### Agenda

- 1. Introduction
- 2. Timeline
- 3. Topics/Issues
- 4. Next Steps and how to comment on the EA/EIR
- 5. Submitted Q&A in a moderated format





## Cape Cod Gateway Airport EA/EIR Project (EEA#16640)



**Community Outreach Meeting #4** December 12, 2023

#### 2:00 PM (virtual – Zoom) Virtual:

6:00 PM (in-person) – Jim Crocker Hearing Room, 2nd Floor, Barnstable Town Hall, 367 Main Street, Hyannis, MA 02601





### **Meeting Goals**

- 1. Discuss issues commonly voiced during past meetings and in response to the Environmental Notification Form (ENF)
- 2. Provide an opportuntity to answer questions
  - Moderated meeting with previously submitted questions as well as questions submitted today on tent cards or in chat box (virtual only).
- 3. Assist community members to develop "substantive comments" based on CEQ guidance, as part of the NEPA process.
- 4. Convey information on the role & benefits of the Airport in the region and beyond
- 5. Continue to recieve feedback and engage with the community



### **Question & Answer Format – In-Person/Virtual**

- Format: questions will be moderated, by the Project Team, and we have requested that community members submit written comments in advance.
- Time: 45 mins will be allocated to the Project Team, FAA and MassDOT to answer questions.
- Comments & Questions: Previously submitted questions have been organized by topic. For efficiency and time purposes we will acknowledge duplicate questions and answer them once.

*Comments and questions can be submitted during the meeting by submitting by the comment cards provided and giving them to the project team (in-person).* 



Note: Only comments submitted to the MEPA office and/or project specific email during the comment period will be considered official comments considered during the Final EIR/EA phases. *See handout for information.* 

MEPA Official Comment Period: December 22, 2023 to February 9, 2024



# **MEETING GUIDELINES**

- ✤ The speakers will cover topics listed in the agenda
- After the presentation, time will be provided for Questions and Answers at key points during the presentation.
  - O The Project Team will address questions / comments within the allotted timeframe.
  - O For any follow up questions, please state your name and your relationship to the project before your question.
  - O Please share only <u>one</u> question or comment at a time, to allow others to participate.
  - O All project-related questions and comments are welcome and appreciated. However, we do request that you refrain from any disrespectful comments.



#### **Project Timeline & Community Outreach**



### **Topics Covered**

- 1. Airport Role: Community & Economic Benefits
- 2. Runway Extension: Proposed Action
- 3. Noise: Regulatory Requirements & Assessment
- 4. Joint Base Cape Cod Alternative
- 5. Water Quality & PFAS (in depth meeting on Dec. 18<sup>th</sup>, same location, following DEP requirements)
- 6. Air Quality



The Airport is a commercial transportation hub for the residents of the Town of Barnstable and Cape Cod = meeting the regional demand for air transportation (both commercial and private transportation).

A variety of users:

- Year-round residents
- Employees transitioning to/from ACK and MVY (contractors, healthcare, hospitality, and etc.)
- Medical evacuation flights (weekly basis),
- Military/Coast Guard,
- Visitors and Businesses,
- Summer residents (that pay annual taxes),
- The Federal Aviation Administration (FAA), and the Transportation Security Administration (TSA).





The Airport creates aviation related jobs, provides revenue to local and state governments, and supports business and leisure travel in the region.





Total Payroll \$73,761,000



Total Output \$157,240,000

COMMERCIAL SERVIC	E AIRPORTS			
Associated City	Airport Name	Total Employment <sup>2</sup>	Total Payroll <sup>2</sup>	Total Output <sup>2</sup>
Bedford	Laurence G. Hanscom Field <sup>1</sup>	19,587	\$527,823,000	\$6,709,016,000
Boston	Boston Logan International Airport	162,266	\$5,974,587,000	\$16,325,472,000
Chicopee/Springfield	Westover Air Reserve Base/Metropolitan Airport <sup>1</sup>	4,571	\$172,687,000	\$245,257,000
Hyannis	Barnstable Municipal Airport-Boardman/Polando Field	1,724	\$73,761,000	\$157,240,000
Nantucket	Nantucket Memorial Airport	3,268	\$118,249,000	\$323,044,000
New Bedford	New Bedford Regional Airport	277	\$11,025,000	\$29,598,000
Provincetown	Provincetown Municipal Airport	390	\$13,958,000	\$34,856,000
Vineyard Haven	Martha's Vineyard Airport	1,401	\$50,939,000	\$140,551,000
Worcester	Worcester Regional Airport	587	\$29,617,000	\$96,746,000
COMMERCIAL SERVIC	E AIRPORTS TOTAL	194,071	\$6,972,646,000	\$24,061,780,000

Includes economic impacts associated with military operations located on the airport. See page 8 for specific military totals. Total impacts include all on-airport business and government agency, capital improvement project, visitor, and multiplier impacts.

Source: Massachusetts statewide airport economic impact study update, January 2019



The Airport is an important source of local jobs and economic activity with a workforce of over 1724 people supporting numerous families of Cape Cod!

- It is home to over 65 businesses/private users such as:
  - Cape Air (33+ yrs.),
  - O Atlantic Aviation (20+ yrs.)
  - Griffin Avionics (40+ yrs.),
  - Federal Aviation Administration (FAA),
  - O Transportation Security EW, Administration (TSA)

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Community Event Series:

The Airport inspires Cape Cod youth to develop an interest in aviation.

- Annual Young Eagles program giving youth ages 8–17, an opportunity to fly
- Annual Student Aviation Career Day
- Annual Community Event "Great Day at the Gateway"
- Girls in Aviation Events, and Scout sleepovers at the Terminal





## Airport Role: More than just an airport...





# FAA and MassDOT's Role

## **FAA Role: Federal and State Aviation Regulators**

#### Federal Aviation Administration



**Mission:** Our continuing mission is to provide the safest, most efficient aerospace system in the world

Provides leadership in planning and developing a safe and efficient national airport system.

Responsibility for airport safety and inspections and standards for airport design, construction, and operation.

Implements the National Environmental Policy Act (NEPA) and other Federal environmental laws and regulations



**Mission:** Dedicated to making air transportation safer, cleaner, more efficient, and more economically advantageous for the people, communities, and businesses of Massachusetts.

Regulates and promotes air transportation in Massachusetts

- Oversee 35 of the State's 38 public-use airports
- Support economic development and job growth
- Reduce impact on the environment
- Explores advanced aviation systems (drone, UAS, aviation electrification)



# **FAA Role: NEPA Review Triggers**

#### FAA Actions Requiring NEPA Review:

- Approval of the Airport Layout Plan
- Environmental Determination
- Determination of Applicable Design Standards
- Determination the Proposed Action is "Reasonably Necessary"
- Approval of Amendments to the Airport Certification Manual
- Issuance of Grants





## **FAA Role: NEPA Review Triggers**

#### Key Points to consider

FAA conditionally **approved** the Airport Layout Plan at conclusion of HYA's Master Plan process

This **triggers** the requirement of an EA to determine the impact of the proposed Action on the environment.

Not until a project **completes** the **NEPA** process does a project or projects become **eligible for funding** 





## **FAA Role: Environmental Assessment**

#### FAA Actions & NEPA Review:

#### Funding

FAA funds an EA document <u>but does not</u> conduct the report – it is undertaken by the Airport and its consultant team.

#### **Oversee Development of the Environmental Assessment**

FAA oversees the EA process and provides guidance to the Airport to <u>ensure</u> <u>compliance</u> with regulatory requirements (Airport Desk Reference)

#### **NEPA Determination**

After completion of the EA, FAA will make a <u>determination</u> that a Proposed Action/Project will either have "No Significant Impact based on designated thresholds or that the project requires an EIS





How we have heard and responded to the community

Current Length: Runway 15-33 - 5,255 feet

The Master Plan (Preferred Alt 4): Recommended a total runway length of 6,550 feet by adding 895 feet to the RW15 end and 400 feet to the RW33 end. (6,550' total)





- The Runway extension = proposed is on existing airport property.
- Additional runway length = used FAA methodologies.
- Additional runway length = allows existing aircraft to operate more safely/to meet federal design standards (Critical Aircraft) that use airport today + proposed changes in commercial fleets.
- Additional runway length = responds to industry trends (upgauging of aircraft)

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 Additional runway length = several runway length increases occurred across Massachusetts because of this same phenomenon:

Pittsfield	Fitchburg	Marshfield
New Bedford	Plymouth	Norwood

#### ACRP SYNTHES

How Airports Plan for Changing Aircraft Capacity: The Effects of Upgauging

A Synthesis of Airport Practice

Denis Verdier Marie Guittard DY Consultants New York, NY

"Upgauging" = <u>airline industry practice of</u> <u>increasing capacity by</u> <u>adding seats to existing</u> <u>aircraft and using larger</u> <u>aircraft in place of smaller</u> <u>ones.</u>

Purpose and Need:

To provide a reasonable and balanced approach in meeting runway length requirements for existing and future aircraft families using the Airport while also balancing the needs of the aviation users and that of the community.

## **Critical Aircraft Determination**

So how do we do that?

Minimum 500 operations for FAA critical operational threshold for largest existing and future use aircraft

Runway Design Criteria = C/D-III





	Airport Master Plan Analysis	Environmental Assessment Validation
Aircraft Type	Runway Length Requirement - Standard Analysis at MTOW (feet)	Runway Length Requirement - HYA Adjusted Analysis (feet, assumptions)
Embraer E190 (Existing Commercial)	6,115 – 8,915	5,290 (HYA-JFK)
Gulfstream V/G500 (Existing GA)	6,585 – 6,585	6,054 (1,500 NM)
Bombardier Global Express (Existing GA)	5,540 – 6,540	5,958 (1,500 NM)
A220 (Future Commercial)	6,200 – 9,415	5,865 (HYA-JFK)
A320 (Future Commercial)	5,515 – 7,515	6,000 (HYA-JFK)

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Airport obligated to look at the entire fleet/users <u>NOT</u> one entity. We looked at the existing fleet operating at the airport <u>TODAY</u> + future known fleet

MA to FL is ~ 1,020 NM



Nearly 40,000 Cape Cod residents fly to the top 4 FL airports year-round. Many of whom have asked for improved options from HYA so that they can avoid PVD and BOS

Table 5: Top 15 Destinations (by quarter 2018) – passengers who live on Cape Cod and who are traveling to a domestic airport - noted by their origin airport

Rank	Destination Airport	1Q18	Destination Airport	2Q18	Destination Airport	3Q18	Destination Airport	4Q18	Destination Airport	YE18
1	MCO	5,421	МСО	5,035	МСО	3,873	МСО	4,546	МСО	18,875
2	FLL	3,285	DCA	2,612	ORD	2,536	DCA	2,352	FLL	9,672
3	RSW	2,638	FLL	2,397	DCA	2,243	ORD	2,313	DCA	9,113
4	TPA	2,396	ORD	2,315	LAX	2,165	FLL	2,285	ORD	8,534



MCO = Orlando

FLL = Fort Lauderdale RSW = Southwest Florida International (aka Fort Meyers)

TPA = Tampa



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### **Runway 15-33 Extension EA/EIR BALANCED APPROACH**

- Alternatives identified in the Airport Master Plan were reviewed in the EA/EIR.
- Analysis of airport user needs and that of the community resulted in a balanced approach with a runway length extension (895') selected for the RW15 end only.
- This still allows the Airport to meet needs of airport users but balances this with community concerns by implementing design features allowing for pavement for critical operations (a takeoff) with the use of declared distances. See next slide
- Current Runway Lengths: 15/33: 5,255 feet
- EA/EIR Proposed Extension: 895' on RW 15 end (6,150')



Reduced master plan proposed by 400' and eliminates an extension to the Runway 33 end



### **Runway 15-33 Extension EA/EIR BALANCED APPROACH**

- Concessions have been made in the overall proposed design of the runway extension to create a balanced approach = meeting the needs of both aviation users and being mindful of community concerns.
- The airport researched over 29 runway alternatives to meet this need
  - Of those alternatives studied, implementation of various pavement lengths were presented.
- Most pilots would prefer using all available new pavement for operations.
- BUT, the Airport settled on use of declared distances not ideal but an alternative that meets the intent while reducing impacts on the community
- Declared distances = specific lengths of runway that are published for aircraft operations, specifically when taking off or landing, and define landing distances and takeoff distances available within a given paved surface.



### **Runway 15-33 Extension - Declared Distances**

- Option A = optimal runway length (what most airports/pilots <u>WANT</u>)
- Option B = less optimal runway length (most airports/pilots <u>DO NOT</u> want)

O Can still meet runway length needs BUT a concession has been made/alters pavement use.
O Take-Off Distance Available (TORA) = The length of runway declared available for taking off.
O Landing Distance Available (LDA) = The length of the runway declared available for landing.

• Option B = Airport's Proposed Alternative.

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- The LDA = truncated allowing the airport to maintain the landing threshold (i.e. aircraft will be landing in the same general location as they do now).
- The TORA = increased by 895' allowing for more runway takeoff length
- BENEFITS: arrivals = same general location today; takeoffs = rotate sooner Option A
   Option B



#### **Runway 15-33 Extension - Declared Distances**



- Simulation = modeling shows anticipated aircraft position due to the runway extension.
- Simulation = anticipated aircraft locations based on standard flight procedures and paths.

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# NOISE ANALYSIS: Response to Community Concerns



## Part 150 – Noise Compatibility Study (CFR Title 14 Part 150)

Noise Exposure Maps completed by Epsilon are consistent with what FAA requires in a Part 150 Noise Analysis, including the use of FAAapproved noise modeling software (AEDT)

The Noise Exposure Maps indicate all surrounding land uses meet FAA compatibility criteria under the future conditions. A "full" Part 150 Study includes two technical components:

- Noise Exposure Maps that define the existing and future aircraft noise exposure boundaries surrounding the airport and,

- A Noise Compatibility Plan to identify potential mitigation measures that could correct surrounding non-compatible land uses.

Epsilon's analysis mirrored the first portion of a Part 150 Study, including modeling and creation of noise exposure contours of existing vs future build and no build conditions were developed using data from the Master Plan.

A full Part 150 Study would evaluate existing and future five-year conditions.







# FAA Part 150 Noise Requirements: daynight average sound level (DNL) noise

- Metric used to reflect a person's cumulative exposure to sound over a 24hour period, expressed as the noise level for the average day of the year on the basis of annual aircraft operations.
- Provides a mechanism to describe the effects of environmental noise in a simple and uniform way.
- DNL is the standard noise metric used for all FAA studies of aviation noise exposure in airport communities.



- All land uses are considered compatible with noise levels less than 65 dBA (DNL).
- All commercial land use compatible with 70 dBA (DNL).
- Some commercial uses compatible with higher levels (i.e. Utilities)

# Aircraft Only Annual Day Night Level (DNL) Build Condition (2040)





# **Build vs. No Build Condition (2040)**



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# **Build vs. No Build Condition (2040)**

60 DNL shown for information purposes only





# Sound Exposure Level



- The **Sound Exposure Level (SEL)** metric represents all the acoustic energy (a.k.a. sound pressure) of an individual noise event as if that event had occurred within a one-second time period.
- SEL captures both the level (magnitude) and the duration of a sound event in a single numerical quantity, by "squeezing" all the noise energy from an event into one second.
- This provides a uniform way to make comparisons among noise events of various durations.



# Single Exposure Level Data (dBA)





**Hyannis Park** 

Barnstable Village





Hyannis Park Barnstable Village



Hyannis Park Barnstable Village Ru

	Challenger 600	(Turbo Jet)	et)			
Runway 15	Runway 33	Runway 6	Runway 24			
83	68	63	65			
64	78	60	61			

	Cirrus SR22 (Sir	s SR22 (Single Engine)				
nway 15	Runway 33	Runway 6	Runway 24			
77	68	60	64			
62	74	59	59			

	Cessna 402 (Piston)				
570 5	Runway 15	Runway 33	Runway 6	Runway 24	
Hyannis Park	82	73	67	71	
Barnstable Village	68	79	66	66	

# Cessna 402 Runway 15 Takeoff SEL







JBCC (a.k.a. OTIS) was not included in the current Master Plan study (2022) but was previously included in the past environmental reviews during the Airport's terminal and tower redevelopment.

The idea was ultimately dismissed in 2000 as infeasible due to the many regulatory, logistical, and financial constraints of such an undertaking.

Several comment letters suggest that some airport operations could be moved to Otis Airfield. While this alternative would have the benefit of reducing impacts in the immediate vicinity of the Barnstable Airport, in fact it merely shifts the impacts elsewhere. In addition, the ENF presents sufficient and compelling reasons – including ownership and jurisdiction -- why the Otis alternative would not be feasible. Therefore, I am not requiring that this alternative be analyzed further in the DEIR.

Statement from the Executive Office of Environmental Affairs, Certificate of the Secretary of Environmental Affairs, August 23, 2000 EOEA#12297



Relocation of Cape Cod Gateway Airport to Joint Base Cape Cod was further reviewed in this DEIR and may be deemed neither realistic nor economically feasible for the following reasons:

- The Airport Commission is an agency of the Town of Barnstable, entrusted with the management of the Airport; a public facility and Enterprise Fund of the Town of Barnstable. For the Commission to address an alternative outside municipal borders is inconsistent with both its powers and its obligations. The Commission has no right or ability to operate outside Barnstable Municipal limits. The alternatives under consideration are limited to Airport property.
- JBCC is the property of the Commonwealth of Massachusetts and is leased by the Federal Government under the Department of the Air Force. As stated above, the Commission has no authority to plan the future use of that property.
- JBCC lacks the necessary terminal facilities to provide passenger boarding/deboarding including redevelopment of other existing facilities (hangars, over 65 businesses, staff offices, and etc.) that would need to be constructed. These would be redundant with existing facilities at HYA.



The consequences of relocating the Cape Cod Gateway Airport would:

- Result in a significant loss of tax revenue to the Town of Barnstable. (\$705,000 in property taxes in 2023).
- Require the Town of Barnstable to reimburse the United States and the Commonwealth for past expenditures of airport grant funding received. To date that is over \$87M. *This is beyond what the airport could fund under its Enterprise Fund.*
- Require someone to pay to relocate existing business/leases or buy them out.
- Result in a commercial service airport in a less central location on Cape Cod to users

The map to the right identifies resident use of commercial air by town – with larger circles indicating areas of higher percentage of use.



Barnstable constitutes the largest area of use and is the most central Cape Cod location. - data from 2018 passenger study



We have heard the community's interest in exploring this alternative and have further studied this in the DEIR.

- The previous slides identify the result of earlier studies plus preliminary investigations as part of this DEIR.
- The idea may be deemed infeasible due to previous lack of justification, issues with governance, shifting airport concerns elsewhere, ownership, lack of commercial facilities and passenger terminals as well as costs.
- Costs =

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- Repayment of at least \$87M to the FAA/State
- Relocating and rebuilding infrastructure at JBCC would be significant
- Refunding existing airport tenants/lease holders
- Loss from permanent business disruptions, and



### Water Quality & PFAS

The airport maintains the following measures for water quality improvements: Stormwater Pollution Prevention Plan (SWPPP), annual cleaning and monitoring of stormwater structures, and reporting to DEP, monitoring well data collection

Project Related Impacts/Mitigation

- Taxiway D Upper Gate Pond Impacts and mitigation
- Stormwater treatment and control proposed for all new pavement surfaces
- PFAS: Ongoing treatment and consistency with Proposed Action in the EA/EIR

How We Have Heard You

- Concerns relative to water quality impacts are addressed in detail in EA/EIR.
- Airport has both avoided/minimized impacts by proposing a 2:1 TWD side slope vs. the standard 4:1. Wetland mitigation is proposed to meet regulatory requirements
- No new untreated stormwater discharges
- The airport continues to respond to and update the community of PFAS remediation efforts including a meeting to be held on 12/18/2023, the 4th of such meeting since September 2022.

#### **Proposed Taxiway D Conditions**

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## **Air Quality**

FAA Regulations

- Air Quality impacts are regulated under NEPA and the Clean Air Act
- These laws specify NAAQS, Attainment Areas, State Implementation Plans
- Projects must comply with the NAAQS

How We Have Heard You

- Concerns related to air quality impacts have been received and addressed
- Potential air quality impacts are discussed in Draft EA/EIR Chapters 5 & 6
- The project is in compliance with federal air quality regulations
- Greenhouse gas analysis provided in Draft EA/EIR in response to MEPA comments
- FAA / EPA Finding Regarding Lead Emissions from Piston Engine Aircraft
  - <u>Endangerment finding</u> requires FAA to regulate lead emissions from piston engine aircraft. FAA will initiate rulemaking aimed at addressing new regulations
  - Measured lead concentrations in Massachusetts are very low, and proposed operations at Cape Cod Gateway airport will not increase lead emissions



## **Air Quality**



- No significant changes to air operations that would result in increased air pollution concentrations
- Background air concentrations were evaluated at the nearest urban air monitor are compared to the NAAQS



Current air pollution concentrations are well below NAAQS, any temporary construction emissions will not lead to an exceedance of NAAQS

#### **Proposed Conditions**

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#### Next Steps...

- Draft EA/EIR filed (Available on 12/9/2023 and submitted to MEPA 12/15/23)
- Dec. 22, 2023 Environmental Monitor Publication Date:
- Dec. 22 to Feb. 9, 2024, Comment Period
- Feb. 16 2024 MEPA DEIR Decision
- Final EA/EIR (Jul/Aug 2024)
- FAA Determination
- MEPA Certificate Final EIR
- CCC DRI Review and begin permitting phase (after completion of DIR review)





#### **Project Contacts**

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#### Website (project documents available)

https://flyhya.com/environmental-assessment/

#### Project Email envirohya@epsilonassociates.com





#### **Please stay involved!**

# **THANK YOU !**

