

U.S. Department of Transportation

Eastern Service Center

1701 Columbia Avenue College Park, Georgia 30337

Federal Aviation Administration

June 9, 2021

AIR INC. airportimpactreliefinc.org

Proposed Finding of No Adverse Effect for the Boston Logan International Airport RNAV (GPS) RWY 4L Approach Procedure, Boston, MA

To Whom It May Concern,

The Federal Aviation Administration (FAA) is evaluating a new proposed Area Navigation (RNAV) Global Positioning System (GPS) instrument approach procedure at Boston Logan International Airport (BOS). This new procedure would allow for aircraft to land onto Runway 4L with GPS technological automation as well as allow for landing during low visibility conditions. These additional procedural capabilities would increase the safety and efficiency of the airspace around BOS.

Pursuant to 36 CFR 800.4(a), the FAA previously consulted with the Massachusetts Historical Commission to identify the Area of Potential Effects for this undertaking. In continuing with our responsibilities under Section 106 of the National Historic Preservation Act and its implementing regulations, the FAA invites you to participate as a consulting parting and submits this assessment of adverse effects, which concludes with a proposed Finding of No Adverse Effects and our supporting rationale for that finding. The FAA seeks your views or comments on this finding, which can be addressed to the FAA using the email or address given at the conclusion of this letter. Pursuant to 36 CFR 800.5(c), please provide any comments within 30 days from receipt of this letter.

Project Background

As described in greater detail in the FAA's Draft Environmental Assessment (EA), which can be accessed at <u>www.faabostonworkshops.com</u>, the FAA is evaluating a new proposed Area Navigation (RNAV) Global Positioning System (GPS) instrument approach procedure at BOS. This new procedure, which is depicted in Attachments A and B, is needed to allow aircraft to land onto Runway 4L with GPS technological automation. The current absence of an RNAV procedure to Runway 4L precludes use of the runway during low visibility conditions. The proposed procedure route is an overlay of existing arrivals and is expected to lead to a net increase of 255 annual arrivals to BOS generally, which represents 0.1% of the total annual arrivals, and an increase of 359 annual arrivals specifically to Runway 4L. These additional

procedural capabilities would increase the safety and efficiency of the airspace around BOS. Publication of the proposed procedure would constitute an undertaking under Section 106 of the National Historic Preservation Act (NHPA).

Regulatory Overview

Under NEPA, the FAA is responsible for analyzing the impacts of its action on historical, architectural, archeological and cultural resources as part of its broader review of the human environment. Because the National Historic Preservation Act (NHPA) is the principal statute concerning such resources, most of this analysis is conducted in coordination with the process under Section 106 of the NHPA, which requires federal agencies to consider the effects of their projects on properties listed, or eligible for listing, in the National Register of Historic Places (NRHP). As this is an FAA Action, the FAA document *Section 106 of the National Historic Properties under Section 106 of the National Historic Properties under Section 106 of the National Historic Preservation Act* was consulted and referenced in order to make this determination.

Review of Historic/Eligible Properties

The National Register of Historic Places (NRHP), the Massachusetts Historical Commission, and the Boston Landmarks Commission's data sources were used to gather a comprehensive directory of all potential historic and cultural resources within the APE. A total of 19 properties within the APE were found to be listed in the National Register of Historic Places as historic districts or individual properties in accordance with the criteria described in the NHPA. These 19 properties are identified and described in Table 1. A total of 4,184 state and local designated properties were identified within the APE and are summarized by their location in Table 2. These 4,184 properties represent the group of potential resources that would be evaluated for National Register eligibility. For the purposes of this proposed finding, we assume all of these properties are eligible for the National Register and propose a finding of no adverse effect for all properties within the APE currently listed, determined eligible for listing, and assumed eligible for listing in the NRHP.

NRHP Property Name	Brief Property Description
Milton Cemetery	Milton Cemetery contains some of the best examples of funerary art from the colonial times to the Victorian era. An historic garden cemetery, it was established as the Town's only cemetery in 1672.
Spring Brook Cemetery	The most prominent structure in the cemetery, Card Memorial Chapel, was designed by Charles Eastman & built in 1898 and funded by Simon & Mary Card in memory of their daughter Lulu.
Dorchester Park	Dorchester Park is a historic park bounded by Dorchester Avenue, Richmond, Adams and Richview Streets in the Dorchester neighborhood of Boston, Massachusetts.

Table 1: National Register of Historic Places Properties within the APE

NRHP Property Name	Brief Property Description
DorchesterMilton Lower Mills Industrial District (Boundary Increase)	The Dorchester-Milton Lower Mills Industrial District is a historic district on both sides of the Neponset River in the Dorchester area of Boston and in the town of Milton, Massachusetts. It encompasses an industrial factory complex, most of which was historically associated with the Walter Baker & Company, the first major maker of chocolate products in the United States.
Savin Hill Historic District	The Savin Hill Historic District is significant for its association with the development of the area from a mid-19th century speculative housing development for Boston's upper-middle class to a close-knot neighborhood of residents from diverse socioeconomic backgrounds. The surviving historic resources catalogue Savin Hill's rich history and remain a cohesive collection of well-preserved historic homes. The district further attains significance as an intact collection of buildings representing a full range of architectural styles.
Blue Hills Parkway	The Blue Hills Parkway, a 1.5-mile-long boulevard in Boston and Milton, is significant as one of the earliest connecting parkways designed for the Metropolitan Parks Commission (MPC) by Olmsted, Olmsted and Eliot and its successor firm, Olmsted Brothers, and it is emblematic of the firm's principles of parkway creation. A divided highway that runs directly south through early 20"-century residential neighborhoods, the Blue Hills Parkway directly connects the Blue Hills Reservation (the largest open space in Metropolitan Boston) with Boston, the Neponset River Reservation, and Truman Parkway.
Blue Hills Reservation Parkways-Metropolitan Park System of Greater Boston	The Metropolitan Park System of Greater Boston, in Massachusetts, is especially noteworthy because it is the first regional park system in the United States.
Foxborough Pumping Station	The Foxborough Pumping Station is a historic water pumping station at 25 Pumping Station Road in Foxborough, Massachusetts. Its main pumphouse was designed by Ernest Boyden, a regionally-known architect of water supply systems, and was built in 1891; it is a brick structure with Queen Anne styling. The station also includes several historic wells, a period garage, and the man- made Fales Pond, a once-dammed section of the Neponset Reservoir near the pumphouse.
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Milton Centre Historic District	The Milton Centre Historic District is both the historical and geographic center of the town of Milton. The 23-acre historic district includes Canton Avenue between Reedsdale Road and Thacher and Highland Streets. Milton Centre is historically significant for its association with the development of the town following the relocation of the third meeting house to Academy Hill in 1728, and the subsequent shift of the town center from Milton Hill.
Scott's Woods Historic District	Scott's Woods Historic District is the area of Hillside, Harland and Forest Streets between Randolph Avenue and the ridge between Hancock and Bugbee Hills, now the MDC Blue Hills Reservation. The Scott's Woods Historic District in Milton, Massachusetts is a semirural, residential area that contains a significant concentration of 18th, 19th and early 20th century dwellings and barns that reflect the Town's agricultural and architectural history from 1713 to 1932, the district's period of significance. Originally known as the "Blue Hill Land," a three thousand-acre tract of land sold by the town of Boston in 1711 to four residents of Milton. The area in the southwest part of Milton is thought to have been named for a member of the Scott Family that lived in the area in the early eighteenth century. Hillside Street, named for being literally on the 'side' of Blue Hill, is the major thoroughfare in the district.
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Canton Corner Historic District	The Canton Corner Historic District encompasses the historic town center of Canton, Massachusetts. Centered on the junction of Pleasant and Washington streets, it includes more than 25 properties and 170 acres (69 ha), whose architectural history spans 250 years of occupation and includes the town's major civic buildings.
Ponkapoag Camp of Appalachian Mountain Club	The Appalachian Mountain Club Ponkapoag Camp is one of the original camps of the oldest outing club in the United States, founded in 1876. Early in the twentieth century tent sites were established at the east end of Ponkapoag Pond in the Blue Hills reservation by the president of the Appalachian Mountain Club, William Rogers, who was also an M.D.C. commissioner. The camp represents an early outing club's architecture for "roughing it" and are important as such structures succumb to fire, rot, and vandalism.
Boyden, Seth, House	The Seth Boyden House is a historic house at 135 Oak Street in Foxborough, Massachusetts. The home is significant for its unusual architectural design as well for its association with the Boyden family, whose members were prominent locally and regionally in the 18 th and 19 th century,
Borderland Historic District	The Borderland Historic District was the 1,200 acre estate of Blanche Ames Ames. The mansion was constructed in 1910 and the property includes a system of ponds, dams, and causeways surrounding the mansion. The exterior of the mansion was built using locally cut field stones. The district is considered significant due to its connection to the estate of Blanche Ames Ames. She was a inventor who was involved in art, farming, engineering and politics. She designed a hexagonal lumber cutter, patented a method for ensnaring airplanes in wires hung from balloons during World War II, and developed a water anti-pollution device in the late 1960s.
SOURCE: National Register Database; <u>http</u> Associates, 2021.	bs://www.nps.gov/subjects/nationalregister/database-research.htm#table, Adapted by Environmental Science

Town	Number of State & Local Designated Properties
Boston	838
Canton	445
Easton	142
Foxborough	194
Mansfield	190
Milton	1,559
Norton	16
Quincy	2
Randolph	225
Sharon	491
Stoughton	82
Grand Total	4,184

Table 2: Number of State & Local Designated Properties within the APE

Assessment of Noise and Visual Impacts by Proposed Action

In our earlier correspondence, the FAA noted that we are "considering the possibility that changes in noise levels or additional visual impacts from an increase in overflights could alter the character or use of certain kinds of historic properties where a quiet setting is a generally recognized purpose and attribute." In order to address this possibility, an assessment was done to further quantify the auditory and visual impacts on the historic properties within the Area of Potential Effects.

In order to assess the auditory impacts, the FAA used a metric known as Day-night Average Sound Level (DNL). DNL is the standard noise metric used for all FAA studies of aviation noise exposure in airport communities and was used here to assess the potential impact on every identified historic property within the Area of Potential Effects.

DNL is a 24-hour, time-weighted average noise metric, expressed in terms of decibel units of sound heard by the human ear, which accounts for the noise levels of individual aircraft events, the number of times those events occur, and the time of day they occur. DNL is a graphical representation of the distribution of noise over the surrounding area from an airport's average operations. There is one unique modification in that there is a "noise penalty" of any noise generated during "nighttime hours." In the calculation of DNL, for each hour during nighttime hours (10:00 p.m. to 7:00 a.m.), the sound levels are increased by a 10 decibel-weighting penalty (equivalent to a 10-fold increase in aircraft operations) before the 24-hour value is computed. The weighting penalty accounts for the more intrusive nature of noise during the nighttime hours. The significance thresholds for aircraft noise for DNL, as spelled out in FAA Order 1050.1F, are given below.

• For DNL 65 dB and higher: +1.5 dB

This threshold has been used by FAA for many years and is applied at airports across the country and will be used to determine noise impacts on historic properties within the APE. The use of this threshold is consistent with the Section 106 analyses for many FAA projects, including the Northern California and Southern Florida Metroplex projects, two of FAA's most recent projects that also modified the flight path of aircraft through the airspace.

According to FAA Order 1050.1F, a significant noise impact could occur to noise sensitive land uses if it had a level of DNL 65 dB with the Proposed Action and also experienced an increase of 1.5 dB when compared to the No Action Alternative. The FAA also recognizes that, in limited instances, resources that have a "quiet setting" as a qualifying attribute may be adversely affected by noise increases that would otherwise not be significant. There are no NRHP properties with a noise exposure of DNL 65 that experience a 1.5 dB noise increase. Further, the NRHP properties were reviewed and none of them were found to have a "quiet setting" as described in the FAA's Section 106 Handbook.

When the analysis is expanded to include the state and local designated properties that are assumed to be eligible for the NRHP, there are no properties that experience a 1.5 dB noise level increase with a proposed action noise level of DNL 65 or greater. As indicated in Table 4.6-3 of the Draft EA, the maximum exposed noise level *decreases* as a result of the Proposed Project

when compared to the No Action Alternative when considering towns/neighborhoods as a whole. Furthermore, as described below, the largest proposed noise changes within the APE are multiple orders of magnitude below the noise thresholds given within FAA Order 1050.1F.

The FAA's noise analysis demonstrates that historic resources will generally experience equivalent noise exposure with the addition of the Proposed Action. Specifically, the maximum change in noise exposure for a historic property is less than 0.2 dB across all historic properties in the APE. For example, one of these properties has a value of 22 dB under the No Action Alternative and 22.1 dB with the Proposed Procedure. Importantly, as depicted in Attachment A, the procedure is an overlay of existing traffic to Runway 4L and is only expected to lead to an annual net increase of 255 arrivals to BOS, out of a current total of 205,837 arrivals. In sum, the FAA will not be introducing audible impacts to resources not already experiencing noise impacts, and any change in noise exposure will be minimal.

In order to assess the potential visual impacts of the historic properties, the data for a year of overflights at BOS from the previous memorandum was reassessed to compare to the newly designated APE. Considering one year of radar track data, the APE experiences 78,879 arrival and 18,989 departure overflights annually. On an average daily basis that corresponds to 216.1 arrival and 52.0 departure overflights. The Proposed Action is estimated to add 255 annual arrival overflights or 0.70 daily average overflights to the APE. When considering the APE as a whole, the increase in overflights would amount to just a 0.26% increase in overflights and would not introduce audible or visual noise in the APE. In order to confirm that the overflights over the APE were not focused on particular historic resources in the APE, the dataset of departure overflights and arrival overflights was mapped over the APE in Attachments A and B respectively. Attachment A shows that the APE areas closest to the airport are already dense with overflights but the flights become more disperse as the APE moves to the southwest. However, Attachment B, which displays a year of arrival radar tracks, show that the APE is already heavily overflown over the full extent of the APE.

For more information on the analyses performed as a part of the Draft EA, please visit <u>www.faabostonworkshops.com</u> for a copy of the Draft EA. More information on the noise analysis can be found at <u>www.faabostonworkshops.com/noise-visualization/</u> and in Sections 3.4.6 and 4.6 of the Draft EA. The Noise Modeling Technical Report is included in Appendix D of the Draft EA.



SOURCE: Esri; RoVolus, 2021; ESA, 2021



Boston Logan RNAV (GPS) RWY 4L EA



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Finding of No Adverse Effect Criteria

In order to establish a Finding of No Adverse Effect, the Proposed Action must not meet any of the criteria spelled out in the FAA's Section 106 Handbook, which are based on criteria in ACHP's section 106 regulations in 36 CFR Part 800. This section presents why the Proposed Action does not meet any of these criteria.

- Does the Proposed Action physically destroy or damage the property?
 - The Proposed Action will not have any physical impact on any property. The Proposed Action changes the location of arrival flights in the airspace around Boston Logan International Airport.
- Does the Proposed Action alter the property in any way that is consistent with the Secretary of the Interior's Standards for Treatment of Historic Properties (36 CFR Part 68)?
 - The Standards guide the design and implementation of physical changes to historic properties. This may include changes in use, material repair or substitution, or modification of historically important features. The Proposed Action is located in the airspace above historic resources does not result in any changes in use, material alteration, or physical modifications to these resources.
- Does the Proposed Action remove a property from its historic location?
 - \circ The Proposed Action does not remove any property from its location.
- Does the Proposed Action change the character of the property's use, or of physical features within the property's setting that contribute to its historic significance?
 - The Proposed Action does not change the character of a property's use or any physical features in any historical property's setting.
 - Any changes to setting as a result of the Proposed action would be audible or visual features which are discussed in the following criterion.
- Does the Proposed Action introduce an atmospheric, audible, or visual feature to the area that would diminish the integrity of the property's significant historic features?
 - Audible: there will not be an introduction of audible noise as a result of the Proposed Action. Furthermore, the noise impacts of the Proposed Action on all of the historic resources in the APE will either decrease noise exposure or cause increases that are orders of magnitude below the significance thresholds for DNL aircraft noise as described in FAA Order 1050.1F and therefore will not cause an introduction of audible impact on any of the properties.
 - Visual: there will not be an introduction of visual impacts as a result of the Proposed Action. Furthermore, the entire APE currently experiences 268 average daily overflights as described in the above analysis. The Proposed Action will add less than 1 additional overflight per day. This increase will not change the current visual features of any historic resource in the APE, as depicted in Attachment B.
- Does the Proposed Action result in neglect of a property which would result in its deterioration, transfer, sale or lease?

• The Proposed Action will not cause any property to be sold or transferred.

Given the results discussed in this letter, the FAA is putting forth at this point a Proposed Finding of No Adverse Effect. This determination is based on the findings discussed in this letter, which includes that none of the NRHP listed properties reviewed herein were found to have a "quiet setting" as described in the FAA's Section 106 Handbook. Furthermore, the net change in aircraft operations as a result of the Proposed Action would be minimal and would not cause an adverse effect, including no physical impacts and no introduction of audible or visual impacts within the APE.

Public Meetings, Comments, and Consultation

The FAA conducted Virtual Public Workshops for the Draft EA on October 23rd, and October 28th, 2020. By attending the Virtual Public Workshops, participants were provided with an overview of the Draft EA which includes results from the noise analysis performed to assess the potential noise impacts of the Proposed Action on historic resources and populations located within the General Study Area. The MHC concurred with the APE on December 8, 2020 so the impacts were shown for historic resources throughout the entire Study Area. During the meeting, the FAA responded to a large number of questions from the community. These meetings were recorded and remain on the FAA's YouTube page for interested community members to review. During the meeting and other forms of engagement, the FAA received over 40 comments regarding the Proposed Action. The FAA is currently reviewing and developing responses to these comments to be shared with the public as part of the Final Environmental Assessment but it should be noted that none of the comments mention any potential impact to historic resources from the Proposed Action.

We look forward to hearing back from you on the FAA's proposed finding. We welcome the input from consulting parties on the historic properties considered as part of the analysis and on the finding itself. If you have any additional comments or questions on this undertaking, please contact me at veronda.johnson@faa.gov or at the address below.

Sincerely,

Veronda Johnson Eastern Service Center Federal Aviation Administration Operations Support Group AJV-E250 1701 Columbia Avenue College Park, GA 30337



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Borderland Historic District	The Borderland Historic District was the 1,200 acre estate of Blanche Ames Ames. The mansion was constructed in 1910 and the property includes a system of ponds, dams, and causeways surrounding the mansion. The exterior of the mansion was built using locally cut field stones. The district is considered significant due to its connection to the estate of Blanche Ames Ames. She was a inventor who was involved in art, farming, engineering and politics. She designed a hexagonal lumber cutter, patented a method for ensnaring airplanes in wires hung from balloons during World War II, and developed a water anti-pollution device in the late 1960s.
SOURCE: National Register Database; <u>http</u> Associates, 2021.	bs://www.nps.gov/subjects/nationalregister/database-research.htm#table, Adapted by Environmental Science

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Grand Total	4,184

Table 2: Number of State & Local Designated Properties within the APE

Assessment of Noise and Visual Impacts by Proposed Action

In our earlier correspondence, the FAA noted that we are "considering the possibility that changes in noise levels or additional visual impacts from an increase in overflights could alter the character or use of certain kinds of historic properties where a quiet setting is a generally recognized purpose and attribute." In order to address this possibility, an assessment was done to further quantify the auditory and visual impacts on the historic properties within the Area of Potential Effects.

In order to assess the auditory impacts, the FAA used a metric known as Day-night Average Sound Level (DNL). DNL is the standard noise metric used for all FAA studies of aviation noise exposure in airport communities and was used here to assess the potential impact on every identified historic property within the Area of Potential Effects.

DNL is a 24-hour, time-weighted average noise metric, expressed in terms of decibel units of sound heard by the human ear, which accounts for the noise levels of individual aircraft events, the number of times those events occur, and the time of day they occur. DNL is a graphical representation of the distribution of noise over the surrounding area from an airport's average operations. There is one unique modification in that there is a "noise penalty" of any noise generated during "nighttime hours." In the calculation of DNL, for each hour during nighttime hours (10:00 p.m. to 7:00 a.m.), the sound levels are increased by a 10 decibel-weighting penalty (equivalent to a 10-fold increase in aircraft operations) before the 24-hour value is computed. The weighting penalty accounts for the more intrusive nature of noise during the nighttime hours. The significance thresholds for aircraft noise for DNL, as spelled out in FAA Order 1050.1F, are given below.

• For DNL 65 dB and higher: +1.5 dB

This threshold has been used by FAA for many years and is applied at airports across the country and will be used to determine noise impacts on historic properties within the APE. The use of this threshold is consistent with the Section 106 analyses for many FAA projects, including the Northern California and Southern Florida Metroplex projects, two of FAA's most recent projects that also modified the flight path of aircraft through the airspace.

According to FAA Order 1050.1F, a significant noise impact could occur to noise sensitive land uses if it had a level of DNL 65 dB with the Proposed Action and also experienced an increase of 1.5 dB when compared to the No Action Alternative. The FAA also recognizes that, in limited instances, resources that have a "quiet setting" as a qualifying attribute may be adversely affected by noise increases that would otherwise not be significant. There are no NRHP properties with a noise exposure of DNL 65 that experience a 1.5 dB noise increase. Further, the NRHP properties were reviewed and none of them were found to have a "quiet setting" as described in the FAA's Section 106 Handbook.

When the analysis is expanded to include the state and local designated properties that are assumed to be eligible for the NRHP, there are no properties that experience a 1.5 dB noise level increase with a proposed action noise level of DNL 65 or greater. As indicated in Table 4.6-3 of the Draft EA, the maximum exposed noise level *decreases* as a result of the Proposed Project

when compared to the No Action Alternative when considering towns/neighborhoods as a whole. Furthermore, as described below, the largest proposed noise changes within the APE are multiple orders of magnitude below the noise thresholds given within FAA Order 1050.1F.

The FAA's noise analysis demonstrates that historic resources will generally experience equivalent noise exposure with the addition of the Proposed Action. Specifically, the maximum change in noise exposure for a historic property is less than 0.2 dB across all historic properties in the APE. For example, one of these properties has a value of 22 dB under the No Action Alternative and 22.1 dB with the Proposed Procedure. Importantly, as depicted in Attachment A, the procedure is an overlay of existing traffic to Runway 4L and is only expected to lead to an annual net increase of 255 arrivals to BOS, out of a current total of 205,837 arrivals. In sum, the FAA will not be introducing audible impacts to resources not already experiencing noise impacts, and any change in noise exposure will be minimal.

In order to assess the potential visual impacts of the historic properties, the data for a year of overflights at BOS from the previous memorandum was reassessed to compare to the newly designated APE. Considering one year of radar track data, the APE experiences 78,879 arrival and 18,989 departure overflights annually. On an average daily basis that corresponds to 216.1 arrival and 52.0 departure overflights. The Proposed Action is estimated to add 255 annual arrival overflights or 0.70 daily average overflights to the APE. When considering the APE as a whole, the increase in overflights would amount to just a 0.26% increase in overflights and would not introduce audible or visual noise in the APE. In order to confirm that the overflights over the APE were not focused on particular historic resources in the APE, the dataset of departure overflights and arrival overflights was mapped over the APE in Attachments A and B respectively. Attachment A shows that the APE areas closest to the airport are already dense with overflights but the flights become more disperse as the APE moves to the southwest. However, Attachment B, which displays a year of arrival radar tracks, show that the APE is already heavily overflown over the full extent of the APE.

For more information on the analyses performed as a part of the Draft EA, please visit <u>www.faabostonworkshops.com</u> for a copy of the Draft EA. More information on the noise analysis can be found at <u>www.faabostonworkshops.com/noise-visualization/</u> and in Sections 3.4.6 and 4.6 of the Draft EA. The Noise Modeling Technical Report is included in Appendix D of the Draft EA.



SOURCE: Esri; RoVolus, 2021; ESA, 2021



Boston Logan RNAV (GPS) RWY 4L EA



SOURCE: Esri; RoVolus, 2021; ESA, 2021



Finding of No Adverse Effect Criteria

In order to establish a Finding of No Adverse Effect, the Proposed Action must not meet any of the criteria spelled out in the FAA's Section 106 Handbook, which are based on criteria in ACHP's section 106 regulations in 36 CFR Part 800. This section presents why the Proposed Action does not meet any of these criteria.

- Does the Proposed Action physically destroy or damage the property?
 - The Proposed Action will not have any physical impact on any property. The Proposed Action changes the location of arrival flights in the airspace around Boston Logan International Airport.
- Does the Proposed Action alter the property in any way that is consistent with the Secretary of the Interior's Standards for Treatment of Historic Properties (36 CFR Part 68)?
 - The Standards guide the design and implementation of physical changes to historic properties. This may include changes in use, material repair or substitution, or modification of historically important features. The Proposed Action is located in the airspace above historic resources does not result in any changes in use, material alteration, or physical modifications to these resources.
- Does the Proposed Action remove a property from its historic location?
 - \circ The Proposed Action does not remove any property from its location.
- Does the Proposed Action change the character of the property's use, or of physical features within the property's setting that contribute to its historic significance?
 - The Proposed Action does not change the character of a property's use or any physical features in any historical property's setting.
 - Any changes to setting as a result of the Proposed action would be audible or visual features which are discussed in the following criterion.
- Does the Proposed Action introduce an atmospheric, audible, or visual feature to the area that would diminish the integrity of the property's significant historic features?
 - Audible: there will not be an introduction of audible noise as a result of the Proposed Action. Furthermore, the noise impacts of the Proposed Action on all of the historic resources in the APE will either decrease noise exposure or cause increases that are orders of magnitude below the significance thresholds for DNL aircraft noise as described in FAA Order 1050.1F and therefore will not cause an introduction of audible impact on any of the properties.
 - Visual: there will not be an introduction of visual impacts as a result of the Proposed Action. Furthermore, the entire APE currently experiences 268 average daily overflights as described in the above analysis. The Proposed Action will add less than 1 additional overflight per day. This increase will not change the current visual features of any historic resource in the APE, as depicted in Attachment B.
- Does the Proposed Action result in neglect of a property which would result in its deterioration, transfer, sale or lease?

• The Proposed Action will not cause any property to be sold or transferred.

Given the results discussed in this letter, the FAA is putting forth at this point a Proposed Finding of No Adverse Effect. This determination is based on the findings discussed in this letter, which includes that none of the NRHP listed properties reviewed herein were found to have a "quiet setting" as described in the FAA's Section 106 Handbook. Furthermore, the net change in aircraft operations as a result of the Proposed Action would be minimal and would not cause an adverse effect, including no physical impacts and no introduction of audible or visual impacts within the APE.

Public Meetings, Comments, and Consultation

The FAA conducted Virtual Public Workshops for the Draft EA on October 23rd, and October 28th, 2020. By attending the Virtual Public Workshops, participants were provided with an overview of the Draft EA which includes results from the noise analysis performed to assess the potential noise impacts of the Proposed Action on historic resources and populations located within the General Study Area. The MHC concurred with the APE on December 8, 2020 so the impacts were shown for historic resources throughout the entire Study Area. During the meeting, the FAA responded to a large number of questions from the community. These meetings were recorded and remain on the FAA's YouTube page for interested community members to review. During the meeting and other forms of engagement, the FAA received over 40 comments regarding the Proposed Action. The FAA is currently reviewing and developing responses to these comments to be shared with the public as part of the Final Environmental Assessment but it should be noted that none of the comments mention any potential impact to historic resources from the Proposed Action.

We look forward to hearing back from you on the FAA's proposed finding. We welcome the input from consulting parties on the historic properties considered as part of the analysis and on the finding itself. If you have any additional comments or questions on this undertaking, please contact me at veronda.johnson@faa.gov or at the address below.

Sincerely,

Veronda Johnson Eastern Service Center Federal Aviation Administration Operations Support Group AJV-E250 1701 Columbia Avenue College Park, GA 30337



U.S. Department of Transportation

Eastern Service Center

1701 Columbia Avenue College Park, Georgia 30337

Federal Aviation Administration

June 9, 2021

Boston Planning & Development Agency 1 City Hall Square 9th Floor Boston, MA 02201

Proposed Finding of No Adverse Effect for the Boston Logan International Airport RNAV (GPS) RWY 4L Approach Procedure, Boston, MA

To Whom It May Concern,

The Federal Aviation Administration (FAA) is evaluating a new proposed Area Navigation (RNAV) Global Positioning System (GPS) instrument approach procedure at Boston Logan International Airport (BOS). This new procedure would allow for aircraft to land onto Runway 4L with GPS technological automation as well as allow for landing during low visibility conditions. These additional procedural capabilities would increase the safety and efficiency of the airspace around BOS.

Pursuant to 36 CFR 800.4(a), the FAA previously consulted with the Massachusetts Historical Commission to identify the Area of Potential Effects for this undertaking. In continuing with our responsibilities under Section 106 of the National Historic Preservation Act and its implementing regulations, the FAA invites you to participate as a consulting parting and submits this assessment of adverse effects, which concludes with a proposed Finding of No Adverse Effects and our supporting rationale for that finding. The FAA seeks your views or comments on this finding, which can be addressed to the FAA using the email or address given at the conclusion of this letter. Pursuant to 36 CFR 800.5(c), please provide any comments within 30 days from receipt of this letter.

Project Background

As described in greater detail in the FAA's Draft Environmental Assessment (EA), which can be accessed at <u>www.faabostonworkshops.com</u>, the FAA is evaluating a new proposed Area Navigation (RNAV) Global Positioning System (GPS) instrument approach procedure at BOS. This new procedure, which is depicted in Attachments A and B, is needed to allow aircraft to land onto Runway 4L with GPS technological automation. The current absence of an RNAV procedure to Runway 4L precludes use of the runway during low visibility conditions. The proposed procedure route is an overlay of existing arrivals and is expected to lead to a net increase of 255 annual arrivals to BOS generally, which represents 0.1% of the total annual arrivals, and an increase of 359 annual arrivals specifically to Runway 4L. These additional

procedural capabilities would increase the safety and efficiency of the airspace around BOS. Publication of the proposed procedure would constitute an undertaking under Section 106 of the National Historic Preservation Act (NHPA).

Regulatory Overview

Under NEPA, the FAA is responsible for analyzing the impacts of its action on historical, architectural, archeological and cultural resources as part of its broader review of the human environment. Because the National Historic Preservation Act (NHPA) is the principal statute concerning such resources, most of this analysis is conducted in coordination with the process under Section 106 of the NHPA, which requires federal agencies to consider the effects of their projects on properties listed, or eligible for listing, in the National Register of Historic Places (NRHP). As this is an FAA Action, the FAA document *Section 106 of the National Historic Properties under Section 106 of the National Historic Properties under Section 106 of the National Historic Preservation Act* was consulted and referenced in order to make this determination.

Review of Historic/Eligible Properties

The National Register of Historic Places (NRHP), the Massachusetts Historical Commission, and the Boston Landmarks Commission's data sources were used to gather a comprehensive directory of all potential historic and cultural resources within the APE. A total of 19 properties within the APE were found to be listed in the National Register of Historic Places as historic districts or individual properties in accordance with the criteria described in the NHPA. These 19 properties are identified and described in Table 1. A total of 4,184 state and local designated properties were identified within the APE and are summarized by their location in Table 2. These 4,184 properties represent the group of potential resources that would be evaluated for National Register eligibility. For the purposes of this proposed finding, we assume all of these properties are eligible for the National Register and propose a finding of no adverse effect for all properties within the APE currently listed, determined eligible for listing, and assumed eligible for listing in the NRHP.

NRHP Property Name	Brief Property Description
Milton Cemetery	Milton Cemetery contains some of the best examples of funerary art from the colonial times to the Victorian era. An historic garden cemetery, it was established as the Town's only cemetery in 1672.
Spring Brook Cemetery	The most prominent structure in the cemetery, Card Memorial Chapel, was designed by Charles Eastman & built in 1898 and funded by Simon & Mary Card in memory of their daughter Lulu.
Dorchester Park	Dorchester Park is a historic park bounded by Dorchester Avenue, Richmond, Adams and Richview Streets in the Dorchester neighborhood of Boston, Massachusetts.

Table 1: National Register of Historic Places Properties within the APE

NRHP Property Name	Brief Property Description
DorchesterMilton Lower Mills Industrial District (Boundary Increase)	The Dorchester-Milton Lower Mills Industrial District is a historic district on both sides of the Neponset River in the Dorchester area of Boston and in the town of Milton, Massachusetts. It encompasses an industrial factory complex, most of which was historically associated with the Walter Baker & Company, the first major maker of chocolate products in the United States.
Savin Hill Historic District	The Savin Hill Historic District is significant for its association with the development of the area from a mid-19th century speculative housing development for Boston's upper-middle class to a close-knot neighborhood of residents from diverse socioeconomic backgrounds. The surviving historic resources catalogue Savin Hill's rich history and remain a cohesive collection of well-preserved historic homes. The district further attains significance as an intact collection of buildings representing a full range of architectural styles.
Blue Hills Parkway	The Blue Hills Parkway, a 1.5-mile-long boulevard in Boston and Milton, is significant as one of the earliest connecting parkways designed for the Metropolitan Parks Commission (MPC) by Olmsted, Olmsted and Eliot and its successor firm, Olmsted Brothers, and it is emblematic of the firm's principles of parkway creation. A divided highway that runs directly south through early 20"-century residential neighborhoods, the Blue Hills Parkway directly connects the Blue Hills Reservation (the largest open space in Metropolitan Boston) with Boston, the Neponset River Reservation, and Truman Parkway.
Blue Hills Reservation Parkways-Metropolitan Park System of Greater Boston	The Metropolitan Park System of Greater Boston, in Massachusetts, is especially noteworthy because it is the first regional park system in the United States.
Foxborough Pumping Station	The Foxborough Pumping Station is a historic water pumping station at 25 Pumping Station Road in Foxborough, Massachusetts. Its main pumphouse was designed by Ernest Boyden, a regionally-known architect of water supply systems, and was built in 1891; it is a brick structure with Queen Anne styling. The station also includes several historic wells, a period garage, and the man- made Fales Pond, a once-dammed section of the Neponset Reservoir near the pumphouse.
Old Harbor Reservation Parkways, Metropolitan Park System of Greater Boston	The Old Harbor Reservation Parkways are three historic roads in the Old Harbor area of Boston. They are part of the Boston parkway system designed by Frederick Law Olmsted.
Dorchester-Milton Lower Mills Industrial District	The Dorchester-Milton Lower Mills Industrial District is located on both sides of the Neponset River in the Dorchester area of Boston and in the town of Milton, Massachusetts. It encompasses an industrial factory complex, most of which was historically associated with the Walter Baker & Company, the first major maker of chocolate products in the United States.

NRHP Property Name	Brief Property Description
Furnace Village Historic District	The Furnace Village Historic District encompasses the historic colonial industrial area in Easton, Massachusetts. At its center is at the intersection of Foundry street, South street and Poquanticut Avenue. The area was settled in 1723, with industrial activity beginning in 1742. The iron furnace was established in 1751, and for industrial purposes, continued in the 19th century. In addition to the colonial era, there is also an employee of the housing of the 19th century.
Milton Centre Historic District	The Milton Centre Historic District is both the historical and geographic center of the town of Milton. The 23-acre historic district includes Canton Avenue between Reedsdale Road and Thacher and Highland Streets. Milton Centre is historically significant for its association with the development of the town following the relocation of the third meeting house to Academy Hill in 1728, and the subsequent shift of the town center from Milton Hill.
Scott's Woods Historic District	Scott's Woods Historic District is the area of Hillside, Harland and Forest Streets between Randolph Avenue and the ridge between Hancock and Bugbee Hills, now the MDC Blue Hills Reservation. The Scott's Woods Historic District in Milton, Massachusetts is a semirural, residential area that contains a significant concentration of 18th, 19th and early 20th century dwellings and barns that reflect the Town's agricultural and architectural history from 1713 to 1932, the district's period of significance. Originally known as the "Blue Hill Land," a three thousand-acre tract of land sold by the town of Boston in 1711 to four residents of Milton. The area in the southwest part of Milton is thought to have been named for a member of the Scott Family that lived in the area in the early eighteenth century. Hillside Street, named for being literally on the 'side' of Blue Hill, is the major thoroughfare in the district.
Milton Hill Historic District	Milton Hill Historic District is located on a lofty hill between Milton Village and Algerene Corner, formerly known as Union Square at the junction of Adams and Centre Streets. The Milton Hill Historic District in Milton, Massachusetts is a residential area that contains the most significant concentration of 19th and early 20th century high-style and period architecture in the Town. As Milton developed from a rural community to a prosperous suburb of Boston, Milton Hill, throughout the period of significance, 1740-1945, has been the home of wealthy Milton and Boston business, professional and civic leaders. It began its rise to prominence as an estate district in 1742 with the establishment of Governor Thomas Hutchinson's summer estate. For the next two hundred years, attracted by the rural scenery afforded by the Neponset River and the Blue Hills and the proximity of the Town's commercial center and Boston, prominent families built country homes, a number designed by noted national and local architects, including William Ralph Emerson; Peabody and Steams; and Perry, Shaw and Hepbum.

NRHP Property Name	Brief Property Description	
Harrison Square Historic District	Clam Point (also known as Harrison Square) is a sub-neighborhood in Boston, noteworthy for its collection of substantial Italianate Mansard residences. The area is known to have the most cohesive, intact collection of mansion-scale, mid-19 th century housing in Boston, and includes the Park, Everett, Freeport, Mill, Ashland, Blanche streets, and Victory Road in the Dorchester neighborhood of Boston.	
Canton Corner Historic District	The Canton Corner Historic District encompasses the historic town center of Canton, Massachusetts. Centered on the junction of Pleasant and Washington streets, it includes more than 25 properties and 170 acres (69 ha), whose architectural history spans 250 years of occupation and includes the town's major civic buildings.	
Ponkapoag Camp of Appalachian Mountain Club	The Appalachian Mountain Club Ponkapoag Camp is one of the original camps of the oldest outing club in the United States, founded in 1876. Early in the twentieth century tent sites were established at the east end of Ponkapoag Pond in the Blue Hills reservation by the president of the Appalachian Mountain Club, William Rogers, who was also an M.D.C. commissioner. The camp represents an early outing club's architecture for "roughing it" and are important as such structures succumb to fire, rot, and vandalism.	
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For more information on the analyses performed as a part of the Draft EA, please visit <u>www.faabostonworkshops.com</u> for a copy of the Draft EA. More information on the noise analysis can be found at <u>www.faabostonworkshops.com/noise-visualization/</u> and in Sections 3.4.6 and 4.6 of the Draft EA. The Noise Modeling Technical Report is included in Appendix D of the Draft EA.



SOURCE: Esri; RoVolus, 2021; ESA, 2021



Boston Logan RNAV (GPS) RWY 4L EA



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Finding of No Adverse Effect Criteria

In order to establish a Finding of No Adverse Effect, the Proposed Action must not meet any of the criteria spelled out in the FAA's Section 106 Handbook, which are based on criteria in ACHP's section 106 regulations in 36 CFR Part 800. This section presents why the Proposed Action does not meet any of these criteria.

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 - The Proposed Action will not have any physical impact on any property. The Proposed Action changes the location of arrival flights in the airspace around Boston Logan International Airport.
- Does the Proposed Action alter the property in any way that is consistent with the Secretary of the Interior's Standards for Treatment of Historic Properties (36 CFR Part 68)?
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- Does the Proposed Action remove a property from its historic location?
 - \circ The Proposed Action does not remove any property from its location.
- Does the Proposed Action change the character of the property's use, or of physical features within the property's setting that contribute to its historic significance?
 - The Proposed Action does not change the character of a property's use or any physical features in any historical property's setting.
 - Any changes to setting as a result of the Proposed action would be audible or visual features which are discussed in the following criterion.
- Does the Proposed Action introduce an atmospheric, audible, or visual feature to the area that would diminish the integrity of the property's significant historic features?
 - Audible: there will not be an introduction of audible noise as a result of the Proposed Action. Furthermore, the noise impacts of the Proposed Action on all of the historic resources in the APE will either decrease noise exposure or cause increases that are orders of magnitude below the significance thresholds for DNL aircraft noise as described in FAA Order 1050.1F and therefore will not cause an introduction of audible impact on any of the properties.
 - Visual: there will not be an introduction of visual impacts as a result of the Proposed Action. Furthermore, the entire APE currently experiences 268 average daily overflights as described in the above analysis. The Proposed Action will add less than 1 additional overflight per day. This increase will not change the current visual features of any historic resource in the APE, as depicted in Attachment B.
- Does the Proposed Action result in neglect of a property which would result in its deterioration, transfer, sale or lease?

• The Proposed Action will not cause any property to be sold or transferred.

Given the results discussed in this letter, the FAA is putting forth at this point a Proposed Finding of No Adverse Effect. This determination is based on the findings discussed in this letter, which includes that none of the NRHP listed properties reviewed herein were found to have a "quiet setting" as described in the FAA's Section 106 Handbook. Furthermore, the net change in aircraft operations as a result of the Proposed Action would be minimal and would not cause an adverse effect, including no physical impacts and no introduction of audible or visual impacts within the APE.

Public Meetings, Comments, and Consultation

The FAA conducted Virtual Public Workshops for the Draft EA on October 23rd, and October 28th, 2020. By attending the Virtual Public Workshops, participants were provided with an overview of the Draft EA which includes results from the noise analysis performed to assess the potential noise impacts of the Proposed Action on historic resources and populations located within the General Study Area. The MHC concurred with the APE on December 8, 2020 so the impacts were shown for historic resources throughout the entire Study Area. During the meeting, the FAA responded to a large number of questions from the community. These meetings were recorded and remain on the FAA's YouTube page for interested community members to review. During the meeting and other forms of engagement, the FAA received over 40 comments regarding the Proposed Action. The FAA is currently reviewing and developing responses to these comments to be shared with the public as part of the Final Environmental Assessment but it should be noted that none of the comments mention any potential impact to historic resources from the Proposed Action.

We look forward to hearing back from you on the FAA's proposed finding. We welcome the input from consulting parties on the historic properties considered as part of the analysis and on the finding itself. If you have any additional comments or questions on this undertaking, please contact me at veronda.johnson@faa.gov or at the address below.

Sincerely,

Veronda Johnson Eastern Service Center Federal Aviation Administration Operations Support Group AJV-E250 1701 Columbia Avenue College Park, GA 30337


U.S. Department of Transportation Federal Aviation

Administration

Eastern Service Center

1701 Columbia Avenue College Park, Georgia 30337

June 9, 2021

Canton Historical Commission 801 Washington Street Canton, MA 02021

Proposed Finding of No Adverse Effect for the Boston Logan International Airport RNAV (GPS) RWY 4L Approach Procedure, Boston, MA

To Whom It May Concern,

The Federal Aviation Administration (FAA) is evaluating a new proposed Area Navigation (RNAV) Global Positioning System (GPS) instrument approach procedure at Boston Logan International Airport (BOS). This new procedure would allow for aircraft to land onto Runway 4L with GPS technological automation as well as allow for landing during low visibility conditions. These additional procedural capabilities would increase the safety and efficiency of the airspace around BOS.

Pursuant to 36 CFR 800.4(a), the FAA previously consulted with the Massachusetts Historical Commission to identify the Area of Potential Effects for this undertaking. In continuing with our responsibilities under Section 106 of the National Historic Preservation Act and its implementing regulations, the FAA invites you to participate as a consulting parting and submits this assessment of adverse effects, which concludes with a proposed Finding of No Adverse Effects and our supporting rationale for that finding. The FAA seeks your views or comments on this finding, which can be addressed to the FAA using the email or address given at the conclusion of this letter. Pursuant to 36 CFR 800.5(c), please provide any comments within 30 days from receipt of this letter.

Project Background

As described in greater detail in the FAA's Draft Environmental Assessment (EA), which can be accessed at <u>www.faabostonworkshops.com</u>, the FAA is evaluating a new proposed Area Navigation (RNAV) Global Positioning System (GPS) instrument approach procedure at BOS. This new procedure, which is depicted in Attachments A and B, is needed to allow aircraft to land onto Runway 4L with GPS technological automation. The current absence of an RNAV procedure to Runway 4L precludes use of the runway during low visibility conditions. The proposed procedure route is an overlay of existing arrivals and is expected to lead to a net increase of 255 annual arrivals to BOS generally, which represents 0.1% of the total annual arrivals, and an increase of 359 annual arrivals specifically to Runway 4L. These additional

procedural capabilities would increase the safety and efficiency of the airspace around BOS. Publication of the proposed procedure would constitute an undertaking under Section 106 of the National Historic Preservation Act (NHPA).

Regulatory Overview

Under NEPA, the FAA is responsible for analyzing the impacts of its action on historical, architectural, archeological and cultural resources as part of its broader review of the human environment. Because the National Historic Preservation Act (NHPA) is the principal statute concerning such resources, most of this analysis is conducted in coordination with the process under Section 106 of the NHPA, which requires federal agencies to consider the effects of their projects on properties listed, or eligible for listing, in the National Register of Historic Places (NRHP). As this is an FAA Action, the FAA document *Section 106 of the National Historic Properties under Section 106 of the National Historic Properties under Section 106 of the National Historic Preservation Act* was consulted and referenced in order to make this determination.

Review of Historic/Eligible Properties

The National Register of Historic Places (NRHP), the Massachusetts Historical Commission, and the Boston Landmarks Commission's data sources were used to gather a comprehensive directory of all potential historic and cultural resources within the APE. A total of 19 properties within the APE were found to be listed in the National Register of Historic Places as historic districts or individual properties in accordance with the criteria described in the NHPA. These 19 properties are identified and described in Table 1. A total of 4,184 state and local designated properties were identified within the APE and are summarized by their location in Table 2. These 4,184 properties represent the group of potential resources that would be evaluated for National Register eligibility. For the purposes of this proposed finding, we assume all of these properties are eligible for the National Register and propose a finding of no adverse effect for all properties within the APE currently listed, determined eligible for listing, and assumed eligible for listing in the NRHP.

NRHP Property Name	Brief Property Description
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Dorchester Park	Dorchester Park is a historic park bounded by Dorchester Avenue, Richmond, Adams and Richview Streets in the Dorchester neighborhood of Boston, Massachusetts.

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Milton Hill Historic District	Milton Hill Historic District is located on a lofty hill between Milton Village and Algerene Corner, formerly known as Union Square at the junction of Adams and Centre Streets. The Milton Hill Historic District in Milton, Massachusetts is a residential area that contains the most significant concentration of 19th and early 20th century high-style and period architecture in the Town. As Milton developed from a rural community to a prosperous suburb of Boston, Milton Hill, throughout the period of significance, 1740-1945, has been the home of wealthy Milton and Boston business, professional and civic leaders. It began its rise to prominence as an estate district in 1742 with the establishment of Governor Thomas Hutchinson's summer estate. For the next two hundred years, attracted by the rural scenery afforded by the Neponset River and the Blue Hills and the proximity of the Town's commercial center and Boston, prominent families built country homes, a number designed by noted national and local architects, including William Ralph Emerson; Peabody and Steams; and Perry, Shaw and Hepbum.

NRHP Property Name	Brief Property Description
Harrison Square Historic District	Clam Point (also known as Harrison Square) is a sub-neighborhood in Boston, noteworthy for its collection of substantial Italianate Mansard residences. The area is known to have the most cohesive, intact collection of mansion-scale, mid-19 th century housing in Boston, and includes the Park, Everett, Freeport, Mill, Ashland, Blanche streets, and Victory Road in the Dorchester neighborhood of Boston.
Canton Corner Historic District	The Canton Corner Historic District encompasses the historic town center of Canton, Massachusetts. Centered on the junction of Pleasant and Washington streets, it includes more than 25 properties and 170 acres (69 ha), whose architectural history spans 250 years of occupation and includes the town's major civic buildings.
Ponkapoag Camp of Appalachian Mountain Club	The Appalachian Mountain Club Ponkapoag Camp is one of the original camps of the oldest outing club in the United States, founded in 1876. Early in the twentieth century tent sites were established at the east end of Ponkapoag Pond in the Blue Hills reservation by the president of the Appalachian Mountain Club, William Rogers, who was also an M.D.C. commissioner. The camp represents an early outing club's architecture for "roughing it" and are important as such structures succumb to fire, rot, and vandalism.
Boyden, Seth, House	The Seth Boyden House is a historic house at 135 Oak Street in Foxborough, Massachusetts. The home is significant for its unusual architectural design as well for its association with the Boyden family, whose members were prominent locally and regionally in the 18 th and 19 th century,
Borderland Historic District	The Borderland Historic District was the 1,200 acre estate of Blanche Ames Ames. The mansion was constructed in 1910 and the property includes a system of ponds, dams, and causeways surrounding the mansion. The exterior of the mansion was built using locally cut field stones. The district is considered significant due to its connection to the estate of Blanche Ames Ames. She was a inventor who was involved in art, farming, engineering and politics. She designed a hexagonal lumber cutter, patented a method for ensnaring airplanes in wires hung from balloons during World War II, and developed a water anti-pollution device in the late 1960s.
SOURCE: National Register Database; <u>http</u> Associates, 2021.	bs://www.nps.gov/subjects/nationalregister/database-research.htm#table, Adapted by Environmental Science

Town	Number of State & Local Designated Properties
Boston	838
Canton	445
Easton	142
Foxborough	194
Mansfield	190
Milton	1,559
Norton	16
Quincy	2
Randolph	225
Sharon	491
Stoughton	82
Grand Total	4,184

Table 2: Number of State & Local Designated Properties within the APE

Assessment of Noise and Visual Impacts by Proposed Action

In our earlier correspondence, the FAA noted that we are "considering the possibility that changes in noise levels or additional visual impacts from an increase in overflights could alter the character or use of certain kinds of historic properties where a quiet setting is a generally recognized purpose and attribute." In order to address this possibility, an assessment was done to further quantify the auditory and visual impacts on the historic properties within the Area of Potential Effects.

In order to assess the auditory impacts, the FAA used a metric known as Day-night Average Sound Level (DNL). DNL is the standard noise metric used for all FAA studies of aviation noise exposure in airport communities and was used here to assess the potential impact on every identified historic property within the Area of Potential Effects.

DNL is a 24-hour, time-weighted average noise metric, expressed in terms of decibel units of sound heard by the human ear, which accounts for the noise levels of individual aircraft events, the number of times those events occur, and the time of day they occur. DNL is a graphical representation of the distribution of noise over the surrounding area from an airport's average operations. There is one unique modification in that there is a "noise penalty" of any noise generated during "nighttime hours." In the calculation of DNL, for each hour during nighttime hours (10:00 p.m. to 7:00 a.m.), the sound levels are increased by a 10 decibel-weighting penalty (equivalent to a 10-fold increase in aircraft operations) before the 24-hour value is computed. The weighting penalty accounts for the more intrusive nature of noise during the nighttime hours. The significance thresholds for aircraft noise for DNL, as spelled out in FAA Order 1050.1F, are given below.

• For DNL 65 dB and higher: +1.5 dB

This threshold has been used by FAA for many years and is applied at airports across the country and will be used to determine noise impacts on historic properties within the APE. The use of this threshold is consistent with the Section 106 analyses for many FAA projects, including the Northern California and Southern Florida Metroplex projects, two of FAA's most recent projects that also modified the flight path of aircraft through the airspace.

According to FAA Order 1050.1F, a significant noise impact could occur to noise sensitive land uses if it had a level of DNL 65 dB with the Proposed Action and also experienced an increase of 1.5 dB when compared to the No Action Alternative. The FAA also recognizes that, in limited instances, resources that have a "quiet setting" as a qualifying attribute may be adversely affected by noise increases that would otherwise not be significant. There are no NRHP properties with a noise exposure of DNL 65 that experience a 1.5 dB noise increase. Further, the NRHP properties were reviewed and none of them were found to have a "quiet setting" as described in the FAA's Section 106 Handbook.

When the analysis is expanded to include the state and local designated properties that are assumed to be eligible for the NRHP, there are no properties that experience a 1.5 dB noise level increase with a proposed action noise level of DNL 65 or greater. As indicated in Table 4.6-3 of the Draft EA, the maximum exposed noise level *decreases* as a result of the Proposed Project

when compared to the No Action Alternative when considering towns/neighborhoods as a whole. Furthermore, as described below, the largest proposed noise changes within the APE are multiple orders of magnitude below the noise thresholds given within FAA Order 1050.1F.

The FAA's noise analysis demonstrates that historic resources will generally experience equivalent noise exposure with the addition of the Proposed Action. Specifically, the maximum change in noise exposure for a historic property is less than 0.2 dB across all historic properties in the APE. For example, one of these properties has a value of 22 dB under the No Action Alternative and 22.1 dB with the Proposed Procedure. Importantly, as depicted in Attachment A, the procedure is an overlay of existing traffic to Runway 4L and is only expected to lead to an annual net increase of 255 arrivals to BOS, out of a current total of 205,837 arrivals. In sum, the FAA will not be introducing audible impacts to resources not already experiencing noise impacts, and any change in noise exposure will be minimal.

In order to assess the potential visual impacts of the historic properties, the data for a year of overflights at BOS from the previous memorandum was reassessed to compare to the newly designated APE. Considering one year of radar track data, the APE experiences 78,879 arrival and 18,989 departure overflights annually. On an average daily basis that corresponds to 216.1 arrival and 52.0 departure overflights. The Proposed Action is estimated to add 255 annual arrival overflights or 0.70 daily average overflights to the APE. When considering the APE as a whole, the increase in overflights would amount to just a 0.26% increase in overflights and would not introduce audible or visual noise in the APE. In order to confirm that the overflights over the APE were not focused on particular historic resources in the APE, the dataset of departure overflights and arrival overflights was mapped over the APE in Attachments A and B respectively. Attachment A shows that the APE areas closest to the airport are already dense with overflights but the flights become more disperse as the APE moves to the southwest. However, Attachment B, which displays a year of arrival radar tracks, show that the APE is already heavily overflown over the full extent of the APE.

For more information on the analyses performed as a part of the Draft EA, please visit <u>www.faabostonworkshops.com</u> for a copy of the Draft EA. More information on the noise analysis can be found at <u>www.faabostonworkshops.com/noise-visualization/</u> and in Sections 3.4.6 and 4.6 of the Draft EA. The Noise Modeling Technical Report is included in Appendix D of the Draft EA.



SOURCE: Esri; RoVolus, 2021; ESA, 2021



Boston Logan RNAV (GPS) RWY 4L EA



SOURCE: Esri; RoVolus, 2021; ESA, 2021



Finding of No Adverse Effect Criteria

In order to establish a Finding of No Adverse Effect, the Proposed Action must not meet any of the criteria spelled out in the FAA's Section 106 Handbook, which are based on criteria in ACHP's section 106 regulations in 36 CFR Part 800. This section presents why the Proposed Action does not meet any of these criteria.

- Does the Proposed Action physically destroy or damage the property?
 - The Proposed Action will not have any physical impact on any property. The Proposed Action changes the location of arrival flights in the airspace around Boston Logan International Airport.
- Does the Proposed Action alter the property in any way that is consistent with the Secretary of the Interior's Standards for Treatment of Historic Properties (36 CFR Part 68)?
 - The Standards guide the design and implementation of physical changes to historic properties. This may include changes in use, material repair or substitution, or modification of historically important features. The Proposed Action is located in the airspace above historic resources does not result in any changes in use, material alteration, or physical modifications to these resources.
- Does the Proposed Action remove a property from its historic location?
 - \circ The Proposed Action does not remove any property from its location.
- Does the Proposed Action change the character of the property's use, or of physical features within the property's setting that contribute to its historic significance?
 - The Proposed Action does not change the character of a property's use or any physical features in any historical property's setting.
 - Any changes to setting as a result of the Proposed action would be audible or visual features which are discussed in the following criterion.
- Does the Proposed Action introduce an atmospheric, audible, or visual feature to the area that would diminish the integrity of the property's significant historic features?
 - Audible: there will not be an introduction of audible noise as a result of the Proposed Action. Furthermore, the noise impacts of the Proposed Action on all of the historic resources in the APE will either decrease noise exposure or cause increases that are orders of magnitude below the significance thresholds for DNL aircraft noise as described in FAA Order 1050.1F and therefore will not cause an introduction of audible impact on any of the properties.
 - Visual: there will not be an introduction of visual impacts as a result of the Proposed Action. Furthermore, the entire APE currently experiences 268 average daily overflights as described in the above analysis. The Proposed Action will add less than 1 additional overflight per day. This increase will not change the current visual features of any historic resource in the APE, as depicted in Attachment B.
- Does the Proposed Action result in neglect of a property which would result in its deterioration, transfer, sale or lease?

• The Proposed Action will not cause any property to be sold or transferred.

Given the results discussed in this letter, the FAA is putting forth at this point a Proposed Finding of No Adverse Effect. This determination is based on the findings discussed in this letter, which includes that none of the NRHP listed properties reviewed herein were found to have a "quiet setting" as described in the FAA's Section 106 Handbook. Furthermore, the net change in aircraft operations as a result of the Proposed Action would be minimal and would not cause an adverse effect, including no physical impacts and no introduction of audible or visual impacts within the APE.

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June 9, 2021

Office of the Planning Board Memorial Hall 801 Washington Street 2nd Floor Canton, MA 02021

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Milton Hill Historic District	Milton Hill Historic District is located on a lofty hill between Milton Village and Algerene Corner, formerly known as Union Square at the junction of Adams and Centre Streets. The Milton Hill Historic District in Milton, Massachusetts is a residential area that contains the most significant concentration of 19th and early 20th century high-style and period architecture in the Town. As Milton developed from a rural community to a prosperous suburb of Boston, Milton Hill, throughout the period of significance, 1740-1945, has been the home of wealthy Milton and Boston business, professional and civic leaders. It began its rise to prominence as an estate district in 1742 with the establishment of Governor Thomas Hutchinson's summer estate. For the next two hundred years, attracted by the rural scenery afforded by the Neponset River and the Blue Hills and the proximity of the Town's commercial center and Boston, prominent families built country homes, a number designed by noted national and local architects, including William Ralph Emerson; Peabody and Steams; and Perry, Shaw and Hepbum.

NRHP Property Name	Brief Property Description
Harrison Square Historic District	Clam Point (also known as Harrison Square) is a sub-neighborhood in Boston, noteworthy for its collection of substantial Italianate Mansard residences. The area is known to have the most cohesive, intact collection of mansion-scale, mid-19 th century housing in Boston, and includes the Park, Everett, Freeport, Mill, Ashland, Blanche streets, and Victory Road in the Dorchester neighborhood of Boston.
Canton Corner Historic District	The Canton Corner Historic District encompasses the historic town center of Canton, Massachusetts. Centered on the junction of Pleasant and Washington streets, it includes more than 25 properties and 170 acres (69 ha), whose architectural history spans 250 years of occupation and includes the town's major civic buildings.
Ponkapoag Camp of Appalachian Mountain Club	The Appalachian Mountain Club Ponkapoag Camp is one of the original camps of the oldest outing club in the United States, founded in 1876. Early in the twentieth century tent sites were established at the east end of Ponkapoag Pond in the Blue Hills reservation by the president of the Appalachian Mountain Club, William Rogers, who was also an M.D.C. commissioner. The camp represents an early outing club's architecture for "roughing it" and are important as such structures succumb to fire, rot, and vandalism.
Boyden, Seth, House	The Seth Boyden House is a historic house at 135 Oak Street in Foxborough, Massachusetts. The home is significant for its unusual architectural design as well for its association with the Boyden family, whose members were prominent locally and regionally in the 18 th and 19 th century,
Borderland Historic District	The Borderland Historic District was the 1,200 acre estate of Blanche Ames Ames. The mansion was constructed in 1910 and the property includes a system of ponds, dams, and causeways surrounding the mansion. The exterior of the mansion was built using locally cut field stones. The district is considered significant due to its connection to the estate of Blanche Ames Ames. She was a inventor who was involved in art, farming, engineering and politics. She designed a hexagonal lumber cutter, patented a method for ensnaring airplanes in wires hung from balloons during World War II, and developed a water anti-pollution device in the late 1960s.
SOURCE: National Register Database; <u>http</u> Associates, 2021.	bs://www.nps.gov/subjects/nationalregister/database-research.htm#table, Adapted by Environmental Science

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Grand Total	4,184

Table 2: Number of State & Local Designated Properties within the APE

Assessment of Noise and Visual Impacts by Proposed Action

In our earlier correspondence, the FAA noted that we are "considering the possibility that changes in noise levels or additional visual impacts from an increase in overflights could alter the character or use of certain kinds of historic properties where a quiet setting is a generally recognized purpose and attribute." In order to address this possibility, an assessment was done to further quantify the auditory and visual impacts on the historic properties within the Area of Potential Effects.

In order to assess the auditory impacts, the FAA used a metric known as Day-night Average Sound Level (DNL). DNL is the standard noise metric used for all FAA studies of aviation noise exposure in airport communities and was used here to assess the potential impact on every identified historic property within the Area of Potential Effects.

DNL is a 24-hour, time-weighted average noise metric, expressed in terms of decibel units of sound heard by the human ear, which accounts for the noise levels of individual aircraft events, the number of times those events occur, and the time of day they occur. DNL is a graphical representation of the distribution of noise over the surrounding area from an airport's average operations. There is one unique modification in that there is a "noise penalty" of any noise generated during "nighttime hours." In the calculation of DNL, for each hour during nighttime hours (10:00 p.m. to 7:00 a.m.), the sound levels are increased by a 10 decibel-weighting penalty (equivalent to a 10-fold increase in aircraft operations) before the 24-hour value is computed. The weighting penalty accounts for the more intrusive nature of noise during the nighttime hours. The significance thresholds for aircraft noise for DNL, as spelled out in FAA Order 1050.1F, are given below.

• For DNL 65 dB and higher: +1.5 dB

This threshold has been used by FAA for many years and is applied at airports across the country and will be used to determine noise impacts on historic properties within the APE. The use of this threshold is consistent with the Section 106 analyses for many FAA projects, including the Northern California and Southern Florida Metroplex projects, two of FAA's most recent projects that also modified the flight path of aircraft through the airspace.

According to FAA Order 1050.1F, a significant noise impact could occur to noise sensitive land uses if it had a level of DNL 65 dB with the Proposed Action and also experienced an increase of 1.5 dB when compared to the No Action Alternative. The FAA also recognizes that, in limited instances, resources that have a "quiet setting" as a qualifying attribute may be adversely affected by noise increases that would otherwise not be significant. There are no NRHP properties with a noise exposure of DNL 65 that experience a 1.5 dB noise increase. Further, the NRHP properties were reviewed and none of them were found to have a "quiet setting" as described in the FAA's Section 106 Handbook.

When the analysis is expanded to include the state and local designated properties that are assumed to be eligible for the NRHP, there are no properties that experience a 1.5 dB noise level increase with a proposed action noise level of DNL 65 or greater. As indicated in Table 4.6-3 of the Draft EA, the maximum exposed noise level *decreases* as a result of the Proposed Project

when compared to the No Action Alternative when considering towns/neighborhoods as a whole. Furthermore, as described below, the largest proposed noise changes within the APE are multiple orders of magnitude below the noise thresholds given within FAA Order 1050.1F.

The FAA's noise analysis demonstrates that historic resources will generally experience equivalent noise exposure with the addition of the Proposed Action. Specifically, the maximum change in noise exposure for a historic property is less than 0.2 dB across all historic properties in the APE. For example, one of these properties has a value of 22 dB under the No Action Alternative and 22.1 dB with the Proposed Procedure. Importantly, as depicted in Attachment A, the procedure is an overlay of existing traffic to Runway 4L and is only expected to lead to an annual net increase of 255 arrivals to BOS, out of a current total of 205,837 arrivals. In sum, the FAA will not be introducing audible impacts to resources not already experiencing noise impacts, and any change in noise exposure will be minimal.

In order to assess the potential visual impacts of the historic properties, the data for a year of overflights at BOS from the previous memorandum was reassessed to compare to the newly designated APE. Considering one year of radar track data, the APE experiences 78,879 arrival and 18,989 departure overflights annually. On an average daily basis that corresponds to 216.1 arrival and 52.0 departure overflights. The Proposed Action is estimated to add 255 annual arrival overflights or 0.70 daily average overflights to the APE. When considering the APE as a whole, the increase in overflights would amount to just a 0.26% increase in overflights and would not introduce audible or visual noise in the APE. In order to confirm that the overflights over the APE were not focused on particular historic resources in the APE, the dataset of departure overflights and arrival overflights was mapped over the APE in Attachments A and B respectively. Attachment A shows that the APE areas closest to the airport are already dense with overflights but the flights become more disperse as the APE moves to the southwest. However, Attachment B, which displays a year of arrival radar tracks, show that the APE is already heavily overflown over the full extent of the APE.

For more information on the analyses performed as a part of the Draft EA, please visit <u>www.faabostonworkshops.com</u> for a copy of the Draft EA. More information on the noise analysis can be found at <u>www.faabostonworkshops.com/noise-visualization/</u> and in Sections 3.4.6 and 4.6 of the Draft EA. The Noise Modeling Technical Report is included in Appendix D of the Draft EA.



SOURCE: Esri; RoVolus, 2021; ESA, 2021



Boston Logan RNAV (GPS) RWY 4L EA



SOURCE: Esri; RoVolus, 2021; ESA, 2021



Finding of No Adverse Effect Criteria

In order to establish a Finding of No Adverse Effect, the Proposed Action must not meet any of the criteria spelled out in the FAA's Section 106 Handbook, which are based on criteria in ACHP's section 106 regulations in 36 CFR Part 800. This section presents why the Proposed Action does not meet any of these criteria.

- Does the Proposed Action physically destroy or damage the property?
 - The Proposed Action will not have any physical impact on any property. The Proposed Action changes the location of arrival flights in the airspace around Boston Logan International Airport.
- Does the Proposed Action alter the property in any way that is consistent with the Secretary of the Interior's Standards for Treatment of Historic Properties (36 CFR Part 68)?
 - The Standards guide the design and implementation of physical changes to historic properties. This may include changes in use, material repair or substitution, or modification of historically important features. The Proposed Action is located in the airspace above historic resources does not result in any changes in use, material alteration, or physical modifications to these resources.
- Does the Proposed Action remove a property from its historic location?
 - \circ The Proposed Action does not remove any property from its location.
- Does the Proposed Action change the character of the property's use, or of physical features within the property's setting that contribute to its historic significance?
 - The Proposed Action does not change the character of a property's use or any physical features in any historical property's setting.
 - Any changes to setting as a result of the Proposed action would be audible or visual features which are discussed in the following criterion.
- Does the Proposed Action introduce an atmospheric, audible, or visual feature to the area that would diminish the integrity of the property's significant historic features?
 - Audible: there will not be an introduction of audible noise as a result of the Proposed Action. Furthermore, the noise impacts of the Proposed Action on all of the historic resources in the APE will either decrease noise exposure or cause increases that are orders of magnitude below the significance thresholds for DNL aircraft noise as described in FAA Order 1050.1F and therefore will not cause an introduction of audible impact on any of the properties.
 - Visual: there will not be an introduction of visual impacts as a result of the Proposed Action. Furthermore, the entire APE currently experiences 268 average daily overflights as described in the above analysis. The Proposed Action will add less than 1 additional overflight per day. This increase will not change the current visual features of any historic resource in the APE, as depicted in Attachment B.
- Does the Proposed Action result in neglect of a property which would result in its deterioration, transfer, sale or lease?

• The Proposed Action will not cause any property to be sold or transferred.

Given the results discussed in this letter, the FAA is putting forth at this point a Proposed Finding of No Adverse Effect. This determination is based on the findings discussed in this letter, which includes that none of the NRHP listed properties reviewed herein were found to have a "quiet setting" as described in the FAA's Section 106 Handbook. Furthermore, the net change in aircraft operations as a result of the Proposed Action would be minimal and would not cause an adverse effect, including no physical impacts and no introduction of audible or visual impacts within the APE.

Public Meetings, Comments, and Consultation

The FAA conducted Virtual Public Workshops for the Draft EA on October 23rd, and October 28th, 2020. By attending the Virtual Public Workshops, participants were provided with an overview of the Draft EA which includes results from the noise analysis performed to assess the potential noise impacts of the Proposed Action on historic resources and populations located within the General Study Area. The MHC concurred with the APE on December 8, 2020 so the impacts were shown for historic resources throughout the entire Study Area. During the meeting, the FAA responded to a large number of questions from the community. These meetings were recorded and remain on the FAA's YouTube page for interested community members to review. During the meeting and other forms of engagement, the FAA received over 40 comments regarding the Proposed Action. The FAA is currently reviewing and developing responses to these comments to be shared with the public as part of the Final Environmental Assessment but it should be noted that none of the comments mention any potential impact to historic resources from the Proposed Action.

We look forward to hearing back from you on the FAA's proposed finding. We welcome the input from consulting parties on the historic properties considered as part of the analysis and on the finding itself. If you have any additional comments or questions on this undertaking, please contact me at veronda.johnson@faa.gov or at the address below.

Sincerely,

Veronda Johnson Eastern Service Center Federal Aviation Administration Operations Support Group AJV-E250 1701 Columbia Avenue College Park, GA 30337



U.S. Department of Transportation Federal Aviation

Administration

Eastern Service Center

1701 Columbia Avenue College Park, Georgia 30337

June 9, 2021

Easton Historical Commission 136 Elm Street Easton, MA 02356

Proposed Finding of No Adverse Effect for the Boston Logan International Airport RNAV (GPS) RWY 4L Approach Procedure, Boston, MA

To Whom It May Concern,

The Federal Aviation Administration (FAA) is evaluating a new proposed Area Navigation (RNAV) Global Positioning System (GPS) instrument approach procedure at Boston Logan International Airport (BOS). This new procedure would allow for aircraft to land onto Runway 4L with GPS technological automation as well as allow for landing during low visibility conditions. These additional procedural capabilities would increase the safety and efficiency of the airspace around BOS.

Pursuant to 36 CFR 800.4(a), the FAA previously consulted with the Massachusetts Historical Commission to identify the Area of Potential Effects for this undertaking. In continuing with our responsibilities under Section 106 of the National Historic Preservation Act and its implementing regulations, the FAA invites you to participate as a consulting parting and submits this assessment of adverse effects, which concludes with a proposed Finding of No Adverse Effects and our supporting rationale for that finding. The FAA seeks your views or comments on this finding, which can be addressed to the FAA using the email or address given at the conclusion of this letter. Pursuant to 36 CFR 800.5(c), please provide any comments within 30 days from receipt of this letter.

Project Background

As described in greater detail in the FAA's Draft Environmental Assessment (EA), which can be accessed at <u>www.faabostonworkshops.com</u>, the FAA is evaluating a new proposed Area Navigation (RNAV) Global Positioning System (GPS) instrument approach procedure at BOS. This new procedure, which is depicted in Attachments A and B, is needed to allow aircraft to land onto Runway 4L with GPS technological automation. The current absence of an RNAV procedure to Runway 4L precludes use of the runway during low visibility conditions. The proposed procedure route is an overlay of existing arrivals and is expected to lead to a net increase of 255 annual arrivals to BOS generally, which represents 0.1% of the total annual arrivals, and an increase of 359 annual arrivals specifically to Runway 4L. These additional

procedural capabilities would increase the safety and efficiency of the airspace around BOS. Publication of the proposed procedure would constitute an undertaking under Section 106 of the National Historic Preservation Act (NHPA).

Regulatory Overview

Under NEPA, the FAA is responsible for analyzing the impacts of its action on historical, architectural, archeological and cultural resources as part of its broader review of the human environment. Because the National Historic Preservation Act (NHPA) is the principal statute concerning such resources, most of this analysis is conducted in coordination with the process under Section 106 of the NHPA, which requires federal agencies to consider the effects of their projects on properties listed, or eligible for listing, in the National Register of Historic Places (NRHP). As this is an FAA Action, the FAA document *Section 106 of the National Historic Properties under Section 106 of the National Historic Properties under Section 106 of the National Historic Preservation Act* was consulted and referenced in order to make this determination.

Review of Historic/Eligible Properties

The National Register of Historic Places (NRHP), the Massachusetts Historical Commission, and the Boston Landmarks Commission's data sources were used to gather a comprehensive directory of all potential historic and cultural resources within the APE. A total of 19 properties within the APE were found to be listed in the National Register of Historic Places as historic districts or individual properties in accordance with the criteria described in the NHPA. These 19 properties are identified and described in Table 1. A total of 4,184 state and local designated properties were identified within the APE and are summarized by their location in Table 2. These 4,184 properties represent the group of potential resources that would be evaluated for National Register eligibility. For the purposes of this proposed finding, we assume all of these properties are eligible for the National Register and propose a finding of no adverse effect for all properties within the APE currently listed, determined eligible for listing, and assumed eligible for listing in the NRHP.

NRHP Property Name	Brief Property Description
Milton Cemetery	Milton Cemetery contains some of the best examples of funerary art from the colonial times to the Victorian era. An historic garden cemetery, it was established as the Town's only cemetery in 1672.
Spring Brook Cemetery	The most prominent structure in the cemetery, Card Memorial Chapel, was designed by Charles Eastman & built in 1898 and funded by Simon & Mary Card in memory of their daughter Lulu.
Dorchester Park	Dorchester Park is a historic park bounded by Dorchester Avenue, Richmond, Adams and Richview Streets in the Dorchester neighborhood of Boston, Massachusetts.

Table 1: National Register of Historic Places Properties within the APE

NRHP Property Name	Brief Property Description
DorchesterMilton Lower Mills Industrial District (Boundary Increase)	The Dorchester-Milton Lower Mills Industrial District is a historic district on both sides of the Neponset River in the Dorchester area of Boston and in the town of Milton, Massachusetts. It encompasses an industrial factory complex, most of which was historically associated with the Walter Baker & Company, the first major maker of chocolate products in the United States.
Savin Hill Historic District	The Savin Hill Historic District is significant for its association with the development of the area from a mid-19th century speculative housing development for Boston's upper-middle class to a close-knot neighborhood of residents from diverse socioeconomic backgrounds. The surviving historic resources catalogue Savin Hill's rich history and remain a cohesive collection of well-preserved historic homes. The district further attains significance as an intact collection of buildings representing a full range of architectural styles.
Blue Hills Parkway	The Blue Hills Parkway, a 1.5-mile-long boulevard in Boston and Milton, is significant as one of the earliest connecting parkways designed for the Metropolitan Parks Commission (MPC) by Olmsted, Olmsted and Eliot and its successor firm, Olmsted Brothers, and it is emblematic of the firm's principles of parkway creation. A divided highway that runs directly south through early 20"-century residential neighborhoods, the Blue Hills Parkway directly connects the Blue Hills Reservation (the largest open space in Metropolitan Boston) with Boston, the Neponset River Reservation, and Truman Parkway.
Blue Hills Reservation Parkways-Metropolitan Park System of Greater Boston	The Metropolitan Park System of Greater Boston, in Massachusetts, is especially noteworthy because it is the first regional park system in the United States.
Foxborough Pumping Station	The Foxborough Pumping Station is a historic water pumping station at 25 Pumping Station Road in Foxborough, Massachusetts. Its main pumphouse was designed by Ernest Boyden, a regionally-known architect of water supply systems, and was built in 1891; it is a brick structure with Queen Anne styling. The station also includes several historic wells, a period garage, and the man- made Fales Pond, a once-dammed section of the Neponset Reservoir near the pumphouse.
Old Harbor Reservation Parkways, Metropolitan Park System of Greater Boston	The Old Harbor Reservation Parkways are three historic roads in the Old Harbor area of Boston. They are part of the Boston parkway system designed by Frederick Law Olmsted.
Dorchester-Milton Lower Mills Industrial District	The Dorchester-Milton Lower Mills Industrial District is located on both sides of the Neponset River in the Dorchester area of Boston and in the town of Milton, Massachusetts. It encompasses an industrial factory complex, most of which was historically associated with the Walter Baker & Company, the first major maker of chocolate products in the United States.

NRHP Property Name	Brief Property Description
Furnace Village Historic District	The Furnace Village Historic District encompasses the historic colonial industrial area in Easton, Massachusetts. At its center is at the intersection of Foundry street, South street and Poquanticut Avenue. The area was settled in 1723, with industrial activity beginning in 1742. The iron furnace was established in 1751, and for industrial purposes, continued in the 19th century. In addition to the colonial era, there is also an employee of the housing of the 19th century.
Milton Centre Historic District	The Milton Centre Historic District is both the historical and geographic center of the town of Milton. The 23-acre historic district includes Canton Avenue between Reedsdale Road and Thacher and Highland Streets. Milton Centre is historically significant for its association with the development of the town following the relocation of the third meeting house to Academy Hill in 1728, and the subsequent shift of the town center from Milton Hill.
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For more information on the analyses performed as a part of the Draft EA, please visit <u>www.faabostonworkshops.com</u> for a copy of the Draft EA. More information on the noise analysis can be found at <u>www.faabostonworkshops.com/noise-visualization/</u> and in Sections 3.4.6 and 4.6 of the Draft EA. The Noise Modeling Technical Report is included in Appendix D of the Draft EA.



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Boston Logan RNAV (GPS) RWY 4L EA



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Finding of No Adverse Effect Criteria

In order to establish a Finding of No Adverse Effect, the Proposed Action must not meet any of the criteria spelled out in the FAA's Section 106 Handbook, which are based on criteria in ACHP's section 106 regulations in 36 CFR Part 800. This section presents why the Proposed Action does not meet any of these criteria.

- Does the Proposed Action physically destroy or damage the property?
 - The Proposed Action will not have any physical impact on any property. The Proposed Action changes the location of arrival flights in the airspace around Boston Logan International Airport.
- Does the Proposed Action alter the property in any way that is consistent with the Secretary of the Interior's Standards for Treatment of Historic Properties (36 CFR Part 68)?
 - The Standards guide the design and implementation of physical changes to historic properties. This may include changes in use, material repair or substitution, or modification of historically important features. The Proposed Action is located in the airspace above historic resources does not result in any changes in use, material alteration, or physical modifications to these resources.
- Does the Proposed Action remove a property from its historic location?
 - \circ The Proposed Action does not remove any property from its location.
- Does the Proposed Action change the character of the property's use, or of physical features within the property's setting that contribute to its historic significance?
 - The Proposed Action does not change the character of a property's use or any physical features in any historical property's setting.
 - Any changes to setting as a result of the Proposed action would be audible or visual features which are discussed in the following criterion.
- Does the Proposed Action introduce an atmospheric, audible, or visual feature to the area that would diminish the integrity of the property's significant historic features?
 - Audible: there will not be an introduction of audible noise as a result of the Proposed Action. Furthermore, the noise impacts of the Proposed Action on all of the historic resources in the APE will either decrease noise exposure or cause increases that are orders of magnitude below the significance thresholds for DNL aircraft noise as described in FAA Order 1050.1F and therefore will not cause an introduction of audible impact on any of the properties.
 - Visual: there will not be an introduction of visual impacts as a result of the Proposed Action. Furthermore, the entire APE currently experiences 268 average daily overflights as described in the above analysis. The Proposed Action will add less than 1 additional overflight per day. This increase will not change the current visual features of any historic resource in the APE, as depicted in Attachment B.
- Does the Proposed Action result in neglect of a property which would result in its deterioration, transfer, sale or lease?

• The Proposed Action will not cause any property to be sold or transferred.

Given the results discussed in this letter, the FAA is putting forth at this point a Proposed Finding of No Adverse Effect. This determination is based on the findings discussed in this letter, which includes that none of the NRHP listed properties reviewed herein were found to have a "quiet setting" as described in the FAA's Section 106 Handbook. Furthermore, the net change in aircraft operations as a result of the Proposed Action would be minimal and would not cause an adverse effect, including no physical impacts and no introduction of audible or visual impacts within the APE.

Public Meetings, Comments, and Consultation

The FAA conducted Virtual Public Workshops for the Draft EA on October 23rd, and October 28th, 2020. By attending the Virtual Public Workshops, participants were provided with an overview of the Draft EA which includes results from the noise analysis performed to assess the potential noise impacts of the Proposed Action on historic resources and populations located within the General Study Area. The MHC concurred with the APE on December 8, 2020 so the impacts were shown for historic resources throughout the entire Study Area. During the meeting, the FAA responded to a large number of questions from the community. These meetings were recorded and remain on the FAA's YouTube page for interested community members to review. During the meeting and other forms of engagement, the FAA received over 40 comments regarding the Proposed Action. The FAA is currently reviewing and developing responses to these comments to be shared with the public as part of the Final Environmental Assessment but it should be noted that none of the comments mention any potential impact to historic resources from the Proposed Action.

We look forward to hearing back from you on the FAA's proposed finding. We welcome the input from consulting parties on the historic properties considered as part of the analysis and on the finding itself. If you have any additional comments or questions on this undertaking, please contact me at veronda.johnson@faa.gov or at the address below.

Sincerely,

Veronda Johnson Eastern Service Center Federal Aviation Administration Operations Support Group AJV-E250 1701 Columbia Avenue College Park, GA 30337


U.S. Department of Transportation

Federal Aviation Administration Eastern Service Center

1701 Columbia Avenue College Park, Georgia 30337

June 9, 2021

Office of the Planning Board Memorial Hall 801 Washington Street 2nd Floor Canton, MA 02021

Proposed Finding of No Adverse Effect for the Boston Logan International Airport RNAV (GPS) RWY 4L Approach Procedure, Boston, MA

To Whom It May Concern,

The Federal Aviation Administration (FAA) is evaluating a new proposed Area Navigation (RNAV) Global Positioning System (GPS) instrument approach procedure at Boston Logan International Airport (BOS). This new procedure would allow for aircraft to land onto Runway 4L with GPS technological automation as well as allow for landing during low visibility conditions. These additional procedural capabilities would increase the safety and efficiency of the airspace around BOS.

Pursuant to 36 CFR 800.4(a), the FAA previously consulted with the Massachusetts Historical Commission to identify the Area of Potential Effects for this undertaking. In continuing with our responsibilities under Section 106 of the National Historic Preservation Act and its implementing regulations, the FAA invites you to participate as a consulting parting and submits this assessment of adverse effects, which concludes with a proposed Finding of No Adverse Effects and our supporting rationale for that finding. The FAA seeks your views or comments on this finding, which can be addressed to the FAA using the email or address given at the conclusion of this letter. Pursuant to 36 CFR 800.5(c), please provide any comments within 30 days from receipt of this letter.

Project Background

As described in greater detail in the FAA's Draft Environmental Assessment (EA), which can be accessed at <u>www.faabostonworkshops.com</u>, the FAA is evaluating a new proposed Area Navigation (RNAV) Global Positioning System (GPS) instrument approach procedure at BOS. This new procedure, which is depicted in Attachments A and B, is needed to allow aircraft to land onto Runway 4L with GPS technological automation. The current absence of an RNAV procedure to Runway 4L precludes use of the runway during low visibility conditions. The proposed procedure route is an overlay of existing arrivals and is expected to lead to a net increase of 255 annual arrivals to BOS generally, which represents 0.1% of the total annual arrivals, and an increase of 359 annual arrivals specifically to Runway 4L. These additional

procedural capabilities would increase the safety and efficiency of the airspace around BOS. Publication of the proposed procedure would constitute an undertaking under Section 106 of the National Historic Preservation Act (NHPA).

Regulatory Overview

Under NEPA, the FAA is responsible for analyzing the impacts of its action on historical, architectural, archeological and cultural resources as part of its broader review of the human environment. Because the National Historic Preservation Act (NHPA) is the principal statute concerning such resources, most of this analysis is conducted in coordination with the process under Section 106 of the NHPA, which requires federal agencies to consider the effects of their projects on properties listed, or eligible for listing, in the National Register of Historic Places (NRHP). As this is an FAA Action, the FAA document *Section 106 of the National Historic Properties under Section 106 of the National Historic Properties under Section 106 of the National Historic Preservation Act* was consulted and referenced in order to make this determination.

Review of Historic/Eligible Properties

The National Register of Historic Places (NRHP), the Massachusetts Historical Commission, and the Boston Landmarks Commission's data sources were used to gather a comprehensive directory of all potential historic and cultural resources within the APE. A total of 19 properties within the APE were found to be listed in the National Register of Historic Places as historic districts or individual properties in accordance with the criteria described in the NHPA. These 19 properties are identified and described in Table 1. A total of 4,184 state and local designated properties were identified within the APE and are summarized by their location in Table 2. These 4,184 properties represent the group of potential resources that would be evaluated for National Register eligibility. For the purposes of this proposed finding, we assume all of these properties are eligible for the National Register and propose a finding of no adverse effect for all properties within the APE currently listed, determined eligible for listing, and assumed eligible for listing in the NRHP.

NRHP Property Name	Brief Property Description
Milton Cemetery	Milton Cemetery contains some of the best examples of funerary art from the colonial times to the Victorian era. An historic garden cemetery, it was established as the Town's only cemetery in 1672.
Spring Brook Cemetery	The most prominent structure in the cemetery, Card Memorial Chapel, was designed by Charles Eastman & built in 1898 and funded by Simon & Mary Card in memory of their daughter Lulu.
Dorchester Park	Dorchester Park is a historic park bounded by Dorchester Avenue, Richmond, Adams and Richview Streets in the Dorchester neighborhood of Boston, Massachusetts.

Table 1: National Register of Historic Places Properties within the APE

NRHP Property Name	Brief Property Description
DorchesterMilton Lower Mills Industrial District (Boundary Increase)	The Dorchester-Milton Lower Mills Industrial District is a historic district on both sides of the Neponset River in the Dorchester area of Boston and in the town of Milton, Massachusetts. It encompasses an industrial factory complex, most of which was historically associated with the Walter Baker & Company, the first major maker of chocolate products in the United States.
Savin Hill Historic District	The Savin Hill Historic District is significant for its association with the development of the area from a mid-19th century speculative housing development for Boston's upper-middle class to a close-knot neighborhood of residents from diverse socioeconomic backgrounds. The surviving historic resources catalogue Savin Hill's rich history and remain a cohesive collection of well-preserved historic homes. The district further attains significance as an intact collection of buildings representing a full range of architectural styles.
Blue Hills Parkway	The Blue Hills Parkway, a 1.5-mile-long boulevard in Boston and Milton, is significant as one of the earliest connecting parkways designed for the Metropolitan Parks Commission (MPC) by Olmsted, Olmsted and Eliot and its successor firm, Olmsted Brothers, and it is emblematic of the firm's principles of parkway creation. A divided highway that runs directly south through early 20"-century residential neighborhoods, the Blue Hills Parkway directly connects the Blue Hills Reservation (the largest open space in Metropolitan Boston) with Boston, the Neponset River Reservation, and Truman Parkway.
Blue Hills Reservation Parkways-Metropolitan Park System of Greater Boston	The Metropolitan Park System of Greater Boston, in Massachusetts, is especially noteworthy because it is the first regional park system in the United States.
Foxborough Pumping Station	The Foxborough Pumping Station is a historic water pumping station at 25 Pumping Station Road in Foxborough, Massachusetts. Its main pumphouse was designed by Ernest Boyden, a regionally-known architect of water supply systems, and was built in 1891; it is a brick structure with Queen Anne styling. The station also includes several historic wells, a period garage, and the man- made Fales Pond, a once-dammed section of the Neponset Reservoir near the pumphouse.
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Dorchester-Milton Lower Mills Industrial District	The Dorchester-Milton Lower Mills Industrial District is located on both sides of the Neponset River in the Dorchester area of Boston and in the town of Milton, Massachusetts. It encompasses an industrial factory complex, most of which was historically associated with the Walter Baker & Company, the first major maker of chocolate products in the United States.

NRHP Property Name	Brief Property Description
Furnace Village Historic District	The Furnace Village Historic District encompasses the historic colonial industrial area in Easton, Massachusetts. At its center is at the intersection of Foundry street, South street and Poquanticut Avenue. The area was settled in 1723, with industrial activity beginning in 1742. The iron furnace was established in 1751, and for industrial purposes, continued in the 19th century. In addition to the colonial era, there is also an employee of the housing of the 19th century.
Milton Centre Historic District	The Milton Centre Historic District is both the historical and geographic center of the town of Milton. The 23-acre historic district includes Canton Avenue between Reedsdale Road and Thacher and Highland Streets. Milton Centre is historically significant for its association with the development of the town following the relocation of the third meeting house to Academy Hill in 1728, and the subsequent shift of the town center from Milton Hill.
Scott's Woods Historic District	Scott's Woods Historic District is the area of Hillside, Harland and Forest Streets between Randolph Avenue and the ridge between Hancock and Bugbee Hills, now the MDC Blue Hills Reservation. The Scott's Woods Historic District in Milton, Massachusetts is a semirural, residential area that contains a significant concentration of 18th, 19th and early 20th century dwellings and barns that reflect the Town's agricultural and architectural history from 1713 to 1932, the district's period of significance. Originally known as the "Blue Hill Land," a three thousand-acre tract of land sold by the town of Boston in 1711 to four residents of Milton. The area in the southwest part of Milton is thought to have been named for a member of the Scott Family that lived in the area in the early eighteenth century. Hillside Street, named for being literally on the 'side' of Blue Hill, is the major thoroughfare in the district.
Milton Hill Historic District	Milton Hill Historic District is located on a lofty hill between Milton Village and Algerene Corner, formerly known as Union Square at the junction of Adams and Centre Streets. The Milton Hill Historic District in Milton, Massachusetts is a residential area that contains the most significant concentration of 19th and early 20th century high-style and period architecture in the Town. As Milton developed from a rural community to a prosperous suburb of Boston, Milton Hill, throughout the period of significance, 1740-1945, has been the home of wealthy Milton and Boston business, professional and civic leaders. It began its rise to prominence as an estate district in 1742 with the establishment of Governor Thomas Hutchinson's summer estate. For the next two hundred years, attracted by the rural scenery afforded by the Neponset River and the Blue Hills and the proximity of the Town's commercial center and Boston, prominent families built country homes, a number designed by noted national and local architects, including William Ralph Emerson; Peabody and Steams; and Perry, Shaw and Hepbum.

NRHP Property Name	Brief Property Description
Harrison Square Historic District	Clam Point (also known as Harrison Square) is a sub-neighborhood in Boston, noteworthy for its collection of substantial Italianate Mansard residences. The area is known to have the most cohesive, intact collection of mansion-scale, mid-19 th century housing in Boston, and includes the Park, Everett, Freeport, Mill, Ashland, Blanche streets, and Victory Road in the Dorchester neighborhood of Boston.
Canton Corner Historic District	The Canton Corner Historic District encompasses the historic town center of Canton, Massachusetts. Centered on the junction of Pleasant and Washington streets, it includes more than 25 properties and 170 acres (69 ha), whose architectural history spans 250 years of occupation and includes the town's major civic buildings.
Ponkapoag Camp of Appalachian Mountain Club	The Appalachian Mountain Club Ponkapoag Camp is one of the original camps of the oldest outing club in the United States, founded in 1876. Early in the twentieth century tent sites were established at the east end of Ponkapoag Pond in the Blue Hills reservation by the president of the Appalachian Mountain Club, William Rogers, who was also an M.D.C. commissioner. The camp represents an early outing club's architecture for "roughing it" and are important as such structures succumb to fire, rot, and vandalism.
Boyden, Seth, House	The Seth Boyden House is a historic house at 135 Oak Street in Foxborough, Massachusetts. The home is significant for its unusual architectural design as well for its association with the Boyden family, whose members were prominent locally and regionally in the 18 th and 19 th century,
Borderland Historic District	The Borderland Historic District was the 1,200 acre estate of Blanche Ames Ames. The mansion was constructed in 1910 and the property includes a system of ponds, dams, and causeways surrounding the mansion. The exterior of the mansion was built using locally cut field stones. The district is considered significant due to its connection to the estate of Blanche Ames Ames. She was a inventor who was involved in art, farming, engineering and politics. She designed a hexagonal lumber cutter, patented a method for ensnaring airplanes in wires hung from balloons during World War II, and developed a water anti-pollution device in the late 1960s.
SOURCE: National Register Database; <u>http</u> Associates, 2021.	bs://www.nps.gov/subjects/nationalregister/database-research.htm#table, Adapted by Environmental Science

Town	Number of State & Local Designated Properties
Boston	838
Canton	445
Easton	142
Foxborough	194
Mansfield	190
Milton	1,559
Norton	16
Quincy	2
Randolph	225
Sharon	491
Stoughton	82
Grand Total	4,184

Table 2: Number of State & Local Designated Properties within the APE

Assessment of Noise and Visual Impacts by Proposed Action

In our earlier correspondence, the FAA noted that we are "considering the possibility that changes in noise levels or additional visual impacts from an increase in overflights could alter the character or use of certain kinds of historic properties where a quiet setting is a generally recognized purpose and attribute." In order to address this possibility, an assessment was done to further quantify the auditory and visual impacts on the historic properties within the Area of Potential Effects.

In order to assess the auditory impacts, the FAA used a metric known as Day-night Average Sound Level (DNL). DNL is the standard noise metric used for all FAA studies of aviation noise exposure in airport communities and was used here to assess the potential impact on every identified historic property within the Area of Potential Effects.

DNL is a 24-hour, time-weighted average noise metric, expressed in terms of decibel units of sound heard by the human ear, which accounts for the noise levels of individual aircraft events, the number of times those events occur, and the time of day they occur. DNL is a graphical representation of the distribution of noise over the surrounding area from an airport's average operations. There is one unique modification in that there is a "noise penalty" of any noise generated during "nighttime hours." In the calculation of DNL, for each hour during nighttime hours (10:00 p.m. to 7:00 a.m.), the sound levels are increased by a 10 decibel-weighting penalty (equivalent to a 10-fold increase in aircraft operations) before the 24-hour value is computed. The weighting penalty accounts for the more intrusive nature of noise during the nighttime hours. The significance thresholds for aircraft noise for DNL, as spelled out in FAA Order 1050.1F, are given below.

• For DNL 65 dB and higher: +1.5 dB

This threshold has been used by FAA for many years and is applied at airports across the country and will be used to determine noise impacts on historic properties within the APE. The use of this threshold is consistent with the Section 106 analyses for many FAA projects, including the Northern California and Southern Florida Metroplex projects, two of FAA's most recent projects that also modified the flight path of aircraft through the airspace.

According to FAA Order 1050.1F, a significant noise impact could occur to noise sensitive land uses if it had a level of DNL 65 dB with the Proposed Action and also experienced an increase of 1.5 dB when compared to the No Action Alternative. The FAA also recognizes that, in limited instances, resources that have a "quiet setting" as a qualifying attribute may be adversely affected by noise increases that would otherwise not be significant. There are no NRHP properties with a noise exposure of DNL 65 that experience a 1.5 dB noise increase. Further, the NRHP properties were reviewed and none of them were found to have a "quiet setting" as described in the FAA's Section 106 Handbook.

When the analysis is expanded to include the state and local designated properties that are assumed to be eligible for the NRHP, there are no properties that experience a 1.5 dB noise level increase with a proposed action noise level of DNL 65 or greater. As indicated in Table 4.6-3 of the Draft EA, the maximum exposed noise level *decreases* as a result of the Proposed Project

when compared to the No Action Alternative when considering towns/neighborhoods as a whole. Furthermore, as described below, the largest proposed noise changes within the APE are multiple orders of magnitude below the noise thresholds given within FAA Order 1050.1F.

The FAA's noise analysis demonstrates that historic resources will generally experience equivalent noise exposure with the addition of the Proposed Action. Specifically, the maximum change in noise exposure for a historic property is less than 0.2 dB across all historic properties in the APE. For example, one of these properties has a value of 22 dB under the No Action Alternative and 22.1 dB with the Proposed Procedure. Importantly, as depicted in Attachment A, the procedure is an overlay of existing traffic to Runway 4L and is only expected to lead to an annual net increase of 255 arrivals to BOS, out of a current total of 205,837 arrivals. In sum, the FAA will not be introducing audible impacts to resources not already experiencing noise impacts, and any change in noise exposure will be minimal.

In order to assess the potential visual impacts of the historic properties, the data for a year of overflights at BOS from the previous memorandum was reassessed to compare to the newly designated APE. Considering one year of radar track data, the APE experiences 78,879 arrival and 18,989 departure overflights annually. On an average daily basis that corresponds to 216.1 arrival and 52.0 departure overflights. The Proposed Action is estimated to add 255 annual arrival overflights or 0.70 daily average overflights to the APE. When considering the APE as a whole, the increase in overflights would amount to just a 0.26% increase in overflights and would not introduce audible or visual noise in the APE. In order to confirm that the overflights over the APE were not focused on particular historic resources in the APE, the dataset of departure overflights and arrival overflights was mapped over the APE in Attachments A and B respectively. Attachment A shows that the APE areas closest to the airport are already dense with overflights but the flights become more disperse as the APE moves to the southwest. However, Attachment B, which displays a year of arrival radar tracks, show that the APE is already heavily overflown over the full extent of the APE.

For more information on the analyses performed as a part of the Draft EA, please visit <u>www.faabostonworkshops.com</u> for a copy of the Draft EA. More information on the noise analysis can be found at <u>www.faabostonworkshops.com/noise-visualization/</u> and in Sections 3.4.6 and 4.6 of the Draft EA. The Noise Modeling Technical Report is included in Appendix D of the Draft EA.



SOURCE: Esri; RoVolus, 2021; ESA, 2021



Boston Logan RNAV (GPS) RWY 4L EA



SOURCE: Esri; RoVolus, 2021; ESA, 2021



Finding of No Adverse Effect Criteria

In order to establish a Finding of No Adverse Effect, the Proposed Action must not meet any of the criteria spelled out in the FAA's Section 106 Handbook, which are based on criteria in ACHP's section 106 regulations in 36 CFR Part 800. This section presents why the Proposed Action does not meet any of these criteria.

- Does the Proposed Action physically destroy or damage the property?
 - The Proposed Action will not have any physical impact on any property. The Proposed Action changes the location of arrival flights in the airspace around Boston Logan International Airport.
- Does the Proposed Action alter the property in any way that is consistent with the Secretary of the Interior's Standards for Treatment of Historic Properties (36 CFR Part 68)?
 - The Standards guide the design and implementation of physical changes to historic properties. This may include changes in use, material repair or substitution, or modification of historically important features. The Proposed Action is located in the airspace above historic resources does not result in any changes in use, material alteration, or physical modifications to these resources.
- Does the Proposed Action remove a property from its historic location?
 - \circ The Proposed Action does not remove any property from its location.
- Does the Proposed Action change the character of the property's use, or of physical features within the property's setting that contribute to its historic significance?
 - The Proposed Action does not change the character of a property's use or any physical features in any historical property's setting.
 - Any changes to setting as a result of the Proposed action would be audible or visual features which are discussed in the following criterion.
- Does the Proposed Action introduce an atmospheric, audible, or visual feature to the area that would diminish the integrity of the property's significant historic features?
 - Audible: there will not be an introduction of audible noise as a result of the Proposed Action. Furthermore, the noise impacts of the Proposed Action on all of the historic resources in the APE will either decrease noise exposure or cause increases that are orders of magnitude below the significance thresholds for DNL aircraft noise as described in FAA Order 1050.1F and therefore will not cause an introduction of audible impact on any of the properties.
 - Visual: there will not be an introduction of visual impacts as a result of the Proposed Action. Furthermore, the entire APE currently experiences 268 average daily overflights as described in the above analysis. The Proposed Action will add less than 1 additional overflight per day. This increase will not change the current visual features of any historic resource in the APE, as depicted in Attachment B.
- Does the Proposed Action result in neglect of a property which would result in its deterioration, transfer, sale or lease?

• The Proposed Action will not cause any property to be sold or transferred.

Given the results discussed in this letter, the FAA is putting forth at this point a Proposed Finding of No Adverse Effect. This determination is based on the findings discussed in this letter, which includes that none of the NRHP listed properties reviewed herein were found to have a "quiet setting" as described in the FAA's Section 106 Handbook. Furthermore, the net change in aircraft operations as a result of the Proposed Action would be minimal and would not cause an adverse effect, including no physical impacts and no introduction of audible or visual impacts within the APE.

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Eagle Hill Civic Association eaglehillcivic.org eaglehillcivic@gmail.com

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Furnace Village Historic District	The Furnace Village Historic District encompasses the historic colonial industrial area in Easton, Massachusetts. At its center is at the intersection of Foundry street, South street and Poquanticut Avenue. The area was settled in 1723, with industrial activity beginning in 1742. The iron furnace was established in 1751, and for industrial purposes, continued in the 19th century. In addition to the colonial era, there is also an employee of the housing of the 19th century.
Milton Centre Historic District	The Milton Centre Historic District is both the historical and geographic center of the town of Milton. The 23-acre historic district includes Canton Avenue between Reedsdale Road and Thacher and Highland Streets. Milton Centre is historically significant for its association with the development of the town following the relocation of the third meeting house to Academy Hill in 1728, and the subsequent shift of the town center from Milton Hill.
Scott's Woods Historic District	Scott's Woods Historic District is the area of Hillside, Harland and Forest Streets between Randolph Avenue and the ridge between Hancock and Bugbee Hills, now the MDC Blue Hills Reservation. The Scott's Woods Historic District in Milton, Massachusetts is a semirural, residential area that contains a significant concentration of 18th, 19th and early 20th century dwellings and barns that reflect the Town's agricultural and architectural history from 1713 to 1932, the district's period of significance. Originally known as the "Blue Hill Land," a three thousand-acre tract of land sold by the town of Boston in 1711 to four residents of Milton. The area in the southwest part of Milton is thought to have been named for a member of the Scott Family that lived in the area in the early eighteenth century. Hillside Street, named for being literally on the 'side' of Blue Hill, is the major thoroughfare in the district.
Milton Hill Historic District	Milton Hill Historic District is located on a lofty hill between Milton Village and Algerene Corner, formerly known as Union Square at the junction of Adams and Centre Streets. The Milton Hill Historic District in Milton, Massachusetts is a residential area that contains the most significant concentration of 19th and early 20th century high-style and period architecture in the Town. As Milton developed from a rural community to a prosperous suburb of Boston, Milton Hill, throughout the period of significance, 1740-1945, has been the home of wealthy Milton and Boston business, professional and civic leaders. It began its rise to prominence as an estate district in 1742 with the establishment of Governor Thomas Hutchinson's summer estate. For the next two hundred years, attracted by the rural scenery afforded by the Neponset River and the Blue Hills and the proximity of the Town's commercial center and Boston, prominent families built country homes, a number designed by noted national and local architects, including William Ralph Emerson; Peabody and Steams; and Perry, Shaw and Hepbum.

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Canton Corner Historic District	The Canton Corner Historic District encompasses the historic town center of Canton, Massachusetts. Centered on the junction of Pleasant and Washington streets, it includes more than 25 properties and 170 acres (69 ha), whose architectural history spans 250 years of occupation and includes the town's major civic buildings.
Ponkapoag Camp of Appalachian Mountain Club	The Appalachian Mountain Club Ponkapoag Camp is one of the original camps of the oldest outing club in the United States, founded in 1876. Early in the twentieth century tent sites were established at the east end of Ponkapoag Pond in the Blue Hills reservation by the president of the Appalachian Mountain Club, William Rogers, who was also an M.D.C. commissioner. The camp represents an early outing club's architecture for "roughing it" and are important as such structures succumb to fire, rot, and vandalism.
Boyden, Seth, House	The Seth Boyden House is a historic house at 135 Oak Street in Foxborough, Massachusetts. The home is significant for its unusual architectural design as well for its association with the Boyden family, whose members were prominent locally and regionally in the 18 th and 19 th century,
Borderland Historic District	The Borderland Historic District was the 1,200 acre estate of Blanche Ames Ames. The mansion was constructed in 1910 and the property includes a system of ponds, dams, and causeways surrounding the mansion. The exterior of the mansion was built using locally cut field stones. The district is considered significant due to its connection to the estate of Blanche Ames Ames. She was a inventor who was involved in art, farming, engineering and politics. She designed a hexagonal lumber cutter, patented a method for ensnaring airplanes in wires hung from balloons during World War II, and developed a water anti-pollution device in the late 1960s.
SOURCE: National Register Database; <u>http</u> Associates, 2021.	bs://www.nps.gov/subjects/nationalregister/database-research.htm#table, Adapted by Environmental Science

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Table 2: Number of State & Local Designated Properties within the APE

Assessment of Noise and Visual Impacts by Proposed Action

In our earlier correspondence, the FAA noted that we are "considering the possibility that changes in noise levels or additional visual impacts from an increase in overflights could alter the character or use of certain kinds of historic properties where a quiet setting is a generally recognized purpose and attribute." In order to address this possibility, an assessment was done to further quantify the auditory and visual impacts on the historic properties within the Area of Potential Effects.

In order to assess the auditory impacts, the FAA used a metric known as Day-night Average Sound Level (DNL). DNL is the standard noise metric used for all FAA studies of aviation noise exposure in airport communities and was used here to assess the potential impact on every identified historic property within the Area of Potential Effects.

DNL is a 24-hour, time-weighted average noise metric, expressed in terms of decibel units of sound heard by the human ear, which accounts for the noise levels of individual aircraft events, the number of times those events occur, and the time of day they occur. DNL is a graphical representation of the distribution of noise over the surrounding area from an airport's average operations. There is one unique modification in that there is a "noise penalty" of any noise generated during "nighttime hours." In the calculation of DNL, for each hour during nighttime hours (10:00 p.m. to 7:00 a.m.), the sound levels are increased by a 10 decibel-weighting penalty (equivalent to a 10-fold increase in aircraft operations) before the 24-hour value is computed. The weighting penalty accounts for the more intrusive nature of noise during the nighttime hours. The significance thresholds for aircraft noise for DNL, as spelled out in FAA Order 1050.1F, are given below.

• For DNL 65 dB and higher: +1.5 dB

This threshold has been used by FAA for many years and is applied at airports across the country and will be used to determine noise impacts on historic properties within the APE. The use of this threshold is consistent with the Section 106 analyses for many FAA projects, including the Northern California and Southern Florida Metroplex projects, two of FAA's most recent projects that also modified the flight path of aircraft through the airspace.

According to FAA Order 1050.1F, a significant noise impact could occur to noise sensitive land uses if it had a level of DNL 65 dB with the Proposed Action and also experienced an increase of 1.5 dB when compared to the No Action Alternative. The FAA also recognizes that, in limited instances, resources that have a "quiet setting" as a qualifying attribute may be adversely affected by noise increases that would otherwise not be significant. There are no NRHP properties with a noise exposure of DNL 65 that experience a 1.5 dB noise increase. Further, the NRHP properties were reviewed and none of them were found to have a "quiet setting" as described in the FAA's Section 106 Handbook.

When the analysis is expanded to include the state and local designated properties that are assumed to be eligible for the NRHP, there are no properties that experience a 1.5 dB noise level increase with a proposed action noise level of DNL 65 or greater. As indicated in Table 4.6-3 of the Draft EA, the maximum exposed noise level *decreases* as a result of the Proposed Project

when compared to the No Action Alternative when considering towns/neighborhoods as a whole. Furthermore, as described below, the largest proposed noise changes within the APE are multiple orders of magnitude below the noise thresholds given within FAA Order 1050.1F.

The FAA's noise analysis demonstrates that historic resources will generally experience equivalent noise exposure with the addition of the Proposed Action. Specifically, the maximum change in noise exposure for a historic property is less than 0.2 dB across all historic properties in the APE. For example, one of these properties has a value of 22 dB under the No Action Alternative and 22.1 dB with the Proposed Procedure. Importantly, as depicted in Attachment A, the procedure is an overlay of existing traffic to Runway 4L and is only expected to lead to an annual net increase of 255 arrivals to BOS, out of a current total of 205,837 arrivals. In sum, the FAA will not be introducing audible impacts to resources not already experiencing noise impacts, and any change in noise exposure will be minimal.

In order to assess the potential visual impacts of the historic properties, the data for a year of overflights at BOS from the previous memorandum was reassessed to compare to the newly designated APE. Considering one year of radar track data, the APE experiences 78,879 arrival and 18,989 departure overflights annually. On an average daily basis that corresponds to 216.1 arrival and 52.0 departure overflights. The Proposed Action is estimated to add 255 annual arrival overflights or 0.70 daily average overflights to the APE. When considering the APE as a whole, the increase in overflights would amount to just a 0.26% increase in overflights and would not introduce audible or visual noise in the APE. In order to confirm that the overflights over the APE were not focused on particular historic resources in the APE, the dataset of departure overflights and arrival overflights was mapped over the APE in Attachments A and B respectively. Attachment A shows that the APE areas closest to the airport are already dense with overflights but the flights become more disperse as the APE moves to the southwest. However, Attachment B, which displays a year of arrival radar tracks, show that the APE is already heavily overflown over the full extent of the APE.

For more information on the analyses performed as a part of the Draft EA, please visit <u>www.faabostonworkshops.com</u> for a copy of the Draft EA. More information on the noise analysis can be found at <u>www.faabostonworkshops.com/noise-visualization/</u> and in Sections 3.4.6 and 4.6 of the Draft EA. The Noise Modeling Technical Report is included in Appendix D of the Draft EA.



SOURCE: Esri; RoVolus, 2021; ESA, 2021



Boston Logan RNAV (GPS) RWY 4L EA



SOURCE: Esri; RoVolus, 2021; ESA, 2021



Finding of No Adverse Effect Criteria

In order to establish a Finding of No Adverse Effect, the Proposed Action must not meet any of the criteria spelled out in the FAA's Section 106 Handbook, which are based on criteria in ACHP's section 106 regulations in 36 CFR Part 800. This section presents why the Proposed Action does not meet any of these criteria.

- Does the Proposed Action physically destroy or damage the property?
 - The Proposed Action will not have any physical impact on any property. The Proposed Action changes the location of arrival flights in the airspace around Boston Logan International Airport.
- Does the Proposed Action alter the property in any way that is consistent with the Secretary of the Interior's Standards for Treatment of Historic Properties (36 CFR Part 68)?
 - The Standards guide the design and implementation of physical changes to historic properties. This may include changes in use, material repair or substitution, or modification of historically important features. The Proposed Action is located in the airspace above historic resources does not result in any changes in use, material alteration, or physical modifications to these resources.
- Does the Proposed Action remove a property from its historic location?
 - \circ The Proposed Action does not remove any property from its location.
- Does the Proposed Action change the character of the property's use, or of physical features within the property's setting that contribute to its historic significance?
 - The Proposed Action does not change the character of a property's use or any physical features in any historical property's setting.
 - Any changes to setting as a result of the Proposed action would be audible or visual features which are discussed in the following criterion.
- Does the Proposed Action introduce an atmospheric, audible, or visual feature to the area that would diminish the integrity of the property's significant historic features?
 - Audible: there will not be an introduction of audible noise as a result of the Proposed Action. Furthermore, the noise impacts of the Proposed Action on all of the historic resources in the APE will either decrease noise exposure or cause increases that are orders of magnitude below the significance thresholds for DNL aircraft noise as described in FAA Order 1050.1F and therefore will not cause an introduction of audible impact on any of the properties.
 - Visual: there will not be an introduction of visual impacts as a result of the Proposed Action. Furthermore, the entire APE currently experiences 268 average daily overflights as described in the above analysis. The Proposed Action will add less than 1 additional overflight per day. This increase will not change the current visual features of any historic resource in the APE, as depicted in Attachment B.
- Does the Proposed Action result in neglect of a property which would result in its deterioration, transfer, sale or lease?

• The Proposed Action will not cause any property to be sold or transferred.

Given the results discussed in this letter, the FAA is putting forth at this point a Proposed Finding of No Adverse Effect. This determination is based on the findings discussed in this letter, which includes that none of the NRHP listed properties reviewed herein were found to have a "quiet setting" as described in the FAA's Section 106 Handbook. Furthermore, the net change in aircraft operations as a result of the Proposed Action would be minimal and would not cause an adverse effect, including no physical impacts and no introduction of audible or visual impacts within the APE.

Public Meetings, Comments, and Consultation

The FAA conducted Virtual Public Workshops for the Draft EA on October 23rd, and October 28th, 2020. By attending the Virtual Public Workshops, participants were provided with an overview of the Draft EA which includes results from the noise analysis performed to assess the potential noise impacts of the Proposed Action on historic resources and populations located within the General Study Area. The MHC concurred with the APE on December 8, 2020 so the impacts were shown for historic resources throughout the entire Study Area. During the meeting, the FAA responded to a large number of questions from the community. These meetings were recorded and remain on the FAA's YouTube page for interested community members to review. During the meeting and other forms of engagement, the FAA received over 40 comments regarding the Proposed Action. The FAA is currently reviewing and developing responses to these comments to be shared with the public as part of the Final Environmental Assessment but it should be noted that none of the comments mention any potential impact to historic resources from the Proposed Action.

We look forward to hearing back from you on the FAA's proposed finding. We welcome the input from consulting parties on the historic properties considered as part of the analysis and on the finding itself. If you have any additional comments or questions on this undertaking, please contact me at veronda.johnson@faa.gov or at the address below.

Sincerely,

Veronda Johnson Eastern Service Center Federal Aviation Administration Operations Support Group AJV-E250 1701 Columbia Avenue College Park, GA 30337



U.S. Department of Transportation

Federal Aviation Administration Eastern Service Center

1701 Columbia Avenue College Park, Georgia 30337

June 9, 2021

Planning & Zoning Board 136 Elm Street North Easton, MA 02356

Proposed Finding of No Adverse Effect for the Boston Logan International Airport RNAV (GPS) RWY 4L Approach Procedure, Boston, MA

To Whom It May Concern,

The Federal Aviation Administration (FAA) is evaluating a new proposed Area Navigation (RNAV) Global Positioning System (GPS) instrument approach procedure at Boston Logan International Airport (BOS). This new procedure would allow for aircraft to land onto Runway 4L with GPS technological automation as well as allow for landing during low visibility conditions. These additional procedural capabilities would increase the safety and efficiency of the airspace around BOS.

Pursuant to 36 CFR 800.4(a), the FAA previously consulted with the Massachusetts Historical Commission to identify the Area of Potential Effects for this undertaking. In continuing with our responsibilities under Section 106 of the National Historic Preservation Act and its implementing regulations, the FAA invites you to participate as a consulting parting and submits this assessment of adverse effects, which concludes with a proposed Finding of No Adverse Effects and our supporting rationale for that finding. The FAA seeks your views or comments on this finding, which can be addressed to the FAA using the email or address given at the conclusion of this letter. Pursuant to 36 CFR 800.5(c), please provide any comments within 30 days from receipt of this letter.

Project Background

As described in greater detail in the FAA's Draft Environmental Assessment (EA), which can be accessed at <u>www.faabostonworkshops.com</u>, the FAA is evaluating a new proposed Area Navigation (RNAV) Global Positioning System (GPS) instrument approach procedure at BOS. This new procedure, which is depicted in Attachments A and B, is needed to allow aircraft to land onto Runway 4L with GPS technological automation. The current absence of an RNAV procedure to Runway 4L precludes use of the runway during low visibility conditions. The proposed procedure route is an overlay of existing arrivals and is expected to lead to a net increase of 255 annual arrivals to BOS generally, which represents 0.1% of the total annual arrivals, and an increase of 359 annual arrivals specifically to Runway 4L. These additional

procedural capabilities would increase the safety and efficiency of the airspace around BOS. Publication of the proposed procedure would constitute an undertaking under Section 106 of the National Historic Preservation Act (NHPA).

Regulatory Overview

Under NEPA, the FAA is responsible for analyzing the impacts of its action on historical, architectural, archeological and cultural resources as part of its broader review of the human environment. Because the National Historic Preservation Act (NHPA) is the principal statute concerning such resources, most of this analysis is conducted in coordination with the process under Section 106 of the NHPA, which requires federal agencies to consider the effects of their projects on properties listed, or eligible for listing, in the National Register of Historic Places (NRHP). As this is an FAA Action, the FAA document *Section 106 of the National Historic Properties under Section 106 of the National Historic Properties under Section 106 of the National Historic Preservation Act* was consulted and referenced in order to make this determination.

Review of Historic/Eligible Properties

The National Register of Historic Places (NRHP), the Massachusetts Historical Commission, and the Boston Landmarks Commission's data sources were used to gather a comprehensive directory of all potential historic and cultural resources within the APE. A total of 19 properties within the APE were found to be listed in the National Register of Historic Places as historic districts or individual properties in accordance with the criteria described in the NHPA. These 19 properties are identified and described in Table 1. A total of 4,184 state and local designated properties were identified within the APE and are summarized by their location in Table 2. These 4,184 properties represent the group of potential resources that would be evaluated for National Register eligibility. For the purposes of this proposed finding, we assume all of these properties are eligible for the National Register and propose a finding of no adverse effect for all properties within the APE currently listed, determined eligible for listing, and assumed eligible for listing in the NRHP.

NRHP Property Name	Brief Property Description
Milton Cemetery	Milton Cemetery contains some of the best examples of funerary art from the colonial times to the Victorian era. An historic garden cemetery, it was established as the Town's only cemetery in 1672.
Spring Brook Cemetery	The most prominent structure in the cemetery, Card Memorial Chapel, was designed by Charles Eastman & built in 1898 and funded by Simon & Mary Card in memory of their daughter Lulu.
Dorchester Park	Dorchester Park is a historic park bounded by Dorchester Avenue, Richmond, Adams and Richview Streets in the Dorchester neighborhood of Boston, Massachusetts.

Table 1: National Register of Historic Places Properties within the APE

NRHP Property Name	Brief Property Description
DorchesterMilton Lower Mills Industrial District (Boundary Increase)	The Dorchester-Milton Lower Mills Industrial District is a historic district on both sides of the Neponset River in the Dorchester area of Boston and in the town of Milton, Massachusetts. It encompasses an industrial factory complex, most of which was historically associated with the Walter Baker & Company, the first major maker of chocolate products in the United States.
Savin Hill Historic District	The Savin Hill Historic District is significant for its association with the development of the area from a mid-19th century speculative housing development for Boston's upper-middle class to a close-knot neighborhood of residents from diverse socioeconomic backgrounds. The surviving historic resources catalogue Savin Hill's rich history and remain a cohesive collection of well-preserved historic homes. The district further attains significance as an intact collection of buildings representing a full range of architectural styles.
Blue Hills Parkway	The Blue Hills Parkway, a 1.5-mile-long boulevard in Boston and Milton, is significant as one of the earliest connecting parkways designed for the Metropolitan Parks Commission (MPC) by Olmsted, Olmsted and Eliot and its successor firm, Olmsted Brothers, and it is emblematic of the firm's principles of parkway creation. A divided highway that runs directly south through early 20"-century residential neighborhoods, the Blue Hills Parkway directly connects the Blue Hills Reservation (the largest open space in Metropolitan Boston) with Boston, the Neponset River Reservation, and Truman Parkway.
Blue Hills Reservation Parkways-Metropolitan Park System of Greater Boston	The Metropolitan Park System of Greater Boston, in Massachusetts, is especially noteworthy because it is the first regional park system in the United States.
Foxborough Pumping Station	The Foxborough Pumping Station is a historic water pumping station at 25 Pumping Station Road in Foxborough, Massachusetts. Its main pumphouse was designed by Ernest Boyden, a regionally-known architect of water supply systems, and was built in 1891; it is a brick structure with Queen Anne styling. The station also includes several historic wells, a period garage, and the man- made Fales Pond, a once-dammed section of the Neponset Reservoir near the pumphouse.
Old Harbor Reservation Parkways, Metropolitan Park System of Greater Boston	The Old Harbor Reservation Parkways are three historic roads in the Old Harbor area of Boston. They are part of the Boston parkway system designed by Frederick Law Olmsted.
Dorchester-Milton Lower Mills Industrial District	The Dorchester-Milton Lower Mills Industrial District is located on both sides of the Neponset River in the Dorchester area of Boston and in the town of Milton, Massachusetts. It encompasses an industrial factory complex, most of which was historically associated with the Walter Baker & Company, the first major maker of chocolate products in the United States.

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Boston Logan RNAV (GPS) RWY 4L EA



SOURCE: Esri; RoVolus, 2021; ESA, 2021



Finding of No Adverse Effect Criteria

In order to establish a Finding of No Adverse Effect, the Proposed Action must not meet any of the criteria spelled out in the FAA's Section 106 Handbook, which are based on criteria in ACHP's section 106 regulations in 36 CFR Part 800. This section presents why the Proposed Action does not meet any of these criteria.

- Does the Proposed Action physically destroy or damage the property?
 - The Proposed Action will not have any physical impact on any property. The Proposed Action changes the location of arrival flights in the airspace around Boston Logan International Airport.
- Does the Proposed Action alter the property in any way that is consistent with the Secretary of the Interior's Standards for Treatment of Historic Properties (36 CFR Part 68)?
 - The Standards guide the design and implementation of physical changes to historic properties. This may include changes in use, material repair or substitution, or modification of historically important features. The Proposed Action is located in the airspace above historic resources does not result in any changes in use, material alteration, or physical modifications to these resources.
- Does the Proposed Action remove a property from its historic location?
 - \circ The Proposed Action does not remove any property from its location.
- Does the Proposed Action change the character of the property's use, or of physical features within the property's setting that contribute to its historic significance?
 - The Proposed Action does not change the character of a property's use or any physical features in any historical property's setting.
 - Any changes to setting as a result of the Proposed action would be audible or visual features which are discussed in the following criterion.
- Does the Proposed Action introduce an atmospheric, audible, or visual feature to the area that would diminish the integrity of the property's significant historic features?
 - Audible: there will not be an introduction of audible noise as a result of the Proposed Action. Furthermore, the noise impacts of the Proposed Action on all of the historic resources in the APE will either decrease noise exposure or cause increases that are orders of magnitude below the significance thresholds for DNL aircraft noise as described in FAA Order 1050.1F and therefore will not cause an introduction of audible impact on any of the properties.
 - Visual: there will not be an introduction of visual impacts as a result of the Proposed Action. Furthermore, the entire APE currently experiences 268 average daily overflights as described in the above analysis. The Proposed Action will add less than 1 additional overflight per day. This increase will not change the current visual features of any historic resource in the APE, as depicted in Attachment B.
- Does the Proposed Action result in neglect of a property which would result in its deterioration, transfer, sale or lease?

• The Proposed Action will not cause any property to be sold or transferred.

Given the results discussed in this letter, the FAA is putting forth at this point a Proposed Finding of No Adverse Effect. This determination is based on the findings discussed in this letter, which includes that none of the NRHP listed properties reviewed herein were found to have a "quiet setting" as described in the FAA's Section 106 Handbook. Furthermore, the net change in aircraft operations as a result of the Proposed Action would be minimal and would not cause an adverse effect, including no physical impacts and no introduction of audible or visual impacts within the APE.

Public Meetings, Comments, and Consultation

The FAA conducted Virtual Public Workshops for the Draft EA on October 23rd, and October 28th, 2020. By attending the Virtual Public Workshops, participants were provided with an overview of the Draft EA which includes results from the noise analysis performed to assess the potential noise impacts of the Proposed Action on historic resources and populations located within the General Study Area. The MHC concurred with the APE on December 8, 2020 so the impacts were shown for historic resources throughout the entire Study Area. During the meeting, the FAA responded to a large number of questions from the community. These meetings were recorded and remain on the FAA's YouTube page for interested community members to review. During the meeting and other forms of engagement, the FAA received over 40 comments regarding the Proposed Action. The FAA is currently reviewing and developing responses to these comments to be shared with the public as part of the Final Environmental Assessment but it should be noted that none of the comments mention any potential impact to historic resources from the Proposed Action.

We look forward to hearing back from you on the FAA's proposed finding. We welcome the input from consulting parties on the historic properties considered as part of the analysis and on the finding itself. If you have any additional comments or questions on this undertaking, please contact me at veronda.johnson@faa.gov or at the address below.

Sincerely,

Veronda Johnson Eastern Service Center Federal Aviation Administration Operations Support Group AJV-E250 1701 Columbia Avenue College Park, GA 30337


Eastern Service Center

Dear Secretary Haaland:

This letter is intended to provide you with notice of a consultation involving National Historic Landmarks, as set forth in 36 C.F.R. § 800.10(c). Specifically, the FAA is proposing to publish a new satellite-based arrival procedure for Runway 4L at Boston Logan International Airport (BOS) and there are two National Historic Landmarks located within the Area of Potential Effects.

The procedure is needed to enhance the safety and efficiency of aircraft operations at BOS by providing vertical and lateral electronic guidance to aircraft, which is particularly important during poor weather conditions. The procedure will allow for a stabilized approach and will reduce pilot workload during those conditions, and also reduce delays and cancellations at BOS. Once the procedure is published, the FAA expects there would be an annual increase of 255 arrivals to Runway 4L at BOS, which were previously scheduled flights that would no longer need to be cancelled due to increased efficiency. The procedure would also allow for the shift of 104 annual arrivals from Runway 4R to Runway 4L due to increased efficiency on Runway 4L. Besides the overall increase of 359 flights to Runway 4L and the decrease of 104 flights to Runway 4R, the number of annual operations at BOS would not change.

This proposal is an undertaking under Section 106 of the National Historic Preservation Act. As part of the FAA's assessment of effects to historic resources from this undertaking, the FAA identified two National Historic Landmarks within the Area of Potential Effects: the Captain Robert Bennet Forbes House (215 Adams Street, Milton, MA) and the Great Blue Hill Weather Observatory (located in the Blue Hills Reservation MRA, East Milton, MA). However, based on its assessment of adverse effects, the FAA has proposed a Finding of No Adverse Effects.

Enclosed please find the FAA's initial Finding of No Adverse Effects, which was sent to all consulting parties, as well as additional consultation letters between the FAA and the Massachusetts Historical Commission (MHC) relating, in part, to the Captain Robert Bennet Forbes House. To date, the MHC has indicated it cannot concur with the FAA's Finding of No Adverse Effect and has stated that "this increase of 359 flights annually will introduce increased visual and audible events which will affect the historic resources under and near the 4L RNAV flight path." The FAA is currently engaged in additional consultation with MHC and has provided additional analysis of the effect on historic properties under the procedure's flight path that we believe shows that the procedure will not introduce any audible or visual elements that would diminish the integrity of the properties' significant historic features. In addition, you can access the FAA's Draft Environmental Assessment for the procedure, prepared pursuant to the National Environmental Policy Act, at the following website: https://faabostonworkshops.com/.

We believe this letter and the enclosed consultation letters satisfy our responsibility to notify the Secretary of the Interior under 36 C.F.R. § 800.10(c). Please do not hesitate to contact us with any questions.

Sincerely,

Veronda Johnson

Veronda Johnson Eastern Service Center Federal Aviation Administration Operations Support Group AJV-E250 1701 Columbia Avenue College Park, GA 30337



U.S. Department of Transportation

Federal Aviation Administration Eastern Service Center

1701 Columbia Avenue College Park, Georgia 30337

June 18, 2020

Mr. William Galvin Chair of the Massachusetts Historical Commission, State of Massachusetts Massachusetts Historical Commission 220 Morrissey Blvd Boston, MA 02125

Reference: Section 106 Consultation Initiation for the Proposed RNAV (GPS) RWL 4L Approach Procedure at Boston Logan International Airport

Dear Mr. Galvin,

The Federal Aviation Administration (FAA) is evaluating a new proposed Area Navigation (RNAV) Global Positioning System (GPS) instrument approach procedure at Boston Logan International Airport (BOS). This new procedure would allow for aircraft to land onto Runway 4L with GPS technological automation as well as allow for landing during low visibility conditions. These additional procedural capabilities would increase the safety and efficiency of the airspace around BOS. Publication of the proposed procedure would constitute an undertaking under Section 106 of the National Historic Preservation Act (NHPA). Therefore, the purpose of this letter is to initiate consultation under Section 106 and the ACHP's implementing regulations.¹ The FAA intends to satisfy Section 106's public involvement requirements in conjunction with the NEPA process.

<u>1.</u> Background Information.

Boston Logan International Airport (the Airport) is a large commercial service airport in Massachusetts, with approximately 340,000 takeoffs and landings in 2019. It is the primary passenger airport for southern New England as well as the region's busiest passenger service airport. Of the twelve runways available at the Airport, Runway 4L is the only runway that typically handles airline arrivals but does not have an Instrument Approach Procedure (IAP) available to assist landings. An IAP is a series of predetermined maneuvers for the orderly transfer of an aircraft under Instrument Flight Rules (IFR) from the beginning of the initial approach to a landing or to a point from which a landing may be made visually. IFR are rules and regulations established by the Federal Aviation Administration to govern flight under conditions in which flight by outside visual reference is not safe. When such conditions are present, these are known as Instrument Meteorological Conditions (IMC). IFR flight depends upon flying by reference to instruments in

¹ <u>https://www.achp.gov/protecting-historic-properties</u>,

https://www.faa.gov/about/office_org/headquarters_offices/apl/environ_policy_guidance/guidance/media/section-106-handbook.pdf

the flight deck, and navigation is accomplished by reference to electronic signals.

Currently, while operating in Visual Meteorological Conditions (VMC), aircraft approaching Runway 4L to land are expected to maintain visual separation from other traffic at all times. As these aircraft presently lack vertical and lateral guidance to the runway, pilots must "hand-fly" the aircraft when arriving to Runway 4L, leading to additional cockpit workload during a critical phase of flight. Additionally, the runway is not available during periods of IMC, so operational flexibility is significantly limited during these times. During periods of significant delay, flights can often land much later than originally scheduled, potentially impacting neighbors during late-night hours. Cancellation of flights during periods of significant delay is not uncommon.

The FAA is proposing the implementation of a publicly available (published) RNAV IAP to Runway 4L. The proposed RNAV procedure will provide lateral and vertical guidance, enabling continuous descent to the runway and offering a more predictable, consistent, and stabilized approach path, thus improving safety. The proposed procedure will be used during IMC conditions and during VMC conditions when advised by local air traffic control.

The proposed RNAV (GPS) procedure will provide a stabilized approach with vertical and lateral guidance. This will reduce cockpit workload and allow aircraft to land at RWY 4L in IMC, which will in turn reduce delays at the Airport and upstream through the NAS. The procedure will also allow for greater controller flexibility during VMC conditions. The proposed procedure is designated as an RNAV (GPS) IAP, which requires that an aircraft flying the procedure remain within one nautical mile of the procedure centerline 95% of the total flight time.

The General Study Area (GSA) for the FAA's NEPA review is delineated for purposes of identifying potential environmental impacts. The GSA, as depicted in **Attachment A**, encompasses an area of approximately 1,173 square miles around BOS across Middlesex, Norfolk, Plymouth, and Suffolk counties. The GSA was constructed to encompass the geographic area where an aircraft flight path could be affected as a result of the proposed procedure.

2. FAA's Proposed Approach to Defining the Area of Potential Effects

As part of the consultation process required under Section 106, the FAA seeks your input on its proposed approach to identifying the Area of Potential Effects (APE) for the undertaking.

The Section 106 regulations define the APE as "the geographical area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties if any such properties exist. The Area of Potential Effects is influenced by the scale and nature of an undertaking and may be different for different kinds of effects caused by the undertaking."²

The Proposed Action will not cause any physical effects. However, pursuant to 36 CFR 800.5(a)(2)(v), the FAA will also consider the potential for the undertaking to introduce visual, atmospheric, or audible elements that could diminish the integrity of a historic property's significant historic features. The FAA will

² 36 CFR § 800.16(d), <u>https://www.achp.gov/sites/default/files/regulations/2017-02/regs-rev04.pdf</u>

make this assessment by comparing the expected flight tracks of aircraft flying the BOS 4L RNAV procedure to radar tracks of current arrivals at BOS. Based on this comparison, the FAA will determine whether there will new areas overflown by the Proposed Action, and specifically whether the undertaking has the potential to introduce new visual, atmospheric or audible elements. Any areas that will be introduced to new visual, atmospheric, or audible elements will be considered part of the APE.

The FAA will also consider the potential for the undertaking to have noise effects that could alter the character or use of historic properties. The FAA is in the process of conducting a noise analysis to determine how this undertaking would affect current aircraft noise exposure levels. If the noise analysis indicates there will be any areas that will be subject to a reportable or significant noise increase, as defined in FAA Order 1050.1F, those areas will be considered part of the APE. The FAA invites the SHPO to provide feedback on this approach to determining the APE and assessing impact on historical properties.

3. Identification of Interested Parties

Once the FAA delineates the APE and identifies the resources within that APE, the FAA will invite local governments with jurisdiction over those resources to participate in consultation. Consistent with this effort and to ensure that all interested parties are reached during the outbreak of COVID-19, the FAA requests your assistance to identify other interested parties that should be invited to participate in consultation. An invitation of consultation does not mean that any resources will be necessarily identified as affected or impacted by the proposed procedure.

We look forward to hearing back from you and consulting with you on our approach to comply with Section 106 of the NHPA and in the identification of interested parties. If you have any initial comments or questions on this undertaking, please contact Veronda Johnson at (404)-305-5598, or at veronda.johnson@faa.gov.

Sincerely,

Veronda Johnson

Veronda Johnson Environmental Protection Specialist Operations Support Group Eastern Service Center



SOURCE: Esri; Prepared by Jacobsen Daniels, 2020



Boston Logan RNAV (GPS) RWY 4L EA

Attachment A BOS EA General Study Area



U.S. Department of Transportation

Eastern Service Center

1701 Columbia Avenue College Park, Georgia 30337

Federal Aviation Administration

October 12, 2021

Ms. Brona Simon State Historic Preservation Officer/Executive Director Massachusetts Historical Commission 220 Morrissey Blvd Boston, MA 02125

Reference: Follow up on Proposed Finding of No Adverse Effect for the Boston Logan International Airport RNAV (GPS) RWY 4L Approach Procedure, Boston, MA (MHC# RC.68314)

Dear Ms. Simon,

Your letter dated September 10, 2021, stating your non-concurrence with our proposed finding of "no adverse effect" was received by the Federal Aviation Administration (FAA) on September 21, 2021 and we have prepared the following additional information.

To address the issues raised in your letter, we can confirm that FAA did reach out to all of the organizations identified in the Massachusetts Historic Commission (MHC) letter dated July 24, 2020 as possible consulting parties:

- All Local Historical Commissions of the cities and towns in the Area of Potential Effects (APE)
- All Regional Planning Commission in the APE
- Air Inc.
- Eagle Hill Civic Association
- Fair Skies Nation

A letter inviting participation as a consulting party was sent to historical commissions and planning boards from Milton, Quincy, Stoughton, Sharon, Randolph, Norton, Mansfield, Canton, Easton, Foxborough, and Boston, Massachusetts. The Mashpee Wampanoag Tribe, and the Wampanoag Tribe of Gay Head were invited to participate in consultation by letters sent June 9, 2021. Air Inc., Eagle Hill Civic Association, Fair Skies Nation, were also invited to participate in consultation, for a total of twenty-seven parties. The Proposed Finding was mailed via USPS to all of these organizations in June 2021 with a signature confirmation with the exceptions of Fair Skies Nation and the Eagle Hill Civic Association to whom the Proposed Finding was emailed. Confirmation of receipt was obtained for all of these potential consulting parties.

The only responses received to date have been from the Foxborough Historical Commission and a recent email from Fair Skies Nation. The letter from the Foxborough Historical Commission, which was previously shared with the MHC in the FAA's package dated August 9th, 2021, stated that the Foxborough Historical Commission "does not believe that this will have any impact on

any historical property in the town." The email from Fair Skies Nation, which was received on September 19, 2021 stated that "implementation of the 4L RNAV actually would help relieve some of the excessive noise and pollution that residents and historic areas under the overused 4R path experience." That email from Fair Skies Nation, received by the FAA on September 19, 2021, is included here per your request for all comments related to the Proposed Finding.

The public information session hosted by Massport on September 23, 2021, referenced in your September 10th letter, concerned a different project: the Boston Logan RNAV Study and the Block 2 Recommendations. This study, which is a collaborative effort involving Massachusetts Port Authority (Massport), the FAA, and experts from the Massachusetts Institute of Technology (MIT) to attempt to address the effect of aircraft noise while maintaining safety at the airport, is a separate undertaking than the Proposed RNAV (GPS) RWY 4L Approach Procedure. The confusion between that project and this undertaking may have arisen because in the methodology described in the FAA letter dated October 29, 2020 for selecting an APE for this project, the descriptor "BLOCK2" was used to describe an area of land for the overflight analysis. This "BLOCK2" has been recreated in Attachment A and is simply a polygon around the Proposed Procedure, which was used to estimate overflights in the area of the Proposed Action. This "BLOCK2" polygon was introduced to help establish an APE for this undertaking and is not related to the Block 2 recommendations referenced in the September 23, 2021 meeting. The use of similar terminology for the two unrelated projects is simply coincidental. Therefore, the comments from this recent meeting are not included in this correspondence.

The FAA would like to continue consultation regarding the Proposed Finding and better understand MHC's position that the undertaking would meet the criterion of adverse effects cited in your letter (36 CFR 800.5(2)(v)). Specifically, FAA seeks further information on the types of resources the MHC believes would be adversely affected by the undertaking through the introduction of visual or audible elements, given that the area is already heavily overflown.

In our June 10, 2021 letter proposing a finding of "no adverse effect" we described our methodology for assessing auditory and visual impacts to the historic properties where a quiet setting is a generally recognized purpose and attribute.¹ MHC's September 10th letter states that the proposed undertaking "will concentrate flights in a more precise vertical and horizontal track" but does not provide an explanation of how any such concentration would diminish the integrity of significant historic features of properties in the APE. With a better understanding of the basis for MHC's non-concurrence, FAA may be able to provide additional information or analysis that might help us to reach consensus.

¹ Because this undertaking does not require land acquisition, construction, or ground disturbance, the FAA focused its "reasonable and good faith effort to carry out appropriate identification efforts" on properties for which setting and feeling are characteristics contributing to the property's National Register eligibility and where integrity of significant historic features could be affected by the introduction of visual or audible elements.

If the MHC is open to further discussion, we would welcome a Zoom meeting to facilitate continued consultation that could assist in clarifying the Proposed Finding for this project. The meeting could be recorded so it could be presented as part of the record of correspondence between the FAA and the MHC. Please respond by contacting me at 404-305-5598, or at veronda.johnson@faa.gov to indicate how you would like to proceed.

Sincerely,

Veronda Johnson Eastern Service Center Federal Aviation Administration Operations Support Group AJV-E250 1701 Columbia Avenue College Park, GA 30337



SOURCE: Esri; RoVolus, 2021; ESA, 2021



Boston Logan RNAV (GPS) RWY 4L EA

Attachment A BLOCK 2 Used in APE Determination Process From: BOS FAIR SKIES <bosfairskies@gmail.com>
Sent: Sunday, September 19, 2021 11:04 PM
To: mhc@sec.state.ma.us; Johnson, Veronda (FAA) <Veronda.Johnson@faa.gov>
Subject: FAA's 4L proposed RNAV approach path

BOS Fair Skies received a copy of a 9/10/21 letter from Brona Simon, Executive Director Massachusetts Historical Commission, to Ms. Veronda Johnson at the FAA about the FAA's proposed RNAV flight path for Runway 4L approaches to Logan Airport. Air Inc, a group we collaborate with on many efforts, shared the letter with BOS Fair Skies.

Implementation of the 4L RNAV actually would help relieve some of the excessive noise and pollution that residents and historic areas under the overused 4R path experience. In 2019, those under the 4R flightpath had 9 aviation noise events for every 1 to 4L. The two RNAV approach paths to 4L should be used to disperse the planes from 4R to an area that has few fly overs when compared to those under the 4R path, which also affects residents and historic places in Quincy and Braintree.

If you would like more information about why the 4L RNAV path is needed for dispersion, equity, and fairness, please respond to this email and ask that your response be forwarded to Phil Johenning or Cindy L. Christiansen. One or both of them will connect with you directly. Thanks.

NOTE: BOS Fair Skies is not associated with Fair Skies Nation



U.S. Department of Transportation

Federal Aviation Administration Eastern Service Center

1701 Columbia Avenue College Park, Georgia 30337

October 29, 2020

Ms. Brona Simon State Historic Preservation Officer/Executive Director Massachusetts Historical Commission 220 Morrissey Blvd Boston, MA 02125

Reference: Section 106 Consultation for the Proposed RNAV (GPS) RWL 4L Approach Procedure at Boston Logan International Airport

Dear Ms. Simon

Thank you for your July 24, 2020 comments on our initial June 24, 2020 consultation letter concerning the proposed approach procedure at Boston Logan International Airport. In response to your comments, we have modified our approach with respect to the review of historic resources in the General Study Area and in our delineation of an Area of Potential Effects (APE). We request your review of the modified approach for defining the APE proposed below. Background information about the undertaking is repeated in this letter to make your review of the updated approach easier.

<u>1.</u> Background Information.

The Federal Aviation Administration (FAA) is evaluating a new proposed Area Navigation (RNAV) Global Positioning System (GPS) instrument approach procedure at Boston Logan International Airport (BOS). This new procedure would allow for aircraft to land onto Runway 4L with GPS technological automation as well as allow for landing during low visibility conditions. These additional procedural capabilities would increase the safety and efficiency of the airspace around BOS. Publication of the proposed procedure would constitute an undertaking under Section 106 of the National Historic Preservation Act (NHPA).

Boston Logan International Airport (the Airport) is a large commercial service airport in Massachusetts, with approximately 427,000 takeoffs and landings in 2019, which includes domestic, international, and general aviation activity. It is the primary passenger airport for southern New England as well as the region's busiest passenger service airport. Of the twelve runways available at the Airport, Runway 4L is the only runway that typically handles airline arrivals but does not have an Instrument Approach Procedure (IAP) available to assist landings. An IAP is a series of predetermined maneuvers for the orderly transfer of an aircraft under Instrument Flight Rules (IFR) from the beginning of the initial approach to a landing or to a point from which a landing may be made visually. IFR are rules and regulations established by the Federal Aviation Administration to govern flight under conditions in which flight by outside visual reference is not

safe. When such conditions are present, these are known as Instrument Meteorological Conditions (IMC). IFR flight depends upon flying by reference to instruments in the flight deck, and navigation is accomplished by reference to electronic signals.

Currently, while operating in Visual Meteorological Conditions (VMC), aircraft approaching Runway 4L to land are expected to maintain visual separation from other traffic at all times. As these aircraft presently lack vertical and lateral guidance to the runway, pilots must "hand-fly" the aircraft when arriving to Runway 4L, leading to additional cockpit workload during a critical phase of flight. Additionally, the runway is not available during periods of IMC, so operational flexibility is significantly limited during these times. During periods of significant delay, flights can often land much later than originally scheduled, potentially impacting neighbors during late-night hours. Cancellation of flights during periods of significant delay is not uncommon.

The FAA is proposing the implementation of a publicly available (published) RNAV IAP to Runway 4L. The proposed RNAV procedure will provide lateral and vertical guidance, enabling continuous descent to the runway and offering a more predictable, consistent, and stabilized approach path, thus improving safety. The proposed procedure will be used during IMC conditions and during VMC conditions when advised by local air traffic control.

The proposed RNAV (GPS) procedure will provide a stabilized approach with vertical and lateral guidance. This will reduce cockpit workload and allow aircraft to land at RWY 4L in IMC, which will in turn reduce delays at the Airport and upstream through the NAS. The procedure will also allow for greater controller flexibility during VMC conditions. The proposed procedure is designated as an RNAV (GPS) IAP, which requires that an aircraft flying the procedure remain within one nautical mile of the procedure centerline 95% of the total flight time. As explained in the noise analysis prepared for the FAA's Draft Environmental Assessment, the FAA only expects the new procedure to be used by approximately 359 operations per year. The Draft Environmental Assessment, which includes the FAA's noise analysis, is available on the following website: https://faabostonworkshops.com/. The FAA is currently accepting comments on the Draft Environmental Assessment through November 20, 2020.

The General Study Area (GSA) for the FAA's NEPA review is delineated for purposes of identifying potential environmental impacts. The GSA, as depicted in **Attachment A**, encompasses an area of approximately 1,173 square miles around BOS across Middlesex, Norfolk, Plymouth, and Suffolk counties. The GSA was conservatively constructed to encompass the geographic area where an aircraft flight path could be affected as a result of the proposed procedure.

2. FAA's Proposed Area of Potential Effects

As part of the consultation process required under Section 106, the FAA seeks your input on the proposed APE identified in this document for the undertaking. The Section 106 regulations define the APE as "the geographical area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties if any such properties exist. The Area of Potential Effects is influenced by the scale and nature of an undertaking and may be different for different kinds of effects

caused by the undertaking."1

The Proposed Action will not cause any physical effects to historic properties. Therefore, the FAA is developing a proposed APE based on consideration of where noise and visual impacts from the undertaking are expected to occur.² Specifically, the FAA considered the potential for noise or visual impacts that could alter the character or use of historic properties and the introduction of visual, atmospheric or audible elements that could diminish the integrity of the property's significant historic features.

An analysis was first conducted to identify areas where any historic property that might be present could be affected by the introduction of visual or audible elements from aircraft overflights. Notably, the FAA has determined the Proposed Action will not cause the introduction of new overflights, as aircraft flying the Proposed Action will all fly over areas that are currently overflown by arrivals to BOS.

Next, the FAA considered the projected increase in the number or concentration of overflights over particular areas to assess the potential for an incremental change in noise levels and visual impacts to alter the character or use of historic properties. The Proposed Action was used to generate two dimensional blocks covering all areas of potential change in overflights separated by the waypoints of the Proposed Action. These blocks are shown in reference to the Proposed Action in **Attachment B**. These blocks were then compared to an entire year of overflight data within the GSA as well as estimated usage of the Proposed Action and used to generate overflight data for each block for the No Action and Proposed Alternatives. **Attachment C** shows the year of overflight data in reference to the Proposed Action and these blocks. The radar data shows that the airspace around the Airport is already extremely dense with overflights, with over 427,000 annual operations in 2019.

Table 2.1 of the Draft Environmental Assessment summarizes the number of overflights for each block in the No Action and Proposed Action Alternatives. Based primarily on the overall increase in overflights and filtered by the percent increase in overflights and minimum aircraft altitude, the FAA is proposing to select the APE based on the following blocks: BLOCK3, NUNZO2, BLOCK2, BLOCK1, and NUNZO1. In each of these blocks, the percentage increase in overflights was greater than 0.4% and adding more than 100 overflights annually at a minimum altitude of 4,000 feet or less for the Proposed Action within each block.

¹ 36 CFR § 800.16(d), <u>https://www.achp.gov/sites/default/files/regulations/2017-02/regs-rev04.pdf</u>

² As part of its review under the National Environmental Policy Act, the FAA conducted a noise modeling analysis to determine how this proposed action would affect current aircraft noise exposure levels in the General Study Area. This analysis indicated that the action would not result in any noise increase that would be "significant" under FAA policy, which defines the threshold of significance as an increase in the Day-Night Average Sound Level (DNL) of 1.5 dB or more for a noise sensitive area that is exposed to noise at or above the DNL 65 dB noise exposure level, or that will be exposed at or above the DNL 65 dB level due to a DNL 1.5 dB or greater increase. However, FAA policy recognizes that this threshold of significance may not be relevant to certain historic properties where a quiet setting is a generally recognized purpose and attribute. *FAA Order 1050.1F, Environmental Impacts: Policies and Procedures, Exhibit 4-1.*

Block Name	Block Minimum Altitudes (ft)	No Action Alternative Overflights	Proposed Action Alternative Overflights**	Percentage Increase in Overflights
BLOCK1	0	83,599	83,958	0.43%
BLOCK2	1,700	81,133	81,492	0.44%
BLOCK3	3,000	66,110	66,469	0.54%
WOONS1	4,000	45,502	45,520	0.04%
NUNZO1	4,000	43,313	43,492	0.41%
NUNZO2	4,000	36,654	36,833	0.49%
WOONS2	4,000	3,609	3,627	0.50%
DOWNWIND2	NA	129,230	129,338	0.08%
CAPE2	NA	66,899	66,953	0.08%
CAPE1	NA	69,766	69,820	0.08%
DOWNWIND1	NA	62,462	62,570	0.17%

 Table 2.1

 Number of Overflights* for the No Action and Proposed Action Alternatives by Block

Source: RoVolus, ESA, September 2020.

*Overflight data was from the calendar year from November 1, 2018 through October 31, 2019 **The Range of overflights added to each block ranged from 18 to 359 overflights

The proposed APE, which is just over 105 square miles, includes the area of the blocks identified in the overflights analysis and this proposed APE is shown in **Attachment D**.

3. FAA's Initial Identification of Historic Properties and Assessment of Effects

The National Register of Historic Places, the Massachusetts Historical Commission, and the Boston Landmarks Commission's data sources were used to gather a comprehensive directory of previously identified historic properties within the GSA. Approximately 4,202 of these resources are within the proposed APE. As noted above, the Proposed Action would not physically affect or alter any historic properties or other cultural resources. The Proposed Action also would not introduce aircraft overflights to resources that are not already overflown by aircraft. However, the FAA is considering the possibility that changes in noise levels or additional visual impacts from an increase in overflights could alter the character or use of certain kinds of historic properties where a quiet setting is a generally recognized purpose and attribute. Therefore, we are asking your assistance in identifying any historic properties where a cultural landscape is part of the property's significance, rural historic districts, outdoor spaces designed for meditation or contemplation and certain traditional cultural properties in continuous use. The FAA looks forward to further consultation with your office to discuss whether the undertaking could affect any such historic properties within the APE.

4. Additional Consultation

The FAA has noted the list of historical commissions, regional planning commissions, and other organizations provided in your previous letter. Once the MHC concurs with the proposed APE, the FAA will reach out to each of these organizations.

We look forward to hearing back from you on the FAA's proposed Area of Potential Effects and consulting with you to identify historic resources that could be affected by this undertaking. Following your review, we would appreciate having a conference call to receive your feedback and also to discuss next steps. If you have any additional comments or questions on this undertaking, please contact me at (404)-305-5598, or at veronda.johnson@faa.gov.

Sincerely,

Veronda Johnson Environmental Protection Specialist Operations Support Group Eastern Service Center



SOURCE: Esri; Prepared by Jacobsen Daniels, 2020



Boston Logan RNAV (GPS) RWY 4L EA

Attachment A BOS EA General Study Area



SOURCE: Esri; Prepared by Jacobsen Daniels, 2020



Boston Logan RNAV (GPS) RWY 4L EA

Attachment B BOS Procedure Corridor Blocks



SOURCE: Esri; Prepared by Jacobsen Daniels, 2020



Boston Logan RNAV (GPS) RWY 4L EA

Attachment C BOS Procedure Corridor Blocks and Radar Flight Tracks



SOURCE: Esri; Prepared by Jacobsen Daniels, 2020





Boston Logan RNAV (GPS) RWY 4L EA

Attachment D Proposed Area of Potential Effects



U.S. Department of Transportation

Eastern Service Center

1701 Columbia Avenue College Park, Georgia 30337

Federal Aviation Administration

August 9, 2021

Ms. Brona Simon State Historic Preservation Officer/Executive Director Massachusetts Historical Commission 220 Morrissey Blvd Boston, MA 02125

Reference: Follow up on Proposed Finding of No Adverse Effect for the Boston Logan International Airport RNAV (GPS) RWY 4L Approach Procedure, Boston, MA (MHC# RC.68314)

Dear Ms. Simon,

Your letter dated July 21, 2021 was received by the FAA and we have prepared the requested additional materials for your review. You will find enclosed in this package the following items:

- The Draft Environmental Assessment for the Boston Logan RNAV (GPS) RWY 4L procedure including all appendices.
- The replies received from historical commissions, regional planning commissions, and other organizations as of 8/9/2021, which consists of a single letter from the Foxborough Historical Commission. For your reference, the table below contains all the organizations with whom the proposed finding was shared.
- The comments received from the public in response to the Draft Environmental Assessment.

We would ask that you please expediate your review of the proposed finding if possible. If you have any additional comments or questions on this undertaking, please don't hesitate to contact me at (404)-305-5598, or at veronda.johnson@faa.gov.

Sincerely,

Veronda Johnson Eastern Service Center Federal Aviation Administration Operations Support Group AJV-E250 1701 Columbia Avenue College Park, GA 30337

Organization Type	Organization Name	Organization Location
Indian Tribe	Mashpee Wampanoag Tribe	Mashpee, MA
Indian Tribe	Wampanoag Tribe of Gay Head (Aquinnah)	Aquinnah, MA
Historical Commission	Boston Landmarks Commission	Boston, MA
Historical Commission	Canton Historical Commission	Canton, MA
Historical Commission	Easton Historical Commission	Easton, MA
Historical Commission	Foxborough Historical Commission	Foxborough, MA
Historical Commission	Mansfield Historical Commission	Mansfield, MA
Historical Commission	Milton Historical Commission	Milton, MA
Historical Commission	Norton Historical Commission	Norton, MA
Historical Commission	Quincy Historical Commission	Quincy, MA
Historical Commission	Town of Randolph Historical Commission	Randolph, MA
Historical Commission	Town of Sharon Historical Commission	Sharon, MA
Historical Commission	Town of Stoughton Historical Commission	Stoughton, MA
Planning Board	Boston Planning & Development Agency	Boston, MA
Planning Board	Canton Office of the Planning Board	Canton, MA
Planning Board	Easton Planning & Zoning Board	North Easton, MA
Planning Board	Foxborough Planning Board	Foxborough, MA
Planning Board	Mansfield Planning Board	Mansfield, MA
Planning Board	Milton Planning Board	Milton, MA
Planning Board	Norton Planning and Economic Development	Norton, MA
Planning Board	City of Quincy Planning Board	Quincy, MA
Planning Board	Town of Randolph Planning Department	Randolph, MA
Planning Board	Town of Sharon Planning Board	Sharon, MA
Planning Board	Town of Stoughton Planning Board	Stoughton, MA
Miscellaneous	Air Inc.	East Boston, MA
Miscellaneous	Eagle Hill Civic Association	Eagle Hill, East Boston, MA
Miscellaneous	Fair Skies Nation	Milton, MA



Foxborough Historical Commission

TOWN OF FOXBOROUGH, TOWN HALL, FOXBOROUGH, MASSACHUSETTS 02035

Tuesday, June 29, 2021

Veronda Johnson Eastern Service Center Federal Aviation Administration Operations Support Group AJV-E250 1701 Columbia Avenue College Park, GA 30337

Dear Ms. Johnson,

This letter is to acknowledge receipt of your invitation to comment on FAA's Proposed Finding of no adverse effect for the Boston Logan International Airport RNAV (GPS) RWY 4L Approach Procedure in Boston MA.

The Foxborough Historical Commission does not believe that this will have any impact on any historical property in the town.

Respectfully submitted

Mark Ferencik

Chairman, Foxborough Historical Commission



Foxborough Historical Commission TOWN OF FOXBOROUGH TOWN HALL FOXBOROUGH, MASSACHUSETTS 02035

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Eastern Service Center FAA Operations.Support Group AJV-E250 1701 Columbia Ave College Park GA 30337

Attn: Veronka Johnson

30337-271401

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U.S. Department of Transportation

Federal Aviation Administration Eastern Service Center

1701 Columbia Avenue College Park, Georgia 30337

June 9, 2021

Fair Skies Nation fairskiesnation.com info@fairskiesnation.com

Proposed Finding of No Adverse Effect for the Boston Logan International Airport RNAV (GPS) RWY 4L Approach Procedure, Boston, MA

To Whom It May Concern,

The Federal Aviation Administration (FAA) is evaluating a new proposed Area Navigation (RNAV) Global Positioning System (GPS) instrument approach procedure at Boston Logan International Airport (BOS). This new procedure would allow for aircraft to land onto Runway 4L with GPS technological automation as well as allow for landing during low visibility conditions. These additional procedural capabilities would increase the safety and efficiency of the airspace around BOS.

Pursuant to 36 CFR 800.4(a), the FAA previously consulted with the Massachusetts Historical Commission to identify the Area of Potential Effects for this undertaking. In continuing with our responsibilities under Section 106 of the National Historic Preservation Act and its implementing regulations, the FAA invites you to participate as a consulting parting and submits this assessment of adverse effects, which concludes with a proposed Finding of No Adverse Effects and our supporting rationale for that finding. The FAA seeks your views or comments on this finding, which can be addressed to the FAA using the email or address given at the conclusion of this letter. Pursuant to 36 CFR 800.5(c), please provide any comments within 30 days from receipt of this letter.

Project Background

As described in greater detail in the FAA's Draft Environmental Assessment (EA), which can be accessed at <u>www.faabostonworkshops.com</u>, the FAA is evaluating a new proposed Area Navigation (RNAV) Global Positioning System (GPS) instrument approach procedure at BOS. This new procedure, which is depicted in Attachments A and B, is needed to allow aircraft to land onto Runway 4L with GPS technological automation. The current absence of an RNAV procedure to Runway 4L precludes use of the runway during low visibility conditions. The proposed procedure route is an overlay of existing arrivals and is expected to lead to a net increase of 255 annual arrivals to BOS generally, which represents 0.1% of the total annual arrivals, and an increase of 359 annual arrivals specifically to Runway 4L. These additional

procedural capabilities would increase the safety and efficiency of the airspace around BOS. Publication of the proposed procedure would constitute an undertaking under Section 106 of the National Historic Preservation Act (NHPA).

Regulatory Overview

Under NEPA, the FAA is responsible for analyzing the impacts of its action on historical, architectural, archeological and cultural resources as part of its broader review of the human environment. Because the National Historic Preservation Act (NHPA) is the principal statute concerning such resources, most of this analysis is conducted in coordination with the process under Section 106 of the NHPA, which requires federal agencies to consider the effects of their projects on properties listed, or eligible for listing, in the National Register of Historic Places (NRHP). As this is an FAA Action, the FAA document *Section 106 of the National Historic Properties under Section 106 of the National Historic Properties under Section 106 of the National Historic Preservation Act* was consulted and referenced in order to make this determination.

Review of Historic/Eligible Properties

The National Register of Historic Places (NRHP), the Massachusetts Historical Commission, and the Boston Landmarks Commission's data sources were used to gather a comprehensive directory of all potential historic and cultural resources within the APE. A total of 19 properties within the APE were found to be listed in the National Register of Historic Places as historic districts or individual properties in accordance with the criteria described in the NHPA. These 19 properties are identified and described in Table 1. A total of 4,184 state and local designated properties were identified within the APE and are summarized by their location in Table 2. These 4,184 properties represent the group of potential resources that would be evaluated for National Register eligibility. For the purposes of this proposed finding, we assume all of these properties are eligible for the National Register and propose a finding of no adverse effect for all properties within the APE currently listed, determined eligible for listing, and assumed eligible for listing in the NRHP.

NRHP Property Name	Brief Property Description
Milton Cemetery	Milton Cemetery contains some of the best examples of funerary art from the colonial times to the Victorian era. An historic garden cemetery, it was established as the Town's only cemetery in 1672.
Spring Brook Cemetery	The most prominent structure in the cemetery, Card Memorial Chapel, was designed by Charles Eastman & built in 1898 and funded by Simon & Mary Card in memory of their daughter Lulu.
Dorchester Park	Dorchester Park is a historic park bounded by Dorchester Avenue, Richmond, Adams and Richview Streets in the Dorchester neighborhood of Boston, Massachusetts.

Table 1: National Register of Historic Places Properties within the APE

NRHP Property Name	Brief Property Description		
DorchesterMilton Lower Mills Industrial District (Boundary Increase)	The Dorchester-Milton Lower Mills Industrial District is a historic district on both sides of the Neponset River in the Dorchester area of Boston and in the town of Milton, Massachusetts. It encompasses an industrial factory complex, most of which was historically associated with the Walter Baker & Company, the first major maker of chocolate products in the United States.		
Savin Hill Historic District	The Savin Hill Historic District is significant for its association with the development of the area from a mid-19th century speculative housing development for Boston's upper-middle class to a close-knot neighborhood of residents from diverse socioeconomic backgrounds. The surviving historic resources catalogue Savin Hill's rich history and remain a cohesive collection of well-preserved historic homes. The district further attains significance as an intact collection of buildings representing a full range of architectural styles.		
Blue Hills Parkway	The Blue Hills Parkway, a 1.5-mile-long boulevard in Boston and Milton, is significant as one of the earliest connecting parkways designed for the Metropolitan Parks Commission (MPC) by Olmsted, Olmsted and Eliot and its successor firm, Olmsted Brothers, and it is emblematic of the firm's principles of parkway creation. A divided highway that runs directly south through early 20"-century residential neighborhoods, the Blue Hills Parkway directly connects the Blue Hills Reservation (the largest open space in Metropolitan Boston) with Boston, the Neponset River Reservation, and Truman Parkway.		
Blue Hills Reservation Parkways-Metropolitan Park System of Greater Boston	The Metropolitan Park System of Greater Boston, in Massachusetts, is especially noteworthy because it is the first regional park system in the United States.		
Foxborough Pumping Station	The Foxborough Pumping Station is a historic water pumping station at 25 Pumping Station Road in Foxborough, Massachusetts. Its main pumphouse was designed by Ernest Boyden, a regionally-known architect of water supply systems, and was built in 1891; it is a brick structure with Queen Anne styling. The station also includes several historic wells, a period garage, and the man- made Fales Pond, a once-dammed section of the Neponset Reservoir near the pumphouse.		
Old Harbor Reservation Parkways, Metropolitan Park System of Greater Boston	The Old Harbor Reservation Parkways are three historic roads in the Old Harbor area of Boston. They are part of the Boston parkway system designed by Frederick Law Olmsted.		
Dorchester-Milton Lower Mills Industrial District	The Dorchester-Milton Lower Mills Industrial District is located on both sides of the Neponset River in the Dorchester area of Boston and in the town of Milton, Massachusetts. It encompasses an industrial factory complex, most of which was historically associated with the Walter Baker & Company, the first major maker of chocolate products in the United States.		

NRHP Property Name	Brief Property Description
Furnace Village Historic District	The Furnace Village Historic District encompasses the historic colonial industrial area in Easton, Massachusetts. At its center is at the intersection of Foundry street, South street and Poquanticut Avenue. The area was settled in 1723, with industrial activity beginning in 1742. The iron furnace was established in 1751, and for industrial purposes, continued in the 19th century. In addition to the colonial era, there is also an employee of the housing of the 19th century.
Milton Centre Historic District	The Milton Centre Historic District is both the historical and geographic center of the town of Milton. The 23-acre historic district includes Canton Avenue between Reedsdale Road and Thacher and Highland Streets. Milton Centre is historically significant for its association with the development of the town following the relocation of the third meeting house to Academy Hill in 1728, and the subsequent shift of the town center from Milton Hill.
Scott's Woods Historic District	Scott's Woods Historic District is the area of Hillside, Harland and Forest Streets between Randolph Avenue and the ridge between Hancock and Bugbee Hills, now the MDC Blue Hills Reservation. The Scott's Woods Historic District in Milton, Massachusetts is a semirural, residential area that contains a significant concentration of 18th, 19th and early 20th century dwellings and barns that reflect the Town's agricultural and architectural history from 1713 to 1932, the district's period of significance. Originally known as the "Blue Hill Land," a three thousand-acre tract of land sold by the town of Boston in 1711 to four residents of Milton. The area in the southwest part of Milton is thought to have been named for a member of the Scott Family that lived in the area in the early eighteenth century. Hillside Street, named for being literally on the 'side' of Blue Hill, is the major thoroughfare in the district.
Milton Hill Historic District	Milton Hill Historic District is located on a lofty hill between Milton Village and Algerene Corner, formerly known as Union Square at the junction of Adams and Centre Streets. The Milton Hill Historic District in Milton, Massachusetts is a residential area that contains the most significant concentration of 19th and early 20th century high-style and period architecture in the Town. As Milton developed from a rural community to a prosperous suburb of Boston, Milton Hill, throughout the period of significance, 1740-1945, has been the home of wealthy Milton and Boston business, professional and civic leaders. It began its rise to prominence as an estate district in 1742 with the establishment of Governor Thomas Hutchinson's summer estate. For the next two hundred years, attracted by the rural scenery afforded by the Neponset River and the Blue Hills and the proximity of the Town's commercial center and Boston, prominent families built country homes, a number designed by noted national and local architects, including William Ralph Emerson; Peabody and Steams; and Perry, Shaw and Hepbum.

NRHP Property Name	Brief Property Description	
Harrison Square Historic District	Clam Point (also known as Harrison Square) is a sub-neighborhood in Boston, noteworthy for its collection of substantial Italianate Mansard residences. The area is known to have the most cohesive, intact collection of mansion-scale, mid-19 th century housing in Boston, and includes the Park, Everett, Freeport, Mill, Ashland, Blanche streets, and Victory Road in the Dorchester neighborhood of Boston.	
Canton Corner Historic District	The Canton Corner Historic District encompasses the historic town center of Canton, Massachusetts. Centered on the junction of Pleasant and Washington streets, it includes more than 25 properties and 170 acres (69 ha), whose architectural history spans 250 years of occupation and includes the town's major civic buildings.	
Ponkapoag Camp of Appalachian Mountain Club	The Appalachian Mountain Club Ponkapoag Camp is one of the original camps of the oldest outing club in the United States, founded in 1876. Early in the twentieth century tent sites were established at the east end of Ponkapoag Pond in the Blue Hills reservation by the president of the Appalachian Mountain Club, William Rogers, who was also an M.D.C. commissioner. The camp represents an early outing club's architecture for "roughing it" and are important as such structures succumb to fire, rot, and vandalism.	
Boyden, Seth, House	The Seth Boyden House is a historic house at 135 Oak Street in Foxborough, Massachusetts. The home is significant for its unusual architectural design as well for its association with the Boyden family, whose members were prominent locally and regionally in the 18 th and 19 th century,	
Borderland Historic District	The Borderland Historic District was the 1,200 acre estate of Blanche Ames Ames. The mansion was constructed in 1910 and the property includes a system of ponds, dams, and causeways surrounding the mansion. The exterior of the mansion was built using locally cut field stones. The district is considered significant due to its connection to the estate of Blanche Ames Ames. She was a inventor who was involved in art, farming, engineering and politics. She designed a hexagonal lumber cutter, patented a method for ensnaring airplanes in wires hung from balloons during World War II, and developed a water anti-pollution device in the late 1960s.	
SOURCE: National Register Database; <u>http</u> Associates, 2021.	bs://www.nps.gov/subjects/nationalregister/database-research.htm#table, Adapted by Environmental Science	

Town	Number of State & Local Designated Properties
Boston	838
Canton	445
Easton	142
Foxborough	194
Mansfield	190
Milton	1,559
Norton	16
Quincy	2
Randolph	225
Sharon	491
Stoughton	82
Grand Total	4,184

Table 2: Number of State & Local Designated Properties within the APE

Assessment of Noise and Visual Impacts by Proposed Action

In our earlier correspondence, the FAA noted that we are "considering the possibility that changes in noise levels or additional visual impacts from an increase in overflights could alter the character or use of certain kinds of historic properties where a quiet setting is a generally recognized purpose and attribute." In order to address this possibility, an assessment was done to further quantify the auditory and visual impacts on the historic properties within the Area of Potential Effects.

In order to assess the auditory impacts, the FAA used a metric known as Day-night Average Sound Level (DNL). DNL is the standard noise metric used for all FAA studies of aviation noise exposure in airport communities and was used here to assess the potential impact on every identified historic property within the Area of Potential Effects.

DNL is a 24-hour, time-weighted average noise metric, expressed in terms of decibel units of sound heard by the human ear, which accounts for the noise levels of individual aircraft events, the number of times those events occur, and the time of day they occur. DNL is a graphical representation of the distribution of noise over the surrounding area from an airport's average operations. There is one unique modification in that there is a "noise penalty" of any noise generated during "nighttime hours." In the calculation of DNL, for each hour during nighttime hours (10:00 p.m. to 7:00 a.m.), the sound levels are increased by a 10 decibel-weighting penalty (equivalent to a 10-fold increase in aircraft operations) before the 24-hour value is computed. The weighting penalty accounts for the more intrusive nature of noise during the nighttime hours. The significance thresholds for aircraft noise for DNL, as spelled out in FAA Order 1050.1F, are given below.

• For DNL 65 dB and higher: +1.5 dB

This threshold has been used by FAA for many years and is applied at airports across the country and will be used to determine noise impacts on historic properties within the APE. The use of this threshold is consistent with the Section 106 analyses for many FAA projects, including the Northern California and Southern Florida Metroplex projects, two of FAA's most recent projects that also modified the flight path of aircraft through the airspace.

According to FAA Order 1050.1F, a significant noise impact could occur to noise sensitive land uses if it had a level of DNL 65 dB with the Proposed Action and also experienced an increase of 1.5 dB when compared to the No Action Alternative. The FAA also recognizes that, in limited instances, resources that have a "quiet setting" as a qualifying attribute may be adversely affected by noise increases that would otherwise not be significant. There are no NRHP properties with a noise exposure of DNL 65 that experience a 1.5 dB noise increase. Further, the NRHP properties were reviewed and none of them were found to have a "quiet setting" as described in the FAA's Section 106 Handbook.

When the analysis is expanded to include the state and local designated properties that are assumed to be eligible for the NRHP, there are no properties that experience a 1.5 dB noise level increase with a proposed action noise level of DNL 65 or greater. As indicated in Table 4.6-3 of the Draft EA, the maximum exposed noise level *decreases* as a result of the Proposed Project

when compared to the No Action Alternative when considering towns/neighborhoods as a whole. Furthermore, as described below, the largest proposed noise changes within the APE are multiple orders of magnitude below the noise thresholds given within FAA Order 1050.1F.

The FAA's noise analysis demonstrates that historic resources will generally experience equivalent noise exposure with the addition of the Proposed Action. Specifically, the maximum change in noise exposure for a historic property is less than 0.2 dB across all historic properties in the APE. For example, one of these properties has a value of 22 dB under the No Action Alternative and 22.1 dB with the Proposed Procedure. Importantly, as depicted in Attachment A, the procedure is an overlay of existing traffic to Runway 4L and is only expected to lead to an annual net increase of 255 arrivals to BOS, out of a current total of 205,837 arrivals. In sum, the FAA will not be introducing audible impacts to resources not already experiencing noise impacts, and any change in noise exposure will be minimal.

In order to assess the potential visual impacts of the historic properties, the data for a year of overflights at BOS from the previous memorandum was reassessed to compare to the newly designated APE. Considering one year of radar track data, the APE experiences 78,879 arrival and 18,989 departure overflights annually. On an average daily basis that corresponds to 216.1 arrival and 52.0 departure overflights. The Proposed Action is estimated to add 255 annual arrival overflights or 0.70 daily average overflights to the APE. When considering the APE as a whole, the increase in overflights would amount to just a 0.26% increase in overflights and would not introduce audible or visual noise in the APE. In order to confirm that the overflights over the APE were not focused on particular historic resources in the APE, the dataset of departure overflights and arrival overflights was mapped over the APE in Attachments A and B respectively. Attachment A shows that the APE areas closest to the airport are already dense with overflights but the flights become more disperse as the APE moves to the southwest. However, Attachment B, which displays a year of arrival radar tracks, show that the APE is already heavily overflown over the full extent of the APE.

For more information on the analyses performed as a part of the Draft EA, please visit <u>www.faabostonworkshops.com</u> for a copy of the Draft EA. More information on the noise analysis can be found at <u>www.faabostonworkshops.com/noise-visualization/</u> and in Sections 3.4.6 and 4.6 of the Draft EA. The Noise Modeling Technical Report is included in Appendix D of the Draft EA.



SOURCE: Esri; RoVolus, 2021; ESA, 2021



Boston Logan RNAV (GPS) RWY 4L EA



SOURCE: Esri; RoVolus, 2021; ESA, 2021



Finding of No Adverse Effect Criteria

In order to establish a Finding of No Adverse Effect, the Proposed Action must not meet any of the criteria spelled out in the FAA's Section 106 Handbook, which are based on criteria in ACHP's section 106 regulations in 36 CFR Part 800. This section presents why the Proposed Action does not meet any of these criteria.

- Does the Proposed Action physically destroy or damage the property?
 - The Proposed Action will not have any physical impact on any property. The Proposed Action changes the location of arrival flights in the airspace around Boston Logan International Airport.
- Does the Proposed Action alter the property in any way that is consistent with the Secretary of the Interior's Standards for Treatment of Historic Properties (36 CFR Part 68)?
 - The Standards guide the design and implementation of physical changes to historic properties. This may include changes in use, material repair or substitution, or modification of historically important features. The Proposed Action is located in the airspace above historic resources does not result in any changes in use, material alteration, or physical modifications to these resources.
- Does the Proposed Action remove a property from its historic location?
 - \circ The Proposed Action does not remove any property from its location.
- Does the Proposed Action change the character of the property's use, or of physical features within the property's setting that contribute to its historic significance?
 - The Proposed Action does not change the character of a property's use or any physical features in any historical property's setting.
 - Any changes to setting as a result of the Proposed action would be audible or visual features which are discussed in the following criterion.
- Does the Proposed Action introduce an atmospheric, audible, or visual feature to the area that would diminish the integrity of the property's significant historic features?
 - Audible: there will not be an introduction of audible noise as a result of the Proposed Action. Furthermore, the noise impacts of the Proposed Action on all of the historic resources in the APE will either decrease noise exposure or cause increases that are orders of magnitude below the significance thresholds for DNL aircraft noise as described in FAA Order 1050.1F and therefore will not cause an introduction of audible impact on any of the properties.
 - Visual: there will not be an introduction of visual impacts as a result of the Proposed Action. Furthermore, the entire APE currently experiences 268 average daily overflights as described in the above analysis. The Proposed Action will add less than 1 additional overflight per day. This increase will not change the current visual features of any historic resource in the APE, as depicted in Attachment B.
- Does the Proposed Action result in neglect of a property which would result in its deterioration, transfer, sale or lease?

• The Proposed Action will not cause any property to be sold or transferred.

Given the results discussed in this letter, the FAA is putting forth at this point a Proposed Finding of No Adverse Effect. This determination is based on the findings discussed in this letter, which includes that none of the NRHP listed properties reviewed herein were found to have a "quiet setting" as described in the FAA's Section 106 Handbook. Furthermore, the net change in aircraft operations as a result of the Proposed Action would be minimal and would not cause an adverse effect, including no physical impacts and no introduction of audible or visual impacts within the APE.

Public Meetings, Comments, and Consultation

The FAA conducted Virtual Public Workshops for the Draft EA on October 23rd, and October 28th, 2020. By attending the Virtual Public Workshops, participants were provided with an overview of the Draft EA which includes results from the noise analysis performed to assess the potential noise impacts of the Proposed Action on historic resources and populations located within the General Study Area. The MHC concurred with the APE on December 8, 2020 so the impacts were shown for historic resources throughout the entire Study Area. During the meeting, the FAA responded to a large number of questions from the community. These meetings were recorded and remain on the FAA's YouTube page for interested community members to review. During the meeting and other forms of engagement, the FAA received over 40 comments regarding the Proposed Action. The FAA is currently reviewing and developing responses to these comments to be shared with the public as part of the Final Environmental Assessment but it should be noted that none of the comments mention any potential impact to historic resources from the Proposed Action.

We look forward to hearing back from you on the FAA's proposed finding. We welcome the input from consulting parties on the historic properties considered as part of the analysis and on the finding itself. If you have any additional comments or questions on this undertaking, please contact me at veronda.johnson@faa.gov or at the address below.

Sincerely,

Veronda Johnson Eastern Service Center Federal Aviation Administration Operations Support Group AJV-E250 1701 Columbia Avenue College Park, GA 30337


of Transportation Federal Aviation

Administration

Eastern Service Center

1701 Columbia Avenue College Park, Georgia 30337

June 9, 2021

Foxborough Historical Commission 40 South Street Foxborough, MA 02035

Proposed Finding of No Adverse Effect for the Boston Logan International Airport RNAV (GPS) RWY 4L Approach Procedure, Boston, MA

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Table 2: Number of State & Local Designated Properties within the APE

Assessment of Noise and Visual Impacts by Proposed Action

In our earlier correspondence, the FAA noted that we are "considering the possibility that changes in noise levels or additional visual impacts from an increase in overflights could alter the character or use of certain kinds of historic properties where a quiet setting is a generally recognized purpose and attribute." In order to address this possibility, an assessment was done to further quantify the auditory and visual impacts on the historic properties within the Area of Potential Effects.

In order to assess the auditory impacts, the FAA used a metric known as Day-night Average Sound Level (DNL). DNL is the standard noise metric used for all FAA studies of aviation noise exposure in airport communities and was used here to assess the potential impact on every identified historic property within the Area of Potential Effects.

DNL is a 24-hour, time-weighted average noise metric, expressed in terms of decibel units of sound heard by the human ear, which accounts for the noise levels of individual aircraft events, the number of times those events occur, and the time of day they occur. DNL is a graphical representation of the distribution of noise over the surrounding area from an airport's average operations. There is one unique modification in that there is a "noise penalty" of any noise generated during "nighttime hours." In the calculation of DNL, for each hour during nighttime hours (10:00 p.m. to 7:00 a.m.), the sound levels are increased by a 10 decibel-weighting penalty (equivalent to a 10-fold increase in aircraft operations) before the 24-hour value is computed. The weighting penalty accounts for the more intrusive nature of noise during the nighttime hours. The significance thresholds for aircraft noise for DNL, as spelled out in FAA Order 1050.1F, are given below.

• For DNL 65 dB and higher: +1.5 dB

This threshold has been used by FAA for many years and is applied at airports across the country and will be used to determine noise impacts on historic properties within the APE. The use of this threshold is consistent with the Section 106 analyses for many FAA projects, including the Northern California and Southern Florida Metroplex projects, two of FAA's most recent projects that also modified the flight path of aircraft through the airspace.

According to FAA Order 1050.1F, a significant noise impact could occur to noise sensitive land uses if it had a level of DNL 65 dB with the Proposed Action and also experienced an increase of 1.5 dB when compared to the No Action Alternative. The FAA also recognizes that, in limited instances, resources that have a "quiet setting" as a qualifying attribute may be adversely affected by noise increases that would otherwise not be significant. There are no NRHP properties with a noise exposure of DNL 65 that experience a 1.5 dB noise increase. Further, the NRHP properties were reviewed and none of them were found to have a "quiet setting" as described in the FAA's Section 106 Handbook.

When the analysis is expanded to include the state and local designated properties that are assumed to be eligible for the NRHP, there are no properties that experience a 1.5 dB noise level increase with a proposed action noise level of DNL 65 or greater. As indicated in Table 4.6-3 of the Draft EA, the maximum exposed noise level *decreases* as a result of the Proposed Project

when compared to the No Action Alternative when considering towns/neighborhoods as a whole. Furthermore, as described below, the largest proposed noise changes within the APE are multiple orders of magnitude below the noise thresholds given within FAA Order 1050.1F.

The FAA's noise analysis demonstrates that historic resources will generally experience equivalent noise exposure with the addition of the Proposed Action. Specifically, the maximum change in noise exposure for a historic property is less than 0.2 dB across all historic properties in the APE. For example, one of these properties has a value of 22 dB under the No Action Alternative and 22.1 dB with the Proposed Procedure. Importantly, as depicted in Attachment A, the procedure is an overlay of existing traffic to Runway 4L and is only expected to lead to an annual net increase of 255 arrivals to BOS, out of a current total of 205,837 arrivals. In sum, the FAA will not be introducing audible impacts to resources not already experiencing noise impacts, and any change in noise exposure will be minimal.

In order to assess the potential visual impacts of the historic properties, the data for a year of overflights at BOS from the previous memorandum was reassessed to compare to the newly designated APE. Considering one year of radar track data, the APE experiences 78,879 arrival and 18,989 departure overflights annually. On an average daily basis that corresponds to 216.1 arrival and 52.0 departure overflights. The Proposed Action is estimated to add 255 annual arrival overflights or 0.70 daily average overflights to the APE. When considering the APE as a whole, the increase in overflights would amount to just a 0.26% increase in overflights and would not introduce audible or visual noise in the APE. In order to confirm that the overflights over the APE were not focused on particular historic resources in the APE, the dataset of departure overflights and arrival overflights was mapped over the APE in Attachments A and B respectively. Attachment A shows that the APE areas closest to the airport are already dense with overflights but the flights become more disperse as the APE moves to the southwest. However, Attachment B, which displays a year of arrival radar tracks, show that the APE is already heavily overflown over the full extent of the APE.

For more information on the analyses performed as a part of the Draft EA, please visit <u>www.faabostonworkshops.com</u> for a copy of the Draft EA. More information on the noise analysis can be found at <u>www.faabostonworkshops.com/noise-visualization/</u> and in Sections 3.4.6 and 4.6 of the Draft EA. The Noise Modeling Technical Report is included in Appendix D of the Draft EA.



SOURCE: Esri; RoVolus, 2021; ESA, 2021



Boston Logan RNAV (GPS) RWY 4L EA



SOURCE: Esri; RoVolus, 2021; ESA, 2021



Finding of No Adverse Effect Criteria

In order to establish a Finding of No Adverse Effect, the Proposed Action must not meet any of the criteria spelled out in the FAA's Section 106 Handbook, which are based on criteria in ACHP's section 106 regulations in 36 CFR Part 800. This section presents why the Proposed Action does not meet any of these criteria.

- Does the Proposed Action physically destroy or damage the property?
 - The Proposed Action will not have any physical impact on any property. The Proposed Action changes the location of arrival flights in the airspace around Boston Logan International Airport.
- Does the Proposed Action alter the property in any way that is consistent with the Secretary of the Interior's Standards for Treatment of Historic Properties (36 CFR Part 68)?
 - The Standards guide the design and implementation of physical changes to historic properties. This may include changes in use, material repair or substitution, or modification of historically important features. The Proposed Action is located in the airspace above historic resources does not result in any changes in use, material alteration, or physical modifications to these resources.
- Does the Proposed Action remove a property from its historic location?
 - \circ The Proposed Action does not remove any property from its location.
- Does the Proposed Action change the character of the property's use, or of physical features within the property's setting that contribute to its historic significance?
 - The Proposed Action does not change the character of a property's use or any physical features in any historical property's setting.
 - Any changes to setting as a result of the Proposed action would be audible or visual features which are discussed in the following criterion.
- Does the Proposed Action introduce an atmospheric, audible, or visual feature to the area that would diminish the integrity of the property's significant historic features?
 - Audible: there will not be an introduction of audible noise as a result of the Proposed Action. Furthermore, the noise impacts of the Proposed Action on all of the historic resources in the APE will either decrease noise exposure or cause increases that are orders of magnitude below the significance thresholds for DNL aircraft noise as described in FAA Order 1050.1F and therefore will not cause an introduction of audible impact on any of the properties.
 - Visual: there will not be an introduction of visual impacts as a result of the Proposed Action. Furthermore, the entire APE currently experiences 268 average daily overflights as described in the above analysis. The Proposed Action will add less than 1 additional overflight per day. This increase will not change the current visual features of any historic resource in the APE, as depicted in Attachment B.
- Does the Proposed Action result in neglect of a property which would result in its deterioration, transfer, sale or lease?

• The Proposed Action will not cause any property to be sold or transferred.

Given the results discussed in this letter, the FAA is putting forth at this point a Proposed Finding of No Adverse Effect. This determination is based on the findings discussed in this letter, which includes that none of the NRHP listed properties reviewed herein were found to have a "quiet setting" as described in the FAA's Section 106 Handbook. Furthermore, the net change in aircraft operations as a result of the Proposed Action would be minimal and would not cause an adverse effect, including no physical impacts and no introduction of audible or visual impacts within the APE.

Public Meetings, Comments, and Consultation

The FAA conducted Virtual Public Workshops for the Draft EA on October 23rd, and October 28th, 2020. By attending the Virtual Public Workshops, participants were provided with an overview of the Draft EA which includes results from the noise analysis performed to assess the potential noise impacts of the Proposed Action on historic resources and populations located within the General Study Area. The MHC concurred with the APE on December 8, 2020 so the impacts were shown for historic resources throughout the entire Study Area. During the meeting, the FAA responded to a large number of questions from the community. These meetings were recorded and remain on the FAA's YouTube page for interested community members to review. During the meeting and other forms of engagement, the FAA received over 40 comments regarding the Proposed Action. The FAA is currently reviewing and developing responses to these comments to be shared with the public as part of the Final Environmental Assessment but it should be noted that none of the comments mention any potential impact to historic resources from the Proposed Action.

We look forward to hearing back from you on the FAA's proposed finding. We welcome the input from consulting parties on the historic properties considered as part of the analysis and on the finding itself. If you have any additional comments or questions on this undertaking, please contact me at veronda.johnson@faa.gov or at the address below.

Sincerely,

Veronda Johnson Eastern Service Center Federal Aviation Administration Operations Support Group AJV-E250 1701 Columbia Avenue College Park, GA 30337



Foxborough Historical Commission

TOWN OF FOXBOROUGH, TOWN HALL, FOXBOROUGH, MASSACHUSETTS 02035

Tuesday, June 29, 2021

Veronda Johnson Eastern Service Center Federal Aviation Administration Operations Support Group AJV-E250 1701 Columbia Avenue College Park, GA 30337

Dear Ms. Johnson,

This letter is to acknowledge receipt of your invitation to comment on FAA's Proposed Finding of no adverse effect for the Boston Logan International Airport RNAV (GPS) RWY 4L Approach Procedure in Boston MA.

The Foxborough Historical Commission does not believe that this will have any impact on any historical property in the town.

Respectfully submitted

Mark Ferencik

Chairman, Foxborough Historical Commission



Foxborough Historical Commission TOWN OF FOXBOROUGH TOWN HALL FOXBOROUGH, MASSACHUSETTS 02035

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Eastern Service Center FAA Operations.Support Group AJV-E250 1701 Columbia Ave College Park GA 30337

Attn: Veronka Johnson

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of Transportation Federal Aviation Eastern Service Center

1701 Columbia Avenue College Park, Georgia 30337

Administration

June 9, 2021

Mansfield Historical Commission 6 Park Row Mansfield, MA 02048

Proposed Finding of No Adverse Effect for the Boston Logan International Airport RNAV (GPS) RWY 4L Approach Procedure, Boston, MA

To Whom It May Concern,

The Federal Aviation Administration (FAA) is evaluating a new proposed Area Navigation (RNAV) Global Positioning System (GPS) instrument approach procedure at Boston Logan International Airport (BOS). This new procedure would allow for aircraft to land onto Runway 4L with GPS technological automation as well as allow for landing during low visibility conditions. These additional procedural capabilities would increase the safety and efficiency of the airspace around BOS.

Pursuant to 36 CFR 800.4(a), the FAA previously consulted with the Massachusetts Historical Commission to identify the Area of Potential Effects for this undertaking. In continuing with our responsibilities under Section 106 of the National Historic Preservation Act and its implementing regulations, the FAA invites you to participate as a consulting parting and submits this assessment of adverse effects, which concludes with a proposed Finding of No Adverse Effects and our supporting rationale for that finding. The FAA seeks your views or comments on this finding, which can be addressed to the FAA using the email or address given at the conclusion of this letter. Pursuant to 36 CFR 800.5(c), please provide any comments within 30 days from receipt of this letter.

Project Background

As described in greater detail in the FAA's Draft Environmental Assessment (EA), which can be accessed at <u>www.faabostonworkshops.com</u>, the FAA is evaluating a new proposed Area Navigation (RNAV) Global Positioning System (GPS) instrument approach procedure at BOS. This new procedure, which is depicted in Attachments A and B, is needed to allow aircraft to land onto Runway 4L with GPS technological automation. The current absence of an RNAV procedure to Runway 4L precludes use of the runway during low visibility conditions. The proposed procedure route is an overlay of existing arrivals and is expected to lead to a net increase of 255 annual arrivals to BOS generally, which represents 0.1% of the total annual arrivals, and an increase of 359 annual arrivals specifically to Runway 4L. These additional

procedural capabilities would increase the safety and efficiency of the airspace around BOS. Publication of the proposed procedure would constitute an undertaking under Section 106 of the National Historic Preservation Act (NHPA).

Regulatory Overview

Under NEPA, the FAA is responsible for analyzing the impacts of its action on historical, architectural, archeological and cultural resources as part of its broader review of the human environment. Because the National Historic Preservation Act (NHPA) is the principal statute concerning such resources, most of this analysis is conducted in coordination with the process under Section 106 of the NHPA, which requires federal agencies to consider the effects of their projects on properties listed, or eligible for listing, in the National Register of Historic Places (NRHP). As this is an FAA Action, the FAA document *Section 106 of the National Historic Properties under Section 106 of the National Historic Properties under Section 106 of the National Historic Preservation Act* was consulted and referenced in order to make this determination.

Review of Historic/Eligible Properties

The National Register of Historic Places (NRHP), the Massachusetts Historical Commission, and the Boston Landmarks Commission's data sources were used to gather a comprehensive directory of all potential historic and cultural resources within the APE. A total of 19 properties within the APE were found to be listed in the National Register of Historic Places as historic districts or individual properties in accordance with the criteria described in the NHPA. These 19 properties are identified and described in Table 1. A total of 4,184 state and local designated properties were identified within the APE and are summarized by their location in Table 2. These 4,184 properties represent the group of potential resources that would be evaluated for National Register eligibility. For the purposes of this proposed finding, we assume all of these properties are eligible for the National Register and propose a finding of no adverse effect for all properties within the APE currently listed, determined eligible for listing, and assumed eligible for listing in the NRHP.

NRHP Property Name	Brief Property Description
Milton Cemetery	Milton Cemetery contains some of the best examples of funerary art from the colonial times to the Victorian era. An historic garden cemetery, it was established as the Town's only cemetery in 1672.
Spring Brook Cemetery	The most prominent structure in the cemetery, Card Memorial Chapel, was designed by Charles Eastman & built in 1898 and funded by Simon & Mary Card in memory of their daughter Lulu.
Dorchester Park	Dorchester Park is a historic park bounded by Dorchester Avenue, Richmond, Adams and Richview Streets in the Dorchester neighborhood of Boston, Massachusetts.

Table 1: National Register of Historic Places Properties within the APE

NRHP Property Name	Brief Property Description
DorchesterMilton Lower Mills Industrial District (Boundary Increase)	The Dorchester-Milton Lower Mills Industrial District is a historic district on both sides of the Neponset River in the Dorchester area of Boston and in the town of Milton, Massachusetts. It encompasses an industrial factory complex, most of which was historically associated with the Walter Baker & Company, the first major maker of chocolate products in the United States.
Savin Hill Historic District	The Savin Hill Historic District is significant for its association with the development of the area from a mid-19th century speculative housing development for Boston's upper-middle class to a close-knot neighborhood of residents from diverse socioeconomic backgrounds. The surviving historic resources catalogue Savin Hill's rich history and remain a cohesive collection of well-preserved historic homes. The district further attains significance as an intact collection of buildings representing a full range of architectural styles.
Blue Hills Parkway	The Blue Hills Parkway, a 1.5-mile-long boulevard in Boston and Milton, is significant as one of the earliest connecting parkways designed for the Metropolitan Parks Commission (MPC) by Olmsted, Olmsted and Eliot and its successor firm, Olmsted Brothers, and it is emblematic of the firm's principles of parkway creation. A divided highway that runs directly south through early 20"-century residential neighborhoods, the Blue Hills Parkway directly connects the Blue Hills Reservation (the largest open space in Metropolitan Boston) with Boston, the Neponset River Reservation, and Truman Parkway.
Blue Hills Reservation Parkways-Metropolitan Park System of Greater Boston	The Metropolitan Park System of Greater Boston, in Massachusetts, is especially noteworthy because it is the first regional park system in the United States.
Foxborough Pumping Station	The Foxborough Pumping Station is a historic water pumping station at 25 Pumping Station Road in Foxborough, Massachusetts. Its main pumphouse was designed by Ernest Boyden, a regionally-known architect of water supply systems, and was built in 1891; it is a brick structure with Queen Anne styling. The station also includes several historic wells, a period garage, and the man- made Fales Pond, a once-dammed section of the Neponset Reservoir near the pumphouse.
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When the analysis is expanded to include the state and local designated properties that are assumed to be eligible for the NRHP, there are no properties that experience a 1.5 dB noise level increase with a proposed action noise level of DNL 65 or greater. As indicated in Table 4.6-3 of the Draft EA, the maximum exposed noise level *decreases* as a result of the Proposed Project

when compared to the No Action Alternative when considering towns/neighborhoods as a whole. Furthermore, as described below, the largest proposed noise changes within the APE are multiple orders of magnitude below the noise thresholds given within FAA Order 1050.1F.

The FAA's noise analysis demonstrates that historic resources will generally experience equivalent noise exposure with the addition of the Proposed Action. Specifically, the maximum change in noise exposure for a historic property is less than 0.2 dB across all historic properties in the APE. For example, one of these properties has a value of 22 dB under the No Action Alternative and 22.1 dB with the Proposed Procedure. Importantly, as depicted in Attachment A, the procedure is an overlay of existing traffic to Runway 4L and is only expected to lead to an annual net increase of 255 arrivals to BOS, out of a current total of 205,837 arrivals. In sum, the FAA will not be introducing audible impacts to resources not already experiencing noise impacts, and any change in noise exposure will be minimal.

In order to assess the potential visual impacts of the historic properties, the data for a year of overflights at BOS from the previous memorandum was reassessed to compare to the newly designated APE. Considering one year of radar track data, the APE experiences 78,879 arrival and 18,989 departure overflights annually. On an average daily basis that corresponds to 216.1 arrival and 52.0 departure overflights. The Proposed Action is estimated to add 255 annual arrival overflights or 0.70 daily average overflights to the APE. When considering the APE as a whole, the increase in overflights would amount to just a 0.26% increase in overflights and would not introduce audible or visual noise in the APE. In order to confirm that the overflights over the APE were not focused on particular historic resources in the APE, the dataset of departure overflights and arrival overflights was mapped over the APE in Attachments A and B respectively. Attachment A shows that the APE areas closest to the airport are already dense with overflights but the flights become more disperse as the APE moves to the southwest. However, Attachment B, which displays a year of arrival radar tracks, show that the APE is already heavily overflown over the full extent of the APE.

For more information on the analyses performed as a part of the Draft EA, please visit <u>www.faabostonworkshops.com</u> for a copy of the Draft EA. More information on the noise analysis can be found at <u>www.faabostonworkshops.com/noise-visualization/</u> and in Sections 3.4.6 and 4.6 of the Draft EA. The Noise Modeling Technical Report is included in Appendix D of the Draft EA.



SOURCE: Esri; RoVolus, 2021; ESA, 2021



Boston Logan RNAV (GPS) RWY 4L EA



SOURCE: Esri; RoVolus, 2021; ESA, 2021



Finding of No Adverse Effect Criteria

In order to establish a Finding of No Adverse Effect, the Proposed Action must not meet any of the criteria spelled out in the FAA's Section 106 Handbook, which are based on criteria in ACHP's section 106 regulations in 36 CFR Part 800. This section presents why the Proposed Action does not meet any of these criteria.

- Does the Proposed Action physically destroy or damage the property?
 - The Proposed Action will not have any physical impact on any property. The Proposed Action changes the location of arrival flights in the airspace around Boston Logan International Airport.
- Does the Proposed Action alter the property in any way that is consistent with the Secretary of the Interior's Standards for Treatment of Historic Properties (36 CFR Part 68)?
 - The Standards guide the design and implementation of physical changes to historic properties. This may include changes in use, material repair or substitution, or modification of historically important features. The Proposed Action is located in the airspace above historic resources does not result in any changes in use, material alteration, or physical modifications to these resources.
- Does the Proposed Action remove a property from its historic location?
 - \circ The Proposed Action does not remove any property from its location.
- Does the Proposed Action change the character of the property's use, or of physical features within the property's setting that contribute to its historic significance?
 - The Proposed Action does not change the character of a property's use or any physical features in any historical property's setting.
 - Any changes to setting as a result of the Proposed action would be audible or visual features which are discussed in the following criterion.
- Does the Proposed Action introduce an atmospheric, audible, or visual feature to the area that would diminish the integrity of the property's significant historic features?
 - Audible: there will not be an introduction of audible noise as a result of the Proposed Action. Furthermore, the noise impacts of the Proposed Action on all of the historic resources in the APE will either decrease noise exposure or cause increases that are orders of magnitude below the significance thresholds for DNL aircraft noise as described in FAA Order 1050.1F and therefore will not cause an introduction of audible impact on any of the properties.
 - Visual: there will not be an introduction of visual impacts as a result of the Proposed Action. Furthermore, the entire APE currently experiences 268 average daily overflights as described in the above analysis. The Proposed Action will add less than 1 additional overflight per day. This increase will not change the current visual features of any historic resource in the APE, as depicted in Attachment B.
- Does the Proposed Action result in neglect of a property which would result in its deterioration, transfer, sale or lease?

• The Proposed Action will not cause any property to be sold or transferred.

Given the results discussed in this letter, the FAA is putting forth at this point a Proposed Finding of No Adverse Effect. This determination is based on the findings discussed in this letter, which includes that none of the NRHP listed properties reviewed herein were found to have a "quiet setting" as described in the FAA's Section 106 Handbook. Furthermore, the net change in aircraft operations as a result of the Proposed Action would be minimal and would not cause an adverse effect, including no physical impacts and no introduction of audible or visual impacts within the APE.

Public Meetings, Comments, and Consultation

The FAA conducted Virtual Public Workshops for the Draft EA on October 23rd, and October 28th, 2020. By attending the Virtual Public Workshops, participants were provided with an overview of the Draft EA which includes results from the noise analysis performed to assess the potential noise impacts of the Proposed Action on historic resources and populations located within the General Study Area. The MHC concurred with the APE on December 8, 2020 so the impacts were shown for historic resources throughout the entire Study Area. During the meeting, the FAA responded to a large number of questions from the community. These meetings were recorded and remain on the FAA's YouTube page for interested community members to review. During the meeting and other forms of engagement, the FAA received over 40 comments regarding the Proposed Action. The FAA is currently reviewing and developing responses to these comments to be shared with the public as part of the Final Environmental Assessment but it should be noted that none of the comments mention any potential impact to historic resources from the Proposed Action.

We look forward to hearing back from you on the FAA's proposed finding. We welcome the input from consulting parties on the historic properties considered as part of the analysis and on the finding itself. If you have any additional comments or questions on this undertaking, please contact me at veronda.johnson@faa.gov or at the address below.

Sincerely,

Veronda Johnson Eastern Service Center Federal Aviation Administration Operations Support Group AJV-E250 1701 Columbia Avenue College Park, GA 30337



U.S. Department of Transportation

Eastern Service Center

1701 Columbia Avenue College Park, Georgia 30337

Federal Aviation Administration

June 9, 2021

Mansfield Planning Board 6 Park Row Mansfield, MA 02048

Proposed Finding of No Adverse Effect for the Boston Logan International Airport RNAV (GPS) RWY 4L Approach Procedure, Boston, MA

To Whom It May Concern,

The Federal Aviation Administration (FAA) is evaluating a new proposed Area Navigation (RNAV) Global Positioning System (GPS) instrument approach procedure at Boston Logan International Airport (BOS). This new procedure would allow for aircraft to land onto Runway 4L with GPS technological automation as well as allow for landing during low visibility conditions. These additional procedural capabilities would increase the safety and efficiency of the airspace around BOS.

Pursuant to 36 CFR 800.4(a), the FAA previously consulted with the Massachusetts Historical Commission to identify the Area of Potential Effects for this undertaking. In continuing with our responsibilities under Section 106 of the National Historic Preservation Act and its implementing regulations, the FAA invites you to participate as a consulting parting and submits this assessment of adverse effects, which concludes with a proposed Finding of No Adverse Effects and our supporting rationale for that finding. The FAA seeks your views or comments on this finding, which can be addressed to the FAA using the email or address given at the conclusion of this letter. Pursuant to 36 CFR 800.5(c), please provide any comments within 30 days from receipt of this letter.

Project Background

As described in greater detail in the FAA's Draft Environmental Assessment (EA), which can be accessed at <u>www.faabostonworkshops.com</u>, the FAA is evaluating a new proposed Area Navigation (RNAV) Global Positioning System (GPS) instrument approach procedure at BOS. This new procedure, which is depicted in Attachments A and B, is needed to allow aircraft to land onto Runway 4L with GPS technological automation. The current absence of an RNAV procedure to Runway 4L precludes use of the runway during low visibility conditions. The proposed procedure route is an overlay of existing arrivals and is expected to lead to a net increase of 255 annual arrivals to BOS generally, which represents 0.1% of the total annual arrivals, and an increase of 359 annual arrivals specifically to Runway 4L. These additional

procedural capabilities would increase the safety and efficiency of the airspace around BOS. Publication of the proposed procedure would constitute an undertaking under Section 106 of the National Historic Preservation Act (NHPA).

Regulatory Overview

Under NEPA, the FAA is responsible for analyzing the impacts of its action on historical, architectural, archeological and cultural resources as part of its broader review of the human environment. Because the National Historic Preservation Act (NHPA) is the principal statute concerning such resources, most of this analysis is conducted in coordination with the process under Section 106 of the NHPA, which requires federal agencies to consider the effects of their projects on properties listed, or eligible for listing, in the National Register of Historic Places (NRHP). As this is an FAA Action, the FAA document *Section 106 of the National Historic Properties under Section 106 of the National Historic Properties under Section 106 of the National Historic Preservation Act* was consulted and referenced in order to make this determination.

Review of Historic/Eligible Properties

The National Register of Historic Places (NRHP), the Massachusetts Historical Commission, and the Boston Landmarks Commission's data sources were used to gather a comprehensive directory of all potential historic and cultural resources within the APE. A total of 19 properties within the APE were found to be listed in the National Register of Historic Places as historic districts or individual properties in accordance with the criteria described in the NHPA. These 19 properties are identified and described in Table 1. A total of 4,184 state and local designated properties were identified within the APE and are summarized by their location in Table 2. These 4,184 properties represent the group of potential resources that would be evaluated for National Register eligibility. For the purposes of this proposed finding, we assume all of these properties are eligible for the National Register and propose a finding of no adverse effect for all properties within the APE currently listed, determined eligible for listing, and assumed eligible for listing in the NRHP.

NRHP Property Name	Brief Property Description
Milton Cemetery	Milton Cemetery contains some of the best examples of funerary art from the colonial times to the Victorian era. An historic garden cemetery, it was established as the Town's only cemetery in 1672.
Spring Brook Cemetery	The most prominent structure in the cemetery, Card Memorial Chapel, was designed by Charles Eastman & built in 1898 and funded by Simon & Mary Card in memory of their daughter Lulu.
Dorchester Park	Dorchester Park is a historic park bounded by Dorchester Avenue, Richmond, Adams and Richview Streets in the Dorchester neighborhood of Boston, Massachusetts.

Table 1: National Register of Historic Places Properties within the APE

NRHP Property Name	Brief Property Description
DorchesterMilton Lower Mills Industrial District (Boundary Increase)	The Dorchester-Milton Lower Mills Industrial District is a historic district on both sides of the Neponset River in the Dorchester area of Boston and in the town of Milton, Massachusetts. It encompasses an industrial factory complex, most of which was historically associated with the Walter Baker & Company, the first major maker of chocolate products in the United States.
Savin Hill Historic District	The Savin Hill Historic District is significant for its association with the development of the area from a mid-19th century speculative housing development for Boston's upper-middle class to a close-knot neighborhood of residents from diverse socioeconomic backgrounds. The surviving historic resources catalogue Savin Hill's rich history and remain a cohesive collection of well-preserved historic homes. The district further attains significance as an intact collection of buildings representing a full range of architectural styles.
Blue Hills Parkway	The Blue Hills Parkway, a 1.5-mile-long boulevard in Boston and Milton, is significant as one of the earliest connecting parkways designed for the Metropolitan Parks Commission (MPC) by Olmsted, Olmsted and Eliot and its successor firm, Olmsted Brothers, and it is emblematic of the firm's principles of parkway creation. A divided highway that runs directly south through early 20"-century residential neighborhoods, the Blue Hills Parkway directly connects the Blue Hills Reservation (the largest open space in Metropolitan Boston) with Boston, the Neponset River Reservation, and Truman Parkway.
Blue Hills Reservation Parkways-Metropolitan Park System of Greater Boston	The Metropolitan Park System of Greater Boston, in Massachusetts, is especially noteworthy because it is the first regional park system in the United States.
Foxborough Pumping Station	The Foxborough Pumping Station is a historic water pumping station at 25 Pumping Station Road in Foxborough, Massachusetts. Its main pumphouse was designed by Ernest Boyden, a regionally-known architect of water supply systems, and was built in 1891; it is a brick structure with Queen Anne styling. The station also includes several historic wells, a period garage, and the man- made Fales Pond, a once-dammed section of the Neponset Reservoir near the pumphouse.
Old Harbor Reservation Parkways, Metropolitan Park System of Greater Boston	The Old Harbor Reservation Parkways are three historic roads in the Old Harbor area of Boston. They are part of the Boston parkway system designed by Frederick Law Olmsted.
Dorchester-Milton Lower Mills Industrial District	The Dorchester-Milton Lower Mills Industrial District is located on both sides of the Neponset River in the Dorchester area of Boston and in the town of Milton, Massachusetts. It encompasses an industrial factory complex, most of which was historically associated with the Walter Baker & Company, the first major maker of chocolate products in the United States.

NRHP Property Name	Brief Property Description
Furnace Village Historic District	The Furnace Village Historic District encompasses the historic colonial industrial area in Easton, Massachusetts. At its center is at the intersection of Foundry street, South street and Poquanticut Avenue. The area was settled in 1723, with industrial activity beginning in 1742. The iron furnace was established in 1751, and for industrial purposes, continued in the 19th century. In addition to the colonial era, there is also an employee of the housing of the 19th century.
Milton Centre Historic District	The Milton Centre Historic District is both the historical and geographic center of the town of Milton. The 23-acre historic district includes Canton Avenue between Reedsdale Road and Thacher and Highland Streets. Milton Centre is historically significant for its association with the development of the town following the relocation of the third meeting house to Academy Hill in 1728, and the subsequent shift of the town center from Milton Hill.
Scott's Woods Historic District	Scott's Woods Historic District is the area of Hillside, Harland and Forest Streets between Randolph Avenue and the ridge between Hancock and Bugbee Hills, now the MDC Blue Hills Reservation. The Scott's Woods Historic District in Milton, Massachusetts is a semirural, residential area that contains a significant concentration of 18th, 19th and early 20th century dwellings and barns that reflect the Town's agricultural and architectural history from 1713 to 1932, the district's period of significance. Originally known as the "Blue Hill Land," a three thousand-acre tract of land sold by the town of Boston in 1711 to four residents of Milton. The area in the southwest part of Milton is thought to have been named for a member of the Scott Family that lived in the area in the early eighteenth century. Hillside Street, named for being literally on the 'side' of Blue Hill, is the major thoroughfare in the district.
Milton Hill Historic District	Milton Hill Historic District is located on a lofty hill between Milton Village and Algerene Corner, formerly known as Union Square at the junction of Adams and Centre Streets. The Milton Hill Historic District in Milton, Massachusetts is a residential area that contains the most significant concentration of 19th and early 20th century high-style and period architecture in the Town. As Milton developed from a rural community to a prosperous suburb of Boston, Milton Hill, throughout the period of significance, 1740-1945, has been the home of wealthy Milton and Boston business, professional and civic leaders. It began its rise to prominence as an estate district in 1742 with the establishment of Governor Thomas Hutchinson's summer estate. For the next two hundred years, attracted by the rural scenery afforded by the Neponset River and the Blue Hills and the proximity of the Town's commercial center and Boston, prominent families built country homes, a number designed by noted national and local architects, including William Ralph Emerson; Peabody and Steams; and Perry, Shaw and Hepbum.

NRHP Property Name	Brief Property Description	
Harrison Square Historic District	Clam Point (also known as Harrison Square) is a sub-neighborhood in Boston, noteworthy for its collection of substantial Italianate Mansard residences. The area is known to have the most cohesive, intact collection of mansion-scale, mid-19 th century housing in Boston, and includes the Park, Everett, Freeport, Mill, Ashland, Blanche streets, and Victory Road in the Dorchester neighborhood of Boston.	
Canton Corner Historic District	The Canton Corner Historic District encompasses the historic town center of Canton, Massachusetts. Centered on the junction of Pleasant and Washington streets, it includes more than 25 properties and 170 acres (69 ha), whose architectural history spans 250 years of occupation and includes the town's major civic buildings.	
Ponkapoag Camp of Appalachian Mountain Club	The Appalachian Mountain Club Ponkapoag Camp is one of the original camps of the oldest outing club in the United States, founded in 1876. Early in the twentieth century tent sites were established at the east end of Ponkapoag Pond in the Blue Hills reservation by the president of the Appalachian Mountain Club, William Rogers, who was also an M.D.C. commissioner. The camp represents an early outing club's architecture for "roughing it" and are important as such structures succumb to fire, rot, and vandalism.	
Boyden, Seth, House	The Seth Boyden House is a historic house at 135 Oak Street in Foxborough, Massachusetts. The home is significant for its unusual architectural design as well for its association with the Boyden family, whose members were prominent locally and regionally in the 18 th and 19 th century,	
Borderland Historic District	The Borderland Historic District was the 1,200 acre estate of Blanche Ames Ames. The mansion was constructed in 1910 and the property includes a system of ponds, dams, and causeways surrounding the mansion. The exterior of the mansion was built using locally cut field stones. The district is considered significant due to its connection to the estate of Blanche Ames Ames. She was a inventor who was involved in art, farming, engineering and politics. She designed a hexagonal lumber cutter, patented a method for ensnaring airplanes in wires hung from balloons during World War II, and developed a water anti-pollution device in the late 1960s.	
SOURCE: National Register Database; https://www.nps.gov/subjects/nationalregister/database-research.htm#table, Adapted by Environmental Science Associates, 2021.		

Town	Number of State & Local Designated Properties
Boston	838
Canton	445
Easton	142
Foxborough	194
Mansfield	190
Milton	1,559
Norton	16
Quincy	2
Randolph	225
Sharon	491
Stoughton	82
Grand Total	4,184

Table 2: Number of State & Local Designated Properties within the APE

Assessment of Noise and Visual Impacts by Proposed Action

In our earlier correspondence, the FAA noted that we are "considering the possibility that changes in noise levels or additional visual impacts from an increase in overflights could alter the character or use of certain kinds of historic properties where a quiet setting is a generally recognized purpose and attribute." In order to address this possibility, an assessment was done to further quantify the auditory and visual impacts on the historic properties within the Area of Potential Effects.

In order to assess the auditory impacts, the FAA used a metric known as Day-night Average Sound Level (DNL). DNL is the standard noise metric used for all FAA studies of aviation noise exposure in airport communities and was used here to assess the potential impact on every identified historic property within the Area of Potential Effects.

DNL is a 24-hour, time-weighted average noise metric, expressed in terms of decibel units of sound heard by the human ear, which accounts for the noise levels of individual aircraft events, the number of times those events occur, and the time of day they occur. DNL is a graphical representation of the distribution of noise over the surrounding area from an airport's average operations. There is one unique modification in that there is a "noise penalty" of any noise generated during "nighttime hours." In the calculation of DNL, for each hour during nighttime hours (10:00 p.m. to 7:00 a.m.), the sound levels are increased by a 10 decibel-weighting penalty (equivalent to a 10-fold increase in aircraft operations) before the 24-hour value is computed. The weighting penalty accounts for the more intrusive nature of noise during the nighttime hours. The significance thresholds for aircraft noise for DNL, as spelled out in FAA Order 1050.1F, are given below.

• For DNL 65 dB and higher: +1.5 dB

This threshold has been used by FAA for many years and is applied at airports across the country and will be used to determine noise impacts on historic properties within the APE. The use of this threshold is consistent with the Section 106 analyses for many FAA projects, including the Northern California and Southern Florida Metroplex projects, two of FAA's most recent projects that also modified the flight path of aircraft through the airspace.

According to FAA Order 1050.1F, a significant noise impact could occur to noise sensitive land uses if it had a level of DNL 65 dB with the Proposed Action and also experienced an increase of 1.5 dB when compared to the No Action Alternative. The FAA also recognizes that, in limited instances, resources that have a "quiet setting" as a qualifying attribute may be adversely affected by noise increases that would otherwise not be significant. There are no NRHP properties with a noise exposure of DNL 65 that experience a 1.5 dB noise increase. Further, the NRHP properties were reviewed and none of them were found to have a "quiet setting" as described in the FAA's Section 106 Handbook.

When the analysis is expanded to include the state and local designated properties that are assumed to be eligible for the NRHP, there are no properties that experience a 1.5 dB noise level increase with a proposed action noise level of DNL 65 or greater. As indicated in Table 4.6-3 of the Draft EA, the maximum exposed noise level *decreases* as a result of the Proposed Project

when compared to the No Action Alternative when considering towns/neighborhoods as a whole. Furthermore, as described below, the largest proposed noise changes within the APE are multiple orders of magnitude below the noise thresholds given within FAA Order 1050.1F.

The FAA's noise analysis demonstrates that historic resources will generally experience equivalent noise exposure with the addition of the Proposed Action. Specifically, the maximum change in noise exposure for a historic property is less than 0.2 dB across all historic properties in the APE. For example, one of these properties has a value of 22 dB under the No Action Alternative and 22.1 dB with the Proposed Procedure. Importantly, as depicted in Attachment A, the procedure is an overlay of existing traffic to Runway 4L and is only expected to lead to an annual net increase of 255 arrivals to BOS, out of a current total of 205,837 arrivals. In sum, the FAA will not be introducing audible impacts to resources not already experiencing noise impacts, and any change in noise exposure will be minimal.

In order to assess the potential visual impacts of the historic properties, the data for a year of overflights at BOS from the previous memorandum was reassessed to compare to the newly designated APE. Considering one year of radar track data, the APE experiences 78,879 arrival and 18,989 departure overflights annually. On an average daily basis that corresponds to 216.1 arrival and 52.0 departure overflights. The Proposed Action is estimated to add 255 annual arrival overflights or 0.70 daily average overflights to the APE. When considering the APE as a whole, the increase in overflights would amount to just a 0.26% increase in overflights and would not introduce audible or visual noise in the APE. In order to confirm that the overflights over the APE were not focused on particular historic resources in the APE, the dataset of departure overflights and arrival overflights was mapped over the APE in Attachments A and B respectively. Attachment A shows that the APE areas closest to the airport are already dense with overflights but the flights become more disperse as the APE moves to the southwest. However, Attachment B, which displays a year of arrival radar tracks, show that the APE is already heavily overflown over the full extent of the APE.

For more information on the analyses performed as a part of the Draft EA, please visit <u>www.faabostonworkshops.com</u> for a copy of the Draft EA. More information on the noise analysis can be found at <u>www.faabostonworkshops.com/noise-visualization/</u> and in Sections 3.4.6 and 4.6 of the Draft EA. The Noise Modeling Technical Report is included in Appendix D of the Draft EA.



SOURCE: Esri; RoVolus, 2021; ESA, 2021



Boston Logan RNAV (GPS) RWY 4L EA



SOURCE: Esri; RoVolus, 2021; ESA, 2021


Finding of No Adverse Effect Criteria

In order to establish a Finding of No Adverse Effect, the Proposed Action must not meet any of the criteria spelled out in the FAA's Section 106 Handbook, which are based on criteria in ACHP's section 106 regulations in 36 CFR Part 800. This section presents why the Proposed Action does not meet any of these criteria.

- Does the Proposed Action physically destroy or damage the property?
 - The Proposed Action will not have any physical impact on any property. The Proposed Action changes the location of arrival flights in the airspace around Boston Logan International Airport.
- Does the Proposed Action alter the property in any way that is consistent with the Secretary of the Interior's Standards for Treatment of Historic Properties (36 CFR Part 68)?
 - The Standards guide the design and implementation of physical changes to historic properties. This may include changes in use, material repair or substitution, or modification of historically important features. The Proposed Action is located in the airspace above historic resources does not result in any changes in use, material alteration, or physical modifications to these resources.
- Does the Proposed Action remove a property from its historic location?
 - \circ The Proposed Action does not remove any property from its location.
- Does the Proposed Action change the character of the property's use, or of physical features within the property's setting that contribute to its historic significance?
 - The Proposed Action does not change the character of a property's use or any physical features in any historical property's setting.
 - Any changes to setting as a result of the Proposed action would be audible or visual features which are discussed in the following criterion.
- Does the Proposed Action introduce an atmospheric, audible, or visual feature to the area that would diminish the integrity of the property's significant historic features?
 - Audible: there will not be an introduction of audible noise as a result of the Proposed Action. Furthermore, the noise impacts of the Proposed Action on all of the historic resources in the APE will either decrease noise exposure or cause increases that are orders of magnitude below the significance thresholds for DNL aircraft noise as described in FAA Order 1050.1F and therefore will not cause an introduction of audible impact on any of the properties.
 - Visual: there will not be an introduction of visual impacts as a result of the Proposed Action. Furthermore, the entire APE currently experiences 268 average daily overflights as described in the above analysis. The Proposed Action will add less than 1 additional overflight per day. This increase will not change the current visual features of any historic resource in the APE, as depicted in Attachment B.
- Does the Proposed Action result in neglect of a property which would result in its deterioration, transfer, sale or lease?

• The Proposed Action will not cause any property to be sold or transferred.

Given the results discussed in this letter, the FAA is putting forth at this point a Proposed Finding of No Adverse Effect. This determination is based on the findings discussed in this letter, which includes that none of the NRHP listed properties reviewed herein were found to have a "quiet setting" as described in the FAA's Section 106 Handbook. Furthermore, the net change in aircraft operations as a result of the Proposed Action would be minimal and would not cause an adverse effect, including no physical impacts and no introduction of audible or visual impacts within the APE.

Public Meetings, Comments, and Consultation

The FAA conducted Virtual Public Workshops for the Draft EA on October 23rd, and October 28th, 2020. By attending the Virtual Public Workshops, participants were provided with an overview of the Draft EA which includes results from the noise analysis performed to assess the potential noise impacts of the Proposed Action on historic resources and populations located within the General Study Area. The MHC concurred with the APE on December 8, 2020 so the impacts were shown for historic resources throughout the entire Study Area. During the meeting, the FAA responded to a large number of questions from the community. These meetings were recorded and remain on the FAA's YouTube page for interested community members to review. During the meeting and other forms of engagement, the FAA received over 40 comments regarding the Proposed Action. The FAA is currently reviewing and developing responses to these comments to be shared with the public as part of the Final Environmental Assessment but it should be noted that none of the comments mention any potential impact to historic resources from the Proposed Action.

We look forward to hearing back from you on the FAA's proposed finding. We welcome the input from consulting parties on the historic properties considered as part of the analysis and on the finding itself. If you have any additional comments or questions on this undertaking, please contact me at veronda.johnson@faa.gov or at the address below.

Sincerely,

Veronda Johnson Eastern Service Center Federal Aviation Administration Operations Support Group AJV-E250 1701 Columbia Avenue College Park, GA 30337



U.S. Department of Transportation

Federal Aviation Administration Eastern Service Center

1701 Columbia Avenue College Park, Georgia 30337

June 9, 2021

Mashpee Wampanoag Tribe 438 Great Neck Road South Mashpee, MA 02649 (508)-477-0208

Proposed Finding of No Adverse Effect for the Boston Logan International Airport RNAV (GPS) RWY 4L Approach Procedure, Boston, MA

To Whom It May Concern,

The Federal Aviation Administration (FAA) is evaluating a new proposed Area Navigation (RNAV) Global Positioning System (GPS) instrument approach procedure at Boston Logan International Airport (BOS). This new procedure would allow for aircraft to land onto Runway 4L with GPS technological automation as well as allow for landing during low visibility conditions. These additional procedural capabilities would increase the safety and efficiency of the airspace around BOS.

Pursuant to 36 CFR 800.4(a), the FAA previously consulted with the Massachusetts Historical Commission to identify the Area of Potential Effects for this undertaking. In continuing with our responsibilities under Section 106 of the National Historic Preservation Act and its implementing regulations, the FAA invites you to participate as a consulting parting and submits this assessment of adverse effects, which concludes with a proposed Finding of No Adverse Effects and our supporting rationale for that finding. The FAA seeks your views or comments on this finding, which can be addressed to the FAA using the email or address given at the conclusion of this letter. Pursuant to 36 CFR 800.5(c), please provide any comments within 30 days from receipt of this letter.

Project Background

As described in greater detail in the FAA's Draft Environmental Assessment (EA), which can be accessed at <u>www.faabostonworkshops.com</u>, the FAA is evaluating a new proposed Area Navigation (RNAV) Global Positioning System (GPS) instrument approach procedure at BOS. This new procedure, which is depicted in Attachments A and B, is needed to allow aircraft to land onto Runway 4L with GPS technological automation. The current absence of an RNAV procedure to Runway 4L precludes use of the runway during low visibility conditions. The proposed procedure route is an overlay of existing arrivals and is expected to lead to a net increase of 255 annual arrivals to BOS generally, which represents 0.1% of the total annual arrivals, and an increase of 359 annual arrivals specifically to Runway 4L. These additional

procedural capabilities would increase the safety and efficiency of the airspace around BOS. Publication of the proposed procedure would constitute an undertaking under Section 106 of the National Historic Preservation Act (NHPA).

Regulatory Overview

Under NEPA, the FAA is responsible for analyzing the impacts of its action on historical, architectural, archeological and cultural resources as part of its broader review of the human environment. Because the National Historic Preservation Act (NHPA) is the principal statute concerning such resources, most of this analysis is conducted in coordination with the process under Section 106 of the NHPA, which requires federal agencies to consider the effects of their projects on properties listed, or eligible for listing, in the National Register of Historic Places (NRHP). As this is an FAA Action, the FAA document *Section 106 of the National Historic Properties under Section 106 of the National Historic Properties under Section 106 of the National Historic Preservation Act* was consulted and referenced in order to make this determination.

Review of Historic/Eligible Properties

The National Register of Historic Places (NRHP), the Massachusetts Historical Commission, and the Boston Landmarks Commission's data sources were used to gather a comprehensive directory of all potential historic and cultural resources within the APE. A total of 19 properties within the APE were found to be listed in the National Register of Historic Places as historic districts or individual properties in accordance with the criteria described in the NHPA. These 19 properties are identified and described in Table 1. A total of 4,184 state and local designated properties were identified within the APE and are summarized by their location in Table 2. These 4,184 properties represent the group of potential resources that would be evaluated for National Register eligibility. For the purposes of this proposed finding, we assume all of these properties are eligible for the National Register and propose a finding of no adverse effect for all properties within the APE currently listed, determined eligible for listing, and assumed eligible for listing in the NRHP.

NRHP Property Name	Brief Property Description
Milton Cemetery	Milton Cemetery contains some of the best examples of funerary art from the colonial times to the Victorian era. An historic garden cemetery, it was established as the Town's only cemetery in 1672.
Spring Brook Cemetery	The most prominent structure in the cemetery, Card Memorial Chapel, was designed by Charles Eastman & built in 1898 and funded by Simon & Mary Card in memory of their daughter Lulu.
Dorchester Park	Dorchester Park is a historic park bounded by Dorchester Avenue, Richmond, Adams and Richview Streets in the Dorchester neighborhood of Boston, Massachusetts.

Table 1: National Register of Historic Places Properties within the APE

NRHP Property Name	Brief Property Description
DorchesterMilton Lower Mills Industrial District (Boundary Increase)	The Dorchester-Milton Lower Mills Industrial District is a historic district on both sides of the Neponset River in the Dorchester area of Boston and in the town of Milton, Massachusetts. It encompasses an industrial factory complex, most of which was historically associated with the Walter Baker & Company, the first major maker of chocolate products in the United States.
Savin Hill Historic District	The Savin Hill Historic District is significant for its association with the development of the area from a mid-19th century speculative housing development for Boston's upper-middle class to a close-knot neighborhood of residents from diverse socioeconomic backgrounds. The surviving historic resources catalogue Savin Hill's rich history and remain a cohesive collection of well-preserved historic homes. The district further attains significance as an intact collection of buildings representing a full range of architectural styles.
Blue Hills Parkway	The Blue Hills Parkway, a 1.5-mile-long boulevard in Boston and Milton, is significant as one of the earliest connecting parkways designed for the Metropolitan Parks Commission (MPC) by Olmsted, Olmsted and Eliot and its successor firm, Olmsted Brothers, and it is emblematic of the firm's principles of parkway creation. A divided highway that runs directly south through early 20"-century residential neighborhoods, the Blue Hills Parkway directly connects the Blue Hills Reservation (the largest open space in Metropolitan Boston) with Boston, the Neponset River Reservation, and Truman Parkway.
Blue Hills Reservation Parkways-Metropolitan Park System of Greater Boston	The Metropolitan Park System of Greater Boston, in Massachusetts, is especially noteworthy because it is the first regional park system in the United States.
Foxborough Pumping Station	The Foxborough Pumping Station is a historic water pumping station at 25 Pumping Station Road in Foxborough, Massachusetts. Its main pumphouse was designed by Ernest Boyden, a regionally-known architect of water supply systems, and was built in 1891; it is a brick structure with Queen Anne styling. The station also includes several historic wells, a period garage, and the man- made Fales Pond, a once-dammed section of the Neponset Reservoir near the pumphouse.
Old Harbor Reservation Parkways, Metropolitan Park System of Greater Boston	The Old Harbor Reservation Parkways are three historic roads in the Old Harbor area of Boston. They are part of the Boston parkway system designed by Frederick Law Olmsted.
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Milton Centre Historic District	The Milton Centre Historic District is both the historical and geographic center of the town of Milton. The 23-acre historic district includes Canton Avenue between Reedsdale Road and Thacher and Highland Streets. Milton Centre is historically significant for its association with the development of the town following the relocation of the third meeting house to Academy Hill in 1728, and the subsequent shift of the town center from Milton Hill.
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Canton Corner Historic District	The Canton Corner Historic District encompasses the historic town center of Canton, Massachusetts. Centered on the junction of Pleasant and Washington streets, it includes more than 25 properties and 170 acres (69 ha), whose architectural history spans 250 years of occupation and includes the town's major civic buildings.
Ponkapoag Camp of Appalachian Mountain Club	The Appalachian Mountain Club Ponkapoag Camp is one of the original camps of the oldest outing club in the United States, founded in 1876. Early in the twentieth century tent sites were established at the east end of Ponkapoag Pond in the Blue Hills reservation by the president of the Appalachian Mountain Club, William Rogers, who was also an M.D.C. commissioner. The camp represents an early outing club's architecture for "roughing it" and are important as such structures succumb to fire, rot, and vandalism.
Boyden, Seth, House	The Seth Boyden House is a historic house at 135 Oak Street in Foxborough, Massachusetts. The home is significant for its unusual architectural design as well for its association with the Boyden family, whose members were prominent locally and regionally in the 18 th and 19 th century,
Borderland Historic District	The Borderland Historic District was the 1,200 acre estate of Blanche Ames Ames. The mansion was constructed in 1910 and the property includes a system of ponds, dams, and causeways surrounding the mansion. The exterior of the mansion was built using locally cut field stones. The district is considered significant due to its connection to the estate of Blanche Ames Ames. She was a inventor who was involved in art, farming, engineering and politics. She designed a hexagonal lumber cutter, patented a method for ensnaring airplanes in wires hung from balloons during World War II, and developed a water anti-pollution device in the late 1960s.
SOURCE: National Register Database; <u>http</u> Associates, 2021.	bs://www.nps.gov/subjects/nationalregister/database-research.htm#table, Adapted by Environmental Science

Town	Number of State & Local Designated Properties
Boston	838
Canton	445
Easton	142
Foxborough	194
Mansfield	190
Milton	1,559
Norton	16
Quincy	2
Randolph	225
Sharon	491
Stoughton	82
Grand Total	4,184

Table 2: Number of State & Local Designated Properties within the APE

Assessment of Noise and Visual Impacts by Proposed Action

In our earlier correspondence, the FAA noted that we are "considering the possibility that changes in noise levels or additional visual impacts from an increase in overflights could alter the character or use of certain kinds of historic properties where a quiet setting is a generally recognized purpose and attribute." In order to address this possibility, an assessment was done to further quantify the auditory and visual impacts on the historic properties within the Area of Potential Effects.

In order to assess the auditory impacts, the FAA used a metric known as Day-night Average Sound Level (DNL). DNL is the standard noise metric used for all FAA studies of aviation noise exposure in airport communities and was used here to assess the potential impact on every identified historic property within the Area of Potential Effects.

DNL is a 24-hour, time-weighted average noise metric, expressed in terms of decibel units of sound heard by the human ear, which accounts for the noise levels of individual aircraft events, the number of times those events occur, and the time of day they occur. DNL is a graphical representation of the distribution of noise over the surrounding area from an airport's average operations. There is one unique modification in that there is a "noise penalty" of any noise generated during "nighttime hours." In the calculation of DNL, for each hour during nighttime hours (10:00 p.m. to 7:00 a.m.), the sound levels are increased by a 10 decibel-weighting penalty (equivalent to a 10-fold increase in aircraft operations) before the 24-hour value is computed. The weighting penalty accounts for the more intrusive nature of noise during the nighttime hours. The significance thresholds for aircraft noise for DNL, as spelled out in FAA Order 1050.1F, are given below.

• For DNL 65 dB and higher: +1.5 dB

This threshold has been used by FAA for many years and is applied at airports across the country and will be used to determine noise impacts on historic properties within the APE. The use of this threshold is consistent with the Section 106 analyses for many FAA projects, including the Northern California and Southern Florida Metroplex projects, two of FAA's most recent projects that also modified the flight path of aircraft through the airspace.

According to FAA Order 1050.1F, a significant noise impact could occur to noise sensitive land uses if it had a level of DNL 65 dB with the Proposed Action and also experienced an increase of 1.5 dB when compared to the No Action Alternative. The FAA also recognizes that, in limited instances, resources that have a "quiet setting" as a qualifying attribute may be adversely affected by noise increases that would otherwise not be significant. There are no NRHP properties with a noise exposure of DNL 65 that experience a 1.5 dB noise increase. Further, the NRHP properties were reviewed and none of them were found to have a "quiet setting" as described in the FAA's Section 106 Handbook.

When the analysis is expanded to include the state and local designated properties that are assumed to be eligible for the NRHP, there are no properties that experience a 1.5 dB noise level increase with a proposed action noise level of DNL 65 or greater. As indicated in Table 4.6-3 of the Draft EA, the maximum exposed noise level *decreases* as a result of the Proposed Project

when compared to the No Action Alternative when considering towns/neighborhoods as a whole. Furthermore, as described below, the largest proposed noise changes within the APE are multiple orders of magnitude below the noise thresholds given within FAA Order 1050.1F.

The FAA's noise analysis demonstrates that historic resources will generally experience equivalent noise exposure with the addition of the Proposed Action. Specifically, the maximum change in noise exposure for a historic property is less than 0.2 dB across all historic properties in the APE. For example, one of these properties has a value of 22 dB under the No Action Alternative and 22.1 dB with the Proposed Procedure. Importantly, as depicted in Attachment A, the procedure is an overlay of existing traffic to Runway 4L and is only expected to lead to an annual net increase of 255 arrivals to BOS, out of a current total of 205,837 arrivals. In sum, the FAA will not be introducing audible impacts to resources not already experiencing noise impacts, and any change in noise exposure will be minimal.

In order to assess the potential visual impacts of the historic properties, the data for a year of overflights at BOS from the previous memorandum was reassessed to compare to the newly designated APE. Considering one year of radar track data, the APE experiences 78,879 arrival and 18,989 departure overflights annually. On an average daily basis that corresponds to 216.1 arrival and 52.0 departure overflights. The Proposed Action is estimated to add 255 annual arrival overflights or 0.70 daily average overflights to the APE. When considering the APE as a whole, the increase in overflights would amount to just a 0.26% increase in overflights and would not introduce audible or visual noise in the APE. In order to confirm that the overflights over the APE were not focused on particular historic resources in the APE, the dataset of departure overflights and arrival overflights was mapped over the APE in Attachments A and B respectively. Attachment A shows that the APE areas closest to the airport are already dense with overflights but the flights become more disperse as the APE moves to the southwest. However, Attachment B, which displays a year of arrival radar tracks, show that the APE is already heavily overflown over the full extent of the APE.

For more information on the analyses performed as a part of the Draft EA, please visit <u>www.faabostonworkshops.com</u> for a copy of the Draft EA. More information on the noise analysis can be found at <u>www.faabostonworkshops.com/noise-visualization/</u> and in Sections 3.4.6 and 4.6 of the Draft EA. The Noise Modeling Technical Report is included in Appendix D of the Draft EA.



SOURCE: Esri; RoVolus, 2021; ESA, 2021



Boston Logan RNAV (GPS) RWY 4L EA



SOURCE: Esri; RoVolus, 2021; ESA, 2021



Finding of No Adverse Effect Criteria

In order to establish a Finding of No Adverse Effect, the Proposed Action must not meet any of the criteria spelled out in the FAA's Section 106 Handbook, which are based on criteria in ACHP's section 106 regulations in 36 CFR Part 800. This section presents why the Proposed Action does not meet any of these criteria.

- Does the Proposed Action physically destroy or damage the property?
 - The Proposed Action will not have any physical impact on any property. The Proposed Action changes the location of arrival flights in the airspace around Boston Logan International Airport.
- Does the Proposed Action alter the property in any way that is consistent with the Secretary of the Interior's Standards for Treatment of Historic Properties (36 CFR Part 68)?
 - The Standards guide the design and implementation of physical changes to historic properties. This may include changes in use, material repair or substitution, or modification of historically important features. The Proposed Action is located in the airspace above historic resources does not result in any changes in use, material alteration, or physical modifications to these resources.
- Does the Proposed Action remove a property from its historic location?
 - \circ The Proposed Action does not remove any property from its location.
- Does the Proposed Action change the character of the property's use, or of physical features within the property's setting that contribute to its historic significance?
 - The Proposed Action does not change the character of a property's use or any physical features in any historical property's setting.
 - Any changes to setting as a result of the Proposed action would be audible or visual features which are discussed in the following criterion.
- Does the Proposed Action introduce an atmospheric, audible, or visual feature to the area that would diminish the integrity of the property's significant historic features?
 - Audible: there will not be an introduction of audible noise as a result of the Proposed Action. Furthermore, the noise impacts of the Proposed Action on all of the historic resources in the APE will either decrease noise exposure or cause increases that are orders of magnitude below the significance thresholds for DNL aircraft noise as described in FAA Order 1050.1F and therefore will not cause an introduction of audible impact on any of the properties.
 - Visual: there will not be an introduction of visual impacts as a result of the Proposed Action. Furthermore, the entire APE currently experiences 268 average daily overflights as described in the above analysis. The Proposed Action will add less than 1 additional overflight per day. This increase will not change the current visual features of any historic resource in the APE, as depicted in Attachment B.
- Does the Proposed Action result in neglect of a property which would result in its deterioration, transfer, sale or lease?

• The Proposed Action will not cause any property to be sold or transferred.

Given the results discussed in this letter, the FAA is putting forth at this point a Proposed Finding of No Adverse Effect. This determination is based on the findings discussed in this letter, which includes that none of the NRHP listed properties reviewed herein were found to have a "quiet setting" as described in the FAA's Section 106 Handbook. Furthermore, the net change in aircraft operations as a result of the Proposed Action would be minimal and would not cause an adverse effect, including no physical impacts and no introduction of audible or visual impacts within the APE.

Public Meetings, Comments, and Consultation

The FAA conducted Virtual Public Workshops for the Draft EA on October 23rd, and October 28th, 2020. By attending the Virtual Public Workshops, participants were provided with an overview of the Draft EA which includes results from the noise analysis performed to assess the potential noise impacts of the Proposed Action on historic resources and populations located within the General Study Area. The MHC concurred with the APE on December 8, 2020 so the impacts were shown for historic resources throughout the entire Study Area. During the meeting, the FAA responded to a large number of questions from the community. These meetings were recorded and remain on the FAA's YouTube page for interested community members to review. During the meeting and other forms of engagement, the FAA received over 40 comments regarding the Proposed Action. The FAA is currently reviewing and developing responses to these comments to be shared with the public as part of the Final Environmental Assessment but it should be noted that none of the comments mention any potential impact to historic resources from the Proposed Action.

We look forward to hearing back from you on the FAA's proposed finding. We welcome the input from consulting parties on the historic properties considered as part of the analysis and on the finding itself. If you have any additional comments or questions on this undertaking, please contact me at veronda.johnson@faa.gov or at the address below.

Sincerely,

Veronda Johnson Eastern Service Center Federal Aviation Administration Operations Support Group AJV-E250 1701 Columbia Avenue College Park, GA 30337

950 CMR: OFFICE OF THE SECRETARY OF THE COMMONWEALTH

<u>APPENDIX A</u> MASSACHUSETTS HISTORICAL COMMISSION 220 MORRISSEY BOULEVARD BOSTON, MASS. 02125 617-727-8470, FAX: 617-727-5128

PROJECT NOTIFICATION FORM

e:Proposed RNAV (GPS) RWY 4L Approach Procedure at Boston Logan International Airport
ddress:Airspace surrounding Boston Logan International Airport
Boston, MA
onent
eronda Johnson on behalf of the Federal Aviation Administration
701 Columbia Avenue
ip/Telephone:College Park, GA, 30337, 404-305-5598

Agency license or funding for the project (list all licenses, permits, approvals, grants or other entitlements being sought from state and federal agencies).

Agency Name

Type of License or funding (specify)

Project Description (narrative):

This non-ground based project is described in detail in the attached letter.

Does the project include demolition? If so, specify nature of demolition and describe the building(s) which are proposed for demolition.

No, the project is not ground based and as thus will not require any demolition.

Does the project include rehabilitation of any existing buildings? If so, specify nature of rehabilitation and describe the building(s) which are proposed for rehabilitation.

No, the project is not ground based and as thus will not include any building rehabilitation.

Does the project include new construction? If so, describe (attach plans and elevations if necessary).

No, the project is not ground based and as thus will not require any new construction.

5/31/96 (Effective 7/1/93) - corrected

950 CMR: OFFICE OF THE SECRETARY OF THE COMMONWEALTH

APPENDIX A (continued)

To the best of your knowledge, are any historic or archaeological properties known to exist within the project's area of potential impact? If so, specify.

This will be determined when the Area of Potential Impact is determined, See Attached Letter What is the total acreage of the project area?

Woodland	N/A	acres	Productive Resources:		
Wetland	N/A	acres	Agriculture	N/A	_acres
Floodplain	N/A	acres	Forestry	N/A	acres
Open space	N/A	acres	Mining/Extraction	N/A	acres
Developed	N/A	acres	Total Project Acreage_	N/A	acres
-			· ·		

What is the acreage of the proposed new construction? ______ N/A _____ acres

What is the present land use of the project area?

N/A

Please attach a copy of the section of the USGS quadrangle map which clearly marks the project location.

N/A

This Project Notification Form has been submitted to the MHC in compliance with 950 CMR 71.00.

Signature of Person submitting this form: <u>Veronda</u> <u>Johnson</u> Date: <u>June 18, 2020</u>
Name: Veronda Johnson on behalf of the Federal Aviation Administration
Address: _1701 Columbia Avenue
City/Town/Zip: College Park, GA, 30337
Telephone: 404-305-5598

REGULATORY AUTHORITY

950 CMR 71.00: M.G.L. c. 9, §§ 26-27C as amended by St. 1988, c. 254.

7/1/93

950 CMR - 276



of Transportation

Eastern Service Center

1701 Columbia Avenue College Park, Georgia 30337

Federal Aviation Administration

June 10, 2021

Ms. Brona Simon State Historic Preservation Officer/Executive Director Massachusetts Historical Commission 220 Morrissey Blvd Boston, MA 02125

Reference: Proposed Finding of No Adverse Effect for the Boston Logan International Airport RNAV (GPS) RWY 4L Approach Procedure, Boston, MA (MHC# RC.68314)

Dear Ms. Simon

Thank you for your December 8, 2020 concurrence with our Area of Potential Effects (APE) for the proposed approach procedure at Boston Logan International Airport (BOS). As described in our earlier correspondence, this procedure is needed to enhance the safety of operations at BOS. In continuing with our responsibilities under Section 106 of the National Historic Preservation Act and its implementing regulations, the Federal Aviation Administration (FAA) submits this assessment of adverse effects, which concludes with a proposed Finding of No Adverse Effects and our supporting rationale for that finding. The FAA is also sharing this proposed finding with all other consulting parties.

Project Background

As described in greater detail in the FAA's Draft Environmental Assessment (EA), which can be accessed at <u>www.faabostonworkshops.com</u>, the FAA is evaluating a new proposed Area Navigation (RNAV) Global Positioning System (GPS) instrument approach procedure at BOS. This new procedure, which is depicted in Attachments A and B, is needed to allow aircraft to land onto Runway 4L with GPS technological automation. The current absence of an RNAV procedure to Runway 4L precludes use of the runway during low visibility conditions. The proposed procedure route is an overlay of existing arrivals and is expected to lead to a net increase of 255 annual arrivals to BOS generally, which represents 0.1% of the total annual arrivals, and an increase of 359 annual arrivals specifically to Runway 4L. These additional procedural capabilities would increase the safety and efficiency of the airspace around BOS. Publication of the proposed procedure would constitute an undertaking under Section 106 of the National Historic Preservation Act (NHPA).

Regulatory Overview

Under NEPA, the FAA is responsible for analyzing the impacts of its action on historical, architectural, archeological and cultural resources as part of its broader review of the human environment. Because the National Historic Preservation Act (NHPA) is the principal statute concerning such resources, most of this analysis is conducted in coordination with the process under Section 106 of the NHPA, which requires federal agencies to consider the effects of their projects on properties listed, or eligible for listing, in the National Register of Historic Places (NRHP). As this is an FAA Action, the FAA document *Section 106 of the National Historic Properties under Section 106 of the National Historic Properties under Section 106 of the National Historic Preservation Act* was consulted and referenced in order to make this determination.

Review of Historic/Eligible Properties

The National Register of Historic Places (NRHP), the Massachusetts Historical Commission, and the Boston Landmarks Commission's data sources were used to gather a comprehensive directory of all potential historic and cultural resources within the APE. A total of 19 properties within the APE were found to be listed in the National Register of Historic Places as historic districts or individual properties in accordance with the criteria described in the NHPA. These 19 properties are identified and described in Table 1. A total of 4,184 state and local designated properties were identified within the APE and are summarized by their location in Table 2. These 4,184 properties represent the group of potential resources that would be evaluated for National Register eligibility. For the purposes of this proposed finding, we assume all of these properties are eligible for the National Register and propose a finding of no adverse effect for all properties within the APE currently listed, determined eligible for listing, and assumed eligible for listing in the NRHP.

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Dorchester Park	Dorchester Park is a historic park bounded by Dorchester Avenue, Richmond, Adams and Richview Streets in the Dorchester neighborhood of Boston, Massachusetts.

Table 1: National	Register	of Historic	Places	Properties	within	the APE
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	most of which was historically associated with the Walter Baker & Company,
	the first major maker of chocolate products in the United States.
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	development of the area from a mid-19th century speculative housing
	development for Boston's upper-middle class to a close-knot neighborhood of
	residents from diverse socioeconomic backgrounds. The surviving historic
	resources catalogue Savin Hill's rich history and remain a cohesive collection
	of well-preserved historic homes. The district further attains significance as an
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Harrison Square Historic District	Clam Point (also known as Harrison Square) is a sub-neighborhood in Boston, noteworthy for its collection of substantial Italianate Mansard residences. The area is known to have the most cohesive, intact collection of mansion-scale, mid-19 th century housing in Boston, and includes the Park, Everett, Freeport, Mill, Ashland, Blanche streets, and Victory Road in the Dorchester neighborhood of Boston.			
Canton Corner Historic District	The Canton Corner Historic District encompasses the historic town center of Canton, Massachusetts. Centered on the junction of Pleasant and Washington streets, it includes more than 25 properties and 170 acres (69 ha), whose architectural history spans 250 years of occupation and includes the town's major civic buildings.			
Ponkapoag Camp of Appalachian Mountain Club	The Appalachian Mountain Club Ponkapoag Camp is one of the original camps of the oldest outing club in the United States, founded in 1876. Early in the twentieth century tent sites were established at the east end of Ponkapoag Pond in the Blue Hills reservation by the president of the Appalachian Mountain Club, William Rogers, who was also an M.D.C. commissioner. The camp represents an early outing club's architecture for "roughing it" and are important as such structures succumb to fire, rot, and vandalism.			
Boyden, Seth, House	The Seth Boyden House is a historic house at 135 Oak Street in Foxborough, Massachusetts. The home is significant for its unusual architectural design as well for its association with the Boyden family, whose members were prominent locally and regionally in the 18 th and 19 th century,			
Borderland Historic District	The Borderland Historic District was the 1,200 acre estate of Blanche Ames Ames. The mansion was constructed in 1910 and the property includes a system of ponds, dams, and causeways surrounding the mansion. The exterior of the mansion was built using locally cut field stones. The district is considered significant due to its connection to the estate of Blanche Ames Ames. She was a inventor who was involved in art, farming, engineering and politics. She designed a hexagonal lumber cutter, patented a method for ensnaring airplanes in wires hung from balloons during World War II, and developed a water anti-pollution device in the late 1960s.			
SOURCE: National Register Database; https://www.nps.gov/subjects/nationalregister/database-research.htm#table, Adapted by Environmental Science Associates, 2021.				

Town	Number of State & Local Designated Properties
Boston	838
Canton	445
Easton	142
Foxborough	194
Mansfield	190
Milton	1,559
Norton	16
Quincy	2
Randolph	225
Sharon	491
Stoughton	82
Grand Total	4,184

Table 2: Number of State & Local Designated Properties within the APE

Assessment of Noise and Visual Impacts by Proposed Action

In our earlier correspondence, the FAA noted that we are "considering the possibility that changes in noise levels or additional visual impacts from an increase in overflights could alter the character or use of certain kinds of historic properties where a quiet setting is a generally recognized purpose and attribute." In order to address this possibility, an assessment was done to further quantify the auditory and visual impacts on the historic properties within the Area of Potential Effects.

In order to assess the auditory impacts, the FAA used a metric known as Day-night Average Sound Level (DNL). DNL is the standard noise metric used for all FAA studies of aviation noise exposure in airport communities and was used here to assess the potential impact on every identified historic property within the Area of Potential Effects.

DNL is a 24-hour, time-weighted average noise metric, expressed in terms of decibel units of sound heard by the human ear, which accounts for the noise levels of individual aircraft events, the number of times those events occur, and the time of day they occur. DNL is a graphical representation of the distribution of noise over the surrounding area from an airport's average operations. There is one unique modification in that there is a "noise penalty" of any noise generated during "nighttime hours." In the calculation of DNL, for each hour during nighttime hours (10:00 p.m. to 7:00 a.m.), the sound levels are increased by a 10 decibel-weighting penalty (equivalent to a 10-fold increase in aircraft operations) before the 24-hour value is computed. The weighting penalty accounts for the more intrusive nature of noise during the nighttime hours. The significance thresholds for aircraft noise for DNL, as spelled out in FAA Order 1050.1F, are given below.

• For DNL 65 dB and higher: +1.5 dB

This threshold has been used by FAA for many years and is applied at airports across the country and will be used to determine noise impacts on historic properties within the APE. The use of this threshold is consistent with the Section 106 analyses for many FAA projects, including the Northern California and Southern Florida Metroplex projects, two of FAA's most recent projects that also modified the flight path of aircraft through the airspace.

According to FAA Order 1050.1F, a significant noise impact could occur to noise sensitive land uses if it had a level of DNL 65 dB with the Proposed Action and also experienced an increase of 1.5 dB when compared to the No Action Alternative. The FAA also recognizes that, in limited instances, resources that have a "quiet setting" as a qualifying attribute may be adversely affected by noise increases that would otherwise not be significant. There are no NRHP properties with a noise exposure of DNL 65 that experience a 1.5 dB noise increase. Further, the NRHP properties were reviewed and none of them were found to have a "quiet setting" as described in the FAA's Section 106 Handbook.

When the analysis is expanded to include the state and local designated properties that are assumed to be eligible for the NRHP, there are no properties that experience a 1.5 dB noise level increase with a proposed action noise level of DNL 65 or greater. As indicated in Table 4.6-3 of the Draft EA, the maximum exposed noise level *decreases* as a result of the Proposed Action

when compared to the No Action Alternative when considering towns/neighborhoods as a whole. Furthermore, as described below, the largest proposed noise changes within the APE are multiple orders of magnitude below the noise thresholds given within FAA Order 1050.1F.

The FAA's noise analysis demonstrates that historic resources will generally experience equivalent noise exposure with the addition of the Proposed Action. Specifically, the maximum change in noise exposure for a historic property is less than 0.2 dB across all historic properties in the APE. For example, one of the properties has a value of 22 dB under the No Action Alternative and 22.1 dB with the Proposed Action. Importantly, as depicted in Attachment A, the procedure is an overlay of existing traffic to Runway 4L and is only expected to lead to an annual net increase of 255 arrivals to BOS, out of a current total of 205,837 arrivals. In sum, the FAA will not be introducing audible impacts to resources not already experiencing noise impacts, and any change in noise exposure will be minimal.

In order to assess the potential visual impacts of the historic properties, the data for a year of overflights at BOS from the previous memorandum was reassessed to compare to the newly designated APE. Considering one year of radar track data, the APE experiences 78,879 arrival and 18,989 departure overflights annually. On an average daily basis that corresponds to 216.1 arrival and 52.0 departure overflights. The Proposed Action is estimated to add 255 annual arrival overflights or 0.70 daily average overflights to the APE. When considering the APE as a whole, the increase in overflights would amount to just a 0.26% increase in overflights and would not introduce audible or visual noise in the APE. In order to confirm that the overflights over the APE were not focused on particular historic resources in the APE, the dataset of departure overflights and arrival overflights was mapped over the APE in Attachments A and B respectively. Attachment A shows that the APE areas closest to the airport are already dense with overflights but the flights become more disperse as the APE moves to the southwest. However, Attachment B, which displays a year of arrival radar tracks, show that the APE is already heavily overflown over the full extent of the APE.

For more information on the analyses performed as a part of the Draft EA, please visit <u>www.faabostonworkshops.com</u> for a copy of the Draft EA. More information on the noise analysis can be found at <u>www.faabostonworkshops.com/noise-visualization/</u> and in Sections 3.4.6 and 4.6 of the Draft EA. The Noise Modeling Technical Report is included in Appendix D of the Draft EA.



SOURCE: Esri; RoVolus, 2021; ESA, 2021



Boston Logan RNAV (GPS) RWY 4L EA



SOURCE: Esri; RoVolus, 2021; ESA, 2021



Finding of No Adverse Effect Criteria

In order to establish a Finding of No Adverse Effect, the Proposed Action must not meet any of the criteria spelled out in the FAA's Section 106 Handbook, which are based on criteria in ACHP's section 106 regulations in 36 CFR Part 800. This section presents why the Proposed Action does not meet any of these criteria.

- Does the Proposed Action physically destroy or damage the property?
 - The Proposed Action will not have any physical impact on any property. The Proposed Action changes the location of arrival flights in the airspace around Boston Logan International Airport.
- Does the Proposed Action alter the property in any way that is consistent with the Secretary of the Interior's Standards for Treatment of Historic Properties (36 CFR Part 68)?
 - The Standards guide the design and implementation of physical changes to historic properties. This may include changes in use, material repair or substitution, or modification of historically important features. The Proposed Action is located in the airspace above historic resources does not result in any changes in use, material alteration, or physical modifications to these resources.
- Does the Proposed Action remove a property from its historic location?
 - \circ The Proposed Action does not remove any property from its location.
- Does the Proposed Action change the character of the property's use, or of physical features within the property's setting that contribute to its historic significance?
 - The Proposed Action does not change the character of a property's use or any physical features in any historical property's setting.
 - Any changes to setting as a result of the Proposed action would be audible or visual features which are discussed in the following criterion.
- Does the Proposed Action introduce an atmospheric, audible, or visual feature to the area that would diminish the integrity of the property's significant historic features?
 - Audible: there will not be an introduction of audible noise as a result of the Proposed Action. Furthermore, the noise impacts of the Proposed Action on all of the historic resources in the APE will either decrease noise exposure or cause increases that are orders of magnitude below the significance thresholds for DNL aircraft noise as described in FAA Order 1050.1F and therefore will not cause an introduction of audible impact on any of the properties.
 - Visual: there will not be an introduction of visual impacts as a result of the Proposed Action. Furthermore, the entire APE currently experiences 268 average daily overflights as described in the above analysis. The Proposed Action will add less than 1 additional overflight per day. This increase will not change the current visual features of any historic resource in the APE, as depicted in Attachment B.
- Does the Proposed Action result in neglect of a property which would result in its deterioration, transfer, sale or lease?

• The Proposed Action will not cause any property to be sold or transferred.

Given the results discussed in this letter, the FAA is proposing a Finding of No Adverse Effect for this undertaking. This determination is based on the findings discussed in this letter, which includes that none of the NRHP listed properties reviewed herein were found to have a "quiet setting" as described in the FAA's Section 106 Handbook. Furthermore, the net change in aircraft operations as a result of the Proposed Action would be minimal and would not cause an adverse effect, including no physical impacts and no introduction of audible or visual impacts within the APE.

Public Meetings, Comments, and Consultation

The FAA conducted Virtual Public Workshops for the Draft EA on October 23rd, and October 28th, 2020. By attending the Virtual Public Workshops, participants were provided with an overview of the Draft EA which includes results from the noise analysis performed to assess the potential noise impacts of the Proposed Action on historic resources and populations located within the General Study Area. The MHC concurred with the APE on December 8, 2020 so the impacts were shown for historic resources throughout the entire Study Area. During the meeting, the FAA responded to a large number of questions from the community. These meetings were recorded and remain on the FAA's YouTube page for interested community members to review. During the meeting and other forms of engagement, the FAA received over 40 comments regarding the Proposed Action. The FAA is currently reviewing and developing responses to these comments to be shared with the public as part of the Final Environmental Assessment but it should be noted that none of the comments mention any potential impact to historic resources from the Proposed Action.

The FAA has noted the list of historical commissions, regional planning commissions, and other organizations provided in your previous letter. The FAA is currently reaching out to these groups as consulting parties. If this determination is modified or updated due to that consultation, a new correspondence will be sent to the MHC.

We look forward to hearing back from you on the FAA's proposed finding. If you have any questions or concerns, we would be happy to have a conference call to receive your feedback and also to discuss any next steps. If you have any additional comments or questions on this undertaking, please contact me at (404)-305-5598, or at veronda.johnson@faa.gov.

Sincerely,

Veronda Johnson Eastern Service Center Federal Aviation Administration Operations Support Group AJV-E250 1701 Columbia Avenue College Park, GA 30337



The Commonwealth of Massachusetts

William Francis Galvin, Secretary of the Commonwealth Massachusetts Historical Commission

September 10, 2021

Veronda Johnson Environmental Protection Specialist Operations Support Group Federal Aviation Administration Eastern Service Center 1701 Columbia Avenue College Park, GA 30337

RE: Logan Airport RNAV (GPS) RWY 4L Approach Procedures, Boston, MA; MHC# RC.68314

Dear Ms. Johnson:

Staff of the Massachusetts Historical Commission (MHC) have reviewed the information you submitted, received at this office on August 11, 2021, for the project referenced above.

The FAA's June 21, 2021 submission indicated that at that time the FAA was reaching out to historical commissions, regional planning commission, and other organizations that MHC identified as possible consulting parties. MHC staff had requested that all comments from these groups be submitted to our office for review. The MHC reiterates this request. The MHC received an email request from the FAA on June 14, 2021 for an email address of Air, Inc., one of the potential consulting parties that MHC had recommended be notified. Please confirm that the FAA sent correspondence inviting each party that MHC recommended. Staff would also like to note that many Local Historical Commissions have reduced meetings during the summer months and the notifications may have taken longer to be received by the Local Historical Commissions.

MHC staff understand that there is also a public information session to be hosted by Massport and the FAA scheduled for September 23, 2021 at 5:30pm. The session is regarding the Boston Logan RNAV Study and current Block 2 recommendations. The Study was in response to community concerns related to the FAA's implementation of NextGen procedures including RNAV. Block 2 was identified as a block within the Runway 4L path. Public comments from this information session should be provided to the MHC.

The MHC cannot concur with FAA's finding of "no adverse effect" to historic properties.

The proposed RNAV (GPS) Runway 4L approach procedures will concentrate flights in a more precise vertical and horizontal track. As indicated in the draft Environmental Assessment (EA), the number of overflights will increase and result in an increased number of events when air traffic noise will be heard over historic resources (see 36 CFR 800.5(2)(v)).

220 Morrissey Boulevard, Boston, Massachusetts 02125 (617) 727-8470 • Fax: (617) 727-5128 www.sec.state.ma.us/mhc These comments are offered to assist in compliance with Section 106 of the National Historic Preservation Act of 1966 (36 CFR 800). Please do not hesitate to contact Elizabeth Sherva of my staff if you have any questions.

Sincerely,

Brona Sim

Brona Simon State Historic Preservation Officer Executive Director Massachusetts Historical Commission

 xc: Milton Historical Commission Boston Landmarks Commission AIR, Inc.
BOS Fair Skies/Fair Skies Nation Eagle Hill Civic Association

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William Francis Galvin, Secretary of the Commonv Massachusetts Historical Commission 220 Morrissey Boulevard Boston, MA 02125	1 - Lo - L	•	



The Commonwealth of Massachusetts

William Francis Galvin, Secretary of the Commonwealth Massachusetts Historical Commission

November 15, 2021

Veronda Johnson Environmental Protection Specialist Operations Support Group Federal Aviation Administration Eastern Service Center 1701 Columbia Avenue College Park, GA 30337

RE: Logan Airport RNAV (GPS) RWY 4L Approach Procedures, Boston, MA; MHC# RC.68314

Dear Ms. Johnson:

Staff of the Massachusetts Historical Commission (MHC) have reviewed the information you submitted, received at this office on October 13, 2021, for the project referenced above.

Your letter seeks further information on the types of resources the MHC believes would be adversely affected by the undertaking through the introduction of visual or audible elements.

Concentrated flights in a more precise vertical and horizontal track will place a higher volume of aircraft in the 4L RNAV flight path. This increase of 359 flights annually will introduce increased visual and audible events which will affect the historic resources under and near the 4L RNAV flight path.

In addition to the properties identified in your correspondence, received at this office on June 21, 2021, it is the opinion of MHC that a number of other important historic resources will be impacted by additional audible and visible flight events. Please see a list below:

Cedar Grove Cemetery

The Cedar Grove Cemetery is located directly below the proposed RNAV Runway 4L flight path. MHC's *Inventory of Historic and Archaeological Assets of the Commonwealth* provides information on the importance of this historic resource that in MHC staff's opinion meets the criteria of eligibility for listing on the National Register of Historic Places. "Cedar Grove's land bordering the Neponset with its low lying hills, marshland and wooded areas constituted a textbook perfect location for a rural garden cemetery of the type pioneered by Dr. Jacob Bigelow, General Dearborn and others at Mt. Auburn Cemetery in Cambridge/Watertown in the 1830s. The peace and charm of the place was apparent to the fashionable strollers of the mid 19th century." The Luther Briggs, Jr. designed Cedar Grove Cemetery with Dorchester Park provide a glimpse of the marshland, meadows, and gently rolling hills characteristic of southern Dorchester before intensive, post 1890-development.

Governor Hutchinson's Field

Governor Hutchinson's Field is listed in the National Register of Historic Places as a contributing element of the Milton Hill Historic District. Governor Hutchinson built his family a country estate on Milton Hill to escape the city. According to A History of Milton 1640-1887, "he found leisure to cultivate his rural tastes and spent much time in laboring with his men in setting out and grafting trees and attending to the routine of farming and of cultivating fruits…" The field is all that remains of the estate today but continues to represent the former rural peaceful landscape of those who left the city for a rural respite.

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Captain R. B. Forbes House

The Captain R. B. Forbes House and Carriage House is a National Historic Landmark. The structures and site are also listed in the National Register of Historic Places as contributing elements to the Milton Hill Historic District.

Blue Hills Reservation Multiple Resource Area

While the list the FAA provided includes the Blue Hills Parkway and Blue Hills Reservation Parkways-Metropolitan Park System of Greater Boston, the list does not include the Blue Hills Reservation Multiple Resource Area. The Blue Hills Reservation is listed in the National Register of Historic Places and includes prehistoric and historic resources of the Blue Hills and Neponset River Reservations. The Blue Hills Reservation has served as an important recreation area since the latter decades of the nineteen century. Improvements at the turn of the last century included the construction of buildings to support the public's use of the important outdoor space for the residents of the surrounding communities. The Great Blue Hill Weather Observatory, found at the top of the Great Blue Hill, is a National Historic Landmark.

Historic properties that are associated with or designed for leisure, respite, or places of rest and solemnity would be adversely effected by the increased flight events. Through the introduction of visible and audible elements that are out of character with the setting of these historic properties (36 CFR 800.5(a)(2)(v)).

Thus, the MHC cannot concur with FAA's finding of "no adverse effect" to historic properties.

The proposed RNAV (GPS) Runway 4L approach procedures will concentrate flights in a more precise vertical and horizontal track. As indicated in the draft Environmental Assessment (EA), the number of overflights will increase and result in an increased number of events when air traffic noise will be heard over historic resources (see 36 CFR 800.5(2)(v)).

These comments are offered to assist in compliance with Section 106 of the National Historic Preservation Act of 1966 (36 CFR 800). Please do not hesitate to contact Elizabeth Sherva of my staff if you have any questions.

Sincerely,

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Brona Simon State Historic Preservation Officer Executive Director Massachusetts Historical Commission

xc: Jamie Loichinger, ACHP
Milton Historical Commission
Boston Landmarks Commission
AIR, Inc.
BOS Fair Skies/Fair Skies Nation
Eagle Hill Civic Association



The Commonwealth of Massachusetts William Francis Galvin, Secretary of the Commonwealth Massachusetts Historical Commission

July 21, 2021

Veronda Johnson Environmental Protection Specialist Operations Support Group Federal Aviation Administration Eastern Service Center 1701 Columbia Avenue College Park, GA 30337

RE: Logan Airport RNAV (GPS) RWL 4L Approach Procedures, Boston, MA; MHC# RC.68314

Dear Ms. Johnson:

Staff of the Massachusetts Historical Commission (MHC) have reviewed the information you submitted, received at this office on June 21, 2021, for the project referenced above.

The information submitted referenced a number of websites where pertinent information could be found. The MHC requires that all information be submitted to this office in hard copy. The MHC does not accept electronic submissions. Please forward the information to this office in hard copy. Please submit a hard copy of the Draft Environmental Assessment (EA) and noise/visual analysis reports.

Additionally, the staff of the MHC understands that the FAA is currently reaching out to historical commissions, regional planning commissions, and other organizations that MHC identified as possibly consulting parties. Please forward all comments from these groups to our office for review.

Finally, the staff of the MHC understands that the FAA has held Virtual Public Workshops which provided an overview to the Environmental Assessment (EA). The letter received states that the FAA received over 40 comments regarding this project. Please forward these comments to our office for review.

These comments are offered to assist in compliance with Section 106 of the National Historic Preservation Act of 1966 (36 CFR 800). Please do not hesitate to contact Elizabeth Sherva of my staff if you have any questions.

Sincerely, Brova Simon

Brona Simon State Historic Preservation Officer Executive Director

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William Francis Galvin, Secretary of the Commonwealth Massachusetts Historical Commission 220 Morrissey Boulevard Boston, MA 02125



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The Commonwealth of Massachusetts William Francis Galvin, Secretary of the Commonwealth Massachusetts Historical Commission

July 24, 2020

Veronda Johnson Environmental Protection Specialist Operations Support Group Federal Aviation Administration Eastern Service Center 1701 Columbia Avenue College Park, GA 30337

RE: Logan Airport RNAV (GPS) RWL 4L Approach Procedures, Boston, MA; MHC# RC.68314

Dear Ms. Johnson:

Staff of the Massachusetts Historical Commission (MHC) have reviewed the information you submitted, received at this office on June 24, 2020, for the project referenced above and have the following comments.

The MHC understands that the Federal Aviation Administration is requesting comments on FAA's proposed approach for defining the area of potential effects (APE) of the RNAV RWL 4L Approach Procedures to Logan Airport (BOS). The FAA proposes to compare the expected flight tracks of the aircraft flying the BOS 4L RNAV procedure to radar tracks of current arrivals at BOS. Based on the comparison, the FAA will determine whether there will be new areas overflown by the Proposed Action, and specifically whether the undertaking has the potential to introduce new visual, atmospheric, or audible elements. Any areas that will be introduced to new visual, atmospheric, or audible (noise levels) elements will be considered part of the APE by FAA.

The MHC does not agree with the proposed approach to defining the area of potential effects (APE). The MHC notes that some areas currently impacted by current arrivals at BOS vary because pilots must "hand-fly" the aircraft when arriving at 4L. Once BOS 4L RNAV procedures are in place, the flight path will not vary as it currently does. The MHC requests that once the FAA has compared the expected flight tracks of the aircraft flying the BOS 4L RNAV procedure to radar tracks of the current arrivals, any areas that will be introduced to new levels of visual, atmospheric, or audible elements should be considered part of the APE by the FAA.

Please submit a map and description of the proposed APE, when available, to the MHC for review and comment (800.4 and 800.16(d)).

The MHC understands that the FAA is also requesting assistance in identifying interested parties. Please see below a list of potential interested parties:

220 Morrissey Boulevard, Boston, Massachusetts 02125 (617) 727-8470 • Fax: (617) 727-5128 www.sec.state.ma.us/mhc
All Local Historical Commissions o	f the cities and towns in the APE	
All Regional Planning Commissions	s in the APE	
AIR INC.	airportimpactreliefinc.org	
Eagle Hill Civic Association	eaglehillcivic@gmail.com eaglehillcivic.org	
Fair Skies Nation	info@fairskiesnation.com fairskiesnation.com	2

Please note, this is not an all-inclusive list. Additional interested parties may be identified after the APE is determined.

These comments are offered to assist in compliance with Section 106 of the National Historic Preservation Act of 1966 (36 CFR 800). Please do not hesitate to contact Elizabeth Sherva of my staff if you have any questions.

Sincerely,

Brona.

Brona Simon State Historic Preservation Officer Executive Director Massachusetts Historical Commission



U.S. Department of Transportation Federal Aviation

Administration

Eastern Service Center

1701 Columbia Avenue College Park, Georgia 30337

June 9, 2021

Milton Historical Commission Milton Town Hall 525 Canton Avenue Milton, MA 02186

Proposed Finding of No Adverse Effect for the Boston Logan International Airport RNAV (GPS) RWY 4L Approach Procedure, Boston, MA

To Whom It May Concern,

The Federal Aviation Administration (FAA) is evaluating a new proposed Area Navigation (RNAV) Global Positioning System (GPS) instrument approach procedure at Boston Logan International Airport (BOS). This new procedure would allow for aircraft to land onto Runway 4L with GPS technological automation as well as allow for landing during low visibility conditions. These additional procedural capabilities would increase the safety and efficiency of the airspace around BOS.

Pursuant to 36 CFR 800.4(a), the FAA previously consulted with the Massachusetts Historical Commission to identify the Area of Potential Effects for this undertaking. In continuing with our responsibilities under Section 106 of the National Historic Preservation Act and its implementing regulations, the FAA invites you to participate as a consulting parting and submits this assessment of adverse effects, which concludes with a proposed Finding of No Adverse Effects and our supporting rationale for that finding. The FAA seeks your views or comments on this finding, which can be addressed to the FAA using the email or address given at the conclusion of this letter. Pursuant to 36 CFR 800.5(c), please provide any comments within 30 days from receipt of this letter.

Project Background

As described in greater detail in the FAA's Draft Environmental Assessment (EA), which can be accessed at <u>www.faabostonworkshops.com</u>, the FAA is evaluating a new proposed Area Navigation (RNAV) Global Positioning System (GPS) instrument approach procedure at BOS. This new procedure, which is depicted in Attachments A and B, is needed to allow aircraft to land onto Runway 4L with GPS technological automation. The current absence of an RNAV procedure to Runway 4L precludes use of the runway during low visibility conditions. The proposed procedure route is an overlay of existing arrivals and is expected to lead to a net increase of 255 annual arrivals to BOS generally, which represents 0.1% of the total annual arrivals, and an increase of 359 annual arrivals specifically to Runway 4L. These additional

procedural capabilities would increase the safety and efficiency of the airspace around BOS. Publication of the proposed procedure would constitute an undertaking under Section 106 of the National Historic Preservation Act (NHPA).

Regulatory Overview

Under NEPA, the FAA is responsible for analyzing the impacts of its action on historical, architectural, archeological and cultural resources as part of its broader review of the human environment. Because the National Historic Preservation Act (NHPA) is the principal statute concerning such resources, most of this analysis is conducted in coordination with the process under Section 106 of the NHPA, which requires federal agencies to consider the effects of their projects on properties listed, or eligible for listing, in the National Register of Historic Places (NRHP). As this is an FAA Action, the FAA document *Section 106 of the National Historic Properties under Section 106 of the National Historic Properties under Section 106 of the National Historic Preservation Act* was consulted and referenced in order to make this determination.

Review of Historic/Eligible Properties

The National Register of Historic Places (NRHP), the Massachusetts Historical Commission, and the Boston Landmarks Commission's data sources were used to gather a comprehensive directory of all potential historic and cultural resources within the APE. A total of 19 properties within the APE were found to be listed in the National Register of Historic Places as historic districts or individual properties in accordance with the criteria described in the NHPA. These 19 properties are identified and described in Table 1. A total of 4,184 state and local designated properties were identified within the APE and are summarized by their location in Table 2. These 4,184 properties represent the group of potential resources that would be evaluated for National Register eligibility. For the purposes of this proposed finding, we assume all of these properties are eligible for the National Register and propose a finding of no adverse effect for all properties within the APE currently listed, determined eligible for listing, and assumed eligible for listing in the NRHP.

NRHP Property Name	Brief Property Description
Milton Cemetery	Milton Cemetery contains some of the best examples of funerary art from the colonial times to the Victorian era. An historic garden cemetery, it was established as the Town's only cemetery in 1672.
Spring Brook Cemetery	The most prominent structure in the cemetery, Card Memorial Chapel, was designed by Charles Eastman & built in 1898 and funded by Simon & Mary Card in memory of their daughter Lulu.
Dorchester Park	Dorchester Park is a historic park bounded by Dorchester Avenue, Richmond, Adams and Richview Streets in the Dorchester neighborhood of Boston, Massachusetts.

Table 1: National Register of Historic Places Properties within the APE

NRHP Property Name	Brief Property Description
DorchesterMilton Lower Mills Industrial District (Boundary Increase)	The Dorchester-Milton Lower Mills Industrial District is a historic district on both sides of the Neponset River in the Dorchester area of Boston and in the town of Milton, Massachusetts. It encompasses an industrial factory complex, most of which was historically associated with the Walter Baker & Company, the first major maker of chocolate products in the United States.
Savin Hill Historic District	The Savin Hill Historic District is significant for its association with the development of the area from a mid-19th century speculative housing development for Boston's upper-middle class to a close-knot neighborhood of residents from diverse socioeconomic backgrounds. The surviving historic resources catalogue Savin Hill's rich history and remain a cohesive collection of well-preserved historic homes. The district further attains significance as an intact collection of buildings representing a full range of architectural styles.
Blue Hills Parkway	The Blue Hills Parkway, a 1.5-mile-long boulevard in Boston and Milton, is significant as one of the earliest connecting parkways designed for the Metropolitan Parks Commission (MPC) by Olmsted, Olmsted and Eliot and its successor firm, Olmsted Brothers, and it is emblematic of the firm's principles of parkway creation. A divided highway that runs directly south through early 20"-century residential neighborhoods, the Blue Hills Parkway directly connects the Blue Hills Reservation (the largest open space in Metropolitan Boston) with Boston, the Neponset River Reservation, and Truman Parkway.
Blue Hills Reservation Parkways-Metropolitan Park System of Greater Boston	The Metropolitan Park System of Greater Boston, in Massachusetts, is especially noteworthy because it is the first regional park system in the United States.
Foxborough Pumping Station	The Foxborough Pumping Station is a historic water pumping station at 25 Pumping Station Road in Foxborough, Massachusetts. Its main pumphouse was designed by Ernest Boyden, a regionally-known architect of water supply systems, and was built in 1891; it is a brick structure with Queen Anne styling. The station also includes several historic wells, a period garage, and the man- made Fales Pond, a once-dammed section of the Neponset Reservoir near the pumphouse.
Old Harbor Reservation Parkways, Metropolitan Park System of Greater Boston	The Old Harbor Reservation Parkways are three historic roads in the Old Harbor area of Boston. They are part of the Boston parkway system designed by Frederick Law Olmsted.
Dorchester-Milton Lower Mills Industrial District	The Dorchester-Milton Lower Mills Industrial District is located on both sides of the Neponset River in the Dorchester area of Boston and in the town of Milton, Massachusetts. It encompasses an industrial factory complex, most of which was historically associated with the Walter Baker & Company, the first major maker of chocolate products in the United States.

NRHP Property Name	Brief Property Description
Furnace Village Historic District	The Furnace Village Historic District encompasses the historic colonial industrial area in Easton, Massachusetts. At its center is at the intersection of Foundry street, South street and Poquanticut Avenue. The area was settled in 1723, with industrial activity beginning in 1742. The iron furnace was established in 1751, and for industrial purposes, continued in the 19th century. In addition to the colonial era, there is also an employee of the housing of the 19th century.
Milton Centre Historic District	The Milton Centre Historic District is both the historical and geographic center of the town of Milton. The 23-acre historic district includes Canton Avenue between Reedsdale Road and Thacher and Highland Streets. Milton Centre is historically significant for its association with the development of the town following the relocation of the third meeting house to Academy Hill in 1728, and the subsequent shift of the town center from Milton Hill.
Scott's Woods Historic District	Scott's Woods Historic District is the area of Hillside, Harland and Forest Streets between Randolph Avenue and the ridge between Hancock and Bugbee Hills, now the MDC Blue Hills Reservation. The Scott's Woods Historic District in Milton, Massachusetts is a semirural, residential area that contains a significant concentration of 18th, 19th and early 20th century dwellings and barns that reflect the Town's agricultural and architectural history from 1713 to 1932, the district's period of significance. Originally known as the "Blue Hill Land," a three thousand-acre tract of land sold by the town of Boston in 1711 to four residents of Milton. The area in the southwest part of Milton is thought to have been named for a member of the Scott Family that lived in the area in the early eighteenth century. Hillside Street, named for being literally on the 'side' of Blue Hill, is the major thoroughfare in the district.
Milton Hill Historic District	Milton Hill Historic District is located on a lofty hill between Milton Village and Algerene Corner, formerly known as Union Square at the junction of Adams and Centre Streets. The Milton Hill Historic District in Milton, Massachusetts is a residential area that contains the most significant concentration of 19th and early 20th century high-style and period architecture in the Town. As Milton developed from a rural community to a prosperous suburb of Boston, Milton Hill, throughout the period of significance, 1740-1945, has been the home of wealthy Milton and Boston business, professional and civic leaders. It began its rise to prominence as an estate district in 1742 with the establishment of Governor Thomas Hutchinson's summer estate. For the next two hundred years, attracted by the rural scenery afforded by the Neponset River and the Blue Hills and the proximity of the Town's commercial center and Boston, prominent families built country homes, a number designed by noted national and local architects, including William Ralph Emerson; Peabody and Steams; and Perry, Shaw and Hepbum.

NRHP Property Name	Brief Property Description
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Canton Corner Historic District	The Canton Corner Historic District encompasses the historic town center of Canton, Massachusetts. Centered on the junction of Pleasant and Washington streets, it includes more than 25 properties and 170 acres (69 ha), whose architectural history spans 250 years of occupation and includes the town's major civic buildings.
Ponkapoag Camp of Appalachian Mountain Club	The Appalachian Mountain Club Ponkapoag Camp is one of the original camps of the oldest outing club in the United States, founded in 1876. Early in the twentieth century tent sites were established at the east end of Ponkapoag Pond in the Blue Hills reservation by the president of the Appalachian Mountain Club, William Rogers, who was also an M.D.C. commissioner. The camp represents an early outing club's architecture for "roughing it" and are important as such structures succumb to fire, rot, and vandalism.
Boyden, Seth, House	The Seth Boyden House is a historic house at 135 Oak Street in Foxborough, Massachusetts. The home is significant for its unusual architectural design as well for its association with the Boyden family, whose members were prominent locally and regionally in the 18 th and 19 th century,
Borderland Historic District	The Borderland Historic District was the 1,200 acre estate of Blanche Ames Ames. The mansion was constructed in 1910 and the property includes a system of ponds, dams, and causeways surrounding the mansion. The exterior of the mansion was built using locally cut field stones. The district is considered significant due to its connection to the estate of Blanche Ames Ames. She was a inventor who was involved in art, farming, engineering and politics. She designed a hexagonal lumber cutter, patented a method for ensnaring airplanes in wires hung from balloons during World War II, and developed a water anti-pollution device in the late 1960s.
SOURCE: National Register Database; <u>http</u> Associates, 2021.	bs://www.nps.gov/subjects/nationalregister/database-research.htm#table, Adapted by Environmental Science

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Grand Total	4,184

Table 2: Number of State & Local Designated Properties within the APE

Assessment of Noise and Visual Impacts by Proposed Action

In our earlier correspondence, the FAA noted that we are "considering the possibility that changes in noise levels or additional visual impacts from an increase in overflights could alter the character or use of certain kinds of historic properties where a quiet setting is a generally recognized purpose and attribute." In order to address this possibility, an assessment was done to further quantify the auditory and visual impacts on the historic properties within the Area of Potential Effects.

In order to assess the auditory impacts, the FAA used a metric known as Day-night Average Sound Level (DNL). DNL is the standard noise metric used for all FAA studies of aviation noise exposure in airport communities and was used here to assess the potential impact on every identified historic property within the Area of Potential Effects.

DNL is a 24-hour, time-weighted average noise metric, expressed in terms of decibel units of sound heard by the human ear, which accounts for the noise levels of individual aircraft events, the number of times those events occur, and the time of day they occur. DNL is a graphical representation of the distribution of noise over the surrounding area from an airport's average operations. There is one unique modification in that there is a "noise penalty" of any noise generated during "nighttime hours." In the calculation of DNL, for each hour during nighttime hours (10:00 p.m. to 7:00 a.m.), the sound levels are increased by a 10 decibel-weighting penalty (equivalent to a 10-fold increase in aircraft operations) before the 24-hour value is computed. The weighting penalty accounts for the more intrusive nature of noise during the nighttime hours. The significance thresholds for aircraft noise for DNL, as spelled out in FAA Order 1050.1F, are given below.

• For DNL 65 dB and higher: +1.5 dB

This threshold has been used by FAA for many years and is applied at airports across the country and will be used to determine noise impacts on historic properties within the APE. The use of this threshold is consistent with the Section 106 analyses for many FAA projects, including the Northern California and Southern Florida Metroplex projects, two of FAA's most recent projects that also modified the flight path of aircraft through the airspace.

According to FAA Order 1050.1F, a significant noise impact could occur to noise sensitive land uses if it had a level of DNL 65 dB with the Proposed Action and also experienced an increase of 1.5 dB when compared to the No Action Alternative. The FAA also recognizes that, in limited instances, resources that have a "quiet setting" as a qualifying attribute may be adversely affected by noise increases that would otherwise not be significant. There are no NRHP properties with a noise exposure of DNL 65 that experience a 1.5 dB noise increase. Further, the NRHP properties were reviewed and none of them were found to have a "quiet setting" as described in the FAA's Section 106 Handbook.

When the analysis is expanded to include the state and local designated properties that are assumed to be eligible for the NRHP, there are no properties that experience a 1.5 dB noise level increase with a proposed action noise level of DNL 65 or greater. As indicated in Table 4.6-3 of the Draft EA, the maximum exposed noise level *decreases* as a result of the Proposed Project

when compared to the No Action Alternative when considering towns/neighborhoods as a whole. Furthermore, as described below, the largest proposed noise changes within the APE are multiple orders of magnitude below the noise thresholds given within FAA Order 1050.1F.

The FAA's noise analysis demonstrates that historic resources will generally experience equivalent noise exposure with the addition of the Proposed Action. Specifically, the maximum change in noise exposure for a historic property is less than 0.2 dB across all historic properties in the APE. For example, one of these properties has a value of 22 dB under the No Action Alternative and 22.1 dB with the Proposed Procedure. Importantly, as depicted in Attachment A, the procedure is an overlay of existing traffic to Runway 4L and is only expected to lead to an annual net increase of 255 arrivals to BOS, out of a current total of 205,837 arrivals. In sum, the FAA will not be introducing audible impacts to resources not already experiencing noise impacts, and any change in noise exposure will be minimal.

In order to assess the potential visual impacts of the historic properties, the data for a year of overflights at BOS from the previous memorandum was reassessed to compare to the newly designated APE. Considering one year of radar track data, the APE experiences 78,879 arrival and 18,989 departure overflights annually. On an average daily basis that corresponds to 216.1 arrival and 52.0 departure overflights. The Proposed Action is estimated to add 255 annual arrival overflights or 0.70 daily average overflights to the APE. When considering the APE as a whole, the increase in overflights would amount to just a 0.26% increase in overflights and would not introduce audible or visual noise in the APE. In order to confirm that the overflights over the APE were not focused on particular historic resources in the APE, the dataset of departure overflights and arrival overflights was mapped over the APE in Attachments A and B respectively. Attachment A shows that the APE areas closest to the airport are already dense with overflights but the flights become more disperse as the APE moves to the southwest. However, Attachment B, which displays a year of arrival radar tracks, show that the APE is already heavily overflown over the full extent of the APE.

For more information on the analyses performed as a part of the Draft EA, please visit <u>www.faabostonworkshops.com</u> for a copy of the Draft EA. More information on the noise analysis can be found at <u>www.faabostonworkshops.com/noise-visualization/</u> and in Sections 3.4.6 and 4.6 of the Draft EA. The Noise Modeling Technical Report is included in Appendix D of the Draft EA.



SOURCE: Esri; RoVolus, 2021; ESA, 2021



Boston Logan RNAV (GPS) RWY 4L EA



SOURCE: Esri; RoVolus, 2021; ESA, 2021



Finding of No Adverse Effect Criteria

In order to establish a Finding of No Adverse Effect, the Proposed Action must not meet any of the criteria spelled out in the FAA's Section 106 Handbook, which are based on criteria in ACHP's section 106 regulations in 36 CFR Part 800. This section presents why the Proposed Action does not meet any of these criteria.

- Does the Proposed Action physically destroy or damage the property?
 - The Proposed Action will not have any physical impact on any property. The Proposed Action changes the location of arrival flights in the airspace around Boston Logan International Airport.
- Does the Proposed Action alter the property in any way that is consistent with the Secretary of the Interior's Standards for Treatment of Historic Properties (36 CFR Part 68)?
 - The Standards guide the design and implementation of physical changes to historic properties. This may include changes in use, material repair or substitution, or modification of historically important features. The Proposed Action is located in the airspace above historic resources does not result in any changes in use, material alteration, or physical modifications to these resources.
- Does the Proposed Action remove a property from its historic location?
 - \circ The Proposed Action does not remove any property from its location.
- Does the Proposed Action change the character of the property's use, or of physical features within the property's setting that contribute to its historic significance?
 - The Proposed Action does not change the character of a property's use or any physical features in any historical property's setting.
 - Any changes to setting as a result of the Proposed action would be audible or visual features which are discussed in the following criterion.
- Does the Proposed Action introduce an atmospheric, audible, or visual feature to the area that would diminish the integrity of the property's significant historic features?
 - Audible: there will not be an introduction of audible noise as a result of the Proposed Action. Furthermore, the noise impacts of the Proposed Action on all of the historic resources in the APE will either decrease noise exposure or cause increases that are orders of magnitude below the significance thresholds for DNL aircraft noise as described in FAA Order 1050.1F and therefore will not cause an introduction of audible impact on any of the properties.
 - Visual: there will not be an introduction of visual impacts as a result of the Proposed Action. Furthermore, the entire APE currently experiences 268 average daily overflights as described in the above analysis. The Proposed Action will add less than 1 additional overflight per day. This increase will not change the current visual features of any historic resource in the APE, as depicted in Attachment B.
- Does the Proposed Action result in neglect of a property which would result in its deterioration, transfer, sale or lease?

• The Proposed Action will not cause any property to be sold or transferred.

Given the results discussed in this letter, the FAA is putting forth at this point a Proposed Finding of No Adverse Effect. This determination is based on the findings discussed in this letter, which includes that none of the NRHP listed properties reviewed herein were found to have a "quiet setting" as described in the FAA's Section 106 Handbook. Furthermore, the net change in aircraft operations as a result of the Proposed Action would be minimal and would not cause an adverse effect, including no physical impacts and no introduction of audible or visual impacts within the APE.

Public Meetings, Comments, and Consultation

The FAA conducted Virtual Public Workshops for the Draft EA on October 23rd, and October 28th, 2020. By attending the Virtual Public Workshops, participants were provided with an overview of the Draft EA which includes results from the noise analysis performed to assess the potential noise impacts of the Proposed Action on historic resources and populations located within the General Study Area. The MHC concurred with the APE on December 8, 2020 so the impacts were shown for historic resources throughout the entire Study Area. During the meeting, the FAA responded to a large number of questions from the community. These meetings were recorded and remain on the FAA's YouTube page for interested community members to review. During the meeting and other forms of engagement, the FAA received over 40 comments regarding the Proposed Action. The FAA is currently reviewing and developing responses to these comments to be shared with the public as part of the Final Environmental Assessment but it should be noted that none of the comments mention any potential impact to historic resources from the Proposed Action.

We look forward to hearing back from you on the FAA's proposed finding. We welcome the input from consulting parties on the historic properties considered as part of the analysis and on the finding itself. If you have any additional comments or questions on this undertaking, please contact me at veronda.johnson@faa.gov or at the address below.

Sincerely,

Veronda Johnson Eastern Service Center Federal Aviation Administration Operations Support Group AJV-E250 1701 Columbia Avenue College Park, GA 30337



U.S. Department of Transportation

Federal Aviation Administration Eastern Service Center

1701 Columbia Avenue College Park, Georgia 30337

June 9, 2021

Milton Planning Board 525 Canton Avenue Milton, Massachusetts 02186

Proposed Finding of No Adverse Effect for the Boston Logan International Airport RNAV (GPS) RWY 4L Approach Procedure, Boston, MA

To Whom It May Concern,

The Federal Aviation Administration (FAA) is evaluating a new proposed Area Navigation (RNAV) Global Positioning System (GPS) instrument approach procedure at Boston Logan International Airport (BOS). This new procedure would allow for aircraft to land onto Runway 4L with GPS technological automation as well as allow for landing during low visibility conditions. These additional procedural capabilities would increase the safety and efficiency of the airspace around BOS.

Pursuant to 36 CFR 800.4(a), the FAA previously consulted with the Massachusetts Historical Commission to identify the Area of Potential Effects for this undertaking. In continuing with our responsibilities under Section 106 of the National Historic Preservation Act and its implementing regulations, the FAA invites you to participate as a consulting parting and submits this assessment of adverse effects, which concludes with a proposed Finding of No Adverse Effects and our supporting rationale for that finding. The FAA seeks your views or comments on this finding, which can be addressed to the FAA using the email or address given at the conclusion of this letter. Pursuant to 36 CFR 800.5(c), please provide any comments within 30 days from receipt of this letter.

Project Background

As described in greater detail in the FAA's Draft Environmental Assessment (EA), which can be accessed at <u>www.faabostonworkshops.com</u>, the FAA is evaluating a new proposed Area Navigation (RNAV) Global Positioning System (GPS) instrument approach procedure at BOS. This new procedure, which is depicted in Attachments A and B, is needed to allow aircraft to land onto Runway 4L with GPS technological automation. The current absence of an RNAV procedure to Runway 4L precludes use of the runway during low visibility conditions. The proposed procedure route is an overlay of existing arrivals and is expected to lead to a net increase of 255 annual arrivals to BOS generally, which represents 0.1% of the total annual arrivals, and an increase of 359 annual arrivals specifically to Runway 4L. These additional

procedural capabilities would increase the safety and efficiency of the airspace around BOS. Publication of the proposed procedure would constitute an undertaking under Section 106 of the National Historic Preservation Act (NHPA).

Regulatory Overview

Under NEPA, the FAA is responsible for analyzing the impacts of its action on historical, architectural, archeological and cultural resources as part of its broader review of the human environment. Because the National Historic Preservation Act (NHPA) is the principal statute concerning such resources, most of this analysis is conducted in coordination with the process under Section 106 of the NHPA, which requires federal agencies to consider the effects of their projects on properties listed, or eligible for listing, in the National Register of Historic Places (NRHP). As this is an FAA Action, the FAA document *Section 106 of the National Historic Properties under Section 106 of the National Historic Properties under Section 106 of the National Historic Preservation Act* was consulted and referenced in order to make this determination.

Review of Historic/Eligible Properties

The National Register of Historic Places (NRHP), the Massachusetts Historical Commission, and the Boston Landmarks Commission's data sources were used to gather a comprehensive directory of all potential historic and cultural resources within the APE. A total of 19 properties within the APE were found to be listed in the National Register of Historic Places as historic districts or individual properties in accordance with the criteria described in the NHPA. These 19 properties are identified and described in Table 1. A total of 4,184 state and local designated properties were identified within the APE and are summarized by their location in Table 2. These 4,184 properties represent the group of potential resources that would be evaluated for National Register eligibility. For the purposes of this proposed finding, we assume all of these properties are eligible for the National Register and propose a finding of no adverse effect for all properties within the APE currently listed, determined eligible for listing, and assumed eligible for listing in the NRHP.

NRHP Property Name	Brief Property Description
Milton Cemetery	Milton Cemetery contains some of the best examples of funerary art from the colonial times to the Victorian era. An historic garden cemetery, it was established as the Town's only cemetery in 1672.
Spring Brook Cemetery	The most prominent structure in the cemetery, Card Memorial Chapel, was designed by Charles Eastman & built in 1898 and funded by Simon & Mary Card in memory of their daughter Lulu.
Dorchester Park	Dorchester Park is a historic park bounded by Dorchester Avenue, Richmond, Adams and Richview Streets in the Dorchester neighborhood of Boston, Massachusetts.

Table 1: National Register of Historic Places Properties within the APE

NRHP Property Name	Brief Property Description
DorchesterMilton Lower Mills Industrial District (Boundary Increase)	The Dorchester-Milton Lower Mills Industrial District is a historic district on both sides of the Neponset River in the Dorchester area of Boston and in the town of Milton, Massachusetts. It encompasses an industrial factory complex, most of which was historically associated with the Walter Baker & Company, the first major maker of chocolate products in the United States.
Savin Hill Historic District	The Savin Hill Historic District is significant for its association with the development of the area from a mid-19th century speculative housing development for Boston's upper-middle class to a close-knot neighborhood of residents from diverse socioeconomic backgrounds. The surviving historic resources catalogue Savin Hill's rich history and remain a cohesive collection of well-preserved historic homes. The district further attains significance as an intact collection of buildings representing a full range of architectural styles.
Blue Hills Parkway	The Blue Hills Parkway, a 1.5-mile-long boulevard in Boston and Milton, is significant as one of the earliest connecting parkways designed for the Metropolitan Parks Commission (MPC) by Olmsted, Olmsted and Eliot and its successor firm, Olmsted Brothers, and it is emblematic of the firm's principles of parkway creation. A divided highway that runs directly south through early 20"-century residential neighborhoods, the Blue Hills Parkway directly connects the Blue Hills Reservation (the largest open space in Metropolitan Boston) with Boston, the Neponset River Reservation, and Truman Parkway.
Blue Hills Reservation Parkways-Metropolitan Park System of Greater Boston	The Metropolitan Park System of Greater Boston, in Massachusetts, is especially noteworthy because it is the first regional park system in the United States.
Foxborough Pumping Station	The Foxborough Pumping Station is a historic water pumping station at 25 Pumping Station Road in Foxborough, Massachusetts. Its main pumphouse was designed by Ernest Boyden, a regionally-known architect of water supply systems, and was built in 1891; it is a brick structure with Queen Anne styling. The station also includes several historic wells, a period garage, and the man- made Fales Pond, a once-dammed section of the Neponset Reservoir near the pumphouse.
Old Harbor Reservation Parkways, Metropolitan Park System of Greater Boston	The Old Harbor Reservation Parkways are three historic roads in the Old Harbor area of Boston. They are part of the Boston parkway system designed by Frederick Law Olmsted.
Dorchester-Milton Lower Mills Industrial District	The Dorchester-Milton Lower Mills Industrial District is located on both sides of the Neponset River in the Dorchester area of Boston and in the town of Milton, Massachusetts. It encompasses an industrial factory complex, most of which was historically associated with the Walter Baker & Company, the first major maker of chocolate products in the United States.

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Boston Logan RNAV (GPS) RWY 4L EA



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Finding of No Adverse Effect Criteria

In order to establish a Finding of No Adverse Effect, the Proposed Action must not meet any of the criteria spelled out in the FAA's Section 106 Handbook, which are based on criteria in ACHP's section 106 regulations in 36 CFR Part 800. This section presents why the Proposed Action does not meet any of these criteria.

- Does the Proposed Action physically destroy or damage the property?
 - The Proposed Action will not have any physical impact on any property. The Proposed Action changes the location of arrival flights in the airspace around Boston Logan International Airport.
- Does the Proposed Action alter the property in any way that is consistent with the Secretary of the Interior's Standards for Treatment of Historic Properties (36 CFR Part 68)?
 - The Standards guide the design and implementation of physical changes to historic properties. This may include changes in use, material repair or substitution, or modification of historically important features. The Proposed Action is located in the airspace above historic resources does not result in any changes in use, material alteration, or physical modifications to these resources.
- Does the Proposed Action remove a property from its historic location?
 - \circ The Proposed Action does not remove any property from its location.
- Does the Proposed Action change the character of the property's use, or of physical features within the property's setting that contribute to its historic significance?
 - The Proposed Action does not change the character of a property's use or any physical features in any historical property's setting.
 - Any changes to setting as a result of the Proposed action would be audible or visual features which are discussed in the following criterion.
- Does the Proposed Action introduce an atmospheric, audible, or visual feature to the area that would diminish the integrity of the property's significant historic features?
 - Audible: there will not be an introduction of audible noise as a result of the Proposed Action. Furthermore, the noise impacts of the Proposed Action on all of the historic resources in the APE will either decrease noise exposure or cause increases that are orders of magnitude below the significance thresholds for DNL aircraft noise as described in FAA Order 1050.1F and therefore will not cause an introduction of audible impact on any of the properties.
 - Visual: there will not be an introduction of visual impacts as a result of the Proposed Action. Furthermore, the entire APE currently experiences 268 average daily overflights as described in the above analysis. The Proposed Action will add less than 1 additional overflight per day. This increase will not change the current visual features of any historic resource in the APE, as depicted in Attachment B.
- Does the Proposed Action result in neglect of a property which would result in its deterioration, transfer, sale or lease?

• The Proposed Action will not cause any property to be sold or transferred.

Given the results discussed in this letter, the FAA is putting forth at this point a Proposed Finding of No Adverse Effect. This determination is based on the findings discussed in this letter, which includes that none of the NRHP listed properties reviewed herein were found to have a "quiet setting" as described in the FAA's Section 106 Handbook. Furthermore, the net change in aircraft operations as a result of the Proposed Action would be minimal and would not cause an adverse effect, including no physical impacts and no introduction of audible or visual impacts within the APE.

Public Meetings, Comments, and Consultation

The FAA conducted Virtual Public Workshops for the Draft EA on October 23rd, and October 28th, 2020. By attending the Virtual Public Workshops, participants were provided with an overview of the Draft EA which includes results from the noise analysis performed to assess the potential noise impacts of the Proposed Action on historic resources and populations located within the General Study Area. The MHC concurred with the APE on December 8, 2020 so the impacts were shown for historic resources throughout the entire Study Area. During the meeting, the FAA responded to a large number of questions from the community. These meetings were recorded and remain on the FAA's YouTube page for interested community members to review. During the meeting and other forms of engagement, the FAA received over 40 comments regarding the Proposed Action. The FAA is currently reviewing and developing responses to these comments to be shared with the public as part of the Final Environmental Assessment but it should be noted that none of the comments mention any potential impact to historic resources from the Proposed Action.

We look forward to hearing back from you on the FAA's proposed finding. We welcome the input from consulting parties on the historic properties considered as part of the analysis and on the finding itself. If you have any additional comments or questions on this undertaking, please contact me at veronda.johnson@faa.gov or at the address below.

Sincerely,

Veronda Johnson Eastern Service Center Federal Aviation Administration Operations Support Group AJV-E250 1701 Columbia Avenue College Park, GA 30337



U.S. Department of Transportation Federal Aviation

Administration

Eastern Service Center

1701 Columbia Avenue College Park, Georgia 30337

June 9, 2021

Norton Historical Commission 70 East Main St. Norton, MA 02766

Proposed Finding of No Adverse Effect for the Boston Logan International Airport RNAV (GPS) RWY 4L Approach Procedure, Boston, MA

To Whom It May Concern,

The Federal Aviation Administration (FAA) is evaluating a new proposed Area Navigation (RNAV) Global Positioning System (GPS) instrument approach procedure at Boston Logan International Airport (BOS). This new procedure would allow for aircraft to land onto Runway 4L with GPS technological automation as well as allow for landing during low visibility conditions. These additional procedural capabilities would increase the safety and efficiency of the airspace around BOS.

Pursuant to 36 CFR 800.4(a), the FAA previously consulted with the Massachusetts Historical Commission to identify the Area of Potential Effects for this undertaking. In continuing with our responsibilities under Section 106 of the National Historic Preservation Act and its implementing regulations, the FAA invites you to participate as a consulting parting and submits this assessment of adverse effects, which concludes with a proposed Finding of No Adverse Effects and our supporting rationale for that finding. The FAA seeks your views or comments on this finding, which can be addressed to the FAA using the email or address given at the conclusion of this letter. Pursuant to 36 CFR 800.5(c), please provide any comments within 30 days from receipt of this letter.

Project Background

As described in greater detail in the FAA's Draft Environmental Assessment (EA), which can be accessed at <u>www.faabostonworkshops.com</u>, the FAA is evaluating a new proposed Area Navigation (RNAV) Global Positioning System (GPS) instrument approach procedure at BOS. This new procedure, which is depicted in Attachments A and B, is needed to allow aircraft to land onto Runway 4L with GPS technological automation. The current absence of an RNAV procedure to Runway 4L precludes use of the runway during low visibility conditions. The proposed procedure route is an overlay of existing arrivals and is expected to lead to a net increase of 255 annual arrivals to BOS generally, which represents 0.1% of the total annual arrivals, and an increase of 359 annual arrivals specifically to Runway 4L. These additional

procedural capabilities would increase the safety and efficiency of the airspace around BOS. Publication of the proposed procedure would constitute an undertaking under Section 106 of the National Historic Preservation Act (NHPA).

Regulatory Overview

Under NEPA, the FAA is responsible for analyzing the impacts of its action on historical, architectural, archeological and cultural resources as part of its broader review of the human environment. Because the National Historic Preservation Act (NHPA) is the principal statute concerning such resources, most of this analysis is conducted in coordination with the process under Section 106 of the NHPA, which requires federal agencies to consider the effects of their projects on properties listed, or eligible for listing, in the National Register of Historic Places (NRHP). As this is an FAA Action, the FAA document *Section 106 of the National Historic Properties under Section 106 of the National Historic Properties under Section 106 of the National Historic Preservation Act* was consulted and referenced in order to make this determination.

Review of Historic/Eligible Properties

The National Register of Historic Places (NRHP), the Massachusetts Historical Commission, and the Boston Landmarks Commission's data sources were used to gather a comprehensive directory of all potential historic and cultural resources within the APE. A total of 19 properties within the APE were found to be listed in the National Register of Historic Places as historic districts or individual properties in accordance with the criteria described in the NHPA. These 19 properties are identified and described in Table 1. A total of 4,184 state and local designated properties were identified within the APE and are summarized by their location in Table 2. These 4,184 properties represent the group of potential resources that would be evaluated for National Register eligibility. For the purposes of this proposed finding, we assume all of these properties are eligible for the National Register and propose a finding of no adverse effect for all properties within the APE currently listed, determined eligible for listing, and assumed eligible for listing in the NRHP.

NRHP Property Name	Brief Property Description
Milton Cemetery	Milton Cemetery contains some of the best examples of funerary art from the colonial times to the Victorian era. An historic garden cemetery, it was established as the Town's only cemetery in 1672.
Spring Brook Cemetery	The most prominent structure in the cemetery, Card Memorial Chapel, was designed by Charles Eastman & built in 1898 and funded by Simon & Mary Card in memory of their daughter Lulu.
Dorchester Park	Dorchester Park is a historic park bounded by Dorchester Avenue, Richmond, Adams and Richview Streets in the Dorchester neighborhood of Boston, Massachusetts.

Table 1: National Register of Historic Places Properties within the APE

NRHP Property Name	Brief Property Description
DorchesterMilton Lower Mills Industrial District (Boundary Increase)	The Dorchester-Milton Lower Mills Industrial District is a historic district on both sides of the Neponset River in the Dorchester area of Boston and in the town of Milton, Massachusetts. It encompasses an industrial factory complex, most of which was historically associated with the Walter Baker & Company, the first major maker of chocolate products in the United States.
Savin Hill Historic District	The Savin Hill Historic District is significant for its association with the development of the area from a mid-19th century speculative housing development for Boston's upper-middle class to a close-knot neighborhood of residents from diverse socioeconomic backgrounds. The surviving historic resources catalogue Savin Hill's rich history and remain a cohesive collection of well-preserved historic homes. The district further attains significance as an intact collection of buildings representing a full range of architectural styles.
Blue Hills Parkway	The Blue Hills Parkway, a 1.5-mile-long boulevard in Boston and Milton, is significant as one of the earliest connecting parkways designed for the Metropolitan Parks Commission (MPC) by Olmsted, Olmsted and Eliot and its successor firm, Olmsted Brothers, and it is emblematic of the firm's principles of parkway creation. A divided highway that runs directly south through early 20"-century residential neighborhoods, the Blue Hills Parkway directly connects the Blue Hills Reservation (the largest open space in Metropolitan Boston) with Boston, the Neponset River Reservation, and Truman Parkway.
Blue Hills Reservation Parkways-Metropolitan Park System of Greater Boston	The Metropolitan Park System of Greater Boston, in Massachusetts, is especially noteworthy because it is the first regional park system in the United States.
Foxborough Pumping Station	The Foxborough Pumping Station is a historic water pumping station at 25 Pumping Station Road in Foxborough, Massachusetts. Its main pumphouse was designed by Ernest Boyden, a regionally-known architect of water supply systems, and was built in 1891; it is a brick structure with Queen Anne styling. The station also includes several historic wells, a period garage, and the man- made Fales Pond, a once-dammed section of the Neponset Reservoir near the pumphouse.
Old Harbor Reservation Parkways, Metropolitan Park System of Greater Boston	The Old Harbor Reservation Parkways are three historic roads in the Old Harbor area of Boston. They are part of the Boston parkway system designed by Frederick Law Olmsted.
Dorchester-Milton Lower Mills Industrial District	The Dorchester-Milton Lower Mills Industrial District is located on both sides of the Neponset River in the Dorchester area of Boston and in the town of Milton, Massachusetts. It encompasses an industrial factory complex, most of which was historically associated with the Walter Baker & Company, the first major maker of chocolate products in the United States.

NRHP Property Name	Brief Property Description
Furnace Village Historic District	The Furnace Village Historic District encompasses the historic colonial industrial area in Easton, Massachusetts. At its center is at the intersection of Foundry street, South street and Poquanticut Avenue. The area was settled in 1723, with industrial activity beginning in 1742. The iron furnace was established in 1751, and for industrial purposes, continued in the 19th century. In addition to the colonial era, there is also an employee of the housing of the 19th century.
Milton Centre Historic District	The Milton Centre Historic District is both the historical and geographic center of the town of Milton. The 23-acre historic district includes Canton Avenue between Reedsdale Road and Thacher and Highland Streets. Milton Centre is historically significant for its association with the development of the town following the relocation of the third meeting house to Academy Hill in 1728, and the subsequent shift of the town center from Milton Hill.
Scott's Woods Historic District	Scott's Woods Historic District is the area of Hillside, Harland and Forest Streets between Randolph Avenue and the ridge between Hancock and Bugbee Hills, now the MDC Blue Hills Reservation. The Scott's Woods Historic District in Milton, Massachusetts is a semirural, residential area that contains a significant concentration of 18th, 19th and early 20th century dwellings and barns that reflect the Town's agricultural and architectural history from 1713 to 1932, the district's period of significance. Originally known as the "Blue Hill Land," a three thousand-acre tract of land sold by the town of Boston in 1711 to four residents of Milton. The area in the southwest part of Milton is thought to have been named for a member of the Scott Family that lived in the area in the early eighteenth century. Hillside Street, named for being literally on the 'side' of Blue Hill, is the major thoroughfare in the district.
Milton Hill Historic District	Milton Hill Historic District is located on a lofty hill between Milton Village and Algerene Corner, formerly known as Union Square at the junction of Adams and Centre Streets. The Milton Hill Historic District in Milton, Massachusetts is a residential area that contains the most significant concentration of 19th and early 20th century high-style and period architecture in the Town. As Milton developed from a rural community to a prosperous suburb of Boston, Milton Hill, throughout the period of significance, 1740-1945, has been the home of wealthy Milton and Boston business, professional and civic leaders. It began its rise to prominence as an estate district in 1742 with the establishment of Governor Thomas Hutchinson's summer estate. For the next two hundred years, attracted by the rural scenery afforded by the Neponset River and the Blue Hills and the proximity of the Town's commercial center and Boston, prominent families built country homes, a number designed by noted national and local architects, including William Ralph Emerson; Peabody and Steams; and Perry, Shaw and Hepbum.

NRHP Property Name	Brief Property Description	
Harrison Square Historic District	Clam Point (also known as Harrison Square) is a sub-neighborhood in Boston, noteworthy for its collection of substantial Italianate Mansard residences. The area is known to have the most cohesive, intact collection of mansion-scale, mid-19 th century housing in Boston, and includes the Park, Everett, Freeport, Mill, Ashland, Blanche streets, and Victory Road in the Dorchester neighborhood of Boston.	
Canton Corner Historic District	The Canton Corner Historic District encompasses the historic town center of Canton, Massachusetts. Centered on the junction of Pleasant and Washington streets, it includes more than 25 properties and 170 acres (69 ha), whose architectural history spans 250 years of occupation and includes the town's major civic buildings.	
Ponkapoag Camp of Appalachian Mountain Club	The Appalachian Mountain Club Ponkapoag Camp is one of the original camps of the oldest outing club in the United States, founded in 1876. Early in the twentieth century tent sites were established at the east end of Ponkapoag Pond in the Blue Hills reservation by the president of the Appalachian Mountain Club, William Rogers, who was also an M.D.C. commissioner. The camp represents an early outing club's architecture for "roughing it" and are important as such structures succumb to fire, rot, and vandalism.	
Boyden, Seth, House	The Seth Boyden House is a historic house at 135 Oak Street in Foxborough, Massachusetts. The home is significant for its unusual architectural design as well for its association with the Boyden family, whose members were prominent locally and regionally in the 18 th and 19 th century,	
Borderland Historic District	The Borderland Historic District was the 1,200 acre estate of Blanche Ames Ames. The mansion was constructed in 1910 and the property includes a system of ponds, dams, and causeways surrounding the mansion. The exterior of the mansion was built using locally cut field stones. The district is considered significant due to its connection to the estate of Blanche Ames Ames. She was a inventor who was involved in art, farming, engineering and politics. She designed a hexagonal lumber cutter, patented a method for ensnaring airplanes in wires hung from balloons during World War II, and developed a water anti-pollution device in the late 1960s.	
SOURCE: National Register Database; https://www.nps.gov/subjects/nationalregister/database-research.htm#table, Adapted by Environmental Science Associates, 2021.		

Town	Number of State & Local Designated Properties
Boston	838
Canton	445
Easton	142
Foxborough	194
Mansfield	190
Milton	1,559
Norton	16
Quincy	2
Randolph	225
Sharon	491
Stoughton	82
Grand Total	4,184

Table 2: Number of State & Local Designated Properties within the APE

Assessment of Noise and Visual Impacts by Proposed Action

In our earlier correspondence, the FAA noted that we are "considering the possibility that changes in noise levels or additional visual impacts from an increase in overflights could alter the character or use of certain kinds of historic properties where a quiet setting is a generally recognized purpose and attribute." In order to address this possibility, an assessment was done to further quantify the auditory and visual impacts on the historic properties within the Area of Potential Effects.

In order to assess the auditory impacts, the FAA used a metric known as Day-night Average Sound Level (DNL). DNL is the standard noise metric used for all FAA studies of aviation noise exposure in airport communities and was used here to assess the potential impact on every identified historic property within the Area of Potential Effects.

DNL is a 24-hour, time-weighted average noise metric, expressed in terms of decibel units of sound heard by the human ear, which accounts for the noise levels of individual aircraft events, the number of times those events occur, and the time of day they occur. DNL is a graphical representation of the distribution of noise over the surrounding area from an airport's average operations. There is one unique modification in that there is a "noise penalty" of any noise generated during "nighttime hours." In the calculation of DNL, for each hour during nighttime hours (10:00 p.m. to 7:00 a.m.), the sound levels are increased by a 10 decibel-weighting penalty (equivalent to a 10-fold increase in aircraft operations) before the 24-hour value is computed. The weighting penalty accounts for the more intrusive nature of noise during the nighttime hours. The significance thresholds for aircraft noise for DNL, as spelled out in FAA Order 1050.1F, are given below.

• For DNL 65 dB and higher: +1.5 dB

This threshold has been used by FAA for many years and is applied at airports across the country and will be used to determine noise impacts on historic properties within the APE. The use of this threshold is consistent with the Section 106 analyses for many FAA projects, including the Northern California and Southern Florida Metroplex projects, two of FAA's most recent projects that also modified the flight path of aircraft through the airspace.

According to FAA Order 1050.1F, a significant noise impact could occur to noise sensitive land uses if it had a level of DNL 65 dB with the Proposed Action and also experienced an increase of 1.5 dB when compared to the No Action Alternative. The FAA also recognizes that, in limited instances, resources that have a "quiet setting" as a qualifying attribute may be adversely affected by noise increases that would otherwise not be significant. There are no NRHP properties with a noise exposure of DNL 65 that experience a 1.5 dB noise increase. Further, the NRHP properties were reviewed and none of them were found to have a "quiet setting" as described in the FAA's Section 106 Handbook.

When the analysis is expanded to include the state and local designated properties that are assumed to be eligible for the NRHP, there are no properties that experience a 1.5 dB noise level increase with a proposed action noise level of DNL 65 or greater. As indicated in Table 4.6-3 of the Draft EA, the maximum exposed noise level *decreases* as a result of the Proposed Project

when compared to the No Action Alternative when considering towns/neighborhoods as a whole. Furthermore, as described below, the largest proposed noise changes within the APE are multiple orders of magnitude below the noise thresholds given within FAA Order 1050.1F.

The FAA's noise analysis demonstrates that historic resources will generally experience equivalent noise exposure with the addition of the Proposed Action. Specifically, the maximum change in noise exposure for a historic property is less than 0.2 dB across all historic properties in the APE. For example, one of these properties has a value of 22 dB under the No Action Alternative and 22.1 dB with the Proposed Procedure. Importantly, as depicted in Attachment A, the procedure is an overlay of existing traffic to Runway 4L and is only expected to lead to an annual net increase of 255 arrivals to BOS, out of a current total of 205,837 arrivals. In sum, the FAA will not be introducing audible impacts to resources not already experiencing noise impacts, and any change in noise exposure will be minimal.

In order to assess the potential visual impacts of the historic properties, the data for a year of overflights at BOS from the previous memorandum was reassessed to compare to the newly designated APE. Considering one year of radar track data, the APE experiences 78,879 arrival and 18,989 departure overflights annually. On an average daily basis that corresponds to 216.1 arrival and 52.0 departure overflights. The Proposed Action is estimated to add 255 annual arrival overflights or 0.70 daily average overflights to the APE. When considering the APE as a whole, the increase in overflights would amount to just a 0.26% increase in overflights and would not introduce audible or visual noise in the APE. In order to confirm that the overflights over the APE were not focused on particular historic resources in the APE, the dataset of departure overflights and arrival overflights was mapped over the APE in Attachments A and B respectively. Attachment A shows that the APE areas closest to the airport are already dense with overflights but the flights become more disperse as the APE moves to the southwest. However, Attachment B, which displays a year of arrival radar tracks, show that the APE is already heavily overflown over the full extent of the APE.

For more information on the analyses performed as a part of the Draft EA, please visit <u>www.faabostonworkshops.com</u> for a copy of the Draft EA. More information on the noise analysis can be found at <u>www.faabostonworkshops.com/noise-visualization/</u> and in Sections 3.4.6 and 4.6 of the Draft EA. The Noise Modeling Technical Report is included in Appendix D of the Draft EA.



SOURCE: Esri; RoVolus, 2021; ESA, 2021



Boston Logan RNAV (GPS) RWY 4L EA



SOURCE: Esri; RoVolus, 2021; ESA, 2021



Finding of No Adverse Effect Criteria

In order to establish a Finding of No Adverse Effect, the Proposed Action must not meet any of the criteria spelled out in the FAA's Section 106 Handbook, which are based on criteria in ACHP's section 106 regulations in 36 CFR Part 800. This section presents why the Proposed Action does not meet any of these criteria.

- Does the Proposed Action physically destroy or damage the property?
 - The Proposed Action will not have any physical impact on any property. The Proposed Action changes the location of arrival flights in the airspace around Boston Logan International Airport.
- Does the Proposed Action alter the property in any way that is consistent with the Secretary of the Interior's Standards for Treatment of Historic Properties (36 CFR Part 68)?
 - The Standards guide the design and implementation of physical changes to historic properties. This may include changes in use, material repair or substitution, or modification of historically important features. The Proposed Action is located in the airspace above historic resources does not result in any changes in use, material alteration, or physical modifications to these resources.
- Does the Proposed Action remove a property from its historic location?
 - \circ The Proposed Action does not remove any property from its location.
- Does the Proposed Action change the character of the property's use, or of physical features within the property's setting that contribute to its historic significance?
 - The Proposed Action does not change the character of a property's use or any physical features in any historical property's setting.
 - Any changes to setting as a result of the Proposed action would be audible or visual features which are discussed in the following criterion.
- Does the Proposed Action introduce an atmospheric, audible, or visual feature to the area that would diminish the integrity of the property's significant historic features?
 - Audible: there will not be an introduction of audible noise as a result of the Proposed Action. Furthermore, the noise impacts of the Proposed Action on all of the historic resources in the APE will either decrease noise exposure or cause increases that are orders of magnitude below the significance thresholds for DNL aircraft noise as described in FAA Order 1050.1F and therefore will not cause an introduction of audible impact on any of the properties.
 - Visual: there will not be an introduction of visual impacts as a result of the Proposed Action. Furthermore, the entire APE currently experiences 268 average daily overflights as described in the above analysis. The Proposed Action will add less than 1 additional overflight per day. This increase will not change the current visual features of any historic resource in the APE, as depicted in Attachment B.
- Does the Proposed Action result in neglect of a property which would result in its deterioration, transfer, sale or lease?
• The Proposed Action will not cause any property to be sold or transferred.

Given the results discussed in this letter, the FAA is putting forth at this point a Proposed Finding of No Adverse Effect. This determination is based on the findings discussed in this letter, which includes that none of the NRHP listed properties reviewed herein were found to have a "quiet setting" as described in the FAA's Section 106 Handbook. Furthermore, the net change in aircraft operations as a result of the Proposed Action would be minimal and would not cause an adverse effect, including no physical impacts and no introduction of audible or visual impacts within the APE.

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U.S. Department of Transportation

Eastern Service Center

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Federal Aviation Administration

June 9, 2021

Norton Planning and Economic Development Norton Municipal Center- 2nd Floor 70 East Main St Norton, MA 02788 United States

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Milton Centre Historic District	The Milton Centre Historic District is both the historical and geographic center of the town of Milton. The 23-acre historic district includes Canton Avenue between Reedsdale Road and Thacher and Highland Streets. Milton Centre is historically significant for its association with the development of the town following the relocation of the third meeting house to Academy Hill in 1728, and the subsequent shift of the town center from Milton Hill.
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Borderland Historic District	The Borderland Historic District was the 1,200 acre estate of Blanche Ames Ames. The mansion was constructed in 1910 and the property includes a system of ponds, dams, and causeways surrounding the mansion. The exterior of the mansion was built using locally cut field stones. The district is considered significant due to its connection to the estate of Blanche Ames Ames. She was a inventor who was involved in art, farming, engineering and politics. She designed a hexagonal lumber cutter, patented a method for ensnaring airplanes in wires hung from balloons during World War II, and developed a water anti-pollution device in the late 1960s.
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Table 2: Number of State & Local Designated Properties within the APE

Assessment of Noise and Visual Impacts by Proposed Action

In our earlier correspondence, the FAA noted that we are "considering the possibility that changes in noise levels or additional visual impacts from an increase in overflights could alter the character or use of certain kinds of historic properties where a quiet setting is a generally recognized purpose and attribute." In order to address this possibility, an assessment was done to further quantify the auditory and visual impacts on the historic properties within the Area of Potential Effects.

In order to assess the auditory impacts, the FAA used a metric known as Day-night Average Sound Level (DNL). DNL is the standard noise metric used for all FAA studies of aviation noise exposure in airport communities and was used here to assess the potential impact on every identified historic property within the Area of Potential Effects.

DNL is a 24-hour, time-weighted average noise metric, expressed in terms of decibel units of sound heard by the human ear, which accounts for the noise levels of individual aircraft events, the number of times those events occur, and the time of day they occur. DNL is a graphical representation of the distribution of noise over the surrounding area from an airport's average operations. There is one unique modification in that there is a "noise penalty" of any noise generated during "nighttime hours." In the calculation of DNL, for each hour during nighttime hours (10:00 p.m. to 7:00 a.m.), the sound levels are increased by a 10 decibel-weighting penalty (equivalent to a 10-fold increase in aircraft operations) before the 24-hour value is computed. The weighting penalty accounts for the more intrusive nature of noise during the nighttime hours. The significance thresholds for aircraft noise for DNL, as spelled out in FAA Order 1050.1F, are given below.

• For DNL 65 dB and higher: +1.5 dB

This threshold has been used by FAA for many years and is applied at airports across the country and will be used to determine noise impacts on historic properties within the APE. The use of this threshold is consistent with the Section 106 analyses for many FAA projects, including the Northern California and Southern Florida Metroplex projects, two of FAA's most recent projects that also modified the flight path of aircraft through the airspace.

According to FAA Order 1050.1F, a significant noise impact could occur to noise sensitive land uses if it had a level of DNL 65 dB with the Proposed Action and also experienced an increase of 1.5 dB when compared to the No Action Alternative. The FAA also recognizes that, in limited instances, resources that have a "quiet setting" as a qualifying attribute may be adversely affected by noise increases that would otherwise not be significant. There are no NRHP properties with a noise exposure of DNL 65 that experience a 1.5 dB noise increase. Further, the NRHP properties were reviewed and none of them were found to have a "quiet setting" as described in the FAA's Section 106 Handbook.

When the analysis is expanded to include the state and local designated properties that are assumed to be eligible for the NRHP, there are no properties that experience a 1.5 dB noise level increase with a proposed action noise level of DNL 65 or greater. As indicated in Table 4.6-3 of the Draft EA, the maximum exposed noise level *decreases* as a result of the Proposed Project

when compared to the No Action Alternative when considering towns/neighborhoods as a whole. Furthermore, as described below, the largest proposed noise changes within the APE are multiple orders of magnitude below the noise thresholds given within FAA Order 1050.1F.

The FAA's noise analysis demonstrates that historic resources will generally experience equivalent noise exposure with the addition of the Proposed Action. Specifically, the maximum change in noise exposure for a historic property is less than 0.2 dB across all historic properties in the APE. For example, one of these properties has a value of 22 dB under the No Action Alternative and 22.1 dB with the Proposed Procedure. Importantly, as depicted in Attachment A, the procedure is an overlay of existing traffic to Runway 4L and is only expected to lead to an annual net increase of 255 arrivals to BOS, out of a current total of 205,837 arrivals. In sum, the FAA will not be introducing audible impacts to resources not already experiencing noise impacts, and any change in noise exposure will be minimal.

In order to assess the potential visual impacts of the historic properties, the data for a year of overflights at BOS from the previous memorandum was reassessed to compare to the newly designated APE. Considering one year of radar track data, the APE experiences 78,879 arrival and 18,989 departure overflights annually. On an average daily basis that corresponds to 216.1 arrival and 52.0 departure overflights. The Proposed Action is estimated to add 255 annual arrival overflights or 0.70 daily average overflights to the APE. When considering the APE as a whole, the increase in overflights would amount to just a 0.26% increase in overflights and would not introduce audible or visual noise in the APE. In order to confirm that the overflights over the APE were not focused on particular historic resources in the APE, the dataset of departure overflights and arrival overflights was mapped over the APE in Attachments A and B respectively. Attachment A shows that the APE areas closest to the airport are already dense with overflights but the flights become more disperse as the APE moves to the southwest. However, Attachment B, which displays a year of arrival radar tracks, show that the APE is already heavily overflown over the full extent of the APE.

For more information on the analyses performed as a part of the Draft EA, please visit <u>www.faabostonworkshops.com</u> for a copy of the Draft EA. More information on the noise analysis can be found at <u>www.faabostonworkshops.com/noise-visualization/</u> and in Sections 3.4.6 and 4.6 of the Draft EA. The Noise Modeling Technical Report is included in Appendix D of the Draft EA.



SOURCE: Esri; RoVolus, 2021; ESA, 2021



Boston Logan RNAV (GPS) RWY 4L EA



SOURCE: Esri; RoVolus, 2021; ESA, 2021



Finding of No Adverse Effect Criteria

In order to establish a Finding of No Adverse Effect, the Proposed Action must not meet any of the criteria spelled out in the FAA's Section 106 Handbook, which are based on criteria in ACHP's section 106 regulations in 36 CFR Part 800. This section presents why the Proposed Action does not meet any of these criteria.

- Does the Proposed Action physically destroy or damage the property?
 - The Proposed Action will not have any physical impact on any property. The Proposed Action changes the location of arrival flights in the airspace around Boston Logan International Airport.
- Does the Proposed Action alter the property in any way that is consistent with the Secretary of the Interior's Standards for Treatment of Historic Properties (36 CFR Part 68)?
 - The Standards guide the design and implementation of physical changes to historic properties. This may include changes in use, material repair or substitution, or modification of historically important features. The Proposed Action is located in the airspace above historic resources does not result in any changes in use, material alteration, or physical modifications to these resources.
- Does the Proposed Action remove a property from its historic location?
 - \circ The Proposed Action does not remove any property from its location.
- Does the Proposed Action change the character of the property's use, or of physical features within the property's setting that contribute to its historic significance?
 - The Proposed Action does not change the character of a property's use or any physical features in any historical property's setting.
 - Any changes to setting as a result of the Proposed action would be audible or visual features which are discussed in the following criterion.
- Does the Proposed Action introduce an atmospheric, audible, or visual feature to the area that would diminish the integrity of the property's significant historic features?
 - Audible: there will not be an introduction of audible noise as a result of the Proposed Action. Furthermore, the noise impacts of the Proposed Action on all of the historic resources in the APE will either decrease noise exposure or cause increases that are orders of magnitude below the significance thresholds for DNL aircraft noise as described in FAA Order 1050.1F and therefore will not cause an introduction of audible impact on any of the properties.
 - Visual: there will not be an introduction of visual impacts as a result of the Proposed Action. Furthermore, the entire APE currently experiences 268 average daily overflights as described in the above analysis. The Proposed Action will add less than 1 additional overflight per day. This increase will not change the current visual features of any historic resource in the APE, as depicted in Attachment B.
- Does the Proposed Action result in neglect of a property which would result in its deterioration, transfer, sale or lease?

• The Proposed Action will not cause any property to be sold or transferred.

Given the results discussed in this letter, the FAA is putting forth at this point a Proposed Finding of No Adverse Effect. This determination is based on the findings discussed in this letter, which includes that none of the NRHP listed properties reviewed herein were found to have a "quiet setting" as described in the FAA's Section 106 Handbook. Furthermore, the net change in aircraft operations as a result of the Proposed Action would be minimal and would not cause an adverse effect, including no physical impacts and no introduction of audible or visual impacts within the APE.

Public Meetings, Comments, and Consultation

The FAA conducted Virtual Public Workshops for the Draft EA on October 23rd, and October 28th, 2020. By attending the Virtual Public Workshops, participants were provided with an overview of the Draft EA which includes results from the noise analysis performed to assess the potential noise impacts of the Proposed Action on historic resources and populations located within the General Study Area. The MHC concurred with the APE on December 8, 2020 so the impacts were shown for historic resources throughout the entire Study Area. During the meeting, the FAA responded to a large number of questions from the community. These meetings were recorded and remain on the FAA's YouTube page for interested community members to review. During the meeting and other forms of engagement, the FAA received over 40 comments regarding the Proposed Action. The FAA is currently reviewing and developing responses to these comments to be shared with the public as part of the Final Environmental Assessment but it should be noted that none of the comments mention any potential impact to historic resources from the Proposed Action.

We look forward to hearing back from you on the FAA's proposed finding. We welcome the input from consulting parties on the historic properties considered as part of the analysis and on the finding itself. If you have any additional comments or questions on this undertaking, please contact me at veronda.johnson@faa.gov or at the address below.

Sincerely,

Veronda Johnson Eastern Service Center Federal Aviation Administration Operations Support Group AJV-E250 1701 Columbia Avenue College Park, GA 30337



U.S. Department of Transportation

Eastern Service Center

1701 Columbia Avenue College Park, Georgia 30337

Federal Aviation Administration

June 9, 2021

Quincy Historical Commission 1305 Hancock St. Quincy, MA 02169

Proposed Finding of No Adverse Effect for the Boston Logan International Airport RNAV (GPS) RWY 4L Approach Procedure, Boston, MA

To Whom It May Concern,

The Federal Aviation Administration (FAA) is evaluating a new proposed Area Navigation (RNAV) Global Positioning System (GPS) instrument approach procedure at Boston Logan International Airport (BOS). This new procedure would allow for aircraft to land onto Runway 4L with GPS technological automation as well as allow for landing during low visibility conditions. These additional procedural capabilities would increase the safety and efficiency of the airspace around BOS.

Pursuant to 36 CFR 800.4(a), the FAA previously consulted with the Massachusetts Historical Commission to identify the Area of Potential Effects for this undertaking. In continuing with our responsibilities under Section 106 of the National Historic Preservation Act and its implementing regulations, the FAA invites you to participate as a consulting parting and submits this assessment of adverse effects, which concludes with a proposed Finding of No Adverse Effects and our supporting rationale for that finding. The FAA seeks your views or comments on this finding, which can be addressed to the FAA using the email or address given at the conclusion of this letter. Pursuant to 36 CFR 800.5(c), please provide any comments within 30 days from receipt of this letter.

Project Background

As described in greater detail in the FAA's Draft Environmental Assessment (EA), which can be accessed at <u>www.faabostonworkshops.com</u>, the FAA is evaluating a new proposed Area Navigation (RNAV) Global Positioning System (GPS) instrument approach procedure at BOS. This new procedure, which is depicted in Attachments A and B, is needed to allow aircraft to land onto Runway 4L with GPS technological automation. The current absence of an RNAV procedure to Runway 4L precludes use of the runway during low visibility conditions. The proposed procedure route is an overlay of existing arrivals and is expected to lead to a net increase of 255 annual arrivals to BOS generally, which represents 0.1% of the total annual arrivals, and an increase of 359 annual arrivals specifically to Runway 4L. These additional

procedural capabilities would increase the safety and efficiency of the airspace around BOS. Publication of the proposed procedure would constitute an undertaking under Section 106 of the National Historic Preservation Act (NHPA).

Regulatory Overview

Under NEPA, the FAA is responsible for analyzing the impacts of its action on historical, architectural, archeological and cultural resources as part of its broader review of the human environment. Because the National Historic Preservation Act (NHPA) is the principal statute concerning such resources, most of this analysis is conducted in coordination with the process under Section 106 of the NHPA, which requires federal agencies to consider the effects of their projects on properties listed, or eligible for listing, in the National Register of Historic Places (NRHP). As this is an FAA Action, the FAA document *Section 106 of the National Historic Properties under Section 106 of the National Historic Properties under Section 106 of the National Historic Preservation Act* was consulted and referenced in order to make this determination.

Review of Historic/Eligible Properties

The National Register of Historic Places (NRHP), the Massachusetts Historical Commission, and the Boston Landmarks Commission's data sources were used to gather a comprehensive directory of all potential historic and cultural resources within the APE. A total of 19 properties within the APE were found to be listed in the National Register of Historic Places as historic districts or individual properties in accordance with the criteria described in the NHPA. These 19 properties are identified and described in Table 1. A total of 4,184 state and local designated properties were identified within the APE and are summarized by their location in Table 2. These 4,184 properties represent the group of potential resources that would be evaluated for National Register eligibility. For the purposes of this proposed finding, we assume all of these properties are eligible for the National Register and propose a finding of no adverse effect for all properties within the APE currently listed, determined eligible for listing, and assumed eligible for listing in the NRHP.

NRHP Property Name	Brief Property Description
Milton Cemetery	Milton Cemetery contains some of the best examples of funerary art from the colonial times to the Victorian era. An historic garden cemetery, it was established as the Town's only cemetery in 1672.
Spring Brook Cemetery	The most prominent structure in the cemetery, Card Memorial Chapel, was designed by Charles Eastman & built in 1898 and funded by Simon & Mary Card in memory of their daughter Lulu.
Dorchester Park	Dorchester Park is a historic park bounded by Dorchester Avenue, Richmond, Adams and Richview Streets in the Dorchester neighborhood of Boston, Massachusetts.

Table 1: National Register of Historic Places Properties within the APE

NRHP Property Name	Brief Property Description
DorchesterMilton Lower Mills Industrial District (Boundary Increase)	The Dorchester-Milton Lower Mills Industrial District is a historic district on both sides of the Neponset River in the Dorchester area of Boston and in the town of Milton, Massachusetts. It encompasses an industrial factory complex, most of which was historically associated with the Walter Baker & Company, the first major maker of chocolate products in the United States.
Savin Hill Historic District	The Savin Hill Historic District is significant for its association with the development of the area from a mid-19th century speculative housing development for Boston's upper-middle class to a close-knot neighborhood of residents from diverse socioeconomic backgrounds. The surviving historic resources catalogue Savin Hill's rich history and remain a cohesive collection of well-preserved historic homes. The district further attains significance as an intact collection of buildings representing a full range of architectural styles.
Blue Hills Parkway	The Blue Hills Parkway, a 1.5-mile-long boulevard in Boston and Milton, is significant as one of the earliest connecting parkways designed for the Metropolitan Parks Commission (MPC) by Olmsted, Olmsted and Eliot and its successor firm, Olmsted Brothers, and it is emblematic of the firm's principles of parkway creation. A divided highway that runs directly south through early 20"-century residential neighborhoods, the Blue Hills Parkway directly connects the Blue Hills Reservation (the largest open space in Metropolitan Boston) with Boston, the Neponset River Reservation, and Truman Parkway.
Blue Hills Reservation Parkways-Metropolitan Park System of Greater Boston	The Metropolitan Park System of Greater Boston, in Massachusetts, is especially noteworthy because it is the first regional park system in the United States.
Foxborough Pumping Station	The Foxborough Pumping Station is a historic water pumping station at 25 Pumping Station Road in Foxborough, Massachusetts. Its main pumphouse was designed by Ernest Boyden, a regionally-known architect of water supply systems, and was built in 1891; it is a brick structure with Queen Anne styling. The station also includes several historic wells, a period garage, and the man- made Fales Pond, a once-dammed section of the Neponset Reservoir near the pumphouse.
Old Harbor Reservation Parkways, Metropolitan Park System of Greater Boston	The Old Harbor Reservation Parkways are three historic roads in the Old Harbor area of Boston. They are part of the Boston parkway system designed by Frederick Law Olmsted.
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The FAA's noise analysis demonstrates that historic resources will generally experience equivalent noise exposure with the addition of the Proposed Action. Specifically, the maximum change in noise exposure for a historic property is less than 0.2 dB across all historic properties in the APE. For example, one of these properties has a value of 22 dB under the No Action Alternative and 22.1 dB with the Proposed Procedure. Importantly, as depicted in Attachment A, the procedure is an overlay of existing traffic to Runway 4L and is only expected to lead to an annual net increase of 255 arrivals to BOS, out of a current total of 205,837 arrivals. In sum, the FAA will not be introducing audible impacts to resources not already experiencing noise impacts, and any change in noise exposure will be minimal.

In order to assess the potential visual impacts of the historic properties, the data for a year of overflights at BOS from the previous memorandum was reassessed to compare to the newly designated APE. Considering one year of radar track data, the APE experiences 78,879 arrival and 18,989 departure overflights annually. On an average daily basis that corresponds to 216.1 arrival and 52.0 departure overflights. The Proposed Action is estimated to add 255 annual arrival overflights or 0.70 daily average overflights to the APE. When considering the APE as a whole, the increase in overflights would amount to just a 0.26% increase in overflights and would not introduce audible or visual noise in the APE. In order to confirm that the overflights over the APE were not focused on particular historic resources in the APE, the dataset of departure overflights and arrival overflights was mapped over the APE in Attachments A and B respectively. Attachment A shows that the APE areas closest to the airport are already dense with overflights but the flights become more disperse as the APE moves to the southwest. However, Attachment B, which displays a year of arrival radar tracks, show that the APE is already heavily overflown over the full extent of the APE.

For more information on the analyses performed as a part of the Draft EA, please visit <u>www.faabostonworkshops.com</u> for a copy of the Draft EA. More information on the noise analysis can be found at <u>www.faabostonworkshops.com/noise-visualization/</u> and in Sections 3.4.6 and 4.6 of the Draft EA. The Noise Modeling Technical Report is included in Appendix D of the Draft EA.



SOURCE: Esri; RoVolus, 2021; ESA, 2021



Boston Logan RNAV (GPS) RWY 4L EA



SOURCE: Esri; RoVolus, 2021; ESA, 2021



Finding of No Adverse Effect Criteria

In order to establish a Finding of No Adverse Effect, the Proposed Action must not meet any of the criteria spelled out in the FAA's Section 106 Handbook, which are based on criteria in ACHP's section 106 regulations in 36 CFR Part 800. This section presents why the Proposed Action does not meet any of these criteria.

- Does the Proposed Action physically destroy or damage the property?
 - The Proposed Action will not have any physical impact on any property. The Proposed Action changes the location of arrival flights in the airspace around Boston Logan International Airport.
- Does the Proposed Action alter the property in any way that is consistent with the Secretary of the Interior's Standards for Treatment of Historic Properties (36 CFR Part 68)?
 - The Standards guide the design and implementation of physical changes to historic properties. This may include changes in use, material repair or substitution, or modification of historically important features. The Proposed Action is located in the airspace above historic resources does not result in any changes in use, material alteration, or physical modifications to these resources.
- Does the Proposed Action remove a property from its historic location?
 - \circ The Proposed Action does not remove any property from its location.
- Does the Proposed Action change the character of the property's use, or of physical features within the property's setting that contribute to its historic significance?
 - The Proposed Action does not change the character of a property's use or any physical features in any historical property's setting.
 - Any changes to setting as a result of the Proposed action would be audible or visual features which are discussed in the following criterion.
- Does the Proposed Action introduce an atmospheric, audible, or visual feature to the area that would diminish the integrity of the property's significant historic features?
 - Audible: there will not be an introduction of audible noise as a result of the Proposed Action. Furthermore, the noise impacts of the Proposed Action on all of the historic resources in the APE will either decrease noise exposure or cause increases that are orders of magnitude below the significance thresholds for DNL aircraft noise as described in FAA Order 1050.1F and therefore will not cause an introduction of audible impact on any of the properties.
 - Visual: there will not be an introduction of visual impacts as a result of the Proposed Action. Furthermore, the entire APE currently experiences 268 average daily overflights as described in the above analysis. The Proposed Action will add less than 1 additional overflight per day. This increase will not change the current visual features of any historic resource in the APE, as depicted in Attachment B.
- Does the Proposed Action result in neglect of a property which would result in its deterioration, transfer, sale or lease?

• The Proposed Action will not cause any property to be sold or transferred.

Given the results discussed in this letter, the FAA is putting forth at this point a Proposed Finding of No Adverse Effect. This determination is based on the findings discussed in this letter, which includes that none of the NRHP listed properties reviewed herein were found to have a "quiet setting" as described in the FAA's Section 106 Handbook. Furthermore, the net change in aircraft operations as a result of the Proposed Action would be minimal and would not cause an adverse effect, including no physical impacts and no introduction of audible or visual impacts within the APE.

Public Meetings, Comments, and Consultation

The FAA conducted Virtual Public Workshops for the Draft EA on October 23rd, and October 28th, 2020. By attending the Virtual Public Workshops, participants were provided with an overview of the Draft EA which includes results from the noise analysis performed to assess the potential noise impacts of the Proposed Action on historic resources and populations located within the General Study Area. The MHC concurred with the APE on December 8, 2020 so the impacts were shown for historic resources throughout the entire Study Area. During the meeting, the FAA responded to a large number of questions from the community. These meetings were recorded and remain on the FAA's YouTube page for interested community members to review. During the meeting and other forms of engagement, the FAA received over 40 comments regarding the Proposed Action. The FAA is currently reviewing and developing responses to these comments to be shared with the public as part of the Final Environmental Assessment but it should be noted that none of the comments mention any potential impact to historic resources from the Proposed Action.

We look forward to hearing back from you on the FAA's proposed finding. We welcome the input from consulting parties on the historic properties considered as part of the analysis and on the finding itself. If you have any additional comments or questions on this undertaking, please contact me at veronda.johnson@faa.gov or at the address below.

Sincerely,

Veronda Johnson Eastern Service Center Federal Aviation Administration Operations Support Group AJV-E250 1701 Columbia Avenue College Park, GA 30337



U.S. Department of Transportation

Eastern Service Center

1701 Columbia Avenue College Park, Georgia 30337

Federal Aviation Administration

June 9, 2021

City of Quincy Planning Board 1305 Hancock St. Quincy, MA 02169

Proposed Finding of No Adverse Effect for the Boston Logan International Airport RNAV (GPS) RWY 4L Approach Procedure, Boston, MA

To Whom It May Concern,

The Federal Aviation Administration (FAA) is evaluating a new proposed Area Navigation (RNAV) Global Positioning System (GPS) instrument approach procedure at Boston Logan International Airport (BOS). This new procedure would allow for aircraft to land onto Runway 4L with GPS technological automation as well as allow for landing during low visibility conditions. These additional procedural capabilities would increase the safety and efficiency of the airspace around BOS.

Pursuant to 36 CFR 800.4(a), the FAA previously consulted with the Massachusetts Historical Commission to identify the Area of Potential Effects for this undertaking. In continuing with our responsibilities under Section 106 of the National Historic Preservation Act and its implementing regulations, the FAA invites you to participate as a consulting parting and submits this assessment of adverse effects, which concludes with a proposed Finding of No Adverse Effects and our supporting rationale for that finding. The FAA seeks your views or comments on this finding, which can be addressed to the FAA using the email or address given at the conclusion of this letter. Pursuant to 36 CFR 800.5(c), please provide any comments within 30 days from receipt of this letter.

Project Background

As described in greater detail in the FAA's Draft Environmental Assessment (EA), which can be accessed at <u>www.faabostonworkshops.com</u>, the FAA is evaluating a new proposed Area Navigation (RNAV) Global Positioning System (GPS) instrument approach procedure at BOS. This new procedure, which is depicted in Attachments A and B, is needed to allow aircraft to land onto Runway 4L with GPS technological automation. The current absence of an RNAV procedure to Runway 4L precludes use of the runway during low visibility conditions. The proposed procedure route is an overlay of existing arrivals and is expected to lead to a net increase of 255 annual arrivals to BOS generally, which represents 0.1% of the total annual arrivals, and an increase of 359 annual arrivals specifically to Runway 4L. These additional

procedural capabilities would increase the safety and efficiency of the airspace around BOS. Publication of the proposed procedure would constitute an undertaking under Section 106 of the National Historic Preservation Act (NHPA).

Regulatory Overview

Under NEPA, the FAA is responsible for analyzing the impacts of its action on historical, architectural, archeological and cultural resources as part of its broader review of the human environment. Because the National Historic Preservation Act (NHPA) is the principal statute concerning such resources, most of this analysis is conducted in coordination with the process under Section 106 of the NHPA, which requires federal agencies to consider the effects of their projects on properties listed, or eligible for listing, in the National Register of Historic Places (NRHP). As this is an FAA Action, the FAA document *Section 106 of the National Historic Properties under Section 106 of the National Historic Properties under Section 106 of the National Historic Preservation Act* was consulted and referenced in order to make this determination.

Review of Historic/Eligible Properties

The National Register of Historic Places (NRHP), the Massachusetts Historical Commission, and the Boston Landmarks Commission's data sources were used to gather a comprehensive directory of all potential historic and cultural resources within the APE. A total of 19 properties within the APE were found to be listed in the National Register of Historic Places as historic districts or individual properties in accordance with the criteria described in the NHPA. These 19 properties are identified and described in Table 1. A total of 4,184 state and local designated properties were identified within the APE and are summarized by their location in Table 2. These 4,184 properties represent the group of potential resources that would be evaluated for National Register eligibility. For the purposes of this proposed finding, we assume all of these properties are eligible for the National Register and propose a finding of no adverse effect for all properties within the APE currently listed, determined eligible for listing, and assumed eligible for listing in the NRHP.

NRHP Property Name	Brief Property Description
Milton Cemetery	Milton Cemetery contains some of the best examples of funerary art from the colonial times to the Victorian era. An historic garden cemetery, it was established as the Town's only cemetery in 1672.
Spring Brook Cemetery	The most prominent structure in the cemetery, Card Memorial Chapel, was designed by Charles Eastman & built in 1898 and funded by Simon & Mary Card in memory of their daughter Lulu.
Dorchester Park	Dorchester Park is a historic park bounded by Dorchester Avenue, Richmond, Adams and Richview Streets in the Dorchester neighborhood of Boston, Massachusetts.

Table 1: National Register of Historic Places Properties within the APE

NRHP Property Name	Brief Property Description
DorchesterMilton Lower Mills Industrial District (Boundary Increase)	The Dorchester-Milton Lower Mills Industrial District is a historic district on both sides of the Neponset River in the Dorchester area of Boston and in the town of Milton, Massachusetts. It encompasses an industrial factory complex, most of which was historically associated with the Walter Baker & Company, the first major maker of chocolate products in the United States.
Savin Hill Historic District	The Savin Hill Historic District is significant for its association with the development of the area from a mid-19th century speculative housing development for Boston's upper-middle class to a close-knot neighborhood of residents from diverse socioeconomic backgrounds. The surviving historic resources catalogue Savin Hill's rich history and remain a cohesive collection of well-preserved historic homes. The district further attains significance as an intact collection of buildings representing a full range of architectural styles.
Blue Hills Parkway	The Blue Hills Parkway, a 1.5-mile-long boulevard in Boston and Milton, is significant as one of the earliest connecting parkways designed for the Metropolitan Parks Commission (MPC) by Olmsted, Olmsted and Eliot and its successor firm, Olmsted Brothers, and it is emblematic of the firm's principles of parkway creation. A divided highway that runs directly south through early 20"-century residential neighborhoods, the Blue Hills Parkway directly connects the Blue Hills Reservation (the largest open space in Metropolitan Boston) with Boston, the Neponset River Reservation, and Truman Parkway.
Blue Hills Reservation Parkways-Metropolitan Park System of Greater Boston	The Metropolitan Park System of Greater Boston, in Massachusetts, is especially noteworthy because it is the first regional park system in the United States.
Foxborough Pumping Station	The Foxborough Pumping Station is a historic water pumping station at 25 Pumping Station Road in Foxborough, Massachusetts. Its main pumphouse was designed by Ernest Boyden, a regionally-known architect of water supply systems, and was built in 1891; it is a brick structure with Queen Anne styling. The station also includes several historic wells, a period garage, and the man- made Fales Pond, a once-dammed section of the Neponset Reservoir near the pumphouse.
Old Harbor Reservation Parkways, Metropolitan Park System of Greater Boston	The Old Harbor Reservation Parkways are three historic roads in the Old Harbor area of Boston. They are part of the Boston parkway system designed by Frederick Law Olmsted.
Dorchester-Milton Lower Mills Industrial District	The Dorchester-Milton Lower Mills Industrial District is located on both sides of the Neponset River in the Dorchester area of Boston and in the town of Milton, Massachusetts. It encompasses an industrial factory complex, most of which was historically associated with the Walter Baker & Company, the first major maker of chocolate products in the United States.

NRHP Property Name	Brief Property Description
Furnace Village Historic District	The Furnace Village Historic District encompasses the historic colonial industrial area in Easton, Massachusetts. At its center is at the intersection of Foundry street, South street and Poquanticut Avenue. The area was settled in 1723, with industrial activity beginning in 1742. The iron furnace was established in 1751, and for industrial purposes, continued in the 19th century. In addition to the colonial era, there is also an employee of the housing of the 19th century.
Milton Centre Historic District	The Milton Centre Historic District is both the historical and geographic center of the town of Milton. The 23-acre historic district includes Canton Avenue between Reedsdale Road and Thacher and Highland Streets. Milton Centre is historically significant for its association with the development of the town following the relocation of the third meeting house to Academy Hill in 1728, and the subsequent shift of the town center from Milton Hill.
Scott's Woods Historic District	Scott's Woods Historic District is the area of Hillside, Harland and Forest Streets between Randolph Avenue and the ridge between Hancock and Bugbee Hills, now the MDC Blue Hills Reservation. The Scott's Woods Historic District in Milton, Massachusetts is a semirural, residential area that contains a significant concentration of 18th, 19th and early 20th century dwellings and barns that reflect the Town's agricultural and architectural history from 1713 to 1932, the district's period of significance. Originally known as the "Blue Hill Land," a three thousand-acre tract of land sold by the town of Boston in 1711 to four residents of Milton. The area in the southwest part of Milton is thought to have been named for a member of the Scott Family that lived in the area in the early eighteenth century. Hillside Street, named for being literally on the 'side' of Blue Hill, is the major thoroughfare in the district.
Milton Hill Historic District	Milton Hill Historic District is located on a lofty hill between Milton Village and Algerene Corner, formerly known as Union Square at the junction of Adams and Centre Streets. The Milton Hill Historic District in Milton, Massachusetts is a residential area that contains the most significant concentration of 19th and early 20th century high-style and period architecture in the Town. As Milton developed from a rural community to a prosperous suburb of Boston, Milton Hill, throughout the period of significance, 1740-1945, has been the home of wealthy Milton and Boston business, professional and civic leaders. It began its rise to prominence as an estate district in 1742 with the establishment of Governor Thomas Hutchinson's summer estate. For the next two hundred years, attracted by the rural scenery afforded by the Neponset River and the Blue Hills and the proximity of the Town's commercial center and Boston, prominent families built country homes, a number designed by noted national and local architects, including William Ralph Emerson; Peabody and Steams; and Perry, Shaw and Hepbum.

NRHP Property Name	Brief Property Description	
Harrison Square Historic District	Clam Point (also known as Harrison Square) is a sub-neighborhood in Boston, noteworthy for its collection of substantial Italianate Mansard residences. The area is known to have the most cohesive, intact collection of mansion-scale, mid-19 th century housing in Boston, and includes the Park, Everett, Freeport, Mill, Ashland, Blanche streets, and Victory Road in the Dorchester neighborhood of Boston.	
Canton Corner Historic District	The Canton Corner Historic District encompasses the historic town center of Canton, Massachusetts. Centered on the junction of Pleasant and Washington streets, it includes more than 25 properties and 170 acres (69 ha), whose architectural history spans 250 years of occupation and includes the town's major civic buildings.	
Ponkapoag Camp of Appalachian Mountain Club	The Appalachian Mountain Club Ponkapoag Camp is one of the original camps of the oldest outing club in the United States, founded in 1876. Early in the twentieth century tent sites were established at the east end of Ponkapoag Pond in the Blue Hills reservation by the president of the Appalachian Mountain Club, William Rogers, who was also an M.D.C. commissioner. The camp represents an early outing club's architecture for "roughing it" and are important as such structures succumb to fire, rot, and vandalism.	
Boyden, Seth, House	The Seth Boyden House is a historic house at 135 Oak Street in Foxborough, Massachusetts. The home is significant for its unusual architectural design as well for its association with the Boyden family, whose members were prominent locally and regionally in the 18 th and 19 th century,	
Borderland Historic District	The Borderland Historic District was the 1,200 acre estate of Blanche Ames Ames. The mansion was constructed in 1910 and the property includes a system of ponds, dams, and causeways surrounding the mansion. The exterior of the mansion was built using locally cut field stones. The district is considered significant due to its connection to the estate of Blanche Ames Ames. She was a inventor who was involved in art, farming, engineering and politics. She designed a hexagonal lumber cutter, patented a method for ensnaring airplanes in wires hung from balloons during World War II, and developed a water anti-pollution device in the late 1960s.	
SOURCE: National Register Database; https://www.nps.gov/subjects/nationalregister/database-research.htm#table, Adapted by Environmental Science Associates, 2021.		

Town	Number of State & Local Designated Properties
Boston	838
Canton	445
Easton	142
Foxborough	194
Mansfield	190
Milton	1,559
Norton	16
Quincy	2
Randolph	225
Sharon	491
Stoughton	82
Grand Total	4,184

Table 2: Number of State & Local Designated Properties within the APE

Assessment of Noise and Visual Impacts by Proposed Action

In our earlier correspondence, the FAA noted that we are "considering the possibility that changes in noise levels or additional visual impacts from an increase in overflights could alter the character or use of certain kinds of historic properties where a quiet setting is a generally recognized purpose and attribute." In order to address this possibility, an assessment was done to further quantify the auditory and visual impacts on the historic properties within the Area of Potential Effects.

In order to assess the auditory impacts, the FAA used a metric known as Day-night Average Sound Level (DNL). DNL is the standard noise metric used for all FAA studies of aviation noise exposure in airport communities and was used here to assess the potential impact on every identified historic property within the Area of Potential Effects.

DNL is a 24-hour, time-weighted average noise metric, expressed in terms of decibel units of sound heard by the human ear, which accounts for the noise levels of individual aircraft events, the number of times those events occur, and the time of day they occur. DNL is a graphical representation of the distribution of noise over the surrounding area from an airport's average operations. There is one unique modification in that there is a "noise penalty" of any noise generated during "nighttime hours." In the calculation of DNL, for each hour during nighttime hours (10:00 p.m. to 7:00 a.m.), the sound levels are increased by a 10 decibel-weighting penalty (equivalent to a 10-fold increase in aircraft operations) before the 24-hour value is computed. The weighting penalty accounts for the more intrusive nature of noise during the nighttime hours. The significance thresholds for aircraft noise for DNL, as spelled out in FAA Order 1050.1F, are given below.

• For DNL 65 dB and higher: +1.5 dB

This threshold has been used by FAA for many years and is applied at airports across the country and will be used to determine noise impacts on historic properties within the APE. The use of this threshold is consistent with the Section 106 analyses for many FAA projects, including the Northern California and Southern Florida Metroplex projects, two of FAA's most recent projects that also modified the flight path of aircraft through the airspace.

According to FAA Order 1050.1F, a significant noise impact could occur to noise sensitive land uses if it had a level of DNL 65 dB with the Proposed Action and also experienced an increase of 1.5 dB when compared to the No Action Alternative. The FAA also recognizes that, in limited instances, resources that have a "quiet setting" as a qualifying attribute may be adversely affected by noise increases that would otherwise not be significant. There are no NRHP properties with a noise exposure of DNL 65 that experience a 1.5 dB noise increase. Further, the NRHP properties were reviewed and none of them were found to have a "quiet setting" as described in the FAA's Section 106 Handbook.

When the analysis is expanded to include the state and local designated properties that are assumed to be eligible for the NRHP, there are no properties that experience a 1.5 dB noise level increase with a proposed action noise level of DNL 65 or greater. As indicated in Table 4.6-3 of the Draft EA, the maximum exposed noise level *decreases* as a result of the Proposed Project

when compared to the No Action Alternative when considering towns/neighborhoods as a whole. Furthermore, as described below, the largest proposed noise changes within the APE are multiple orders of magnitude below the noise thresholds given within FAA Order 1050.1F.

The FAA's noise analysis demonstrates that historic resources will generally experience equivalent noise exposure with the addition of the Proposed Action. Specifically, the maximum change in noise exposure for a historic property is less than 0.2 dB across all historic properties in the APE. For example, one of these properties has a value of 22 dB under the No Action Alternative and 22.1 dB with the Proposed Procedure. Importantly, as depicted in Attachment A, the procedure is an overlay of existing traffic to Runway 4L and is only expected to lead to an annual net increase of 255 arrivals to BOS, out of a current total of 205,837 arrivals. In sum, the FAA will not be introducing audible impacts to resources not already experiencing noise impacts, and any change in noise exposure will be minimal.

In order to assess the potential visual impacts of the historic properties, the data for a year of overflights at BOS from the previous memorandum was reassessed to compare to the newly designated APE. Considering one year of radar track data, the APE experiences 78,879 arrival and 18,989 departure overflights annually. On an average daily basis that corresponds to 216.1 arrival and 52.0 departure overflights. The Proposed Action is estimated to add 255 annual arrival overflights or 0.70 daily average overflights to the APE. When considering the APE as a whole, the increase in overflights would amount to just a 0.26% increase in overflights and would not introduce audible or visual noise in the APE. In order to confirm that the overflights over the APE were not focused on particular historic resources in the APE, the dataset of departure overflights and arrival overflights was mapped over the APE in Attachments A and B respectively. Attachment A shows that the APE areas closest to the airport are already dense with overflights but the flights become more disperse as the APE moves to the southwest. However, Attachment B, which displays a year of arrival radar tracks, show that the APE is already heavily overflown over the full extent of the APE.

For more information on the analyses performed as a part of the Draft EA, please visit <u>www.faabostonworkshops.com</u> for a copy of the Draft EA. More information on the noise analysis can be found at <u>www.faabostonworkshops.com/noise-visualization/</u> and in Sections 3.4.6 and 4.6 of the Draft EA. The Noise Modeling Technical Report is included in Appendix D of the Draft EA.



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Boston Logan RNAV (GPS) RWY 4L EA



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Finding of No Adverse Effect Criteria

In order to establish a Finding of No Adverse Effect, the Proposed Action must not meet any of the criteria spelled out in the FAA's Section 106 Handbook, which are based on criteria in ACHP's section 106 regulations in 36 CFR Part 800. This section presents why the Proposed Action does not meet any of these criteria.

- Does the Proposed Action physically destroy or damage the property?
 - The Proposed Action will not have any physical impact on any property. The Proposed Action changes the location of arrival flights in the airspace around Boston Logan International Airport.
- Does the Proposed Action alter the property in any way that is consistent with the Secretary of the Interior's Standards for Treatment of Historic Properties (36 CFR Part 68)?
 - The Standards guide the design and implementation of physical changes to historic properties. This may include changes in use, material repair or substitution, or modification of historically important features. The Proposed Action is located in the airspace above historic resources does not result in any changes in use, material alteration, or physical modifications to these resources.
- Does the Proposed Action remove a property from its historic location?
 - \circ The Proposed Action does not remove any property from its location.
- Does the Proposed Action change the character of the property's use, or of physical features within the property's setting that contribute to its historic significance?
 - The Proposed Action does not change the character of a property's use or any physical features in any historical property's setting.
 - Any changes to setting as a result of the Proposed action would be audible or visual features which are discussed in the following criterion.
- Does the Proposed Action introduce an atmospheric, audible, or visual feature to the area that would diminish the integrity of the property's significant historic features?
 - Audible: there will not be an introduction of audible noise as a result of the Proposed Action. Furthermore, the noise impacts of the Proposed Action on all of the historic resources in the APE will either decrease noise exposure or cause increases that are orders of magnitude below the significance thresholds for DNL aircraft noise as described in FAA Order 1050.1F and therefore will not cause an introduction of audible impact on any of the properties.
 - Visual: there will not be an introduction of visual impacts as a result of the Proposed Action. Furthermore, the entire APE currently experiences 268 average daily overflights as described in the above analysis. The Proposed Action will add less than 1 additional overflight per day. This increase will not change the current visual features of any historic resource in the APE, as depicted in Attachment B.
- Does the Proposed Action result in neglect of a property which would result in its deterioration, transfer, sale or lease?
• The Proposed Action will not cause any property to be sold or transferred.

Given the results discussed in this letter, the FAA is putting forth at this point a Proposed Finding of No Adverse Effect. This determination is based on the findings discussed in this letter, which includes that none of the NRHP listed properties reviewed herein were found to have a "quiet setting" as described in the FAA's Section 106 Handbook. Furthermore, the net change in aircraft operations as a result of the Proposed Action would be minimal and would not cause an adverse effect, including no physical impacts and no introduction of audible or visual impacts within the APE.

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of Transportation

Eastern Service Center

1701 Columbia Avenue College Park, Georgia 30337

Federal Aviation Administration

June 9, 2021

Town of Randolph Historical Commission 41 South Main Street Randolph, MA 02368 United States

Proposed Finding of No Adverse Effect for the Boston Logan International Airport RNAV (GPS) RWY 4L Approach Procedure, Boston, MA

To Whom It May Concern,

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Table 1: National Register of Historic Places Properties within the APE

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DorchesterMilton Lower Mills Industrial District (Boundary Increase)	The Dorchester-Milton Lower Mills Industrial District is a historic district on both sides of the Neponset River in the Dorchester area of Boston and in the town of Milton, Massachusetts. It encompasses an industrial factory complex, most of which was historically associated with the Walter Baker & Company, the first major maker of chocolate products in the United States.
Savin Hill Historic District	The Savin Hill Historic District is significant for its association with the development of the area from a mid-19th century speculative housing development for Boston's upper-middle class to a close-knot neighborhood of residents from diverse socioeconomic backgrounds. The surviving historic resources catalogue Savin Hill's rich history and remain a cohesive collection of well-preserved historic homes. The district further attains significance as an intact collection of buildings representing a full range of architectural styles.
Blue Hills Parkway	The Blue Hills Parkway, a 1.5-mile-long boulevard in Boston and Milton, is significant as one of the earliest connecting parkways designed for the Metropolitan Parks Commission (MPC) by Olmsted, Olmsted and Eliot and its successor firm, Olmsted Brothers, and it is emblematic of the firm's principles of parkway creation. A divided highway that runs directly south through early 20"-century residential neighborhoods, the Blue Hills Parkway directly connects the Blue Hills Reservation (the largest open space in Metropolitan Boston) with Boston, the Neponset River Reservation, and Truman Parkway.
Blue Hills Reservation Parkways-Metropolitan Park System of Greater Boston	The Metropolitan Park System of Greater Boston, in Massachusetts, is especially noteworthy because it is the first regional park system in the United States.
Foxborough Pumping Station	The Foxborough Pumping Station is a historic water pumping station at 25 Pumping Station Road in Foxborough, Massachusetts. Its main pumphouse was designed by Ernest Boyden, a regionally-known architect of water supply systems, and was built in 1891; it is a brick structure with Queen Anne styling. The station also includes several historic wells, a period garage, and the man- made Fales Pond, a once-dammed section of the Neponset Reservoir near the pumphouse.
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Milton Centre Historic District	The Milton Centre Historic District is both the historical and geographic center of the town of Milton. The 23-acre historic district includes Canton Avenue between Reedsdale Road and Thacher and Highland Streets. Milton Centre is historically significant for its association with the development of the town following the relocation of the third meeting house to Academy Hill in 1728, and the subsequent shift of the town center from Milton Hill.
Scott's Woods Historic District	Scott's Woods Historic District is the area of Hillside, Harland and Forest Streets between Randolph Avenue and the ridge between Hancock and Bugbee Hills, now the MDC Blue Hills Reservation. The Scott's Woods Historic District in Milton, Massachusetts is a semirural, residential area that contains a significant concentration of 18th, 19th and early 20th century dwellings and barns that reflect the Town's agricultural and architectural history from 1713 to 1932, the district's period of significance. Originally known as the "Blue Hill Land," a three thousand-acre tract of land sold by the town of Boston in 1711 to four residents of Milton. The area in the southwest part of Milton is thought to have been named for a member of the Scott Family that lived in the area in the early eighteenth century. Hillside Street, named for being literally on the 'side' of Blue Hill, is the major thoroughfare in the district.
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Ponkapoag Camp of Appalachian Mountain Club	The Appalachian Mountain Club Ponkapoag Camp is one of the original camps of the oldest outing club in the United States, founded in 1876. Early in the twentieth century tent sites were established at the east end of Ponkapoag Pond in the Blue Hills reservation by the president of the Appalachian Mountain Club, William Rogers, who was also an M.D.C. commissioner. The camp represents an early outing club's architecture for "roughing it" and are important as such structures succumb to fire, rot, and vandalism.
Boyden, Seth, House	The Seth Boyden House is a historic house at 135 Oak Street in Foxborough, Massachusetts. The home is significant for its unusual architectural design as well for its association with the Boyden family, whose members were prominent locally and regionally in the 18 th and 19 th century,
Borderland Historic District	The Borderland Historic District was the 1,200 acre estate of Blanche Ames Ames. The mansion was constructed in 1910 and the property includes a system of ponds, dams, and causeways surrounding the mansion. The exterior of the mansion was built using locally cut field stones. The district is considered significant due to its connection to the estate of Blanche Ames Ames. She was a inventor who was involved in art, farming, engineering and politics. She designed a hexagonal lumber cutter, patented a method for ensnaring airplanes in wires hung from balloons during World War II, and developed a water anti-pollution device in the late 1960s.
SOURCE: National Register Database; <u>http</u> Associates, 2021.	bs://www.nps.gov/subjects/nationalregister/database-research.htm#table, Adapted by Environmental Science

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Grand Total	4,184

Table 2: Number of State & Local Designated Properties within the APE

Assessment of Noise and Visual Impacts by Proposed Action

In our earlier correspondence, the FAA noted that we are "considering the possibility that changes in noise levels or additional visual impacts from an increase in overflights could alter the character or use of certain kinds of historic properties where a quiet setting is a generally recognized purpose and attribute." In order to address this possibility, an assessment was done to further quantify the auditory and visual impacts on the historic properties within the Area of Potential Effects.

In order to assess the auditory impacts, the FAA used a metric known as Day-night Average Sound Level (DNL). DNL is the standard noise metric used for all FAA studies of aviation noise exposure in airport communities and was used here to assess the potential impact on every identified historic property within the Area of Potential Effects.

DNL is a 24-hour, time-weighted average noise metric, expressed in terms of decibel units of sound heard by the human ear, which accounts for the noise levels of individual aircraft events, the number of times those events occur, and the time of day they occur. DNL is a graphical representation of the distribution of noise over the surrounding area from an airport's average operations. There is one unique modification in that there is a "noise penalty" of any noise generated during "nighttime hours." In the calculation of DNL, for each hour during nighttime hours (10:00 p.m. to 7:00 a.m.), the sound levels are increased by a 10 decibel-weighting penalty (equivalent to a 10-fold increase in aircraft operations) before the 24-hour value is computed. The weighting penalty accounts for the more intrusive nature of noise during the nighttime hours. The significance thresholds for aircraft noise for DNL, as spelled out in FAA Order 1050.1F, are given below.

• For DNL 65 dB and higher: +1.5 dB

This threshold has been used by FAA for many years and is applied at airports across the country and will be used to determine noise impacts on historic properties within the APE. The use of this threshold is consistent with the Section 106 analyses for many FAA projects, including the Northern California and Southern Florida Metroplex projects, two of FAA's most recent projects that also modified the flight path of aircraft through the airspace.

According to FAA Order 1050.1F, a significant noise impact could occur to noise sensitive land uses if it had a level of DNL 65 dB with the Proposed Action and also experienced an increase of 1.5 dB when compared to the No Action Alternative. The FAA also recognizes that, in limited instances, resources that have a "quiet setting" as a qualifying attribute may be adversely affected by noise increases that would otherwise not be significant. There are no NRHP properties with a noise exposure of DNL 65 that experience a 1.5 dB noise increase. Further, the NRHP properties were reviewed and none of them were found to have a "quiet setting" as described in the FAA's Section 106 Handbook.

When the analysis is expanded to include the state and local designated properties that are assumed to be eligible for the NRHP, there are no properties that experience a 1.5 dB noise level increase with a proposed action noise level of DNL 65 or greater. As indicated in Table 4.6-3 of the Draft EA, the maximum exposed noise level *decreases* as a result of the Proposed Project

when compared to the No Action Alternative when considering towns/neighborhoods as a whole. Furthermore, as described below, the largest proposed noise changes within the APE are multiple orders of magnitude below the noise thresholds given within FAA Order 1050.1F.

The FAA's noise analysis demonstrates that historic resources will generally experience equivalent noise exposure with the addition of the Proposed Action. Specifically, the maximum change in noise exposure for a historic property is less than 0.2 dB across all historic properties in the APE. For example, one of these properties has a value of 22 dB under the No Action Alternative and 22.1 dB with the Proposed Procedure. Importantly, as depicted in Attachment A, the procedure is an overlay of existing traffic to Runway 4L and is only expected to lead to an annual net increase of 255 arrivals to BOS, out of a current total of 205,837 arrivals. In sum, the FAA will not be introducing audible impacts to resources not already experiencing noise impacts, and any change in noise exposure will be minimal.

In order to assess the potential visual impacts of the historic properties, the data for a year of overflights at BOS from the previous memorandum was reassessed to compare to the newly designated APE. Considering one year of radar track data, the APE experiences 78,879 arrival and 18,989 departure overflights annually. On an average daily basis that corresponds to 216.1 arrival and 52.0 departure overflights. The Proposed Action is estimated to add 255 annual arrival overflights or 0.70 daily average overflights to the APE. When considering the APE as a whole, the increase in overflights would amount to just a 0.26% increase in overflights and would not introduce audible or visual noise in the APE. In order to confirm that the overflights over the APE were not focused on particular historic resources in the APE, the dataset of departure overflights and arrival overflights was mapped over the APE in Attachments A and B respectively. Attachment A shows that the APE areas closest to the airport are already dense with overflights but the flights become more disperse as the APE moves to the southwest. However, Attachment B, which displays a year of arrival radar tracks, show that the APE is already heavily overflown over the full extent of the APE.

For more information on the analyses performed as a part of the Draft EA, please visit <u>www.faabostonworkshops.com</u> for a copy of the Draft EA. More information on the noise analysis can be found at <u>www.faabostonworkshops.com/noise-visualization/</u> and in Sections 3.4.6 and 4.6 of the Draft EA. The Noise Modeling Technical Report is included in Appendix D of the Draft EA.



SOURCE: Esri; RoVolus, 2021; ESA, 2021



Boston Logan RNAV (GPS) RWY 4L EA



SOURCE: Esri; RoVolus, 2021; ESA, 2021



Finding of No Adverse Effect Criteria

In order to establish a Finding of No Adverse Effect, the Proposed Action must not meet any of the criteria spelled out in the FAA's Section 106 Handbook, which are based on criteria in ACHP's section 106 regulations in 36 CFR Part 800. This section presents why the Proposed Action does not meet any of these criteria.

- Does the Proposed Action physically destroy or damage the property?
 - The Proposed Action will not have any physical impact on any property. The Proposed Action changes the location of arrival flights in the airspace around Boston Logan International Airport.
- Does the Proposed Action alter the property in any way that is consistent with the Secretary of the Interior's Standards for Treatment of Historic Properties (36 CFR Part 68)?
 - The Standards guide the design and implementation of physical changes to historic properties. This may include changes in use, material repair or substitution, or modification of historically important features. The Proposed Action is located in the airspace above historic resources does not result in any changes in use, material alteration, or physical modifications to these resources.
- Does the Proposed Action remove a property from its historic location?
 - \circ The Proposed Action does not remove any property from its location.
- Does the Proposed Action change the character of the property's use, or of physical features within the property's setting that contribute to its historic significance?
 - The Proposed Action does not change the character of a property's use or any physical features in any historical property's setting.
 - Any changes to setting as a result of the Proposed action would be audible or visual features which are discussed in the following criterion.
- Does the Proposed Action introduce an atmospheric, audible, or visual feature to the area that would diminish the integrity of the property's significant historic features?
 - Audible: there will not be an introduction of audible noise as a result of the Proposed Action. Furthermore, the noise impacts of the Proposed Action on all of the historic resources in the APE will either decrease noise exposure or cause increases that are orders of magnitude below the significance thresholds for DNL aircraft noise as described in FAA Order 1050.1F and therefore will not cause an introduction of audible impact on any of the properties.
 - Visual: there will not be an introduction of visual impacts as a result of the Proposed Action. Furthermore, the entire APE currently experiences 268 average daily overflights as described in the above analysis. The Proposed Action will add less than 1 additional overflight per day. This increase will not change the current visual features of any historic resource in the APE, as depicted in Attachment B.
- Does the Proposed Action result in neglect of a property which would result in its deterioration, transfer, sale or lease?

• The Proposed Action will not cause any property to be sold or transferred.

Given the results discussed in this letter, the FAA is putting forth at this point a Proposed Finding of No Adverse Effect. This determination is based on the findings discussed in this letter, which includes that none of the NRHP listed properties reviewed herein were found to have a "quiet setting" as described in the FAA's Section 106 Handbook. Furthermore, the net change in aircraft operations as a result of the Proposed Action would be minimal and would not cause an adverse effect, including no physical impacts and no introduction of audible or visual impacts within the APE.

Public Meetings, Comments, and Consultation

The FAA conducted Virtual Public Workshops for the Draft EA on October 23rd, and October 28th, 2020. By attending the Virtual Public Workshops, participants were provided with an overview of the Draft EA which includes results from the noise analysis performed to assess the potential noise impacts of the Proposed Action on historic resources and populations located within the General Study Area. The MHC concurred with the APE on December 8, 2020 so the impacts were shown for historic resources throughout the entire Study Area. During the meeting, the FAA responded to a large number of questions from the community. These meetings were recorded and remain on the FAA's YouTube page for interested community members to review. During the meeting and other forms of engagement, the FAA received over 40 comments regarding the Proposed Action. The FAA is currently reviewing and developing responses to these comments to be shared with the public as part of the Final Environmental Assessment but it should be noted that none of the comments mention any potential impact to historic resources from the Proposed Action.

We look forward to hearing back from you on the FAA's proposed finding. We welcome the input from consulting parties on the historic properties considered as part of the analysis and on the finding itself. If you have any additional comments or questions on this undertaking, please contact me at veronda.johnson@faa.gov or at the address below.

Sincerely,

Veronda Johnson Eastern Service Center Federal Aviation Administration Operations Support Group AJV-E250 1701 Columbia Avenue College Park, GA 30337



U.S. Department of Transportation

Eastern Service Center

1701 Columbia Avenue College Park, Georgia 30337

Federal Aviation Administration

June 9, 2021

Town of Randolph Planning Department 41 South Main Street Randolph, MA 02368 United States

Proposed Finding of No Adverse Effect for the Boston Logan International Airport RNAV (GPS) RWY 4L Approach Procedure, Boston, MA

To Whom It May Concern,

The Federal Aviation Administration (FAA) is evaluating a new proposed Area Navigation (RNAV) Global Positioning System (GPS) instrument approach procedure at Boston Logan International Airport (BOS). This new procedure would allow for aircraft to land onto Runway 4L with GPS technological automation as well as allow for landing during low visibility conditions. These additional procedural capabilities would increase the safety and efficiency of the airspace around BOS.

Pursuant to 36 CFR 800.4(a), the FAA previously consulted with the Massachusetts Historical Commission to identify the Area of Potential Effects for this undertaking. In continuing with our responsibilities under Section 106 of the National Historic Preservation Act and its implementing regulations, the FAA invites you to participate as a consulting parting and submits this assessment of adverse effects, which concludes with a proposed Finding of No Adverse Effects and our supporting rationale for that finding. The FAA seeks your views or comments on this finding, which can be addressed to the FAA using the email or address given at the conclusion of this letter. Pursuant to 36 CFR 800.5(c), please provide any comments within 30 days from receipt of this letter.

Project Background

As described in greater detail in the FAA's Draft Environmental Assessment (EA), which can be accessed at <u>www.faabostonworkshops.com</u>, the FAA is evaluating a new proposed Area Navigation (RNAV) Global Positioning System (GPS) instrument approach procedure at BOS. This new procedure, which is depicted in Attachments A and B, is needed to allow aircraft to land onto Runway 4L with GPS technological automation. The current absence of an RNAV procedure to Runway 4L precludes use of the runway during low visibility conditions. The proposed procedure route is an overlay of existing arrivals and is expected to lead to a net increase of 255 annual arrivals to BOS generally, which represents 0.1% of the total annual arrivals, and an increase of 359 annual arrivals specifically to Runway 4L. These additional

procedural capabilities would increase the safety and efficiency of the airspace around BOS. Publication of the proposed procedure would constitute an undertaking under Section 106 of the National Historic Preservation Act (NHPA).

Regulatory Overview

Under NEPA, the FAA is responsible for analyzing the impacts of its action on historical, architectural, archeological and cultural resources as part of its broader review of the human environment. Because the National Historic Preservation Act (NHPA) is the principal statute concerning such resources, most of this analysis is conducted in coordination with the process under Section 106 of the NHPA, which requires federal agencies to consider the effects of their projects on properties listed, or eligible for listing, in the National Register of Historic Places (NRHP). As this is an FAA Action, the FAA document *Section 106 of the National Historic Properties under Section 106 of the National Historic Properties under Section 106 of the National Historic Preservation Act* was consulted and referenced in order to make this determination.

Review of Historic/Eligible Properties

The National Register of Historic Places (NRHP), the Massachusetts Historical Commission, and the Boston Landmarks Commission's data sources were used to gather a comprehensive directory of all potential historic and cultural resources within the APE. A total of 19 properties within the APE were found to be listed in the National Register of Historic Places as historic districts or individual properties in accordance with the criteria described in the NHPA. These 19 properties are identified and described in Table 1. A total of 4,184 state and local designated properties were identified within the APE and are summarized by their location in Table 2. These 4,184 properties represent the group of potential resources that would be evaluated for National Register eligibility. For the purposes of this proposed finding, we assume all of these properties are eligible for the National Register and propose a finding of no adverse effect for all properties within the APE currently listed, determined eligible for listing, and assumed eligible for listing in the NRHP.

NRHP Property Name	Brief Property Description
Milton Cemetery	Milton Cemetery contains some of the best examples of funerary art from the colonial times to the Victorian era. An historic garden cemetery, it was established as the Town's only cemetery in 1672.
Spring Brook Cemetery	The most prominent structure in the cemetery, Card Memorial Chapel, was designed by Charles Eastman & built in 1898 and funded by Simon & Mary Card in memory of their daughter Lulu.
Dorchester Park	Dorchester Park is a historic park bounded by Dorchester Avenue, Richmond, Adams and Richview Streets in the Dorchester neighborhood of Boston, Massachusetts.

Table 1: National Register of Historic Places Properties within the APE

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When the analysis is expanded to include the state and local designated properties that are assumed to be eligible for the NRHP, there are no properties that experience a 1.5 dB noise level increase with a proposed action noise level of DNL 65 or greater. As indicated in Table 4.6-3 of the Draft EA, the maximum exposed noise level *decreases* as a result of the Proposed Project

when compared to the No Action Alternative when considering towns/neighborhoods as a whole. Furthermore, as described below, the largest proposed noise changes within the APE are multiple orders of magnitude below the noise thresholds given within FAA Order 1050.1F.

The FAA's noise analysis demonstrates that historic resources will generally experience equivalent noise exposure with the addition of the Proposed Action. Specifically, the maximum change in noise exposure for a historic property is less than 0.2 dB across all historic properties in the APE. For example, one of these properties has a value of 22 dB under the No Action Alternative and 22.1 dB with the Proposed Procedure. Importantly, as depicted in Attachment A, the procedure is an overlay of existing traffic to Runway 4L and is only expected to lead to an annual net increase of 255 arrivals to BOS, out of a current total of 205,837 arrivals. In sum, the FAA will not be introducing audible impacts to resources not already experiencing noise impacts, and any change in noise exposure will be minimal.

In order to assess the potential visual impacts of the historic properties, the data for a year of overflights at BOS from the previous memorandum was reassessed to compare to the newly designated APE. Considering one year of radar track data, the APE experiences 78,879 arrival and 18,989 departure overflights annually. On an average daily basis that corresponds to 216.1 arrival and 52.0 departure overflights. The Proposed Action is estimated to add 255 annual arrival overflights or 0.70 daily average overflights to the APE. When considering the APE as a whole, the increase in overflights would amount to just a 0.26% increase in overflights and would not introduce audible or visual noise in the APE. In order to confirm that the overflights over the APE were not focused on particular historic resources in the APE, the dataset of departure overflights and arrival overflights was mapped over the APE in Attachments A and B respectively. Attachment A shows that the APE areas closest to the airport are already dense with overflights but the flights become more disperse as the APE moves to the southwest. However, Attachment B, which displays a year of arrival radar tracks, show that the APE is already heavily overflown over the full extent of the APE.

For more information on the analyses performed as a part of the Draft EA, please visit <u>www.faabostonworkshops.com</u> for a copy of the Draft EA. More information on the noise analysis can be found at <u>www.faabostonworkshops.com/noise-visualization/</u> and in Sections 3.4.6 and 4.6 of the Draft EA. The Noise Modeling Technical Report is included in Appendix D of the Draft EA.



SOURCE: Esri; RoVolus, 2021; ESA, 2021



Boston Logan RNAV (GPS) RWY 4L EA



SOURCE: Esri; RoVolus, 2021; ESA, 2021



Finding of No Adverse Effect Criteria

In order to establish a Finding of No Adverse Effect, the Proposed Action must not meet any of the criteria spelled out in the FAA's Section 106 Handbook, which are based on criteria in ACHP's section 106 regulations in 36 CFR Part 800. This section presents why the Proposed Action does not meet any of these criteria.

- Does the Proposed Action physically destroy or damage the property?
 - The Proposed Action will not have any physical impact on any property. The Proposed Action changes the location of arrival flights in the airspace around Boston Logan International Airport.
- Does the Proposed Action alter the property in any way that is consistent with the Secretary of the Interior's Standards for Treatment of Historic Properties (36 CFR Part 68)?
 - The Standards guide the design and implementation of physical changes to historic properties. This may include changes in use, material repair or substitution, or modification of historically important features. The Proposed Action is located in the airspace above historic resources does not result in any changes in use, material alteration, or physical modifications to these resources.
- Does the Proposed Action remove a property from its historic location?
 - \circ The Proposed Action does not remove any property from its location.
- Does the Proposed Action change the character of the property's use, or of physical features within the property's setting that contribute to its historic significance?
 - The Proposed Action does not change the character of a property's use or any physical features in any historical property's setting.
 - Any changes to setting as a result of the Proposed action would be audible or visual features which are discussed in the following criterion.
- Does the Proposed Action introduce an atmospheric, audible, or visual feature to the area that would diminish the integrity of the property's significant historic features?
 - Audible: there will not be an introduction of audible noise as a result of the Proposed Action. Furthermore, the noise impacts of the Proposed Action on all of the historic resources in the APE will either decrease noise exposure or cause increases that are orders of magnitude below the significance thresholds for DNL aircraft noise as described in FAA Order 1050.1F and therefore will not cause an introduction of audible impact on any of the properties.
 - Visual: there will not be an introduction of visual impacts as a result of the Proposed Action. Furthermore, the entire APE currently experiences 268 average daily overflights as described in the above analysis. The Proposed Action will add less than 1 additional overflight per day. This increase will not change the current visual features of any historic resource in the APE, as depicted in Attachment B.
- Does the Proposed Action result in neglect of a property which would result in its deterioration, transfer, sale or lease?

• The Proposed Action will not cause any property to be sold or transferred.

Given the results discussed in this letter, the FAA is putting forth at this point a Proposed Finding of No Adverse Effect. This determination is based on the findings discussed in this letter, which includes that none of the NRHP listed properties reviewed herein were found to have a "quiet setting" as described in the FAA's Section 106 Handbook. Furthermore, the net change in aircraft operations as a result of the Proposed Action would be minimal and would not cause an adverse effect, including no physical impacts and no introduction of audible or visual impacts within the APE.

Public Meetings, Comments, and Consultation

The FAA conducted Virtual Public Workshops for the Draft EA on October 23rd, and October 28th, 2020. By attending the Virtual Public Workshops, participants were provided with an overview of the Draft EA which includes results from the noise analysis performed to assess the potential noise impacts of the Proposed Action on historic resources and populations located within the General Study Area. The MHC concurred with the APE on December 8, 2020 so the impacts were shown for historic resources throughout the entire Study Area. During the meeting, the FAA responded to a large number of questions from the community. These meetings were recorded and remain on the FAA's YouTube page for interested community members to review. During the meeting and other forms of engagement, the FAA received over 40 comments regarding the Proposed Action. The FAA is currently reviewing and developing responses to these comments to be shared with the public as part of the Final Environmental Assessment but it should be noted that none of the comments mention any potential impact to historic resources from the Proposed Action.

We look forward to hearing back from you on the FAA's proposed finding. We welcome the input from consulting parties on the historic properties considered as part of the analysis and on the finding itself. If you have any additional comments or questions on this undertaking, please contact me at veronda.johnson@faa.gov or at the address below.

Sincerely,

Veronda Johnson Eastern Service Center Federal Aviation Administration Operations Support Group AJV-E250 1701 Columbia Avenue College Park, GA 30337



of Transportation Federal Aviation Eastern Service Center

1701 Columbia Avenue College Park, Georgia 30337

Administration

June 9, 2021

Town of Sharon Historical Commission 90 South Main Street Sharon, MA 02067

Proposed Finding of No Adverse Effect for the Boston Logan International Airport RNAV (GPS) RWY 4L Approach Procedure, Boston, MA

To Whom It May Concern,

The Federal Aviation Administration (FAA) is evaluating a new proposed Area Navigation (RNAV) Global Positioning System (GPS) instrument approach procedure at Boston Logan International Airport (BOS). This new procedure would allow for aircraft to land onto Runway 4L with GPS technological automation as well as allow for landing during low visibility conditions. These additional procedural capabilities would increase the safety and efficiency of the airspace around BOS.

Pursuant to 36 CFR 800.4(a), the FAA previously consulted with the Massachusetts Historical Commission to identify the Area of Potential Effects for this undertaking. In continuing with our responsibilities under Section 106 of the National Historic Preservation Act and its implementing regulations, the FAA invites you to participate as a consulting parting and submits this assessment of adverse effects, which concludes with a proposed Finding of No Adverse Effects and our supporting rationale for that finding. The FAA seeks your views or comments on this finding, which can be addressed to the FAA using the email or address given at the conclusion of this letter. Pursuant to 36 CFR 800.5(c), please provide any comments within 30 days from receipt of this letter.

Project Background

As described in greater detail in the FAA's Draft Environmental Assessment (EA), which can be accessed at <u>www.faabostonworkshops.com</u>, the FAA is evaluating a new proposed Area Navigation (RNAV) Global Positioning System (GPS) instrument approach procedure at BOS. This new procedure, which is depicted in Attachments A and B, is needed to allow aircraft to land onto Runway 4L with GPS technological automation. The current absence of an RNAV procedure to Runway 4L precludes use of the runway during low visibility conditions. The proposed procedure route is an overlay of existing arrivals and is expected to lead to a net increase of 255 annual arrivals to BOS generally, which represents 0.1% of the total annual arrivals, and an increase of 359 annual arrivals specifically to Runway 4L. These additional

procedural capabilities would increase the safety and efficiency of the airspace around BOS. Publication of the proposed procedure would constitute an undertaking under Section 106 of the National Historic Preservation Act (NHPA).

Regulatory Overview

Under NEPA, the FAA is responsible for analyzing the impacts of its action on historical, architectural, archeological and cultural resources as part of its broader review of the human environment. Because the National Historic Preservation Act (NHPA) is the principal statute concerning such resources, most of this analysis is conducted in coordination with the process under Section 106 of the NHPA, which requires federal agencies to consider the effects of their projects on properties listed, or eligible for listing, in the National Register of Historic Places (NRHP). As this is an FAA Action, the FAA document *Section 106 of the National Historic Properties under Section 106 of the National Historic Properties under Section 106 of the National Historic Preservation Act* was consulted and referenced in order to make this determination.

Review of Historic/Eligible Properties

The National Register of Historic Places (NRHP), the Massachusetts Historical Commission, and the Boston Landmarks Commission's data sources were used to gather a comprehensive directory of all potential historic and cultural resources within the APE. A total of 19 properties within the APE were found to be listed in the National Register of Historic Places as historic districts or individual properties in accordance with the criteria described in the NHPA. These 19 properties are identified and described in Table 1. A total of 4,184 state and local designated properties were identified within the APE and are summarized by their location in Table 2. These 4,184 properties represent the group of potential resources that would be evaluated for National Register eligibility. For the purposes of this proposed finding, we assume all of these properties are eligible for the National Register and propose a finding of no adverse effect for all properties within the APE currently listed, determined eligible for listing, and assumed eligible for listing in the NRHP.

NRHP Property Name	Brief Property Description
Milton Cemetery	Milton Cemetery contains some of the best examples of funerary art from the colonial times to the Victorian era. An historic garden cemetery, it was established as the Town's only cemetery in 1672.
Spring Brook Cemetery	The most prominent structure in the cemetery, Card Memorial Chapel, was designed by Charles Eastman & built in 1898 and funded by Simon & Mary Card in memory of their daughter Lulu.
Dorchester Park	Dorchester Park is a historic park bounded by Dorchester Avenue, Richmond, Adams and Richview Streets in the Dorchester neighborhood of Boston, Massachusetts.

Table 1: National Register of Historic Places Properties within the APE

NRHP Property Name	Brief Property Description
DorchesterMilton Lower Mills Industrial District (Boundary Increase)	The Dorchester-Milton Lower Mills Industrial District is a historic district on both sides of the Neponset River in the Dorchester area of Boston and in the town of Milton, Massachusetts. It encompasses an industrial factory complex, most of which was historically associated with the Walter Baker & Company, the first major maker of chocolate products in the United States.
Savin Hill Historic District	The Savin Hill Historic District is significant for its association with the development of the area from a mid-19th century speculative housing development for Boston's upper-middle class to a close-knot neighborhood of residents from diverse socioeconomic backgrounds. The surviving historic resources catalogue Savin Hill's rich history and remain a cohesive collection of well-preserved historic homes. The district further attains significance as an intact collection of buildings representing a full range of architectural styles.
Blue Hills Parkway	The Blue Hills Parkway, a 1.5-mile-long boulevard in Boston and Milton, is significant as one of the earliest connecting parkways designed for the Metropolitan Parks Commission (MPC) by Olmsted, Olmsted and Eliot and its successor firm, Olmsted Brothers, and it is emblematic of the firm's principles of parkway creation. A divided highway that runs directly south through early 20"-century residential neighborhoods, the Blue Hills Parkway directly connects the Blue Hills Reservation (the largest open space in Metropolitan Boston) with Boston, the Neponset River Reservation, and Truman Parkway.
Blue Hills Reservation Parkways-Metropolitan Park System of Greater Boston	The Metropolitan Park System of Greater Boston, in Massachusetts, is especially noteworthy because it is the first regional park system in the United States.
Foxborough Pumping Station	The Foxborough Pumping Station is a historic water pumping station at 25 Pumping Station Road in Foxborough, Massachusetts. Its main pumphouse was designed by Ernest Boyden, a regionally-known architect of water supply systems, and was built in 1891; it is a brick structure with Queen Anne styling. The station also includes several historic wells, a period garage, and the man- made Fales Pond, a once-dammed section of the Neponset Reservoir near the pumphouse.
Old Harbor Reservation Parkways, Metropolitan Park System of Greater Boston	The Old Harbor Reservation Parkways are three historic roads in the Old Harbor area of Boston. They are part of the Boston parkway system designed by Frederick Law Olmsted.
Dorchester-Milton Lower Mills Industrial District	The Dorchester-Milton Lower Mills Industrial District is located on both sides of the Neponset River in the Dorchester area of Boston and in the town of Milton, Massachusetts. It encompasses an industrial factory complex, most of which was historically associated with the Walter Baker & Company, the first major maker of chocolate products in the United States.

NRHP Property Name	Brief Property Description
Furnace Village Historic District	The Furnace Village Historic District encompasses the historic colonial industrial area in Easton, Massachusetts. At its center is at the intersection of Foundry street, South street and Poquanticut Avenue. The area was settled in 1723, with industrial activity beginning in 1742. The iron furnace was established in 1751, and for industrial purposes, continued in the 19th century. In addition to the colonial era, there is also an employee of the housing of the 19th century.
Milton Centre Historic District	The Milton Centre Historic District is both the historical and geographic center of the town of Milton. The 23-acre historic district includes Canton Avenue between Reedsdale Road and Thacher and Highland Streets. Milton Centre is historically significant for its association with the development of the town following the relocation of the third meeting house to Academy Hill in 1728, and the subsequent shift of the town center from Milton Hill.
Scott's Woods Historic District	Scott's Woods Historic District is the area of Hillside, Harland and Forest Streets between Randolph Avenue and the ridge between Hancock and Bugbee Hills, now the MDC Blue Hills Reservation. The Scott's Woods Historic District in Milton, Massachusetts is a semirural, residential area that contains a significant concentration of 18th, 19th and early 20th century dwellings and barns that reflect the Town's agricultural and architectural history from 1713 to 1932, the district's period of significance. Originally known as the "Blue Hill Land," a three thousand-acre tract of land sold by the town of Boston in 1711 to four residents of Milton. The area in the southwest part of Milton is thought to have been named for a member of the Scott Family that lived in the area in the early eighteenth century. Hillside Street, named for being literally on the 'side' of Blue Hill, is the major thoroughfare in the district.
Milton Hill Historic District	Milton Hill Historic District is located on a lofty hill between Milton Village and Algerene Corner, formerly known as Union Square at the junction of Adams and Centre Streets. The Milton Hill Historic District in Milton, Massachusetts is a residential area that contains the most significant concentration of 19th and early 20th century high-style and period architecture in the Town. As Milton developed from a rural community to a prosperous suburb of Boston, Milton Hill, throughout the period of significance, 1740-1945, has been the home of wealthy Milton and Boston business, professional and civic leaders. It began its rise to prominence as an estate district in 1742 with the establishment of Governor Thomas Hutchinson's summer estate. For the next two hundred years, attracted by the rural scenery afforded by the Neponset River and the Blue Hills and the proximity of the Town's commercial center and Boston, prominent families built country homes, a number designed by noted national and local architects, including William Ralph Emerson; Peabody and Steams; and Perry, Shaw and Hepbum.

NRHP Property Name	Brief Property Description	
Harrison Square Historic District	Clam Point (also known as Harrison Square) is a sub-neighborhood in Boston, noteworthy for its collection of substantial Italianate Mansard residences. The area is known to have the most cohesive, intact collection of mansion-scale, mid-19 th century housing in Boston, and includes the Park, Everett, Freeport, Mill, Ashland, Blanche streets, and Victory Road in the Dorchester neighborhood of Boston.	
Canton Corner Historic District	The Canton Corner Historic District encompasses the historic town center of Canton, Massachusetts. Centered on the junction of Pleasant and Washington streets, it includes more than 25 properties and 170 acres (69 ha), whose architectural history spans 250 years of occupation and includes the town's major civic buildings.	
Ponkapoag Camp of Appalachian Mountain Club	The Appalachian Mountain Club Ponkapoag Camp is one of the original camps of the oldest outing club in the United States, founded in 1876. Early in the twentieth century tent sites were established at the east end of Ponkapoag Pond in the Blue Hills reservation by the president of the Appalachian Mountain Club, William Rogers, who was also an M.D.C. commissioner. The camp represents an early outing club's architecture for "roughing it" and are important as such structures succumb to fire, rot, and vandalism.	
Boyden, Seth, House	The Seth Boyden House is a historic house at 135 Oak Street in Foxborough, Massachusetts. The home is significant for its unusual architectural design as well for its association with the Boyden family, whose members were prominent locally and regionally in the 18 th and 19 th century,	
Borderland Historic District	The Borderland Historic District was the 1,200 acre estate of Blanche Ames Ames. The mansion was constructed in 1910 and the property includes a system of ponds, dams, and causeways surrounding the mansion. The exterior of the mansion was built using locally cut field stones. The district is considered significant due to its connection to the estate of Blanche Ames Ames. She was a inventor who was involved in art, farming, engineering and politics. She designed a hexagonal lumber cutter, patented a method for ensnaring airplanes in wires hung from balloons during World War II, and developed a water anti-pollution device in the late 1960s.	
SOURCE: National Register Database; https://www.nps.gov/subjects/nationalregister/database-research.htm#table, Adapted by Environmental Science Associates, 2021.		

Town	Number of State & Local Designated Properties
Boston	838
Canton	445
Easton	142
Foxborough	194
Mansfield	190
Milton	1,559
Norton	16
Quincy	2
Randolph	225
Sharon	491
Stoughton	82
Grand Total	4,184

Table 2: Number of State & Local Designated Properties within the APE

Assessment of Noise and Visual Impacts by Proposed Action

In our earlier correspondence, the FAA noted that we are "considering the possibility that changes in noise levels or additional visual impacts from an increase in overflights could alter the character or use of certain kinds of historic properties where a quiet setting is a generally recognized purpose and attribute." In order to address this possibility, an assessment was done to further quantify the auditory and visual impacts on the historic properties within the Area of Potential Effects.

In order to assess the auditory impacts, the FAA used a metric known as Day-night Average Sound Level (DNL). DNL is the standard noise metric used for all FAA studies of aviation noise exposure in airport communities and was used here to assess the potential impact on every identified historic property within the Area of Potential Effects.

DNL is a 24-hour, time-weighted average noise metric, expressed in terms of decibel units of sound heard by the human ear, which accounts for the noise levels of individual aircraft events, the number of times those events occur, and the time of day they occur. DNL is a graphical representation of the distribution of noise over the surrounding area from an airport's average operations. There is one unique modification in that there is a "noise penalty" of any noise generated during "nighttime hours." In the calculation of DNL, for each hour during nighttime hours (10:00 p.m. to 7:00 a.m.), the sound levels are increased by a 10 decibel-weighting penalty (equivalent to a 10-fold increase in aircraft operations) before the 24-hour value is computed. The weighting penalty accounts for the more intrusive nature of noise during the nighttime hours. The significance thresholds for aircraft noise for DNL, as spelled out in FAA Order 1050.1F, are given below.

• For DNL 65 dB and higher: +1.5 dB

This threshold has been used by FAA for many years and is applied at airports across the country and will be used to determine noise impacts on historic properties within the APE. The use of this threshold is consistent with the Section 106 analyses for many FAA projects, including the Northern California and Southern Florida Metroplex projects, two of FAA's most recent projects that also modified the flight path of aircraft through the airspace.

According to FAA Order 1050.1F, a significant noise impact could occur to noise sensitive land uses if it had a level of DNL 65 dB with the Proposed Action and also experienced an increase of 1.5 dB when compared to the No Action Alternative. The FAA also recognizes that, in limited instances, resources that have a "quiet setting" as a qualifying attribute may be adversely affected by noise increases that would otherwise not be significant. There are no NRHP properties with a noise exposure of DNL 65 that experience a 1.5 dB noise increase. Further, the NRHP properties were reviewed and none of them were found to have a "quiet setting" as described in the FAA's Section 106 Handbook.

When the analysis is expanded to include the state and local designated properties that are assumed to be eligible for the NRHP, there are no properties that experience a 1.5 dB noise level increase with a proposed action noise level of DNL 65 or greater. As indicated in Table 4.6-3 of the Draft EA, the maximum exposed noise level *decreases* as a result of the Proposed Project

when compared to the No Action Alternative when considering towns/neighborhoods as a whole. Furthermore, as described below, the largest proposed noise changes within the APE are multiple orders of magnitude below the noise thresholds given within FAA Order 1050.1F.

The FAA's noise analysis demonstrates that historic resources will generally experience equivalent noise exposure with the addition of the Proposed Action. Specifically, the maximum change in noise exposure for a historic property is less than 0.2 dB across all historic properties in the APE. For example, one of these properties has a value of 22 dB under the No Action Alternative and 22.1 dB with the Proposed Procedure. Importantly, as depicted in Attachment A, the procedure is an overlay of existing traffic to Runway 4L and is only expected to lead to an annual net increase of 255 arrivals to BOS, out of a current total of 205,837 arrivals. In sum, the FAA will not be introducing audible impacts to resources not already experiencing noise impacts, and any change in noise exposure will be minimal.

In order to assess the potential visual impacts of the historic properties, the data for a year of overflights at BOS from the previous memorandum was reassessed to compare to the newly designated APE. Considering one year of radar track data, the APE experiences 78,879 arrival and 18,989 departure overflights annually. On an average daily basis that corresponds to 216.1 arrival and 52.0 departure overflights. The Proposed Action is estimated to add 255 annual arrival overflights or 0.70 daily average overflights to the APE. When considering the APE as a whole, the increase in overflights would amount to just a 0.26% increase in overflights and would not introduce audible or visual noise in the APE. In order to confirm that the overflights over the APE were not focused on particular historic resources in the APE, the dataset of departure overflights and arrival overflights was mapped over the APE in Attachments A and B respectively. Attachment A shows that the APE areas closest to the airport are already dense with overflights but the flights become more disperse as the APE moves to the southwest. However, Attachment B, which displays a year of arrival radar tracks, show that the APE is already heavily overflown over the full extent of the APE.

For more information on the analyses performed as a part of the Draft EA, please visit <u>www.faabostonworkshops.com</u> for a copy of the Draft EA. More information on the noise analysis can be found at <u>www.faabostonworkshops.com/noise-visualization/</u> and in Sections 3.4.6 and 4.6 of the Draft EA. The Noise Modeling Technical Report is included in Appendix D of the Draft EA.



SOURCE: Esri; RoVolus, 2021; ESA, 2021



Boston Logan RNAV (GPS) RWY 4L EA



SOURCE: Esri; RoVolus, 2021; ESA, 2021



Finding of No Adverse Effect Criteria

In order to establish a Finding of No Adverse Effect, the Proposed Action must not meet any of the criteria spelled out in the FAA's Section 106 Handbook, which are based on criteria in ACHP's section 106 regulations in 36 CFR Part 800. This section presents why the Proposed Action does not meet any of these criteria.

- Does the Proposed Action physically destroy or damage the property?
 - The Proposed Action will not have any physical impact on any property. The Proposed Action changes the location of arrival flights in the airspace around Boston Logan International Airport.
- Does the Proposed Action alter the property in any way that is consistent with the Secretary of the Interior's Standards for Treatment of Historic Properties (36 CFR Part 68)?
 - The Standards guide the design and implementation of physical changes to historic properties. This may include changes in use, material repair or substitution, or modification of historically important features. The Proposed Action is located in the airspace above historic resources does not result in any changes in use, material alteration, or physical modifications to these resources.
- Does the Proposed Action remove a property from its historic location?
 - \circ The Proposed Action does not remove any property from its location.
- Does the Proposed Action change the character of the property's use, or of physical features within the property's setting that contribute to its historic significance?
 - The Proposed Action does not change the character of a property's use or any physical features in any historical property's setting.
 - Any changes to setting as a result of the Proposed action would be audible or visual features which are discussed in the following criterion.
- Does the Proposed Action introduce an atmospheric, audible, or visual feature to the area that would diminish the integrity of the property's significant historic features?
 - Audible: there will not be an introduction of audible noise as a result of the Proposed Action. Furthermore, the noise impacts of the Proposed Action on all of the historic resources in the APE will either decrease noise exposure or cause increases that are orders of magnitude below the significance thresholds for DNL aircraft noise as described in FAA Order 1050.1F and therefore will not cause an introduction of audible impact on any of the properties.
 - Visual: there will not be an introduction of visual impacts as a result of the Proposed Action. Furthermore, the entire APE currently experiences 268 average daily overflights as described in the above analysis. The Proposed Action will add less than 1 additional overflight per day. This increase will not change the current visual features of any historic resource in the APE, as depicted in Attachment B.
- Does the Proposed Action result in neglect of a property which would result in its deterioration, transfer, sale or lease?
• The Proposed Action will not cause any property to be sold or transferred.

Given the results discussed in this letter, the FAA is putting forth at this point a Proposed Finding of No Adverse Effect. This determination is based on the findings discussed in this letter, which includes that none of the NRHP listed properties reviewed herein were found to have a "quiet setting" as described in the FAA's Section 106 Handbook. Furthermore, the net change in aircraft operations as a result of the Proposed Action would be minimal and would not cause an adverse effect, including no physical impacts and no introduction of audible or visual impacts within the APE.

Public Meetings, Comments, and Consultation

The FAA conducted Virtual Public Workshops for the Draft EA on October 23rd, and October 28th, 2020. By attending the Virtual Public Workshops, participants were provided with an overview of the Draft EA which includes results from the noise analysis performed to assess the potential noise impacts of the Proposed Action on historic resources and populations located within the General Study Area. The MHC concurred with the APE on December 8, 2020 so the impacts were shown for historic resources throughout the entire Study Area. During the meeting, the FAA responded to a large number of questions from the community. These meetings were recorded and remain on the FAA's YouTube page for interested community members to review. During the meeting and other forms of engagement, the FAA received over 40 comments regarding the Proposed Action. The FAA is currently reviewing and developing responses to these comments to be shared with the public as part of the Final Environmental Assessment but it should be noted that none of the comments mention any potential impact to historic resources from the Proposed Action.

We look forward to hearing back from you on the FAA's proposed finding. We welcome the input from consulting parties on the historic properties considered as part of the analysis and on the finding itself. If you have any additional comments or questions on this undertaking, please contact me at veronda.johnson@faa.gov or at the address below.

Sincerely,

Veronda Johnson Eastern Service Center Federal Aviation Administration Operations Support Group AJV-E250 1701 Columbia Avenue College Park, GA 30337



U.S. Department of Transportation

Eastern Service Center

1701 Columbia Avenue College Park, Georgia 30337

Federal Aviation Administration

June 9, 2021

Town of Sharon Planning Board 90 South Main Street Sharon, MA 02067

Proposed Finding of No Adverse Effect for the Boston Logan International Airport RNAV (GPS) RWY 4L Approach Procedure, Boston, MA

To Whom It May Concern,

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Pursuant to 36 CFR 800.4(a), the FAA previously consulted with the Massachusetts Historical Commission to identify the Area of Potential Effects for this undertaking. In continuing with our responsibilities under Section 106 of the National Historic Preservation Act and its implementing regulations, the FAA invites you to participate as a consulting parting and submits this assessment of adverse effects, which concludes with a proposed Finding of No Adverse Effects and our supporting rationale for that finding. The FAA seeks your views or comments on this finding, which can be addressed to the FAA using the email or address given at the conclusion of this letter. Pursuant to 36 CFR 800.5(c), please provide any comments within 30 days from receipt of this letter.

Project Background

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procedural capabilities would increase the safety and efficiency of the airspace around BOS. Publication of the proposed procedure would constitute an undertaking under Section 106 of the National Historic Preservation Act (NHPA).

Regulatory Overview

Under NEPA, the FAA is responsible for analyzing the impacts of its action on historical, architectural, archeological and cultural resources as part of its broader review of the human environment. Because the National Historic Preservation Act (NHPA) is the principal statute concerning such resources, most of this analysis is conducted in coordination with the process under Section 106 of the NHPA, which requires federal agencies to consider the effects of their projects on properties listed, or eligible for listing, in the National Register of Historic Places (NRHP). As this is an FAA Action, the FAA document *Section 106 of the National Historic Properties under Section 106 of the National Historic Properties under Section 106 of the National Historic Preservation Act* was consulted and referenced in order to make this determination.

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The National Register of Historic Places (NRHP), the Massachusetts Historical Commission, and the Boston Landmarks Commission's data sources were used to gather a comprehensive directory of all potential historic and cultural resources within the APE. A total of 19 properties within the APE were found to be listed in the National Register of Historic Places as historic districts or individual properties in accordance with the criteria described in the NHPA. These 19 properties are identified and described in Table 1. A total of 4,184 state and local designated properties were identified within the APE and are summarized by their location in Table 2. These 4,184 properties represent the group of potential resources that would be evaluated for National Register eligibility. For the purposes of this proposed finding, we assume all of these properties are eligible for the National Register and propose a finding of no adverse effect for all properties within the APE currently listed, determined eligible for listing, and assumed eligible for listing in the NRHP.

NRHP Property Name	Brief Property Description
Milton Cemetery	Milton Cemetery contains some of the best examples of funerary art from the colonial times to the Victorian era. An historic garden cemetery, it was established as the Town's only cemetery in 1672.
Spring Brook Cemetery	The most prominent structure in the cemetery, Card Memorial Chapel, was designed by Charles Eastman & built in 1898 and funded by Simon & Mary Card in memory of their daughter Lulu.
Dorchester Park	Dorchester Park is a historic park bounded by Dorchester Avenue, Richmond, Adams and Richview Streets in the Dorchester neighborhood of Boston, Massachusetts.

Table 1: National Register of Historic Places Properties within the APE

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Savin Hill Historic District	The Savin Hill Historic District is significant for its association with the development of the area from a mid-19th century speculative housing development for Boston's upper-middle class to a close-knot neighborhood of residents from diverse socioeconomic backgrounds. The surviving historic resources catalogue Savin Hill's rich history and remain a cohesive collection of well-preserved historic homes. The district further attains significance as an intact collection of buildings representing a full range of architectural styles.
Blue Hills Parkway	The Blue Hills Parkway, a 1.5-mile-long boulevard in Boston and Milton, is significant as one of the earliest connecting parkways designed for the Metropolitan Parks Commission (MPC) by Olmsted, Olmsted and Eliot and its successor firm, Olmsted Brothers, and it is emblematic of the firm's principles of parkway creation. A divided highway that runs directly south through early 20"-century residential neighborhoods, the Blue Hills Parkway directly connects the Blue Hills Reservation (the largest open space in Metropolitan Boston) with Boston, the Neponset River Reservation, and Truman Parkway.
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Borderland Historic District	The Borderland Historic District was the 1,200 acre estate of Blanche Ames Ames. The mansion was constructed in 1910 and the property includes a system of ponds, dams, and causeways surrounding the mansion. The exterior of the mansion was built using locally cut field stones. The district is considered significant due to its connection to the estate of Blanche Ames Ames. She was a inventor who was involved in art, farming, engineering and politics. She designed a hexagonal lumber cutter, patented a method for ensnaring airplanes in wires hung from balloons during World War II, and developed a water anti-pollution device in the late 1960s.
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Table 2: Number of State & Local Designated Properties within the APE

Assessment of Noise and Visual Impacts by Proposed Action

In our earlier correspondence, the FAA noted that we are "considering the possibility that changes in noise levels or additional visual impacts from an increase in overflights could alter the character or use of certain kinds of historic properties where a quiet setting is a generally recognized purpose and attribute." In order to address this possibility, an assessment was done to further quantify the auditory and visual impacts on the historic properties within the Area of Potential Effects.

In order to assess the auditory impacts, the FAA used a metric known as Day-night Average Sound Level (DNL). DNL is the standard noise metric used for all FAA studies of aviation noise exposure in airport communities and was used here to assess the potential impact on every identified historic property within the Area of Potential Effects.

DNL is a 24-hour, time-weighted average noise metric, expressed in terms of decibel units of sound heard by the human ear, which accounts for the noise levels of individual aircraft events, the number of times those events occur, and the time of day they occur. DNL is a graphical representation of the distribution of noise over the surrounding area from an airport's average operations. There is one unique modification in that there is a "noise penalty" of any noise generated during "nighttime hours." In the calculation of DNL, for each hour during nighttime hours (10:00 p.m. to 7:00 a.m.), the sound levels are increased by a 10 decibel-weighting penalty (equivalent to a 10-fold increase in aircraft operations) before the 24-hour value is computed. The weighting penalty accounts for the more intrusive nature of noise during the nighttime hours. The significance thresholds for aircraft noise for DNL, as spelled out in FAA Order 1050.1F, are given below.

• For DNL 65 dB and higher: +1.5 dB

This threshold has been used by FAA for many years and is applied at airports across the country and will be used to determine noise impacts on historic properties within the APE. The use of this threshold is consistent with the Section 106 analyses for many FAA projects, including the Northern California and Southern Florida Metroplex projects, two of FAA's most recent projects that also modified the flight path of aircraft through the airspace.

According to FAA Order 1050.1F, a significant noise impact could occur to noise sensitive land uses if it had a level of DNL 65 dB with the Proposed Action and also experienced an increase of 1.5 dB when compared to the No Action Alternative. The FAA also recognizes that, in limited instances, resources that have a "quiet setting" as a qualifying attribute may be adversely affected by noise increases that would otherwise not be significant. There are no NRHP properties with a noise exposure of DNL 65 that experience a 1.5 dB noise increase. Further, the NRHP properties were reviewed and none of them were found to have a "quiet setting" as described in the FAA's Section 106 Handbook.

When the analysis is expanded to include the state and local designated properties that are assumed to be eligible for the NRHP, there are no properties that experience a 1.5 dB noise level increase with a proposed action noise level of DNL 65 or greater. As indicated in Table 4.6-3 of the Draft EA, the maximum exposed noise level *decreases* as a result of the Proposed Project

when compared to the No Action Alternative when considering towns/neighborhoods as a whole. Furthermore, as described below, the largest proposed noise changes within the APE are multiple orders of magnitude below the noise thresholds given within FAA Order 1050.1F.

The FAA's noise analysis demonstrates that historic resources will generally experience equivalent noise exposure with the addition of the Proposed Action. Specifically, the maximum change in noise exposure for a historic property is less than 0.2 dB across all historic properties in the APE. For example, one of these properties has a value of 22 dB under the No Action Alternative and 22.1 dB with the Proposed Procedure. Importantly, as depicted in Attachment A, the procedure is an overlay of existing traffic to Runway 4L and is only expected to lead to an annual net increase of 255 arrivals to BOS, out of a current total of 205,837 arrivals. In sum, the FAA will not be introducing audible impacts to resources not already experiencing noise impacts, and any change in noise exposure will be minimal.

In order to assess the potential visual impacts of the historic properties, the data for a year of overflights at BOS from the previous memorandum was reassessed to compare to the newly designated APE. Considering one year of radar track data, the APE experiences 78,879 arrival and 18,989 departure overflights annually. On an average daily basis that corresponds to 216.1 arrival and 52.0 departure overflights. The Proposed Action is estimated to add 255 annual arrival overflights or 0.70 daily average overflights to the APE. When considering the APE as a whole, the increase in overflights would amount to just a 0.26% increase in overflights and would not introduce audible or visual noise in the APE. In order to confirm that the overflights over the APE were not focused on particular historic resources in the APE, the dataset of departure overflights and arrival overflights was mapped over the APE in Attachments A and B respectively. Attachment A shows that the APE areas closest to the airport are already dense with overflights but the flights become more disperse as the APE moves to the southwest. However, Attachment B, which displays a year of arrival radar tracks, show that the APE is already heavily overflown over the full extent of the APE.

For more information on the analyses performed as a part of the Draft EA, please visit <u>www.faabostonworkshops.com</u> for a copy of the Draft EA. More information on the noise analysis can be found at <u>www.faabostonworkshops.com/noise-visualization/</u> and in Sections 3.4.6 and 4.6 of the Draft EA. The Noise Modeling Technical Report is included in Appendix D of the Draft EA.



SOURCE: Esri; RoVolus, 2021; ESA, 2021



Boston Logan RNAV (GPS) RWY 4L EA



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Finding of No Adverse Effect Criteria

In order to establish a Finding of No Adverse Effect, the Proposed Action must not meet any of the criteria spelled out in the FAA's Section 106 Handbook, which are based on criteria in ACHP's section 106 regulations in 36 CFR Part 800. This section presents why the Proposed Action does not meet any of these criteria.

- Does the Proposed Action physically destroy or damage the property?
 - The Proposed Action will not have any physical impact on any property. The Proposed Action changes the location of arrival flights in the airspace around Boston Logan International Airport.
- Does the Proposed Action alter the property in any way that is consistent with the Secretary of the Interior's Standards for Treatment of Historic Properties (36 CFR Part 68)?
 - The Standards guide the design and implementation of physical changes to historic properties. This may include changes in use, material repair or substitution, or modification of historically important features. The Proposed Action is located in the airspace above historic resources does not result in any changes in use, material alteration, or physical modifications to these resources.
- Does the Proposed Action remove a property from its historic location?
 - \circ The Proposed Action does not remove any property from its location.
- Does the Proposed Action change the character of the property's use, or of physical features within the property's setting that contribute to its historic significance?
 - The Proposed Action does not change the character of a property's use or any physical features in any historical property's setting.
 - Any changes to setting as a result of the Proposed action would be audible or visual features which are discussed in the following criterion.
- Does the Proposed Action introduce an atmospheric, audible, or visual feature to the area that would diminish the integrity of the property's significant historic features?
 - Audible: there will not be an introduction of audible noise as a result of the Proposed Action. Furthermore, the noise impacts of the Proposed Action on all of the historic resources in the APE will either decrease noise exposure or cause increases that are orders of magnitude below the significance thresholds for DNL aircraft noise as described in FAA Order 1050.1F and therefore will not cause an introduction of audible impact on any of the properties.
 - Visual: there will not be an introduction of visual impacts as a result of the Proposed Action. Furthermore, the entire APE currently experiences 268 average daily overflights as described in the above analysis. The Proposed Action will add less than 1 additional overflight per day. This increase will not change the current visual features of any historic resource in the APE, as depicted in Attachment B.
- Does the Proposed Action result in neglect of a property which would result in its deterioration, transfer, sale or lease?

• The Proposed Action will not cause any property to be sold or transferred.

Given the results discussed in this letter, the FAA is putting forth at this point a Proposed Finding of No Adverse Effect. This determination is based on the findings discussed in this letter, which includes that none of the NRHP listed properties reviewed herein were found to have a "quiet setting" as described in the FAA's Section 106 Handbook. Furthermore, the net change in aircraft operations as a result of the Proposed Action would be minimal and would not cause an adverse effect, including no physical impacts and no introduction of audible or visual impacts within the APE.

Public Meetings, Comments, and Consultation

The FAA conducted Virtual Public Workshops for the Draft EA on October 23rd, and October 28th, 2020. By attending the Virtual Public Workshops, participants were provided with an overview of the Draft EA which includes results from the noise analysis performed to assess the potential noise impacts of the Proposed Action on historic resources and populations located within the General Study Area. The MHC concurred with the APE on December 8, 2020 so the impacts were shown for historic resources throughout the entire Study Area. During the meeting, the FAA responded to a large number of questions from the community. These meetings were recorded and remain on the FAA's YouTube page for interested community members to review. During the meeting and other forms of engagement, the FAA received over 40 comments regarding the Proposed Action. The FAA is currently reviewing and developing responses to these comments to be shared with the public as part of the Final Environmental Assessment but it should be noted that none of the comments mention any potential impact to historic resources from the Proposed Action.

We look forward to hearing back from you on the FAA's proposed finding. We welcome the input from consulting parties on the historic properties considered as part of the analysis and on the finding itself. If you have any additional comments or questions on this undertaking, please contact me at veronda.johnson@faa.gov or at the address below.

Sincerely,

Veronda Johnson Eastern Service Center Federal Aviation Administration Operations Support Group AJV-E250 1701 Columbia Avenue College Park, GA 30337



of Transportation Federal Aviation Eastern Service Center

1701 Columbia Avenue College Park, Georgia 30337

Administration

June 9, 2021

Town of Stoughton Historical Commission 10 Pearl Street Stoughton, MA 02072

Proposed Finding of No Adverse Effect for the Boston Logan International Airport RNAV (GPS) RWY 4L Approach Procedure, Boston, MA

To Whom It May Concern,

The Federal Aviation Administration (FAA) is evaluating a new proposed Area Navigation (RNAV) Global Positioning System (GPS) instrument approach procedure at Boston Logan International Airport (BOS). This new procedure would allow for aircraft to land onto Runway 4L with GPS technological automation as well as allow for landing during low visibility conditions. These additional procedural capabilities would increase the safety and efficiency of the airspace around BOS.

Pursuant to 36 CFR 800.4(a), the FAA previously consulted with the Massachusetts Historical Commission to identify the Area of Potential Effects for this undertaking. In continuing with our responsibilities under Section 106 of the National Historic Preservation Act and its implementing regulations, the FAA invites you to participate as a consulting parting and submits this assessment of adverse effects, which concludes with a proposed Finding of No Adverse Effects and our supporting rationale for that finding. The FAA seeks your views or comments on this finding, which can be addressed to the FAA using the email or address given at the conclusion of this letter. Pursuant to 36 CFR 800.5(c), please provide any comments within 30 days from receipt of this letter.

Project Background

As described in greater detail in the FAA's Draft Environmental Assessment (EA), which can be accessed at <u>www.faabostonworkshops.com</u>, the FAA is evaluating a new proposed Area Navigation (RNAV) Global Positioning System (GPS) instrument approach procedure at BOS. This new procedure, which is depicted in Attachments A and B, is needed to allow aircraft to land onto Runway 4L with GPS technological automation. The current absence of an RNAV procedure to Runway 4L precludes use of the runway during low visibility conditions. The proposed procedure route is an overlay of existing arrivals and is expected to lead to a net increase of 255 annual arrivals to BOS generally, which represents 0.1% of the total annual arrivals, and an increase of 359 annual arrivals specifically to Runway 4L. These additional

procedural capabilities would increase the safety and efficiency of the airspace around BOS. Publication of the proposed procedure would constitute an undertaking under Section 106 of the National Historic Preservation Act (NHPA).

Regulatory Overview

Under NEPA, the FAA is responsible for analyzing the impacts of its action on historical, architectural, archeological and cultural resources as part of its broader review of the human environment. Because the National Historic Preservation Act (NHPA) is the principal statute concerning such resources, most of this analysis is conducted in coordination with the process under Section 106 of the NHPA, which requires federal agencies to consider the effects of their projects on properties listed, or eligible for listing, in the National Register of Historic Places (NRHP). As this is an FAA Action, the FAA document *Section 106 of the National Historic Properties under Section 106 of the National Historic Properties under Section 106 of the National Historic Preservation Act* was consulted and referenced in order to make this determination.

Review of Historic/Eligible Properties

The National Register of Historic Places (NRHP), the Massachusetts Historical Commission, and the Boston Landmarks Commission's data sources were used to gather a comprehensive directory of all potential historic and cultural resources within the APE. A total of 19 properties within the APE were found to be listed in the National Register of Historic Places as historic districts or individual properties in accordance with the criteria described in the NHPA. These 19 properties are identified and described in Table 1. A total of 4,184 state and local designated properties were identified within the APE and are summarized by their location in Table 2. These 4,184 properties represent the group of potential resources that would be evaluated for National Register eligibility. For the purposes of this proposed finding, we assume all of these properties are eligible for the National Register and propose a finding of no adverse effect for all properties within the APE currently listed, determined eligible for listing, and assumed eligible for listing in the NRHP.

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This threshold has been used by FAA for many years and is applied at airports across the country and will be used to determine noise impacts on historic properties within the APE. The use of this threshold is consistent with the Section 106 analyses for many FAA projects, including the Northern California and Southern Florida Metroplex projects, two of FAA's most recent projects that also modified the flight path of aircraft through the airspace.

According to FAA Order 1050.1F, a significant noise impact could occur to noise sensitive land uses if it had a level of DNL 65 dB with the Proposed Action and also experienced an increase of 1.5 dB when compared to the No Action Alternative. The FAA also recognizes that, in limited instances, resources that have a "quiet setting" as a qualifying attribute may be adversely affected by noise increases that would otherwise not be significant. There are no NRHP properties with a noise exposure of DNL 65 that experience a 1.5 dB noise increase. Further, the NRHP properties were reviewed and none of them were found to have a "quiet setting" as described in the FAA's Section 106 Handbook.

When the analysis is expanded to include the state and local designated properties that are assumed to be eligible for the NRHP, there are no properties that experience a 1.5 dB noise level increase with a proposed action noise level of DNL 65 or greater. As indicated in Table 4.6-3 of the Draft EA, the maximum exposed noise level *decreases* as a result of the Proposed Project

when compared to the No Action Alternative when considering towns/neighborhoods as a whole. Furthermore, as described below, the largest proposed noise changes within the APE are multiple orders of magnitude below the noise thresholds given within FAA Order 1050.1F.

The FAA's noise analysis demonstrates that historic resources will generally experience equivalent noise exposure with the addition of the Proposed Action. Specifically, the maximum change in noise exposure for a historic property is less than 0.2 dB across all historic properties in the APE. For example, one of these properties has a value of 22 dB under the No Action Alternative and 22.1 dB with the Proposed Procedure. Importantly, as depicted in Attachment A, the procedure is an overlay of existing traffic to Runway 4L and is only expected to lead to an annual net increase of 255 arrivals to BOS, out of a current total of 205,837 arrivals. In sum, the FAA will not be introducing audible impacts to resources not already experiencing noise impacts, and any change in noise exposure will be minimal.

In order to assess the potential visual impacts of the historic properties, the data for a year of overflights at BOS from the previous memorandum was reassessed to compare to the newly designated APE. Considering one year of radar track data, the APE experiences 78,879 arrival and 18,989 departure overflights annually. On an average daily basis that corresponds to 216.1 arrival and 52.0 departure overflights. The Proposed Action is estimated to add 255 annual arrival overflights or 0.70 daily average overflights to the APE. When considering the APE as a whole, the increase in overflights would amount to just a 0.26% increase in overflights and would not introduce audible or visual noise in the APE. In order to confirm that the overflights over the APE were not focused on particular historic resources in the APE, the dataset of departure overflights and arrival overflights was mapped over the APE in Attachments A and B respectively. Attachment A shows that the APE areas closest to the airport are already dense with overflights but the flights become more disperse as the APE moves to the southwest. However, Attachment B, which displays a year of arrival radar tracks, show that the APE is already heavily overflown over the full extent of the APE.

For more information on the analyses performed as a part of the Draft EA, please visit <u>www.faabostonworkshops.com</u> for a copy of the Draft EA. More information on the noise analysis can be found at <u>www.faabostonworkshops.com/noise-visualization/</u> and in Sections 3.4.6 and 4.6 of the Draft EA. The Noise Modeling Technical Report is included in Appendix D of the Draft EA.



SOURCE: Esri; RoVolus, 2021; ESA, 2021



Boston Logan RNAV (GPS) RWY 4L EA



SOURCE: Esri; RoVolus, 2021; ESA, 2021



Finding of No Adverse Effect Criteria

In order to establish a Finding of No Adverse Effect, the Proposed Action must not meet any of the criteria spelled out in the FAA's Section 106 Handbook, which are based on criteria in ACHP's section 106 regulations in 36 CFR Part 800. This section presents why the Proposed Action does not meet any of these criteria.

- Does the Proposed Action physically destroy or damage the property?
 - The Proposed Action will not have any physical impact on any property. The Proposed Action changes the location of arrival flights in the airspace around Boston Logan International Airport.
- Does the Proposed Action alter the property in any way that is consistent with the Secretary of the Interior's Standards for Treatment of Historic Properties (36 CFR Part 68)?
 - The Standards guide the design and implementation of physical changes to historic properties. This may include changes in use, material repair or substitution, or modification of historically important features. The Proposed Action is located in the airspace above historic resources does not result in any changes in use, material alteration, or physical modifications to these resources.
- Does the Proposed Action remove a property from its historic location?
 - \circ The Proposed Action does not remove any property from its location.
- Does the Proposed Action change the character of the property's use, or of physical features within the property's setting that contribute to its historic significance?
 - The Proposed Action does not change the character of a property's use or any physical features in any historical property's setting.
 - Any changes to setting as a result of the Proposed action would be audible or visual features which are discussed in the following criterion.
- Does the Proposed Action introduce an atmospheric, audible, or visual feature to the area that would diminish the integrity of the property's significant historic features?
 - Audible: there will not be an introduction of audible noise as a result of the Proposed Action. Furthermore, the noise impacts of the Proposed Action on all of the historic resources in the APE will either decrease noise exposure or cause increases that are orders of magnitude below the significance thresholds for DNL aircraft noise as described in FAA Order 1050.1F and therefore will not cause an introduction of audible impact on any of the properties.
 - Visual: there will not be an introduction of visual impacts as a result of the Proposed Action. Furthermore, the entire APE currently experiences 268 average daily overflights as described in the above analysis. The Proposed Action will add less than 1 additional overflight per day. This increase will not change the current visual features of any historic resource in the APE, as depicted in Attachment B.
- Does the Proposed Action result in neglect of a property which would result in its deterioration, transfer, sale or lease?

• The Proposed Action will not cause any property to be sold or transferred.

Given the results discussed in this letter, the FAA is putting forth at this point a Proposed Finding of No Adverse Effect. This determination is based on the findings discussed in this letter, which includes that none of the NRHP listed properties reviewed herein were found to have a "quiet setting" as described in the FAA's Section 106 Handbook. Furthermore, the net change in aircraft operations as a result of the Proposed Action would be minimal and would not cause an adverse effect, including no physical impacts and no introduction of audible or visual impacts within the APE.

Public Meetings, Comments, and Consultation

The FAA conducted Virtual Public Workshops for the Draft EA on October 23rd, and October 28th, 2020. By attending the Virtual Public Workshops, participants were provided with an overview of the Draft EA which includes results from the noise analysis performed to assess the potential noise impacts of the Proposed Action on historic resources and populations located within the General Study Area. The MHC concurred with the APE on December 8, 2020 so the impacts were shown for historic resources throughout the entire Study Area. During the meeting, the FAA responded to a large number of questions from the community. These meetings were recorded and remain on the FAA's YouTube page for interested community members to review. During the meeting and other forms of engagement, the FAA received over 40 comments regarding the Proposed Action. The FAA is currently reviewing and developing responses to these comments to be shared with the public as part of the Final Environmental Assessment but it should be noted that none of the comments mention any potential impact to historic resources from the Proposed Action.

We look forward to hearing back from you on the FAA's proposed finding. We welcome the input from consulting parties on the historic properties considered as part of the analysis and on the finding itself. If you have any additional comments or questions on this undertaking, please contact me at veronda.johnson@faa.gov or at the address below.

Sincerely,

Veronda Johnson Eastern Service Center Federal Aviation Administration Operations Support Group AJV-E250 1701 Columbia Avenue College Park, GA 30337



U.S. Department of Transportation

Eastern Service Center

1701 Columbia Avenue College Park, Georgia 30337

Federal Aviation Administration

June 9, 2021

Town of Stoughton Planning Board 10 Pearl Street Stoughton, MA 02072

Proposed Finding of No Adverse Effect for the Boston Logan International Airport RNAV (GPS) RWY 4L Approach Procedure, Boston, MA

To Whom It May Concern,

The Federal Aviation Administration (FAA) is evaluating a new proposed Area Navigation (RNAV) Global Positioning System (GPS) instrument approach procedure at Boston Logan International Airport (BOS). This new procedure would allow for aircraft to land onto Runway 4L with GPS technological automation as well as allow for landing during low visibility conditions. These additional procedural capabilities would increase the safety and efficiency of the airspace around BOS.

Pursuant to 36 CFR 800.4(a), the FAA previously consulted with the Massachusetts Historical Commission to identify the Area of Potential Effects for this undertaking. In continuing with our responsibilities under Section 106 of the National Historic Preservation Act and its implementing regulations, the FAA invites you to participate as a consulting parting and submits this assessment of adverse effects, which concludes with a proposed Finding of No Adverse Effects and our supporting rationale for that finding. The FAA seeks your views or comments on this finding, which can be addressed to the FAA using the email or address given at the conclusion of this letter. Pursuant to 36 CFR 800.5(c), please provide any comments within 30 days from receipt of this letter.

Project Background

As described in greater detail in the FAA's Draft Environmental Assessment (EA), which can be accessed at <u>www.faabostonworkshops.com</u>, the FAA is evaluating a new proposed Area Navigation (RNAV) Global Positioning System (GPS) instrument approach procedure at BOS. This new procedure, which is depicted in Attachments A and B, is needed to allow aircraft to land onto Runway 4L with GPS technological automation. The current absence of an RNAV procedure to Runway 4L precludes use of the runway during low visibility conditions. The proposed procedure route is an overlay of existing arrivals and is expected to lead to a net increase of 255 annual arrivals to BOS generally, which represents 0.1% of the total annual arrivals, and an increase of 359 annual arrivals specifically to Runway 4L. These additional

procedural capabilities would increase the safety and efficiency of the airspace around BOS. Publication of the proposed procedure would constitute an undertaking under Section 106 of the National Historic Preservation Act (NHPA).

Regulatory Overview

Under NEPA, the FAA is responsible for analyzing the impacts of its action on historical, architectural, archeological and cultural resources as part of its broader review of the human environment. Because the National Historic Preservation Act (NHPA) is the principal statute concerning such resources, most of this analysis is conducted in coordination with the process under Section 106 of the NHPA, which requires federal agencies to consider the effects of their projects on properties listed, or eligible for listing, in the National Register of Historic Places (NRHP). As this is an FAA Action, the FAA document *Section 106 of the National Historic Properties under Section 106 of the National Historic Properties under Section 106 of the National Historic Preservation Act* was consulted and referenced in order to make this determination.

Review of Historic/Eligible Properties

The National Register of Historic Places (NRHP), the Massachusetts Historical Commission, and the Boston Landmarks Commission's data sources were used to gather a comprehensive directory of all potential historic and cultural resources within the APE. A total of 19 properties within the APE were found to be listed in the National Register of Historic Places as historic districts or individual properties in accordance with the criteria described in the NHPA. These 19 properties are identified and described in Table 1. A total of 4,184 state and local designated properties were identified within the APE and are summarized by their location in Table 2. These 4,184 properties represent the group of potential resources that would be evaluated for National Register eligibility. For the purposes of this proposed finding, we assume all of these properties are eligible for the National Register and propose a finding of no adverse effect for all properties within the APE currently listed, determined eligible for listing, and assumed eligible for listing in the NRHP.

NRHP Property Name	Brief Property Description
Milton Cemetery	Milton Cemetery contains some of the best examples of funerary art from the colonial times to the Victorian era. An historic garden cemetery, it was established as the Town's only cemetery in 1672.
Spring Brook Cemetery	The most prominent structure in the cemetery, Card Memorial Chapel, was designed by Charles Eastman & built in 1898 and funded by Simon & Mary Card in memory of their daughter Lulu.
Dorchester Park	Dorchester Park is a historic park bounded by Dorchester Avenue, Richmond, Adams and Richview Streets in the Dorchester neighborhood of Boston, Massachusetts.

Table 1: National Register of Historic Places Properties within the APE

NRHP Property Name	Brief Property Description
DorchesterMilton Lower Mills Industrial District (Boundary Increase)	The Dorchester-Milton Lower Mills Industrial District is a historic district on both sides of the Neponset River in the Dorchester area of Boston and in the town of Milton, Massachusetts. It encompasses an industrial factory complex, most of which was historically associated with the Walter Baker & Company, the first major maker of chocolate products in the United States.
Savin Hill Historic District	The Savin Hill Historic District is significant for its association with the development of the area from a mid-19th century speculative housing development for Boston's upper-middle class to a close-knot neighborhood of residents from diverse socioeconomic backgrounds. The surviving historic resources catalogue Savin Hill's rich history and remain a cohesive collection of well-preserved historic homes. The district further attains significance as an intact collection of buildings representing a full range of architectural styles.
Blue Hills Parkway	The Blue Hills Parkway, a 1.5-mile-long boulevard in Boston and Milton, is significant as one of the earliest connecting parkways designed for the Metropolitan Parks Commission (MPC) by Olmsted, Olmsted and Eliot and its successor firm, Olmsted Brothers, and it is emblematic of the firm's principles of parkway creation. A divided highway that runs directly south through early 20"-century residential neighborhoods, the Blue Hills Parkway directly connects the Blue Hills Reservation (the largest open space in Metropolitan Boston) with Boston, the Neponset River Reservation, and Truman Parkway.
Blue Hills Reservation Parkways-Metropolitan Park System of Greater Boston	The Metropolitan Park System of Greater Boston, in Massachusetts, is especially noteworthy because it is the first regional park system in the United States.
Foxborough Pumping Station	The Foxborough Pumping Station is a historic water pumping station at 25 Pumping Station Road in Foxborough, Massachusetts. Its main pumphouse was designed by Ernest Boyden, a regionally-known architect of water supply systems, and was built in 1891; it is a brick structure with Queen Anne styling. The station also includes several historic wells, a period garage, and the man- made Fales Pond, a once-dammed section of the Neponset Reservoir near the pumphouse.
Old Harbor Reservation Parkways, Metropolitan Park System of Greater Boston	The Old Harbor Reservation Parkways are three historic roads in the Old Harbor area of Boston. They are part of the Boston parkway system designed by Frederick Law Olmsted.
Dorchester-Milton Lower Mills Industrial District	The Dorchester-Milton Lower Mills Industrial District is located on both sides of the Neponset River in the Dorchester area of Boston and in the town of Milton, Massachusetts. It encompasses an industrial factory complex, most of which was historically associated with the Walter Baker & Company, the first major maker of chocolate products in the United States.

NRHP Property Name	Brief Property Description
Furnace Village Historic District	The Furnace Village Historic District encompasses the historic colonial industrial area in Easton, Massachusetts. At its center is at the intersection of Foundry street, South street and Poquanticut Avenue. The area was settled in 1723, with industrial activity beginning in 1742. The iron furnace was established in 1751, and for industrial purposes, continued in the 19th century. In addition to the colonial era, there is also an employee of the housing of the 19th century.
Milton Centre Historic District	The Milton Centre Historic District is both the historical and geographic center of the town of Milton. The 23-acre historic district includes Canton Avenue between Reedsdale Road and Thacher and Highland Streets. Milton Centre is historically significant for its association with the development of the town following the relocation of the third meeting house to Academy Hill in 1728, and the subsequent shift of the town center from Milton Hill.
Scott's Woods Historic District	Scott's Woods Historic District is the area of Hillside, Harland and Forest Streets between Randolph Avenue and the ridge between Hancock and Bugbee Hills, now the MDC Blue Hills Reservation. The Scott's Woods Historic District in Milton, Massachusetts is a semirural, residential area that contains a significant concentration of 18th, 19th and early 20th century dwellings and barns that reflect the Town's agricultural and architectural history from 1713 to 1932, the district's period of significance. Originally known as the "Blue Hill Land," a three thousand-acre tract of land sold by the town of Boston in 1711 to four residents of Milton. The area in the southwest part of Milton is thought to have been named for a member of the Scott Family that lived in the area in the early eighteenth century. Hillside Street, named for being literally on the 'side' of Blue Hill, is the major thoroughfare in the district.
Milton Hill Historic District	Milton Hill Historic District is located on a lofty hill between Milton Village and Algerene Corner, formerly known as Union Square at the junction of Adams and Centre Streets. The Milton Hill Historic District in Milton, Massachusetts is a residential area that contains the most significant concentration of 19th and early 20th century high-style and period architecture in the Town. As Milton developed from a rural community to a prosperous suburb of Boston, Milton Hill, throughout the period of significance, 1740-1945, has been the home of wealthy Milton and Boston business, professional and civic leaders. It began its rise to prominence as an estate district in 1742 with the establishment of Governor Thomas Hutchinson's summer estate. For the next two hundred years, attracted by the rural scenery afforded by the Neponset River and the Blue Hills and the proximity of the Town's commercial center and Boston, prominent families built country homes, a number designed by noted national and local architects, including William Ralph Emerson; Peabody and Steams; and Perry, Shaw and Hepbum.

NRHP Property Name	Brief Property Description	
Harrison Square Historic District	Clam Point (also known as Harrison Square) is a sub-neighborhood in Boston, noteworthy for its collection of substantial Italianate Mansard residences. The area is known to have the most cohesive, intact collection of mansion-scale, mid-19 th century housing in Boston, and includes the Park, Everett, Freeport, Mill, Ashland, Blanche streets, and Victory Road in the Dorchester neighborhood of Boston.	
Canton Corner Historic District	The Canton Corner Historic District encompasses the historic town center of Canton, Massachusetts. Centered on the junction of Pleasant and Washington streets, it includes more than 25 properties and 170 acres (69 ha), whose architectural history spans 250 years of occupation and includes the town's major civic buildings.	
Ponkapoag Camp of Appalachian Mountain Club	The Appalachian Mountain Club Ponkapoag Camp is one of the original camps of the oldest outing club in the United States, founded in 1876. Early in the twentieth century tent sites were established at the east end of Ponkapoag Pond in the Blue Hills reservation by the president of the Appalachian Mountain Club, William Rogers, who was also an M.D.C. commissioner. The camp represents an early outing club's architecture for "roughing it" and are important as such structures succumb to fire, rot, and vandalism.	
Boyden, Seth, House	The Seth Boyden House is a historic house at 135 Oak Street in Foxborough, Massachusetts. The home is significant for its unusual architectural design as well for its association with the Boyden family, whose members were prominent locally and regionally in the 18 th and 19 th century,	
Borderland Historic District	The Borderland Historic District was the 1,200 acre estate of Blanche Ames Ames. The mansion was constructed in 1910 and the property includes a system of ponds, dams, and causeways surrounding the mansion. The exterior of the mansion was built using locally cut field stones. The district is considered significant due to its connection to the estate of Blanche Ames Ames. She was a inventor who was involved in art, farming, engineering and politics. She designed a hexagonal lumber cutter, patented a method for ensnaring airplanes in wires hung from balloons during World War II, and developed a water anti-pollution device in the late 1960s.	
SOURCE: National Register Database; https://www.nps.gov/subjects/nationalregister/database-research.htm#table, Adapted by Environmental Science Associates, 2021.		

Town	Number of State & Local Designated Properties
Boston	838
Canton	445
Easton	142
Foxborough	194
Mansfield	190
Milton	1,559
Norton	16
Quincy	2
Randolph	225
Sharon	491
Stoughton	82
Grand Total	4,184

Table 2: Number of State & Local Designated Properties within the APE

Assessment of Noise and Visual Impacts by Proposed Action

In our earlier correspondence, the FAA noted that we are "considering the possibility that changes in noise levels or additional visual impacts from an increase in overflights could alter the character or use of certain kinds of historic properties where a quiet setting is a generally recognized purpose and attribute." In order to address this possibility, an assessment was done to further quantify the auditory and visual impacts on the historic properties within the Area of Potential Effects.

In order to assess the auditory impacts, the FAA used a metric known as Day-night Average Sound Level (DNL). DNL is the standard noise metric used for all FAA studies of aviation noise exposure in airport communities and was used here to assess the potential impact on every identified historic property within the Area of Potential Effects.

DNL is a 24-hour, time-weighted average noise metric, expressed in terms of decibel units of sound heard by the human ear, which accounts for the noise levels of individual aircraft events, the number of times those events occur, and the time of day they occur. DNL is a graphical representation of the distribution of noise over the surrounding area from an airport's average operations. There is one unique modification in that there is a "noise penalty" of any noise generated during "nighttime hours." In the calculation of DNL, for each hour during nighttime hours (10:00 p.m. to 7:00 a.m.), the sound levels are increased by a 10 decibel-weighting penalty (equivalent to a 10-fold increase in aircraft operations) before the 24-hour value is computed. The weighting penalty accounts for the more intrusive nature of noise during the nighttime hours. The significance thresholds for aircraft noise for DNL, as spelled out in FAA Order 1050.1F, are given below.

• For DNL 65 dB and higher: +1.5 dB

This threshold has been used by FAA for many years and is applied at airports across the country and will be used to determine noise impacts on historic properties within the APE. The use of this threshold is consistent with the Section 106 analyses for many FAA projects, including the Northern California and Southern Florida Metroplex projects, two of FAA's most recent projects that also modified the flight path of aircraft through the airspace.

According to FAA Order 1050.1F, a significant noise impact could occur to noise sensitive land uses if it had a level of DNL 65 dB with the Proposed Action and also experienced an increase of 1.5 dB when compared to the No Action Alternative. The FAA also recognizes that, in limited instances, resources that have a "quiet setting" as a qualifying attribute may be adversely affected by noise increases that would otherwise not be significant. There are no NRHP properties with a noise exposure of DNL 65 that experience a 1.5 dB noise increase. Further, the NRHP properties were reviewed and none of them were found to have a "quiet setting" as described in the FAA's Section 106 Handbook.

When the analysis is expanded to include the state and local designated properties that are assumed to be eligible for the NRHP, there are no properties that experience a 1.5 dB noise level increase with a proposed action noise level of DNL 65 or greater. As indicated in Table 4.6-3 of the Draft EA, the maximum exposed noise level *decreases* as a result of the Proposed Project

when compared to the No Action Alternative when considering towns/neighborhoods as a whole. Furthermore, as described below, the largest proposed noise changes within the APE are multiple orders of magnitude below the noise thresholds given within FAA Order 1050.1F.

The FAA's noise analysis demonstrates that historic resources will generally experience equivalent noise exposure with the addition of the Proposed Action. Specifically, the maximum change in noise exposure for a historic property is less than 0.2 dB across all historic properties in the APE. For example, one of these properties has a value of 22 dB under the No Action Alternative and 22.1 dB with the Proposed Procedure. Importantly, as depicted in Attachment A, the procedure is an overlay of existing traffic to Runway 4L and is only expected to lead to an annual net increase of 255 arrivals to BOS, out of a current total of 205,837 arrivals. In sum, the FAA will not be introducing audible impacts to resources not already experiencing noise impacts, and any change in noise exposure will be minimal.

In order to assess the potential visual impacts of the historic properties, the data for a year of overflights at BOS from the previous memorandum was reassessed to compare to the newly designated APE. Considering one year of radar track data, the APE experiences 78,879 arrival and 18,989 departure overflights annually. On an average daily basis that corresponds to 216.1 arrival and 52.0 departure overflights. The Proposed Action is estimated to add 255 annual arrival overflights or 0.70 daily average overflights to the APE. When considering the APE as a whole, the increase in overflights would amount to just a 0.26% increase in overflights and would not introduce audible or visual noise in the APE. In order to confirm that the overflights over the APE were not focused on particular historic resources in the APE, the dataset of departure overflights and arrival overflights was mapped over the APE in Attachments A and B respectively. Attachment A shows that the APE areas closest to the airport are already dense with overflights but the flights become more disperse as the APE moves to the southwest. However, Attachment B, which displays a year of arrival radar tracks, show that the APE is already heavily overflown over the full extent of the APE.

For more information on the analyses performed as a part of the Draft EA, please visit <u>www.faabostonworkshops.com</u> for a copy of the Draft EA. More information on the noise analysis can be found at <u>www.faabostonworkshops.com/noise-visualization/</u> and in Sections 3.4.6 and 4.6 of the Draft EA. The Noise Modeling Technical Report is included in Appendix D of the Draft EA.



SOURCE: Esri; RoVolus, 2021; ESA, 2021



Boston Logan RNAV (GPS) RWY 4L EA



SOURCE: Esri; RoVolus, 2021; ESA, 2021



Finding of No Adverse Effect Criteria

In order to establish a Finding of No Adverse Effect, the Proposed Action must not meet any of the criteria spelled out in the FAA's Section 106 Handbook, which are based on criteria in ACHP's section 106 regulations in 36 CFR Part 800. This section presents why the Proposed Action does not meet any of these criteria.

- Does the Proposed Action physically destroy or damage the property?
 - The Proposed Action will not have any physical impact on any property. The Proposed Action changes the location of arrival flights in the airspace around Boston Logan International Airport.
- Does the Proposed Action alter the property in any way that is consistent with the Secretary of the Interior's Standards for Treatment of Historic Properties (36 CFR Part 68)?
 - The Standards guide the design and implementation of physical changes to historic properties. This may include changes in use, material repair or substitution, or modification of historically important features. The Proposed Action is located in the airspace above historic resources does not result in any changes in use, material alteration, or physical modifications to these resources.
- Does the Proposed Action remove a property from its historic location?
 - \circ The Proposed Action does not remove any property from its location.
- Does the Proposed Action change the character of the property's use, or of physical features within the property's setting that contribute to its historic significance?
 - The Proposed Action does not change the character of a property's use or any physical features in any historical property's setting.
 - Any changes to setting as a result of the Proposed action would be audible or visual features which are discussed in the following criterion.
- Does the Proposed Action introduce an atmospheric, audible, or visual feature to the area that would diminish the integrity of the property's significant historic features?
 - Audible: there will not be an introduction of audible noise as a result of the Proposed Action. Furthermore, the noise impacts of the Proposed Action on all of the historic resources in the APE will either decrease noise exposure or cause increases that are orders of magnitude below the significance thresholds for DNL aircraft noise as described in FAA Order 1050.1F and therefore will not cause an introduction of audible impact on any of the properties.
 - Visual: there will not be an introduction of visual impacts as a result of the Proposed Action. Furthermore, the entire APE currently experiences 268 average daily overflights as described in the above analysis. The Proposed Action will add less than 1 additional overflight per day. This increase will not change the current visual features of any historic resource in the APE, as depicted in Attachment B.
- Does the Proposed Action result in neglect of a property which would result in its deterioration, transfer, sale or lease?
• The Proposed Action will not cause any property to be sold or transferred.

Given the results discussed in this letter, the FAA is putting forth at this point a Proposed Finding of No Adverse Effect. This determination is based on the findings discussed in this letter, which includes that none of the NRHP listed properties reviewed herein were found to have a "quiet setting" as described in the FAA's Section 106 Handbook. Furthermore, the net change in aircraft operations as a result of the Proposed Action would be minimal and would not cause an adverse effect, including no physical impacts and no introduction of audible or visual impacts within the APE.

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Sincerely,

Veronda Johnson Eastern Service Center Federal Aviation Administration Operations Support Group AJV-E250 1701 Columbia Avenue College Park, GA 30337



U.S. Department of Transportation

Eastern Service Center

Federal Aviation Administration

June 9, 2021

Wampanoag Tribe of Gay Head (Aquinnah) 20 Black Brook Road Aquinnah, MA 02535-1546 (508)-645-9265

Proposed Finding of No Adverse Effect for the Boston Logan International Airport RNAV (GPS) RWY 4L Approach Procedure, Boston, MA

To Whom It May Concern,

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Pursuant to 36 CFR 800.4(a), the FAA previously consulted with the Massachusetts Historical Commission to identify the Area of Potential Effects for this undertaking. In continuing with our responsibilities under Section 106 of the National Historic Preservation Act and its implementing regulations, the FAA invites you to participate as a consulting parting and submits this assessment of adverse effects, which concludes with a proposed Finding of No Adverse Effects and our supporting rationale for that finding. The FAA seeks your views or comments on this finding, which can be addressed to the FAA using the email or address given at the conclusion of this letter. Pursuant to 36 CFR 800.5(c), please provide any comments within 30 days from receipt of this letter.

Project Background

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procedural capabilities would increase the safety and efficiency of the airspace around BOS. Publication of the proposed procedure would constitute an undertaking under Section 106 of the National Historic Preservation Act (NHPA).

Regulatory Overview

Under NEPA, the FAA is responsible for analyzing the impacts of its action on historical, architectural, archeological and cultural resources as part of its broader review of the human environment. Because the National Historic Preservation Act (NHPA) is the principal statute concerning such resources, most of this analysis is conducted in coordination with the process under Section 106 of the NHPA, which requires federal agencies to consider the effects of their projects on properties listed, or eligible for listing, in the National Register of Historic Places (NRHP). As this is an FAA Action, the FAA document *Section 106 of the National Historic Properties under Section 106 of the National Historic Properties under Section 106 of the National Historic Preservation Act* was consulted and referenced in order to make this determination.

Review of Historic/Eligible Properties

The National Register of Historic Places (NRHP), the Massachusetts Historical Commission, and the Boston Landmarks Commission's data sources were used to gather a comprehensive directory of all potential historic and cultural resources within the APE. A total of 19 properties within the APE were found to be listed in the National Register of Historic Places as historic districts or individual properties in accordance with the criteria described in the NHPA. These 19 properties are identified and described in Table 1. A total of 4,184 state and local designated properties were identified within the APE and are summarized by their location in Table 2. These 4,184 properties represent the group of potential resources that would be evaluated for National Register eligibility. For the purposes of this proposed finding, we assume all of these properties are eligible for the National Register and propose a finding of no adverse effect for all properties within the APE currently listed, determined eligible for listing, and assumed eligible for listing in the NRHP.

NRHP Property Name	Brief Property Description
Milton Cemetery	Milton Cemetery contains some of the best examples of funerary art from the colonial times to the Victorian era. An historic garden cemetery, it was established as the Town's only cemetery in 1672.
Spring Brook Cemetery	The most prominent structure in the cemetery, Card Memorial Chapel, was designed by Charles Eastman & built in 1898 and funded by Simon & Mary Card in memory of their daughter Lulu.
Dorchester Park	Dorchester Park is a historic park bounded by Dorchester Avenue, Richmond, Adams and Richview Streets in the Dorchester neighborhood of Boston, Massachusetts.

Table 1: National Register of Historic Places Properties within the APE

NRHP Property Name	Brief Property Description
DorchesterMilton Lower Mills Industrial District (Boundary Increase)	The Dorchester-Milton Lower Mills Industrial District is a historic district on both sides of the Neponset River in the Dorchester area of Boston and in the town of Milton, Massachusetts. It encompasses an industrial factory complex, most of which was historically associated with the Walter Baker & Company, the first major maker of chocolate products in the United States.
Savin Hill Historic District	The Savin Hill Historic District is significant for its association with the development of the area from a mid-19th century speculative housing development for Boston's upper-middle class to a close-knot neighborhood of residents from diverse socioeconomic backgrounds. The surviving historic resources catalogue Savin Hill's rich history and remain a cohesive collection of well-preserved historic homes. The district further attains significance as an intact collection of buildings representing a full range of architectural styles.
Blue Hills Parkway	The Blue Hills Parkway, a 1.5-mile-long boulevard in Boston and Milton, is significant as one of the earliest connecting parkways designed for the Metropolitan Parks Commission (MPC) by Olmsted, Olmsted and Eliot and its successor firm, Olmsted Brothers, and it is emblematic of the firm's principles of parkway creation. A divided highway that runs directly south through early 20"-century residential neighborhoods, the Blue Hills Parkway directly connects the Blue Hills Reservation (the largest open space in Metropolitan Boston) with Boston, the Neponset River Reservation, and Truman Parkway.
Blue Hills Reservation Parkways-Metropolitan Park System of Greater Boston	The Metropolitan Park System of Greater Boston, in Massachusetts, is especially noteworthy because it is the first regional park system in the United States.
Foxborough Pumping Station	The Foxborough Pumping Station is a historic water pumping station at 25 Pumping Station Road in Foxborough, Massachusetts. Its main pumphouse was designed by Ernest Boyden, a regionally-known architect of water supply systems, and was built in 1891; it is a brick structure with Queen Anne styling. The station also includes several historic wells, a period garage, and the man- made Fales Pond, a once-dammed section of the Neponset Reservoir near the pumphouse.
Old Harbor Reservation Parkways, Metropolitan Park System of Greater Boston	The Old Harbor Reservation Parkways are three historic roads in the Old Harbor area of Boston. They are part of the Boston parkway system designed by Frederick Law Olmsted.
Dorchester-Milton Lower Mills Industrial District	The Dorchester-Milton Lower Mills Industrial District is located on both sides of the Neponset River in the Dorchester area of Boston and in the town of Milton, Massachusetts. It encompasses an industrial factory complex, most of which was historically associated with the Walter Baker & Company, the first major maker of chocolate products in the United States.

NRHP Property Name	Brief Property Description
Furnace Village Historic District	The Furnace Village Historic District encompasses the historic colonial industrial area in Easton, Massachusetts. At its center is at the intersection of Foundry street, South street and Poquanticut Avenue. The area was settled in 1723, with industrial activity beginning in 1742. The iron furnace was established in 1751, and for industrial purposes, continued in the 19th century. In addition to the colonial era, there is also an employee of the housing of the 19th century.
Milton Centre Historic District	The Milton Centre Historic District is both the historical and geographic center of the town of Milton. The 23-acre historic district includes Canton Avenue between Reedsdale Road and Thacher and Highland Streets. Milton Centre is historically significant for its association with the development of the town following the relocation of the third meeting house to Academy Hill in 1728, and the subsequent shift of the town center from Milton Hill.
Scott's Woods Historic District	Scott's Woods Historic District is the area of Hillside, Harland and Forest Streets between Randolph Avenue and the ridge between Hancock and Bugbee Hills, now the MDC Blue Hills Reservation. The Scott's Woods Historic District in Milton, Massachusetts is a semirural, residential area that contains a significant concentration of 18th, 19th and early 20th century dwellings and barns that reflect the Town's agricultural and architectural history from 1713 to 1932, the district's period of significance. Originally known as the "Blue Hill Land," a three thousand-acre tract of land sold by the town of Boston in 1711 to four residents of Milton. The area in the southwest part of Milton is thought to have been named for a member of the Scott Family that lived in the area in the early eighteenth century. Hillside Street, named for being literally on the 'side' of Blue Hill, is the major thoroughfare in the district.
Milton Hill Historic District	Milton Hill Historic District is located on a lofty hill between Milton Village and Algerene Corner, formerly known as Union Square at the junction of Adams and Centre Streets. The Milton Hill Historic District in Milton, Massachusetts is a residential area that contains the most significant concentration of 19th and early 20th century high-style and period architecture in the Town. As Milton developed from a rural community to a prosperous suburb of Boston, Milton Hill, throughout the period of significance, 1740-1945, has been the home of wealthy Milton and Boston business, professional and civic leaders. It began its rise to prominence as an estate district in 1742 with the establishment of Governor Thomas Hutchinson's summer estate. For the next two hundred years, attracted by the rural scenery afforded by the Neponset River and the Blue Hills and the proximity of the Town's commercial center and Boston, prominent families built country homes, a number designed by noted national and local architects, including William Ralph Emerson; Peabody and Steams; and Perry, Shaw and Hepbum.

NRHP Property Name	Brief Property Description
Harrison Square Historic District	Clam Point (also known as Harrison Square) is a sub-neighborhood in Boston, noteworthy for its collection of substantial Italianate Mansard residences. The area is known to have the most cohesive, intact collection of mansion-scale, mid-19 th century housing in Boston, and includes the Park, Everett, Freeport, Mill, Ashland, Blanche streets, and Victory Road in the Dorchester neighborhood of Boston.
Canton Corner Historic District	The Canton Corner Historic District encompasses the historic town center of Canton, Massachusetts. Centered on the junction of Pleasant and Washington streets, it includes more than 25 properties and 170 acres (69 ha), whose architectural history spans 250 years of occupation and includes the town's major civic buildings.
Ponkapoag Camp of Appalachian Mountain Club	The Appalachian Mountain Club Ponkapoag Camp is one of the original camps of the oldest outing club in the United States, founded in 1876. Early in the twentieth century tent sites were established at the east end of Ponkapoag Pond in the Blue Hills reservation by the president of the Appalachian Mountain Club, William Rogers, who was also an M.D.C. commissioner. The camp represents an early outing club's architecture for "roughing it" and are important as such structures succumb to fire, rot, and vandalism.
Boyden, Seth, House	The Seth Boyden House is a historic house at 135 Oak Street in Foxborough, Massachusetts. The home is significant for its unusual architectural design as well for its association with the Boyden family, whose members were prominent locally and regionally in the 18 th and 19 th century,
Borderland Historic District	The Borderland Historic District was the 1,200 acre estate of Blanche Ames Ames. The mansion was constructed in 1910 and the property includes a system of ponds, dams, and causeways surrounding the mansion. The exterior of the mansion was built using locally cut field stones. The district is considered significant due to its connection to the estate of Blanche Ames Ames. She was a inventor who was involved in art, farming, engineering and politics. She designed a hexagonal lumber cutter, patented a method for ensnaring airplanes in wires hung from balloons during World War II, and developed a water anti-pollution device in the late 1960s.
SOURCE: National Register Database; <u>http</u> Associates, 2021.	bs://www.nps.gov/subjects/nationalregister/database-research.htm#table, Adapted by Environmental Science

Town	Number of State & Local Designated Properties
Boston	838
Canton	445
Easton	142
Foxborough	194
Mansfield	190
Milton	1,559
Norton	16
Quincy	2
Randolph	225
Sharon	491
Stoughton	82
Grand Total	4,184

Table 2: Number of State & Local Designated Properties within the APE

Assessment of Noise and Visual Impacts by Proposed Action

In our earlier correspondence, the FAA noted that we are "considering the possibility that changes in noise levels or additional visual impacts from an increase in overflights could alter the character or use of certain kinds of historic properties where a quiet setting is a generally recognized purpose and attribute." In order to address this possibility, an assessment was done to further quantify the auditory and visual impacts on the historic properties within the Area of Potential Effects.

In order to assess the auditory impacts, the FAA used a metric known as Day-night Average Sound Level (DNL). DNL is the standard noise metric used for all FAA studies of aviation noise exposure in airport communities and was used here to assess the potential impact on every identified historic property within the Area of Potential Effects.

DNL is a 24-hour, time-weighted average noise metric, expressed in terms of decibel units of sound heard by the human ear, which accounts for the noise levels of individual aircraft events, the number of times those events occur, and the time of day they occur. DNL is a graphical representation of the distribution of noise over the surrounding area from an airport's average operations. There is one unique modification in that there is a "noise penalty" of any noise generated during "nighttime hours." In the calculation of DNL, for each hour during nighttime hours (10:00 p.m. to 7:00 a.m.), the sound levels are increased by a 10 decibel-weighting penalty (equivalent to a 10-fold increase in aircraft operations) before the 24-hour value is computed. The weighting penalty accounts for the more intrusive nature of noise during the nighttime hours. The significance thresholds for aircraft noise for DNL, as spelled out in FAA Order 1050.1F, are given below.

• For DNL 65 dB and higher: +1.5 dB

This threshold has been used by FAA for many years and is applied at airports across the country and will be used to determine noise impacts on historic properties within the APE. The use of this threshold is consistent with the Section 106 analyses for many FAA projects, including the Northern California and Southern Florida Metroplex projects, two of FAA's most recent projects that also modified the flight path of aircraft through the airspace.

According to FAA Order 1050.1F, a significant noise impact could occur to noise sensitive land uses if it had a level of DNL 65 dB with the Proposed Action and also experienced an increase of 1.5 dB when compared to the No Action Alternative. The FAA also recognizes that, in limited instances, resources that have a "quiet setting" as a qualifying attribute may be adversely affected by noise increases that would otherwise not be significant. There are no NRHP properties with a noise exposure of DNL 65 that experience a 1.5 dB noise increase. Further, the NRHP properties were reviewed and none of them were found to have a "quiet setting" as described in the FAA's Section 106 Handbook.

When the analysis is expanded to include the state and local designated properties that are assumed to be eligible for the NRHP, there are no properties that experience a 1.5 dB noise level increase with a proposed action noise level of DNL 65 or greater. As indicated in Table 4.6-3 of the Draft EA, the maximum exposed noise level *decreases* as a result of the Proposed Project

when compared to the No Action Alternative when considering towns/neighborhoods as a whole. Furthermore, as described below, the largest proposed noise changes within the APE are multiple orders of magnitude below the noise thresholds given within FAA Order 1050.1F.

The FAA's noise analysis demonstrates that historic resources will generally experience equivalent noise exposure with the addition of the Proposed Action. Specifically, the maximum change in noise exposure for a historic property is less than 0.2 dB across all historic properties in the APE. For example, one of these properties has a value of 22 dB under the No Action Alternative and 22.1 dB with the Proposed Procedure. Importantly, as depicted in Attachment A, the procedure is an overlay of existing traffic to Runway 4L and is only expected to lead to an annual net increase of 255 arrivals to BOS, out of a current total of 205,837 arrivals. In sum, the FAA will not be introducing audible impacts to resources not already experiencing noise impacts, and any change in noise exposure will be minimal.

In order to assess the potential visual impacts of the historic properties, the data for a year of overflights at BOS from the previous memorandum was reassessed to compare to the newly designated APE. Considering one year of radar track data, the APE experiences 78,879 arrival and 18,989 departure overflights annually. On an average daily basis that corresponds to 216.1 arrival and 52.0 departure overflights. The Proposed Action is estimated to add 255 annual arrival overflights or 0.70 daily average overflights to the APE. When considering the APE as a whole, the increase in overflights would amount to just a 0.26% increase in overflights and would not introduce audible or visual noise in the APE. In order to confirm that the overflights over the APE were not focused on particular historic resources in the APE, the dataset of departure overflights and arrival overflights was mapped over the APE in Attachments A and B respectively. Attachment A shows that the APE areas closest to the airport are already dense with overflights but the flights become more disperse as the APE moves to the southwest. However, Attachment B, which displays a year of arrival radar tracks, show that the APE is already heavily overflown over the full extent of the APE.

For more information on the analyses performed as a part of the Draft EA, please visit <u>www.faabostonworkshops.com</u> for a copy of the Draft EA. More information on the noise analysis can be found at <u>www.faabostonworkshops.com/noise-visualization/</u> and in Sections 3.4.6 and 4.6 of the Draft EA. The Noise Modeling Technical Report is included in Appendix D of the Draft EA.



SOURCE: Esri; RoVolus, 2021; ESA, 2021



Boston Logan RNAV (GPS) RWY 4L EA



SOURCE: Esri; RoVolus, 2021; ESA, 2021



Finding of No Adverse Effect Criteria

In order to establish a Finding of No Adverse Effect, the Proposed Action must not meet any of the criteria spelled out in the FAA's Section 106 Handbook, which are based on criteria in ACHP's section 106 regulations in 36 CFR Part 800. This section presents why the Proposed Action does not meet any of these criteria.

- Does the Proposed Action physically destroy or damage the property?
 - The Proposed Action will not have any physical impact on any property. The Proposed Action changes the location of arrival flights in the airspace around Boston Logan International Airport.
- Does the Proposed Action alter the property in any way that is consistent with the Secretary of the Interior's Standards for Treatment of Historic Properties (36 CFR Part 68)?
 - The Standards guide the design and implementation of physical changes to historic properties. This may include changes in use, material repair or substitution, or modification of historically important features. The Proposed Action is located in the airspace above historic resources does not result in any changes in use, material alteration, or physical modifications to these resources.
- Does the Proposed Action remove a property from its historic location?
 - \circ The Proposed Action does not remove any property from its location.
- Does the Proposed Action change the character of the property's use, or of physical features within the property's setting that contribute to its historic significance?
 - The Proposed Action does not change the character of a property's use or any physical features in any historical property's setting.
 - Any changes to setting as a result of the Proposed action would be audible or visual features which are discussed in the following criterion.
- Does the Proposed Action introduce an atmospheric, audible, or visual feature to the area that would diminish the integrity of the property's significant historic features?
 - Audible: there will not be an introduction of audible noise as a result of the Proposed Action. Furthermore, the noise impacts of the Proposed Action on all of the historic resources in the APE will either decrease noise exposure or cause increases that are orders of magnitude below the significance thresholds for DNL aircraft noise as described in FAA Order 1050.1F and therefore will not cause an introduction of audible impact on any of the properties.
 - Visual: there will not be an introduction of visual impacts as a result of the Proposed Action. Furthermore, the entire APE currently experiences 268 average daily overflights as described in the above analysis. The Proposed Action will add less than 1 additional overflight per day. This increase will not change the current visual features of any historic resource in the APE, as depicted in Attachment B.
- Does the Proposed Action result in neglect of a property which would result in its deterioration, transfer, sale or lease?

• The Proposed Action will not cause any property to be sold or transferred.

Given the results discussed in this letter, the FAA is putting forth at this point a Proposed Finding of No Adverse Effect. This determination is based on the findings discussed in this letter, which includes that none of the NRHP listed properties reviewed herein were found to have a "quiet setting" as described in the FAA's Section 106 Handbook. Furthermore, the net change in aircraft operations as a result of the Proposed Action would be minimal and would not cause an adverse effect, including no physical impacts and no introduction of audible or visual impacts within the APE.

Public Meetings, Comments, and Consultation

The FAA conducted Virtual Public Workshops for the Draft EA on October 23rd, and October 28th, 2020. By attending the Virtual Public Workshops, participants were provided with an overview of the Draft EA which includes results from the noise analysis performed to assess the potential noise impacts of the Proposed Action on historic resources and populations located within the General Study Area. The MHC concurred with the APE on December 8, 2020 so the impacts were shown for historic resources throughout the entire Study Area. During the meeting, the FAA responded to a large number of questions from the community. These meetings were recorded and remain on the FAA's YouTube page for interested community members to review. During the meeting and other forms of engagement, the FAA received over 40 comments regarding the Proposed Action. The FAA is currently reviewing and developing responses to these comments to be shared with the public as part of the Final Environmental Assessment but it should be noted that none of the comments mention any potential impact to historic resources from the Proposed Action.

We look forward to hearing back from you on the FAA's proposed finding. We welcome the input from consulting parties on the historic properties considered as part of the analysis and on the finding itself. If you have any additional comments or questions on this undertaking, please contact me at veronda.johnson@faa.gov or at the address below.

Sincerely,

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