keep the gates down to a bare minimum if you do vote to accept their DEIR, which I gather, will soon become an EIR. I urge you to make sure that the traffic by vehicles are kept to a bare minimum. I urge you to effectuate whatever is possible to keep the many more flights that are going to increase to use a path that produces a lot less of the deafening noise that is now in place. I wonder, does this noise also cause vibrations?

Sincerely,

*Mimi L. Callum*

Mimi L. Callum  
28 Boatwains Way  
Chelsea, MA 02150

cc: Mr. Stewart Dalzell  
Massachusetts Port Authority  
One Harborside Drive  
Boston, MA 02128  
email: sdalzell@massport.com

## Form Letter A

**From:**  
**To:**  
**Subject:**

Czepiga, Paige (EEA)  
Fw: Comment on Environmental Assessment/Draft Environmental Impact Report for the  
Boston Logan airport Terminal E Modernization

----- Forwarded Message -----

**From:** "paige.czepiga@state.ma.us" <paige.czepiga@state.ma.us>; "richard.doucette@faa.gov" <richard.doucette@faa.gov>; "sdazei@massport.com" <sdazei@massport.com>  
**Cc:** David Burnes <dburnes@townofmilton.org>; Kathleen M. Conlon <kconlon@townofmilton.org>; Thomas J. Hurley <thurley@townofmilton.org>; Bill Driscoll Jr. <bdriscolljr@gmail.com>; Walter Timilty <watter.timilty@mahouse.gov>; Representative Stephen Lynch <ma08lma-113@mail.house.gov>  
**Sent:** Thursday, September 8, 2016 11:53 PM  
**Subject:** Comment on Environmental Assessment/Draft Environmental Impact Report for the Boston Logan airport Terminal E Modernization

Secretary of Energy and Environmental Affairs  
Executive Office of Energy and Environmental Affairs

Attn: MEPA Office  
Page Czepiga, EEA No. 15434  
100 Cambridge Street, Suite 900  
Boston, MA 02114

Mr. Richard Doucette  
Federal Aviation Administration  
New England Region  
1200 District Avenue  
Burlington, MA. 01803  
Mr. Curt Spalding, Regional Administrator  
Environmental Protection Agency  
5 Post Office Square - Suite 100  
Boston, MA 02109-3912

September 8, 2016

Dear Ms. Czepiga, Mr. Doucette and Mr. Spalding,

I received notification of the public comment period for the Environmental Assessment/Draft Environmental Impact Report for the Boston Logan airport Terminal E Modernization. I thank you for the opportunity to comment. I am a father of three small children and have lived in East Milton for over 12 years. I oppose any plans for modernization of Terminal E for the following reasons:

1) Modernizing the terminal is an expansion of the terminal. This means more planes guided in and out of the airport by NextGen. Milton has been swarmed by planes since NextGen came online. For instance, for over five days now there have been planes overhead every one to two minutes repeatedly over the same homes under the computer-chosen flight path at altitudes below 2,000 feet from 5am until 1AM thanks to NextGen. This is not at all unusual. I have lived here for 12 years and it was never like this before NextGen. This expansion will only create

more air traffic noise and pollution over our homes. NextGen has already caused significant deterioration of our quality of life and health due to air and noise pollution, and FAA obstinately refuses to address these concerns. Two primary schools in Milton are directly under the NextGen flight path with 400 plus planes passing overhead at less than 2,000 feet spewing fine particulates over students and residents. I am opposed to any airport plans that will result in increased air traffic in the skies over these schools and my home, and that is exactly what will happen if this plan is approved. International flight arrivals at all hours of the day and night are already a very serious problem for my town; we cannot tolerate anymore. Further, approval of this plan will pave the way for other FAA-planned expansions that are in the works, increasing residents' exposure to unacceptable noise and toxic pollutants.

2) Milton has submitted far and away the most complaints in the Boston area, yet nothing is done. There have been no real noise abatement action on behalf of surrounding communities. Given this track record, there is no reason to expect more responsive and responsible behavior in the face of even more air traffic.

3) Runways will be made larger, resulting in more blacktop. More black-top or paving will adversely impact bird nesting areas and will result in greater pollutant run-off into Boston Harbor. This absolutely SHOULD require federal (EPA, not FAA) and state (DEP) approval, and should accordingly be denied. In addition, the EPA and DEP ought to consider the toxic fumes being spewed over residents of Milton and other low-altitude approach communities facing the repeated onslaught of planes brought on by NextGen.

4) The findings of Mr. Richard Doucette, Environmental Program Manager of FAA New England Region state that larger, but quieter aircraft can be accommodated by approval of this project. I suggest that the resultant increase in traffic volume immediately cancels out any supposed benefits of cleaner, quieter aircraft. Further, an independent evaluation of this should be performed by the EPA/DEP as both the FAA and Massport have a vested interest in the expansion. In summary, this expansion/modernization project plan benefits the airlines, lobbyists, the FAA, and Massport, to the detriment of the residents of surrounding communities. I reject Mr. Doucette's Finding of No Significant Impact at [https://www.massport.com/.../3.../TerminalE\\_EA\\_073015\\_signed.pdf](https://www.massport.com/.../3.../TerminalE_EA_073015_signed.pdf) and call for an independent review by the EPA/DEP. There will be an environmental impact. More fuel run-off will spill into the Harbor, and more toxic fuel particulates will make their way into our lungs.

I argue that there will be a very significant human impact to people in my community of Milton, and other surrounding communities who have watched their quality of life suffer with the advent of NextGen RNAV, designed solely with the interests of airlines and air travelers in mind. Despite the best efforts of citizens and some dedicated elected officials, the FAA advances their mission with complete disregard of its impact on communities all across this nation.

Before allowing any further 'modernization' or expansion to Logan airport, FAA and Massport needs to first mend fences with their neighbors on the ground, listen and respond accordingly to the public's very valid health concerns, and be held accountable by our elected officials.

I oppose the plan to 'modernize' Terminal E. Thank you.

Sincerely,

**Czepiga, Page (EEA)** Form Letter B

**From:** Saturday, September 10, 2016 10:17  
**Sent:** AM Czepiga, Page (EEA)  
**To:** Logan Airport  
**Subject:**

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Hello,

In the name of environmental justice for East Boston and many other heavily impacted communities around Logan Airport, please do NOT expand Terminal E!!! People in East Boston already have some of the highest asthma rates in the state. Hearing loss in the community is also very high. East Boston (and the city of Boston in general) CANNOT ABSORB MORE NOISE AND POLLUTION.

The state needs to invest in a REGIONAL transportation plan that would greatly improve and increase utilization of other regional Massachusetts airports, combined with peak hour pricing and other ways to more safely and fairly manage airport traffic.

Please provide a succinct and clear EIR summary document in English and Spanish to allow local residents to process what is being proposed. Massport needs to respect and fulfill its prior commitments to noise and pollution abatement, rather than further endanger the health and quality of life of local residents, who already shoulder an extremely unfair burden of negative environmental impacts.



**Czepiga, Page (EEA)** **Form Letter C**

**From:** Czepiga, Page (EEA)  
**Sent:** joseph.boncore@masenate.gov; adrian.madaro@mahouse.gov;  
**To:** salvatore.lamatina@boston.gov; robert.deleo@mahouse.gov  
**Cc:** Opposition to Logan Expansion  
**Subject:**

Mr. Matthew Beaton  
 Executive Office of Energy and Environmental Affairs  
 Attn: Page Czepiga, EEA No. 15434  
 100 Cambridge Street Suite 900  
 Boston, MA 02114

Dear Secretary Beaton,

This is a letter expressing my concerns about Terminal E expansion at Logan Airport. This expansion has negative impacts on my community and continues serious procedural injustices within the MEPA evaluation process.

The arguments incorporated in the MEPA comment structure, that 1) airport demand is not influenced by airport capacity and 2) increased impacts are therefore not a byproduct of airport growth, place undue burden on impacted communities to prove fundamental theories of supply and demand. They advance a false assumption that growth is unstoppable and they displace accountability for transportation outcomes from Massport, to the market.

In fact, Massport can bend the trajectory of growth at Logan by promoting environmentally responsible plans. This has been demonstrated by the success of efforts in the early 1990's to reduce airport impacts by regionalizing the New England airspace resulting in gains of 17% of New England Passenger market share at TF: Green and Manchester-Boston AND MIRROR IMAGE DECLINES IN BOSTON LOGAN MARKET SHARE between 1994 and 2004.

As a resident and fellow public servant who is keenly aware of the public health crises which the Logan Airport Health Study of 2014 and scholarly research studies attribute directly to Logan airport, I insist that the State reject Massport's self-serving and unhelpful arguments and that:

1. THE MEPA review process be extended, requiring a full Final Environmental Impact Report in which impacted communities receive responses to their concerns about the increases in air and noise pollution;
2. Massport comply with all MassDOT procedures to improve engagement within impacted Environmental Justice communities. Specifically, the Port Authority must be directed to produce a clear, transparent and fair process by:
  - a. Drafting a Summary EIR Document within the Final EIR of no more than 20 pages explaining the environmental impact information to inform residents about the burdens this project will cause
  - b. Writing this Summary Document in an understandable manner without unnecessarily technical language;
  - c. Translating this Summary Document into Spanish and distributing it widely as part of an extended community presentation and discussion effort which is respectful of family schedules and designed to achieve high levels of engagement and public comment
3. Massport conduct an expanded study of opportunities to offset Logan airport growth by diverting flights through a regional air space plan which includes all other viable airports;
4. Massport strengthen and construct the project's mass transit commitments in the initial construction phase and as a prerequisite to Terminal expansion.

The following are facts which I am requesting that you incorporate into your evaluation of this damaging project:

- The expanded Terminal will handle more than the entire TF: Green, Worcester, Hanscom, Pease, Portland, Manchester-Boston and Bradley Airports do today combined, ALL BY ITSELF
- Airport expansion plans call for a 43% increase in passengers, equal to adding three times the total passenger volume of all airports in New England
- Section 7, Page 21 of the 2011 ESPR states that flight operations will increase by 30% by 2030. This increase will cause corresponding increases in noise and pollution
- Section 7, Page 21 of the 2011 ESPR states that NOx related to airport expansions will increase by 24% by 2030
- The MBTA pedestrian connection will be built in the second phase of the project and completed by 2028, put off for 12 years. This pedestrian connection would require travelers to travel over 3,300 feet on foot, compared to an average 250 feet walk to cell phone and short term parking lots and 50 feet to the passenger car pick-up curbside, the mode Massport is making its biggest investment: Table 5-21 of the DEIR shows that curbside pick-up areas at Terminal E will be expanded by 461%

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• Section 5, Page 14 of the DEIR states that there will be 28 more night flights (between 10:00 pm and 5:00 am) every night using the long runways pointing over Eagle Hill, Chelsea, Winthrop, South Boston, Revere, Somerville and dozens of other communities. If the volume of added flights exceed the capacity of the Head to Head noise abatement-based configuration used at Logan during overnight hours, 85 decibel airport overflights will occur as often as every 15 minutes throughout the night causing massive sleep interruption in our hard working neighborhoods

- With 6.1 million additional passengers since 2009, Logan has already grown by more than the volume of TF: Green and Manchester-Boston combined (5.7 million) over the past few years
- A 2013 Air Passenger Survey revealed that only 28 percent of air passengers use HOV/shared-ride modes to access the Airport. If this trend is not improved upon, the next 10 million passengers Massport encourages to fly into Logan will produce an additional 7.2 million vehicle trips to and through our communities
- Noise is on the rise. 2014 noise contours were larger in most areas around the Airport than they were in 2013
- Pollution is up. Total VOC, NOx and PM10/PM2.5 emissions went up 2014 compared to 2013
- Average daily traffic at Logan has increased 13% since 2010
- Aircraft sources of particulate pollution increased 31% over the four years reported between 2010 and 2014

As an employee of a national youth-serving nonprofit, I am always thinking about widespread community impact from political decisions like this, particularly for the many minorities in East Boston who are increasingly under-represented.

Further, as a resident of a highly impacted community, I am AGGRESSIVELY OPPOSED TO ANY EXPANSION OF AIRPORT IMPACTS at Logan. I am eagerly looking forward to continued and improved engagement in this critical review process and I urge you to consider the health and environmental impacts of this expansion project in this process here and now. Sincerely,

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TO:

Matthew A. Beaton  
Secretary of Energy and Environmental Affairs  
Executive Office of Energy and Environmental Affairs

August 18, 2016

Richard Doucette  
Federal Aviation Administration  
New England Region

Stewart Dalzell  
Deputy Director  
Strategic and Business Planning Department  
Massachusetts Port Authority

Dear Sirs:

The Environmental Assessment / Draft Environmental Impact Report highlights the many tangible and significant benefits that would result from modernizing Terminal E, addressing Logan's ability to handle the forecasted increasing demand in terms of total passengers and, in particular, international passengers. Our concerns are not with the proposed terminal modernization project itself, but with the impact that the resulting increased capacity will have on surrounding communities, and specifically on the Town of Hull. That said, we believe there are viable means to mitigate this impact and we respectfully ask for your engagement in addressing our concerns.

Currently, the Town of Hull takes on the noise burden - day and night - from a significant number of flights departing from Runway 22R and Runway 15R and flights arriving on Runway 33L. Planes departing from Runway 22R fly over Hull High School and Lillian M. Jacobs Elementary School. Runway 33L (arrivals) / 15R (departures) is the preferred and most often used runway for overnight flights. The current flight path for 33L/15R brings planes over a large portion of our small town and is already disruptive. The continuous noise level now interferes with many normal functions at one's home. Most disturbing is the impact on sleep time which is crucial for health in our busy day to day lives. The Terminal E Modernization Project will result, not only in increased international and overnight flights, but also in the accommodation of Group VI jumbo aircraft, such as the Airbus 380 and Boeing 747-8. This will impose a tremendous additional burden on our community; however, there is a noise mitigation solution.

The Town of Hull is a small peninsula uniquely situated between three large bodies of water. Our unique geography provides an opportunity for noise mitigation by adjusting flight paths over water rather than over homes. The implementation of the NextGen Air Transportation System brings with it the ability to fly planes along a flight path with a dramatic increase in precision. We ask that the flight paths (i.e. RNAVs) of planes departing from Runway 22R and Runway 15R be modified to fly significantly farther out over Boston Harbor and at a higher altitude, and

that planes arriving onto Runway 33L fly an over-the-harbor flight path with a continuous descent. These flight path modifications will provide a significant reduction of the noise impact on our community.

The Town of Hull requests that these modifications to the flight paths (i.e. RNAVs) be done prior to the opening of the modernized Terminal E.

Form Letter E

**Czepiga, Page (EEA)**

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**From:** Czepiga, Page (EEA)  
**Sent:** adrian.madaro@mahouse.gov; joseph.boncore@masenate.gov;  
**To:** salvatore.lamattina@boston.gov; claudia.correa@boston.gov  
**Cc:** Comment Letter for the Draft Environmental Impact Review for the Logan Terminal E  
**Subject:** Modernization Project.

Mr. Matthew Beaton  
Executive Office of Environmental Affairs  
Attn: Page Czepiga, EEA No. 15434  
100 Cambridge Street, Suite 900  
Boston, MA 02114

August 8, 2016

Dear Secretary Beaton,

I am writing to request that you extend the comment period for the Draft Environmental Impact Review for the Logan Terminal E Modernization Project.

I have not had a chance to review the DEIR released by Massport on July 20, 2016 due to the document's length, complexity and technical nature. I am very concerned that this project will INCREASE the negative health impacts that airport pollution has on neighboring communities and I want the opportunity to analyze and comment fully on this major airport expansion project.

I am requesting that the DEIR be dramatically shortened, more clearly organized and simplified and that the comment period be extended to allow for public review as well as a series of public meetings between and among resident, agency and political stakeholders.

Without this action by your office, many residents of this community and I will not be able to participate in the public comment process on this project.

The revised DEIR should be no longer than 10 - 20 pages in length, available in English and Spanish languages at a minimum and written in easily understandable languages without confusing technical terminology. Even with these accommodations, our community will need an extended opportunity of at least 180 days so that interested residents may confer with technical consultants in the airport management and environmental health and engineering fields in order to understand whether Massport has sufficiently addressed the impacts of the Terminal E Modernization Project, which combined with the Terminal E Expansion and other airport expansions will increase air pollution dramatically.

I am grateful to you and the Baker Administration for requiring this DEIR. I am committed to participating in this decision as to whether or not you should require a full Final Environmental Impact Review.

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Appendix E  
Wastewater Memorandum

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AECOM  
One Federal Street, 8<sup>th</sup> Floor, Boston, MA 02110  
T 617.723.1700 F 617.749.0947 www.aecom.com

**Memorandum**

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Date: September, 2016

To: File

From: Ross Edwards, PE

Subject: Terminal E Modernization – Wastewater Flow Calculation

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This memorandum describes the rationale utilized to estimate increased wastewater flow related to the Terminal E Modernization Project. Water consumption in Terminal E is directly related to the number of passengers and employees that use the facility. Similarly, the quantity of sewage flow from Terminal E is related directly to the number of passengers and employees.

Currently Terminal E generates an average of 55,000 gal/day of wastewater (2015 records). Under the future Build condition, wastewater generation is estimated to increase to 66,000 gal/day.

**Basis for Determining Water Usage Requirements for Terminal E – Year 2030 - 8 Million Annual Passengers (MAP)**

## Daily Departures:

- 2015 = 6,129 passengers
- 2030 = 8,615 passengers (@ 8 MAP)
- Difference = 2,486 passengers / day

## Daily Arrivals:

- 2015 = 7,330 passengers
- 2030 = 10,312 passengers (@ 8 MAP)
- Difference = 2,982 passengers / day

Departures: 1.8 Flushes / Passenger x 2,486 passengers x .99\* gal/flush = 4,430 gallons

Arrivals: 1 Flush / Passenger x 2,982 passengers x .99\* gal/flush = 2,952 gallons

Total Departures + Arrivals = 7,382 gal/day

Add sink usage

Departing Passengers:

2,486 passengers x 1.8 uses x 1 gal/min x 7.5 sec (average) = 560 gal/day

Arriving Passengers:

2,982 passengers x 1.0 uses x 1 gal/min x 7.5 sec (average) = 370 gal/day

Total 8,312 gal/day

Add 25% for cleaning/concessions/additional employees = 2,078 gallons

Total Increased Water Usage: 8,312 + 2,078 = 10,390 gallons

2030 (@ 8 MAP) Terminal E, Average Day Increased Water Usage = 10,390 gallons / day

**This equates to approximately 11,000 gal/day incremental increase associated with the Terminal E Modernization Project**

Assumptions:

\* Assumes future use of "low-flow" fixtures throughout new terminal spaces, with the following:

Women: (50% of population) use WC's @ 1.28 gal / flush (gpf)

Men: (25% of population) use WC's @ 1.28 gpf, and (25%) use urinals @ .125 gpf.

Therefore: 50% x 1.28 = .64 gpf

25% x 1.28 = .32 gpf

25% x .125 = .03 gpf

Average: .99 gpf